



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 8, 2026 – 05:32 AM UTC

PDB ID : 4V4I / pdb_00004v4i
Title : Crystal Structure of a 70S Ribosome-tRNA Complex Reveals Functional Interactions and Rearrangements.
Authors : Korostelev, A.; Trakhanov, S.; Laurberg, M.; Noller, H.F.
Deposited on : 2007-02-15
Resolution : 3.71 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

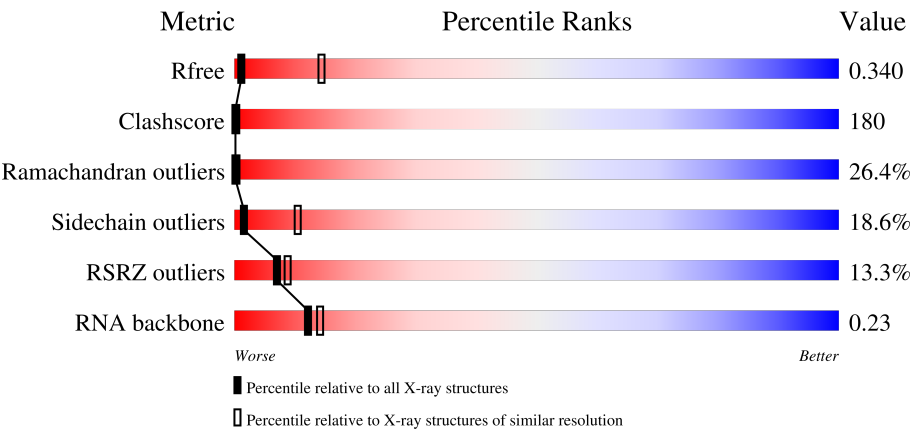
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.71 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	180053	1182 (3.84-3.60)
Clashscore	190562	1222 (3.84-3.60)
Ramachandran outliers	187476	1178 (3.84-3.60)
Sidechain outliers	187428	1174 (3.84-3.60)
RSRZ outliers	180081	1181 (3.84-3.60)
RNA backbone	3983	1007 (4.30-3.08)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	w	2889	11% 56% 38%
2	x	121	6% 62% 36%
3	A	229	5% 32% 16% 45%
4	B	276	25% 54% 36% 5%

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Mol	Chain	Length	Quality of chain
5	C	206	
6	D	205	
7	E	182	
8	F	180	
9	G	148	
10	H	163	
11	I	122	
12	J	150	
13	K	141	
14	L	118	
15	M	112	
16	N	146	
17	O	118	
18	P	101	
19	Q	113	
20	R	96	
21	S	110	
22	T	206	
23	U	85	
24	V	98	
25	W	72	
26	X	60	
27	Y	60	
28	Z	49	
29	a	65	

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Mol	Chain	Length	Quality of chain
30	b	37	
31	y	1522	
32	z	76	
33	0	76	
34	1	10	
35	c	256	
36	d	239	
37	e	209	
38	f	162	
39	g	101	
40	h	156	
41	i	138	
42	j	128	
43	k	105	
44	l	129	
45	m	132	
46	n	126	
47	o	61	
48	p	89	
49	q	88	
50	r	105	
51	s	88	
52	t	93	
53	u	106	
54	v	27	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	2MG	y	1207	-	-	X	-
31	5MC	y	1400	-	-	X	-
31	4OC	y	1402	-	-	X	-
31	5MC	y	1407	-	-	X	-
31	UR3	y	1498	-	-	X	-
31	MA6	y	1518	-	-	X	-
31	MA6	y	1519	-	-	X	-
31	PSU	y	516	-	-	X	-
31	5MC	y	967	-	-	X	-
32	PSU	z	39	-	-	X	-
32	7MG	z	46	-	-	X	-
32	5MU	z	54	-	-	X	-
32	PSU	z	55	-	-	X	-

2 Entry composition

There are 54 unique types of molecules in this entry. The entry contains 146532 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 23S LARGE SUBUNIT RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	w	2889	Total	C	N	O	P	0	0	0
			62213	27690	11624	20011	2888			

- Molecule 2 is a RNA chain called 5S LARGE SUBUNIT RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	x	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 3 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A	127	Total	C	N	O	S	0	0	0
			996	627	184	184	1			

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	B	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	C	201	Total	C	N	O	S	0	0	0
			1541	974	295	267	5			

- Molecule 6 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	D	194	Total	C	N	O	S	0	0	0
			1517	969	283	263	2			

- Molecule 7 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	180	Total	C	N	O	S	0	0	0
			1468	938	267	259	4			

- Molecule 8 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	F	173	Total	C	N	O	S	0	0	0
			1319	839	245	234	1			

- Molecule 9 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	G	148	Total	C	N	O	S	0	0	0
			1156	737	204	214	1			

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	H	138	Total	C	N	O	S	0	0	0
			1103	712	206	182	3			

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	I	122	Total	C	N	O	S	0	0	0
			932	587	171	170	4			

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	J	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	K	137	Total	C	N	O	S	0	0	0
			1089	698	207	177	7			

- Molecule 14 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	L	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	M	106	Total	C	N	O	S	0	0	0
			846	534	168	144				

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	N	137	Total	C	N	O	S	0	0	0
			1143	713	234	195	1			

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	O	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	P	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 19 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	Q	109	Total	C	N	O	S	0	0	0
			868	547	170	150	1			

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	R	92	Total	C	N	O	S	0	0	0
			725	471	131	123				

- Molecule 21 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	103	Total	C	N	O	S	0	0	0
			793	510	151	126	6			

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	T	185	Total	C	N	O	S	0	0	0
			1475	941	262	269	3			

- Molecule 23 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	U	76	Total	C	N	O	S	0	0	0
			605	376	126	102	1			

- Molecule 24 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	V	88	Total	C	N	O		0	0	0
			694	435	141	118				

- Molecule 25 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	W	62	Total	C	N	O	S	0	0	0
			520	325	102	91	2			

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	X	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	Y	56	Total	C	N	O	S	0	0	0
			436	275	84	72	5			

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	Z	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	a	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	b	35	Total	C	N	O	S	0	0	0
			294	181	66	44	3			

- Molecule 31 is a RNA chain called 16S SMALL SUBUNIT RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	y	1502	Total	C	N	O	P	0	0	0
			32302	14386	5984	10431	1501			

There are 13 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
y	450	G	C	conflict	GB 155076
y	516	PSU	U	modified residue	GB 155076
y	527	7MG	G	modified residue	GB 155076
y	966	M2G	G	modified residue	GB 155076
y	967	5MC	C	modified residue	GB 155076
y	1207	2MG	G	modified residue	GB 155076
y	1400	5MC	C	modified residue	GB 155076
y	1402	4OC	C	modified residue	GB 155076
y	1404	5MC	C	modified residue	GB 155076
y	1407	5MC	C	modified residue	GB 155076
y	1498	UR3	U	modified residue	GB 155076
y	1518	MA6	A	modified residue	GB 155076
y	1519	MA6	A	modified residue	GB 155076

- Molecule 32 is a RNA chain called P-site PHE-tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	z	76	Total	C	N	O	P	0	0	0
			1628	731	290	530	75			

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
z	8	4SU	U	modified residue	GB 174422
z	16	H2U	U	modified residue	GB 174422
z	20	H2U	U	modified residue	GB 174422
z	32	PSU	U	modified residue	GB 174422
z	37	MIA	A	modified residue	GB 174422
z	39	PSU	U	modified residue	GB 174422
z	46	7MG	G	modified residue	GB 174422
z	54	5MU	U	modified residue	GB 174422
z	55	PSU	U	modified residue	GB 174422

- Molecule 33 is a RNA chain called E-TRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	0	76	Total	C	N	O	P	0	0	0
			1621	725	293	528	75			

- Molecule 34 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	1	6	Total	C	N	O	P	0	0	0
			122	56	19	42	5			

- Molecule 35 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	c	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 36 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	d	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 37 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	e	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 38 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	f	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

- Molecule 39 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	g	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 40 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	h	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 41 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	i	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 42 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	j	127	Total	C	N	O	0	0	0
			1011	639	198	174			

- Molecule 43 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	k	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 44 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	l	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			

- Molecule 45 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	m	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 46 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	n	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			

- Molecule 47 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	o	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 48 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	p	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 49 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	q	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 50 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	r	104	Total	C	N	O	S	0	0	0
			857	547	161	147	2			

- Molecule 51 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	s	73	Total	C	N	O	0	0	0
			598	381	118	99			

- Molecule 52 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	t	80	Total	C	N	O	S	0	0	0
			647	414	119	112	2			

- Molecule 53 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	u	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

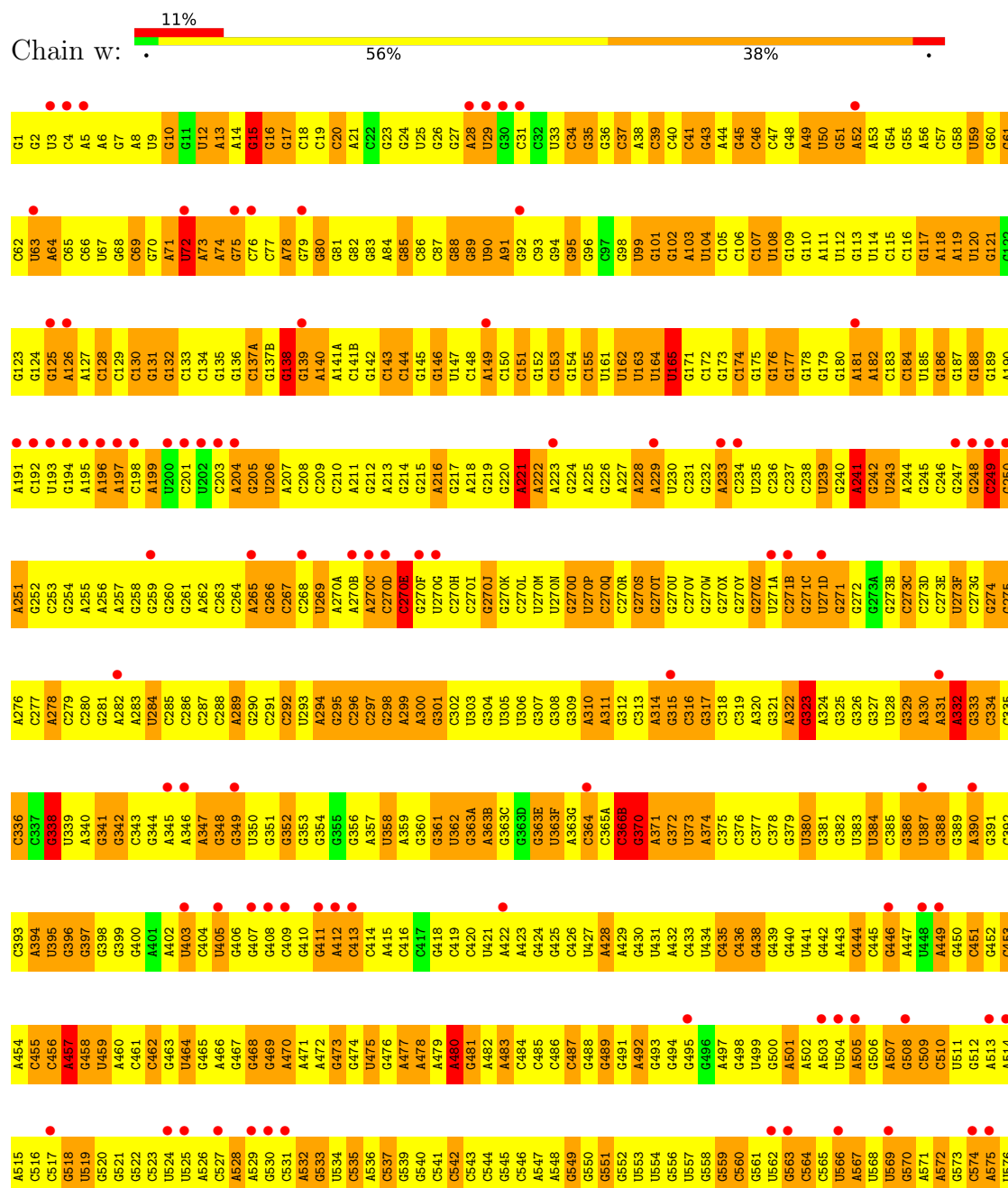
- Molecule 54 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	v	24	Total	C	N	O	0	0	0
			208	128	50	30			

3 Residue-property plots

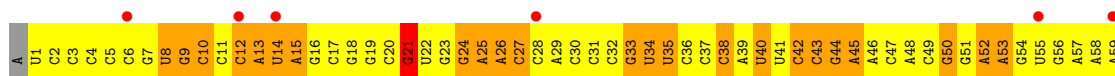
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

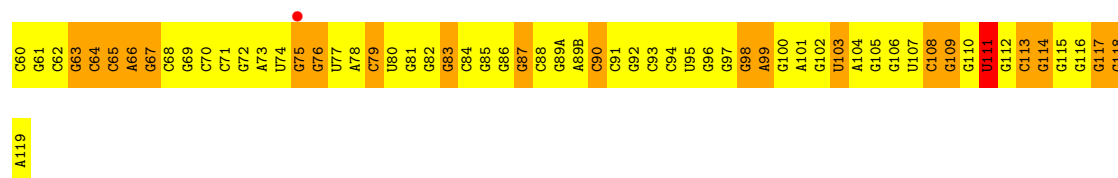
• Molecule 1: 23S LARGE SUBUNIT RIBOSOMAL RNA



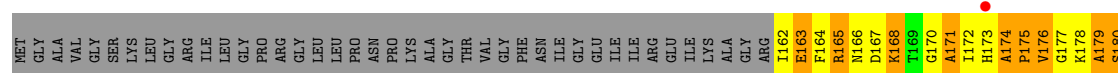
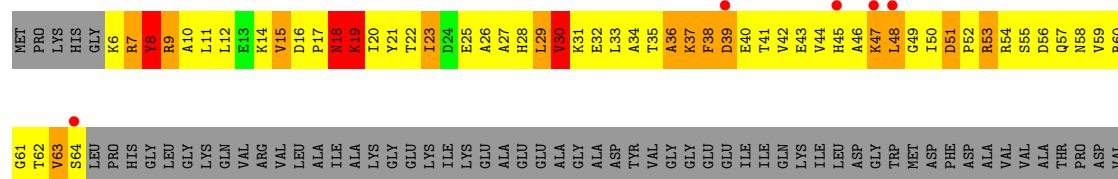
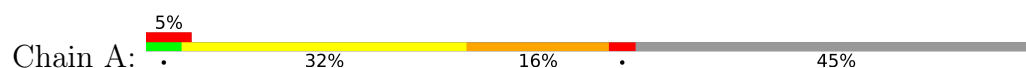
G1356	G1296	G1236	A1177	G1116	G1056	A996	U937	G875	C815	C755	G695	G635	G577
U1357	C1297	A1237	C1178	G1117	A1057	G997	G938	C876	C816	C756	G696	G636	A578
G1358	C1298	G1238	C1179	C1118	G1058	U998	G939	U877	C817	U757	G697	G637	G579
A1359	G1299	G1239	C1180	C1119	G1059	U999	G940	U878	G818	U758	C698	A837	C580
G1360	U1300	G1240	C1181	G1120	U1060	A1000	G941	G879	A819	G759	A699	U639	C581
G1361	A1301	A1241	A1182	G1121	U1061	A1001	G942	G880	A820	G760	G700	C640	G582
C1362	A1302	A1242	G1183	G1122	G1062	G1002	U943	G881	A821	A761	G701	C641	G583
G1363	G1303	G1243	G1184	C1123	G1063	G1003	G944	G882	U822	U762	G702	G642	C584
G1364	C1304	G1244	C1185	G1124	U1064	C1004	A945	G883	G823	U763	U703	A643	G585
A1365	G1305	G1245	G1186	A1125	U1065	G1005	G946	C884	A824	A764	G704	A644	A586
A1366	C1306	A1246	G1187	G1126	U1066	C1006	G947	C885	G825	G765	A705	C587	C587
G1367	A1307	A1247	U1188	A1127	A1067	C1007	G948	C886	U826	G766	A706	A646	U588
G1368	A1308	G1248	A1189	A1128	G1068	U1008	C949	A887	U827	U767	G707	G647	C589
G1369	G1309	U1249	G1190	A1129	A1069	A1009	G950	C888	U828	G768	C708	G648	A590
C1370	G1310	G1250	G1191	U1130	A1070	G951	C951	C889	A829	G769	U709	G649	C591
G1371	G1311	C1251	G1192	G1131	G1071	G1011	G952	A890	G830	G770	G710	C850	G592
U1372	U1312	G1252	G1193	A1132	C1072	U1012	A953	G892	G831	G771	G711	G651	G593
A1373	U1313	A1253	A1194	U1133	A1073	C1013	G954	C893	G832	C772	G712	U652	U594
G1374	C1314	A1254	G1195	G1135	G1074	U1014	C955	C894	U833	U773	G713	C653	C595
C1375	C1315	U1255	C1196	G1136	C1075	G1015	G956	U895	C834	A774	G714	U654	G596
G1376	U1316	G1256	G1197	G1137	C1076	A957	G957	A896	A835	G775	G715	A655	U597
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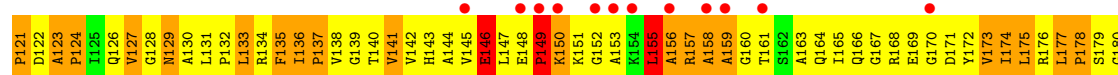
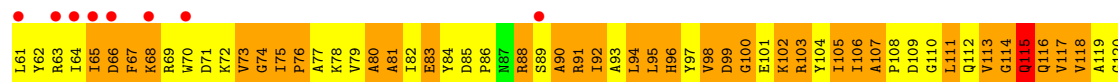




• Molecule 3: 50S ribosomal protein L1

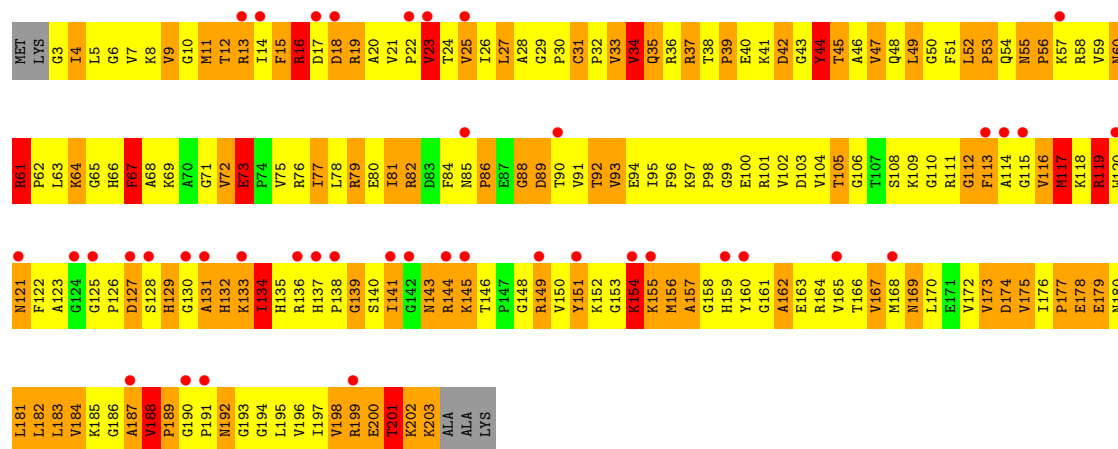


• Molecule 4: 50S ribosomal protein L2

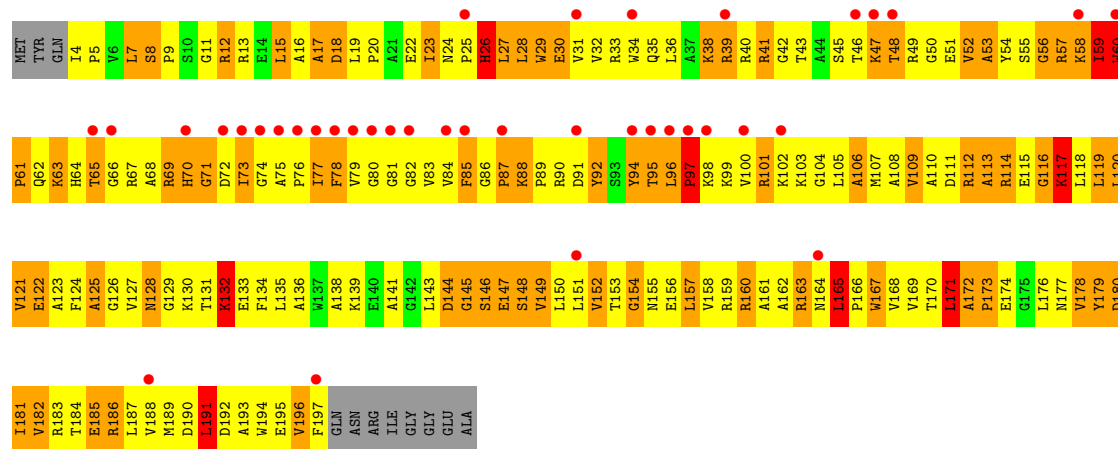


• Molecule 5: 50S ribosomal protein L3

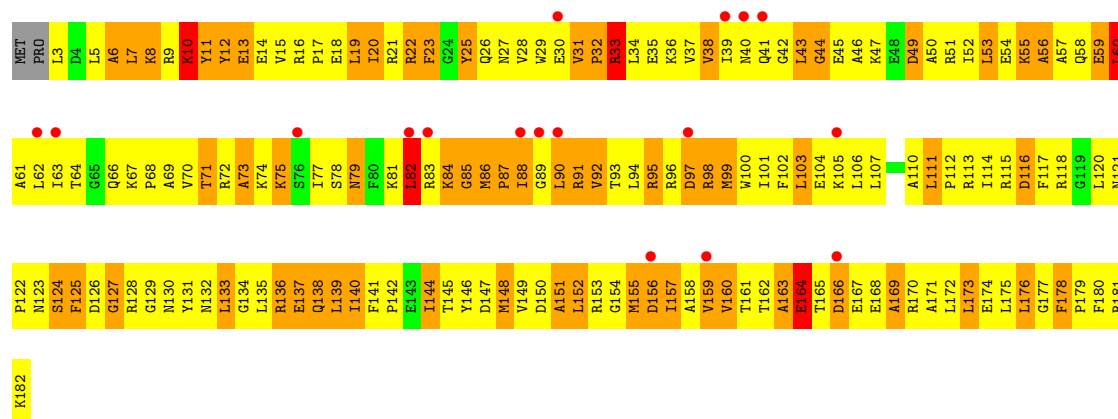




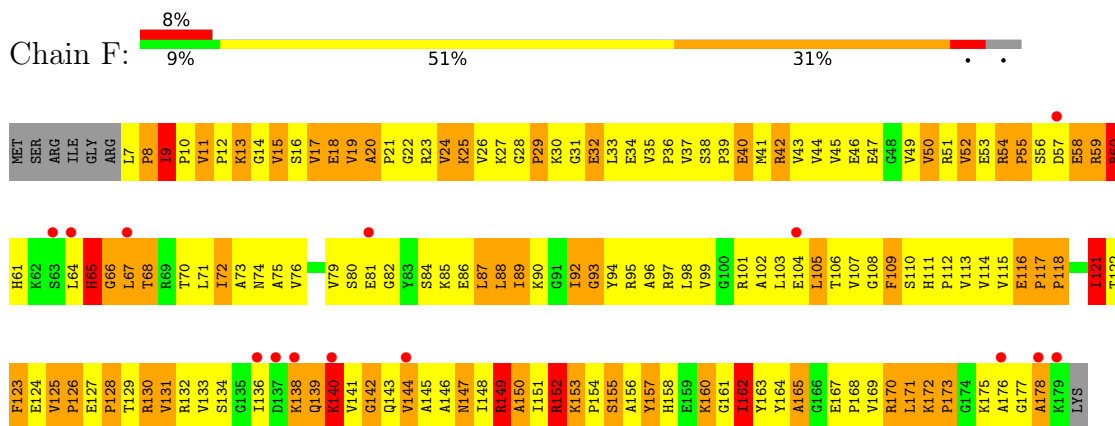
• Molecule 6: 50S ribosomal protein L4



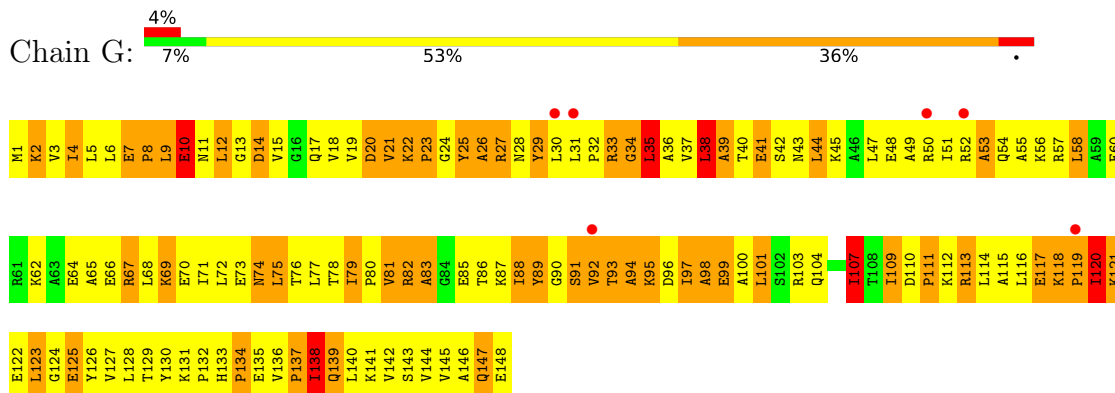
• Molecule 7: 50S ribosomal protein L5



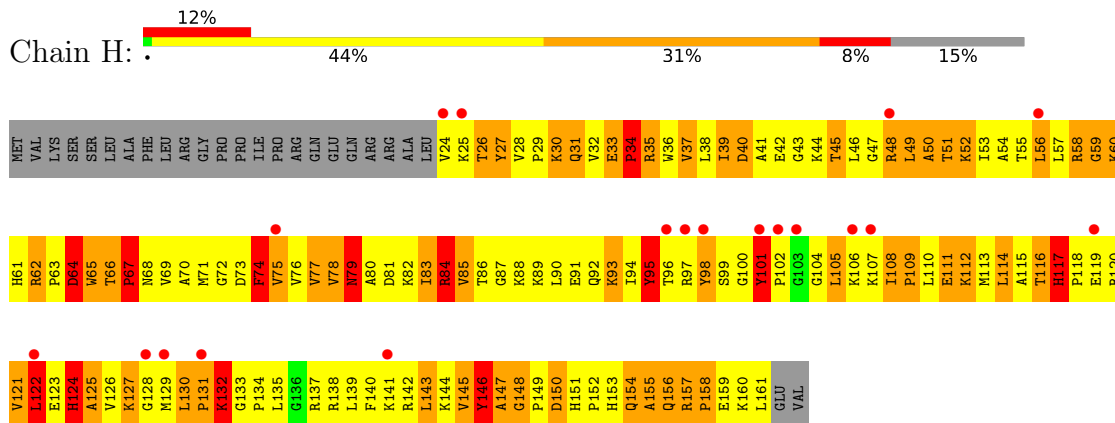
• Molecule 8: 50S ribosomal protein L6



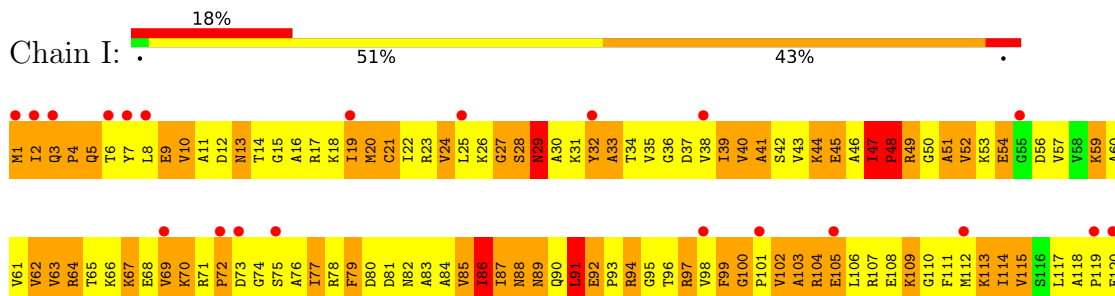
- Molecule 9: 50S ribosomal protein L9



- Molecule 10: 50S ribosomal protein L13



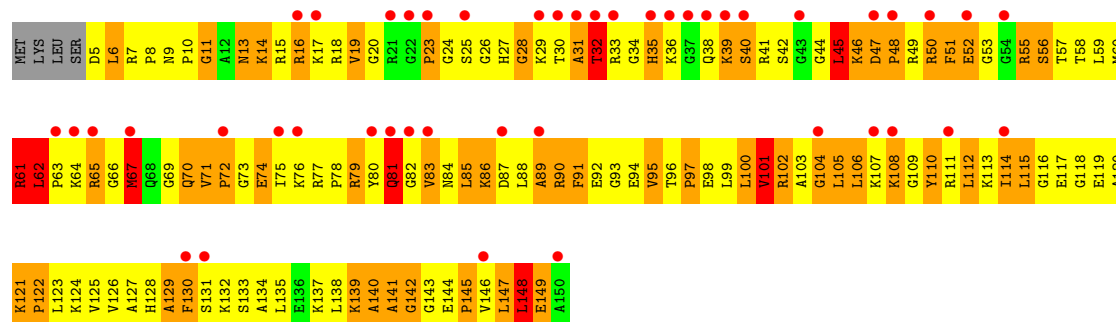
- Molecule 11: 50S ribosomal protein L14



V121
L122

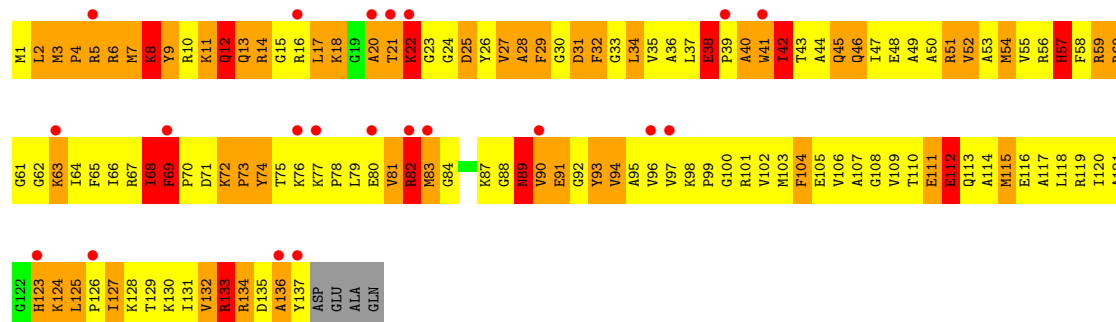
• Molecule 12: 50S ribosomal protein L15

Chain J: 6% 30% 49% 37% 5%



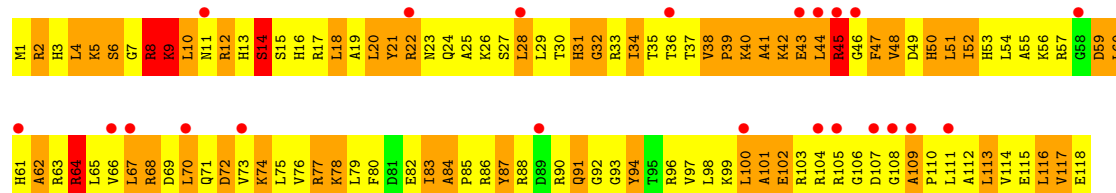
• Molecule 13: 50S ribosomal protein L16

Chain K: 15% 50% 35% 9%



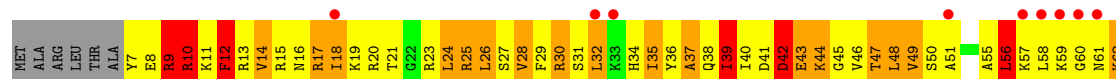
• Molecule 14: 50S ribosomal protein L17

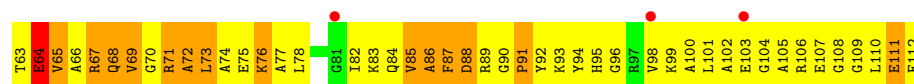
Chain L: 19% 52% 41%



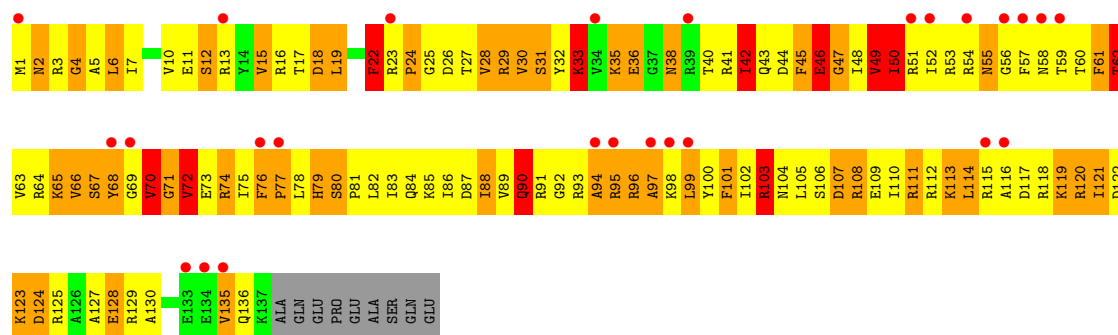
• Molecule 15: 50S ribosomal protein L18

Chain M: 8% 11% 53% 28% 6% 5%

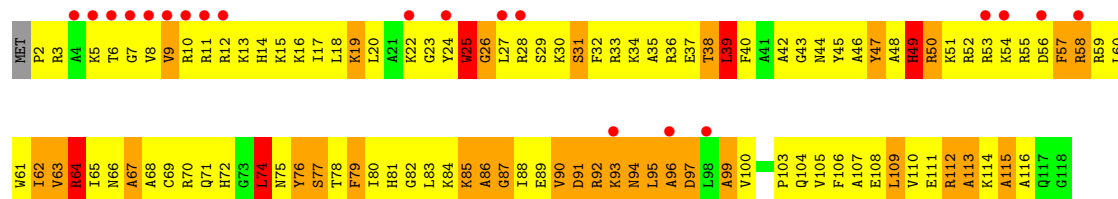
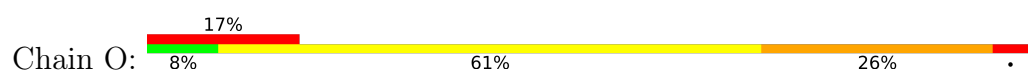




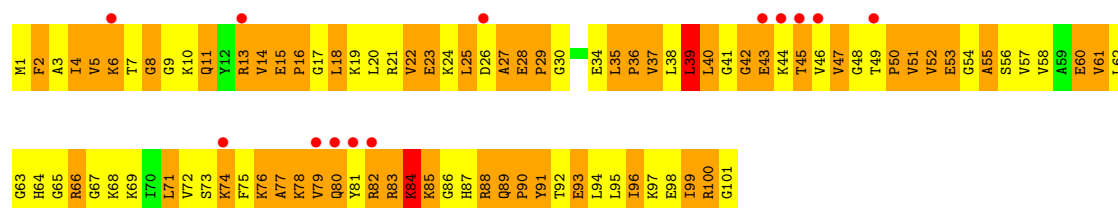
• Molecule 16: 50S ribosomal protein L19



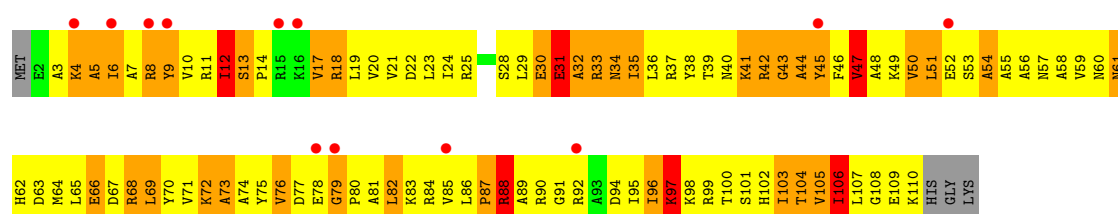
• Molecule 17: 50S ribosomal protein L20



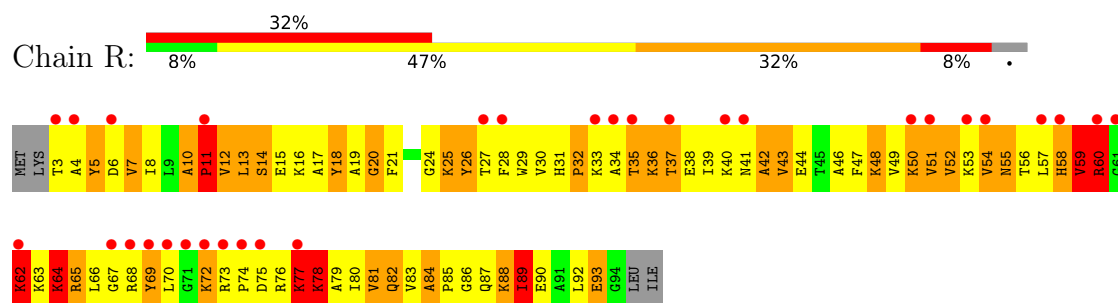
• Molecule 18: 50S ribosomal protein L21



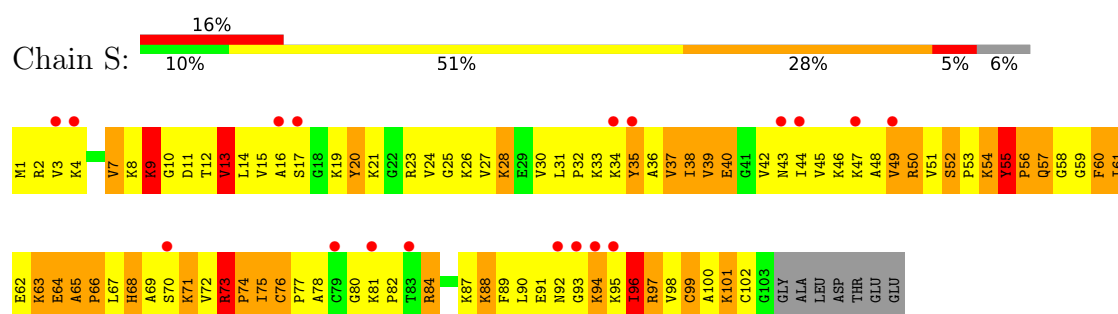
• Molecule 19: 50S ribosomal protein L22



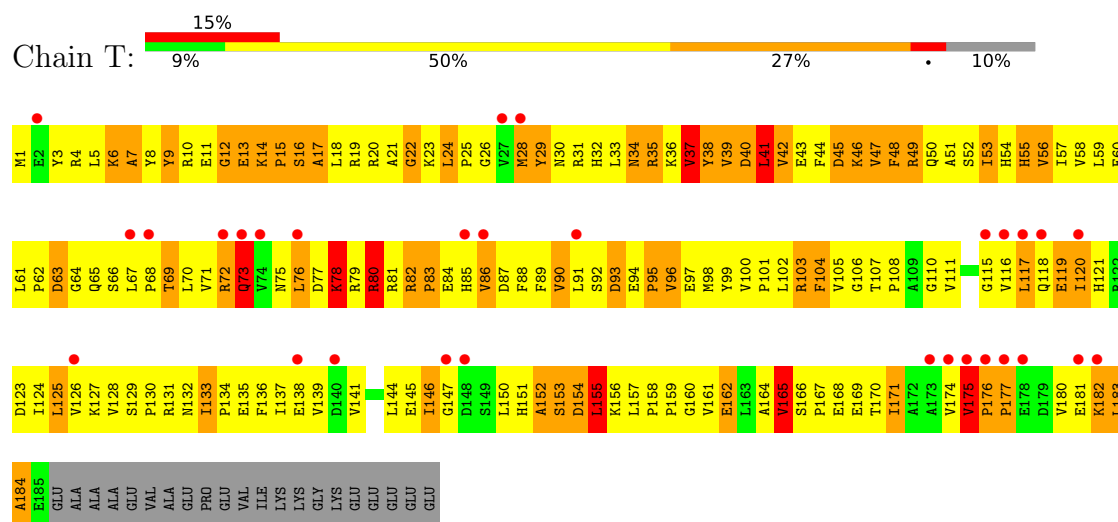
- Molecule 20: 50S ribosomal protein L23



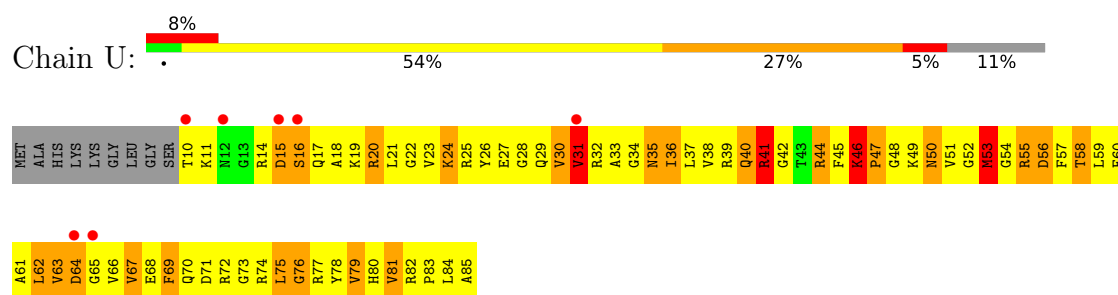
- Molecule 21: 50S ribosomal protein L24



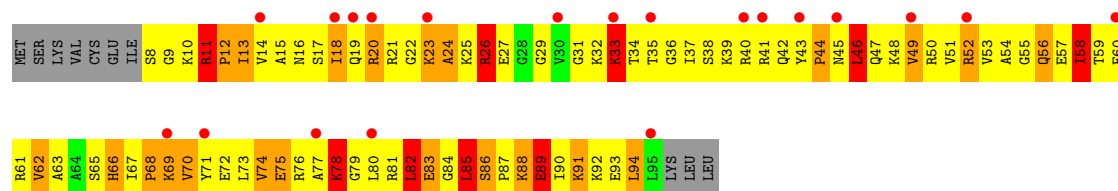
- Molecule 22: 50S ribosomal protein L25



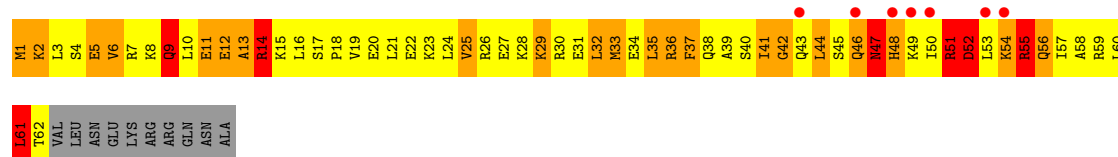
- Molecule 23: 50S ribosomal protein L27



- Molecule 24: 50S ribosomal protein L28



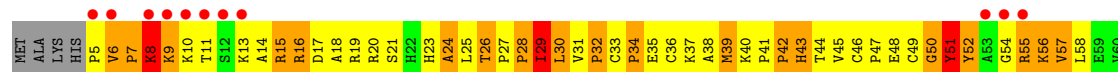
• Molecule 25: 50S ribosomal protein L29



• Molecule 26: 50S ribosomal protein L30



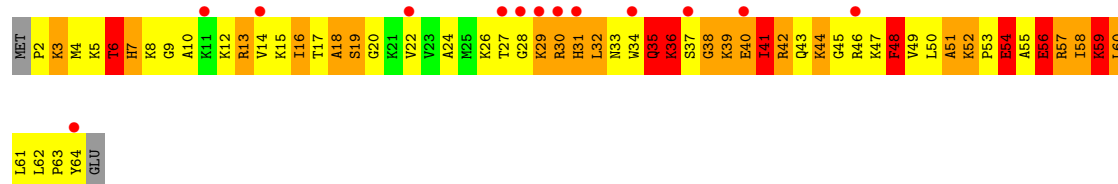
• Molecule 27: 50S ribosomal protein L32



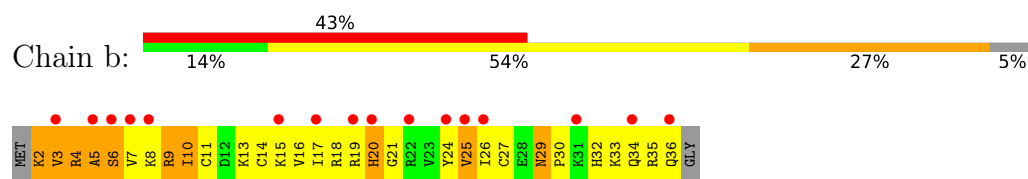
• Molecule 28: 50S ribosomal protein L34



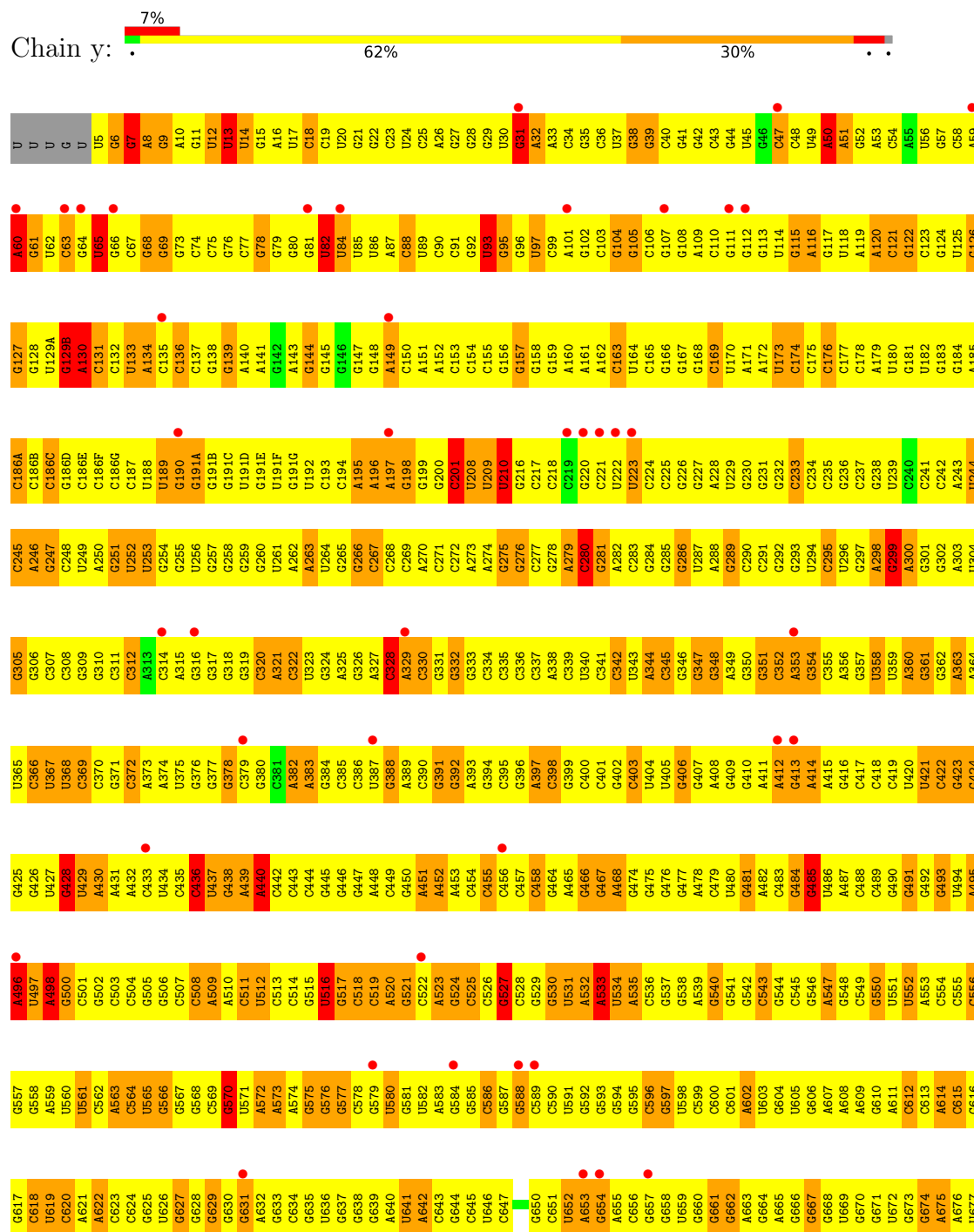
• Molecule 29: 50S ribosomal protein L35



• Molecule 30: 50S ribosomal protein L36



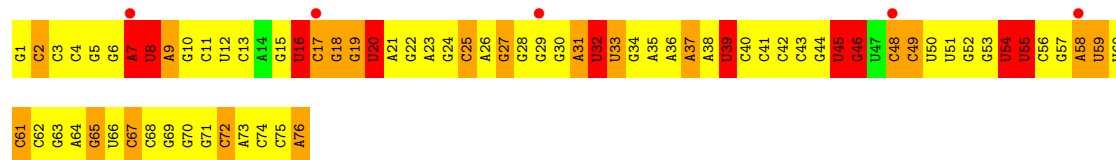
• Molecule 31: 16S SMALL SUBUNIT RIBOSOMAL RNA



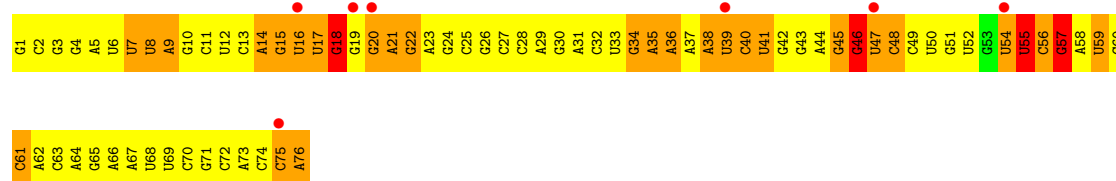
G1466	G1467	G1468	G1469	G1470	G1471	G1472	G1473	G1474	G1475	G1476	G1477	G1478	G1479	G1480	G1481	G1482	G1483	G1484	G1485	G1486	G1487	G1488	G1489	G1490	G1491	G1492	G1493	G1494	G1495	G1496	G1497	G1498	G1499	G1500	G1501	G1502	G1503	G1504	G1505	G1506	G1507	G1508	G1509	G1510	G1511	G1512	G1513	G1514	G1515	G1516	G1517	G1518	G1519	G1520	G1521	G1522	G1523	G1524	G1525						
G1401	G1402	G1403	G1404	G1405	G1406	G1407	G1408	G1409	G1410	G1411	G1412	G1413	G1414	G1415	G1416	G1417	G1418	G1419	G1420	G1421	G1422	G1423	G1424	G1425	G1426	G1427	G1428	G1429	G1430	G1431	G1432	G1433	G1434	G1435	G1436	G1437	G1438	G1439	G1440	G1441	G1442	G1443	G1444	G1445	G1446	G1447	G1448	G1449	G1450	G1451	G1452	G1453	G1454	G1455	G1456	G1457	G1458	G1459	G1460	G1461	G1462	G1463	G1464	G1465	
C1342	C1343	C1344	C1345	C1346	C1347	C1348	C1349	C1350	C1351	C1352	C1353	C1354	C1355	C1356	C1357	C1358	C1359	C1360	C1361	C1362	C1363	C1364	C1365	C1366	C1367	C1368	C1369	C1370	C1371	C1372	C1373	C1374	C1375	C1376	C1377	C1378	C1379	C1380	C1381	C1382	C1383	C1384	C1385	C1386	C1387	C1388	C1389	C1390	C1391	C1392	C1393	C1394	C1395	C1396	C1397	C1398	C1399	C1400							
C1282	C1283	C1284	C1285	C1286	C1287	C1288	C1289	C1290	C1291	C1292	C1293	C1294	C1295	C1296	C1297	C1298	C1299	C1300	C1301	C1302	C1303	C1304	C1305	C1306	C1307	C1308	C1309	C1310	C1311	C1312	C1313	C1314	C1315	C1316	C1317	C1318	C1319	C1320	C1321	C1322	C1323	C1324	C1325	C1326	C1327	C1328	C1329	C1330	C1331	C1332	C1333	C1334	C1335	C1336	C1337	C1338	C1339	C1340	C1341						
G1222	G1223	G1224	G1225	G1226	G1227	G1228	G1229	G1230	G1231	G1232	G1233	G1234	G1235	G1236	G1237	G1238	G1239	G1240	G1241	G1242	G1243	G1244	G1245	G1246	G1247	G1248	G1249	G1250	G1251	G1252	G1253	G1254	G1255	G1256	G1257	G1258	G1259	G1260	G1261	G1262	G1263	G1264	G1265	G1266	G1267	G1268	G1269	G1270	G1271	G1272	G1273	G1274	G1275	G1276	G1277	G1278	G1279	G1280	G1281						
C1161	C1162	C1163	C1164	C1165	C1166	C1167	C1168	C1169	C1170	C1171	C1172	C1173	C1174	C1175	C1176	C1177	C1178	C1179	C1180	C1181	C1182	C1183	C1184	C1185	C1186	C1187	C1188	C1189	C1190	C1191	C1192	C1193	C1194	C1195	C1196	C1197	C1198	C1199	C1200	C1201	C1202	C1203	C1204	C1205	C1206	C1207	C1208	C1209	C1210	C1211	C1212	C1213	C1214	C1215	C1216	C1217	C1218	C1219	C1220	C1221					
A1101	A1102	A1103	A1104	A1105	A1106	A1107	A1108	A1109	A1110	A1111	A1112	A1113	A1114	A1115	A1116	A1117	A1118	A1119	A1120	A1121	A1122	A1123	A1124	A1125	A1126	A1127	A1128	A1129	A1130	A1131	A1132	A1133	A1134	A1135	A1136	A1137	A1138	A1139	A1140	A1141	A1142	A1143	A1144	A1145	A1146	A1147	A1148	A1149	A1150	A1151	A1152	A1153	A1154	A1155	A1156	A1157	A1158	A1159	A1160						
A1041	A1042	A1043	A1044	A1045	A1046	A1047	A1048	A1049	A1050	A1051	A1052	A1053	A1054	A1055	A1056	A1057	A1058	A1059	A1060	A1061	A1062	A1063	A1064	A1065	A1066	A1067	A1068	A1069	A1070	A1071	A1072	A1073	A1074	A1075	A1076	A1077	A1078	A1079	A1080	A1081	A1082	A1083	A1084	A1085	A1086	A1087	A1088	A1089	A1090	A1091	A1092	A1093	A1094	A1095	A1096	A1097	A1098	A1099	A1100						
C984	C985	C986	C987	C988	C989	C990	C991	C992	C993	C994	C995	C996	C997	C998	C999	A1000	A1001	A1002	A1003	A1004	A1005	A1006	A1007	A1008	A1009	A1010	A1011	A1012	A1013	A1014	A1015	A1016	A1017	A1018	A1019	A1020	A1021	A1022	A1023	A1024	A1025	A1026	A1027	A1028	A1029	A1030	A1031	A1032	A1033	A1034	A1035	A1036	A1037	A1038	A1039	A1040									
C924	C925	C926	C927	C928	C929	C930	C931	C932	C933	C934	C935	C936	C937	C938	C939	C940	C941	C942	C943	C944	C945	C946	C947	C948	C949	C950	C951	C952	C953	C954	C955	C956	C957	C958	C959	C960	C961	C962	C963	C964	C965	C966	C967	C968	C969	C970	C971	C972	C973	C974	C975	C976	C977	C978	C979	C980									
A864	A865	A866	A867	A868	A869	A870	A871	A872	A873	A874	A875	A876	A877	A878	A879	A880	A881	A882	A883	A884	A885	A886	A887	A888	A889	A890	A891	A892	A893	A894	A895	A896	A897	A898	A899	A900	A901	A902	A903	A904	A905	A906	A907	A908	A909	A910	A911	A912	A913	A914	A915	A916	A917	A918	A919	A920	A921	A922	A923						
G798	G799	G800	G801	G802	G803	G804	G805	G806	G807	G808	G809	G810	G811	G812	G813	G814	G815	G816	G817	G818	G819	G820	G821	G822	G823	G824	G825	G826	G827	G828	G829	G830	G831	G832	G833	G834	G835	G836	G837	G838	G839	G840	G841	G842	G843	G844	G845	G846	G847	G848	G849	G850	G851	G852	G853	G854	G855	G856	G857	G858	G859	G860	G861	G862	G863
C738	C739	C740	C741	C742	C743	C744	C745	C746	C747	C748	C749	C750	C751	C752	C753	C754	C755	C756	C757	C758	C759	C760	C761	C762	C763	C764	C765	C766	C767	C768	C769	C770	C771	C772	C773	C774	C775	C776	C777	C778	C779	C780	C781	C782	C783	C784	C785	C786	C787	C788	C789	C790	C791	C792	C793	C794	C795	C796	C797						
U678	U679	U680	U681	U682	U683	U684	U685	U686	U687	U688	U689	U690	U691	U692	U693	U694	U695	U696	U697	U698	U699	U700	U701	U702	U703	U704	U705	U706	U707	U708	U709	U710	U711	U712	U713	U714	U715	U716	U717	U718	U719	U720	U721	U722	U723	U724	U725	U726	U727	U728	U729	U730	U731	U732	U733	U734	U735	U736	U737						



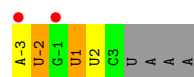
• Molecule 32: P-site PHE-tRNA



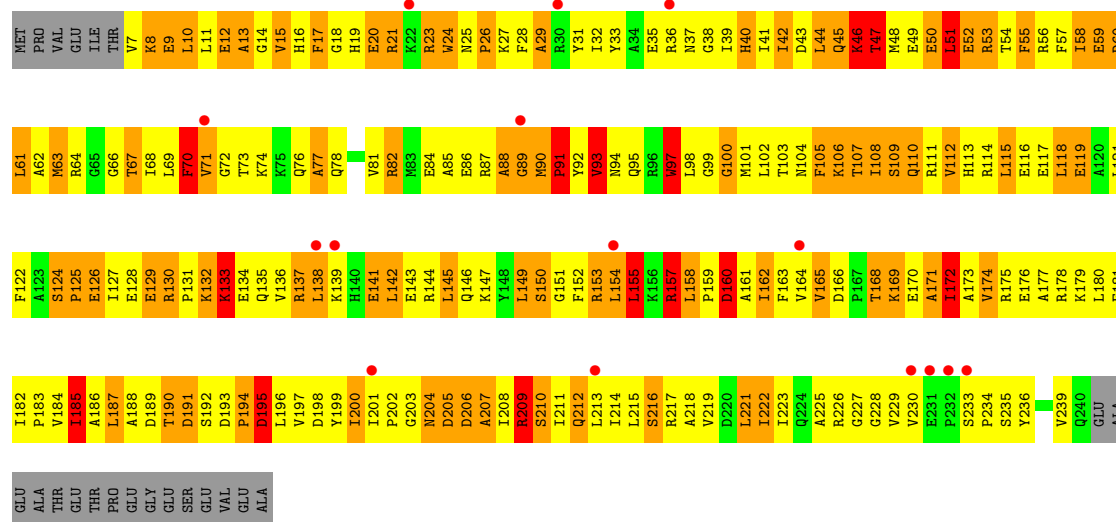
• Molecule 33: E-tRNA



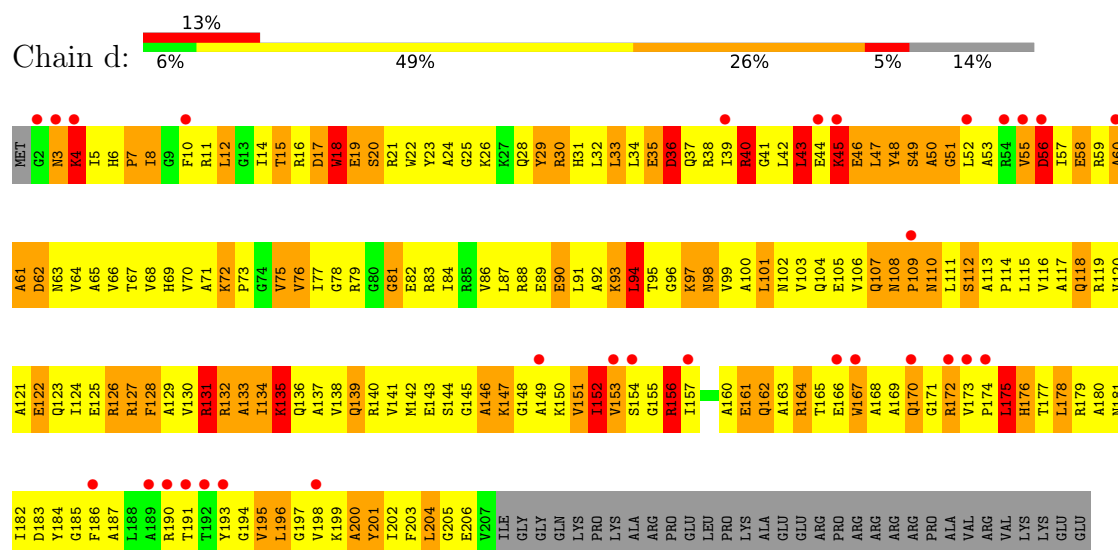
• Molecule 34: MRNA



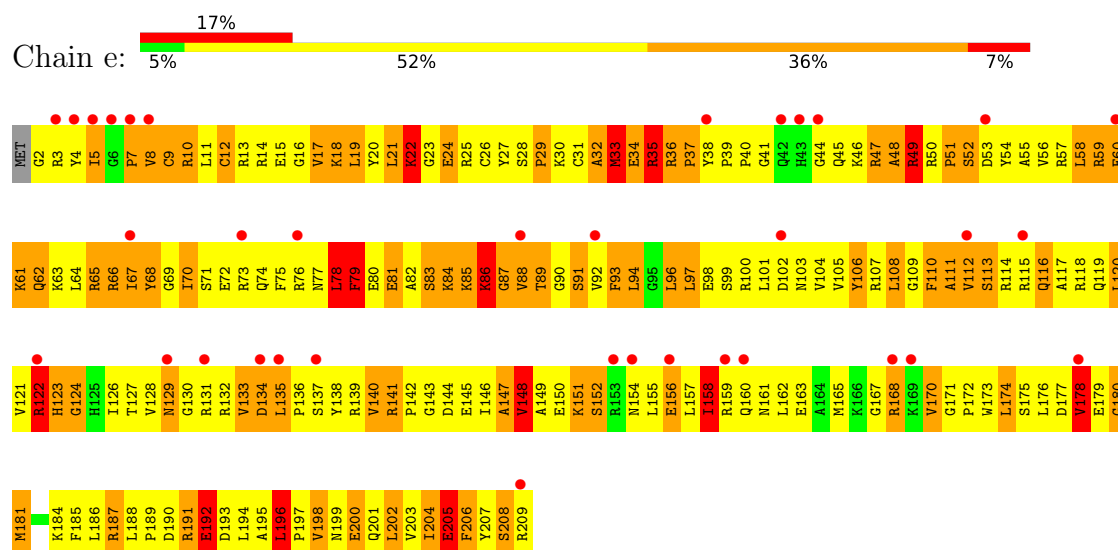
• Molecule 35: 30S ribosomal protein S2



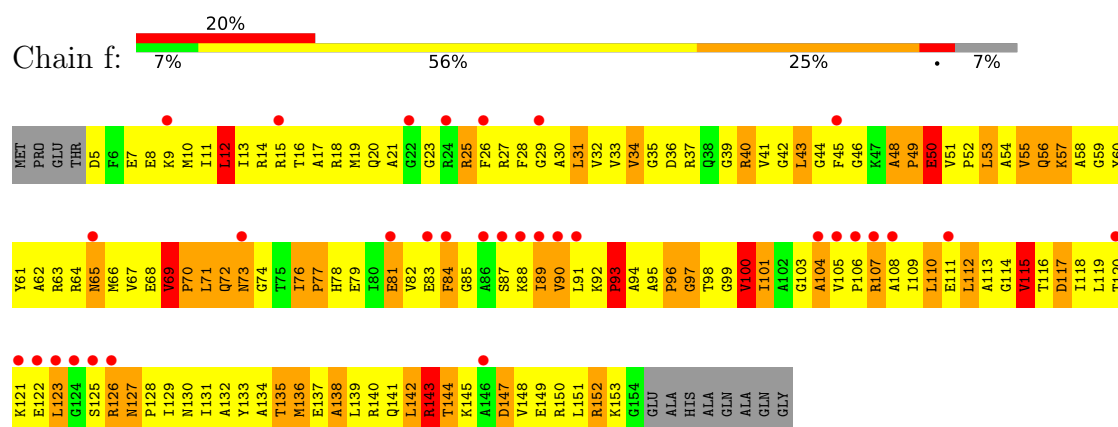
- Molecule 36: 30S ribosomal protein S3



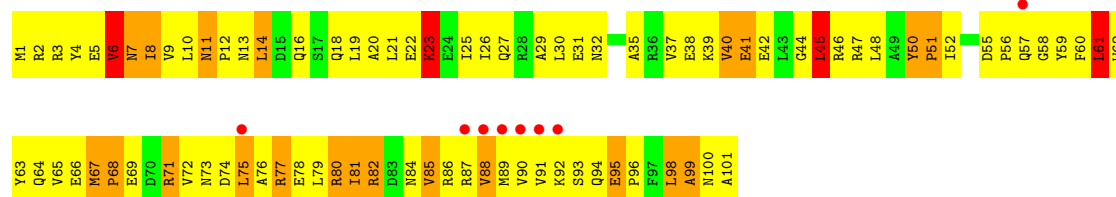
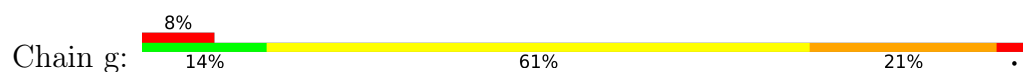
- Molecule 37: 30S ribosomal protein S4



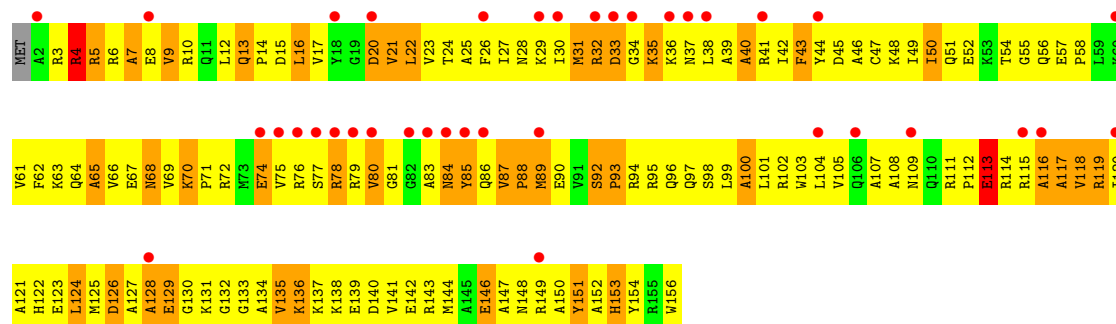
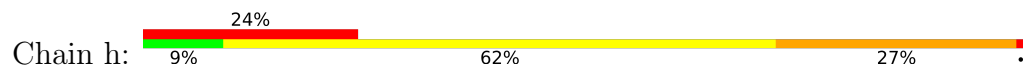
- Molecule 38: 30S ribosomal protein S5



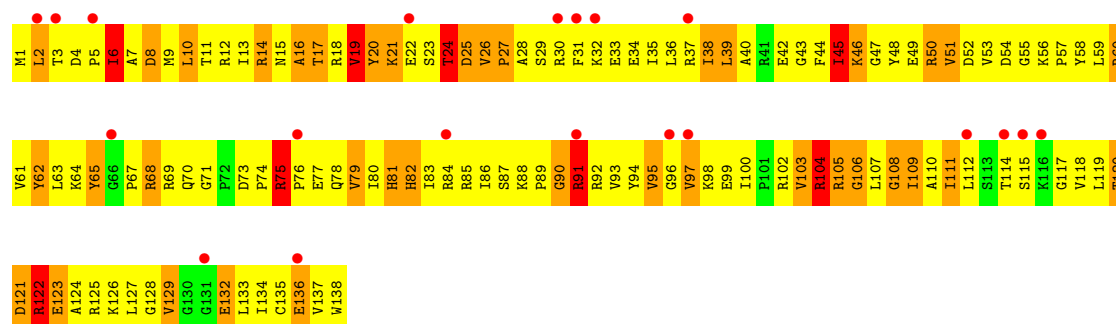
- Molecule 39: 30S ribosomal protein S6



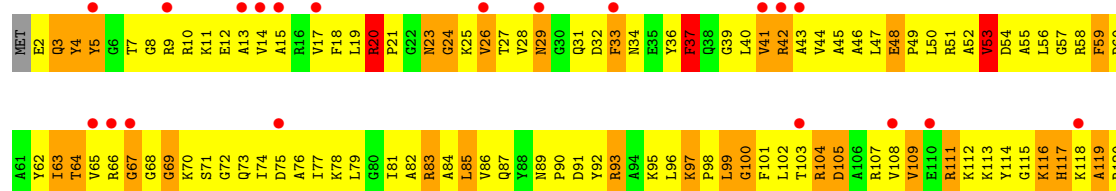
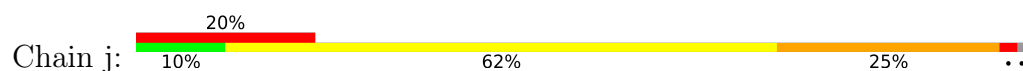
• Molecule 40: 30S ribosomal protein S7

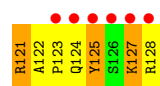


• Molecule 41: 30S ribosomal protein S8

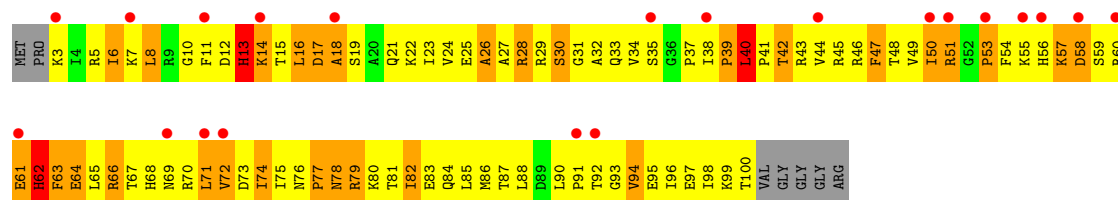


• Molecule 42: 30S ribosomal protein S9

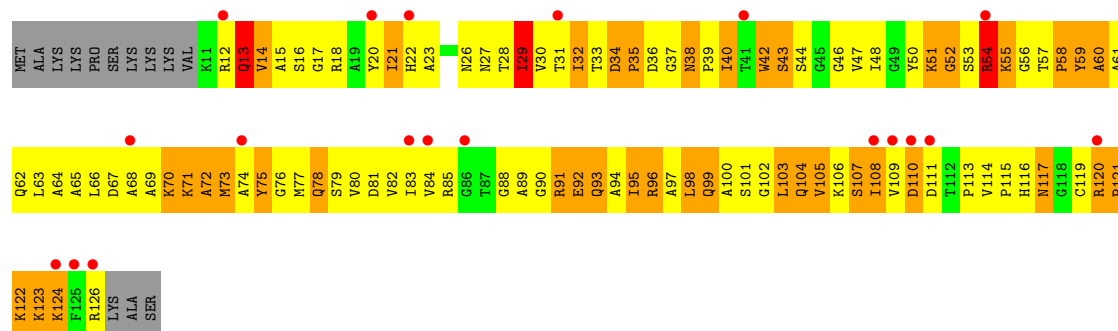




• Molecule 43: 30S ribosomal protein S10



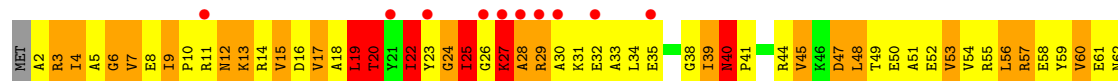
• Molecule 44: 30S ribosomal protein S11

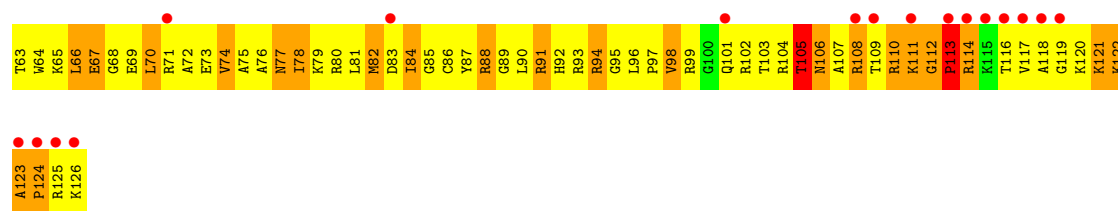


• Molecule 45: 30S ribosomal protein S12

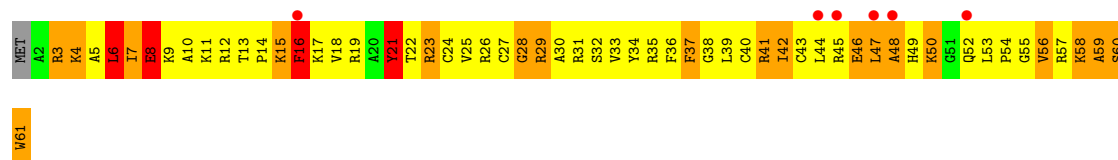


• Molecule 46: 30S ribosomal protein S13

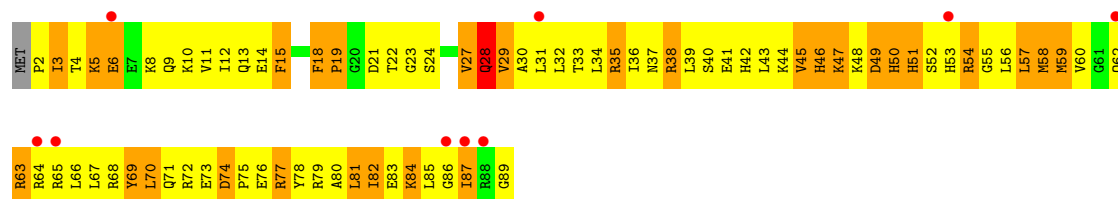
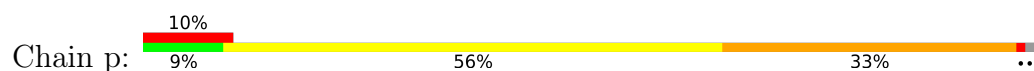




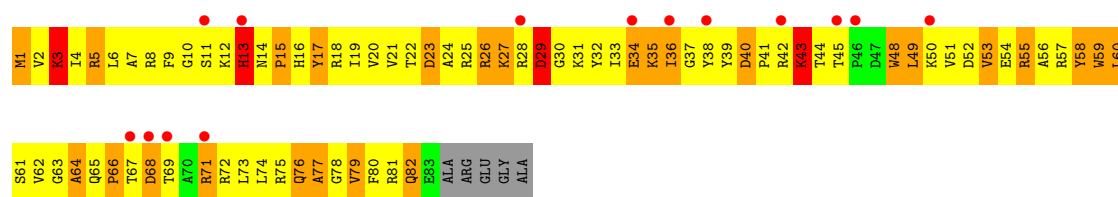
• Molecule 47: 30S ribosomal protein S14



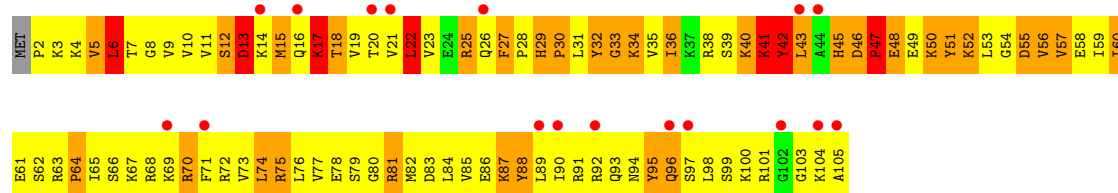
• Molecule 48: 30S ribosomal protein S15



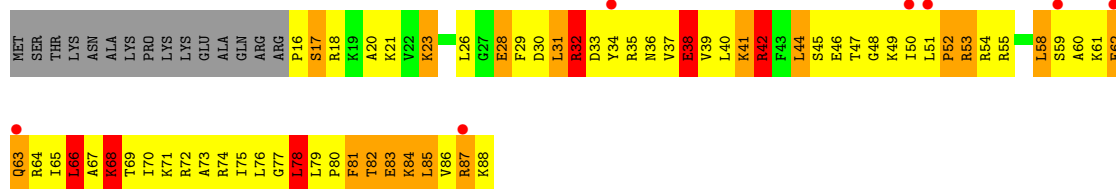
• Molecule 49: 30S ribosomal protein S16



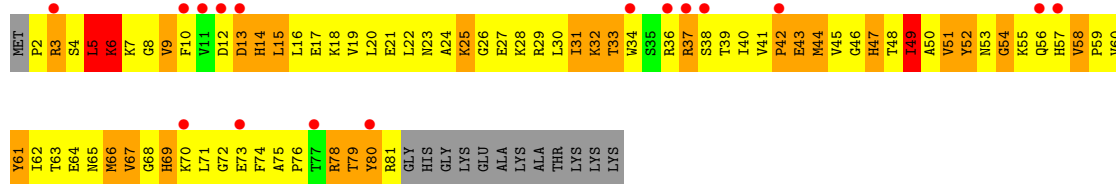
• Molecule 50: 30S ribosomal protein S17



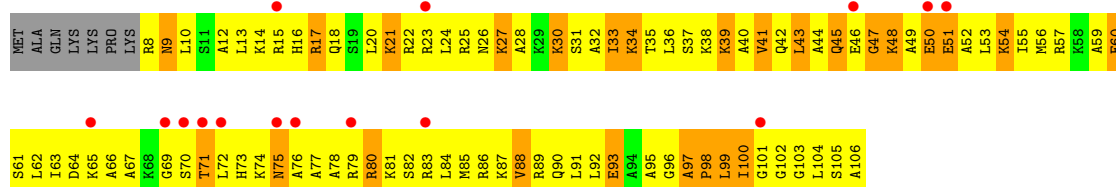
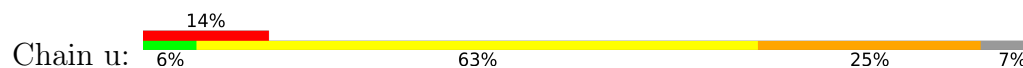
• Molecule 51: 30S ribosomal protein S18



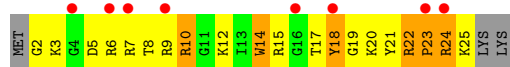
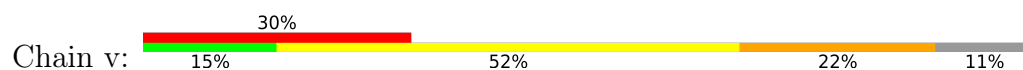
• Molecule 52: 30S ribosomal protein S19



• Molecule 53: 30S ribosomal protein S20



• Molecule 54: 30S ribosomal protein Thx



4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	507.81Å 507.81Å 689.52Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 – 3.71 30.00 – 3.71	Depositor EDS
% Data completeness (in resolution range)	100.0 (30.00-3.71) 97.7 (30.00-3.71)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.68 (at 3.67Å)	Xtriage
Refinement program	REFMAC 5.2.0019, CNS	Depositor
R, R_{free}	0.348 , 0.353 0.334 , 0.340	Depositor DCC
R_{free} test set	11428 reflections (2.48%)	wwPDB-VP
Wilson B-factor (Å ²)	40.4	Xtriage
Anisotropy	0.192	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.00 , 0.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.26$, $\langle L^2 \rangle = 0.11$	Xtriage
Estimated twinning fraction	0.228 for -1/2*h+1/2*k-1/2*l,1/2*h-1/2*k-1/2*l,-h-k 0.219 for -1/2*h-1/2*k+1/2*l,-1/2*h-1/2*k-1/2*l,h-k	Xtriage
F_o, F_c correlation	0.80	EDS
Total number of atoms	146532	wwPDB-VP
Average B, all atoms (Å ²)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.09% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 4SU, MA6, MIA, 2MG, M2G, H2U, UR3, PSU, 5MU, 4OC, 5MC, 7MG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	w	0.79	35/69679 (0.1%)	1.00	197/108779 (0.2%)
2	x	0.70	0/2878	0.93	11/4490 (0.2%)
3	A	0.67	0/1015	0.96	9/1369 (0.7%)
4	B	0.63	0/2165	1.02	12/2919 (0.4%)
5	C	0.73	0/1574	1.08	9/2125 (0.4%)
6	D	0.75	0/1551	0.99	7/2101 (0.3%)
7	E	0.76	1/1492 (0.1%)	1.00	7/2006 (0.3%)
8	F	0.73	0/1345	1.08	10/1819 (0.5%)
9	G	0.68	0/1171	1.01	6/1583 (0.4%)
10	H	0.61	0/1130	0.89	6/1525 (0.4%)
11	I	0.72	0/942	1.10	12/1268 (0.9%)
12	J	0.63	0/1131	0.91	4/1504 (0.3%)
13	K	0.80	0/1110	1.12	11/1483 (0.7%)
14	L	0.74	2/982 (0.2%)	1.03	11/1312 (0.8%)
15	M	0.69	0/856	0.86	0/1138
16	N	0.63	0/1157	1.00	5/1544 (0.3%)
17	O	0.66	0/982	1.06	4/1306 (0.3%)
18	P	0.73	0/790	1.01	10/1057 (0.9%)
19	Q	0.74	0/878	1.08	8/1179 (0.7%)
20	R	0.88	1/739 (0.1%)	1.12	6/993 (0.6%)
21	S	0.80	0/806	1.09	7/1074 (0.7%)
22	T	0.75	0/1507	1.12	18/2045 (0.9%)
23	U	0.76	0/613	0.99	4/816 (0.5%)
24	V	0.67	0/701	0.89	1/932 (0.1%)
25	W	0.64	0/522	0.98	2/690 (0.3%)
26	X	0.71	0/482	1.33	8/646 (1.2%)
27	Y	0.66	0/449	1.08	5/606 (0.8%)
28	Z	1.04	0/426	1.20	7/561 (1.2%)
29	a	0.67	0/515	1.04	4/679 (0.6%)
30	b	0.73	0/297	1.04	1/392 (0.3%)
31	y	0.73	11/35859 (0.0%)	0.97	80/55966 (0.1%)
32	z	0.72	1/1603 (0.1%)	0.96	7/2497 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	0	0.67	0/1791	0.87	3/2791 (0.1%)
34	1	0.82	0/135	0.95	0/208
35	c	0.71	0/1935	0.94	9/2609 (0.3%)
36	d	0.66	0/1636	0.94	5/2205 (0.2%)
37	e	0.65	0/1733	0.97	9/2318 (0.4%)
38	f	0.66	0/1162	1.03	12/1564 (0.8%)
39	g	0.77	0/856	1.13	7/1154 (0.6%)
40	h	0.67	0/1276	1.08	12/1709 (0.7%)
41	i	0.68	0/1136	1.03	6/1527 (0.4%)
42	j	0.59	0/1029	0.95	6/1378 (0.4%)
43	k	0.71	0/807	0.91	3/1085 (0.3%)
44	l	0.69	0/879	1.06	11/1187 (0.9%)
45	m	0.77	0/986	1.12	10/1320 (0.8%)
46	n	0.66	0/1008	1.01	12/1347 (0.9%)
47	o	0.61	0/501	0.85	1/664 (0.2%)
48	p	0.61	0/745	1.04	5/992 (0.5%)
49	q	0.63	0/716	1.00	6/963 (0.6%)
50	r	0.70	0/870	0.92	2/1159 (0.2%)
51	s	0.64	0/604	0.98	4/801 (0.5%)
52	t	0.69	0/661	0.96	3/890 (0.3%)
53	u	0.24	0/764	0.70	1/1006 (0.1%)
54	v	0.69	0/212	0.76	0/277
All	All	0.75	51/158789 (0.0%)	1.00	616/237558 (0.3%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	w	0	24
2	x	2	0
31	y	0	8
All	All	2	32

All (51) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	w	926	A	O3'-P	24.06	1.97	1.61
1	w	1506	C	O3'-P	23.84	1.97	1.61
1	w	1171	G	O3'-P	22.48	1.94	1.61
1	w	890	A	O3'-P	22.42	1.94	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	w	1481	U	O3'-P	19.31	1.90	1.61
1	w	154(B)	C	O3'-P	19.26	1.90	1.61
1	w	1743	G	O3'-P	18.83	1.89	1.61
31	y	102(C)	C	O3'-P	17.68	1.87	1.61
1	w	41	C	O3'-P	16.79	1.86	1.61
1	w	1133	U	O3'-P	16.67	1.86	1.61
1	w	1712	C	O3'-P	16.66	1.86	1.61
1	w	99	U	O3'-P	16.11	1.85	1.61
1	w	149(B)	A	O3'-P	15.91	1.85	1.61
1	w	1864	U	O3'-P	15.09	1.83	1.61
1	w	2219	G	O3'-P	14.63	1.83	1.61
1	w	2199	A	O3'-P	14.53	1.82	1.61
1	w	155	C	O3'-P	14.35	1.82	1.61
1	w	489	G	O3'-P	14.29	1.82	1.61
1	w	1735	U	O3'-P	14.19	1.82	1.61
31	y	458	C	O3'-P	14.08	1.82	1.61
1	w	114(B)	A	O3'-P	13.84	1.81	1.61
1	w	2213	U	O3'-P	13.73	1.81	1.61
31	y	843	U	O3'-P	13.24	1.81	1.61
1	w	122(A)	C	O3'-P	12.92	1.80	1.61
31	y	210	U	O3'-P	12.85	1.80	1.61
1	w	366(B)	C	O3'-P	12.81	1.80	1.61
1	w	163(B)	C	O3'-P	12.23	1.79	1.61
1	w	1872	A	O3'-P	12.22	1.79	1.61
1	w	165	U	O3'-P	12.18	1.79	1.61
1	w	1451	C	O3'-P	11.41	1.78	1.61
1	w	436	C	O3'-P	11.19	1.77	1.61
1	w	1583	A	O3'-P	11.13	1.77	1.61
14	L	38	VAL	CA-CB	10.68	1.59	1.54
1	w	144(B)	A	O3'-P	10.58	1.77	1.61
1	w	537	C	O3'-P	10.37	1.76	1.61
31	y	838	G	O3'-P	10.29	1.76	1.61
31	y	1167	A	O3'-P	-9.87	1.46	1.61
31	y	82	U	O3'-P	-9.74	1.46	1.61
1	w	712(B)	A	O3'-P	9.62	1.75	1.61
1	w	1718	G	O3'-P	8.53	1.74	1.61
1	w	2799	A	O3'-P	8.52	1.74	1.61
31	y	103(C)	G	O3'-P	8.43	1.73	1.61
7	E	43	LEU	CA-C	6.80	1.55	1.52
31	y	1498	UR3	O3'-P	6.50	1.62	1.56
20	R	55	ASN	CA-C	6.12	1.55	1.52
31	y	1443	G	O3'-P	6.12	1.70	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	y	440	A	O3'-P	5.59	1.69	1.61
14	L	8	ARG	CA-C	5.50	1.60	1.52
32	z	8	4SU	O3'-P	5.44	1.61	1.56
1	w	2499	C	C1'-N1	5.12	1.56	1.48
1	w	790	C	C1'-N1	5.05	1.56	1.48

All (616) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	F	149	ARG	N-CA-C	-17.44	92.35	111.36
1	w	1822	G	N9-C1'-C2'	-14.88	89.67	112.00
1	w	1577	C	N1-C1'-C2'	-12.03	93.96	112.00
1	w	712(B)	A	P-O3'-C3'	-11.74	102.58	120.20
4	B	23	GLU	N-CA-C	-11.38	100.91	112.97
39	g	50	TYR	CA-C-N	11.05	130.97	120.03
39	g	50	TYR	C-N-CA	11.05	130.97	120.03
20	R	10	ALA	CA-C-N	10.98	133.57	119.84
20	R	10	ALA	C-N-CA	10.98	133.57	119.84
31	y	93	U	N1-C1'-C2'	-10.89	95.66	112.00
4	B	123	ALA	CA-C-N	10.55	133.03	119.84
4	B	123	ALA	C-N-CA	10.55	133.03	119.84
40	h	87	VAL	N-CA-C	10.29	118.59	109.02
19	Q	106	ILE	N-CA-C	10.13	122.15	108.27
31	y	832	C	N1-C1'-C2'	-10.12	96.82	112.00
1	w	2471	C	N1-C1'-C2'	-9.95	97.08	112.00
1	w	1516	U	N1-C1'-C2'	-9.78	97.32	112.00
40	h	126	ASP	N-CA-C	-9.61	100.66	112.38
1	w	489	G	P-O3'-C3'	-9.53	105.90	120.20
16	N	76	PHE	CA-C-N	9.45	131.65	119.84
16	N	76	PHE	C-N-CA	9.45	131.65	119.84
1	w	1274	A	N9-C1'-C2'	-9.39	97.92	112.00
1	w	926	A	P-O3'-C3'	-9.30	106.25	120.20
2	x	12	C	C2'-C3'-O3'	9.30	123.45	109.50
1	w	1863	G	N9-C1'-C2'	-9.13	98.30	112.00
31	y	436	C	N1-C1'-C2'	-9.13	98.31	112.00
4	B	155	LEU	N-CA-C	9.08	119.90	108.19
22	T	82	ARG	CA-C-N	9.08	131.19	119.84
22	T	82	ARG	C-N-CA	9.08	131.19	119.84
18	P	4	ILE	N-CA-C	9.06	120.31	108.35
1	w	890	A	P-O3'-C3'	-9.05	106.62	120.20
31	y	1517	G	C4'-C3'-O3'	8.97	126.46	113.00
1	w	945	A	N9-C1'-C2'	8.93	127.39	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	X	40	THR	CA-C-N	8.88	130.94	119.84
26	X	40	THR	C-N-CA	8.88	130.94	119.84
1	w	1454	U	N1-C1'-C2'	-8.78	98.83	112.00
25	W	52	ASP	N-CA-C	-8.78	101.83	112.54
35	c	162	ILE	N-CA-C	8.67	119.84	107.88
1	w	1506	C	P-O3'-C3'	-8.61	107.29	120.20
31	y	1053	G	C2'-C3'-O3'	8.50	122.25	109.50
21	S	73	ARG	CA-C-N	8.49	130.45	119.84
21	S	73	ARG	C-N-CA	8.49	130.45	119.84
48	p	74	ASP	CA-C-N	8.48	128.18	119.19
48	p	74	ASP	C-N-CA	8.48	128.18	119.19
1	w	1743	G	P-O3'-C3'	-8.44	107.55	120.20
1	w	1627	G	N9-C1'-C2'	-8.33	99.50	112.00
1	w	2393	A	N9-C1'-C2'	-8.31	99.53	112.00
39	g	50	TYR	N-CA-C	8.30	115.69	108.22
22	T	14	LYS	CA-C-N	8.28	130.19	119.84
22	T	14	LYS	C-N-CA	8.28	130.19	119.84
4	B	243	GLY	N-CA-C	-8.28	105.22	115.08
1	w	338	G	N9-C1'-C2'	-8.27	99.59	112.00
13	K	57	HIS	N-CA-C	-8.26	101.97	113.37
20	R	62	LYS	N-CA-C	8.24	118.83	108.19
1	w	1566	A	C2'-C3'-O3'	8.23	121.84	109.50
4	B	194	GLY	N-CA-C	8.21	122.04	110.38
41	i	14	ARG	N-CA-C	-8.17	103.06	112.87
45	m	32	ARG	N-CA-C	8.15	117.86	108.49
2	x	14	U	C4'-C3'-O3'	8.14	125.20	113.00
31	y	93	U	P-O3'-C3'	-8.11	108.03	120.20
1	w	2848	G	N9-C1'-C2'	-8.11	99.84	112.00
2	x	24	G	C4'-C3'-O3'	8.07	125.11	113.00
1	w	1171	G	P-O3'-C3'	-8.05	108.13	120.20
1	w	241	A	N9-C1'-C2'	8.01	126.02	114.00
41	i	109	ILE	N-CA-C	7.95	118.72	110.05
40	h	92	SER	CA-C-N	7.92	129.73	119.84
40	h	92	SER	C-N-CA	7.92	129.73	119.84
31	y	686	U	C2'-C3'-O3'	7.88	121.32	109.50
5	C	125	GLY	CA-C-N	7.78	129.56	119.84
5	C	125	GLY	C-N-CA	7.78	129.56	119.84
28	Z	6	GLN	CA-C-N	7.78	129.57	119.84
28	Z	6	GLN	C-N-CA	7.78	129.57	119.84
28	Z	12	ARG	N-CA-C	-7.76	101.55	111.02
11	I	21	CYS	N-CA-C	7.75	122.15	110.14
30	b	5	ALA	N-CA-C	7.72	120.31	108.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	102(C)	C	P-O3'-C3'	-7.69	108.66	120.20
1	w	1668	A	C2'-C3'-O3'	7.69	121.03	109.50
1	w	1577	C	C4'-C3'-O3'	7.68	124.52	113.00
1	w	1301	A	C4'-C3'-O3'	7.67	120.90	109.40
22	T	69	THR	N-CA-C	7.66	118.71	108.38
8	F	142	GLY	N-CA-C	-7.65	105.17	114.66
3	A	220	GLY	CA-C-N	7.63	129.38	119.84
3	A	220	GLY	C-N-CA	7.63	129.38	119.84
2	x	21	G	C2'-C3'-O3'	7.61	125.11	113.70
46	n	112	GLY	CA-C-N	7.59	129.33	119.84
46	n	112	GLY	C-N-CA	7.59	129.33	119.84
5	C	31	CYS	CA-C-N	7.55	127.50	120.03
5	C	31	CYS	C-N-CA	7.55	127.50	120.03
1	w	270(E)	C	N1-C1'-C2'	7.54	123.31	112.00
1	w	712(B)	A	N9-C1'-C2'	-7.53	100.70	112.00
5	C	23	VAL	N-CA-C	7.50	118.23	107.88
1	w	2451	A	N9-C1'-C2'	-7.46	100.81	112.00
11	I	47	ILE	CA-C-N	7.44	129.14	119.84
11	I	47	ILE	C-N-CA	7.44	129.14	119.84
31	y	97	U	P-O3'-C3'	-7.38	109.13	120.20
38	f	127	ASN	CA-C-N	7.35	129.03	119.84
38	f	127	ASN	C-N-CA	7.35	129.03	119.84
31	y	210	U	P-O3'-C3'	-7.32	109.22	120.20
45	m	84	ILE	N-CA-C	7.31	119.59	108.71
31	y	495	A	C4'-C3'-O3'	7.29	120.33	109.40
37	e	196	LEU	CA-C-N	7.25	128.91	119.84
37	e	196	LEU	C-N-CA	7.25	128.91	119.84
16	N	19	LEU	CA-C-N	7.23	128.88	119.84
16	N	19	LEU	C-N-CA	7.23	128.88	119.84
51	s	32	ARG	N-CA-C	-7.23	104.59	113.19
22	T	86	VAL	N-CA-C	7.22	119.22	108.96
1	w	873	G	N9-C1'-C2'	-7.22	101.17	112.00
31	y	1230	C	N1-C1'-C2'	-7.19	101.22	112.00
1	w	155	C	P-O3'-C3'	-7.16	109.46	120.20
2	x	24	G	C4'-C3'-C2'	7.14	109.74	102.60
7	E	56	ALA	N-CA-C	-7.12	103.21	110.97
28	Z	43	THR	CA-C-N	7.12	128.74	119.84
28	Z	43	THR	C-N-CA	7.12	128.74	119.84
4	B	177	LEU	CA-C-N	7.12	128.73	119.84
4	B	177	LEU	C-N-CA	7.12	128.73	119.84
36	d	72	LYS	CA-C-N	7.10	126.93	119.05
36	d	72	LYS	C-N-CA	7.10	126.93	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	f	107	ARG	N-CA-C	-7.10	103.15	111.03
2	x	14	U	C4'-C3'-C2'	7.09	109.69	102.60
8	F	67	LEU	N-CA-C	-7.08	104.62	113.18
45	m	11	ARG	N-CA-C	-7.07	102.99	111.69
14	L	9	LYS	N-CA-C	7.03	114.54	108.78
45	m	89	VAL	N-CA-C	6.99	118.41	108.42
9	G	79	ILE	CA-C-N	6.98	127.01	119.89
9	G	79	ILE	C-N-CA	6.98	127.01	119.89
44	l	42	TRP	N-CA-C	6.96	117.06	107.73
13	K	38	GLU	CA-C-N	6.95	128.53	119.84
13	K	38	GLU	C-N-CA	6.95	128.53	119.84
29	a	7	HIS	N-CA-C	6.95	120.29	107.99
1	w	537	C	P-O3'-C3'	-6.92	109.82	120.20
8	F	140	LYS	N-CA-C	-6.92	104.71	113.01
2	x	24	G	C2'-C3'-O3'	6.91	124.07	113.70
1	w	114(B)	A	P-O3'-C3'	-6.91	109.83	120.20
31	y	890	G	N9-C1'-C2'	-6.89	101.66	112.00
1	w	1191	G	N9-C1'-C2'	-6.86	101.72	112.00
41	i	75	ARG	CA-C-N	6.82	126.86	119.90
41	i	75	ARG	C-N-CA	6.82	126.86	119.90
1	w	913	U	C4'-C3'-O3'	6.81	119.61	109.40
31	y	280	C	N1-C1'-C2'	-6.81	101.78	112.00
1	w	1126	A	C2'-C3'-O3'	6.76	119.64	109.50
31	y	189	U	N1-C1'-C2'	-6.75	101.88	112.00
29	a	58	ILE	N-CA-C	6.73	116.83	110.30
2	x	21	G	C4'-C3'-C2'	6.72	109.32	102.60
46	n	88	ARG	N-CA-C	-6.71	103.61	112.34
43	k	62	HIS	N-CA-C	6.70	119.12	109.14
31	y	328	C	C4'-C3'-O3'	6.70	119.44	109.40
21	S	3	VAL	N-CA-C	6.66	113.34	106.21
1	w	728	G	N9-C1'-C2'	6.66	121.98	112.00
46	n	25	ILE	N-CA-C	6.64	118.44	106.61
31	y	1517	G	O4'-C4'-C3'	-6.61	97.39	104.00
1	w	1192	G	O4'-C1'-C2'	-6.61	100.99	107.60
1	w	1799	G	C2'-C3'-O3'	6.60	119.41	109.50
31	y	50	A	C2'-C3'-O3'	6.59	119.39	109.50
31	y	201	C	P-O3'-C3'	-6.58	110.33	120.20
1	w	2051	A	C4'-C3'-O3'	6.56	119.24	109.40
1	w	888	C	C2'-C3'-O3'	6.55	119.32	109.50
17	O	39	LEU	N-CA-C	-6.54	103.84	112.34
13	K	40	ALA	N-CA-C	6.53	117.09	107.88
38	f	69	VAL	CA-C-N	6.53	128.00	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	f	69	VAL	C-N-CA	6.53	128.00	119.84
2	x	14	U	C2'-C3'-O3'	6.51	123.46	113.70
5	C	73	GLU	CA-C-N	6.50	129.25	120.79
5	C	73	GLU	C-N-CA	6.50	129.25	120.79
45	m	57	VAL	N-CA-C	6.50	117.61	107.28
18	P	89	GLN	CA-C-N	6.50	127.96	119.84
18	P	89	GLN	C-N-CA	6.50	127.96	119.84
31	y	189	U	C4'-C3'-O3'	6.50	122.75	113.00
31	y	832	C	C4'-C3'-O3'	6.50	122.74	113.00
1	w	2765	A	N9-C1'-C2'	6.49	121.73	112.00
1	w	1163	G	C3'-C2'-O2'	6.48	120.42	110.70
7	E	160	VAL	N-CA-C	6.47	117.61	108.17
19	Q	13	SER	CA-C-N	6.47	126.39	119.28
19	Q	13	SER	C-N-CA	6.47	126.39	119.28
39	g	51	PRO	N-CA-C	6.45	121.09	111.41
2	x	21	G	C4'-C3'-O3'	6.45	122.67	113.00
26	X	20	LYS	N-CA-C	6.45	118.31	111.28
37	e	33	MET	N-CA-C	-6.44	103.39	111.11
1	w	1944	U	C1'-C2'-O2'	-6.42	102.17	111.80
22	T	175	VAL	CA-C-N	6.42	126.99	120.38
22	T	175	VAL	C-N-CA	6.42	126.99	120.38
1	w	2865	U	N1-C1'-C2'	-6.41	102.39	112.00
14	L	9	LYS	CB-CA-C	-6.41	107.85	117.07
8	F	147	ASN	N-CA-C	-6.40	104.54	113.37
6	D	114	ARG	N-CA-C	-6.40	105.33	113.01
40	h	87	VAL	CA-C-N	6.40	127.83	119.84
40	h	87	VAL	C-N-CA	6.40	127.83	119.84
3	A	46	ALA	N-CA-C	6.39	116.44	108.19
31	y	1201	A	N9-C1'-C2'	6.38	121.56	112.00
1	w	2031	A	C4'-C3'-O3'	6.37	118.95	109.40
44	l	14	VAL	N-CA-C	6.35	113.01	106.21
1	w	1385	G	C4'-C3'-O3'	6.35	122.52	113.00
1	w	1385	G	N9-C1'-C2'	-6.34	102.49	112.00
31	y	570	G	N9-C1'-C2'	6.33	121.50	112.00
1	w	2225	A	C2'-C3'-O3'	6.33	119.00	109.50
1	w	1618	A	C2'-C3'-O3'	6.33	118.99	109.50
22	T	37	VAL	N-CA-C	6.32	117.82	108.65
31	y	1455	G	P-O3'-C3'	-6.32	110.72	120.20
38	f	76	ILE	CA-C-N	6.31	127.73	119.84
38	f	76	ILE	C-N-CA	6.31	127.73	119.84
1	w	1199	U	N1-C1'-C2'	6.31	121.46	112.00
14	L	22	ARG	N-CA-C	-6.30	104.46	111.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	1822	G	C4'-C3'-O3'	6.30	122.45	113.00
11	I	92	GLU	CA-C-N	6.30	127.71	119.84
11	I	92	GLU	C-N-CA	6.30	127.71	119.84
4	B	103	ARG	N-CA-C	6.30	118.43	108.79
32	z	7	A	C2'-C3'-O3'	6.30	123.14	113.70
40	h	13	GLN	CA-C-N	6.29	127.71	119.84
40	h	13	GLN	C-N-CA	6.29	127.71	119.84
1	w	1626	G	N9-C1'-C2'	-6.29	102.57	112.00
20	R	59	VAL	N-CA-C	6.28	122.40	109.34
40	h	50	ILE	N-CA-C	-6.28	103.20	111.05
10	H	75	VAL	N-CA-C	6.27	117.95	108.80
9	G	98	ALA	N-CA-C	-6.26	104.74	112.38
33	0	18	G	N9-C1'-C2'	6.26	121.40	112.00
1	w	1992	G	C2'-C3'-O3'	6.26	118.89	109.50
31	y	749	C	C5'-C4'-C3'	-6.25	106.63	116.00
1	w	99	U	P-O3'-C3'	-6.24	110.84	120.20
1	w	1943	U	C2'-C3'-O3'	6.24	118.87	109.50
1	w	805	G	N9-C1'-C2'	6.24	121.36	112.00
13	K	77	LYS	CA-C-N	6.24	127.64	119.84
13	K	77	LYS	C-N-CA	6.24	127.64	119.84
25	W	36	ARG	N-CA-C	-6.22	105.79	113.19
6	D	86	GLY	CA-C-N	6.21	127.61	119.84
6	D	86	GLY	C-N-CA	6.21	127.61	119.84
7	E	156	ASP	N-CA-C	6.21	118.29	108.79
31	y	1101	A	C2'-C3'-O3'	6.21	118.81	109.50
1	w	1644	C	N1-C1'-C2'	6.20	121.30	112.00
11	I	100	GLY	CA-C-N	6.20	127.58	119.84
11	I	100	GLY	C-N-CA	6.20	127.58	119.84
1	w	1520	U	N1-C1'-C2'	6.19	121.28	112.00
31	y	890	G	C4'-C3'-O3'	6.17	122.26	113.00
31	y	1159	U	C2'-C3'-O3'	6.17	118.76	109.50
1	w	1033	U	C2'-C3'-O3'	6.16	118.74	109.50
1	w	2198	A	N9-C1'-C2'	6.15	121.23	112.00
46	n	123	ALA	CA-C-N	6.15	127.53	119.84
46	n	123	ALA	C-N-CA	6.15	127.53	119.84
1	w	2776	A	C2'-C3'-O3'	-6.15	104.47	113.70
1	w	2866	U	N1-C1'-C2'	6.14	121.20	112.00
1	w	959	A	N9-C1'-C2'	6.13	121.20	112.00
22	T	56	VAL	N-CA-C	6.13	117.75	108.80
33	0	46	G	N9-C1'-C2'	-6.12	102.81	112.00
41	i	17	THR	N-CA-C	-6.11	104.80	112.93
46	n	114	ARG	N-CA-C	6.11	117.83	108.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	1230	C	C3'-C2'-O2'	6.11	119.86	110.70
8	F	116	GLU	CA-C-N	6.10	126.67	120.38
8	F	116	GLU	C-N-CA	6.10	126.67	120.38
13	K	38	GLU	N-CA-C	6.10	117.50	109.93
12	J	142	GLY	N-CA-C	6.10	118.80	110.69
35	c	112	VAL	N-CA-C	-6.08	104.40	110.30
31	y	894	G	N9-C1'-C2'	-6.07	102.89	112.00
5	C	25	VAL	N-CA-C	6.07	117.44	108.45
1	w	1955	U	N1-C1'-C2'	6.07	123.11	114.00
7	E	157	ILE	N-CA-C	6.07	118.75	108.86
31	y	348	G	N9-C1'-C2'	6.07	121.10	112.00
1	w	585	G	N9-C1'-C2'	6.05	121.08	112.00
1	w	138	G	N9-C1'-C2'	6.05	121.07	112.00
1	w	2311	A	C3'-C2'-O2'	6.05	119.77	110.70
49	q	29	ASP	N-CA-C	-6.04	106.26	113.21
1	w	944	G	O4'-C1'-C2'	-6.04	101.56	107.60
23	U	76	GLY	N-CA-C	6.04	119.95	111.19
35	c	168	THR	N-CA-C	-6.04	104.32	111.03
44	l	29	ILE	N-CA-C	6.02	117.26	108.53
1	w	2725	A	N9-C1'-C2'	6.01	121.02	112.00
31	y	748	C	N1-C1'-C2'	-6.01	102.98	112.00
23	U	46	LYS	CA-C-N	6.00	127.35	119.84
23	U	46	LYS	C-N-CA	6.00	127.35	119.84
1	w	2382	G	N9-C1'-C2'	6.00	121.01	112.00
13	K	83	MET	N-CA-C	6.00	117.93	107.49
1	w	15	G	N9-C1'-C2'	-6.00	103.00	112.00
6	D	113	ALA	N-CA-C	-5.99	106.10	113.41
31	y	1213	A	N9-C1'-C2'	-5.99	103.02	112.00
19	Q	13	SER	N-CA-C	5.98	123.03	109.81
4	B	100	GLY	N-CA-C	-5.98	103.64	114.46
31	y	792	A	C1'-C2'-O2'	-5.97	102.84	111.80
1	w	1963	U	N1-C1'-C2'	5.96	122.94	114.00
1	w	2433	A	C4'-C3'-O3'	5.96	118.33	109.40
1	w	1329	U	C5'-C4'-C3'	-5.95	107.07	116.00
21	S	17	SER	N-CA-C	-5.95	105.67	113.17
14	L	77	ARG	N-CA-C	-5.93	104.90	111.36
29	a	52	LYS	CA-C-N	5.93	127.25	119.84
29	a	52	LYS	C-N-CA	5.93	127.25	119.84
1	w	887	A	C3'-C2'-C1'	-5.93	95.37	101.30
1	w	2497	A	C2'-C3'-O3'	5.91	118.36	109.50
32	z	45	U	C4'-C3'-O3'	5.90	121.85	113.00
1	w	1247	A	N9-C1'-C2'	5.90	122.85	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	1250	G	C4'-C3'-O3'	5.90	118.25	109.40
13	K	112	GLU	N-CA-C	-5.90	104.84	112.68
1	w	1934	C	C2'-C3'-O3'	5.89	122.54	113.70
3	A	218	THR	N-CA-C	-5.89	104.20	111.75
31	y	1293	G	N9-C1'-C2'	-5.89	103.16	112.00
31	y	428	G	N9-C1'-C2'	5.89	122.84	114.00
11	I	19	ILE	N-CA-C	5.89	115.71	108.53
1	w	2490	G	C2'-C3'-O3'	5.88	118.33	109.50
31	y	1331	G	C2'-C3'-O3'	5.88	118.32	109.50
51	s	63	GLN	N-CA-C	-5.88	105.94	113.23
49	q	68	ASP	N-CA-C	-5.87	106.16	113.55
6	D	152	VAL	N-CA-C	5.86	115.18	106.85
1	w	1516	U	C4'-C3'-O3'	5.86	121.79	113.00
1	w	2056	G	C3'-C2'-C1'	-5.86	95.44	101.30
33	0	57	G	C2'-C3'-O3'	-5.86	104.91	113.70
9	G	10	GLU	N-CA-C	-5.86	104.98	111.36
1	w	2490	G	N9-C1'-C2'	5.84	122.76	114.00
27	Y	6	VAL	CA-C-N	5.84	127.14	119.84
27	Y	6	VAL	C-N-CA	5.84	127.14	119.84
35	c	119	GLU	N-CA-C	-5.82	106.02	113.01
1	w	958	U	C2'-C3'-O3'	-5.82	104.97	113.70
42	j	7	THR	CB-CA-C	-5.82	108.69	117.07
14	L	38	VAL	CA-C-N	5.82	127.11	119.84
14	L	38	VAL	C-N-CA	5.82	127.11	119.84
46	n	40	ASN	CA-C-N	5.82	127.11	119.84
46	n	40	ASN	C-N-CA	5.82	127.11	119.84
1	w	149(B)	A	P-O3'-C3'	-5.81	111.48	120.20
1	w	1937	A	C2'-C3'-O3'	5.81	118.22	109.50
31	y	31	G	C2'-C3'-O3'	5.80	118.21	109.50
1	w	2712	U	O4'-C1'-C2'	5.80	111.60	105.80
26	X	40	THR	N-CA-C	5.80	113.44	108.22
31	y	1364	U	C2'-C3'-O3'	5.80	118.20	109.50
31	y	1229	A	N9-C1'-C2'	-5.80	103.30	112.00
31	y	1497	G	C4'-C3'-O3'	5.80	121.69	113.00
1	w	1963	U	O4'-C1'-C2'	5.79	111.59	105.80
31	y	1371	G	O4'-C1'-C2'	-5.79	101.81	107.60
32	z	58	A	C4'-C3'-O3'	5.79	118.08	109.40
42	j	20	ARG	CA-C-N	5.78	126.59	120.11
42	j	20	ARG	C-N-CA	5.78	126.59	120.11
38	f	30	ALA	N-CA-C	5.77	117.17	108.46
44	l	32	ILE	N-CA-C	5.77	116.43	108.12
1	w	1301	A	N9-C1'-C2'	-5.76	105.36	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	V	62	VAL	N-CA-C	5.76	114.72	107.70
1	w	1185	C	C5'-C4'-C3'	-5.76	107.36	116.00
46	n	83	ASP	N-CA-C	-5.76	105.52	112.54
7	E	98	ARG	N-CA-C	-5.75	105.01	111.28
1	w	1662	C	N1-C1'-C2'	-5.75	103.38	112.00
1	w	973	A	C2'-C3'-O3'	5.74	118.11	109.50
1	w	1253	A	C2'-C3'-O3'	5.74	118.10	109.50
1	w	1342	A	C2'-C3'-O3'	5.73	118.09	109.50
1	w	2336	A	C2'-C3'-O3'	5.71	118.06	109.50
37	e	147	ALA	N-CA-C	-5.70	101.19	110.20
48	p	18	PHE	CA-C-N	5.70	126.96	119.84
48	p	18	PHE	C-N-CA	5.70	126.96	119.84
1	w	177	G	N9-C1'-C2'	5.70	120.55	112.00
1	w	2751	G	C2'-C3'-O3'	5.70	118.04	109.50
35	c	185	ILE	N-CA-C	5.69	115.86	108.35
1	w	2171	A	C2'-C3'-O3'	5.69	118.03	109.50
1	w	2581	G	C4'-C3'-O3'	5.69	117.94	109.40
20	R	60	ARG	N-CA-C	5.69	122.92	110.80
45	m	83	LEU	N-CA-C	5.69	118.23	109.07
11	I	41	ALA	N-CA-C	5.69	117.49	108.79
1	w	2655	G	C2'-C3'-O3'	5.68	118.03	109.50
31	y	1222	G	O4'-C1'-C2'	-5.68	101.92	107.60
11	I	62	VAL	N-CA-C	5.68	118.60	110.09
2	x	111	U	C1'-O4'-C4'	-5.67	104.23	109.90
7	E	91	ARG	N-CA-C	5.67	116.75	108.14
44	l	34	ASP	CA-C-N	5.67	126.92	119.84
44	l	34	ASP	C-N-CA	5.67	126.92	119.84
1	w	885	C	N1-C1'-C2'	5.66	120.50	112.00
31	y	773	G	N9-C1'-C2'	-5.66	103.51	112.00
42	j	63	ILE	N-CA-C	5.64	116.97	108.96
1	w	1163	G	N9-C1'-C2'	-5.63	103.55	112.00
3	A	174	ALA	CA-C-N	5.63	126.87	119.84
3	A	174	ALA	C-N-CA	5.63	126.87	119.84
7	E	38	VAL	N-CA-C	5.62	116.67	108.58
31	y	12	U	N1-C1'-C2'	5.62	120.43	112.00
8	F	165	ALA	N-CA-C	-5.62	107.67	114.75
19	Q	79	GLY	CA-C-N	5.61	126.86	119.84
19	Q	79	GLY	C-N-CA	5.61	126.86	119.84
22	T	40	ASP	N-CA-C	5.61	118.60	109.06
38	f	12	LEU	N-CA-C	5.61	115.96	108.38
21	S	55	TYR	CA-C-N	5.61	125.59	120.21
21	S	55	TYR	C-N-CA	5.61	125.59	120.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	K	104	PHE	N-CA-C	5.61	116.79	108.60
38	f	115	VAL	N-CA-C	5.60	116.43	108.42
31	y	1285	A	C2'-C3'-O3'	5.60	117.89	109.50
46	n	33	ALA	N-CA-C	-5.59	104.60	111.75
1	w	2346	A	C2'-C3'-O3'	5.59	117.88	109.50
1	w	403	U	N1-C1'-C2'	5.58	120.38	112.00
43	k	50	ILE	N-CA-C	5.58	117.62	108.97
1	w	1131	G	C4'-C3'-O3'	5.58	117.77	109.40
31	y	1346	A	O4'-C1'-C2'	5.58	111.38	105.80
1	w	1786	A	C2'-C3'-O3'	5.58	117.86	109.50
41	i	136	GLU	N-CA-C	5.57	117.09	109.18
31	y	1504	G	C2'-C3'-O3'	5.57	117.85	109.50
11	I	36	GLY	N-CA-C	-5.56	107.96	115.36
9	G	49	ALA	N-CA-C	-5.56	106.86	113.97
42	j	7	THR	CA-C-O	5.55	121.16	117.94
1	w	1210	A	C1'-C2'-O2'	-5.55	103.47	111.80
31	y	438	G	N9-C1'-C2'	5.55	120.33	112.00
51	s	38	GLU	N-CA-C	-5.55	105.77	112.54
47	o	41	ARG	N-CA-C	-5.55	105.13	112.34
31	y	351	G	C4'-C3'-O3'	5.54	117.72	109.40
49	q	71	ARG	N-CA-C	-5.54	106.19	113.12
44	l	97	ALA	N-CA-C	-5.54	106.22	112.87
1	w	2166	G	N9-C1'-C2'	5.54	120.31	112.00
23	U	41	ARG	N-CA-C	5.54	122.59	110.80
1	w	2110	G	N9-C1'-C2'	5.53	120.30	112.00
1	w	41	C	P-O3'-C3'	-5.53	111.90	120.20
1	w	579	G	N9-C1'-C2'	5.53	120.29	112.00
18	P	35	LEU	CA-C-N	5.53	126.75	119.84
18	P	35	LEU	C-N-CA	5.53	126.75	119.84
31	y	993	G	C2'-C3'-O3'	5.53	117.79	109.50
14	L	9	LYS	CA-C-O	5.52	121.14	117.94
1	w	270(C)	A	N9-C1'-C2'	5.51	120.27	112.00
1	w	2369	A	C3'-C2'-O2'	5.50	118.95	110.70
1	w	196	A	N9-C1'-C2'	5.50	120.25	112.00
1	w	1811	G	O4'-C1'-C2'	-5.50	102.10	107.60
49	q	40	ASP	CA-C-N	5.50	126.72	119.84
49	q	40	ASP	C-N-CA	5.50	126.72	119.84
18	P	39	LEU	N-CA-C	5.48	122.48	110.80
45	m	19	LYS	N-CA-C	5.48	117.74	109.41
1	w	811	U	N1-C1'-C2'	5.48	120.21	112.00
1	w	90	U	C3'-C2'-O2'	5.47	118.91	110.70
1	w	1838	C	C2'-C3'-O3'	5.47	117.71	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	130	A	N9-C1'-C2'	-5.47	103.80	112.00
1	w	2190	G	N9-C1'-C2'	-5.47	103.80	112.00
31	y	971	G	C2'-C3'-O3'	-5.47	105.50	113.70
31	y	974	A	N9-C1'-C2'	5.46	122.20	114.00
1	w	436	C	P-O3'-C3'	-5.46	112.01	120.20
22	T	48	PHE	N-CA-C	-5.45	105.44	111.71
1	w	2243	U	N1-C1'-C2'	-5.45	103.82	112.00
14	L	38	VAL	CB-CA-C	-5.45	108.53	113.70
1	w	507	A	N9-C1'-C2'	5.43	120.14	112.00
28	Z	46	VAL	N-CA-C	5.42	117.91	108.90
35	c	187	LEU	N-CA-C	5.42	117.64	109.23
4	B	7	LYS	CA-C-N	5.42	128.60	120.96
4	B	7	LYS	C-N-CA	5.42	128.60	120.96
1	w	2233	U	N1-C1'-C2'	5.42	120.13	112.00
10	H	33	GLU	CA-C-N	5.42	126.61	119.84
10	H	33	GLU	C-N-CA	5.42	126.61	119.84
1	w	1241	A	N9-C1'-C2'	5.41	120.12	112.00
12	J	114	ILE	N-CA-C	5.41	116.46	108.45
1	w	1616	A	C2'-C3'-O3'	5.41	117.61	109.50
51	s	62	GLU	N-CA-C	-5.41	106.19	112.89
1	w	249	C	C2'-C3'-O3'	-5.41	105.59	113.70
1	w	1735	U	P-O3'-C3'	-5.40	112.09	120.20
1	w	829	A	N9-C1'-C2'	5.40	122.10	114.00
36	d	94	LEU	N-CA-C	-5.40	105.50	111.71
10	H	66	THR	CA-C-N	5.39	126.58	119.84
10	H	66	THR	C-N-CA	5.39	126.58	119.84
44	l	38	ASN	CA-C-N	5.39	125.15	119.76
44	l	38	ASN	C-N-CA	5.39	125.15	119.76
32	z	25	C	C3'-C2'-O2'	5.38	118.78	110.70
1	w	1342	A	C4'-C3'-O3'	5.37	117.46	109.40
31	y	965	A	C2'-C3'-O3'	5.37	117.55	109.50
31	y	1151	A	N9-C1'-C2'	-5.37	103.95	112.00
40	h	70	LYS	CA-C-N	5.37	126.21	119.98
40	h	70	LYS	C-N-CA	5.37	126.21	119.98
1	w	1128	A	N9-C1'-C2'	5.36	122.05	114.00
1	w	1577	C	C3'-C2'-C1'	5.36	106.66	101.30
1	w	1930	G	N9-C1'-C2'	-5.36	103.95	112.00
1	w	2805	G	P-O3'-C3'	-5.36	112.16	120.20
14	L	38	VAL	N-CA-CB	5.36	114.11	110.52
14	L	100	LEU	N-CA-C	5.36	117.67	109.95
45	m	92	LEU	CA-C-N	5.36	126.55	119.84
45	m	92	LEU	C-N-CA	5.36	126.55	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	c	71	VAL	N-CA-C	5.36	115.28	107.88
31	y	960	U	C2'-C3'-O3'	5.36	117.54	109.50
3	A	48	LEU	N-CA-C	5.36	115.43	107.88
1	w	1022	G	C2'-C3'-O3'	5.35	117.53	109.50
8	F	130	ARG	N-CA-C	-5.35	104.17	111.56
1	w	2053	G	N9-C1'-C2'	-5.35	103.97	112.00
1	w	2724	C	N1-C1'-C2'	5.35	120.03	112.00
1	w	1111	A	C2'-C3'-O3'	5.35	117.53	109.50
1	w	2654	A	C2'-C3'-O3'	5.34	117.52	109.50
31	y	1338	G	N9-C1'-C2'	5.34	120.02	112.00
1	w	2172	U	N1-C1'-C2'	5.34	120.01	112.00
1	w	2848	G	C4'-C3'-O3'	5.34	121.01	113.00
19	Q	42	ARG	CB-CA-C	-5.33	109.98	117.23
31	y	65	U	C2'-C3'-O3'	5.33	117.50	109.50
21	S	56	PRO	N-CA-C	5.33	118.69	111.22
26	X	37	LEU	N-CA-C	5.33	117.36	109.69
1	w	2529	G	C4'-C3'-O3'	-5.32	105.01	113.00
1	w	370	G	N9-C1'-C2'	5.32	121.98	114.00
22	T	176	PRO	N-CA-C	5.32	117.19	110.70
43	k	28	ARG	N-CA-C	-5.32	105.49	111.28
1	w	1934	C	N1-C1'-C2'	-5.31	104.03	112.00
37	e	135	LEU	CA-C-N	5.31	125.40	119.87
37	e	135	LEU	C-N-CA	5.31	125.40	119.87
52	t	58	VAL	CA-C-N	5.31	125.22	119.85
52	t	58	VAL	C-N-CA	5.31	125.22	119.85
52	t	33	THR	N-CA-C	5.31	117.33	108.99
1	w	323	G	N9-C1'-C2'	5.31	119.96	112.00
16	N	50	ILE	N-CA-C	5.30	115.74	110.23
18	P	49	THR	CA-C-N	5.30	126.47	119.84
18	P	49	THR	C-N-CA	5.30	126.47	119.84
31	y	403	C	N1-C1'-C2'	-5.30	104.05	112.00
44	l	120	ARG	CA-C-N	5.30	126.46	119.84
44	l	120	ARG	C-N-CA	5.30	126.46	119.84
1	w	1185	C	C4'-C3'-O3'	5.29	120.94	113.00
19	Q	105	VAL	N-CA-C	5.29	115.70	107.28
26	X	15	TYR	CA-C-N	5.29	126.46	119.84
26	X	15	TYR	C-N-CA	5.29	126.46	119.84
11	I	32	TYR	CB-CA-C	-5.29	109.45	117.07
1	w	314	A	N9-C1'-C2'	5.29	119.93	112.00
1	w	1828	G	C2'-C3'-O3'	5.29	117.43	109.50
1	w	1264	G	N9-C1'-C2'	5.28	119.92	112.00
35	c	133	LYS	N-CA-C	-5.28	105.64	111.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	m	112	ARG	N-CA-C	5.28	116.90	108.41
1	w	1819	A	C2'-C3'-O3'	5.27	117.41	109.50
5	C	31	CYS	N-CA-C	5.27	120.13	108.64
28	Z	29	LYS	N-CA-C	-5.27	105.45	111.14
17	O	31	SER	N-CA-C	5.26	117.08	108.55
38	f	101	ILE	N-CA-C	5.26	115.88	108.36
40	h	74	GLU	N-CA-C	5.26	115.18	108.24
1	w	2406	U	C4'-C3'-O3'	5.26	117.29	109.40
37	e	141	ARG	CA-C-N	5.26	126.08	119.98
37	e	141	ARG	C-N-CA	5.26	126.08	119.98
1	w	1059	G	C4'-C3'-O3'	5.25	120.88	113.00
1	w	2614	A	C1'-C2'-O2'	-5.25	103.92	111.80
39	g	8	ILE	N-CA-C	5.25	115.21	107.75
3	A	51	ASP	CA-C-N	5.25	126.41	119.84
3	A	51	ASP	C-N-CA	5.25	126.41	119.84
31	y	458	C	P-O3'-C3'	-5.25	112.32	120.20
31	y	795	C	N1-C1'-C2'	-5.24	104.13	112.00
32	z	31	A	C4'-C3'-O3'	5.24	120.86	113.00
1	w	791	C	C2'-C3'-O3'	5.24	117.36	109.50
1	w	1451	C	O3'-P-O5'	-5.24	96.14	104.00
42	j	83	ARG	N-CA-C	-5.24	107.43	113.88
22	T	93	ASP	N-CA-C	-5.24	104.82	111.11
1	w	2282	G	C4'-C3'-O3'	5.24	117.25	109.40
1	w	2171	A	N9-C1'-C2'	5.23	121.85	114.00
1	w	1185	C	N1-C1'-C2'	-5.23	104.16	112.00
1	w	72	U	N1-C1'-C2'	5.22	119.83	112.00
27	Y	26	THR	CA-C-N	5.22	123.47	119.66
27	Y	26	THR	C-N-CA	5.22	123.47	119.66
22	T	35	ARG	N-CA-C	5.22	117.12	109.24
12	J	81	GLN	N-CA-C	5.22	117.31	108.02
31	y	498	A	C2'-C3'-O3'	5.21	117.32	109.50
31	y	1239	A	C2'-C3'-O3'	5.21	117.32	109.50
1	w	2499	C	N1-C1'-C2'	5.21	119.82	112.00
1	w	2655	G	N9-C1'-C2'	-5.21	106.19	114.00
1	w	1706	U	C2'-C3'-O3'	5.20	117.30	109.50
8	F	117	PRO	N-CA-C	5.20	117.05	110.70
35	c	70	PHE	N-CA-C	5.20	116.75	108.79
1	w	2676	C	C3'-C2'-O2'	5.20	118.49	110.70
1	w	890	A	O4'-C1'-C2'	-5.19	102.41	107.60
31	y	943	U	N1-C1'-C2'	5.19	119.79	112.00
1	w	2145	C	N1-C1'-C2'	5.17	119.76	112.00
31	y	129(B)	G	C4'-C3'-O3'	5.17	117.16	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	1669	A	N9-C1'-C2'	5.17	119.76	112.00
17	O	95	LEU	N-CA-C	-5.17	105.14	111.75
1	w	1222	C	C3'-C2'-O2'	5.17	118.45	110.70
1	w	2263	C	N1-C1'-C2'	-5.17	104.25	112.00
50	r	22	LEU	N-CA-C	5.17	118.01	109.85
31	y	312	C	N1-C1'-C2'	-5.16	104.26	112.00
1	w	1397	U	N1-C1'-C2'	5.16	119.73	112.00
1	w	2389	G	N9-C1'-C2'	5.16	119.73	112.00
50	r	57	VAL	N-CA-C	5.15	116.32	108.80
48	p	58	MET	N-CA-C	-5.15	105.75	111.36
26	X	9	VAL	N-CA-C	5.15	120.05	109.34
31	y	949	A	N9-C1'-C2'	5.15	119.72	112.00
36	d	175	LEU	N-CA-C	-5.15	106.51	112.89
32	z	31	A	C2'-C3'-O3'	5.14	121.42	113.70
1	w	1822	G	C3'-C2'-C1'	5.14	106.44	101.30
22	T	125	LEU	N-CA-C	5.14	116.99	108.20
31	y	954	G	O4'-C1'-C2'	-5.14	102.46	107.60
20	R	55	ASN	N-CA-C	5.14	116.32	108.30
1	w	332	A	N9-C1'-C2'	5.14	119.71	112.00
1	w	886	C	O4'-C1'-C2'	5.14	110.94	105.80
1	w	2015	A	N9-C1'-C2'	5.13	119.70	112.00
31	y	818	G	C1'-C2'-O2'	-5.13	104.10	111.80
32	z	31	A	C3'-C2'-C1'	-5.13	96.17	101.30
31	y	1080	A	O4'-C1'-C2'	-5.13	102.47	107.60
6	D	47	LYS	N-CA-C	5.13	117.52	108.75
1	w	1059	G	N9-C1'-C2'	-5.12	104.32	112.00
6	D	95	THR	N-CA-C	5.12	114.59	107.73
1	w	1616	A	N9-C1'-C2'	5.11	121.67	114.00
12	J	79	ARG	N-CA-C	5.11	116.88	110.24
18	P	6	LYS	N-CA-C	5.11	114.58	107.73
36	d	26	LYS	CB-CA-C	-5.11	109.19	116.34
1	w	909	A	O4'-C1'-C2'	-5.10	102.50	107.60
22	T	158	PRO	CA-C-N	5.10	125.01	119.76
22	T	158	PRO	C-N-CA	5.10	125.01	119.76
1	w	457	A	N9-C1'-C2'	5.09	119.63	112.00
10	H	26	THR	CB-CA-C	-5.09	110.31	117.23
31	y	1517	G	C3'-C2'-C1'	-5.09	96.21	101.30
1	w	1015	G	C4'-C3'-O3'	-5.09	105.37	113.00
31	y	1109	C	N1-C1'-C2'	5.08	119.63	112.00
31	y	7	G	C2'-C3'-O3'	5.08	117.12	109.50
31	y	13	U	C4'-C3'-O3'	5.08	117.02	109.40
1	w	1930	G	C4'-C3'-O3'	5.08	120.62	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	n	70	LEU	N-CA-C	-5.08	105.63	111.07
1	w	221	A	N9-C1'-C2'	5.08	119.62	112.00
14	L	101	ALA	N-CA-C	5.08	117.06	109.59
1	w	1274	A	C4'-C3'-O3'	5.07	120.61	113.00
53	u	17	ARG	N-CA-C	-5.07	106.78	112.87
37	e	192	GLU	N-CA-C	-5.07	107.10	113.28
1	w	480	A	C3'-C2'-O2'	5.07	118.30	110.70
9	G	67	ARG	N-CA-C	-5.06	106.20	112.38
1	w	1627	G	C4'-C3'-O3'	5.06	120.59	113.00
31	y	1301	U	N1-C1'-C2'	-5.06	104.41	112.00
18	P	83	ARG	N-CA-C	-5.05	105.84	112.41
31	y	496	A	N9-C1'-C2'	5.05	119.58	112.00
1	w	2638	G	C4'-C3'-O3'	5.05	116.97	109.40
31	y	485	G	N9-C1'-C2'	5.05	121.57	114.00
1	w	2107	C	C3'-C2'-O2'	5.04	118.26	110.70
17	O	63	VAL	N-CA-C	5.04	115.33	110.74
27	Y	37	LYS	N-CA-C	5.04	117.00	110.65
31	y	60	A	C2'-C3'-O3'	5.04	117.06	109.50
39	g	67	MET	CA-C-N	5.04	126.14	119.84
39	g	67	MET	C-N-CA	5.04	126.14	119.84
1	w	2489	G	N9-C1'-C2'	5.04	119.56	112.00
1	w	2484	G	N9-C1'-C2'	-5.03	104.45	112.00
1	w	2645	G	C2'-C3'-O3'	5.03	117.05	109.50
1	w	2025	C	N1-C1'-C2'	5.03	119.55	112.00
1	w	616	A	C4'-C3'-C2'	-5.03	97.57	102.60
38	f	90	VAL	N-CA-C	5.03	115.72	108.48
31	y	305	G	C1'-C2'-O2'	-5.02	104.27	111.80
1	w	1546	A	N9-C1'-C2'	5.02	119.53	112.00
1	w	1465	G	N9-C1'-C2'	-5.01	104.48	112.00
31	y	533	A	N9-C1'-C2'	5.01	119.52	112.00
49	q	5	ARG	N-CA-C	5.01	115.14	108.23
1	w	519	U	C3'-C2'-O2'	5.01	118.21	110.70
1	w	163(B)	C	P-O3'-C3'	-5.01	112.69	120.20
1	w	374	A	N9-C1'-C2'	5.01	119.51	112.00
1	w	1381	G	C3'-C2'-O2'	5.00	118.20	110.70
1	w	2471	C	C4'-C3'-C2'	5.00	107.60	102.60
13	K	42	ILE	N-CA-C	5.00	116.95	109.20

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	x	14	U	C3'

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Mol	Chain	Res	Type	Atom
2	x	24	G	C3'

All (32) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	w	1191	G	Sidechain
1	w	1231	G	Sidechain
1	w	1247	A	Sidechain
1	w	1274	A	Sidechain
1	w	1323	U	Sidechain
1	w	138	G	Sidechain
1	w	1497	U	Sidechain
1	w	1577	C	Sidechain
1	w	1626	G	Sidechain
1	w	1627	G	Sidechain
1	w	1822	G	Sidechain
1	w	1934	C	Sidechain
1	w	1973	G	Sidechain
1	w	2061	G	Sidechain
1	w	2158	A	Sidechain
1	w	241	A	Sidechain
1	w	2451	A	Sidechain
1	w	2662	A	Sidechain
1	w	2756	U	Sidechain
1	w	338	G	Sidechain
1	w	566	U	Sidechain
1	w	74	A	Sidechain
1	w	801	G	Sidechain
1	w	974(A)	G	Sidechain
31	y	1053	G	Sidechain
31	y	1080	A	Sidechain
31	y	1338	G	Sidechain
31	y	1346	A	Sidechain
31	y	299	G	Sidechain
31	y	832	C	Sidechain
31	y	915	A	Sidechain
31	y	938	A	Sidechain

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	w	62213	0	31360	16110	1
2	x	2573	0	1306	734	0
3	A	996	0	1013	374	0
4	B	2115	0	2195	1159	0
5	C	1541	0	1599	910	0
6	D	1517	0	1565	743	0
7	E	1468	0	1529	682	0
8	F	1319	0	1399	522	0
9	G	1156	0	1239	569	2
10	H	1103	0	1177	668	0
11	I	932	0	994	519	0
12	J	1114	0	1187	593	0
13	K	1089	0	1156	605	0
14	L	968	0	1033	556	0
15	M	846	0	902	405	0
16	N	1143	0	1211	557	0
17	O	964	0	1022	474	0
18	P	779	0	852	404	0
19	Q	868	0	929	438	0
20	R	725	0	778	323	0
21	S	793	0	890	268	0
22	T	1475	0	1504	551	0
23	U	605	0	628	427	0
24	V	694	0	764	441	0
25	W	520	0	575	210	0
26	X	477	0	529	253	0
27	Y	436	0	460	217	0
28	Z	418	0	467	222	0
29	a	507	0	576	282	0
30	b	294	0	323	143	0
31	y	32302	0	16327	8640	2
32	z	1628	0	844	343	0
33	0	1621	0	821	294	0
34	1	122	0	65	17	0
35	c	1900	0	1951	678	0
36	d	1612	0	1677	711	0
37	e	1703	0	1767	829	0
38	f	1146	0	1207	455	0
39	g	843	0	857	236	0
40	h	1257	0	1296	484	0
41	i	1116	0	1177	587	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	j	1011	0	1043	339	0
43	k	794	0	840	254	0
44	l	864	0	881	349	0
45	m	970	0	1057	537	0
46	n	997	0	1072	413	0
47	o	492	0	533	269	0
48	p	734	0	771	279	0
49	q	700	0	720	339	0
50	r	857	0	930	418	0
51	s	598	0	670	225	0
52	t	647	0	673	247	0
53	u	762	0	859	271	0
54	v	208	0	221	98	0
All	All	146532	0	99421	43508	3

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 180.

All (43508) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1458:C:H1'	1:w:1459:G:C2	1.35	1.60
1:w:1699:G:C3'	1:w:1700:A:H5''	1.33	1.56
31:y:701:C:C5'	31:y:703:G:H5'	1.38	1.53
1:w:2743:C:C2'	1:w:2744:G:H5''	1.34	1.52
31:y:1518:MA6:H8	31:y:1518:MA6:C5'	1.35	1.52
1:w:2025:C:H2'	1:w:2026:C:C6	1.42	1.52
1:w:1136:G:H2'	1:w:1137:G:C8	1.43	1.52
31:y:673:G:H2'	31:y:674:G:C8	1.47	1.50
1:w:2574:G:H1'	5:C:143:ASN:ND2	1.23	1.50
31:y:95:G:H2'	31:y:96:G:C8	1.41	1.50
35:c:97:TRP:CH2	35:c:176:GLU:HG3	1.44	1.50
1:w:465:G:N2	1:w:684:G:H1'	1.27	1.46
1:w:2511:U:H2'	1:w:2512:C:C5'	1.47	1.45
12:J:71:VAL:HG13	12:J:72:PRO:CD	1.47	1.43
1:w:1794:U:H1'	1:w:1900:A:C2	1.51	1.43
1:w:1699:G:H3'	1:w:1700:A:C5'	1.45	1.42
37:e:9:CYS:SG	37:e:31:CYS:HA	1.57	1.42
1:w:1838:C:N4	1:w:1898:U:H2'	1.15	1.41
1:w:2644:G:H2'	1:w:2645:G:C8	1.55	1.41
37:e:12:CYS:HB2	37:e:33:MET:SD	1.60	1.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2677:G:H2'	1:w:2678:C:C6	1.54	1.41
31:y:1281:U:H5''	31:y:1282:C:C5	1.53	1.41
31:y:1326:C:H4'	54:v:19:GLY:CA	1.50	1.41
31:y:944:G:N2	31:y:1339:A:H62	1.16	1.40
31:y:1087:G:H2'	31:y:1088:G:C8	1.54	1.40
31:y:21:G:C2'	31:y:22:G:H5'	1.51	1.40
31:y:575:G:H4'	31:y:576:G:C5'	1.50	1.40
1:w:2822:G:C8	14:L:2:ARG:HB3	1.53	1.40
31:y:546:G:H4'	31:y:548:G:C4'	1.52	1.39
1:w:1170:G:H2'	1:w:1171:G:C8	1.56	1.39
1:w:389:G:C8	1:w:2413:G:H4'	1.58	1.39
31:y:1013:G:N2	31:y:1016:A:N6	1.71	1.38
37:e:9:CYS:H	37:e:22:LYS:CG	1.36	1.38
9:G:124:GLY:CA	9:G:144:VAL:H	1.33	1.38
11:I:17:ARG:NE	11:I:47:ILE:HB	1.39	1.37
1:w:954:G:C5'	13:K:17:LEU:HG	1.54	1.37
31:y:558:G:H2'	31:y:559:A:C2	1.60	1.37
30:b:14:CYS:SG	30:b:32:HIS:HB3	1.63	1.37
31:y:129(B):G:O2'	31:y:189:U:H2'	1.25	1.37
33:0:9:A:N6	33:0:23:A:N7	1.74	1.36
1:w:802:A:H3'	1:w:803:U:C6	1.59	1.36
16:N:100:TYR:HA	16:N:103:ARG:NH2	1.36	1.36
35:c:97:TRP:HB2	35:c:172:ILE:CD1	1.55	1.36
1:w:765:G:H2'	1:w:766:C:O4'	1.25	1.35
30:b:27:CYS:SG	30:b:32:HIS:HB2	1.66	1.35
37:e:9:CYS:N	37:e:22:LYS:HG3	1.34	1.35
1:w:2743:C:H2'	1:w:2744:G:C5'	1.54	1.35
31:y:1347:G:N2	31:y:1373:G:H2'	1.05	1.35
1:w:92:G:H2'	1:w:93:C:C6	1.59	1.34
1:w:974(A):G:H5''	1:w:1186:G:N2	1.41	1.34
31:y:1157:A:N6	31:y:1178:G:H1'	1.42	1.34
1:w:1669:A:H5'	1:w:1671:U:C4	1.61	1.34
46:n:22:ILE:HB	46:n:25:ILE:CD1	1.57	1.34
1:w:2711:A:O5'	1:w:2712:U:H5'	1.27	1.33
24:V:60:PHE:CD1	24:V:87:PRO:HB3	1.62	1.33
1:w:1728:G:H21	1:w:1732:A:N6	1.26	1.33
31:y:575:G:C4'	31:y:576:G:H5'	1.58	1.33
1:w:2875:C:C3'	1:w:2876:G:H5''	1.57	1.33
1:w:585:G:H3'	1:w:1251:C:N4	1.44	1.33
11:I:86:ILE:CG2	11:I:94:ARG:HD3	1.57	1.33
1:w:1753:G:O2'	1:w:1754:C:H6	1.06	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2822:G:C2'	1:w:2823:A:H5''	1.59	1.32
31:y:1347:G:H22	31:y:1373:G:C2'	1.42	1.32
40:h:123:GLU:HA	40:h:126:ASP:CG	1.53	1.32
1:w:497:A:H8	1:w:497:A:O5'	1.12	1.32
31:y:413:G:N2	31:y:428:G:O2'	1.62	1.32
31:y:420:U:H2'	31:y:422:C:N4	1.45	1.32
31:y:546:G:C4'	31:y:548:G:H4'	1.58	1.32
1:w:954:G:H5''	13:K:17:LEU:CG	1.57	1.32
31:y:1237:C:H3'	31:y:1238:A:C5'	1.57	1.32
1:w:2065:C:C2'	1:w:2066:C:H5''	1.60	1.31
31:y:16:A:H2'	31:y:17:U:C6	1.65	1.31
31:y:1489:G:H2'	31:y:1490:C:C6	1.63	1.31
35:c:121:LEU:HA	35:c:126:GLU:CB	1.61	1.31
1:w:1133:U:O2'	1:w:1137:G:H5''	1.16	1.31
1:w:1915:U:H3'	1:w:1916:A:C8	1.66	1.31
31:y:562:C:O2'	45:m:14:ARG:HD3	1.13	1.31
31:y:1468:A:H2'	31:y:1469:G:O4'	1.28	1.31
1:w:2654:A:N6	1:w:2666:C:H41	1.27	1.31
31:y:908:A:H2'	31:y:909:A:C8	1.65	1.31
1:w:2296:U:H4'	1:w:2297:C:C5'	1.59	1.31
9:G:101:LEU:HB3	9:G:107:ILE:O	1.16	1.31
31:y:910:C:H5''	45:m:96:ARG:NH2	1.41	1.31
1:w:89:G:H2'	1:w:90:U:O4'	1.15	1.30
1:w:451:C:H2'	1:w:453:C:C5	1.67	1.30
1:w:1304:C:C2'	1:w:1305:C:H5''	1.60	1.30
1:w:1944:U:O2'	1:w:1945:G:H5''	1.28	1.30
1:w:2650:U:H2'	1:w:2651:C:C6	1.65	1.30
1:w:974(A):G:C5'	1:w:1186:G:N2	1.93	1.30
1:w:2296:U:C4'	1:w:2297:C:H5'	1.60	1.30
40:h:116:ALA:O	40:h:120:ILE:HB	1.30	1.30
6:D:119:LEU:CB	6:D:188:VAL:HA	1.61	1.30
2:x:88:C:H2'	2:x:89(A):G:N7	1.44	1.30
31:y:517:G:H2'	31:y:531:U:C6	1.65	1.30
31:y:902:G:O2'	31:y:903:G:H5'	1.31	1.30
1:w:371:A:H1'	1:w:373:U:C6	1.66	1.29
1:w:465:G:H21	1:w:684:G:C1'	1.46	1.29
1:w:315:G:H2'	1:w:316:C:C1'	1.59	1.29
31:y:226:G:H2'	31:y:227:G:C8	1.66	1.29
1:w:49:A:N6	1:w:177:G:N1	1.78	1.29
1:w:117:G:H4'	1:w:126:A:C2	1.66	1.29
1:w:668:G:C2'	1:w:670:A:H62	1.46	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1672:C:O2	1:w:2553:G:H4'	1.22	1.29
1:w:2367:G:C2'	1:w:2368:C:H5''	1.60	1.29
1:w:1443:G:H2'	1:w:1444:G:C8	1.68	1.29
1:w:2654:A:H62	1:w:2666:C:N4	1.28	1.29
31:y:677:U:H2'	31:y:678:U:C6	1.67	1.29
31:y:944:G:H21	31:y:1339:A:N6	1.29	1.29
16:N:50:ILE:HG22	16:N:62:THR:C	1.57	1.28
31:y:529:G:C2'	31:y:530:G:H5''	1.61	1.28
31:y:1104:G:H4'	35:c:111:ARG:NH2	1.47	1.28
1:w:588:U:C2'	1:w:589:C:H5'	1.62	1.28
1:w:732:C:H2'	1:w:733:G:O4'	1.30	1.28
31:y:1443:G:C4'	31:y:1446:A:H5'	1.63	1.28
1:w:2124:G:N2	3:A:218:THR:HA	1.46	1.28
26:X:22:ALA:O	26:X:26:LEU:HG	1.19	1.28
27:Y:13:LYS:O	27:Y:16:ARG:HB3	1.32	1.28
31:y:1054:C:O2'	31:y:1055:A:H5''	1.18	1.28
31:y:1299:A:C2	31:y:1300:G:H5'	1.69	1.28
1:w:579:G:C4'	1:w:2017:U:H2'	1.64	1.28
1:w:1827:C:C4'	1:w:1971:A:H4'	1.62	1.28
1:w:1021:A:O2'	1:w:1123:C:H5''	1.32	1.27
1:w:1297:C:OP2	1:w:2710:C:H4'	1.25	1.27
4:B:63:ARG:NE	4:B:86:PRO:HD3	1.47	1.27
38:f:105:VAL:CG1	38:f:106:PRO:HD3	1.62	1.27
1:w:2080:G:N2	1:w:2241:A:H1'	1.47	1.27
1:w:2419:U:C5	29:a:31:HIS:HB3	1.70	1.27
1:w:2670:A:H5'	1:w:2671:A:OP2	1.25	1.27
5:C:54:GLN:CG	5:C:75:VAL:HG21	1.62	1.27
41:i:119:LEU:CD1	41:i:124:ALA:HA	1.64	1.27
1:w:1667:G:OP1	11:I:6:THR:HA	1.33	1.27
11:I:17:ARG:HE	11:I:47:ILE:CB	1.45	1.27
13:K:40:ALA:O	13:K:97:VAL:HB	1.35	1.27
31:y:474:G:OP1	49:q:75:ARG:HG3	1.26	1.27
31:y:914:A:O2'	31:y:915:A:H5'	1.33	1.27
1:w:1320:C:O2	1:w:1331:A:N6	1.67	1.27
5:C:9:VAL:CG2	5:C:26:ILE:HA	1.64	1.27
31:y:985:C:O2'	31:y:986:A:H5'	1.34	1.27
37:e:9:CYS:O	37:e:33:MET:HE1	1.17	1.27
21:S:55:TYR:CB	21:S:56:PRO:HD2	1.65	1.27
31:y:412:A:O2'	31:y:413:G:H5''	1.15	1.27
31:y:685:G:O2'	31:y:686:U:H5'	1.29	1.27
5:C:28:ALA:CB	5:C:93:VAL:HG13	1.64	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:60:ARG:HB3	8:F:60:ARG:NH2	1.47	1.26
37:e:8:VAL:HB	37:e:21:LEU:O	1.16	1.26
1:w:49:A:N6	1:w:177:G:H1	1.30	1.26
1:w:1799:G:C5'	1:w:1819:A:H62	1.48	1.26
31:y:750:G:N2	48:p:23:GLY:HA3	1.48	1.26
1:w:2319:G:H1'	1:w:2320:A:N7	1.50	1.26
31:y:1374:A:H2'	31:y:1375:A:C5'	1.62	1.26
1:w:1343:G:C2'	1:w:1344:G:H5''	1.66	1.26
1:w:2588:G:H2'	1:w:2589:A:O4'	1.16	1.26
2:x:21:G:H2'	2:x:22:U:C6	1.71	1.26
5:C:28:ALA:HB2	5:C:93:VAL:CG1	1.66	1.26
24:V:69:LYS:O	24:V:73:LEU:HG	1.29	1.26
31:y:1507:A:O2'	31:y:1508:G:H5'	1.35	1.26
47:o:29:ARG:CB	47:o:40:CYS:HB3	1.66	1.26
1:w:789:A:N1	28:Z:3:ARG:HD3	1.48	1.26
1:w:830:G:H1'	1:w:2448:A:N1	1.48	1.26
1:w:859:G:H8	1:w:859:G:OP2	1.09	1.26
31:y:95:G:C2'	31:y:96:G:C8	2.17	1.26
1:w:724:U:H2'	1:w:725:G:O4'	1.34	1.25
1:w:1687:G:H2'	1:w:1701:A:N6	1.48	1.25
1:w:2342:C:O2	1:w:2374:C:H4'	1.30	1.25
1:w:2534:A:C2'	1:w:2535:G:H5''	1.63	1.25
31:y:66:G:H4'	31:y:173:U:O4	1.27	1.25
1:w:2549:G:O2'	1:w:2550:G:H5'	1.27	1.25
8:F:152:ARG:HH21	8:F:152:ARG:CA	1.50	1.25
15:M:67:ARG:O	15:M:71:ARG:HD3	1.36	1.25
31:y:230:G:H1'	49:q:25:ARG:CZ	1.65	1.25
31:y:300:A:O2'	50:r:31:LEU:HD21	1.36	1.25
31:y:1344:C:O2'	42:j:120:ARG:HB3	1.26	1.25
1:w:667:U:H2'	1:w:668:G:O4'	1.28	1.25
1:w:885:C:C3'	1:w:886:C:H5'	1.63	1.25
1:w:2558:C:H2'	1:w:2559:C:C6	1.69	1.25
1:w:2736:G:H5'	1:w:2736:G:C8	1.72	1.25
2:x:63:G:C2'	2:x:64:C:H5''	1.64	1.25
21:S:55:TYR:HB2	21:S:56:PRO:CD	1.65	1.25
31:y:122:G:H2'	31:y:123:C:C6	1.71	1.25
31:y:1047:G:H2'	31:y:1048:G:O4'	1.35	1.25
31:y:160:A:H8	31:y:160:A:OP1	1.16	1.25
31:y:529:G:O6	45:m:48:ASN:HA	1.33	1.25
31:y:1412:C:H2'	31:y:1413:A:C8	1.72	1.25
1:w:48:G:H21	1:w:177:G:N2	1.35	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1728:G:N2	1:w:1732:A:H62	1.33	1.25
31:y:113:G:H2'	31:y:114:U:C6	1.72	1.25
31:y:1306:A:H2'	31:y:1307:U:O4'	1.30	1.25
2:x:63:G:C3'	2:x:64:C:H5''	1.67	1.25
31:y:777:A:H3'	31:y:778:G:C8	1.71	1.25
31:y:1308:U:OP2	46:n:99:ARG:HD3	1.23	1.25
1:w:965:C:C3'	1:w:966:G:H5''	1.67	1.24
31:y:62:U:H2'	31:y:63:C:C6	1.70	1.24
31:y:123:C:H4'	31:y:311:C:O2	1.37	1.24
31:y:335:C:H4'	31:y:1433:A:O2'	1.35	1.24
42:j:10:ARG:NH2	42:j:72:GLY:HA2	1.52	1.24
1:w:2601:C:H5''	32:z:75:C:C5'	1.65	1.24
4:B:49:ILE:HD12	4:B:49:ILE:O	1.32	1.24
23:U:45:PHE:HA	23:U:77:ARG:O	1.30	1.24
31:y:1067:A:O2'	31:y:1068:G:O4'	1.54	1.24
35:c:92:TYR:O	35:c:151:GLY:HA3	1.31	1.24
1:w:2014:A:H2'	1:w:2015:A:C8	1.71	1.24
2:x:55:U:O2'	2:x:56:G:H5'	1.09	1.24
31:y:160:A:H2'	31:y:161:A:C8	1.72	1.24
1:w:1334:G:H2'	1:w:1335:U:O4'	1.33	1.24
31:y:405:U:C5	37:e:2:GLY:HA2	1.72	1.24
31:y:1014:A:O2'	31:y:1015:A:H5'	1.37	1.24
31:y:1498:UR3:H5	34:1:1:U:O2'	1.30	1.24
22:T:17:ALA:HA	22:T:20:ARG:NE	1.53	1.24
31:y:193:C:O2'	31:y:194:C:H5'	1.37	1.24
31:y:245:C:H42	31:y:283:C:N4	1.35	1.24
1:w:729:G:H3'	1:w:730:C:C5'	1.66	1.23
1:w:2186:G:H2'	1:w:2187:G:C8	1.72	1.23
31:y:21:G:O2'	31:y:22:G:H5'	1.33	1.23
31:y:66:G:H4'	31:y:173:U:C4	1.74	1.23
31:y:1504:G:OP1	31:y:1507:A:H4'	1.38	1.23
1:w:26:G:H2'	1:w:27:G:O4'	1.37	1.23
1:w:1699:G:C2'	1:w:1700:A:H5''	1.66	1.23
31:y:210:U:H1'	31:y:216:G:N7	1.52	1.23
31:y:818:G:O2'	31:y:819:A:H5''	1.21	1.23
1:w:2101:G:C2'	1:w:2102:U:H5'	1.66	1.23
1:w:2631:G:N2	5:C:61:ARG:NH1	1.86	1.23
15:M:40:ILE:HG23	15:M:46:VAL:O	1.33	1.23
1:w:19:C:H2'	1:w:20:C:C5'	1.68	1.23
31:y:245:C:N4	31:y:283:C:H42	1.35	1.23
47:o:29:ARG:HB2	47:o:40:CYS:CB	1.66	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2579:C:C2'	1:w:2580:U:H5'	1.68	1.23
2:x:82:G:H4'	26:X:49:LYS:NZ	1.54	1.23
12:J:71:VAL:CG1	12:J:72:PRO:HD3	1.68	1.23
15:M:26:LEU:HB3	15:M:87:PHE:CD1	1.73	1.23
31:y:135:C:C2'	31:y:136:C:H5''	1.69	1.23
31:y:1013:G:H2'	31:y:1015:A:OP2	1.35	1.23
36:d:87:LEU:HD12	36:d:88:ARG:N	1.54	1.23
1:w:579:G:H4'	1:w:2017:U:C2'	1.69	1.22
2:x:88:C:H2'	2:x:89(A):G:C8	1.74	1.22
4:B:63:ARG:HE	4:B:86:PRO:CD	1.51	1.22
31:y:160:A:OP1	31:y:160:A:C8	1.91	1.22
31:y:683:G:N2	44:l:39:PRO:HG3	1.54	1.22
31:y:1187:G:H1'	47:o:61:TRP:OXT	1.35	1.22
36:d:131:ARG:O	36:d:135:LYS:HG3	1.33	1.22
37:e:9:CYS:HB2	37:e:22:LYS:NZ	1.52	1.22
1:w:299:A:O2'	1:w:319:C:H1'	1.39	1.22
1:w:1506:C:O3'	1:w:1508:A:P	1.96	1.22
2:x:110:G:C2'	2:x:111:U:H5'	1.67	1.22
31:y:891:U:H2'	31:y:892:A:C8	1.75	1.22
1:w:1186:G:C5	1:w:1187:G:H1'	1.74	1.22
1:w:2745:C:H2'	1:w:2746:U:C6	1.74	1.22
31:y:1512:U:H2'	31:y:1513:A:C8	1.71	1.22
32:z:40:C:O2'	32:z:41:C:H5'	1.35	1.22
35:c:121:LEU:CA	35:c:126:GLU:HB3	1.68	1.22
1:w:2275:C:O2'	13:K:83:MET:HB2	1.37	1.22
1:w:2747:G:O6	1:w:2754:U:H2'	1.33	1.22
31:y:936:C:H1'	31:y:1383:C:N4	1.53	1.22
45:m:24:PRO:HD2	45:m:97:TYR:OH	1.34	1.22
48:p:56:LEU:HA	48:p:59:MET:SD	1.79	1.22
1:w:270(K):G:N2	1:w:270(L):C:H1'	1.53	1.22
1:w:710:G:H2'	1:w:711:G:C8	1.73	1.22
1:w:926:A:O3'	1:w:928:G:P	1.97	1.22
1:w:978:G:H3'	1:w:979:G:C8	1.75	1.22
1:w:2528:U:OP2	1:w:2530:A:N6	1.72	1.22
1:w:2722:G:C5'	14:L:4:LEU:HD13	1.69	1.22
1:w:2759:G:H2'	1:w:2760:C:C6	1.75	1.22
6:D:26:HIS:HB2	12:J:13:ASN:HB2	1.22	1.22
1:w:483:A:O3'	21:S:56:PRO:HG3	1.35	1.21
1:w:668:G:O2'	1:w:670:A:N6	1.71	1.21
1:w:859:G:OP2	1:w:859:G:C8	1.93	1.21
31:y:1292:U:H2'	31:y:1293:G:C8	1.74	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:24:VAL:O	43:k:28:ARG:HG2	1.38	1.21
45:m:37:THR:HG23	45:m:58:ARG:CZ	1.69	1.21
1:w:598:G:C2'	1:w:599:G:H5'	1.69	1.21
1:w:696:G:N2	1:w:767:U:H1'	1.53	1.21
1:w:1970:A:H5''	1:w:1971:A:OP1	1.36	1.21
9:G:7:GLU:CG	9:G:8:PRO:HD3	1.70	1.21
31:y:1239:A:N6	31:y:1299:A:H8	1.36	1.21
37:e:12:CYS:CB	37:e:19:LEU:HB2	1.70	1.21
1:w:1173:G:H2'	1:w:1176:G:O6	1.35	1.21
14:L:68:ARG:NH2	14:L:69:ASP:HB2	1.55	1.21
31:y:321:A:O2'	31:y:322:C:O5'	1.59	1.21
31:y:1237:C:C3'	31:y:1238:A:H5'	1.69	1.21
1:w:1791:A:N6	1:w:1828:G:O2'	1.74	1.21
1:w:2335:A:O2'	1:w:2337:G:N7	1.72	1.21
31:y:36:C:C5'	45:m:120:GLY:HA2	1.68	1.21
31:y:597:G:H3'	31:y:597:G:OP2	1.39	1.21
31:y:817:C:C5'	31:y:819:A:H5'	1.71	1.21
1:w:1439:A:H62	1:w:1552:G:N2	1.37	1.21
1:w:1918:A:C8	1:w:1918:A:OP2	1.94	1.21
2:x:42:C:C2	7:E:92:VAL:HG23	1.74	1.21
26:X:20:LYS:O	26:X:23:LEU:HG	1.34	1.21
1:w:2065:C:H2'	1:w:2066:C:C5'	1.71	1.20
31:y:789:U:H2'	31:y:791:G:OP2	1.07	1.20
45:m:109:VAL:HG23	45:m:119:TYR:CB	1.71	1.20
1:w:2865:U:H5'	1:w:2867:G:OP2	1.38	1.20
18:P:96:ILE:CG2	18:P:97:LYS:H	1.54	1.20
45:m:37:THR:HB	45:m:56:LYS:O	1.37	1.20
1:w:324:A:N6	1:w:338:G:H1'	1.56	1.20
1:w:1707:G:H2'	1:w:1708:C:C6	1.76	1.20
13:K:125:LEU:HD22	13:K:126:PRO:CD	1.69	1.20
31:y:186(F):C:H2'	31:y:186(G):C:C6	1.76	1.20
31:y:331:G:OP1	31:y:332:G:H8	1.25	1.20
31:y:1212:U:O2'	31:y:1213:A:C5'	1.88	1.20
31:y:1269:A:H8	31:y:1269:A:O5'	1.25	1.20
1:w:1128:A:N6	1:w:2518:A:N6	1.89	1.20
1:w:2359:C:H2'	1:w:2360:A:O4'	1.05	1.20
1:w:2602:A:N6	32:z:76:A:H5''	1.55	1.20
8:F:152:ARG:HA	8:F:152:ARG:NH2	1.56	1.20
1:w:143:C:C2'	1:w:144:C:H5''	1.72	1.20
1:w:811:U:O2	1:w:1250:G:H3'	1.07	1.20
1:w:1321:A:H2'	1:w:1322:A:O4'	1.38	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:119:LEU:HB3	6:D:188:VAL:HA	1.23	1.20
13:K:67:ARG:O	13:K:68:ILE:HG13	1.39	1.20
31:y:300:A:H2'	31:y:301:G:O4'	1.38	1.20
31:y:438:G:H2'	31:y:494:U:O4	1.37	1.20
31:y:1092:A:C6	31:y:1093:A:N6	2.09	1.20
31:y:1290:G:H2'	31:y:1291:G:C5'	1.72	1.20
1:w:702:G:H3'	1:w:703:U:C5	1.76	1.19
1:w:2437:U:H2'	1:w:2438:U:C6	1.75	1.19
10:H:26:THR:HG22	10:H:28:VAL:H	1.04	1.19
26:X:8:LEU:HA	26:X:54:VAL:HA	1.20	1.19
31:y:718:G:H1'	44:l:116:HIS:HB2	1.24	1.19
35:c:97:TRP:CB	35:c:172:ILE:HD12	1.71	1.19
51:s:38:GLU:CA	51:s:41:LYS:HD2	1.72	1.19
1:w:183:C:O2'	1:w:432:A:H1'	1.40	1.19
1:w:1022:G:C4'	1:w:1023:U:H5'	1.70	1.19
1:w:1570:A:H2'	1:w:1571:A:C8	1.76	1.19
2:x:14:U:H4'	2:x:107:U:O2	1.38	1.19
29:a:52:LYS:N	29:a:53:PRO:HD2	1.52	1.19
31:y:273:A:O2'	31:y:274:A:H5'	1.37	1.19
31:y:657:G:N2	48:p:22:THR:OG1	1.75	1.19
31:y:1246:C:H2'	31:y:1247:U:C6	1.76	1.19
40:h:12:LEU:CG	40:h:13:GLN:H	1.54	1.19
1:w:1753:G:O2'	1:w:1754:C:C6	1.95	1.19
1:w:2193:G:C2'	1:w:2194:G:H5''	1.72	1.19
1:w:2875:C:C2'	1:w:2876:G:H5''	1.72	1.19
2:x:82:G:H2'	2:x:83:G:C8	1.76	1.19
31:y:1064:G:OP2	31:y:1386:G:H4'	1.41	1.19
1:w:1228:G:N3	1:w:1229:G:H1'	1.56	1.19
1:w:1373:A:H3'	1:w:1374:G:C8	1.78	1.19
1:w:1501:C:H5'	4:B:102:LYS:NZ	1.57	1.19
13:K:34:LEU:HD12	13:K:103:MET:CE	1.71	1.19
19:Q:71:VAL:HA	19:Q:107:LEU:HD22	1.20	1.19
20:R:81:VAL:HG21	20:R:86:GLY:CA	1.72	1.19
31:y:99:C:H2'	31:y:101:A:C8	1.78	1.19
31:y:1060:C:O2'	31:y:1061:G:H5'	1.35	1.19
31:y:1347:G:C8	42:j:107:ARG:HB2	1.77	1.19
1:w:814:C:H1'	1:w:1225:G:N2	1.57	1.19
1:w:1004:C:H5'	1:w:1010:A:N6	1.58	1.19
1:w:1276:A:H4'	14:L:12:ARG:HH22	1.03	1.19
1:w:1815:A:H4'	1:w:1816:G:C5'	1.72	1.19
1:w:2114:A:N3	1:w:2168:G:H4'	1.54	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:n:77:ASN:O	46:n:81:LEU:HD13	1.40	1.19
1:w:85:G:H1'	1:w:103:A:C2	1.78	1.18
1:w:307:G:H22	1:w:309:G:H3'	1.01	1.18
1:w:666:G:OP1	12:J:47:ASP:HB3	1.43	1.18
1:w:1255:U:O2	6:D:67:ARG:HB3	1.43	1.18
4:B:211:ARG:HG3	4:B:215:LEU:HD11	1.25	1.18
31:y:242:C:C2'	31:y:243:A:H5'	1.72	1.18
31:y:329:A:O2'	31:y:330:C:H5'	1.43	1.18
41:i:11:THR:HA	41:i:14:ARG:HG2	1.22	1.18
1:w:890:A:H2'	1:w:892:G:H5'	1.20	1.18
1:w:1669:A:H3'	1:w:1670:C:C5'	1.72	1.18
31:y:954:G:N1	46:n:104:ARG:NH1	1.91	1.18
33:O:54:U:H3	33:O:58:A:N6	1.38	1.18
1:w:261:G:H4'	1:w:609(A):A:C2	1.77	1.18
1:w:1045:A:H4'	1:w:1047:G:H5'	1.19	1.18
1:w:2658:C:H5''	8:F:158:HIS:NE2	1.57	1.18
1:w:2825:G:H8	1:w:2825:G:O5'	1.27	1.18
10:H:80:ALA:O	10:H:83:ILE:HG12	1.42	1.18
22:T:19:ARG:HE	22:T:25:PRO:HG2	1.03	1.18
31:y:38:G:O2'	31:y:397:A:N6	1.73	1.18
31:y:328:C:H4'	31:y:329:A:C5'	1.72	1.18
1:w:1567:A:OP2	1:w:1567:A:H2'	1.38	1.18
1:w:1624:G:H2'	1:w:1625:C:C6	1.79	1.18
1:w:1797:C:H5''	4:B:256:GLY:O	1.44	1.18
1:w:2786:U:H1'	5:C:64:LYS:CG	1.74	1.18
12:J:98:GLU:O	12:J:102:ARG:HB3	1.43	1.18
13:K:27:VAL:HG11	13:K:136:ALA:HB3	1.23	1.18
15:M:70:GLY:HA3	15:M:101:LEU:CD2	1.71	1.18
19:Q:39:THR:OG1	27:Y:28:PRO:HG3	1.42	1.18
24:V:88:LYS:HG2	24:V:89:GLU:OE2	1.39	1.18
31:y:518:C:H5'	31:y:530:G:C4'	1.74	1.18
31:y:1160:G:C2'	31:y:1161:C:H5'	1.73	1.18
37:e:33:MET:H	37:e:33:MET:CE	1.56	1.18
1:w:177:G:H3'	1:w:178:G:H8	1.09	1.18
1:w:2175:C:C2'	1:w:2176:A:H5''	1.73	1.18
5:C:20:ALA:CB	11:I:73:ASP:HB3	1.73	1.18
9:G:101:LEU:HD12	9:G:107:ILE:CG2	1.73	1.18
31:y:517:G:N2	31:y:532:A:H4'	1.59	1.18
31:y:733:A:O2'	31:y:734:G:H5''	1.42	1.18
31:y:1375:A:H2'	31:y:1376:U:O4'	1.44	1.18
37:e:12:CYS:HB3	37:e:19:LEU:CB	1.74	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:8:GLY:HA3	50:r:59:ILE:HG12	1.24	1.18
1:w:1309:G:H2'	1:w:1310:G:H5''	1.21	1.17
1:w:2787:C:O2	5:C:61:ARG:NH1	1.77	1.17
2:x:13:A:N1	2:x:70:C:H5''	1.60	1.17
27:Y:33:CYS:SG	27:Y:34:PRO:HD2	1.84	1.17
31:y:135:C:H2'	31:y:136:C:C5'	1.74	1.17
31:y:1323:G:H2'	31:y:1324:A:C8	1.80	1.17
1:w:698:C:H4'	1:w:734:A:N6	1.59	1.17
1:w:2016:U:H5'	1:w:2058:A:C5'	1.73	1.17
1:w:2189:U:H3'	1:w:2190:G:H5''	1.19	1.17
1:w:2296:U:O2'	1:w:2297:C:H6	1.26	1.17
1:w:2359:C:O2	1:w:2360:A:H1'	1.38	1.17
31:y:818:G:C2'	31:y:819:A:H5''	1.74	1.17
31:y:1212:U:C2'	31:y:1213:A:H5''	1.73	1.17
31:y:1229:A:H2	46:n:125:ARG:O	1.25	1.17
37:e:9:CYS:CB	37:e:22:LYS:HZ2	1.57	1.17
44:l:82:VAL:HG11	44:l:105:VAL:HB	1.19	1.17
45:m:76:LEU:HD22	45:m:80:SER:CB	1.74	1.17
1:w:890:A:H5''	1:w:890:A:H8	1.09	1.17
1:w:144(B):A:H4'	1:w:1460:A:O2'	1.43	1.17
1:w:2286:A:H5''	1:w:2287:A:O5'	1.43	1.17
1:w:270(U):G:H2'	1:w:270(V):C:C5	1.80	1.17
1:w:705:A:OP2	1:w:726:G:N2	1.77	1.17
1:w:1031:G:C2'	1:w:1032:A:H5'	1.74	1.17
1:w:2024:G:H2'	1:w:2025:C:C6	1.79	1.17
1:w:712(B):A:H5''	1:w:712(B):A:N3	1.58	1.17
1:w:2758:A:H3'	1:w:2759:G:H5''	1.21	1.17
19:Q:10:VAL:HG12	19:Q:11:ARG:H	1.06	1.17
31:y:838:G:O6	31:y:842:C:C5'	1.92	1.17
31:y:1141:C:H2'	31:y:1142:G:H5''	1.18	1.17
31:y:1196:U:O5'	31:y:1197:G:H5''	1.42	1.17
40:h:133:GLY:O	40:h:137:LYS:HG3	1.43	1.17
19:Q:57:ASN:HA	19:Q:60:ASN:HB2	1.26	1.17
28:Z:16:HIS:HA	28:Z:21:ARG:HG3	1.17	1.17
31:y:1347:G:N2	31:y:1373:G:C2'	2.01	1.17
44:l:108:ILE:HB	51:s:87:ARG:O	1.44	1.17
1:w:483:A:N6	1:w:497:A:N3	1.93	1.16
1:w:560:C:H4'	17:O:52:ARG:NH1	1.60	1.16
1:w:978:G:H3'	1:w:979:G:H8	1.00	1.16
1:w:2034:U:H3'	1:w:2035:G:H5''	1.24	1.16
7:E:74:LYS:HB2	7:E:86:MET:HB2	1.25	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:93:LYS:HD2	17:O:93:LYS:H	1.04	1.16
31:y:1064:G:N2	31:y:1190:G:H2'	1.58	1.16
31:y:1252:A:H2'	31:y:1253:G:O4'	1.45	1.16
45:m:27:LYS:HA	45:m:27:LYS:HE3	1.21	1.16
1:w:2080:G:H5'	24:V:23:LYS:HG3	1.17	1.16
1:w:2511:U:C2'	1:w:2512:C:H5''	1.73	1.16
1:w:2601:C:H4'	32:z:74:C:O3'	1.43	1.16
13:K:125:LEU:HD13	13:K:126:PRO:HD2	1.19	1.16
29:a:49:VAL:O	29:a:53:PRO:HG3	1.45	1.16
31:y:320:C:O2'	31:y:1435:G:C1'	1.93	1.16
31:y:686:U:H1'	31:y:687:A:H5'	1.25	1.16
37:e:9:CYS:HA	37:e:26:CYS:SG	1.84	1.16
37:e:26:CYS:HA	37:e:31:CYS:CB	1.76	1.16
45:m:27:LYS:O	45:m:29:ALA:N	1.78	1.16
48:p:21:ASP:O	48:p:24:SER:HB2	1.44	1.16
49:q:4:ILE:HB	49:q:66:PRO:HB3	1.26	1.16
1:w:671:C:H2'	1:w:672:C:H5'	1.17	1.16
1:w:674:G:H5''	6:D:72:ASP:H	1.07	1.16
1:w:1186:G:H2'	1:w:1187:G:O4'	1.46	1.16
1:w:1455:G:H2'	1:w:1456:G:C8	1.81	1.16
1:w:1687:G:C2'	1:w:1701:A:H61	1.57	1.16
11:I:24:VAL:HG22	11:I:25:LEU:H	1.08	1.16
15:M:39:ILE:CG1	15:M:49:VAL:HG13	1.74	1.16
31:y:301:G:H5'	50:r:31:LEU:CD2	1.76	1.16
1:w:262:A:C5'	1:w:609(B):G:O2'	1.94	1.16
1:w:1259:G:H2'	1:w:1260:G:C8	1.79	1.16
1:w:1302:A:H2	1:w:1643:G:N2	1.43	1.16
1:w:1676:A:C2	1:w:1677:A:H1'	1.81	1.16
1:w:1862:G:H2'	1:w:1863:G:H5''	1.19	1.16
1:w:2839:G:C5'	14:L:46:GLY:HA3	1.75	1.16
2:x:80:U:H2'	2:x:81:G:H8	1.09	1.16
3:A:21:TYR:HA	3:A:25:GLU:OE2	1.44	1.16
27:Y:38:ALA:H	27:Y:49:CYS:HB2	1.03	1.16
31:y:476:G:H2'	31:y:477:G:C8	1.80	1.16
31:y:509:A:O2'	31:y:510:A:H5'	1.43	1.16
31:y:668:G:C4'	48:p:49:ASP:HA	1.75	1.16
31:y:1441:G:H5''	31:y:1442:G:O4'	1.44	1.16
1:w:579:G:H2'	1:w:580:C:C6	1.80	1.16
1:w:712(B):A:H4'	1:w:2713:A:H5'	1.20	1.16
1:w:2783:G:H2'	1:w:2784:C:C6	1.81	1.16
5:C:27:LEU:HG	5:C:180:ASN:O	1.40	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:838:G:O6	31:y:842:C:H5'	0.98	1.16
45:m:76:LEU:HD22	45:m:80:SER:HB2	1.22	1.16
46:n:15:VAL:HG21	46:n:41:PRO:HA	1.25	1.16
1:w:764:A:H4'	4:B:213:ARG:CD	1.76	1.15
1:w:885:C:H3'	1:w:886:C:H5'	1.27	1.15
1:w:1260:G:H2'	1:w:1261:C:C6	1.81	1.15
1:w:1479:G:C2	1:w:1480:G:H1'	1.80	1.15
1:w:2240:C:H2'	1:w:2241:A:H5'	1.16	1.15
1:w:2478:A:H4'	1:w:2528:U:O4'	1.39	1.15
1:w:2618:G:C6	1:w:2619:C:N4	2.14	1.15
1:w:2745:C:H1'	8:F:143:GLN:HG2	1.17	1.15
16:N:28:VAL:HG22	16:N:45:PHE:O	1.44	1.15
16:N:93:ARG:HA	16:N:117:ASP:HB2	1.28	1.15
1:w:137(A):C:H2'	1:w:137(B):G:H8	1.12	1.15
1:w:247:G:H4'	1:w:386:G:C6	1.80	1.15
1:w:432:A:H2'	1:w:433:C:C6	1.80	1.15
1:w:1153:C:H2'	1:w:1154:G:H5'	1.27	1.15
1:w:1700:A:H8	1:w:1700:A:O5'	1.24	1.15
1:w:2631:G:H22	5:C:61:ARG:NH1	1.38	1.15
1:w:2733:A:O2'	1:w:2734:A:C5'	1.93	1.15
2:x:79:C:O2'	2:x:80:U:H5'	1.43	1.15
5:C:77:ILE:HG22	5:C:78:LEU:H	1.08	1.15
9:G:114:LEU:HA	9:G:130:TYR:CD1	1.80	1.15
9:G:124:GLY:HA2	9:G:144:VAL:HG23	1.16	1.15
15:M:27:SER:HA	15:M:89:ARG:CG	1.77	1.15
22:T:55:HIS:O	22:T:70:LEU:HD11	1.41	1.15
31:y:314:C:C2'	31:y:315:A:H5''	1.75	1.15
31:y:529:G:H2'	31:y:530:G:C5'	1.74	1.15
31:y:975:A:N3	31:y:1357:A:H1'	1.59	1.15
31:y:1506:U:O4	31:y:1521:G:H5''	1.42	1.15
35:c:27:LYS:HG2	35:c:194:PRO:HD2	1.16	1.15
1:w:182:A:N1	1:w:215:G:N2	1.94	1.15
1:w:483:A:H61	1:w:497:A:H1'	1.10	1.15
1:w:1088:A:H4'	1:w:1089:G:C8	1.80	1.15
1:w:1746:G:C4	1:w:1747:G:H1'	1.81	1.15
1:w:2694:G:O2'	1:w:2695:C:H5''	1.41	1.15
11:I:86:ILE:HG22	11:I:94:ARG:CD	1.77	1.15
12:J:92:GLU:HG3	12:J:95:VAL:HG13	1.26	1.15
31:y:954:G:N2	31:y:1227:A:H62	1.42	1.15
31:y:1312:G:C2'	31:y:1313:U:H5'	1.75	1.15
36:d:34:LEU:HD23	36:d:38:ARG:HH21	1.03	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:119:ARG:HH12	36:d:123:GLN:HB3	1.01	1.15
38:f:100:VAL:HG13	38:f:118:ILE:HG12	1.27	1.15
51:s:82:THR:HG23	51:s:83:GLU:H	1.10	1.15
1:w:363(E):G:H2'	1:w:363(F):U:H5''	1.22	1.15
1:w:1184:G:O2'	1:w:1185:C:H5'	1.46	1.15
1:w:1275:A:N7	14:L:16:HIS:HB3	1.60	1.15
1:w:1394:U:H4'	1:w:1603:A:H4'	1.23	1.15
1:w:1458:C:C1'	1:w:1459:G:C2	2.28	1.15
1:w:1991:U:C2'	1:w:1992:G:H5''	1.77	1.15
1:w:2323:G:N2	1:w:2335:A:C2	2.14	1.15
1:w:2441:C:H2'	1:w:2442:C:H5''	1.27	1.15
1:w:2472:G:H22	1:w:2477:C:H5'	1.07	1.15
1:w:2534:A:H2'	1:w:2535:G:C5'	1.75	1.15
1:w:2601:C:C5'	32:z:75:C:H5'	1.76	1.15
13:K:125:LEU:CD1	13:K:126:PRO:HD2	1.76	1.15
16:N:51:ARG:HB3	16:N:62:THR:CG2	1.75	1.15
31:y:166:G:H2'	31:y:167:G:C8	1.82	1.15
31:y:777:A:C3'	31:y:778:G:H8	1.58	1.15
31:y:1329:A:H5''	46:n:26:GLY:CA	1.75	1.15
32:z:71:G:C3'	32:z:72:C:H5''	1.76	1.15
1:w:483:A:H4'	21:S:56:PRO:CB	1.76	1.15
1:w:519:U:C4'	19:Q:25:ARG:HH22	1.59	1.15
1:w:530:G:O2'	1:w:532:A:N7	1.79	1.15
1:w:817:C:H5'	1:w:932:G:C6	1.82	1.15
1:w:1796:U:H4'	4:B:256:GLY:N	1.60	1.15
1:w:1991:U:H2'	1:w:1992:G:C5'	1.76	1.15
1:w:2014:A:H2'	1:w:2015:A:N7	1.62	1.15
6:D:4:ILE:HA	6:D:12:ARG:HE	1.05	1.15
15:M:39:ILE:HG13	15:M:49:VAL:HG13	1.22	1.15
16:N:50:ILE:HG22	16:N:62:THR:O	1.47	1.15
20:R:81:VAL:HG22	20:R:82:GLN:H	1.06	1.15
21:S:49:VAL:HG12	21:S:50:ARG:H	1.07	1.15
24:V:12:PRO:HG3	24:V:63:ALA:N	1.60	1.15
29:a:16:ILE:HD13	29:a:16:ILE:O	1.47	1.15
31:y:245:C:H2'	31:y:246:A:H5'	1.19	1.15
31:y:335:C:O2'	31:y:1433:A:H1'	1.47	1.15
31:y:343:U:H1'	31:y:347:G:N2	1.62	1.15
31:y:405:U:H6	37:e:2:GLY:N	1.41	1.15
31:y:519:C:O3'	45:m:50:ALA:HB1	1.45	1.15
31:y:1399:C:H5'	31:y:1401:G:C8	1.81	1.15
46:n:39:ILE:HG13	46:n:56:LEU:HD11	1.22	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:227:A:O2'	1:w:228:A:H5''	1.46	1.14
1:w:539:G:H2'	1:w:540:G:C8	1.81	1.14
1:w:655:A:H4'	1:w:656:G:O4'	1.47	1.14
1:w:932:G:H5'	1:w:933:A:OP1	1.46	1.14
1:w:1692:U:O2	1:w:1695:G:N1	1.79	1.14
1:w:1926:U:H1'	1:w:1929:G:N1	1.60	1.14
1:w:2089:U:H2'	1:w:2090:G:C8	1.82	1.14
1:w:2113:U:H2'	1:w:2114:A:C8	1.81	1.14
1:w:2193:G:H2'	1:w:2194:G:H5''	1.15	1.14
1:w:2439:A:H5''	1:w:2441:C:O5'	1.46	1.14
1:w:2471:C:H5'	1:w:2471:C:C6	1.82	1.14
1:w:2548:G:C2'	1:w:2549:G:H5''	1.77	1.14
1:w:2875:C:H3'	1:w:2876:G:H5''	1.24	1.14
4:B:78:LYS:HB2	4:B:114:GLY:O	1.43	1.14
11:I:85:VAL:C	11:I:86:ILE:HD12	1.70	1.14
20:R:11:PRO:HA	20:R:28:PHE:HA	1.22	1.14
24:V:26:ARG:HG3	24:V:34:THR:CG2	1.77	1.14
31:y:89:U:H2'	31:y:90:C:C6	1.82	1.14
31:y:376:G:H5'	49:q:6:LEU:CD2	1.77	1.14
31:y:842:C:H4'	31:y:848:C:N4	1.62	1.14
35:c:125:PRO:HA	35:c:128:GLU:HB2	1.16	1.14
1:w:13:A:H2	1:w:14:A:N6	1.42	1.14
1:w:576:U:O2'	1:w:577:G:H5'	1.44	1.14
1:w:1031:G:H2'	1:w:1032:A:H5'	1.15	1.14
1:w:1805:U:C2'	1:w:1806:C:H5''	1.77	1.14
1:w:2619:C:C2'	1:w:2620:C:H5'	1.76	1.14
1:w:2837:G:C2'	1:w:2838:G:H5'	1.76	1.14
5:C:188:VAL:CG2	5:C:189:PRO:HD2	1.76	1.14
8:F:98:LEU:HB2	8:F:102:ALA:O	1.47	1.14
8:F:125:VAL:HA	8:F:131:VAL:HB	1.27	1.14
10:H:123:GLU:HB3	10:H:127:LYS:HE3	1.15	1.14
13:K:51:ARG:HD3	13:K:51:ARG:N	1.60	1.14
15:M:27:SER:CA	15:M:89:ARG:HG3	1.76	1.14
1:w:729:G:H3'	1:w:730:C:H5''	1.24	1.14
1:w:921:G:H4'	1:w:2269:A:C8	1.83	1.14
1:w:1005:C:H2'	1:w:1006:C:H5''	1.29	1.14
1:w:1815:A:H4'	1:w:1816:G:H5'	1.15	1.14
1:w:2158:A:O2'	1:w:2159:G:H5'	1.45	1.14
1:w:2306:C:H3'	1:w:2311:A:H61	1.03	1.14
1:w:2356:C:O2	1:w:2361:A:N6	1.80	1.14
1:w:2360:A:C2	1:w:2361:A:H1'	1.82	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2462:U:H2'	1:w:2463:C:H5'	1.20	1.14
3:A:201:LYS:HB2	3:A:202:PRO:CD	1.77	1.14
4:B:140:THR:O	4:B:164:GLN:HA	1.45	1.14
5:C:63:LEU:HD23	5:C:65:GLY:N	1.63	1.14
31:y:186(F):C:H2'	31:y:186(G):C:H6	1.01	1.14
31:y:210:U:C1'	31:y:216:G:N7	2.11	1.14
31:y:331:G:OP1	31:y:332:G:C8	1.99	1.14
31:y:807:A:H2'	31:y:808:C:C6	1.83	1.14
31:y:959:A:N6	52:t:79:THR:HG21	1.62	1.14
31:y:1064:G:O2'	31:y:1190:G:N2	1.79	1.14
31:y:1305:G:N2	31:y:1332:A:OP2	1.81	1.14
53:u:82:SER:O	53:u:86:ARG:HB2	1.47	1.14
1:w:321:G:C2	1:w:341:G:H4'	1.82	1.14
1:w:412:A:H61	1:w:2411:A:H1'	1.13	1.14
1:w:466:A:H5''	28:Z:30:VAL:HG11	1.17	1.14
1:w:591:C:O2	29:a:2:PRO:HB3	1.47	1.14
1:w:1838:C:N4	1:w:1898:U:C2'	2.10	1.14
1:w:1860:G:H4'	3:A:207:GLY:HA2	1.20	1.14
1:w:2038:G:H2'	1:w:2039:C:C6	1.82	1.14
1:w:2527:C:H2'	1:w:2528:U:C6	1.82	1.14
1:w:2857:G:N2	1:w:2859:G:H3'	1.59	1.14
8:F:20:ALA:HB1	8:F:21:PRO:HD2	1.19	1.14
9:G:6:LEU:HD13	9:G:35:LEU:HD22	1.27	1.14
16:N:25:GLY:O	16:N:48:ILE:HG23	1.48	1.14
31:y:68:G:N1	31:y:101:A:H2	1.45	1.14
31:y:236:G:H3'	31:y:237:C:C6	1.83	1.14
31:y:625:G:H2'	31:y:626:U:C6	1.81	1.14
31:y:757:U:H2'	31:y:758:G:H1'	1.18	1.14
31:y:911:U:H2'	31:y:912:C:C6	1.81	1.14
31:y:1290:G:C2'	31:y:1291:G:H5''	1.76	1.14
31:y:1518:MA6:C5'	31:y:1518:MA6:C8	2.25	1.14
40:h:126:ASP:HA	40:h:131:LYS:HG3	1.15	1.14
1:w:216:A:H2'	1:w:217:G:C8	1.83	1.14
1:w:1173:G:H3'	1:w:1174:A:C5'	1.75	1.14
1:w:1458:C:H4'	1:w:1459:G:O5'	1.40	1.14
1:w:1869:G:N2	1:w:1871:A:H3'	1.60	1.14
1:w:2061:G:C8	1:w:2501:C:H1'	1.83	1.14
1:w:2240:C:C2'	1:w:2241:A:H5'	1.77	1.14
6:D:117:LYS:HZ2	6:D:186:ARG:HA	1.07	1.14
23:U:34:GLY:HA2	23:U:60:PHE:HE2	1.04	1.14
31:y:910:C:C5'	45:m:96:ARG:HH22	1.59	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1511:A:H2'	1:w:1512:G:C8	1.81	1.13
5:C:105:THR:CG2	5:C:106:GLY:H	1.62	1.13
7:E:165:THR:OG1	7:E:167:GLU:HG3	1.45	1.13
9:G:124:GLY:C	9:G:143:SER:HA	1.70	1.13
14:L:40:LYS:HD3	14:L:40:LYS:H	1.07	1.13
31:y:122:G:H2'	31:y:123:C:H6	0.98	1.13
31:y:228:A:H1'	49:q:62:VAL:HB	1.31	1.13
31:y:519:C:H5'	45:m:50:ALA:HB2	1.16	1.13
31:y:571:U:H2'	31:y:917:G:H4'	1.27	1.13
31:y:716:A:H2'	31:y:717:C:H5'	1.30	1.13
31:y:1157:A:H4'	31:y:1158:C:H5'	1.24	1.13
31:y:1367:C:OP1	42:j:114:TYR:HB2	1.49	1.13
31:y:1455:G:H2'	31:y:1459:C:C6	1.82	1.13
35:c:61:LEU:HD12	35:c:64:ARG:HH21	1.02	1.13
40:h:47:CYS:HB3	40:h:58:PRO:HB2	1.16	1.13
43:k:99:LYS:HD3	43:k:100:THR:H	1.06	1.13
52:t:12:ASP:HB2	52:t:15:LEU:HD21	1.30	1.13
1:w:307:G:N2	1:w:309:G:H3'	1.64	1.13
1:w:570:G:H2'	1:w:2030:A:N6	1.64	1.13
1:w:964:C:O2	1:w:2273:A:H2	1.30	1.13
1:w:1138:G:C8	1:w:1138:G:OP2	2.00	1.13
1:w:2393:A:H2'	1:w:2394:C:C6	1.82	1.13
1:w:2786:U:H1'	5:C:64:LYS:HG2	1.28	1.13
1:w:2842:G:H2'	1:w:2843:G:H8	1.13	1.13
4:B:79:VAL:HG21	4:B:111:LEU:HG	1.17	1.13
5:C:31:CYS:SG	5:C:51:PHE:HB2	1.88	1.13
5:C:51:PHE:HB3	5:C:76:ARG:CD	1.77	1.13
5:C:54:GLN:HG3	5:C:75:VAL:HG21	1.22	1.13
17:O:85:LYS:HA	17:O:85:LYS:HE3	1.19	1.13
18:P:15:GLU:HB2	18:P:16:PRO:HD3	1.26	1.13
23:U:50:ASN:HB2	23:U:81:VAL:CG1	1.77	1.13
31:y:96:G:H2'	31:y:97:U:H6	1.13	1.13
31:y:320:C:O2'	31:y:1435:G:H1'	0.98	1.13
31:y:518:C:C5'	31:y:530:G:H4'	1.77	1.13
31:y:1108:G:C3'	31:y:1109:C:H5''	1.78	1.13
31:y:1212:U:O2'	31:y:1213:A:H5''	0.98	1.13
31:y:1402:4OC:H2'	31:y:1403:C:C6	1.82	1.13
37:e:172:PRO:HG3	37:e:193:ASP:HB3	1.23	1.13
38:f:48:ALA:HB1	38:f:49:PRO:HD2	1.23	1.13
1:w:107:C:H4'	1:w:292:C:O2'	1.49	1.13
1:w:1796:U:H2'	1:w:1797:C:H5	1.03	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1886:C:H2'	1:w:1887:C:H6	1.12	1.13
2:x:55:U:O2'	2:x:56:G:C5'	1.97	1.13
4:B:75:ILE:H	4:B:76:PRO:HD2	1.13	1.13
5:C:51:PHE:HB3	5:C:76:ARG:HD2	1.27	1.13
6:D:15:LEU:HB2	6:D:19:LEU:HD11	1.27	1.13
11:I:67:LYS:HG2	11:I:68:GLU:H	1.10	1.13
16:N:62:THR:HG21	16:N:75:ILE:HG12	1.22	1.13
31:y:36:C:H2'	31:y:37:U:C5	1.82	1.13
31:y:143:A:N6	31:y:220:G:H1	1.46	1.13
31:y:156:G:H3'	31:y:157:G:H5''	1.27	1.13
31:y:405:U:C6	37:e:2:GLY:N	2.16	1.13
31:y:910:C:H2'	31:y:911:U:C6	1.84	1.13
31:y:1013:G:C2	31:y:1016:A:N6	2.17	1.13
37:e:9:CYS:C	37:e:33:MET:HE1	1.72	1.13
37:e:118:ARG:HG3	37:e:119:GLN:N	1.63	1.13
41:i:119:LEU:HD13	41:i:124:ALA:HA	1.22	1.13
1:w:438:G:H2'	1:w:439:G:H5'	1.27	1.13
1:w:674:G:H4'	6:D:71:GLY:N	1.64	1.13
1:w:811:U:O2	1:w:1250:G:C3'	1.94	1.13
1:w:957:A:H5''	13:K:74:TYR:OH	1.48	1.13
1:w:1153:C:H5'	17:O:76:TYR:CE2	1.84	1.13
1:w:1161:C:O5'	1:w:1161:C:H6	1.31	1.13
1:w:2631:G:H4'	1:w:2892:A:H4'	1.27	1.13
1:w:2787:C:O2'	5:C:61:ARG:HB2	1.46	1.13
4:B:2:ALA:CA	4:B:200:ASP:HB3	1.77	1.13
18:P:76:LYS:HE3	18:P:78:LYS:HB2	1.19	1.13
23:U:25:ARG:HG3	23:U:37:LEU:HB2	1.25	1.13
31:y:95:G:H2'	31:y:96:G:N7	1.62	1.13
31:y:898:G:H1'	31:y:901:A:H61	1.10	1.13
31:y:992:U:O2'	31:y:993:G:OP2	1.66	1.13
38:f:79:GLU:HG2	38:f:93:PRO:HD3	1.27	1.13
41:i:84:ARG:O	41:i:135:CYS:HB2	1.49	1.13
52:t:22:LEU:HA	52:t:25:LYS:HE2	1.26	1.13
1:w:242:G:C8	29:a:5:LYS:HB3	1.84	1.12
1:w:363(G):A:H2'	1:w:364:C:C5	1.82	1.12
1:w:451:C:C2'	1:w:453:C:H5	1.60	1.13
1:w:1124:C:H3'	1:w:1125:G:C8	1.82	1.12
1:w:1173:G:C3'	1:w:1174:A:H5''	1.75	1.13
1:w:149(B):A:H1'	1:w:1529:A:H2	1.11	1.12
1:w:1639:U:H2'	1:w:1640:C:H5''	1.28	1.12
1:w:2052:G:H2'	1:w:2053:G:H8	1.14	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2077:A:H2'	1:w:2078:C:C6	1.83	1.12
1:w:2167:U:H2'	1:w:2168:G:O4'	1.49	1.13
1:w:2550:G:C2'	1:w:2551:C:H5'	1.78	1.12
1:w:2712:U:H5''	1:w:2714:G:H5'	1.28	1.12
5:C:198:VAL:CG1	5:C:199:ARG:H	1.61	1.13
6:D:105:LEU:HD13	6:D:105:LEU:O	1.48	1.13
15:M:35:ILE:HD13	15:M:69:VAL:HB	1.20	1.12
18:P:68:LYS:HB3	18:P:94:LEU:CD2	1.79	1.12
26:X:35:ARG:HH21	26:X:37:LEU:HD21	1.09	1.12
31:y:391:G:C3'	31:y:392:G:H5''	1.77	1.12
31:y:520:A:H62	31:y:529:G:N2	1.46	1.12
31:y:1313:U:OP2	52:t:4:SER:HA	1.49	1.13
35:c:102:LEU:HD12	35:c:176:GLU:CB	1.78	1.13
37:e:115:ARG:O	37:e:118:ARG:HG2	1.46	1.12
41:i:122:ARG:HG2	41:i:123:GLU:H	1.06	1.13
1:w:1753:G:N2	1:w:1755:A:H3'	1.62	1.12
1:w:2837:G:H2'	1:w:2838:G:H5'	1.22	1.12
31:y:689:C:H2'	31:y:690:G:H5'	1.30	1.12
31:y:1412:C:H2'	31:y:1413:A:H8	0.97	1.12
37:e:9:CYS:O	37:e:33:MET:CE	1.96	1.12
38:f:79:GLU:H	41:i:104:ARG:HD3	0.98	1.12
44:l:77:MET:HB3	44:l:80:VAL:HG11	1.16	1.12
46:n:93:ARG:O	46:n:94:ARG:HG2	1.49	1.12
1:w:322:A:OP1	6:D:163:ARG:HB2	1.47	1.12
1:w:805:G:H4'	12:J:39:LYS:HB3	1.31	1.12
1:w:1021:A:N6	1:w:1141:U:H3	1.46	1.12
1:w:1304:C:H2'	1:w:1305:C:C5'	1.76	1.12
1:w:1782:C:H1'	1:w:2609:U:H5''	1.23	1.12
1:w:1815:A:C4'	1:w:1816:G:H5'	1.78	1.12
1:w:1920:C:H5''	31:y:1517:G:C4	1.83	1.12
1:w:2443:C:H2'	1:w:2444:G:C8	1.84	1.12
4:B:24:ILE:HG12	4:B:25:THR:H	1.11	1.12
10:H:90:LEU:HA	10:H:110:LEU:CB	1.79	1.12
11:I:6:THR:HG22	11:I:7:TYR:H	1.03	1.12
13:K:42:ILE:HD13	13:K:43:THR:N	1.62	1.12
14:L:75:LEU:O	14:L:79:LEU:HG	1.47	1.12
26:X:20:LYS:HA	26:X:23:LEU:HD21	1.21	1.12
31:y:789:U:C2'	31:y:791:G:OP2	1.97	1.12
31:y:891:U:OP2	31:y:906:G:N1	1.82	1.12
35:c:189:ASP:O	35:c:191:ASP:N	1.82	1.12
38:f:106:PRO:HA	38:f:109:ILE:HD12	1.27	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:108:U:H2'	1:w:109:G:C8	1.84	1.12
1:w:600:G:H2'	1:w:601:C:C6	1.83	1.12
1:w:778:G:H4'	4:B:48:ARG:NH2	1.63	1.12
1:w:2354:G:H1'	23:U:36:ILE:HD13	1.29	1.12
1:w:2784:C:C3'	1:w:2785:C:H5''	1.78	1.12
2:x:17:C:C2'	2:x:18:G:H5'	1.78	1.12
4:B:137:PRO:HB2	4:B:140:THR:HG22	1.24	1.12
4:B:155:LEU:HD22	4:B:157:ARG:HG2	1.29	1.12
10:H:127:LYS:HA	10:H:130:LEU:CD1	1.78	1.12
26:X:3:ARG:O	26:X:58:VAL:HG13	1.49	1.12
31:y:946:A:H8	31:y:946:A:O5'	1.29	1.12
36:d:122:GLU:O	36:d:125:GLU:HG2	1.50	1.12
36:d:123:GLN:HE21	36:d:133:ALA:HB1	0.95	1.12
36:d:156:ARG:H	36:d:160:ALA:HB3	1.10	1.12
43:k:8:LEU:HB3	43:k:96:ILE:HG13	1.30	1.12
52:t:25:LYS:HE3	52:t:28:LYS:HD3	1.17	1.12
1:w:19:C:H2'	1:w:20:C:H5'	1.15	1.12
1:w:231:C:C2'	1:w:232:G:H5'	1.80	1.12
1:w:341:G:H2'	1:w:342:G:C8	1.84	1.12
1:w:918:A:H4'	2:x:97:G:H21	1.12	1.12
1:w:1136:G:C2'	1:w:1137:G:C8	2.33	1.12
1:w:2303:G:N2	7:E:132:ASN:HD22	1.45	1.12
1:w:2529:G:OP2	1:w:2530:A:H5''	1.45	1.12
1:w:2810:A:O2'	5:C:61:ARG:HD3	1.50	1.12
2:x:110:G:H2'	2:x:111:U:H5'	1.27	1.12
10:H:110:LEU:O	10:H:114:LEU:HG	1.46	1.12
10:H:138:ARG:HA	10:H:141:LYS:HE2	1.18	1.12
16:N:24:PRO:HA	16:N:49:VAL:CG1	1.79	1.12
22:T:99:TYR:O	22:T:123:ASP:HB2	1.47	1.12
31:y:117:G:H2'	31:y:118:U:C6	1.83	1.12
31:y:671:G:H4'	39:g:77:ARG:NH1	1.62	1.12
36:d:161:GLU:HG3	36:d:162:GLN:H	1.07	1.12
53:u:20:LEU:HD12	53:u:21:LYS:N	1.65	1.12
1:w:683:C:H4'	28:Z:21:ARG:HH12	1.07	1.12
1:w:870:A:H8	1:w:870:A:OP2	1.32	1.12
1:w:965:C:C2'	1:w:966:G:H5''	1.78	1.12
1:w:1510:A:H2'	1:w:1511:A:O4'	1.50	1.12
1:w:1669:A:C3'	1:w:1670:C:H5'	1.79	1.12
1:w:1847:A:OP1	1:w:1847:A:H3'	1.49	1.12
1:w:2051:A:H2'	1:w:2614:A:N6	1.63	1.12
1:w:2818:G:C4'	1:w:2837:G:H4'	1.79	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2822:G:H2'	1:w:2823:A:C5'	1.78	1.12
9:G:124:GLY:HA2	9:G:144:VAL:CG2	1.80	1.12
10:H:117:HIS:HB2	10:H:120:ARG:HB3	1.13	1.12
13:K:23:GLY:N	13:K:99:PRO:HD2	1.64	1.12
13:K:46:GLN:NE2	13:K:125:LEU:HD21	1.64	1.12
14:L:68:ARG:HB3	14:L:68:ARG:HH11	1.15	1.12
14:L:86:ARG:HG3	14:L:87:TYR:CD1	1.85	1.12
18:P:30:GLY:HA3	18:P:65:GLY:H	1.09	1.12
18:P:78:LYS:H	18:P:83:ARG:HA	0.98	1.12
18:P:96:ILE:HG22	18:P:97:LYS:N	1.56	1.12
31:y:691:G:O6	44:l:52:GLY:HA2	1.50	1.12
31:y:1266:G:H2'	31:y:1268:A:OP2	1.50	1.12
35:c:42:ILE:HD13	35:c:43:ASP:H	1.06	1.12
38:f:43:LEU:HD11	38:f:65:ASN:HD22	0.95	1.12
50:r:8:GLY:CA	50:r:59:ILE:HG12	1.78	1.12
1:w:8:A:O2'	1:w:9:U:H5'	1.50	1.11
1:w:55:G:H2'	1:w:56:A:C8	1.85	1.11
1:w:324:A:H62	1:w:338:G:H1'	1.03	1.11
1:w:594:U:H5'	29:a:61:LEU:CD1	1.80	1.11
1:w:666:G:H5''	12:J:49:ARG:HB3	1.13	1.11
1:w:666:G:C5'	12:J:49:ARG:HB3	1.80	1.11
1:w:889:C:H1'	1:w:890:A:C1'	1.80	1.11
1:w:1356:G:N2	1:w:1376:C:N4	1.98	1.11
1:w:1669:A:H2'	1:w:1670:C:H5''	1.27	1.11
1:w:1797:C:H4'	4:B:257:LEU:O	1.47	1.11
1:w:2352:A:H8	1:w:2352:A:O5'	1.29	1.11
1:w:2875:C:H2'	1:w:2876:G:C4'	1.78	1.11
5:C:11:MET:HB2	5:C:23:VAL:O	1.48	1.11
14:L:56:LYS:HD2	14:L:88:ARG:HA	1.18	1.11
19:Q:10:VAL:HB	19:Q:101:SER:H	1.05	1.11
20:R:12:VAL:HA	20:R:29:TRP:NE1	1.64	1.11
31:y:546:G:O2'	31:y:547:A:O4'	1.67	1.11
31:y:974:A:H8	31:y:974:A:OP1	1.27	1.11
31:y:1441:G:H5''	31:y:1442:G:C5'	1.80	1.11
35:c:27:LYS:HG2	35:c:194:PRO:CD	1.80	1.11
51:s:60:ALA:O	51:s:63:GLN:HG2	1.45	1.11
1:w:145:G:H3'	1:w:146:G:H5''	1.18	1.11
1:w:2080:G:C2	1:w:2081:C:C4	2.38	1.11
5:C:108:SER:HA	5:C:189:PRO:CG	1.80	1.11
6:D:98:LYS:HA	6:D:101:ARG:HB3	1.32	1.11
6:D:119:LEU:HA	6:D:188:VAL:HG22	1.15	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:120:LEU:HB2	7:E:179:PRO:HG2	1.27	1.11
8:F:118:PRO:HD2	8:F:121:ILE:HB	1.24	1.11
9:G:62:LYS:HZ3	9:G:133:HIS:HB2	1.11	1.11
9:G:124:GLY:CA	9:G:144:VAL:N	2.11	1.11
17:O:12:ARG:HA	17:O:15:LYS:HD3	1.20	1.11
17:O:99:ALA:HA	17:O:103:PRO:HB3	1.12	1.11
27:Y:38:ALA:HB3	27:Y:49:CYS:HB3	1.30	1.11
31:y:558:G:C2'	31:y:559:A:H2	1.63	1.11
1:w:80:G:H1'	1:w:347:A:C6	1.86	1.11
1:w:143:C:H4'	20:R:36:LYS:HG2	1.28	1.11
1:w:855:G:H3'	1:w:856:C:C6	1.86	1.11
1:w:1025:G:H5''	1:w:1026:U:H5'	1.31	1.11
1:w:1657:C:O2'	1:w:1658:C:H5'	1.50	1.11
1:w:2471:C:H5'	1:w:2471:C:H6	0.95	1.11
1:w:2839:G:H5''	14:L:46:GLY:HA3	1.22	1.11
12:J:7:ARG:HH11	12:J:10:PRO:HG2	1.12	1.11
31:y:303:A:O2'	31:y:304:U:H5'	1.50	1.11
31:y:673:G:C2'	31:y:674:G:C8	2.34	1.11
31:y:754:C:H1'	48:p:69:TYR:CD1	1.85	1.11
31:y:825:G:H2'	31:y:826:C:C6	1.85	1.11
31:y:961:U:H2'	31:y:962:C:H5'	1.14	1.11
31:y:1387:G:C2'	31:y:1388:C:H5''	1.80	1.11
38:f:100:VAL:HA	38:f:118:ILE:H	1.03	1.11
39:g:14:LEU:HB3	39:g:18:GLN:HG2	1.27	1.11
42:j:85:LEU:HD13	42:j:86:VAL:H	1.10	1.11
49:q:5:ARG:HD2	49:q:28:ARG:HB3	1.16	1.11
51:s:81:PHE:O	51:s:82:THR:HG22	1.49	1.11
1:w:855:G:H3'	1:w:856:C:H6	0.99	1.11
1:w:961:C:H41	1:w:2456:C:H5'	1.10	1.11
1:w:1317:A:H2'	1:w:1318:C:C6	1.85	1.11
1:w:1538:G:H2'	1:w:1539:G:N7	1.65	1.11
1:w:1583:A:H4'	1:w:1585:C:OP2	1.43	1.11
1:w:1803:A:OP2	1:w:1803:A:H8	1.30	1.11
1:w:2784:C:H3'	1:w:2785:C:H5''	1.17	1.11
5:C:59:VAL:HG21	5:C:63:LEU:HA	1.29	1.11
7:E:78:SER:HB3	32:z:19:G:N2	1.64	1.11
8:F:117:PRO:HA	8:F:121:ILE:HD12	1.27	1.11
11:I:8:LEU:HD13	11:I:82:ASN:HB3	1.32	1.11
16:N:51:ARG:HB3	16:N:62:THR:HG23	1.15	1.11
20:R:20:GLY:HA2	20:R:24:GLY:O	1.46	1.11
22:T:102:LEU:HD11	22:T:124:ILE:HG22	1.18	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:234:C:H2'	31:y:235:C:C6	1.86	1.11
31:y:891:U:H2'	31:y:892:A:H8	1.02	1.11
31:y:1518:MA6:H8	31:y:1518:MA6:O5'	1.50	1.11
1:w:394:A:H2'	1:w:395:U:H4'	1.33	1.11
1:w:1042:G:H1'	1:w:1114:G:N2	1.63	1.11
1:w:1383:C:O2'	1:w:1384:A:H5''	1.48	1.11
1:w:1545:A:H2'	1:w:1546:A:O4'	1.49	1.11
1:w:2742:C:O2'	1:w:2743:C:H5'	1.49	1.11
3:A:30:VAL:HA	3:A:33:LEU:HD12	1.17	1.11
8:F:95:ARG:HE	8:F:107:VAL:HA	1.11	1.11
9:G:88:ILE:HG22	9:G:121:LYS:HG2	1.14	1.11
17:O:92:ARG:HB3	17:O:94:ASN:HD21	1.02	1.11
24:V:26:ARG:HG2	24:V:27:GLU:H	1.08	1.11
31:y:42:G:H2'	31:y:43:C:C6	1.86	1.11
31:y:1160:G:H2'	31:y:1161:C:H5'	1.16	1.11
35:c:211:ILE:O	35:c:214:ILE:HG12	1.49	1.11
37:e:91:SER:HA	37:e:94:LEU:HD22	1.32	1.11
38:f:105:VAL:HG13	38:f:106:PRO:HD3	1.26	1.11
45:m:8:GLN:HA	45:m:11:ARG:HD2	1.28	1.11
45:m:109:VAL:CG2	45:m:119:TYR:HB2	1.79	1.11
1:w:95:G:N3	25:W:41:ILE:HD11	1.64	1.10
1:w:465:G:H2'	1:w:683:C:O2'	1.52	1.10
1:w:900:A:H2'	1:w:901:A:H8	1.16	1.10
1:w:1323:U:H2'	1:w:1324:G:H5''	1.25	1.10
1:w:2472:G:H22	1:w:2477:C:C5'	1.62	1.10
1:w:2472:G:N2	1:w:2477:C:H5'	1.64	1.10
1:w:2646:C:H2'	1:w:2647:U:H5''	1.14	1.10
1:w:2758:A:H3'	1:w:2759:G:C5'	1.81	1.10
2:x:113:C:H2'	15:M:47:THR:HG22	1.26	1.10
11:I:91:LEU:HD13	11:I:91:LEU:H	1.07	1.10
15:M:73:LEU:CA	15:M:76:LYS:HD3	1.81	1.10
22:T:39:VAL:HG12	22:T:40:ASP:H	1.04	1.10
22:T:98:MET:C	22:T:125:LEU:HD12	1.76	1.10
26:X:44:ARG:HD2	26:X:44:ARG:H	0.97	1.10
31:y:21:G:H2'	31:y:22:G:H5'	1.31	1.10
31:y:87:A:H2'	31:y:88:C:H5'	1.33	1.10
31:y:302:G:H2'	31:y:303:A:C8	1.85	1.10
31:y:666:G:H2'	31:y:667:G:H5'	1.25	1.10
36:d:152:ILE:HG21	36:d:199:LYS:HE2	1.23	1.10
37:e:158:ILE:HD12	37:e:158:ILE:H	1.10	1.10
44:l:110:ASP:HB3	51:s:85:LEU:HD13	1.20	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:n:91:ARG:NH1	46:n:91:ARG:HB3	1.66	1.10
1:w:532:A:H5'	17:O:28:ARG:NH1	1.64	1.10
1:w:669:G:C5	1:w:801:G:O6	2.05	1.10
1:w:1504:C:H2'	1:w:1505:C:O4'	1.50	1.10
1:w:1754:C:H5'	16:N:101:PHE:HE1	1.07	1.10
1:w:1978:A:H2'	1:w:1979:C:H6	1.12	1.10
1:w:2783:G:H21	5:C:37:ARG:NH2	1.48	1.10
1:w:2865:U:H3'	1:w:2866:U:H3'	1.33	1.10
6:D:150:LEU:HA	6:D:169:VAL:HB	1.30	1.10
7:E:122:PRO:HG3	7:E:180:PHE:HA	1.21	1.10
9:G:40:THR:HG23	9:G:43:ASN:HB2	1.30	1.10
12:J:7:ARG:HD2	12:J:10:PRO:HD2	1.31	1.10
26:X:28:LEU:HD12	26:X:33:GLN:HB3	1.33	1.10
31:y:90:C:H2'	31:y:91:C:C6	1.85	1.10
31:y:132:C:H2'	31:y:133:U:H5''	1.12	1.10
31:y:582:U:C5	31:y:758:G:N2	2.19	1.10
35:c:118:LEU:HD13	35:c:121:LEU:HD13	1.24	1.10
46:n:4:ILE:HG13	46:n:57:ARG:HA	1.11	1.10
50:r:22:LEU:HA	50:r:41:LYS:CG	1.80	1.10
1:w:458:G:H5''	28:Z:38:GLY:O	1.51	1.10
1:w:867:C:N3	1:w:912:C:H1'	1.64	1.10
1:w:872:A:C2	1:w:905:U:N3	2.19	1.10
1:w:1369:G:H1'	1:w:1809:A:N6	1.67	1.10
1:w:2052:G:H1'	5:C:148:GLY:O	1.52	1.10
1:w:2345:G:N3	1:w:2381:C:H2'	1.65	1.10
5:C:108:SER:HA	5:C:189:PRO:HG3	1.32	1.10
8:F:124:GLU:HG2	8:F:132:ARG:HE	1.14	1.10
13:K:33:GLY:H	13:K:132:VAL:HB	0.96	1.10
15:M:26:LEU:HD21	15:M:39:ILE:HG22	1.28	1.10
18:P:4:ILE:HG12	18:P:13:ARG:HB3	1.32	1.10
31:y:116:A:C2	31:y:117:G:H1'	1.87	1.10
36:d:11:ARG:HD3	36:d:15:THR:HG21	1.33	1.10
36:d:124:ILE:HG21	36:d:130:VAL:HG13	1.27	1.10
1:w:270(K):G:C2	1:w:270(L):C:H1'	1.87	1.10
1:w:497:A:O5'	1:w:497:A:C8	2.04	1.10
1:w:706:A:N6	1:w:725:G:H1'	1.67	1.10
1:w:855:G:H21	23:U:27:GLU:HB3	1.03	1.10
1:w:1194:A:H5'	1:w:1195:G:OP2	1.52	1.10
1:w:1636:C:H1'	1:w:1760:A:C2	1.86	1.10
1:w:1790:C:O3'	1:w:1791:A:H8	1.34	1.10
1:w:2082:A:H3'	1:w:2083:G:C8	1.85	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2281:C:H2'	1:w:2282:G:H5'	1.25	1.10
1:w:2751:G:H2'	1:w:2751:G:N3	1.66	1.10
1:w:2842:G:H2'	1:w:2843:G:C8	1.86	1.10
4:B:69:ARG:HH11	4:B:76:PRO:HG3	1.01	1.10
4:B:79:VAL:HB	4:B:111:LEU:HD11	1.31	1.10
6:D:4:ILE:HA	6:D:12:ARG:NE	1.67	1.10
7:E:172:LEU:HA	7:E:175:LEU:HD12	1.20	1.10
8:F:43:VAL:HG22	8:F:44:VAL:H	1.11	1.10
20:R:82:GLN:HG3	20:R:83:VAL:H	1.14	1.10
22:T:17:ALA:HA	22:T:20:ARG:HE	1.01	1.10
24:V:51:VAL:HB	24:V:60:PHE:H	1.16	1.10
31:y:119:A:N7	31:y:287:U:O2	1.83	1.10
31:y:160:A:H61	31:y:347:G:H1'	0.95	1.10
31:y:367:U:O2'	31:y:368:U:O5'	1.70	1.10
31:y:517:G:C2	31:y:532:A:H4'	1.85	1.10
31:y:701:C:C5'	31:y:703:G:C5'	2.28	1.10
31:y:1064:G:H1'	31:y:1065:U:H5''	1.34	1.10
31:y:1207:2MG:H2'	31:y:1208:C:C5	1.86	1.10
31:y:1290:G:H2'	31:y:1291:G:H5''	1.11	1.10
31:y:1518:MA6:H93	31:y:1519:MA6:H92	1.32	1.10
32:z:3:C:H2'	32:z:4:C:C6	1.86	1.10
35:c:55:PHE:HA	35:c:58:ILE:CG1	1.80	1.10
36:d:194:GLY:O	36:d:195:VAL:HG13	1.51	1.10
38:f:34:VAL:HG21	38:f:62:ALA:HB1	1.17	1.10
1:w:69:C:O2	1:w:73:A:O2'	1.69	1.10
1:w:273(E):C:H2'	1:w:273(F):U:H5''	1.32	1.10
1:w:528:A:C2	1:w:2042:A:H3'	1.85	1.10
1:w:613:U:H3'	1:w:615:G:OP2	1.51	1.10
1:w:650:C:O2'	29:a:17:THR:CG2	2.00	1.10
1:w:708:C:C2'	1:w:709:U:H5'	1.80	1.10
1:w:1138:G:H2'	1:w:1139:G:H5''	1.25	1.10
1:w:1200:C:H2'	1:w:1201:C:H5''	1.13	1.10
1:w:1454:U:H6	1:w:1454:U:O5'	1.34	1.10
1:w:1580:A:H2'	1:w:1581:G:H5'	1.31	1.10
5:C:51:PHE:CD1	5:C:52:LEU:N	2.19	1.10
7:E:20:ILE:HG23	7:E:21:ARG:H	0.93	1.10
9:G:92:VAL:O	9:G:93:THR:HG23	1.51	1.10
10:H:113:MET:HA	10:H:116:THR:HG23	1.24	1.10
15:M:70:GLY:HA3	15:M:101:LEU:HD22	1.13	1.10
18:P:60:GLU:HA	18:P:101:GLY:HA2	1.15	1.10
31:y:96:G:H2'	31:y:97:U:C6	1.87	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:230:G:H5''	49:q:31:LYS:NZ	1.65	1.10
31:y:292:G:OP2	31:y:293:G:C8	2.03	1.10
31:y:407:G:OP1	37:e:5:ILE:HG12	1.52	1.10
31:y:423:G:C2'	31:y:424:G:H5'	1.80	1.10
31:y:842:C:C5'	31:y:848:C:H42	1.65	1.10
31:y:874:G:H2'	31:y:875:C:C6	1.86	1.10
31:y:1061:G:H2'	31:y:1062:U:C6	1.86	1.10
35:c:20:GLU:HB3	35:c:190:THR:HG21	1.34	1.10
35:c:163:PHE:CE1	35:c:186:ALA:HA	1.87	1.10
36:d:68:VAL:HG12	36:d:69:HIS:H	1.11	1.10
36:d:134:ILE:HG13	36:d:135:LYS:H	1.00	1.10
36:d:198:VAL:O	36:d:199:LYS:HD3	1.50	1.10
37:e:33:MET:HE3	37:e:33:MET:N	1.65	1.10
37:e:175:SER:HB2	37:e:186:LEU:HB2	1.22	1.10
1:w:270(B):A:N6	1:w:270(Z):G:H1'	1.67	1.09
1:w:594:U:C5'	29:a:61:LEU:HD13	1.82	1.09
1:w:1040:C:H2'	1:w:1041:C:C6	1.87	1.09
1:w:1138:G:H4'	10:H:128:GLY:HA3	1.26	1.09
1:w:1326:U:H2'	1:w:1327:C:O4'	1.51	1.09
1:w:1989:G:H2'	1:w:1990:C:H5'	1.27	1.09
1:w:2009:G:H4'	19:Q:41:LYS:HG2	1.15	1.09
1:w:2259:G:H5'	1:w:2427:C:H3'	1.33	1.09
1:w:2795:G:N2	1:w:2801:A:OP2	1.84	1.09
4:B:2:ALA:HA	4:B:200:ASP:CB	1.81	1.09
13:K:125:LEU:HD22	13:K:126:PRO:HD3	1.30	1.09
14:L:37:THR:HG22	14:L:111:LEU:HG	1.32	1.09
14:L:86:ARG:HG3	14:L:87:TYR:HD1	1.15	1.09
20:R:59:VAL:O	20:R:74:PRO:HD2	1.50	1.09
21:S:65:ALA:HB3	21:S:66:PRO:HD3	1.33	1.09
23:U:66:VAL:O	23:U:81:VAL:HA	1.50	1.09
24:V:11:ARG:NH2	24:V:61:ARG:H	1.48	1.09
29:a:56:GLU:H	29:a:56:GLU:CD	1.56	1.09
31:y:143:A:N1	31:y:220:G:N2	1.99	1.09
31:y:622:A:H2'	31:y:623:C:H5'	1.10	1.09
31:y:767:A:H2'	31:y:768:A:H5'	1.32	1.09
31:y:1253:G:O2'	31:y:1356:G:H5'	1.50	1.09
31:y:1443:G:H4'	31:y:1446:A:C5'	1.82	1.09
42:j:85:LEU:HD23	42:j:92:TYR:HB2	1.33	1.09
1:w:532:A:H2'	1:w:2021:C:H42	0.95	1.09
1:w:814:C:H1'	1:w:1225:G:H21	0.95	1.09
1:w:1486:A:C2'	1:w:1487:G:H5''	1.81	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1799:G:H5'	1:w:1819:A:N6	1.66	1.09
1:w:1805:U:H2'	1:w:1806:C:H5''	1.32	1.09
1:w:2175:C:H2'	1:w:2176:A:H5''	1.28	1.09
1:w:2747:G:N2	1:w:2756:U:H5'	1.66	1.09
2:x:43:C:H2'	2:x:44:G:H5'	1.13	1.09
12:J:71:VAL:HG13	12:J:72:PRO:HD2	1.31	1.09
13:K:11:LYS:CG	13:K:12:GLN:H	1.63	1.09
14:L:5:LYS:HG2	14:L:6:SER:H	1.01	1.09
18:P:16:PRO:HD2	18:P:18:LEU:HD21	1.31	1.09
22:T:44:PHE:CE2	22:T:45:ASP:HB2	1.85	1.09
31:y:222:U:H3'	31:y:223:U:H5''	1.22	1.09
31:y:242:C:H2'	31:y:243:A:H5'	1.12	1.09
31:y:657:G:H1'	48:p:23:GLY:HA2	1.21	1.09
31:y:692:U:H2'	31:y:694:A:OP2	1.52	1.09
31:y:1372:U:H2'	31:y:1373:G:O4'	1.48	1.09
36:d:136:GLN:O	36:d:140:ARG:HG3	1.52	1.09
37:e:18:LYS:HA	37:e:33:MET:HG3	1.22	1.09
39:g:6:VAL:HG23	39:g:7:ASN:H	1.07	1.09
52:t:50:ALA:HA	52:t:59:PRO:HB3	1.29	1.09
1:w:410:G:OP1	1:w:411:G:H5'	1.51	1.09
1:w:1125:G:H3'	1:w:1126:A:H5''	1.35	1.09
1:w:1799:G:H5'	1:w:1819:A:H62	0.96	1.09
1:w:1930:G:H22	1:w:1968:G:H2'	1.16	1.09
1:w:2064:C:H2'	1:w:2065:C:C6	1.87	1.09
1:w:2329:G:N2	23:U:41:ARG:HH22	1.47	1.09
1:w:2534:A:O2'	1:w:2535:G:H5''	1.51	1.09
1:w:2710:C:H2'	1:w:2711:A:O4'	1.50	1.09
2:x:17:C:H2'	2:x:18:G:H5'	1.16	1.09
5:C:102:VAL:HA	5:C:201:THR:N	1.64	1.09
5:C:102:VAL:CA	5:C:201:THR:H	1.66	1.09
8:F:54:ARG:HB2	8:F:55:PRO:HD2	1.30	1.09
12:J:79:ARG:HD2	12:J:108:LYS:O	1.50	1.09
16:N:100:TYR:CA	16:N:103:ARG:HH22	1.65	1.09
18:P:30:GLY:HA2	18:P:64:HIS:HB3	1.33	1.09
24:V:49:VAL:HG12	24:V:50:ARG:H	1.07	1.09
25:W:51:ARG:HD3	25:W:52:ASP:OD2	1.52	1.09
31:y:136:C:O2'	49:q:63:GLY:HA2	1.49	1.09
31:y:425:G:C2	31:y:426:G:H1'	1.86	1.09
31:y:667:G:H5''	48:p:51:HIS:CD2	1.87	1.09
31:y:936:C:C1'	31:y:1383:C:H42	1.64	1.09
31:y:1178:G:H2'	31:y:1180:A:OP2	1.50	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:184:VAL:HG23	35:c:198:ASP:H	1.17	1.09
37:e:8:VAL:O	37:e:12:CYS:SG	2.09	1.09
38:f:107:ARG:O	38:f:110:LEU:HD23	1.52	1.09
41:i:86:ILE:HD13	41:i:135:CYS:HA	1.31	1.09
42:j:24:GLY:HA2	42:j:60:ASP:CA	1.81	1.09
1:w:294:A:N6	1:w:344:G:H21	1.48	1.09
1:w:492:A:H3'	1:w:493:G:H8	1.16	1.09
1:w:920:G:H2'	1:w:921:G:H5'	1.25	1.09
1:w:1229:G:H3'	1:w:1230:C:C6	1.88	1.09
1:w:1401:G:H2'	1:w:1402:C:C6	1.88	1.09
1:w:2367:G:H2'	1:w:2368:C:C5'	1.83	1.09
1:w:2511:U:H2'	1:w:2512:C:H5'	1.30	1.09
1:w:2579:C:H2'	1:w:2580:U:H5'	1.12	1.09
1:w:2831:G:H4'	1:w:2883:A:H2	1.17	1.09
2:x:23:G:H2'	2:x:24:G:C8	1.86	1.09
3:A:8:TYR:HB2	3:A:12:LEU:HD13	1.13	1.09
4:B:44:ASN:HA	4:B:49:ILE:HA	1.21	1.09
4:B:267:SER:HA	4:B:270:ILE:HG13	1.32	1.09
5:C:117:MET:HA	5:C:122:PHE:H	0.93	1.09
14:L:38:VAL:CG1	14:L:39:PRO:HD3	1.82	1.09
16:N:24:PRO:HA	16:N:49:VAL:HG11	1.12	1.09
16:N:101:PHE:HD2	16:N:101:PHE:N	1.50	1.09
24:V:11:ARG:HG3	24:V:61:ARG:HB3	1.24	1.09
31:y:137:C:H2'	31:y:138:G:H8	1.17	1.09
31:y:667:G:H4'	48:p:51:HIS:CG	1.87	1.09
31:y:701:C:H5''	31:y:703:G:C5'	1.83	1.09
42:j:10:ARG:HH21	42:j:72:GLY:HA2	1.01	1.09
44:l:14:VAL:HB	44:l:77:MET:CE	1.83	1.09
1:w:142:G:H2'	1:w:143:C:C5'	1.81	1.09
1:w:271(D):U:H2'	1:w:271:G:H4'	1.21	1.09
1:w:716:A:H8	1:w:716:A:O5'	1.34	1.09
1:w:833:U:H5'	12:J:52:GLU:CB	1.83	1.09
1:w:1566:A:O2'	1:w:1567:A:O5'	1.71	1.09
1:w:1754:C:H5'	16:N:101:PHE:CE1	1.86	1.09
1:w:2052:G:N2	5:C:149:ARG:HA	1.67	1.09
1:w:2415:G:H4'	12:J:66:GLY:O	1.49	1.09
4:B:75:ILE:HG23	4:B:98:VAL:HB	1.22	1.09
5:C:51:PHE:N	5:C:76:ARG:HB3	1.65	1.09
5:C:176:ILE:HB	5:C:181:LEU:HB2	1.09	1.09
5:C:188:VAL:HG22	5:C:189:PRO:CD	1.83	1.09
9:G:124:GLY:HA3	9:G:144:VAL:H	1.05	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:157:ARG:HD2	10:H:157:ARG:O	1.52	1.09
11:I:25:LEU:HD12	11:I:26:LYS:H	0.99	1.09
15:M:67:ARG:O	15:M:71:ARG:CD	2.01	1.09
16:N:28:VAL:HG13	16:N:44:ASP:O	1.52	1.09
22:T:77:ASP:N	22:T:83:PRO:HA	1.66	1.09
22:T:141:VAL:CG2	22:T:144:LEU:HG	1.82	1.09
31:y:136:C:H2'	31:y:137:C:C6	1.87	1.09
31:y:510:A:H5''	31:y:511:C:OP2	1.52	1.09
31:y:864:A:H2	31:y:917:G:N2	1.49	1.09
31:y:883:C:H2'	31:y:884:U:H5'	1.27	1.09
31:y:896:C:H5''	50:r:100:LYS:NZ	1.68	1.09
31:y:1152:A:O2'	31:y:1153:C:H5'	1.52	1.09
40:h:31:MET:HG2	40:h:32:ARG:H	0.99	1.09
43:k:30:SER:CB	43:k:84:GLN:HB3	1.82	1.09
46:n:22:ILE:HB	46:n:25:ILE:HD11	1.24	1.09
1:w:108:U:H2'	1:w:109:G:H8	1.11	1.08
1:w:532:A:H5'	17:O:28:ARG:HH12	1.12	1.08
1:w:814:C:C1'	1:w:1225:G:H21	1.65	1.08
1:w:872:A:H2	1:w:905:U:N3	1.48	1.08
1:w:1015:G:H3'	1:w:1016:G:H8	1.14	1.08
1:w:1439:A:N6	1:w:1552:G:H21	1.51	1.08
1:w:1862:G:C2'	1:w:1863:G:H5''	1.81	1.08
1:w:2052:G:H2'	1:w:2053:G:C8	1.87	1.08
1:w:2359:C:OP2	1:w:2359:C:C5	2.06	1.08
8:F:98:LEU:HB3	8:F:123:PHE:CE2	1.86	1.08
31:y:128:G:H5''	50:r:2:PRO:HB2	1.19	1.08
31:y:652:U:O2'	31:y:653:A:H5''	1.53	1.08
31:y:1142:G:H3'	31:y:1143:G:H8	1.18	1.08
31:y:1441:G:H5''	31:y:1442:G:H5'	1.32	1.08
36:d:29:TYR:HA	36:d:33:LEU:HD23	1.32	1.08
42:j:10:ARG:HH21	42:j:72:GLY:CA	1.65	1.08
1:w:488:G:H4'	19:Q:49:LYS:HE3	1.28	1.08
1:w:802:A:C3'	1:w:803:U:H6	1.63	1.08
1:w:1343:G:H2'	1:w:1344:G:C5'	1.83	1.08
1:w:2533:A:H2'	1:w:2534:A:H5'	1.31	1.08
1:w:2566:A:H61	11:I:28:SER:HB2	1.06	1.08
1:w:2620:C:H4'	5:C:156:MET:CB	1.83	1.08
1:w:2758:A:C3'	1:w:2759:G:H5''	1.82	1.08
17:O:47:TYR:O	17:O:50:ARG:HB2	1.52	1.08
20:R:63:LYS:HZ1	20:R:65:ARG:HB2	1.18	1.08
31:y:140:A:H8	31:y:140:A:O5'	1.32	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:230:G:H5''	49:q:31:LYS:HZ2	1.08	1.08
31:y:568:G:N2	31:y:574:A:C2	2.19	1.08
31:y:1364:U:O2'	31:y:1365:G:OP1	1.71	1.08
31:y:1387:G:H2'	31:y:1388:C:H5''	1.09	1.08
52:t:21:GLU:O	52:t:25:LYS:HD2	1.51	1.08
1:w:109:G:H3'	1:w:110:G:H8	1.15	1.08
1:w:198:C:H4'	1:w:2243:U:O2'	1.52	1.08
1:w:499:U:H2'	1:w:500:G:O4'	1.53	1.08
1:w:964:C:O2	1:w:2273:A:C2	2.06	1.08
1:w:2321:G:H2'	1:w:2322:A:H5'	1.35	1.08
1:w:2572:A:OP1	1:w:2574:G:C4'	2.00	1.08
2:x:8:U:H4'	2:x:9:G:OP1	1.52	1.08
2:x:113:C:O2	15:M:47:THR:HB	1.51	1.08
3:A:7:ARG:HH11	3:A:7:ARG:CB	1.66	1.08
3:A:21:TYR:CB	3:A:25:GLU:HG3	1.83	1.08
4:B:81:ALA:HB3	4:B:94:LEU:HB3	1.13	1.08
12:J:138:LEU:HA	12:J:142:GLY:HA3	1.09	1.08
13:K:51:ARG:NH1	13:K:51:ARG:HB2	1.68	1.08
15:M:75:GLU:HA	15:M:78:LEU:CD1	1.83	1.08
23:U:50:ASN:HA	23:U:63:VAL:HB	1.33	1.08
24:V:51:VAL:CG1	24:V:52:ARG:H	1.66	1.08
31:y:314:C:H2'	31:y:315:A:C5'	1.81	1.08
31:y:450:G:H4'	49:q:42:ARG:NH2	1.68	1.08
31:y:860:A:C2'	31:y:861:G:H5'	1.83	1.08
31:y:959:A:H61	52:t:79:THR:CG2	1.66	1.08
31:y:1318:A:H8	31:y:1318:A:O5'	1.36	1.08
38:f:48:ALA:HB1	38:f:49:PRO:CD	1.81	1.08
45:m:40:ARG:HH22	45:m:42:VAL:HB	1.06	1.08
51:s:38:GLU:HA	51:s:41:LYS:HD2	1.13	1.08
51:s:53:ARG:HD2	51:s:58:LEU:HD22	1.30	1.08
1:w:668:G:C6	1:w:670:A:H2'	1.88	1.08
1:w:846:C:H1'	1:w:847:U:C5	1.89	1.08
1:w:1005:C:C2'	1:w:1006:C:H5''	1.83	1.08
1:w:1784:A:H4'	1:w:1785:A:O5'	1.46	1.08
1:w:1848:A:H62	31:y:702:A:N6	1.50	1.08
1:w:1986:A:C3'	1:w:1987:G:H5''	1.84	1.08
1:w:2006:C:H5''	1:w:2048:G:H5''	1.36	1.08
1:w:2061:G:N7	1:w:2501:C:H1'	1.68	1.08
1:w:2153:G:H8	1:w:2153:G:OP2	1.36	1.08
1:w:2722:G:C4'	14:L:4:LEU:HD13	1.82	1.08
2:x:22:U:H2'	2:x:23:G:C8	1.89	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:148:SER:HB3	6:D:184:THR:HG22	1.30	1.08
9:G:7:GLU:HA	9:G:14:ASP:HB3	1.10	1.08
13:K:132:VAL:HG22	13:K:133:ARG:H	1.16	1.08
17:O:12:ARG:O	17:O:15:LYS:HG2	1.52	1.08
19:Q:19:LEU:HB2	27:Y:25:LEU:HD23	1.22	1.08
22:T:99:TYR:HA	22:T:124:ILE:O	1.53	1.08
24:V:10:LYS:C	24:V:12:PRO:HD2	1.78	1.08
31:y:428:G:H4'	31:y:429:U:OP1	1.54	1.08
31:y:811:C:H2'	31:y:812:C:H5''	1.08	1.08
31:y:838:G:C6	31:y:842:C:H5'	1.88	1.08
31:y:1251:A:N3	31:y:1369:C:O2'	1.86	1.08
31:y:1344:C:O2'	42:j:120:ARG:CB	2.01	1.08
31:y:1428:A:H2'	31:y:1429:C:C6	1.89	1.08
35:c:97:TRP:CH2	35:c:176:GLU:CG	2.36	1.08
35:c:170:GLU:O	35:c:172:ILE:HG12	1.53	1.08
35:c:178:ARG:NH2	41:i:74:PRO:HD3	1.69	1.08
37:e:199:ASN:ND2	37:e:202:LEU:H	1.51	1.08
38:f:20:GLN:HB2	38:f:23:GLY:O	1.51	1.08
39:g:5:GLU:HB2	39:g:91:VAL:HG12	1.33	1.08
40:h:12:LEU:CD2	40:h:28:ASN:HD21	1.64	1.08
40:h:127:ALA:HA	40:h:135:VAL:HG21	1.32	1.08
45:m:42:VAL:HG22	45:m:43:THR:H	1.11	1.08
46:n:91:ARG:HB3	46:n:91:ARG:HH11	0.99	1.08
47:o:24:CYS:HB3	47:o:28:GLY:HA2	1.31	1.08
1:w:270(M):U:H2'	1:w:270(N):U:C6	1.88	1.08
1:w:460:A:C2	1:w:461:C:H1'	1.88	1.08
1:w:535:C:OP2	1:w:535:C:C6	2.06	1.08
1:w:710:G:H2'	1:w:711:G:H8	0.93	1.08
1:w:918:A:C4'	2:x:97:G:H21	1.65	1.08
1:w:1345:C:H3'	1:w:1384:A:H62	1.00	1.08
1:w:1794:U:C2	1:w:1795:C:C5	2.42	1.08
1:w:2417:C:O2'	1:w:2418:A:H5'	1.51	1.08
1:w:2470:G:C2'	1:w:2471:C:H5''	1.83	1.08
1:w:2486:G:H5'	13:K:126:PRO:HB3	1.35	1.08
1:w:2619:C:O2'	1:w:2620:C:H5'	1.54	1.08
5:C:24:THR:HB	5:C:186:GLY:HA2	1.15	1.08
12:J:122:PRO:HB2	12:J:142:GLY:CA	1.84	1.08
13:K:34:LEU:HD12	13:K:103:MET:HE2	1.22	1.08
16:N:50:ILE:CA	16:N:99:LEU:HG	1.83	1.08
17:O:36:ARG:HA	17:O:39:LEU:HD11	1.34	1.08
22:T:137:ILE:HG12	22:T:138:GLU:H	1.16	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:44:ARG:HD2	26:X:44:ARG:N	1.65	1.08
31:y:560:U:H5'	31:y:566:G:N2	1.67	1.08
31:y:842:C:C4'	31:y:848:C:H42	1.66	1.08
31:y:1112:C:C2	36:d:178:LEU:HD13	1.87	1.08
35:c:134:GLU:HA	35:c:137:ARG:CZ	1.83	1.08
40:h:12:LEU:HG	40:h:13:GLN:N	1.42	1.08
44:l:95:ILE:HA	44:l:98:LEU:CD1	1.82	1.08
49:q:21:VAL:HB	49:q:33:ILE:HB	1.35	1.08
1:w:270(G):U:H2'	1:w:270(H):C:C6	1.89	1.07
1:w:1282:U:H2'	1:w:1283:G:O4'	1.52	1.07
1:w:1725:G:H2'	1:w:1726:G:H8	1.15	1.07
1:w:2218:G:H1'	4:B:148:GLU:CD	1.79	1.07
1:w:2461:C:H2'	1:w:2462:U:C6	1.89	1.07
1:w:2790:A:H4'	1:w:2893:G:H21	1.02	1.07
7:E:74:LYS:HB2	7:E:86:MET:CB	1.84	1.07
7:E:114:ILE:O	46:n:6:GLY:HA2	1.53	1.07
8:F:124:GLU:O	8:F:131:VAL:HA	1.54	1.07
15:M:96:GLY:HA2	15:M:99:LYS:HD2	1.27	1.07
24:V:12:PRO:HG2	24:V:13:ILE:H	1.19	1.07
24:V:29:GLY:HA2	24:V:33:LYS:HA	1.36	1.07
31:y:555:C:H3'	31:y:556:C:H5''	1.19	1.07
31:y:1245:A:H2'	31:y:1246:C:O4'	1.51	1.07
31:y:1334:G:OP2	31:y:1334:G:H8	1.35	1.07
36:d:16:ARG:HD3	36:d:17:ASP:H	1.12	1.07
38:f:144:THR:HG22	38:f:145:LYS:H	1.14	1.07
44:l:77:MET:CB	44:l:80:VAL:HG11	1.84	1.07
50:r:22:LEU:CA	50:r:41:LYS:HG3	1.84	1.07
1:w:145:G:H2'	1:w:146:G:O4'	1.53	1.07
1:w:294:A:H62	1:w:344:G:N2	1.49	1.07
1:w:885:C:C2'	1:w:886:C:H5'	1.84	1.07
1:w:887:A:C8	1:w:889:C:H2'	1.89	1.07
1:w:906:G:H2'	1:w:907:U:H5''	1.08	1.07
1:w:988:A:H8	1:w:988:A:O5'	1.34	1.07
1:w:1142:C:H5'	1:w:114(B):A:H5''	1.36	1.07
1:w:1394:U:H4'	1:w:1603:A:C4'	1.83	1.07
1:w:2534:A:H2'	1:w:2535:G:H5''	1.29	1.07
2:x:63:G:H2'	2:x:64:C:H5''	1.29	1.07
3:A:217:THR:HG22	3:A:219:MET:H	1.15	1.07
7:E:78:SER:HB2	32:z:19:G:C2	1.89	1.07
7:E:135:LEU:HD11	7:E:155:MET:HG2	1.14	1.07
10:H:50:ALA:HA	10:H:53:ILE:HD12	1.11	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:37:LEU:CD1	13:K:128:LYS:H	1.66	1.07
13:K:39:PRO:HB3	13:K:99:PRO:CG	1.84	1.07
24:V:50:ARG:HG2	24:V:51:VAL:H	1.14	1.07
31:y:331:G:H5''	31:y:332:G:H5'	1.36	1.07
31:y:682:G:H2'	31:y:683:G:C8	1.88	1.07
31:y:954:G:H21	31:y:1227:A:N6	1.50	1.07
31:y:1363:A:H1'	31:y:1365:G:N7	1.69	1.07
31:y:1500:A:H2'	31:y:1501:C:H5'	1.10	1.07
33:0:27:C:H2'	33:0:28:C:C6	1.90	1.07
35:c:124:SER:HB2	35:c:125:PRO:HD2	1.10	1.07
36:d:123:GLN:NE2	36:d:133:ALA:HB1	1.68	1.07
39:g:6:VAL:HG23	39:g:7:ASN:N	1.64	1.07
44:l:82:VAL:HG11	44:l:105:VAL:CB	1.83	1.07
44:l:91:ARG:HG3	44:l:92:GLU:H	1.13	1.07
45:m:37:THR:OG1	45:m:58:ARG:N	1.87	1.07
45:m:123:LYS:HA	45:m:123:LYS:HE2	1.33	1.07
1:w:1055:G:H2'	1:w:1056:G:C8	1.89	1.07
1:w:1562:A:H2'	1:w:1563:G:H8	1.15	1.07
1:w:1658:C:H2'	1:w:1659:U:C6	1.88	1.07
1:w:2101:G:H2'	1:w:2102:U:C5'	1.83	1.07
1:w:2218:G:O4'	4:B:149:PRO:HG2	1.54	1.07
1:w:2304:G:H1'	7:E:132:ASN:CB	1.85	1.07
1:w:2511:U:H2'	1:w:2512:C:H5''	1.07	1.07
2:x:15:A:H5'	2:x:109:G:H5''	1.34	1.07
5:C:116:VAL:HG22	5:C:117:MET:H	1.17	1.07
10:H:127:LYS:HA	10:H:130:LEU:HD11	1.24	1.07
11:I:87:ILE:HG23	11:I:91:LEU:HA	1.28	1.07
12:J:83:VAL:HG22	12:J:84:ASN:H	0.96	1.07
13:K:98:LYS:HB2	13:K:101:ARG:CG	1.83	1.07
31:y:411:A:H8	31:y:411:A:H3'	1.15	1.07
31:y:582:U:H5	31:y:758:G:N2	1.51	1.07
31:y:718:G:H3'	31:y:720:C:H41	1.13	1.07
31:y:943:U:O5'	31:y:943:U:H6	1.34	1.07
31:y:959:A:H3'	31:y:960:U:H5''	1.36	1.07
31:y:1378:C:O5'	31:y:1378:C:H6	1.35	1.07
35:c:164:VAL:HG22	35:c:165:VAL:H	1.14	1.07
42:j:103:THR:HG22	42:j:104:ARG:H	1.12	1.07
1:w:1426:G:H3'	1:w:1427:A:H5''	1.33	1.07
1:w:1545:A:H3'	1:w:1546:A:H8	1.16	1.07
1:w:1963:U:H4'	1:w:1964:G:OP1	1.33	1.07
1:w:2820:A:OP2	14:L:2:ARG:O	1.69	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:218:ARG:HG2	4:B:219:PRO:HD2	1.35	1.07
8:F:105:LEU:O	8:F:113:VAL:HB	1.55	1.07
9:G:98:ALA:HA	9:G:109:ILE:HD11	1.35	1.07
21:S:71:LYS:NZ	21:S:78:ALA:HB1	1.70	1.07
31:y:573:A:H2'	31:y:574:A:H8	1.12	1.07
31:y:594:G:H2'	31:y:595:G:H5'	1.33	1.07
31:y:1197:G:C8	31:y:1197:G:OP2	2.08	1.07
31:y:1235:U:H5'	54:v:3:LYS:HG2	1.22	1.07
31:y:1293:G:C2'	31:y:1294:G:H8	1.66	1.07
36:d:124:ILE:HD11	36:d:133:ALA:CB	1.85	1.07
37:e:13:ARG:HB2	37:e:33:MET:HE2	1.33	1.07
37:e:199:ASN:HB3	37:e:202:LEU:HG	1.35	1.07
39:g:8:ILE:HB	39:g:61:LEU:HG	1.35	1.07
1:w:315:G:H2'	1:w:316:C:H1'	1.21	1.07
1:w:386:G:H5''	1:w:387:U:C5	1.89	1.07
1:w:787:U:H3'	1:w:791:C:H41	1.01	1.07
1:w:1130:U:N3	1:w:2025:C:H5''	1.67	1.07
1:w:2033:A:O2'	1:w:2034:U:H5''	1.55	1.07
5:C:11:MET:O	5:C:12:THR:HG23	1.55	1.07
8:F:17:VAL:HA	8:F:26:VAL:HG22	1.11	1.07
9:G:88:ILE:CG2	9:G:121:LYS:HG2	1.83	1.07
15:M:68:GLN:HA	15:M:71:ARG:NH1	1.69	1.07
22:T:102:LEU:HD11	22:T:124:ILE:CG2	1.84	1.07
31:y:303:A:C2'	31:y:304:U:H5'	1.85	1.07
31:y:464:G:N2	31:y:467:G:H5''	1.70	1.07
31:y:701:C:H5''	31:y:703:G:H5'	1.19	1.07
31:y:899:C:H3'	31:y:900:A:H8	1.20	1.07
31:y:136(A):C:O2'	31:y:136(B):C:H5'	1.54	1.07
31:y:1441:G:C5'	31:y:1442:G:O4'	2.01	1.07
36:d:93:LYS:HD3	36:d:94:LEU:N	1.68	1.07
38:f:13:ILE:HG12	38:f:14:ARG:H	1.17	1.07
47:o:24:CYS:HB3	47:o:28:GLY:CA	1.85	1.07
1:w:466:A:C5'	28:Z:30:VAL:HG11	1.85	1.06
1:w:1264:G:H5'	27:Y:11:THR:HG21	1.37	1.06
1:w:1423:G:H2'	1:w:1424:G:C8	1.90	1.06
1:w:1692:U:H1'	1:w:1695:G:O6	1.54	1.06
1:w:2305:A:H5''	7:E:134:GLY:HA3	1.35	1.06
1:w:2620:C:H2'	1:w:2621:A:C8	1.89	1.06
1:w:2653:U:H5''	1:w:2654:A:H2'	1.33	1.06
7:E:78:SER:CB	32:z:19:G:N2	2.17	1.06
24:V:21:ARG:HG3	24:V:22:GLY:H	1.14	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:68:G:N1	31:y:101:A:C2	2.17	1.06
31:y:242:C:H2'	31:y:243:A:C5'	1.84	1.06
31:y:423:G:H2'	31:y:424:G:H5'	1.33	1.06
31:y:436:C:C6	31:y:436:C:H5''	1.90	1.06
31:y:565:U:H3'	31:y:566:G:H8	1.10	1.06
31:y:1396:A:H5''	31:y:1398:A:H5''	1.31	1.06
35:c:134:GLU:O	35:c:137:ARG:HD2	1.55	1.06
41:i:69:ARG:HG3	41:i:70:GLN:H	1.08	1.06
45:m:84:ILE:HD13	45:m:84:ILE:N	1.67	1.06
1:w:519:U:H5''	19:Q:25:ARG:HH12	1.20	1.06
1:w:519:U:H4'	19:Q:25:ARG:NH2	1.67	1.06
1:w:600:G:H2'	1:w:601:C:H6	1.15	1.06
1:w:898:C:H3'	1:w:899:A:H5''	1.08	1.06
1:w:974(A):G:H1'	1:w:989:G:N2	1.68	1.06
1:w:1138:G:H2'	1:w:1139:G:C5'	1.85	1.06
1:w:1914:C:H2'	1:w:1915:U:O4'	1.53	1.06
1:w:2117:A:H3'	1:w:2118:U:H5''	1.31	1.06
1:w:2394:C:OP1	12:J:63:PRO:HD2	1.54	1.06
1:w:2623:G:H5'	1:w:2826:A:O2'	1.53	1.06
1:w:2795:G:H1'	1:w:2801:A:N6	1.68	1.06
1:w:2860:A:H8	1:w:2860:A:O5'	1.36	1.06
5:C:9:VAL:HG23	5:C:26:ILE:HA	1.33	1.06
7:E:103:LEU:HA	7:E:106:LEU:HG	1.31	1.06
8:F:89:ILE:HG23	8:F:129:THR:HG21	1.34	1.06
8:F:125:VAL:CA	8:F:131:VAL:HB	1.85	1.06
8:F:157:TYR:HA	8:F:172:LYS:H	1.13	1.06
18:P:15:GLU:HB2	18:P:16:PRO:CD	1.83	1.06
21:S:52:SER:HB3	21:S:53:PRO:HD2	1.09	1.06
22:T:44:PHE:CD2	22:T:45:ASP:N	2.22	1.06
23:U:68:GLU:HB3	23:U:80:HIS:H	1.17	1.06
31:y:24:U:O2'	31:y:25:C:H5'	1.55	1.06
31:y:152:A:H62	31:y:169:C:N4	1.52	1.06
31:y:519:C:C5'	45:m:50:ALA:HB2	1.84	1.06
31:y:598:U:H4'	41:i:94:TYR:HB3	1.33	1.06
31:y:692:U:H3	44:l:53:SER:HA	0.95	1.06
31:y:1293:G:O2'	31:y:1294:G:C8	2.09	1.06
31:y:1518:MA6:C8	31:y:1518:MA6:O5'	2.03	1.06
37:e:89:THR:HA	37:e:93:PHE:HD2	1.14	1.06
47:o:22:THR:HG21	47:o:34:TYR:O	1.53	1.06
48:p:77:ARG:HH11	48:p:77:ARG:HB3	0.92	1.06
1:w:64:A:H2'	1:w:65:C:C6	1.91	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:377:C:O2	1:w:397:G:N2	1.89	1.06
1:w:1149:G:O2'	1:w:1150:C:H5'	1.55	1.06
1:w:1837:C:H1'	1:w:1928:A:H1'	1.32	1.06
1:w:1925:C:O2'	1:w:1926:U:H5'	1.56	1.06
1:w:2246:G:O2'	1:w:2247:A:H5'	1.55	1.06
1:w:2359:C:C2'	1:w:2360:A:O4'	2.02	1.06
1:w:2373:G:H2'	1:w:2374:C:C6	1.91	1.06
1:w:2657:A:OP2	1:w:2664:G:N2	1.88	1.06
1:w:2722:G:H5''	14:L:4:LEU:HD13	1.31	1.06
1:w:2852:G:O6	1:w:2864:G:C6	2.09	1.06
2:x:62:C:H2'	2:x:63:G:C8	1.91	1.06
2:x:74:U:H3'	2:x:75:G:H8	1.19	1.06
5:C:117:MET:HA	5:C:122:PHE:N	1.69	1.06
12:J:71:VAL:HG13	12:J:72:PRO:HD3	1.10	1.06
15:M:73:LEU:HA	15:M:76:LYS:CD	1.84	1.06
17:O:45:TYR:O	17:O:49:HIS:HB2	1.51	1.06
18:P:34:GLU:HB2	18:P:64:HIS:HE1	1.21	1.06
25:W:28:LYS:O	25:W:31:GLU:HG3	1.55	1.06
31:y:67:C:O2'	31:y:172:A:H1'	1.56	1.06
31:y:93:U:H5''	31:y:93:U:H6	1.08	1.06
31:y:154:C:H2'	31:y:155:C:C6	1.90	1.06
31:y:412:A:O2'	31:y:413:G:C5'	2.02	1.06
31:y:635:G:C2'	31:y:636:U:H5'	1.84	1.06
31:y:888:G:C8	31:y:889:A:H2'	1.90	1.06
31:y:945:G:N3	31:y:945:G:H2'	1.66	1.06
31:y:1281:U:C5'	31:y:1282:C:H5	1.67	1.06
31:y:1293:G:O2'	31:y:1294:G:H8	1.35	1.06
31:y:1326:C:C4'	54:v:19:GLY:HA2	1.86	1.06
31:y:1498:UR3:O4	34:1:2:U:H4'	1.52	1.06
33:0:6:U:H2'	33:0:7:U:H5''	1.31	1.06
35:c:24:TRP:HB3	35:c:40:HIS:NE2	1.69	1.06
41:i:36:LEU:HD21	41:i:61:VAL:HG11	1.36	1.06
43:k:5:ARG:O	43:k:6:ILE:HG13	1.54	1.06
50:r:22:LEU:HA	50:r:41:LYS:HG3	1.09	1.06
1:w:39:C:H2'	1:w:40:C:C6	1.89	1.06
1:w:61:G:H2'	1:w:62:C:C6	1.90	1.06
1:w:307:G:H1'	1:w:310:A:N6	1.71	1.06
1:w:479:A:H4'	1:w:480:A:C5'	1.85	1.06
1:w:519:U:H5'	19:Q:76:VAL:HG22	1.32	1.06
1:w:1309:G:C2'	1:w:1310:G:H5''	1.86	1.06
1:w:1568:G:H5''	4:B:61:LEU:HD22	1.30	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2055:C:H4'	1:w:2056:G:H5''	1.31	1.06
1:w:2134:A:N6	1:w:2157:G:O2'	1.87	1.06
1:w:2511:U:C2'	1:w:2512:C:C5'	2.31	1.06
1:w:2689:U:H4'	1:w:2690:C:C6	1.91	1.06
1:w:2785:C:C6	1:w:2785:C:H5'	1.90	1.06
8:F:72:ILE:HD13	8:F:72:ILE:H	1.14	1.06
10:H:113:MET:HG3	10:H:121:VAL:HG13	1.34	1.06
12:J:50:ARG:HH11	12:J:57:THR:HB	1.14	1.06
15:M:39:ILE:HD11	15:M:49:VAL:HG22	1.12	1.06
16:N:50:ILE:HA	16:N:99:LEU:CG	1.85	1.06
18:P:44:LYS:HG2	18:P:45:THR:H	1.19	1.06
22:T:53:ILE:HD13	22:T:53:ILE:H	1.17	1.06
22:T:99:TYR:CD1	22:T:125:LEU:HD13	1.88	1.06
31:y:314:C:H2'	31:y:315:A:H5''	1.06	1.06
31:y:584:G:H5'	50:r:91:ARG:NH2	1.70	1.06
31:y:757:U:H2'	31:y:758:G:C1'	1.84	1.06
31:y:817:C:H5''	31:y:819:A:H5'	1.33	1.06
31:y:1029:G:N2	31:y:103(A):A:OP2	1.88	1.06
31:y:1406:U:C5	31:y:1407:5MC:HM51	1.89	1.06
33:0:19:G:H5''	33:0:20:G:OP1	1.55	1.06
35:c:55:PHE:HA	35:c:58:ILE:HG13	1.30	1.06
36:d:126:ARG:HB2	36:d:126:ARG:HH11	1.12	1.06
37:e:9:CYS:SG	37:e:31:CYS:CA	2.44	1.06
1:w:708:C:H2'	1:w:709:U:H5'	1.06	1.06
1:w:1213:A:H2'	1:w:1214:A:O4'	1.55	1.06
1:w:1228:G:C2	1:w:1229:G:H1'	1.91	1.06
1:w:1344:G:O2'	1:w:1385:G:H5'	1.56	1.06
1:w:1560:G:H2'	1:w:1561:G:H8	1.18	1.06
1:w:1686:C:H2'	1:w:1687:G:H5'	1.30	1.06
1:w:1860:G:H2'	1:w:1861:G:C8	1.91	1.06
1:w:1895:C:H2'	1:w:1896:G:O4'	1.53	1.06
1:w:2563:U:H2'	1:w:2565:A:OP2	1.55	1.06
2:x:25:A:OP2	2:x:27:C:N4	1.88	1.06
3:A:7:ARG:HB3	3:A:7:ARG:NH1	1.70	1.06
5:C:52:LEU:HB3	5:C:75:VAL:HB	1.32	1.06
6:D:150:LEU:CA	6:D:169:VAL:HB	1.85	1.06
7:E:146:TYR:HE1	7:E:149:VAL:HG13	1.20	1.06
9:G:97:ILE:HD13	9:G:98:ALA:N	1.71	1.06
14:L:34:ILE:HG22	14:L:35:THR:H	0.94	1.06
14:L:38:VAL:HG12	14:L:39:PRO:HD3	1.08	1.06
14:L:45:ARG:HG3	14:L:46:GLY:H	0.94	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:190:G:H2'	31:y:190:G:OP2	1.55	1.06
31:y:500:G:C6	31:y:546:G:N2	2.24	1.06
31:y:855:G:H2'	31:y:856:C:C6	1.89	1.06
31:y:910:C:H2'	31:y:911:U:H6	1.13	1.06
31:y:1012:U:H2'	31:y:1013:G:H5'	1.31	1.06
35:c:42:ILE:HD13	35:c:43:ASP:N	1.70	1.06
37:e:5:ILE:HD11	37:e:118:ARG:NH2	1.69	1.06
48:p:77:ARG:HB3	48:p:77:ARG:NH1	1.71	1.06
49:q:21:VAL:HG12	49:q:26:ARG:HH21	1.15	1.06
1:w:6:A:O2'	10:H:153:HIS:HB2	1.55	1.05
1:w:99:U:H5''	1:w:101:G:H5''	1.13	1.05
1:w:577:G:C2'	1:w:578:A:H5'	1.85	1.05
1:w:671:C:H2'	1:w:672:C:C5'	1.86	1.05
1:w:1242:A:H2'	1:w:1243:G:O4'	1.55	1.05
1:w:1279:G:H2'	1:w:1280:G:O4'	1.56	1.05
1:w:1686:C:C2'	1:w:1687:G:H5'	1.85	1.05
1:w:1782:C:H1'	1:w:2609:U:C5'	1.85	1.05
5:C:55:ASN:ND2	5:C:75:VAL:HG22	1.69	1.05
9:G:77:LEU:HB3	9:G:142:VAL:HG22	1.35	1.05
9:G:101:LEU:HG	9:G:109:ILE:HG23	1.33	1.05
10:H:80:ALA:HA	10:H:83:ILE:HD11	1.37	1.05
12:J:112:LEU:H	12:J:128:HIS:HB2	1.15	1.05
15:M:64:GLU:O	15:M:67:ARG:HG2	1.54	1.05
15:M:78:LEU:HD11	15:M:109:GLY:HA2	1.32	1.05
16:N:123:LYS:HB2	16:N:123:LYS:NZ	1.71	1.05
22:T:46:LYS:HA	22:T:49:ARG:HD2	1.37	1.05
31:y:517:G:H4'	31:y:519:C:C4	1.90	1.05
31:y:1066:C:H3'	31:y:1067:A:C8	1.90	1.05
31:y:1196:U:OP1	31:y:1197:G:H4'	1.56	1.05
31:y:1299:A:C3'	31:y:1300:G:H5''	1.85	1.05
31:y:1306:A:N6	31:y:1331:G:N3	2.03	1.05
31:y:1468:A:C2'	31:y:1469:G:H5'	1.87	1.05
31:y:1526:G:H3'	31:y:1527:C:H6	1.14	1.05
33:O:18:G:N2	33:O:58:A:O4'	1.89	1.05
36:d:119:ARG:NH1	36:d:123:GLN:HB3	1.71	1.05
41:i:74:PRO:O	41:i:76:PRO:HD3	1.55	1.05
1:w:261:G:C4'	1:w:609(A):A:H2	1.67	1.05
1:w:480:A:H3'	1:w:481:G:H5''	1.37	1.05
1:w:565:C:H5''	18:P:81:TYR:CE1	1.91	1.05
1:w:599:G:H2'	1:w:600:G:C8	1.92	1.05
1:w:1088:A:H4'	1:w:1089:G:H8	1.10	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1153:C:H5'	17:O:76:TYR:HE2	1.19	1.05
1:w:2025:C:C2'	1:w:2026:C:C6	2.39	1.05
1:w:2309:A:H3'	1:w:2310:A:C8	1.91	1.05
1:w:2578:G:H1'	5:C:139:GLY:HA3	1.33	1.05
7:E:163:ALA:HA	7:E:168:GLU:HB2	1.30	1.05
12:J:6:LEU:C	12:J:8:PRO:HD3	1.79	1.05
22:T:141:VAL:CG1	22:T:144:LEU:HB2	1.85	1.05
23:U:30:VAL:HG22	23:U:31:VAL:H	0.96	1.05
23:U:34:GLY:HA2	23:U:60:PHE:CE2	1.91	1.05
24:V:15:ALA:O	24:V:46:LEU:HG	1.56	1.05
31:y:556:C:O2'	31:y:557:G:H5'	1.54	1.05
31:y:582:U:H5''	48:p:68:ARG:HH12	1.18	1.05
35:c:102:LEU:HD12	35:c:176:GLU:HB2	1.06	1.05
44:l:58:PRO:HD3	44:l:89:ALA:HB1	1.35	1.05
1:w:353:G:H2'	1:w:354:G:H8	1.22	1.05
1:w:467:G:H4'	1:w:796:C:O2'	1.55	1.05
1:w:666:G:H21	29:a:2:PRO:HA	1.11	1.05
1:w:702:G:H3'	1:w:703:U:H5	1.11	1.05
1:w:811:U:H1'	1:w:1251:C:H4'	1.33	1.05
1:w:919:G:H2'	1:w:920:G:H8	1.15	1.05
1:w:1753:G:C4	1:w:1755:A:OP2	2.10	1.05
1:w:1845:G:H2'	1:w:1846:G:C8	1.91	1.05
1:w:1881:C:H2'	1:w:1882:C:C6	1.91	1.05
1:w:2320:A:N1	1:w:2333:A:H2'	1.71	1.05
1:w:2759:G:H2'	1:w:2760:C:H6	0.94	1.05
7:E:125:PHE:HB2	7:E:166:ASP:CG	1.81	1.05
11:I:104:ARG:HH11	11:I:104:ARG:HB3	1.16	1.05
13:K:48:GLU:HA	13:K:51:ARG:HE	1.19	1.05
18:P:5:VAL:HG22	18:P:6:LYS:H	1.22	1.05
18:P:51:VAL:HG12	18:P:52:VAL:H	1.16	1.05
31:y:135:C:H2'	31:y:136:C:H5''	1.09	1.05
31:y:889:A:H5''	31:y:891:U:C6	1.92	1.05
31:y:1436:U:H2'	31:y:1437:C:C6	1.90	1.05
36:d:16:ARG:CD	36:d:17:ASP:H	1.67	1.05
37:e:12:CYS:HA	37:e:19:LEU:HD12	1.34	1.05
40:h:31:MET:HG3	40:h:36:LYS:HB3	1.38	1.05
41:i:65:TYR:HB3	41:i:78:GLN:HE22	1.19	1.05
41:i:73:ASP:OD2	41:i:75:ARG:HG2	1.55	1.05
42:j:24:GLY:HA2	42:j:60:ASP:HA	1.08	1.05
46:n:48:LEU:HD12	46:n:53:VAL:HG22	1.39	1.05
50:r:48:GLU:OE1	50:r:50:LYS:HB2	1.55	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:205:G:O2'	1:w:206:U:OP2	1.75	1.05
1:w:599:G:H4'	6:D:27:LEU:HD12	1.06	1.05
1:w:1025:G:H1'	1:w:1135:C:O5'	1.56	1.05
1:w:1533:C:H3'	1:w:1534:G:H8	1.19	1.05
1:w:1924:C:O2'	32:z:13:C:H4'	1.56	1.05
1:w:2485:G:H4'	13:K:46:GLN:HE21	1.22	1.05
1:w:2631:G:N2	5:C:61:ARG:HH12	1.45	1.05
1:w:2631:G:C4'	1:w:2892:A:H4'	1.87	1.05
1:w:2733:A:O2'	1:w:2734:A:H5'	1.56	1.05
1:w:2757:A:O2'	1:w:2758:A:H5'	1.55	1.05
4:B:169:GLU:CG	4:B:174:ILE:HD11	1.87	1.05
5:C:20:ALA:HB2	11:I:73:ASP:HB3	1.06	1.05
14:L:68:ARG:HB3	14:L:68:ARG:NH1	1.72	1.05
20:R:54:VAL:HG21	20:R:78:LYS:H	0.98	1.05
24:V:26:ARG:CG	24:V:34:THR:HG23	1.85	1.05
31:y:135:C:N4	31:y:228:A:H61	1.53	1.05
31:y:288:A:H2'	31:y:289:G:H4'	1.32	1.05
31:y:728:A:N3	31:y:729:A:N7	2.03	1.05
33:0:26:G:C2'	33:0:27:C:H5'	1.86	1.05
35:c:175:ARG:HG3	35:c:179:LYS:HE3	1.37	1.05
37:e:31:CYS:HB3	37:e:34:GLU:CB	1.86	1.05
37:e:101:LEU:HG	37:e:140:VAL:CG1	1.86	1.05
46:n:39:ILE:HG21	46:n:56:LEU:HD21	1.08	1.05
50:r:87:LYS:HD3	50:r:88:TYR:N	1.71	1.05
52:t:70:LYS:HG2	52:t:71:LEU:H	1.18	1.05
1:w:71:A:H5''	1:w:73:A:OP2	1.53	1.05
1:w:89:G:C2'	1:w:90:U:O4'	2.05	1.05
1:w:389:G:H8	1:w:2413:G:C4'	1.69	1.05
1:w:461:C:H2'	1:w:462:C:C6	1.92	1.05
1:w:535:C:O2'	17:O:53:ARG:HB3	1.55	1.05
1:w:1665:A:H5''	11:I:78:ARG:HH22	1.19	1.05
1:w:1989:G:C2'	1:w:1990:C:H5'	1.86	1.05
4:B:76:PRO:HB2	4:B:117:VAL:CG1	1.86	1.05
4:B:79:VAL:HA	4:B:95:LEU:HB3	1.05	1.05
10:H:65:TRP:HB3	17:O:64:ARG:NE	1.70	1.05
17:O:93:LYS:H	17:O:93:LYS:CD	1.66	1.05
17:O:106:PHE:HA	17:O:109:LEU:CD1	1.87	1.05
19:Q:58:ALA:O	19:Q:64:MET:HG2	1.57	1.05
20:R:88:LYS:O	20:R:89:ILE:HB	1.56	1.05
24:V:51:VAL:HG11	24:V:60:PHE:CD2	1.89	1.05
31:y:248:C:H4'	31:y:282:A:H2	1.21	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:564:C:H3'	31:y:566:G:O2'	1.57	1.05
31:y:935:A:H1'	31:y:1384:C:O2	1.57	1.05
31:y:1288:A:H61	31:y:1371:G:H1'	1.13	1.05
31:y:1312:G:H2'	31:y:1313:U:H5'	1.30	1.05
37:e:19:LEU:HB3	37:e:21:LEU:HD21	1.10	1.05
38:f:69:VAL:HG11	38:f:139:LEU:HB3	1.37	1.05
45:m:40:ARG:NH2	45:m:54:VAL:HG21	1.71	1.05
1:w:58:G:H5''	20:R:72:LYS:CB	1.85	1.04
1:w:116:C:C3'	1:w:117:G:H5''	1.86	1.04
1:w:432:A:H2'	1:w:433:C:H6	0.90	1.04
1:w:1038:C:H2'	1:w:1039:G:H5'	1.38	1.04
1:w:1206:G:H2'	1:w:1207:C:H6	1.19	1.04
1:w:1530:G:C6	1:w:1541:U:C2	2.44	1.04
1:w:1592:C:H2'	1:w:1593:G:C8	1.91	1.04
1:w:1843:C:N4	1:w:1844:C:H41	1.55	1.04
1:w:2093:G:H1'	1:w:2198:A:H61	0.94	1.04
1:w:2124:G:H21	3:A:218:THR:CA	1.70	1.04
1:w:2302:G:H2'	1:w:2303:G:C8	1.91	1.04
1:w:2369:A:C2'	1:w:2370:G:H5'	1.85	1.04
1:w:2556:C:H2'	1:w:2557:G:H8	1.22	1.04
1:w:2694:G:C2'	1:w:2695:C:H5''	1.87	1.04
1:w:2736:G:H5'	1:w:2736:G:H8	0.89	1.04
2:x:26:A:H3'	2:x:27:C:C5	1.92	1.04
3:A:40:GLU:HB3	3:A:217:THR:HG21	1.39	1.04
6:D:26:HIS:HB2	12:J:13:ASN:CB	1.86	1.04
6:D:26:HIS:CB	12:J:13:ASN:HB2	1.87	1.04
9:G:40:THR:CG2	9:G:43:ASN:HB2	1.86	1.04
11:I:78:ARG:HB3	16:N:73:GLU:HB2	1.34	1.04
14:L:37:THR:OG1	14:L:39:PRO:HD2	1.55	1.04
14:L:37:THR:HA	14:L:111:LEU:HA	1.09	1.04
20:R:14:SER:HB3	20:R:16:LYS:HE2	1.09	1.04
22:T:15:PRO:O	22:T:19:ARG:CD	2.05	1.04
31:y:104:G:C2'	31:y:105:G:H5'	1.85	1.04
31:y:443:C:O2'	31:y:444:C:H5'	1.57	1.04
31:y:624:C:H4'	49:q:10:GLY:HA2	1.39	1.04
31:y:736:C:H2'	31:y:737:A:H8	1.17	1.04
31:y:855:G:H5''	31:y:871:U:O4	1.54	1.04
39:g:7:ASN:HB2	39:g:89:MET:HB3	1.08	1.04
47:o:6:LEU:HA	47:o:23:ARG:NH1	1.73	1.04
1:w:58:G:OP1	20:R:72:LYS:HA	1.57	1.04
1:w:479:A:H5'	1:w:480:A:H8	1.17	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:584:C:H2'	1:w:585:G:C8	1.92	1.04
1:w:992:C:H4'	18:P:89:GLN:NE2	1.72	1.04
1:w:1033:U:H3'	30:b:18:ARG:HH12	1.17	1.04
1:w:1530:G:H5'	1:w:1531:C:OP2	1.55	1.04
1:w:1913:A:N6	31:y:1494:G:H1'	1.69	1.04
1:w:2437:U:H2'	1:w:2438:U:H6	1.05	1.04
1:w:2729:G:H2'	1:w:2730:C:C6	1.92	1.04
1:w:2817:G:H2'	1:w:2818:G:C8	1.91	1.04
2:x:43:C:C2'	2:x:44:G:H5'	1.87	1.04
2:x:63:G:H3'	2:x:64:C:H5''	1.39	1.04
11:I:62:VAL:O	11:I:63:VAL:HG13	1.57	1.04
12:J:148:LEU:HD13	12:J:148:LEU:H	1.19	1.04
14:L:78:LYS:HE2	14:L:82:GLU:HB3	1.34	1.04
14:L:79:LEU:HA	14:L:83:ILE:HB	1.37	1.04
21:S:52:SER:HB3	21:S:53:PRO:CD	1.88	1.04
31:y:41:G:H2'	31:y:42:G:H8	1.21	1.04
31:y:253:U:H4'	31:y:276:G:C1'	1.87	1.04
31:y:411:A:H3'	31:y:411:A:C8	1.92	1.04
31:y:679:C:O5'	31:y:679:C:H6	1.36	1.04
31:y:1470:G:C2'	31:y:1471:G:H5'	1.87	1.04
32:z:24:G:H2'	32:z:25:C:O4'	1.57	1.04
37:e:19:LEU:HB3	37:e:21:LEU:CD2	1.88	1.04
37:e:121:VAL:HG13	37:e:136:PRO:HG2	1.35	1.04
37:e:170:VAL:HG23	37:e:171:GLY:H	1.19	1.04
40:h:119:ARG:HG3	40:h:120:ILE:HD12	1.35	1.04
45:m:116:ARG:HD2	45:m:121:THR:HG22	1.35	1.04
46:n:20:THR:HA	46:n:25:ILE:HG21	1.39	1.04
46:n:81:LEU:HD21	46:n:88:ARG:HH21	1.21	1.04
53:u:33:ILE:HG13	53:u:34:LYS:H	1.10	1.04
1:w:455:C:H5''	1:w:456:C:OP2	1.55	1.04
1:w:531:C:H4'	1:w:532:A:H5''	1.39	1.04
1:w:1173:G:H1'	1:w:1177:A:N6	1.72	1.04
1:w:1297:C:P	1:w:2710:C:H4'	1.97	1.04
1:w:1458:C:H1'	1:w:1459:G:N2	1.71	1.04
1:w:2623:G:O5'	1:w:2825:G:N2	1.89	1.04
1:w:2875:C:H2'	1:w:2876:G:C5'	1.88	1.04
2:x:88:C:C2'	2:x:89(A):G:C8	2.40	1.04
4:B:10:THR:O	4:B:14:ARG:HB3	1.57	1.04
4:B:134:ARG:NH2	4:B:187:GLY:HA3	1.72	1.04
5:C:48:GLN:HB3	5:C:78:LEU:HD22	1.36	1.04
5:C:144:ARG:HH11	5:C:144:ARG:HB3	1.16	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:59:ILE:HD11	6:D:73:ILE:HB	1.07	1.04
7:E:78:SER:HB2	32:z:19:G:N3	1.72	1.04
9:G:120:ILE:HG12	9:G:121:LYS:N	1.72	1.04
11:I:4:PRO:HB2	11:I:22:ILE:O	1.55	1.04
13:K:51:ARG:HD3	13:K:51:ARG:H	0.90	1.04
17:O:90:VAL:HG12	17:O:91:ASP:H	1.22	1.04
28:Z:28:ARG:HA	28:Z:31:LEU:HG	1.39	1.04
31:y:66:G:C4'	31:y:173:U:O4	2.04	1.04
31:y:247:G:C2	31:y:278:G:N2	2.24	1.04
31:y:902:G:C2'	31:y:903:G:H5'	1.88	1.04
31:y:1013:G:N3	31:y:1016:A:N1	2.04	1.04
31:y:102(C):C:H2'	31:y:1029:G:O4'	1.57	1.04
31:y:1165:C:H2'	31:y:1166:G:C8	1.92	1.04
31:y:1293:G:C2'	31:y:1294:G:C8	2.40	1.04
39:g:95:GLU:HB2	51:s:32:ARG:HG2	1.40	1.04
40:h:47:CYS:HB3	40:h:58:PRO:CB	1.87	1.04
44:l:95:ILE:HA	44:l:98:LEU:HD11	1.35	1.04
1:w:57:C:H4'	20:R:73:ARG:NH2	1.72	1.04
1:w:648:G:H4'	1:w:2351:G:H4'	1.40	1.04
1:w:974(A):G:H5'	1:w:1186:G:N2	1.72	1.04
1:w:1717:G:C4	1:w:1718:G:H1'	1.93	1.04
1:w:1825:A:H5'	4:B:223:GLY:HA3	1.40	1.04
1:w:2053:G:H4'	5:C:145:LYS:HG2	1.37	1.04
1:w:2419:U:H5''	29:a:32:LEU:HD22	1.07	1.04
1:w:2566:A:N6	11:I:28:SER:HB2	1.71	1.04
1:w:2619:C:OP1	5:C:152:LYS:HD3	1.56	1.04
1:w:2835:A:H1'	1:w:2879:C:C5	1.92	1.04
4:B:182:LEU:O	4:B:271:ILE:HB	1.57	1.04
9:G:120:ILE:HG12	9:G:121:LYS:H	0.91	1.04
13:K:52:VAL:HG23	13:K:53:ALA:H	1.17	1.04
14:L:38:VAL:HB	14:L:110:PRO:HB2	1.38	1.04
16:N:29:ARG:O	16:N:85:LYS:HA	1.57	1.04
16:N:93:ARG:HH22	16:N:118:ARG:HG2	1.19	1.04
21:S:38:ILE:HG23	21:S:39:VAL:H	1.16	1.04
26:X:12:PRO:HD2	26:X:13:ILE:HD13	1.38	1.04
26:X:40:THR:O	26:X:43:ILE:HB	1.56	1.04
31:y:36:C:H5''	45:m:120:GLY:CA	1.88	1.04
31:y:160:A:N6	31:y:347:G:H1'	1.72	1.04
31:y:407:G:H5''	37:e:118:ARG:HD3	1.39	1.04
31:y:520:A:N6	31:y:529:G:H21	1.56	1.04
31:y:714:G:H4'	31:y:775:G:O2'	1.52	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:782:A:O2'	31:y:1515:C:H5'	1.55	1.04
31:y:974:A:OP1	31:y:974:A:C8	2.10	1.04
31:y:1109:C:H3'	31:y:1110:A:H8	1.18	1.04
31:y:1268:A:H1'	54:v:20:LYS:HB2	1.37	1.04
31:y:1271:G:O2'	31:y:1272:G:H5'	1.53	1.04
31:y:1376:U:H2'	31:y:1377:A:C8	1.92	1.04
31:y:1378:C:OP2	40:h:5:ARG:HD2	1.58	1.04
31:y:1422:G:O2'	31:y:1423:G:H5'	1.58	1.04
32:z:9:A:N6	32:z:22:G:C5	2.26	1.04
36:d:55:VAL:HG12	36:d:68:VAL:HG11	1.40	1.04
36:d:77:ILE:HG13	36:d:84:ILE:HG21	1.08	1.04
40:h:137:LYS:O	40:h:141:VAL:HG23	1.57	1.04
41:i:90:GLY:HA2	50:r:34:LYS:HE2	1.35	1.04
50:r:62:SER:OG	50:r:70:ARG:O	1.73	1.04
1:w:14:A:C2	1:w:15:G:H1'	1.92	1.04
1:w:143:C:H2'	1:w:144:C:C5'	1.87	1.04
1:w:299:A:N6	1:w:339:U:H3	1.56	1.04
1:w:304:G:H2'	1:w:305:U:C6	1.91	1.04
1:w:346:A:H4'	1:w:347:A:C5'	1.87	1.04
1:w:1251:C:H2'	17:O:10:ARG:NH2	1.73	1.04
1:w:1255:U:OP1	1:w:1256:G:H5''	1.54	1.04
1:w:1663:C:O2'	1:w:1664:A:C8	2.11	1.04
1:w:1794:U:C1'	1:w:1900:A:C2	2.41	1.04
1:w:1999:C:H4'	1:w:2723:C:H1'	1.33	1.04
1:w:2111:C:N4	1:w:2144:U:H4'	1.73	1.04
1:w:2111:C:H2'	1:w:2145:C:N4	1.73	1.04
1:w:2114:A:H3'	1:w:2115:G:C8	1.93	1.04
1:w:2589:A:H5''	4:B:237:GLU:OE1	1.58	1.04
1:w:2745:C:H4'	8:F:142:GLY:O	1.57	1.04
1:w:2822:G:H5''	5:C:159:HIS:HE1	1.14	1.04
7:E:56:ALA:O	7:E:60:LEU:HG	1.56	1.04
7:E:59:GLU:HG3	7:E:60:LEU:H	1.20	1.04
13:K:17:LEU:O	13:K:18:LYS:HB3	1.57	1.04
19:Q:59:VAL:HG22	19:Q:64:MET:HB2	1.34	1.04
19:Q:92:ARG:HA	19:Q:92:ARG:HE	1.16	1.04
31:y:93:U:H5''	31:y:93:U:C6	1.93	1.04
31:y:117:G:C5	31:y:118:U:C4	2.45	1.04
31:y:391:G:H3'	31:y:392:G:H5''	1.37	1.04
31:y:529:G:O6	45:m:47:PRO:O	1.76	1.04
31:y:531:U:O5'	31:y:531:U:H6	1.41	1.04
31:y:562:C:O2'	45:m:14:ARG:CD	2.05	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:827:U:H3	31:y:872:A:N6	1.55	1.04
31:y:1305:G:H5''	54:v:5:ASP:OD1	1.55	1.04
31:y:1500:A:C2'	31:y:1501:C:H5'	1.86	1.04
36:d:40:ARG:HB3	36:d:40:ARG:HH11	1.16	1.04
36:d:202:ILE:HG22	36:d:204:LEU:HD11	1.35	1.04
37:e:59:ARG:HE	37:e:59:ARG:C	1.65	1.04
1:w:295:G:H3'	1:w:296:C:H5''	1.05	1.03
1:w:297:C:H3'	1:w:298:G:H5''	1.37	1.03
1:w:308:G:H21	1:w:329:G:N2	1.55	1.03
1:w:457:A:H5'	28:Z:40:TRP:CZ2	1.92	1.03
1:w:466:A:H5''	28:Z:30:VAL:CG1	1.86	1.03
1:w:885:C:H3'	1:w:886:C:C5'	1.86	1.03
1:w:1148:A:H3'	1:w:1149:G:H8	1.17	1.03
1:w:1345:C:H3'	1:w:1384:A:N6	1.73	1.03
1:w:1996:C:H1'	1:w:1997:G:H1'	1.06	1.03
1:w:2083:G:C6	1:w:2084:C:N4	2.25	1.03
1:w:2085:C:H5''	4:B:263:ARG:HH12	1.23	1.03
1:w:2093:G:H1'	1:w:2198:A:N6	1.73	1.03
1:w:2563:U:H4'	11:I:28:SER:CB	1.88	1.03
1:w:2625:G:H2'	1:w:2626:C:C6	1.93	1.03
1:w:2832:U:H1'	1:w:2834:G:H1'	1.37	1.03
3:A:201:LYS:HB2	3:A:202:PRO:HD2	1.06	1.03
4:B:81:ALA:CB	4:B:94:LEU:HB3	1.87	1.03
5:C:63:LEU:HD23	5:C:65:GLY:H	0.90	1.03
11:I:78:ARG:HB3	16:N:73:GLU:CB	1.87	1.03
16:N:64:ARG:NE	16:N:103:ARG:HB2	1.72	1.03
31:y:317:G:H2'	31:y:318:G:C8	1.92	1.03
31:y:565:U:P	31:y:566:G:H3'	1.98	1.03
31:y:573:A:H2'	31:y:574:A:C8	1.93	1.03
31:y:644:G:C5	31:y:645:C:C6	2.46	1.03
31:y:701:C:H5'	31:y:703:G:H5'	1.06	1.03
31:y:1349:A:OP1	42:j:118:LYS:HB3	1.58	1.03
32:z:18:G:N2	32:z:55:PSU:HN3	1.56	1.03
33:0:62:A:H2'	33:0:63:C:C6	1.92	1.03
35:c:118:LEU:HD13	35:c:121:LEU:CD1	1.86	1.03
35:c:218:ALA:O	35:c:221:LEU:HB3	1.58	1.03
1:w:35:G:O5'	1:w:35:G:H8	1.38	1.03
1:w:177:G:H3'	1:w:178:G:C8	1.92	1.03
1:w:215:G:H5'	1:w:216:A:OP1	1.59	1.03
1:w:617:G:C4	1:w:618(A):G:H1'	1.93	1.03
1:w:944:G:H8	1:w:944:G:H3'	1.20	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1138:G:H4'	10:H:128:GLY:CA	1.87	1.03
1:w:1373:A:H3'	1:w:1374:G:H8	0.91	1.03
1:w:1581:G:H2'	1:w:1582:C:O4'	1.55	1.03
1:w:1805:U:O2	4:B:50:THR:HB	1.57	1.03
1:w:1884:A:H3'	1:w:1885:A:H5''	1.41	1.03
1:w:2111:C:N4	1:w:2144:U:C4'	2.22	1.03
1:w:2558:C:H2'	1:w:2559:C:H6	1.03	1.03
1:w:2581:G:O6	1:w:2610:C:C2	2.10	1.03
4:B:81:ALA:HB3	4:B:94:LEU:CB	1.88	1.03
4:B:102:LYS:N	4:B:102:LYS:HE2	1.74	1.03
6:D:163:ARG:HG3	6:D:164:ASN:H	1.23	1.03
8:F:19:VAL:HG22	8:F:24:VAL:HG22	1.38	1.03
9:G:101:LEU:CB	9:G:107:ILE:O	2.05	1.03
14:L:28:LEU:O	14:L:28:LEU:HD23	1.57	1.03
16:N:64:ARG:HH22	16:N:66:VAL:HG23	1.18	1.03
16:N:102:ILE:HG13	16:N:103:ARG:N	1.66	1.03
20:R:14:SER:HB3	20:R:16:LYS:CE	1.88	1.03
21:S:71:LYS:HZ1	21:S:78:ALA:HB1	1.20	1.03
22:T:28:MET:HE2	22:T:29:TYR:HA	1.39	1.03
23:U:36:ILE:HA	23:U:60:PHE:HB2	1.40	1.03
31:y:175:C:C2'	31:y:176:C:H5'	1.87	1.03
31:y:497:U:H2'	31:y:498:A:H5''	1.05	1.03
31:y:818:G:O2'	31:y:819:A:C5'	2.07	1.03
31:y:1226:C:OP2	46:n:103:THR:HB	1.58	1.03
37:e:22:LYS:HB2	37:e:26:CYS:SG	1.97	1.03
37:e:145:GLU:CG	37:e:184:LYS:HB2	1.88	1.03
53:u:75:ASN:HB2	53:u:79:ARG:NH1	1.74	1.03
1:w:116:C:H3'	1:w:117:G:H5''	1.08	1.03
1:w:231:C:H2'	1:w:232:G:H5'	1.39	1.03
1:w:507:A:H5'	1:w:509:C:O4'	1.58	1.03
1:w:623:G:H2'	1:w:624:C:C6	1.94	1.03
1:w:1378:A:H2'	1:w:1380:G:N7	1.73	1.03
1:w:1455:G:H2'	1:w:1456:G:H8	1.09	1.03
1:w:1539:G:H3'	1:w:1540:G:H5''	1.40	1.03
1:w:1557:C:H3'	1:w:1558:A:C5'	1.89	1.03
1:w:1796:U:H2'	1:w:1797:C:C5	1.91	1.03
1:w:1832:C:OP1	31:y:899:C:H2'	1.58	1.03
1:w:1959:G:H2'	1:w:1960:A:O4'	1.59	1.03
1:w:2016:U:H5'	1:w:2058:A:H5'	1.39	1.03
1:w:2306:C:C3'	1:w:2311:A:H61	1.70	1.03
1:w:2820:A:OP2	1:w:2820:A:H3'	1.57	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:79:C:C2'	2:x:80:U:H5'	1.89	1.03
4:B:21:PHE:HA	4:B:24:ILE:HB	1.35	1.03
4:B:77:ALA:HB3	4:B:96:HIS:O	1.59	1.03
7:E:98:ARG:O	7:E:102:PHE:HB2	1.56	1.03
13:K:23:GLY:HA2	13:K:98:LYS:HB3	1.36	1.03
16:N:66:VAL:HA	16:N:70:VAL:O	1.56	1.03
18:P:30:GLY:HA3	18:P:65:GLY:N	1.71	1.03
20:R:54:VAL:HG22	20:R:77:LYS:HD3	1.36	1.03
31:y:322:C:H2'	31:y:323:U:O4'	1.56	1.03
31:y:476:G:H2'	31:y:477:G:H8	1.17	1.03
31:y:750:G:N2	48:p:23:GLY:CA	2.21	1.03
31:y:898:G:H1'	31:y:901:A:N6	1.74	1.03
31:y:1469:G:C8	31:y:1469:G:OP2	2.11	1.03
33:0:6:U:C2'	33:0:7:U:H5''	1.88	1.03
36:d:87:LEU:HD13	36:d:101:LEU:HD11	1.36	1.03
36:d:90:GLU:O	36:d:94:LEU:HB2	1.58	1.03
37:e:199:ASN:HD22	37:e:202:LEU:HG	1.22	1.03
40:h:116:ALA:HA	40:h:120:ILE:HD13	1.38	1.03
41:i:50:ARG:HA	41:i:59:LEU:HG	1.33	1.03
47:o:26:ARG:NE	47:o:43:CYS:SG	2.30	1.03
49:q:4:ILE:H	49:q:66:PRO:HA	1.24	1.03
1:w:243:U:O2'	1:w:244:A:H5'	1.57	1.03
1:w:558:G:H2'	1:w:559:G:O4'	1.59	1.03
1:w:1015:G:H3'	1:w:1016:G:C8	1.92	1.03
1:w:1278:A:H4'	1:w:1278:A:OP1	1.55	1.03
1:w:1356:G:H2'	1:w:1357:U:H6	1.22	1.03
1:w:1926:U:H1'	1:w:1929:G:C2	1.92	1.03
1:w:2080:G:H5'	24:V:23:LYS:CG	1.88	1.03
1:w:2733:A:C2'	1:w:2734:A:H5'	1.88	1.03
1:w:2818:G:C2'	1:w:2819:G:H5'	1.86	1.03
2:x:17:C:H2'	2:x:18:G:C5'	1.88	1.03
2:x:66:A:N6	2:x:108:C:C1'	2.21	1.03
3:A:167:ASP:H	3:A:171:ALA:HA	1.22	1.03
4:B:24:ILE:HA	4:B:91:ARG:NH1	1.73	1.03
5:C:32:PRO:HB3	5:C:69:LYS:HE3	1.38	1.03
5:C:51:PHE:H	5:C:76:ARG:HB3	0.90	1.03
11:I:20:MET:O	11:I:41:ALA:HB1	1.59	1.03
16:N:62:THR:HB	16:N:75:ILE:CA	1.87	1.03
31:y:16:A:H2'	31:y:17:U:H6	0.95	1.03
31:y:407:G:C5'	37:e:118:ARG:HD3	1.88	1.03
31:y:974:A:OP2	47:o:41:ARG:NH1	1.92	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1065:U:C5'	31:y:1190:G:N2	2.21	1.03
36:d:77:ILE:HG13	36:d:84:ILE:CG2	1.88	1.03
36:d:151:VAL:HG13	36:d:152:ILE:H	1.24	1.03
37:e:128:VAL:HA	37:e:146:ILE:CD1	1.89	1.03
41:i:51:VAL:HG21	41:i:60:ARG:HH21	1.18	1.03
44:l:14:VAL:HG13	44:l:35:PRO:HG3	1.41	1.03
45:m:33:ARG:CA	45:m:84:ILE:HD11	1.89	1.03
1:w:118:A:N3	1:w:178:G:H1'	1.73	1.03
1:w:254:G:O6	29:a:5:LYS:HB2	1.59	1.03
1:w:485:C:H2'	1:w:486:C:C5	1.93	1.03
1:w:1056:G:C2	1:w:1103:A:N6	2.27	1.03
1:w:1299:G:N2	1:w:1640:C:O2	1.91	1.03
1:w:1732:A:H2'	1:w:1733:G:H5'	1.37	1.03
1:w:1925:C:H6	1:w:1925:C:O5'	1.41	1.03
1:w:2712:U:C5'	1:w:2714:G:H5'	1.88	1.03
3:A:164:PHE:HZ	3:A:197:LEU:HA	1.18	1.03
4:B:21:PHE:CA	4:B:24:ILE:HB	1.88	1.03
4:B:138:VAL:HG23	4:B:139:GLY:H	1.21	1.03
5:C:175:VAL:HB	5:C:182:LEU:CD1	1.89	1.03
6:D:192:ASP:O	6:D:195:GLU:HG2	1.57	1.03
7:E:107:LEU:HA	7:E:111:LEU:HD13	1.38	1.03
9:G:103:ARG:HD2	9:G:104:GLN:N	1.73	1.03
11:I:64:ARG:HB3	11:I:102:VAL:HG11	1.40	1.03
11:I:111:PHE:HB3	11:I:114:ILE:HD11	1.40	1.03
22:T:3:TYR:O	22:T:57:ILE:HD12	1.58	1.03
27:Y:38:ALA:HB2	27:Y:49:CYS:N	1.73	1.03
31:y:104:G:H2'	31:y:105:G:H5'	1.36	1.03
31:y:132:C:C2'	31:y:133:U:H5''	1.87	1.03
31:y:489:C:H5''	37:e:132:ARG:NH2	1.71	1.03
31:y:958:A:H2'	31:y:959:A:H8	1.22	1.03
31:y:1176:A:H3'	31:y:1177:G:C8	1.93	1.03
31:y:1299:A:N3	31:y:1300:G:C5'	2.22	1.03
31:y:1348:U:H2'	31:y:1349:A:C8	1.94	1.03
31:y:1395:C:H2'	31:y:1396:A:H5'	1.36	1.03
31:y:1440:C:H2'	31:y:1441:G:H5'	1.38	1.03
37:e:23:GLY:HA2	37:e:112:VAL:HG23	1.05	1.03
43:k:99:LYS:CD	43:k:100:THR:H	1.72	1.03
51:s:36:ASN:O	51:s:40:LEU:HG	1.59	1.03
1:w:599:G:H4'	6:D:27:LEU:CD1	1.89	1.02
1:w:811:U:C6	1:w:1251:C:H1'	1.94	1.02
1:w:1458:C:C4'	1:w:1459:G:O5'	2.06	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1741:C:H2'	1:w:1742:C:O4'	1.57	1.02
1:w:2345:G:C2	1:w:2381:C:H2'	1.94	1.02
1:w:2574:G:C1'	5:C:143:ASN:ND2	2.19	1.02
5:C:51:PHE:HD1	5:C:52:LEU:HD12	1.20	1.02
7:E:15:VAL:HG12	7:E:19:LEU:HD11	1.41	1.02
9:G:9:LEU:HG	9:G:10:GLU:H	0.89	1.02
10:H:78:VAL:O	10:H:80:ALA:N	1.92	1.02
13:K:25:ASP:HB2	13:K:101:ARG:HD3	1.41	1.02
13:K:39:PRO:CB	13:K:99:PRO:HG3	1.88	1.02
14:L:84:ALA:HB3	14:L:85:PRO:HD3	1.06	1.02
15:M:18:ILE:HG23	15:M:19:LYS:H	1.23	1.02
17:O:32:PHE:O	17:O:36:ARG:HB2	1.58	1.02
22:T:19:ARG:HD2	22:T:19:ARG:H	1.22	1.02
22:T:69:THR:HG23	22:T:89:PHE:O	1.57	1.02
31:y:341:C:N3	31:y:342:C:N4	2.04	1.02
31:y:613:C:H4'	37:e:85:LYS:HZ1	1.20	1.02
31:y:623:C:H2'	31:y:624:C:C6	1.93	1.02
31:y:817:C:O4'	31:y:818:G:H3'	1.57	1.02
31:y:826:C:O2'	41:i:12:ARG:HA	1.59	1.02
31:y:1339:A:C2	32:z:31:A:O4'	2.11	1.02
31:y:1390:U:H2'	31:y:1391:U:C6	1.94	1.02
31:y:1526:G:H3'	31:y:1527:C:C6	1.93	1.02
38:f:137:GLU:O	38:f:141:GLN:HG2	1.58	1.02
41:i:103:VAL:HG12	41:i:108:GLY:O	1.60	1.02
42:j:36:TYR:O	42:j:37:PHE:HB2	1.57	1.02
45:m:84:ILE:HD13	45:m:84:ILE:H	0.90	1.02
46:n:78:ILE:HG13	46:n:79:LYS:H	1.18	1.02
1:w:58:G:H5''	20:R:72:LYS:HB2	1.06	1.02
1:w:346:A:H4'	1:w:347:A:H5'	1.06	1.02
1:w:394:A:H8	1:w:394:A:O5'	1.42	1.02
1:w:965:C:H3'	1:w:966:G:H5''	1.38	1.02
1:w:1182:A:H3'	1:w:1183:G:H5''	1.02	1.02
1:w:1451:C:H5'	1:w:1453:A:H5'	1.42	1.02
1:w:1663:C:O2'	1:w:1664:A:H8	1.42	1.02
1:w:1692:U:O2'	1:w:1693:U:H5''	1.57	1.02
1:w:1987:G:H8	1:w:1987:G:H5'	1.18	1.02
1:w:2013:A:O5'	19:Q:96:ILE:HG21	1.60	1.02
1:w:2290:G:N2	1:w:2343:C:H1'	1.74	1.02
1:w:2548:G:H2'	1:w:2549:G:H5''	1.04	1.02
1:w:2563:U:C4'	11:I:28:SER:HB3	1.90	1.02
5:C:105:THR:HG22	5:C:106:GLY:N	1.71	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:33:ARG:CB	7:E:33:ARG:HH21	1.71	1.02
7:E:139:LEU:HB2	7:E:146:TYR:N	1.73	1.02
8:F:127:GLU:HB3	8:F:129:THR:H	1.21	1.02
31:y:36:C:H2'	31:y:37:U:C6	1.93	1.02
31:y:291:C:OP2	31:y:305:G:C2	2.13	1.02
31:y:393:A:H2'	31:y:394:G:H8	1.20	1.02
31:y:626:U:H5''	49:q:38:TYR:HB2	1.35	1.02
31:y:1279:A:H3'	31:y:1279:A:N3	1.72	1.02
31:y:1296:C:H1'	31:y:1302:U:H3	1.19	1.02
32:z:71:G:H3'	32:z:72:C:H5''	1.02	1.02
35:c:54:THR:HG22	35:c:58:ILE:HD11	1.40	1.02
38:f:152:ARG:HD2	41:i:42:GLU:O	1.59	1.02
45:m:40:ARG:HH21	45:m:54:VAL:HG21	0.91	1.02
49:q:2:VAL:O	49:q:23:ASP:HA	1.60	1.02
1:w:634:C:H2'	1:w:635:C:C6	1.93	1.02
1:w:669:G:C8	1:w:669:G:O5'	2.13	1.02
1:w:762:U:H4'	1:w:763:G:C5'	1.89	1.02
1:w:1276:A:H4'	14:L:12:ARG:NH2	1.74	1.02
1:w:1700:A:H2'	1:w:1701:A:H5'	1.37	1.02
1:w:1827:C:H4'	1:w:1971:A:C4'	1.89	1.02
1:w:2784:C:H3'	1:w:2785:C:C5'	1.88	1.02
2:x:13:A:N1	2:x:70:C:C5'	2.22	1.02
5:C:13:ARG:HA	5:C:23:VAL:CG2	1.90	1.02
6:D:121:VAL:HG13	6:D:191:LEU:H	1.23	1.02
8:F:60:ARG:HB3	8:F:60:ARG:HH21	0.93	1.02
10:H:29:PRO:HG3	10:H:64:ASP:HB3	1.40	1.02
13:K:51:ARG:HH11	13:K:51:ARG:CB	1.70	1.02
13:K:134:ARG:NH1	22:T:53:ILE:HD12	1.75	1.02
14:L:84:ALA:HB3	14:L:85:PRO:CD	1.89	1.02
15:M:73:LEU:O	15:M:76:LYS:HB2	1.59	1.02
20:R:57:LEU:HG	20:R:58:HIS:H	1.19	1.02
31:y:7:G:O2'	31:y:8:A:OP1	1.77	1.02
31:y:21:G:H2'	31:y:22:G:C5'	1.89	1.02
31:y:420:U:C2'	31:y:422:C:H41	1.72	1.02
31:y:896:C:C5'	50:r:100:LYS:NZ	2.22	1.02
31:y:1067:A:H4'	31:y:1387:G:O2'	1.58	1.02
37:e:89:THR:HA	37:e:93:PHE:CD2	1.95	1.02
39:g:14:LEU:CB	39:g:18:GLN:HG2	1.89	1.02
45:m:85:ARG:HG3	45:m:86:GLY:H	1.22	1.02
53:u:43:LEU:HD22	53:u:51:GLU:HG3	1.37	1.02
1:w:188:G:O2'	1:w:1365:A:N6	1.91	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:253:C:O2'	1:w:254:G:H5'	1.59	1.02
1:w:483:A:O3'	21:S:56:PRO:CG	2.07	1.02
1:w:818:G:N7	1:w:1187:G:C5	2.28	1.02
1:w:965:C:H2'	1:w:966:G:H5''	1.38	1.02
1:w:1014:U:H2'	1:w:1015:G:O4'	1.59	1.02
1:w:1298:C:C2	1:w:1299:G:C8	2.48	1.02
1:w:149(B):A:H1'	1:w:1529:A:C2	1.94	1.02
1:w:1612:C:H5'	28:Z:7:PRO:HG2	1.39	1.02
1:w:1669:A:C3'	1:w:1670:C:C5'	2.35	1.02
1:w:2195:C:H2'	1:w:2196:C:H6	1.22	1.02
1:w:2355:C:C4'	23:U:24:LYS:HE3	1.88	1.02
2:x:11:C:OP1	23:U:72:ARG:HD2	1.58	1.02
6:D:59:ILE:CD1	6:D:73:ILE:HB	1.89	1.02
9:G:7:GLU:HG2	9:G:8:PRO:CD	1.89	1.02
11:I:23:ARG:O	11:I:39:ILE:HG22	1.58	1.02
16:N:100:TYR:CA	16:N:103:ARG:NH2	2.23	1.02
22:T:155:LEU:HD13	22:T:156:LYS:H	1.23	1.02
31:y:227:G:H21	49:q:62:VAL:CB	1.73	1.02
31:y:307:C:C5	31:y:308:C:C5	2.47	1.02
31:y:402:G:H4'	31:y:620:C:H42	1.18	1.02
31:y:405:U:H5	37:e:2:GLY:HA2	0.87	1.02
31:y:406:G:N7	31:y:495:A:H2'	1.74	1.02
31:y:838:G:H2'	31:y:841:U:H5''	1.35	1.02
31:y:1065:U:H5''	31:y:1190:G:H21	1.20	1.02
31:y:1141:C:C2'	31:y:1142:G:H5''	1.88	1.02
31:y:1230:C:C2'	31:y:1231:G:H5'	1.89	1.02
44:l:46:GLY:HA2	44:l:50:TYR:O	1.56	1.02
49:q:1:MET:HA	49:q:65:GLN:HB2	1.37	1.02
51:s:63:GLN:HA	51:s:66:LEU:HB2	1.42	1.02
53:u:81:LYS:O	53:u:85:MET:HB3	1.59	1.02
1:w:440:G:H2'	1:w:441:U:O4'	1.59	1.02
1:w:614:U:C4	1:w:615:G:H1'	1.93	1.02
1:w:865:C:N4	1:w:909:A:H62	1.56	1.02
1:w:1056:G:H8	1:w:1056:G:O5'	1.43	1.02
1:w:1270:C:O2'	1:w:1648:C:P	2.17	1.02
1:w:1443:G:H2'	1:w:1444:G:H8	0.85	1.02
1:w:1803:A:OP2	1:w:1803:A:C8	2.13	1.02
1:w:2009:G:C5'	19:Q:41:LYS:HE3	1.90	1.02
1:w:2056:G:H21	27:Y:6:VAL:H	1.02	1.02
1:w:2601:C:H5''	32:z:75:C:H5'	1.02	1.02
2:x:23:G:H2'	2:x:24:G:N7	1.74	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:13:GLY:HA2	9:G:17:GLN:HG3	1.41	1.02
9:G:23:PRO:HB2	9:G:27:ARG:HE	1.23	1.02
9:G:78:THR:HG22	9:G:143:SER:HB3	1.40	1.02
10:H:91:GLU:H	10:H:110:LEU:HB2	1.24	1.02
11:I:98:VAL:HG22	11:I:99:PHE:H	1.23	1.02
13:K:27:VAL:HG23	13:K:28:ALA:H	1.18	1.02
14:L:100:LEU:HG	14:L:112:ALA:HA	1.40	1.02
17:O:8:VAL:HG13	17:O:11:ARG:NE	1.75	1.02
17:O:90:VAL:HG13	18:P:11:GLN:HE22	1.22	1.02
31:y:302:G:H1'	31:y:556:C:OP1	1.58	1.02
31:y:320:C:HO2'	31:y:1435:G:H1'	1.25	1.02
31:y:529:G:H2'	31:y:530:G:H5''	1.02	1.02
31:y:692:U:N3	44:l:53:SER:HA	1.73	1.02
31:y:728:A:C2	31:y:729:A:N7	2.27	1.02
31:y:777:A:H3'	31:y:778:G:H8	0.85	1.02
31:y:993:G:N3	31:y:993:G:H2'	1.74	1.02
31:y:1077:G:N2	31:y:1079:G:H3'	1.73	1.02
31:y:1358:U:O2	31:y:1363:A:N1	1.93	1.02
31:y:1374:A:C2'	31:y:1375:A:H5'	1.89	1.02
31:y:1500:A:H2'	31:y:1501:C:C5'	1.90	1.02
35:c:54:THR:O	35:c:58:ILE:HG12	1.59	1.02
36:d:77:ILE:HA	36:d:84:ILE:HB	1.38	1.02
36:d:87:LEU:CD1	36:d:101:LEU:HD11	1.90	1.02
36:d:138:VAL:HG22	36:d:169:ALA:HB2	1.03	1.02
37:e:94:LEU:HD23	37:e:200:GLU:HB2	1.41	1.02
45:m:36:CYS:SG	45:m:76:LEU:HD11	2.00	1.02
1:w:36:G:H4'	1:w:451:C:C2	1.95	1.01
1:w:188:G:H5'	24:V:18:ILE:HG12	1.41	1.01
1:w:458:G:H5'	28:Z:40:TRP:NE1	1.74	1.01
1:w:519:U:H4'	19:Q:25:ARG:HH22	0.87	1.01
1:w:589:C:H2'	1:w:590:A:H8	1.25	1.01
1:w:691:C:H1'	4:B:43:ARG:NH1	1.73	1.01
1:w:796:C:H2'	1:w:797:C:C6	1.93	1.01
1:w:992:C:H4'	18:P:89:GLN:HE22	0.86	1.01
1:w:1372:U:H2'	1:w:1373:A:H8	1.21	1.01
1:w:1759:A:O2'	1:w:2714:G:H1'	1.60	1.01
1:w:1993:U:H2'	1:w:1994:C:H6	1.21	1.01
1:w:2451:A:O5'	1:w:2451:A:H8	1.40	1.01
1:w:712(B):A:C4'	1:w:2713:A:H5'	1.90	1.01
3:A:21:TYR:HB3	3:A:25:GLU:HG3	1.04	1.01
10:H:65:TRP:HB3	17:O:64:ARG:CD	1.89	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:33:LYS:HD3	16:N:41:ARG:HB3	1.42	1.01
20:R:12:VAL:HG13	20:R:13:LEU:H	1.23	1.01
26:X:5:LYS:CE	26:X:7:LYS:HE3	1.90	1.01
26:X:10:LYS:CG	26:X:53:LEU:HA	1.89	1.01
31:y:538:G:H3'	45:m:114:LYS:HZ1	1.23	1.01
31:y:598:U:H4'	41:i:94:TYR:CB	1.88	1.01
31:y:613:C:H4'	37:e:85:LYS:NZ	1.76	1.01
31:y:728:A:H2'	31:y:729:A:C8	1.93	1.01
31:y:862:C:C2'	31:y:863:U:H5'	1.90	1.01
31:y:979:C:H2'	31:y:980:C:H5'	1.34	1.01
32:z:71:G:H3'	32:z:72:C:C5'	1.88	1.01
33:0:34:G:C2'	33:0:35:A:H5''	1.90	1.01
37:e:9:CYS:SG	37:e:22:LYS:CB	2.47	1.01
1:w:817:C:O5'	1:w:817:C:H6	1.41	1.01
1:w:978:G:C3'	1:w:979:G:H8	1.73	1.01
1:w:1674:G:N3	1:w:1676:A:N6	2.08	1.01
1:w:1716:U:H2'	1:w:1717:G:N7	1.74	1.01
1:w:2030:A:H5'	1:w:2031:A:H8	1.25	1.01
1:w:2352:A:N7	1:w:2365:G:N2	2.08	1.01
2:x:106:G:H2'	2:x:107:U:H6	1.23	1.01
3:A:7:ARG:HH11	3:A:7:ARG:HB3	1.24	1.01
15:M:88:ASP:O	15:M:89:ARG:HG2	1.60	1.01
17:O:87:GLY:HA3	18:P:52:VAL:CG1	1.89	1.01
20:R:64:LYS:H	20:R:64:LYS:HD3	1.24	1.01
22:T:5:LEU:HD13	22:T:6:LYS:N	1.75	1.01
22:T:72:ARG:O	22:T:73:GLN:HB2	1.55	1.01
22:T:102:LEU:HD21	22:T:124:ILE:HB	1.38	1.01
24:V:26:ARG:HG3	24:V:34:THR:HG23	1.02	1.01
24:V:51:VAL:HG21	24:V:60:PHE:HB2	1.41	1.01
27:Y:30:LEU:HD21	27:Y:39:MET:O	1.59	1.01
31:y:14:U:C6	31:y:16:A:OP2	2.12	1.01
31:y:273:A:C2'	31:y:274:A:H5'	1.90	1.01
31:y:516:PSU:HN3	31:y:533:A:H62	1.03	1.01
31:y:1127:G:O2'	31:y:1149:C:H1'	1.59	1.01
31:y:1299:A:H3'	31:y:1300:G:C5'	1.90	1.01
31:y:1440:C:C2'	31:y:1441:G:H5'	1.90	1.01
37:e:14:ARG:HA	37:e:40:PRO:CD	1.90	1.01
48:p:77:ARG:HH11	48:p:77:ARG:CB	1.73	1.01
1:w:389:G:H8	1:w:2413:G:H4'	0.90	1.01
1:w:558:G:OP1	10:H:134:PRO:HD2	1.60	1.01
1:w:563:G:H2'	1:w:564:C:H5'	1.40	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:598:G:H2'	1:w:599:G:C5'	1.90	1.01
1:w:661:C:H4'	12:J:18:ARG:HD2	1.41	1.01
1:w:708:C:H2'	1:w:709:U:C5'	1.90	1.01
1:w:1139:G:H1'	1:w:1143:A:H2	1.24	1.01
1:w:1252:G:H3'	1:w:1253:A:C8	1.95	1.01
1:w:2394:C:OP1	12:J:62:LEU:HB2	1.58	1.01
1:w:2771:C:O2	1:w:2771:C:H2'	1.61	1.01
5:C:34:VAL:HG23	5:C:78:LEU:HD21	1.43	1.01
5:C:77:ILE:CG2	5:C:78:LEU:H	1.73	1.01
5:C:176:ILE:HB	5:C:181:LEU:CB	1.90	1.01
6:D:119:LEU:O	6:D:121:VAL:N	1.93	1.01
8:F:42:ARG:H	8:F:53:GLU:HB3	1.23	1.01
8:F:89:ILE:HG23	8:F:129:THR:CG2	1.88	1.01
11:I:41:ALA:O	11:I:57:VAL:HA	1.59	1.01
13:K:98:LYS:HB2	13:K:101:ARG:HG3	1.35	1.01
14:L:56:LYS:HA	14:L:84:ALA:HB1	1.40	1.01
16:N:26:ASP:HA	16:N:48:ILE:HG13	1.38	1.01
17:O:40:PHE:HA	18:P:78:LYS:HG3	1.37	1.01
17:O:87:GLY:HA3	18:P:52:VAL:HG12	1.01	1.01
21:S:61:ILE:HG23	21:S:62:GLU:H	1.22	1.01
22:T:141:VAL:HG22	22:T:144:LEU:CG	1.89	1.01
31:y:278:G:H8	31:y:278:G:O5'	1.41	1.01
31:y:502:G:H4'	31:y:550:G:O2'	1.59	1.01
31:y:565:U:OP2	31:y:566:G:H3'	1.60	1.01
31:y:756:C:H2'	31:y:757:U:O4'	1.60	1.01
31:y:1108:G:H3'	31:y:1109:C:H5''	1.39	1.01
31:y:1148:U:H2'	31:y:1149:C:C5	1.94	1.01
31:y:1199:U:H4'	43:k:54:PHE:CZ	1.96	1.01
31:y:1229:A:C2	46:n:125:ARG:O	2.13	1.01
31:y:1253:G:H1'	31:y:1355:G:O2'	1.59	1.01
31:y:1441:G:H5''	31:y:1442:G:C4'	1.89	1.01
45:m:22:LYS:O	45:m:24:PRO:HD3	1.60	1.01
45:m:24:PRO:HD2	45:m:97:TYR:CZ	1.94	1.01
45:m:109:VAL:HG23	45:m:119:TYR:HB2	1.33	1.01
51:s:42:ARG:HB2	51:s:42:ARG:HH11	1.22	1.01
1:w:492:A:H3'	1:w:493:G:C8	1.94	1.01
1:w:558:G:H3'	1:w:559:G:H5''	1.40	1.01
1:w:585:G:C3'	1:w:1251:C:H42	1.74	1.01
1:w:861:A:N3	2:x:79:C:H4'	1.75	1.01
1:w:890:A:H5''	1:w:890:A:C8	1.95	1.01
1:w:987:G:H3'	1:w:988:A:N7	1.73	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1033:U:C3'	30:b:18:ARG:HH12	1.73	1.01
1:w:1812:A:N3	4:B:45:ASN:HB2	1.73	1.01
1:w:1827:C:H4'	1:w:1971:A:H4'	1.05	1.01
1:w:1848:A:H2'	1:w:1849:G:O4'	1.60	1.01
1:w:2038:G:H2'	1:w:2039:C:H6	1.26	1.01
1:w:2250:G:H2'	13:K:82:ARG:NH2	1.76	1.01
1:w:2572:A:OP1	1:w:2574:G:H4'	1.61	1.01
2:x:66:A:N6	2:x:108:C:H1'	1.74	1.01
5:C:54:GLN:CG	5:C:75:VAL:CG2	2.38	1.01
5:C:184:VAL:HG23	5:C:185:LYS:N	1.74	1.01
5:C:198:VAL:HG12	5:C:199:ARG:N	1.61	1.01
10:H:60:LYS:HA	10:H:60:LYS:HE3	1.41	1.01
10:H:98:TYR:O	10:H:105:LEU:HB2	1.59	1.01
11:I:22:ILE:HG12	11:I:40:VAL:O	1.60	1.01
12:J:122:PRO:HB2	12:J:142:GLY:HA2	1.38	1.01
20:R:36:LYS:O	20:R:38:GLU:N	1.94	1.01
21:S:1:MET:HG2	21:S:2:ARG:H	1.22	1.01
26:X:35:ARG:NH2	26:X:37:LEU:HD21	1.74	1.01
31:y:362:G:H2'	31:y:364:A:OP2	1.61	1.01
31:y:622:A:C2'	31:y:623:C:H5'	1.91	1.01
31:y:826:C:O5'	31:y:826:C:H6	1.43	1.01
31:y:1003:G:C2	31:y:1004:A:H1'	1.95	1.01
36:d:138:VAL:CG2	36:d:169:ALA:HB2	1.90	1.01
37:e:14:ARG:HA	37:e:40:PRO:HD2	1.41	1.01
37:e:17:VAL:HB	37:e:19:LEU:HG	1.40	1.01
37:e:70:ILE:HG13	37:e:71:SER:H	1.23	1.01
38:f:79:GLU:H	41:i:104:ARG:CD	1.73	1.01
39:g:47:ARG:HA	39:g:57:GLN:OE1	1.61	1.01
41:i:40:ALA:HA	41:i:45:ILE:CG2	1.90	1.01
43:k:48:THR:HA	43:k:62:HIS:HB3	1.41	1.01
46:n:4:ILE:HG13	46:n:57:ARG:CA	1.91	1.01
46:n:99:ARG:HB3	46:n:101:GLN:OE1	1.59	1.01
50:r:61:GLU:HA	50:r:71:PHE:CD1	1.95	1.01
1:w:451:C:H2'	1:w:453:C:H5	0.84	1.01
1:w:465:G:H3'	1:w:466:A:C8	1.95	1.01
1:w:718:A:H2'	1:w:719:C:O4'	1.59	1.01
1:w:1009:A:N3	1:w:1153:C:O2'	1.93	1.01
1:w:1031:G:H2'	1:w:1032:A:C5'	1.90	1.01
1:w:1064:C:O5'	1:w:1064:C:H6	1.43	1.01
1:w:1133:U:O2'	1:w:1137:G:C5'	2.08	1.01
1:w:1243:G:H4'	12:J:9:ASN:ND2	1.75	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1356:G:C2	1:w:1376:C:N4	2.29	1.01
1:w:1367:A:H2'	1:w:1368:G:O4'	1.60	1.01
1:w:1836:C:O5'	1:w:1836:C:H6	1.44	1.01
1:w:2451:A:C8	1:w:2451:A:H3'	1.94	1.01
1:w:2865:U:C6	1:w:2865:U:H5''	1.96	1.01
2:x:80:U:H2'	2:x:81:G:C8	1.95	1.01
4:B:117:VAL:HG13	4:B:128:GLY:O	1.60	1.01
8:F:156:ALA:HB2	8:F:169:VAL:HG23	1.40	1.01
14:L:17:ARG:C	14:L:21:TYR:HE1	1.69	1.01
35:c:13:ALA:HA	35:c:16:HIS:CE1	1.95	1.01
37:e:12:CYS:CB	37:e:33:MET:SD	2.48	1.01
38:f:44:GLY:HA2	38:f:62:ALA:HB2	1.43	1.01
1:w:519:U:H3'	1:w:520:G:H8	1.21	1.00
1:w:529:A:N6	1:w:2041:U:H3	1.59	1.00
1:w:613:U:H1'	1:w:616:A:N7	1.77	1.00
1:w:969:U:H2'	1:w:970:C:C6	1.95	1.00
1:w:1542:G:C8	1:w:1542:G:H3'	1.97	1.00
1:w:1886:C:H2'	1:w:1887:C:C6	1.96	1.00
1:w:2073:C:H2'	1:w:2074:U:H6	1.25	1.00
1:w:2238:G:H2'	1:w:2238:G:N3	1.75	1.00
1:w:2306:C:H3'	1:w:2311:A:N6	1.75	1.00
1:w:2675:A:OP1	11:I:31:LYS:HG3	1.61	1.00
1:w:2784:C:OP2	1:w:2784:C:C5	2.14	1.00
1:w:2793:G:H3'	1:w:2794:C:C5	1.94	1.00
3:A:8:TYR:HB2	3:A:12:LEU:CD1	1.90	1.00
5:C:4:ILE:HG13	5:C:91:VAL:HG11	1.44	1.00
7:E:15:VAL:O	7:E:19:LEU:HD12	1.59	1.00
7:E:77:ILE:HG13	32:z:56:C:C4	1.94	1.00
7:E:139:LEU:HB2	7:E:146:TYR:H	1.24	1.00
7:E:172:LEU:HA	7:E:175:LEU:CD1	1.89	1.00
8:F:95:ARG:NE	8:F:107:VAL:HA	1.75	1.00
10:H:93:LYS:HB3	10:H:110:LEU:HD21	1.41	1.00
14:L:104:ARG:HB2	14:L:109:ALA:HB2	1.42	1.00
16:N:92:GLY:HA2	16:N:115:ARG:H	1.21	1.00
17:O:44:ASN:ND2	18:P:78:LYS:HB3	1.75	1.00
20:R:51:VAL:HB	20:R:79:ALA:HB1	1.41	1.00
22:T:99:TYR:HD2	22:T:124:ILE:HA	1.24	1.00
23:U:36:ILE:HA	23:U:60:PHE:CB	1.90	1.00
27:Y:30:LEU:HD23	27:Y:31:VAL:H	1.24	1.00
31:y:185:A:N1	31:y:192:U:N3	2.08	1.00
31:y:366:C:H2'	31:y:367:U:H5'	1.43	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:820:U:H5'	31:y:820:U:H6	1.23	1.00
31:y:896:C:H4'	50:r:101:ARG:CD	1.91	1.00
31:y:1202:G:H21	47:o:26:ARG:HH12	1.06	1.00
31:y:1296:C:H1'	31:y:1302:U:N3	1.76	1.00
31:y:1367:C:H4'	43:k:60:ARG:NH1	1.76	1.00
35:c:118:LEU:HA	35:c:121:LEU:HB2	1.38	1.00
36:d:182:ILE:HG23	36:d:202:ILE:O	1.61	1.00
40:h:48:LYS:O	40:h:51:GLN:HB2	1.58	1.00
40:h:120:ILE:CG2	40:h:124:LEU:HD21	1.91	1.00
40:h:126:ASP:HA	40:h:131:LYS:CG	1.89	1.00
42:j:118:LYS:HB2	42:j:121:ARG:HD3	1.42	1.00
49:q:37:GLY:HA2	49:q:50:LYS:O	1.60	1.00
1:w:395:U:H2'	1:w:396:G:N7	1.74	1.00
1:w:1037:G:N2	1:w:1118:C:O2	1.94	1.00
1:w:2089:U:H2'	1:w:2090:G:N7	1.76	1.00
1:w:2584:U:H2'	1:w:2585:U:H3'	1.39	1.00
1:w:2736:G:H8	1:w:2736:G:C5'	1.73	1.00
8:F:105:LEU:HD11	8:F:107:VAL:HG22	1.43	1.00
9:G:64:GLU:HG3	9:G:67:ARG:NH2	1.76	1.00
9:G:94:ALA:HB3	9:G:95:LYS:HZ3	1.25	1.00
9:G:133:HIS:NE2	9:G:136:VAL:HB	1.76	1.00
11:I:86:ILE:HG22	11:I:94:ARG:HD3	1.00	1.00
11:I:88:ASN:HB2	11:I:92:GLU:O	1.61	1.00
13:K:51:ARG:HB2	13:K:51:ARG:HH11	1.22	1.00
15:M:58:LEU:HD23	15:M:59:LYS:H	1.22	1.00
31:y:27:G:C2'	31:y:28:G:H5'	1.90	1.00
31:y:99:C:C2'	31:y:101:A:C8	2.43	1.00
31:y:152:A:N6	31:y:169:C:H42	1.59	1.00
31:y:276:G:N2	31:y:277:C:H1'	1.77	1.00
31:y:363:A:H5'	45:m:32:ARG:C	1.87	1.00
31:y:889:A:H5''	31:y:891:U:N1	1.75	1.00
31:y:102(B):C:H2'	31:y:102(C):C:H5''	1.42	1.00
35:c:137:ARG:O	35:c:141:GLU:HG3	1.61	1.00
35:c:163:PHE:CD1	35:c:186:ALA:HA	1.97	1.00
37:e:67:ILE:HG22	37:e:68:TYR:HD1	1.27	1.00
38:f:79:GLU:HB2	41:i:104:ARG:NH1	1.75	1.00
41:i:9:MET:HB2	41:i:13:ILE:HD13	1.39	1.00
49:q:21:VAL:HG12	49:q:26:ARG:NH2	1.75	1.00
50:r:81:ARG:HH22	50:r:85:VAL:HG23	1.26	1.00
1:w:322:A:H8	1:w:322:A:OP2	1.43	1.00
1:w:324:A:H62	1:w:338:G:C1'	1.73	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:803:U:H3'	1:w:804:A:C8	1.96	1.00
1:w:942:G:H2'	1:w:943:U:O4'	1.62	1.00
1:w:1137:G:C8	1:w:1137:G:O5'	2.14	1.00
1:w:1200:C:H2'	1:w:1201:C:C5'	1.90	1.00
1:w:1254:A:H5''	1:w:1255:U:H5'	1.43	1.00
1:w:1294:U:H4'	14:L:26:LYS:HE3	1.38	1.00
1:w:1421:G:OP2	1:w:1421:G:H8	1.45	1.00
1:w:1633:G:O5'	1:w:1633:G:H8	1.42	1.00
1:w:1707:G:C2'	1:w:1708:C:C6	2.43	1.00
1:w:1818:U:H2'	4:B:155:LEU:HG	1.41	1.00
1:w:2013:A:O2'	1:w:2014:A:H5'	1.60	1.00
1:w:2060:A:O2'	1:w:2061:G:OP2	1.80	1.00
1:w:2550:G:H2'	1:w:2551:C:H5'	1.39	1.00
8:F:149:ARG:HA	8:F:153:LYS:HG3	1.40	1.00
12:J:17:LYS:HB3	12:J:19:VAL:HG23	1.43	1.00
13:K:111:GLU:HB3	13:K:115:MET:HE3	1.43	1.00
18:P:76:LYS:HG2	18:P:85:LYS:HB2	1.42	1.00
19:Q:18:ARG:O	19:Q:21:VAL:HG22	1.62	1.00
20:R:58:HIS:O	20:R:59:VAL:HG13	1.62	1.00
31:y:21:G:C2'	31:y:22:G:C5'	2.38	1.00
31:y:22:G:H5''	31:y:885:G:H5'	1.42	1.00
31:y:116:A:OP2	31:y:289:G:H5''	1.59	1.00
31:y:131:C:H4'	31:y:263:A:H8	1.26	1.00
31:y:718:G:C1'	44:l:116:HIS:HB2	1.91	1.00
31:y:1395:C:C6	31:y:1395:C:OP2	2.14	1.00
31:y:1516:G:N2	31:y:1518:MA6:H3'	1.75	1.00
36:d:134:ILE:HG13	36:d:135:LYS:N	1.75	1.00
39:g:23:LYS:O	39:g:26:ILE:HG12	1.60	1.00
1:w:674:G:H4'	6:D:71:GLY:H	1.17	1.00
1:w:1400:G:C8	1:w:1400:G:OP2	2.14	1.00
1:w:1967:C:H2'	1:w:1968:G:H5'	1.40	1.00
1:w:2594:C:O2	1:w:2599:G:N2	1.95	1.00
1:w:2723:C:N4	1:w:2724:C:C5	2.29	1.00
1:w:2730:C:O2'	1:w:2731:G:H5'	1.62	1.00
9:G:101:LEU:HD12	9:G:107:ILE:HG23	1.04	1.00
13:K:51:ARG:H	13:K:51:ARG:CD	1.71	1.00
31:y:5:U:O4	38:f:97:GLY:HA3	1.61	1.00
31:y:155:C:H2'	31:y:156:G:H8	1.22	1.00
31:y:586:C:H1'	31:y:878:G:O2'	1.61	1.00
31:y:659:U:H5	31:y:659:U:OP2	1.43	1.00
31:y:1250:A:N3	31:y:1370:G:O2'	1.95	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:16:ARG:HD3	36:d:17:ASP:N	1.76	1.00
37:e:8:VAL:HG12	37:e:21:LEU:CD1	1.91	1.00
41:i:35:ILE:O	41:i:39:LEU:HD23	1.60	1.00
1:w:99:U:C5'	1:w:101:G:H5''	1.91	1.00
1:w:270(G):U:H2'	1:w:270(H):C:C5	1.97	1.00
1:w:598:G:H1'	12:J:13:ASN:CG	1.85	1.00
1:w:1182:A:H3'	1:w:1183:G:C5'	1.91	1.00
1:w:1270:C:H5''	1:w:1271:G:H5'	1.44	1.00
1:w:1321:A:H4'	19:Q:11:ARG:NH2	1.77	1.00
1:w:2359:C:C2	1:w:2360:A:H1'	1.97	1.00
2:x:107:U:H3'	2:x:108:C:C5	1.95	1.00
2:x:113:C:H2'	15:M:47:THR:CG2	1.91	1.00
5:C:4:ILE:HD12	5:C:91:VAL:HG12	1.44	1.00
5:C:102:VAL:HA	5:C:201:THR:H	0.86	1.00
7:E:55:LYS:HD3	7:E:56:ALA:N	1.77	1.00
7:E:128:ARG:HA	7:E:165:THR:HA	1.43	1.00
10:H:63:PRO:HA	17:O:64:ARG:NH2	1.76	1.00
31:y:297:G:H2'	31:y:298:A:C8	1.96	1.00
31:y:321:A:O2'	31:y:322:C:C5'	2.10	1.00
31:y:1316:G:O4'	31:y:1360:A:H2	1.45	1.00
46:n:4:ILE:CG1	46:n:57:ARG:HA	1.92	1.00
46:n:52:GLU:HA	46:n:55:ARG:HE	1.26	1.00
1:w:117:G:H4'	1:w:126:A:H2	1.03	1.00
1:w:2818:G:H2'	1:w:2819:G:C5'	1.91	1.00
6:D:105:LEU:HD13	6:D:109:VAL:HG22	1.42	1.00
9:G:7:GLU:CA	9:G:14:ASP:HB3	1.91	1.00
10:H:113:MET:HA	10:H:116:THR:CG2	1.92	1.00
31:y:980:C:H2'	31:y:981:U:H5'	1.42	1.00
31:y:1230:C:OP1	32:z:30:G:H4'	1.59	1.00
40:h:50:ILE:HG21	40:h:61:VAL:HG21	1.41	1.00
1:w:598:G:H2'	1:w:599:G:H5'	1.00	1.00
1:w:668:G:C2'	1:w:670:A:N6	2.21	1.00
1:w:1056:G:N2	1:w:1103:A:N6	2.09	1.00
1:w:1369:G:C1'	1:w:1809:A:N6	2.25	1.00
1:w:1799:G:O6	4:B:179:SER:HB2	1.61	1.00
1:w:2080:G:C2	1:w:2081:C:C5	2.50	1.00
1:w:2472:G:O6	1:w:2476:A:H5''	1.62	1.00
1:w:2655:G:O2'	1:w:2656:U:OP2	1.79	1.00
10:H:112:LYS:NZ	10:H:115:ALA:HB3	1.75	1.00
10:H:117:HIS:HB2	10:H:120:ARG:CB	1.92	1.00
13:K:38:GLU:HB2	13:K:127:ILE:HG21	1.43	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:10:VAL:HG12	19:Q:11:ARG:N	1.75	1.00
31:y:297:G:H21	31:y:300:A:H62	1.08	1.00
31:y:390:C:H2'	31:y:391:G:O4'	1.62	1.00
31:y:1221:G:C2	31:y:1222:G:H1'	1.94	1.00
31:y:1331:G:C4	31:y:1331:G:OP2	2.15	1.00
35:c:124:SER:HB2	35:c:125:PRO:CD	1.91	1.00
43:k:93:GLY:O	43:k:94:VAL:HG23	1.60	1.00
1:w:262:A:H5''	1:w:609(B):G:O2'	1.62	0.99
1:w:762:U:H4'	1:w:763:G:H5''	1.41	0.99
1:w:1047:G:OP1	1:w:1047:G:H3'	1.61	0.99
1:w:2052:G:C2	5:C:149:ARG:HA	1.96	0.99
1:w:2245:U:O2	1:w:2435:A:H3'	1.59	0.99
11:I:91:LEU:HD13	11:I:91:LEU:N	1.71	0.99
15:M:25:ARG:HE	15:M:40:ILE:HG22	1.21	0.99
19:Q:42:ARG:HG3	19:Q:46:PHE:HE2	1.26	0.99
19:Q:59:VAL:CG2	19:Q:64:MET:HB2	1.90	0.99
26:X:5:LYS:HA	26:X:36:VAL:HG12	1.40	0.99
31:y:934:C:H5	31:y:1345:U:H5'	1.26	0.99
36:d:67:THR:HA	36:d:102:ASN:O	1.60	0.99
45:m:116:ARG:HD2	45:m:121:THR:CG2	1.91	0.99
1:w:308:G:H21	1:w:329:G:H21	1.01	0.99
1:w:1672:C:O2	1:w:2553:G:C4'	2.09	0.99
1:w:2101:G:H2'	1:w:2102:U:H5'	1.01	0.99
1:w:2711:A:O5'	1:w:2712:U:C5'	2.09	0.99
5:C:32:PRO:HB3	5:C:69:LYS:CE	1.92	0.99
5:C:91:VAL:HG13	5:C:95:ILE:HD11	1.44	0.99
5:C:116:VAL:C	5:C:118:LYS:H	1.70	0.99
7:E:31:VAL:HG22	7:E:32:PRO:CD	1.91	0.99
7:E:141:PHE:CD1	7:E:142:PRO:HD2	1.97	0.99
10:H:44:LYS:N	10:H:84:ARG:HB2	1.77	0.99
15:M:74:ALA:HB1	15:M:109:GLY:HA3	1.44	0.99
22:T:69:THR:HG22	22:T:70:LEU:N	1.77	0.99
31:y:243:A:O2'	31:y:244:U:OP2	1.81	0.99
31:y:405:U:C5	37:e:2:GLY:CA	2.45	0.99
31:y:668:G:H4'	48:p:49:ASP:HA	1.38	0.99
31:y:1013:G:H21	31:y:1016:A:N6	1.41	0.99
35:c:178:ARG:HH21	41:i:74:PRO:HD3	1.23	0.99
41:i:51:VAL:HG12	41:i:52:ASP:H	1.27	0.99
1:w:273(E):C:C2'	1:w:273(F):U:H5''	1.93	0.99
1:w:363(F):U:H3'	1:w:363(G):A:C8	1.95	0.99
1:w:2677:G:C2'	1:w:2678:C:C6	2.45	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:121:PRO:HA	4:B:131:LEU:HG	1.42	0.99
6:D:112:ARG:HH21	6:D:112:ARG:HG3	1.22	0.99
6:D:178:VAL:O	6:D:181:ILE:HG22	1.62	0.99
16:N:74:ARG:HB3	16:N:76:PHE:CE1	1.96	0.99
31:y:326:G:H2'	31:y:327:A:H5'	1.42	0.99
31:y:510:A:H8	31:y:510:A:O5'	1.45	0.99
31:y:811:C:H2'	31:y:812:C:C5'	1.92	0.99
31:y:976:G:H5'	31:y:1358:U:O2'	1.62	0.99
31:y:1230:C:O2'	31:y:1231:G:H5'	1.62	0.99
31:y:1230:C:H4'	32:z:31:A:OP1	1.61	0.99
31:y:1326:C:C4'	54:v:19:GLY:CA	2.37	0.99
35:c:159:PRO:O	35:c:161:ALA:N	1.95	0.99
41:i:22:GLU:O	41:i:62:TYR:HA	1.61	0.99
1:w:588:U:H2'	1:w:589:C:C5'	1.91	0.99
1:w:1542:G:H3'	1:w:1542:G:H8	1.24	0.99
1:w:2355:C:H4'	23:U:24:LYS:CE	1.91	0.99
1:w:2644:G:C2'	1:w:2645:G:H8	1.74	0.99
4:B:260:ARG:NH1	4:B:262:ARG:HA	1.76	0.99
8:F:152:ARG:HD2	8:F:152:ARG:N	1.72	0.99
9:G:4:ILE:HA	9:G:17:GLN:O	1.61	0.99
9:G:88:ILE:HG22	9:G:121:LYS:CG	1.93	0.99
9:G:98:ALA:HA	9:G:109:ILE:CD1	1.91	0.99
10:H:95:TYR:OH	10:H:110:LEU:HA	1.62	0.99
11:I:114:ILE:HG13	11:I:115:VAL:H	1.25	0.99
16:N:123:LYS:HB2	16:N:123:LYS:HZ2	1.26	0.99
18:P:16:PRO:HD2	18:P:18:LEU:CD2	1.91	0.99
20:R:17:ALA:HA	20:R:26:TYR:HB3	1.42	0.99
23:U:25:ARG:HE	23:U:37:LEU:HA	1.27	0.99
25:W:47:ASN:HB2	25:W:51:ARG:CD	1.92	0.99
26:X:4:LEU:O	26:X:36:VAL:HA	1.62	0.99
31:y:538:G:H3'	45:m:114:LYS:NZ	1.75	0.99
31:y:673:G:C2'	31:y:674:G:H8	1.73	0.99
31:y:761:G:H1'	50:r:105:ALA:HB2	1.44	0.99
37:e:94:LEU:CD2	37:e:200:GLU:HG3	1.92	0.99
38:f:46:GLY:HA3	38:f:58:ALA:HA	1.40	0.99
41:i:103:VAL:HG23	41:i:121:ASP:OD1	1.62	0.99
50:r:86:GLU:HA	50:r:89:LEU:HD13	1.42	0.99
1:w:270(E):C:H2'	1:w:270(F):G:C8	1.97	0.99
1:w:483:A:C4'	21:S:56:PRO:HB2	1.91	0.99
1:w:668:G:H2'	1:w:670:A:H62	1.26	0.99
1:w:688:U:O2	1:w:786:C:O2'	1.80	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:817:C:O5'	1:w:817:C:C6	2.15	0.99
1:w:1152:C:H1'	17:O:77:SER:CB	1.92	0.99
1:w:1184:G:C2'	1:w:1185:C:H5'	1.93	0.99
1:w:1797:C:H6	1:w:1797:C:O5'	1.42	0.99
1:w:1825:A:H1'	4:B:254:THR:CG2	1.92	0.99
1:w:2298:A:H1'	1:w:2321:G:N2	1.78	0.99
1:w:2332:U:C4'	1:w:2336:A:N6	2.25	0.99
1:w:2644:G:H2'	1:w:2645:G:H8	0.87	0.99
1:w:2790:A:H4'	1:w:2893:G:N2	1.77	0.99
9:G:9:LEU:HG	9:G:10:GLU:N	1.75	0.99
22:T:141:VAL:HG13	22:T:144:LEU:CB	1.90	0.99
31:y:159:G:N2	31:y:163:C:N4	2.10	0.99
31:y:245:C:H2'	31:y:246:A:C5'	1.92	0.99
31:y:328:C:H4'	31:y:329:A:H5''	1.40	0.99
31:y:700:G:O2'	31:y:703:G:C5'	2.10	0.99
31:y:908:A:C2'	31:y:909:A:H8	1.76	0.99
31:y:1299:A:N3	31:y:1300:G:H5''	1.76	0.99
36:d:68:VAL:CG1	36:d:69:HIS:H	1.75	0.99
37:e:57:ARG:HH21	38:f:107:ARG:HD2	1.24	0.99
44:l:62:GLN:HA	44:l:94:ALA:HB2	1.41	0.99
1:w:271(D):U:H2'	1:w:271:G:C4'	1.90	0.99
1:w:519:U:H3'	1:w:520:G:C8	1.97	0.99
1:w:1501:C:H5'	4:B:102:LYS:HZ2	1.08	0.99
1:w:1640:C:OP1	1:w:1640:C:H4'	1.60	0.99
1:w:1797:C:O5'	1:w:1797:C:C6	2.16	0.99
1:w:1825:A:H1'	4:B:254:THR:HG21	1.02	0.99
1:w:1849:G:H5'	1:w:1850:G:OP2	1.62	0.99
3:A:21:TYR:HB3	3:A:25:GLU:CG	1.91	0.99
7:E:75:LYS:HB2	7:E:77:ILE:HD13	1.44	0.99
10:H:50:ALA:HB2	10:H:126:VAL:HG22	1.40	0.99
13:K:35:VAL:C	13:K:103:MET:HE1	1.87	0.99
31:y:685:G:O6	31:y:704:A:OP2	1.80	0.99
31:y:945:G:N2	31:y:1236:A:N1	2.11	0.99
31:y:1422:G:H2'	31:y:1423:G:H8	1.27	0.99
31:y:1468:A:O2'	31:y:1469:G:H5'	1.61	0.99
1:w:1453:A:N6	1:w:2702:U:O4'	1.96	0.99
1:w:1827:C:OP1	1:w:1971:A:H1'	1.62	0.99
1:w:2022:U:H1'	1:w:2034:U:C4	1.97	0.99
1:w:2619:C:H2'	1:w:2620:C:H5'	1.41	0.99
2:x:49:C:OP2	15:M:95:HIS:CE1	2.15	0.99
2:x:52:A:H2'	2:x:53:A:O4'	1.60	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:42:ILE:HD13	13:K:43:THR:H	0.84	0.99
19:Q:19:LEU:CB	27:Y:25:LEU:HD23	1.91	0.99
31:y:160:A:H1'	31:y:344:A:N3	1.76	0.99
31:y:959:A:H3'	31:y:960:U:C5'	1.90	0.99
31:y:1097:C:H2'	31:y:1098:C:C6	1.98	0.99
31:y:1347:G:H21	31:y:1349:A:N6	1.59	0.99
32:z:9:A:N6	32:z:22:G:N7	2.09	0.99
37:e:145:GLU:HG3	37:e:184:LYS:HB2	1.00	0.99
1:w:182:A:N3	1:w:433:C:O2'	1.94	0.99
1:w:601:C:O2'	1:w:605:C:H5''	1.61	0.99
1:w:898:C:H3'	1:w:899:A:C5'	1.92	0.99
1:w:1130:U:H3	1:w:2025:C:H5''	1.21	0.99
1:w:1282:U:C2	1:w:1283:G:H1'	1.98	0.99
1:w:1893:C:H2'	1:w:1894:C:H5'	1.42	0.99
1:w:2187:G:H3'	1:w:2188:C:H5''	1.44	0.99
1:w:2189:U:H3'	1:w:2190:G:C5'	1.92	0.99
1:w:2875:C:H2'	1:w:2876:G:O4'	1.62	0.99
3:A:166:ASN:HA	3:A:171:ALA:HB2	1.41	0.99
17:O:31:SER:HB3	17:O:34:LYS:HB2	1.42	0.99
24:V:51:VAL:HG12	24:V:52:ARG:N	1.78	0.99
31:y:156:G:H3'	31:y:157:G:C5'	1.92	0.99
31:y:464:G:H22	31:y:467:G:H5''	0.84	0.99
31:y:1299:A:H3'	31:y:1300:G:H5''	1.00	0.99
1:w:336:C:H5'	21:S:67:LEU:HD23	1.44	0.99
1:w:443:A:H2	1:w:1245:G:H21	1.07	0.99
1:w:585:G:H21	1:w:1254:A:H62	1.00	0.99
1:w:661:C:O2'	12:J:18:ARG:HA	1.62	0.99
1:w:1805:U:H1'	4:B:50:THR:O	1.63	0.99
1:w:2588:G:C2'	1:w:2589:A:O4'	2.11	0.99
1:w:2618:G:N3	5:C:150:VAL:HG21	1.77	0.99
1:w:2677:G:H2'	1:w:2678:C:H6	0.90	0.99
1:w:2900:A:C3'	1:w:2901:C:H5''	1.92	0.99
3:A:23:ILE:HG23	3:A:187:ALA:CB	1.93	0.99
5:C:5:LEU:HB3	5:C:76:ARG:HD3	1.43	0.99
6:D:120:LEU:HD13	6:D:123:ALA:HB2	1.44	0.99
11:I:10:VAL:HG22	11:I:17:ARG:O	1.62	0.99
17:O:92:ARG:O	17:O:94:ASN:ND2	1.95	0.99
21:S:47:LYS:HG2	21:S:48:ALA:H	1.26	0.99
31:y:335:C:H4'	31:y:1433:A:HO2'	1.24	0.99
31:y:362:G:H2'	31:y:364:A:N7	1.78	0.99
31:y:517:G:O2'	31:y:531:U:H5'	1.63	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:576:G:H22	31:y:759:A:H5''	1.27	0.99
31:y:923:A:H5'	38:f:21:ALA:CB	1.91	0.99
31:y:1518:MA6:H8	31:y:1518:MA6:H5''	1.01	0.99
35:c:163:PHE:HB2	35:c:185:ILE:HD11	1.41	0.99
38:f:43:LEU:HD11	38:f:65:ASN:ND2	1.77	0.99
40:h:120:ILE:HG23	40:h:124:LEU:HD21	1.40	0.99
47:o:61:TRP:N	47:o:61:TRP:HE3	1.61	0.99
1:w:519:U:H2'	1:w:520:G:O4'	1.61	0.99
1:w:709:U:H2'	1:w:710:G:O4'	1.63	0.99
1:w:1054:A:H3'	1:w:1055:G:H8	1.26	0.99
1:w:1796:U:C4'	4:B:256:GLY:H	1.75	0.99
1:w:2199:A:C8	1:w:2199:A:OP2	2.15	0.99
1:w:2323:G:N2	1:w:2335:A:H2	1.56	0.99
1:w:2522:U:O2'	1:w:2647:U:OP2	1.79	0.99
1:w:2744:G:N2	8:F:143:GLN:OE1	1.96	0.99
3:A:23:ILE:CG2	3:A:187:ALA:HB1	1.93	0.99
4:B:137:PRO:HB2	4:B:140:THR:CG2	1.93	0.99
4:B:185:VAL:HG12	4:B:186:HIS:N	1.77	0.99
5:C:119:ARG:HD2	5:C:120:TRP:CE2	1.98	0.99
24:V:85:LEU:CD1	24:V:88:LYS:H	1.76	0.99
31:y:128:G:H4'	50:r:3:LYS:HD2	1.42	0.99
31:y:175:C:H2'	31:y:176:C:H5'	0.99	0.99
31:y:751:U:H1'	48:p:24:SER:HA	1.44	0.99
45:m:40:ARG:NH2	45:m:42:VAL:HB	1.78	0.99
47:o:40:CYS:HB2	47:o:42:ILE:HG12	1.41	0.99
48:p:24:SER:HB3	48:p:27:VAL:HG23	1.42	0.99
52:t:12:ASP:CB	52:t:15:LEU:HD21	1.93	0.99
1:w:39:C:H2'	1:w:40:C:H6	1.25	0.98
1:w:116:C:O2'	1:w:126:A:C4	2.16	0.98
1:w:506:G:H4'	1:w:509:C:O2	1.61	0.98
1:w:2324:C:H1'	1:w:2337:G:H4'	1.44	0.98
1:w:2831:G:H4'	1:w:2883:A:C2	1.97	0.98
2:x:6:C:H2'	2:x:7:G:H8	1.26	0.98
2:x:94:C:H2'	2:x:95:U:C6	1.96	0.98
25:W:47:ASN:HB2	25:W:51:ARG:HD2	1.03	0.98
31:y:236:G:C3'	31:y:237:C:C6	2.46	0.98
31:y:422:C:H4'	31:y:423:G:H5''	1.43	0.98
38:f:79:GLU:N	41:i:104:ARG:HD3	1.78	0.98
1:w:353:G:H2'	1:w:354:G:C8	1.96	0.98
1:w:919:G:H2'	1:w:920:G:C8	1.97	0.98
1:w:1681:G:O2'	1:w:1762:A:H2'	1.61	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1699:G:C3'	1:w:1700:A:C5'	2.17	0.98
1:w:2286:A:H5'	1:w:2287:A:O4'	1.60	0.98
2:x:42:C:N1	7:E:92:VAL:HG23	1.78	0.98
4:B:148:GLU:CG	4:B:149:PRO:HD2	1.92	0.98
12:J:47:ASP:HB2	12:J:51:PHE:CE2	1.99	0.98
31:y:297:G:N2	31:y:300:A:H62	1.61	0.98
31:y:1073:U:O2'	31:y:1074:G:H5'	1.62	0.98
31:y:1135:U:O2	31:y:1138:G:N1	1.95	0.98
33:0:34:G:H2'	33:0:35:A:H5''	1.43	0.98
37:e:158:ILE:H	37:e:158:ILE:CD1	1.76	0.98
39:g:7:ASN:CB	39:g:89:MET:HB3	1.93	0.98
42:j:125:TYR:HD2	42:j:125:TYR:H	1.11	0.98
1:w:125:G:H1'	28:Z:13:ALA:HB1	1.43	0.98
1:w:262:A:H5'	1:w:609(B):G:O2'	1.60	0.98
1:w:545:G:H1'	1:w:548:A:H61	1.27	0.98
1:w:698:C:C4'	1:w:734:A:H61	1.75	0.98
1:w:1497:U:N3	1:w:1578:U:OP1	1.96	0.98
1:w:2578:G:H1'	5:C:139:GLY:CA	1.92	0.98
3:A:40:GLU:HB3	3:A:217:THR:CG2	1.92	0.98
5:C:103:ASP:OD1	5:C:201:THR:HA	1.61	0.98
7:E:33:ARG:HH21	7:E:33:ARG:CA	1.77	0.98
23:U:68:GLU:HB3	23:U:80:HIS:N	1.78	0.98
31:y:972:C:H4'	43:k:57:LYS:HD3	1.42	0.98
31:y:1485:U:O2'	31:y:1486:G:H5'	1.62	0.98
31:y:1504:G:OP1	31:y:1507:A:C4'	2.10	0.98
1:w:746:A:H2'	1:w:2611:U:O2'	1.62	0.98
1:w:1174:A:H2'	1:w:1176:G:N7	1.79	0.98
1:w:1233:C:H2'	1:w:1234:U:C6	1.99	0.98
1:w:1356:G:H2'	1:w:1357:U:C6	1.97	0.98
1:w:1517:G:H2'	1:w:1518:C:C6	1.98	0.98
1:w:1725:G:H2'	1:w:1726:G:C8	1.97	0.98
1:w:2053:G:H4'	5:C:145:LYS:CG	1.93	0.98
1:w:2619:C:H2'	1:w:2620:C:C5'	1.94	0.98
1:w:2793:G:H3'	1:w:2794:C:C6	1.97	0.98
3:A:165:ARG:HB2	3:A:165:ARG:HH11	1.25	0.98
6:D:112:ARG:HH21	6:D:112:ARG:CG	1.76	0.98
9:G:1:MET:O	9:G:3:VAL:N	1.95	0.98
14:L:34:ILE:HG22	14:L:35:THR:N	1.76	0.98
17:O:87:GLY:CA	18:P:52:VAL:HG12	1.92	0.98
19:Q:75:TYR:C	19:Q:103:ILE:HG13	1.88	0.98
27:Y:31:VAL:HB	27:Y:32:PRO:CD	1.94	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:559:A:H5'	31:y:561:U:OP1	1.64	0.98
41:i:53:VAL:HB	41:i:58:TYR:CD1	1.97	0.98
50:r:88:TYR:O	50:r:91:ARG:HB2	1.64	0.98
1:w:101:G:H4'	1:w:102:G:C8	1.97	0.98
1:w:469:G:N7	28:Z:39:ARG:NH2	2.10	0.98
1:w:655:A:H5''	1:w:656:G:OP1	1.62	0.98
1:w:764:A:C4'	4:B:213:ARG:HD2	1.93	0.98
1:w:898:C:C3'	1:w:899:A:H5''	1.93	0.98
1:w:1229:G:H3'	1:w:1230:C:H6	1.24	0.98
1:w:2091:U:OP1	1:w:2092:U:H3'	1.62	0.98
1:w:2791:C:H2'	1:w:2792:G:C8	1.98	0.98
4:B:34:VAL:HG22	4:B:35:LYS:HD3	1.43	0.98
4:B:79:VAL:HB	4:B:111:LEU:CD1	1.93	0.98
4:B:79:VAL:CA	4:B:95:LEU:HB3	1.93	0.98
5:C:24:THR:HB	5:C:186:GLY:CA	1.92	0.98
7:E:20:ILE:HG23	7:E:21:ARG:N	1.76	0.98
8:F:127:GLU:HB2	8:F:130:ARG:HG3	1.42	0.98
16:N:62:THR:CB	16:N:75:ILE:HA	1.92	0.98
23:U:30:VAL:CG2	23:U:31:VAL:H	1.76	0.98
31:y:518:C:H5'	31:y:530:G:H4'	1.37	0.98
31:y:1139:G:H5'	31:y:1140:C:OP1	1.63	0.98
37:e:84:LYS:HG3	37:e:85:LYS:H	1.25	0.98
45:m:39:VAL:O	45:m:40:ARG:HB2	1.64	0.98
1:w:267:C:H2'	1:w:268:C:C6	1.99	0.98
1:w:588:U:H2'	1:w:589:C:H5'	0.99	0.98
1:w:961:C:N4	1:w:2456:C:H5'	1.78	0.98
1:w:1658:C:H2'	1:w:1659:U:H6	1.26	0.98
1:w:2025:C:H2'	1:w:2026:C:C5	1.97	0.98
1:w:2680:C:O2	1:w:2727:G:N2	1.96	0.98
1:w:2684:U:H2'	1:w:2685:G:O4'	1.64	0.98
10:H:35:ARG:H	10:H:73:ASP:HA	1.26	0.98
22:T:141:VAL:HG13	22:T:144:LEU:HB2	0.99	0.98
31:y:30:U:O2'	31:y:31:G:OP1	1.81	0.98
31:y:565:U:C6	31:y:566:G:C8	2.50	0.98
31:y:745:C:H1'	31:y:836:G:O2'	1.64	0.98
31:y:1111:A:H2'	31:y:1112:C:C5	1.98	0.98
41:i:35:ILE:HA	41:i:38:ILE:HD12	1.44	0.98
44:l:17:GLY:HA3	44:l:80:VAL:HG12	1.46	0.98
1:w:182:A:N6	1:w:215:G:H1	1.61	0.98
1:w:814:C:H4'	18:P:87:HIS:NE2	1.79	0.98
1:w:957:A:N1	1:w:2458:G:H5''	1.77	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:183:ARG:HG3	4:B:270:ILE:HA	1.43	0.98
7:E:135:LEU:CD1	7:E:155:MET:HG2	1.94	0.98
9:G:9:LEU:CG	9:G:10:GLU:H	1.73	0.98
12:J:71:VAL:CG1	12:J:72:PRO:CD	2.33	0.98
13:K:40:ALA:O	13:K:97:VAL:CB	2.12	0.98
31:y:626:U:H2'	31:y:627:G:O4'	1.63	0.98
31:y:1087:G:C2'	31:y:1088:G:H8	1.77	0.98
31:y:1512:U:H2'	31:y:1513:A:H8	1.20	0.98
39:g:51:PRO:HA	39:g:56:PRO:HA	1.45	0.98
47:o:46:GLU:HA	47:o:49:HIS:CE1	1.98	0.98
54:v:12:LYS:O	54:v:22:ARG:NH2	1.97	0.98
1:w:486:C:H2'	1:w:487:C:H5'	1.46	0.98
1:w:579:G:H2'	1:w:580:C:H6	1.14	0.98
1:w:1139:G:H1'	1:w:1143:A:C2	1.98	0.98
1:w:1477:A:H3'	1:w:1478:G:O4'	1.60	0.98
1:w:1986:A:C2'	1:w:1987:G:H5''	1.94	0.98
1:w:2747:G:O6	1:w:2754:U:C2'	2.11	0.98
1:w:2875:C:H2'	1:w:2876:G:H5''	1.43	0.98
9:G:79:ILE:C	9:G:145:VAL:HB	1.88	0.98
14:L:84:ALA:CB	14:L:85:PRO:HD3	1.93	0.98
18:P:37:VAL:HB	18:P:55:ALA:HB1	1.46	0.98
23:U:62:LEU:CD1	23:U:63:VAL:H	1.76	0.98
25:W:47:ASN:HA	25:W:50:ILE:O	1.59	0.98
31:y:133:U:O2'	31:y:134:A:N7	1.95	0.98
31:y:562:C:H4'	31:y:563:A:O5'	1.60	0.98
31:y:1114:C:O5'	31:y:1114:C:H6	1.45	0.98
31:y:1210:C:H4'	31:y:1214:C:C2	1.98	0.98
31:y:1210:C:H4'	31:y:1214:C:N3	1.79	0.98
31:y:1239:A:N6	31:y:1299:A:C8	2.15	0.98
37:e:47:ARG:HB3	37:e:47:ARG:HH11	1.23	0.98
48:p:18:PHE:HB3	48:p:21:ASP:HB2	1.44	0.98
1:w:309:G:H2'	1:w:330:A:N1	1.78	0.98
1:w:937:U:H3'	1:w:938:G:H8	1.28	0.98
1:w:1275:A:O2'	1:w:1276:A:O4'	1.82	0.98
1:w:1341:U:HO2'	1:w:1342:A:H5'	1.29	0.98
1:w:1805:U:C3'	1:w:1806:C:H5''	1.94	0.98
1:w:1918:A:OP2	1:w:1918:A:H8	1.31	0.98
1:w:2650:U:H2'	1:w:2651:C:H6	0.81	0.98
1:w:2733:A:O2'	1:w:2734:A:H5''	1.61	0.98
1:w:2821:A:C8	14:L:2:ARG:HA	1.98	0.98
4:B:250:TRP:HE3	4:B:250:TRP:H	1.08	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:153:LYS:CB	8:F:154:PRO:HD3	1.92	0.98
11:I:93:PRO:C	11:I:95:GLY:H	1.71	0.98
12:J:79:ARG:HD2	12:J:108:LYS:C	1.89	0.98
13:K:47:ILE:O	13:K:51:ARG:HD2	1.64	0.98
22:T:108:PRO:HG3	22:T:141:VAL:HG11	1.44	0.98
31:y:718:G:H3'	31:y:720:C:N4	1.77	0.98
49:q:43:LYS:H	49:q:43:LYS:HE2	1.27	0.98
1:w:13:A:H2	1:w:14:A:H62	1.00	0.98
1:w:48:G:N2	1:w:177:G:H21	1.62	0.98
1:w:545:G:H2'	1:w:547:A:OP2	1.64	0.98
1:w:593:G:N2	1:w:664:C:O2	1.97	0.98
1:w:855:G:N2	23:U:27:GLU:HB3	1.77	0.98
1:w:1669:A:H4'	1:w:2550:G:OP1	1.63	0.98
1:w:2250:G:H2'	13:K:82:ARG:HH22	1.25	0.98
2:x:63:G:H3'	2:x:64:C:C5'	1.92	0.98
4:B:165:ILE:HG21	4:B:173:VAL:HG23	1.46	0.98
5:C:38:THR:HG21	5:C:40:GLU:OE2	1.64	0.98
9:G:113:ARG:HB3	9:G:132:PRO:HA	1.00	0.98
10:H:35:ARG:N	10:H:73:ASP:HA	1.79	0.98
17:O:70:ARG:HG2	17:O:75:ASN:OD1	1.64	0.98
19:Q:10:VAL:CG1	19:Q:11:ARG:H	1.76	0.98
21:S:49:VAL:O	21:S:55:TYR:HA	1.64	0.98
24:V:85:LEU:HD11	24:V:88:LYS:HB3	1.45	0.98
31:y:227:G:H21	49:q:62:VAL:HB	1.27	0.98
31:y:464:G:H22	31:y:467:G:C5'	1.75	0.98
31:y:582:U:H3	31:y:759:A:H62	1.00	0.98
31:y:720:C:H2'	31:y:721:G:N7	1.77	0.98
31:y:833:U:H2'	31:y:834:C:C5	1.99	0.98
31:y:908:A:H2'	31:y:909:A:H8	1.02	0.98
36:d:43:LEU:HD12	36:d:44:GLU:H	1.28	0.98
41:i:53:VAL:HB	41:i:58:TYR:HD1	1.29	0.98
1:w:307:G:H22	1:w:309:G:C3'	1.76	0.97
1:w:671:C:O2'	1:w:672:C:H5''	1.64	0.97
1:w:1310:G:H5'	28:Z:9:ARG:NH2	1.79	0.97
1:w:1920:C:C5'	31:y:1517:G:C4	2.46	0.97
1:w:1958:C:O2'	1:w:1959:G:H5'	1.62	0.97
1:w:2034:U:C3'	1:w:2035:G:H5''	1.94	0.97
9:G:113:ARG:HB3	9:G:132:PRO:CA	1.92	0.97
10:H:78:VAL:HA	10:H:146:TYR:CE2	1.98	0.97
12:J:83:VAL:HG12	12:J:114:ILE:HA	1.44	0.97
12:J:113:LYS:HA	12:J:129:ALA:O	1.63	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:5:LYS:HG2	14:L:6:SER:N	1.75	0.97
20:R:54:VAL:HG22	20:R:77:LYS:CD	1.94	0.97
20:R:89:ILE:HA	20:R:92:LEU:HB2	1.42	0.97
21:S:55:TYR:HB2	21:S:56:PRO:HD2	1.01	0.97
31:y:14:U:C5	31:y:16:A:OP2	2.16	0.97
31:y:37:U:H1'	31:y:500:G:H4'	1.46	0.97
31:y:1053:G:OP1	31:y:1054:C:H3'	1.63	0.97
31:y:1107:C:O2'	31:y:1191:A:H1'	1.63	0.97
40:h:31:MET:HG2	40:h:32:ARG:N	1.79	0.97
44:l:59:TYR:CD1	44:l:63:LEU:HD21	1.97	0.97
52:t:25:LYS:CE	52:t:28:LYS:HD3	1.94	0.97
1:w:775:G:H4'	1:w:776:G:O5'	1.62	0.97
1:w:1517:G:H2'	1:w:1518:C:H6	1.27	0.97
1:w:1966:A:H8	1:w:1966:A:O5'	1.48	0.97
1:w:1978:A:H2'	1:w:1979:C:C6	1.98	0.97
1:w:2573:C:H6	1:w:2573:C:H3'	1.28	0.97
1:w:2644:G:C2'	1:w:2645:G:C8	2.45	0.97
2:x:115:G:H2'	2:x:116:G:H8	1.24	0.97
18:P:34:GLU:HB2	18:P:64:HIS:CE1	1.99	0.97
23:U:28:GLY:CA	23:U:67:VAL:HG13	1.94	0.97
26:X:49:LYS:HA	26:X:49:LYS:HE3	1.42	0.97
31:y:467:G:H2'	31:y:468:A:H8	1.28	0.97
31:y:879:C:C5	45:m:5:THR:HG22	1.99	0.97
31:y:1081:G:OP1	38:f:18:ARG:NH1	1.97	0.97
31:y:1439:C:C4	31:y:1440:C:C4	2.51	0.97
33:0:69:U:H2'	33:0:70:C:C6	1.98	0.97
41:i:112:LEU:O	41:i:118:VAL:HG13	1.64	0.97
49:q:23:ASP:HB3	49:q:26:ARG:HG3	1.45	0.97
1:w:213:A:O2'	1:w:214:G:H5'	1.63	0.97
1:w:668:G:O6	1:w:670:A:H2'	1.63	0.97
1:w:697:C:N4	1:w:698:C:H41	1.61	0.97
1:w:1303:G:H2'	1:w:1304:C:H6	1.29	0.97
1:w:1511:A:H2'	1:w:1512:G:H8	1.21	0.97
1:w:1653:G:H2'	14:L:9:LYS:NZ	1.79	0.97
1:w:1772:G:H2'	1:w:1773:A:H4'	1.43	0.97
1:w:1930:G:N2	1:w:1968:G:H2'	1.77	0.97
1:w:1996:C:H1'	1:w:1997:G:C1'	1.92	0.97
1:w:2835:A:H62	1:w:2878:U:H3'	1.30	0.97
7:E:96:ARG:O	7:E:99:MET:HG3	1.64	0.97
7:E:98:ARG:O	7:E:102:PHE:CB	2.11	0.97
8:F:152:ARG:HH21	8:F:152:ARG:HA	0.81	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:26:LEU:HB3	15:M:87:PHE:HD1	0.81	0.97
22:T:39:VAL:HG12	22:T:40:ASP:N	1.71	0.97
31:y:754:C:H6	48:p:69:TYR:HE1	1.06	0.97
37:e:54:TYR:HA	37:e:57:ARG:HB2	1.41	0.97
39:g:5:GLU:HB2	39:g:91:VAL:CG1	1.94	0.97
39:g:76:ALA:O	39:g:79:LEU:HB3	1.65	0.97
46:n:39:ILE:CG2	46:n:56:LEU:HD21	1.93	0.97
1:w:485:C:H2'	1:w:486:C:H5	1.27	0.97
1:w:1486:A:O2'	1:w:1487:G:H5''	1.62	0.97
1:w:1536:A:N6	1:w:1538:G:H21	1.61	0.97
1:w:1782:C:H5'	1:w:2609:U:C2	1.98	0.97
1:w:2441:C:C2'	1:w:2442:C:H5''	1.93	0.97
1:w:2660:A:H2'	1:w:2661:G:C8	1.98	0.97
2:x:42:C:H4'	7:E:67:LYS:O	1.63	0.97
4:B:130:ALA:HA	4:B:191:ALA:O	1.62	0.97
7:E:135:LEU:HD11	7:E:155:MET:CG	1.94	0.97
8:F:20:ALA:HB1	8:F:21:PRO:CD	1.95	0.97
20:R:17:ALA:CA	20:R:26:TYR:HB3	1.93	0.97
31:y:405:U:H5	37:e:2:GLY:CA	1.76	0.97
31:y:896:C:H4'	50:r:101:ARG:NE	1.79	0.97
31:y:1111:A:H2'	31:y:1112:C:C6	2.00	0.97
41:i:29:SER:HB3	41:i:32:LYS:HG3	1.44	0.97
1:w:245:G:H4'	12:J:71:VAL:CA	1.94	0.97
1:w:557:U:C2	1:w:558:G:C8	2.52	0.97
1:w:563:G:C2'	1:w:564:C:H5'	1.94	0.97
1:w:811:U:C2	1:w:1250:G:H3'	1.99	0.97
1:w:855:G:N2	23:U:26:TYR:HD1	1.62	0.97
1:w:920:G:C2'	1:w:921:G:H5'	1.94	0.97
1:w:1017:G:H2'	1:w:1018:C:H6	1.29	0.97
1:w:1533:C:H2'	1:w:1534:G:O4'	1.62	0.97
1:w:1700:A:O5'	1:w:1700:A:C8	2.16	0.97
1:w:1820:U:N3	4:B:202:LYS:HA	1.78	0.97
1:w:1827:C:H5'	1:w:1971:A:O2'	1.64	0.97
1:w:1936:A:C2	1:w:1942:C:N4	2.32	0.97
1:w:2076:U:OP1	1:w:2076:U:H6	1.45	0.97
1:w:2359:C:OP2	1:w:2359:C:H5	1.43	0.97
1:w:2863:C:H2'	1:w:2864:G:H5''	1.47	0.97
2:x:74:U:H3'	2:x:75:G:C8	1.98	0.97
4:B:97:TYR:HB3	4:B:101:GLU:O	1.63	0.97
6:D:112:ARG:HA	6:D:115:GLU:HG2	1.44	0.97
14:L:45:ARG:HG3	14:L:46:GLY:N	1.77	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:51:LEU:H	14:L:51:LEU:HD23	1.28	0.97
19:Q:22:ASP:HA	19:Q:25:ARG:HG3	1.46	0.97
31:y:135:C:H42	31:y:228:A:N6	1.63	0.97
31:y:155:C:H2'	31:y:156:G:C8	2.00	0.97
31:y:303:A:H1'	31:y:555:C:H4'	1.46	0.97
31:y:1157:A:C4'	31:y:1158:C:H5'	1.93	0.97
41:i:31:PHE:O	41:i:35:ILE:HG12	1.64	0.97
47:o:46:GLU:HA	47:o:49:HIS:HE1	1.28	0.97
1:w:217:G:H2'	1:w:218:A:C8	2.00	0.97
1:w:288:C:H3'	1:w:289:A:H5''	1.46	0.97
1:w:483:A:H4'	21:S:56:PRO:HB2	0.97	0.97
1:w:906:G:C2'	1:w:907:U:H5''	1.92	0.97
1:w:944:G:H3'	1:w:944:G:C8	1.99	0.97
1:w:974(A):G:C5'	1:w:1186:G:H22	1.66	0.97
1:w:1574:C:H2'	1:w:1575:C:C6	2.00	0.97
1:w:1792:G:N2	1:w:1827:C:O2	1.98	0.97
1:w:2245:U:H5'	1:w:2246:G:H5'	1.46	0.97
1:w:2734:A:H2'	1:w:2735:G:H5'	1.45	0.97
4:B:62:TYR:CE1	4:B:64:ILE:HB	1.99	0.97
4:B:211:ARG:HG3	4:B:215:LEU:CD1	1.95	0.97
6:D:169:VAL:HG13	6:D:170:THR:H	1.27	0.97
7:E:103:LEU:HA	7:E:106:LEU:CG	1.94	0.97
8:F:8:PRO:HB3	8:F:49:VAL:HG13	1.47	0.97
10:H:123:GLU:HB3	10:H:127:LYS:CE	1.95	0.97
17:O:54:LYS:O	17:O:58:ARG:HG3	1.63	0.97
19:Q:10:VAL:HB	19:Q:101:SER:N	1.80	0.97
21:S:36:ALA:O	21:S:37:VAL:HG13	1.62	0.97
22:T:80:ARG:NH1	22:T:82:ARG:HB2	1.79	0.97
31:y:8:A:O2'	31:y:9:G:O5'	1.83	0.97
31:y:22:G:H2'	31:y:23:C:C6	1.99	0.97
31:y:401:C:OP1	37:e:73:ARG:HG2	1.64	0.97
31:y:748:C:H6	31:y:748:C:H5''	1.27	0.97
31:y:959:A:C3'	31:y:960:U:H4'	1.94	0.97
31:y:1518:MA6:C8	31:y:1518:MA6:H5''	1.90	0.97
35:c:35:GLU:HG3	35:c:39:ILE:O	1.63	0.97
35:c:133:LYS:HZ2	35:c:137:ARG:HH22	1.12	0.97
1:w:46:C:O2	1:w:179:G:N2	1.96	0.97
1:w:341:G:H2'	1:w:342:G:N9	1.79	0.97
1:w:811:U:C5	1:w:1251:C:H1'	1.99	0.97
1:w:1022:G:H4'	1:w:1023:U:H5'	1.00	0.97
1:w:2134:A:H62	1:w:2157:G:H1'	1.24	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2293:C:H2'	1:w:2294:C:H5''	1.47	0.97
8:F:60:ARG:HH21	8:F:60:ARG:CB	1.77	0.97
9:G:128:LEU:HB2	9:G:140:LEU:O	1.64	0.97
10:H:49:LEU:HA	10:H:52:LYS:HE3	1.43	0.97
13:K:42:ILE:CD1	13:K:43:THR:H	1.77	0.97
15:M:75:GLU:HA	15:M:78:LEU:CG	1.93	0.97
24:V:85:LEU:HD11	24:V:88:LYS:CB	1.92	0.97
31:y:457:C:O2'	31:y:458:C:H5'	1.64	0.97
31:y:553:A:H4'	45:m:30:PRO:HG2	1.47	0.97
31:y:555:C:H3'	31:y:556:C:C5'	1.94	0.97
31:y:782:A:O3'	31:y:1515:C:H4'	1.63	0.97
31:y:1108:G:C2'	31:y:1109:C:H5''	1.94	0.97
38:f:11:ILE:HG22	38:f:12:LEU:HD12	1.47	0.97
47:o:41:ARG:HA	47:o:44:LEU:HD12	1.46	0.97
1:w:117:G:C4'	1:w:126:A:C2	2.48	0.97
1:w:443:A:N7	6:D:40:ARG:HD3	1.78	0.97
1:w:627:A:O2'	1:w:628:G:H8	1.46	0.97
1:w:1360:A:H62	1:w:1371:G:H21	1.01	0.97
1:w:2290:G:N2	1:w:2374:C:O4'	1.98	0.97
1:w:2331:G:H2'	1:w:2332:U:C6	2.00	0.97
3:A:23:ILE:HG23	3:A:187:ALA:HB1	1.00	0.97
6:D:121:VAL:HA	6:D:189:MET:O	1.63	0.97
9:G:7:GLU:HA	9:G:14:ASP:CB	1.94	0.97
31:y:128:G:C5'	50:r:2:PRO:HB2	1.94	0.97
31:y:594:G:C2'	31:y:595:G:H5'	1.94	0.97
31:y:790:A:C8	31:y:790:A:O5'	2.18	0.97
31:y:1073:U:O2	35:c:104:ASN:ND2	1.96	0.97
31:y:1349:A:H5''	42:j:121:ARG:HB3	1.46	0.97
36:d:55:VAL:HG12	36:d:68:VAL:CG1	1.95	0.97
45:m:42:VAL:HG12	45:m:54:VAL:HG11	1.46	0.97
1:w:253:C:C2'	1:w:254:G:H5'	1.94	0.97
1:w:346:A:C4'	1:w:347:A:H5'	1.93	0.97
1:w:887:A:N3	1:w:887:A:H3'	1.79	0.97
1:w:1184:G:O2'	1:w:1185:C:C5'	2.12	0.97
1:w:1206:G:H2'	1:w:1207:C:C6	2.00	0.97
1:w:1472:A:H2'	1:w:1473:G:O4'	1.65	0.97
1:w:1789:A:H3'	1:w:1790:C:C6	1.99	0.97
1:w:1911:U:C2	1:w:1919:A:N6	2.32	0.97
1:w:2058:A:O5'	1:w:2058:A:H8	1.47	0.97
1:w:2134:A:N6	1:w:2157:G:H1'	1.78	0.97
1:w:2175:C:O2'	1:w:2176:A:H5''	1.63	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2304:G:H1'	7:E:132:ASN:HB3	0.99	0.97
1:w:2889:C:O2	1:w:2889:C:H2'	1.65	0.97
4:B:169:GLU:HG2	4:B:174:ILE:HD11	1.47	0.97
5:C:4:ILE:HD12	5:C:91:VAL:CG1	1.95	0.97
5:C:77:ILE:HG22	5:C:78:LEU:N	1.74	0.97
10:H:129:MET:SD	10:H:130:LEU:N	2.37	0.97
11:I:78:ARG:HB3	16:N:73:GLU:HG3	1.46	0.97
12:J:16:ARG:HE	12:J:17:LYS:H	1.08	0.97
14:L:13:HIS:O	14:L:17:ARG:HG3	1.65	0.97
14:L:102:GLU:HG3	14:L:103:ARG:H	1.28	0.97
29:a:49:VAL:HB	29:a:53:PRO:HD3	1.47	0.97
31:y:210:U:O3'	31:y:216:G:C8	2.18	0.97
31:y:385:C:O2'	31:y:386:C:H5'	1.64	0.97
31:y:955:U:O5'	31:y:955:U:H6	1.45	0.97
31:y:1054:C:HO2'	31:y:1055:A:H5''	1.29	0.97
31:y:1263:C:H2'	31:y:1264:C:O4'	1.64	0.97
35:c:137:ARG:HB3	35:c:137:ARG:NH1	1.79	0.97
36:d:29:TYR:HA	36:d:33:LEU:CD2	1.93	0.97
1:w:964:C:C2	1:w:2273:A:H2	1.81	0.97
1:w:1131:G:N2	1:w:1132:A:C5	2.32	0.97
1:w:1372:U:H2'	1:w:1373:A:C8	1.99	0.97
1:w:1636:C:C1'	1:w:1760:A:C2	2.46	0.97
1:w:2068:U:H3	1:w:2430:A:H2	1.08	0.97
5:C:119:ARG:HE	5:C:157:ALA:HA	1.30	0.97
6:D:149:VAL:O	6:D:150:LEU:HD13	1.62	0.97
7:E:31:VAL:HG22	7:E:32:PRO:HD3	1.47	0.97
12:J:83:VAL:CG2	12:J:84:ASN:H	1.76	0.97
17:O:92:ARG:HB3	17:O:94:ASN:ND2	1.80	0.97
31:y:41:G:H2'	31:y:42:G:C8	1.99	0.97
31:y:689:C:H6	31:y:689:C:O5'	1.48	0.97
31:y:782:A:O2'	31:y:1515:C:C5'	2.11	0.97
31:y:801:U:C2	31:y:802:A:C8	2.53	0.97
37:e:8:VAL:CB	37:e:21:LEU:O	2.12	0.97
40:h:64:GLN:NE2	40:h:68:ASN:HB2	1.80	0.97
44:l:93:GLN:H	44:l:93:GLN:NE2	1.61	0.97
45:m:46:LYS:HB3	45:m:47:PRO:HD3	1.45	0.97
1:w:26:G:O2'	1:w:1260:G:H4'	1.63	0.96
1:w:728:G:H5'	1:w:729:G:OP2	1.65	0.96
1:w:1169:G:H3'	1:w:1170:G:H5''	1.44	0.96
1:w:1366:A:OP2	1:w:1367:A:N6	1.96	0.96
2:x:100:G:H2'	2:x:101:A:H5'	1.47	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:81:VAL:HG21	20:R:86:GLY:HA3	1.44	0.96
21:S:67:LEU:HD13	21:S:68:HIS:N	1.80	0.96
31:y:278:G:H2'	31:y:279:A:C8	2.00	0.96
31:y:363:A:C2	45:m:31:PHE:HE2	1.82	0.96
31:y:1014:A:H2'	31:y:1015:A:O4'	1.65	0.96
31:y:1293:G:H2'	31:y:1294:G:C8	1.99	0.96
31:y:1326:C:OP1	54:v:17:THR:HB	1.65	0.96
37:e:25:ARG:HA	37:e:30:LYS:HB2	1.43	0.96
38:f:118:ILE:HG22	38:f:120:THR:HG22	1.44	0.96
38:f:122:GLU:O	38:f:123:LEU:HD13	1.65	0.96
43:k:25:GLU:C	43:k:27:ALA:H	1.71	0.96
44:l:17:GLY:O	44:l:18:ARG:HD2	1.65	0.96
49:q:4:ILE:HB	49:q:66:PRO:CB	1.95	0.96
1:w:57:C:H4'	20:R:73:ARG:HH21	1.23	0.96
1:w:214:G:N2	1:w:216:A:N3	2.13	0.96
1:w:271(C):G:O2'	1:w:271(D):U:H5''	1.66	0.96
1:w:466:A:H5'	28:Z:21:ARG:NH2	1.80	0.96
1:w:545:G:H1'	1:w:548:A:N6	1.80	0.96
1:w:1230:C:H2'	1:w:1231:G:C8	1.98	0.96
1:w:1471:A:N6	1:w:1522:G:N1	2.12	0.96
1:w:1665:A:OP2	1:w:1665:A:H8	1.47	0.96
1:w:1869:G:H22	1:w:1871:A:H3'	1.19	0.96
1:w:2419:U:H5''	29:a:32:LEU:CD2	1.94	0.96
1:w:2818:G:H2'	1:w:2819:G:H5'	1.00	0.96
5:C:51:PHE:HD1	5:C:52:LEU:H	1.06	0.96
9:G:6:LEU:CD1	9:G:35:LEU:HD22	1.95	0.96
9:G:7:GLU:HG2	9:G:8:PRO:HD3	0.98	0.96
10:H:40:ASP:OD2	10:H:77:VAL:HG13	1.64	0.96
10:H:50:ALA:CB	10:H:126:VAL:HG22	1.95	0.96
18:P:73:SER:HB2	18:P:89:GLN:HB3	1.47	0.96
22:T:146:ILE:HD13	22:T:146:ILE:H	1.28	0.96
23:U:31:VAL:HG13	23:U:65:GLY:H	1.27	0.96
27:Y:38:ALA:HB3	27:Y:49:CYS:CB	1.96	0.96
31:y:393:A:H2'	31:y:394:G:C8	2.00	0.96
31:y:1381:U:O2'	31:y:1382:C:H5'	1.64	0.96
1:w:466:A:H4'	28:Z:30:VAL:HG21	1.44	0.96
1:w:531:C:H5''	1:w:532:A:OP1	1.64	0.96
1:w:589:C:C2'	1:w:590:A:H8	1.77	0.96
4:B:21:PHE:HA	4:B:24:ILE:CB	1.94	0.96
4:B:248:SER:HB2	4:B:249:PRO:CD	1.94	0.96
7:E:122:PRO:HB3	7:E:173:LEU:HD11	1.45	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:122:THR:HG23	8:F:134:SER:OG	1.64	0.96
12:J:122:PRO:HB3	12:J:137:LYS:O	1.63	0.96
14:L:44:LEU:HA	14:L:47:PHE:CD2	2.00	0.96
22:T:99:TYR:HB3	22:T:123:ASP:OD2	1.64	0.96
31:y:298:A:C2	31:y:299:G:C6	2.53	0.96
31:y:883:C:C2'	31:y:884:U:H5'	1.94	0.96
31:y:934:C:H5	31:y:1345:U:C5'	1.78	0.96
31:y:1348:U:H5''	42:j:120:ARG:HD3	1.43	0.96
36:d:15:THR:OG1	36:d:178:LEU:HA	1.64	0.96
36:d:152:ILE:CG2	36:d:199:LYS:HE2	1.94	0.96
37:e:26:CYS:HA	37:e:31:CYS:SG	2.05	0.96
41:i:40:ALA:HA	41:i:45:ILE:HG22	1.44	0.96
47:o:61:TRP:N	47:o:61:TRP:CE3	2.33	0.96
53:u:43:LEU:HD13	53:u:51:GLU:HB2	1.47	0.96
1:w:458:G:H3'	28:Z:39:ARG:HA	1.48	0.96
1:w:744:G:H5'	5:C:132:HIS:HD2	1.28	0.96
1:w:1818:U:H2'	4:B:155:LEU:CD2	1.95	0.96
1:w:2016:U:H5'	1:w:2058:A:H5''	1.43	0.96
3:A:50:ILE:HD12	3:A:52:PRO:HD3	1.43	0.96
8:F:8:PRO:O	8:F:9:ILE:HB	1.62	0.96
13:K:11:LYS:HG2	13:K:12:GLN:H	1.26	0.96
17:O:90:VAL:HG12	17:O:91:ASP:N	1.76	0.96
20:R:63:LYS:NZ	20:R:65:ARG:HB2	1.79	0.96
22:T:90:VAL:HG22	22:T:91:LEU:H	1.27	0.96
22:T:99:TYR:CZ	22:T:125:LEU:HB2	1.99	0.96
31:y:986:A:H2'	31:y:987:G:O4'	1.64	0.96
31:y:1269:A:O5'	31:y:1269:A:C8	2.18	0.96
31:y:1349:A:OP1	42:j:118:LYS:CB	2.13	0.96
36:d:182:ILE:HG12	36:d:203:PHE:HA	1.46	0.96
53:u:62:LEU:HD12	53:u:63:ILE:N	1.81	0.96
1:w:13:A:C2	1:w:14:A:N6	2.33	0.96
1:w:992:C:O2'	1:w:993:G:H5'	1.63	0.96
1:w:1527:G:H21	1:w:1545:A:H62	1.14	0.96
1:w:2295:C:H3'	15:M:9:ARG:NE	1.80	0.96
1:w:2822:G:C8	14:L:2:ARG:CB	2.48	0.96
1:w:2822:G:H5''	5:C:159:HIS:CE1	2.00	0.96
2:x:94:C:H2'	2:x:95:U:C5	1.98	0.96
5:C:52:LEU:CB	5:C:75:VAL:HB	1.94	0.96
13:K:37:LEU:HG	13:K:128:LYS:O	1.65	0.96
18:P:72:VAL:HA	18:P:90:PRO:HA	1.47	0.96
24:V:25:LYS:HE2	24:V:37:ILE:HG12	1.46	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:b:27:CYS:SG	30:b:32:HIS:CB	2.52	0.96
31:y:115:G:H1'	31:y:116:A:N7	1.80	0.96
31:y:736:C:H2'	31:y:737:A:C8	2.00	0.96
32:z:17:C:H5'	32:z:18:G:H5'	1.48	0.96
38:f:78:HIS:CE1	38:f:142:LEU:HG	1.99	0.96
38:f:89:ILE:HA	38:f:123:LEU:HD23	1.43	0.96
45:m:52:ARG:NE	45:m:52:ARG:N	2.12	0.96
1:w:65:C:H2'	1:w:66:C:O4'	1.66	0.96
1:w:813:U:O4'	1:w:1226:A:O4'	1.84	0.96
1:w:918:A:OP2	1:w:919:G:N7	1.98	0.96
1:w:1022:G:H4'	1:w:1023:U:C5'	1.96	0.96
1:w:1133:U:C2'	1:w:1137:G:H5''	1.96	0.96
1:w:1540:G:H3'	1:w:1541:U:C6	2.01	0.96
1:w:1549:C:H2'	1:w:1550:C:C5	2.01	0.96
1:w:1707:G:C3'	1:w:1708:C:C6	2.49	0.96
1:w:1858:G:O3'	1:w:1859:A:H8	1.46	0.96
1:w:2269:A:H3'	1:w:2270:G:C8	1.99	0.96
1:w:2850:A:H2'	1:w:2851:A:O4'	1.66	0.96
2:x:82:G:H4'	26:X:49:LYS:HZ1	1.17	0.96
3:A:16:ASP:HB3	3:A:19:LYS:HD2	1.48	0.96
5:C:54:GLN:HG3	5:C:75:VAL:CG2	1.93	0.96
18:P:30:GLY:CA	18:P:65:GLY:H	1.78	0.96
28:Z:13:ALA:O	28:Z:20:ALA:HB2	1.66	0.96
28:Z:18:PHE:CE2	28:Z:22:MET:HE2	1.99	0.96
31:y:95:G:OP1	31:y:95:G:H4'	1.66	0.96
31:y:404:U:N3	31:y:405:U:C5	2.33	0.96
1:w:48:G:N2	1:w:177:G:N2	2.14	0.96
1:w:585:G:N2	1:w:1254:A:H62	1.62	0.96
1:w:878:A:H2'	1:w:879:G:C8	2.01	0.96
1:w:1228:G:H2'	1:w:1229:G:O4'	1.65	0.96
1:w:1275:A:N7	14:L:16:HIS:CB	2.27	0.96
1:w:1363:C:H1'	1:w:1809:A:C2	1.99	0.96
1:w:1400:G:OP2	1:w:1400:G:H8	1.44	0.96
1:w:1764:G:O2'	1:w:1765:C:H5'	1.64	0.96
1:w:2329:G:N2	23:U:41:ARG:NH2	2.13	0.96
1:w:2334:G:O2'	15:M:15:ARG:HG3	1.66	0.96
1:w:2367:G:H2'	1:w:2368:C:H5''	0.96	0.96
5:C:105:THR:CG2	5:C:106:GLY:N	2.25	0.96
10:H:38:LEU:HD13	10:H:39:ILE:N	1.80	0.96
30:b:14:CYS:SG	30:b:32:HIS:CB	2.54	0.96
31:y:85:U:H2'	31:y:86:U:C6	2.00	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:370:C:H2'	31:y:371:G:H8	1.29	0.96
36:d:135:LYS:O	36:d:138:VAL:HB	1.65	0.96
38:f:105:VAL:HG12	38:f:106:PRO:HD3	1.43	0.96
52:t:12:ASP:HB2	52:t:15:LEU:CD2	1.94	0.96
1:w:321:G:H2'	1:w:340:A:H1'	1.48	0.96
1:w:372:G:O2'	1:w:373:U:P	2.23	0.96
1:w:457:A:H5'	28:Z:40:TRP:HZ2	1.29	0.96
1:w:551:G:O2'	1:w:1220:A:N1	1.98	0.96
1:w:713:G:H1'	1:w:718:A:N6	1.79	0.96
1:w:814:C:H2'	1:w:815:C:H6	1.29	0.96
1:w:1454:U:O5'	1:w:1454:U:C6	2.19	0.96
1:w:1562:A:H2'	1:w:1563:G:C8	1.99	0.96
1:w:1700:A:H2'	1:w:1701:A:C5'	1.95	0.96
1:w:2158:A:C2	1:w:2159:G:H1'	2.00	0.96
1:w:2657:A:H3'	1:w:2658:C:H5	1.30	0.96
9:G:115:ALA:HB3	9:G:129:THR:O	1.65	0.96
10:H:76:VAL:HG22	10:H:144:LYS:HB2	1.48	0.96
11:I:25:LEU:HD12	11:I:26:LYS:N	1.81	0.96
15:M:10:ARG:HH21	15:M:11:LYS:NZ	1.64	0.96
26:X:28:LEU:CD1	26:X:35:ARG:HG2	1.96	0.96
29:a:32:LEU:HD11	29:a:34:TRP:CE3	2.01	0.96
31:y:51:A:OP2	31:y:52:G:H5''	1.66	0.96
31:y:265:G:N2	31:y:267:C:H5'	1.81	0.96
31:y:770:C:C3'	31:y:771:G:H5''	1.96	0.96
31:y:1130:A:H2	31:y:1131:G:N7	1.63	0.96
31:y:1471:G:H2'	31:y:1472:U:C6	2.00	0.96
38:f:94:ALA:HB1	38:f:117:ASP:O	1.66	0.96
40:h:114:ARG:O	40:h:115:ARG:HG3	1.64	0.96
46:n:39:ILE:HG21	46:n:56:LEU:CD2	1.96	0.96
1:w:58:G:N3	1:w:73:A:C2	2.34	0.96
1:w:289:A:H5''	1:w:289:A:N3	1.80	0.96
1:w:341:G:OP2	1:w:341:G:H8	1.48	0.96
1:w:443:A:H2	1:w:1245:G:N2	1.64	0.96
1:w:691:C:H2'	1:w:692:C:H6	1.28	0.96
1:w:764:A:H4'	4:B:213:ARG:HD2	0.99	0.96
1:w:858:U:O2'	1:w:2268:A:O2'	1.75	0.96
1:w:982:C:H1'	1:w:2029:G:H5'	1.45	0.96
1:w:995:C:N4	10:H:24:VAL:HA	1.81	0.96
1:w:1435:G:H2'	1:w:1436:G:C8	2.01	0.96
1:w:1530:G:O6	1:w:1541:U:C2	2.19	0.96
1:w:1567:A:O4'	1:w:1568:G:C2	2.18	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2785:C:H5'	1:w:2785:C:H6	1.27	0.96
1:w:2824:C:O5'	1:w:2824:C:H6	1.46	0.96
4:B:54:ARG:HA	4:B:217:ARG:HA	1.47	0.96
5:C:4:ILE:CG1	5:C:91:VAL:HG11	1.96	0.96
7:E:68:PRO:HB3	7:E:92:VAL:CG1	1.95	0.96
13:K:125:LEU:CD2	13:K:126:PRO:HD2	1.96	0.96
16:N:100:TYR:HB2	16:N:101:PHE:CD2	2.01	0.96
21:S:52:SER:CB	21:S:53:PRO:HD2	1.95	0.96
31:y:36:C:H5''	45:m:120:GLY:HA2	0.99	0.96
31:y:560:U:H5''	31:y:562:C:OP1	1.66	0.96
31:y:565:U:H2'	31:y:566:G:N7	1.81	0.96
31:y:1196:U:O5'	31:y:1197:G:C5'	2.12	0.96
36:d:34:LEU:HD23	36:d:38:ARG:NH2	1.81	0.96
1:w:295:G:C3'	1:w:296:C:H5''	1.95	0.96
1:w:2604:U:O2'	1:w:2605:U:H5'	1.65	0.96
1:w:2679:A:O2'	5:C:189:PRO:HD3	1.66	0.96
1:w:2735:G:H2'	1:w:2736:G:H5''	1.46	0.96
6:D:24:ASN:O	6:D:28:LEU:HG	1.65	0.96
6:D:165:LEU:HG	6:D:170:THR:HB	1.48	0.96
8:F:17:VAL:HG22	8:F:45:VAL:HG12	1.44	0.96
12:J:83:VAL:HG22	12:J:84:ASN:N	1.75	0.96
31:y:975:A:H5''	31:y:976:G:H5''	1.45	0.96
35:c:68:ILE:HG22	35:c:69:LEU:H	1.26	0.96
37:e:199:ASN:HD22	37:e:202:LEU:CG	1.78	0.96
48:p:70:LEU:O	48:p:73:GLU:HB2	1.64	0.96
1:w:84:A:H5'	1:w:85:G:OP1	1.66	0.95
1:w:299:A:C2	1:w:323:G:N2	2.34	0.95
1:w:383:U:H2'	1:w:385:C:H5	1.28	0.95
1:w:613:U:H1'	1:w:616:A:C8	2.01	0.95
1:w:670:A:C5'	1:w:671:C:H5'	1.95	0.95
1:w:783:A:H2'	1:w:784:A:H4'	1.47	0.95
1:w:787:U:C3'	1:w:791:C:H41	1.79	0.95
1:w:1182:A:C3'	1:w:1183:G:H5''	1.96	0.95
1:w:1233:C:H2'	1:w:1234:U:H6	1.29	0.95
1:w:1303:G:H2'	1:w:1304:C:C6	2.00	0.95
1:w:1794:U:H1'	1:w:1900:A:N1	1.81	0.95
1:w:1839:G:H2'	1:w:1840:G:C8	2.00	0.95
1:w:2210:G:C6	1:w:2212:A:H5''	2.00	0.95
1:w:2333:A:C4	1:w:2335:A:N6	2.34	0.95
1:w:2355:C:H4'	23:U:24:LYS:HE3	0.97	0.95
1:w:2735:G:C2'	1:w:2736:G:H5''	1.96	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2825:G:O5'	1:w:2825:G:C8	2.18	0.95
2:x:22:U:H2'	2:x:23:G:H8	1.25	0.95
4:B:270:ILE:HD12	4:B:270:ILE:O	1.66	0.95
11:I:2:ILE:HG12	11:I:34:THR:HA	1.45	0.95
13:K:25:ASP:HB3	13:K:102:VAL:HG23	1.46	0.95
14:L:104:ARG:HB2	14:L:109:ALA:CB	1.95	0.95
18:P:99:ILE:HG22	18:P:100:ARG:HG3	1.48	0.95
20:R:55:ASN:O	20:R:56:THR:HG23	1.65	0.95
23:U:22:GLY:O	23:U:38:VAL:HA	1.66	0.95
23:U:62:LEU:HD13	23:U:63:VAL:N	1.81	0.95
31:y:140:A:H2'	31:y:141:A:C8	2.01	0.95
31:y:443:C:C2'	31:y:444:C:H5'	1.96	0.95
31:y:1057:G:H5''	36:d:154:SER:OG	1.65	0.95
38:f:106:PRO:CA	38:f:109:ILE:HD12	1.95	0.95
45:m:72:GLU:O	45:m:74:HIS:N	1.98	0.95
1:w:217:G:H2'	1:w:218:A:H8	1.26	0.95
1:w:253:C:H2'	1:w:254:G:C5'	1.96	0.95
1:w:289:A:H8	1:w:351:G:H22	1.01	0.95
1:w:1259:G:H2'	1:w:1260:G:H8	1.13	0.95
1:w:1284:A:N7	1:w:1285:G:C2	2.33	0.95
1:w:1574:C:H2'	1:w:1575:C:H6	1.28	0.95
1:w:2120:G:C2	1:w:2121:G:C8	2.54	0.95
1:w:2437:U:C2'	1:w:2438:U:H6	1.78	0.95
3:A:185:LYS:HD3	3:A:185:LYS:O	1.65	0.95
9:G:67:ARG:NH2	9:G:67:ARG:HB3	1.80	0.95
11:I:78:ARG:HB3	16:N:73:GLU:CG	1.95	0.95
22:T:141:VAL:HG22	22:T:144:LEU:HG	1.00	0.95
26:X:10:LYS:HB2	26:X:53:LEU:HB3	1.44	0.95
31:y:539:A:H2'	31:y:540:G:O4'	1.66	0.95
31:y:1013:G:C2'	31:y:1015:A:OP2	2.13	0.95
31:y:1142:G:H3'	31:y:1143:G:C8	2.01	0.95
39:g:75:LEU:HD22	39:g:76:ALA:H	1.31	0.95
49:q:3:LYS:HA	49:q:65:GLN:O	1.65	0.95
1:w:551:G:H2'	1:w:552:G:C8	2.01	0.95
1:w:594:U:O2	1:w:663:G:O6	1.81	0.95
1:w:813:U:H2'	1:w:814:C:O4'	1.66	0.95
1:w:1288:U:H5''	1:w:1289:C:OP2	1.64	0.95
1:w:1323:U:H2'	1:w:1324:G:C5'	1.96	0.95
1:w:2276:G:OP2	13:K:83:MET:HA	1.65	0.95
1:w:2722:G:H4'	14:L:4:LEU:HD13	1.48	0.95
2:x:42:C:H1'	7:E:92:VAL:CG2	1.97	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:69:ARG:NH1	4:B:76:PRO:HG3	1.81	0.95
9:G:67:ARG:HB3	9:G:67:ARG:HH21	1.31	0.95
10:H:111:GLU:HA	10:H:114:LEU:HD21	1.48	0.95
31:y:191(F):U:H2'	31:y:191(G):G:C8	2.00	0.95
31:y:420:U:H2'	31:y:422:C:H41	0.80	0.95
31:y:421:U:H2'	31:y:423:G:O6	1.67	0.95
31:y:790:A:O5'	31:y:790:A:H8	1.48	0.95
31:y:872:A:O2'	31:y:873:A:H3'	1.64	0.95
31:y:1104:G:H8	31:y:1104:G:OP2	1.48	0.95
31:y:1363:A:O4'	31:y:1365:G:C8	2.17	0.95
35:c:44:LEU:HA	35:c:47:THR:CG2	1.95	0.95
1:w:53:A:C8	1:w:53:A:O5'	2.20	0.95
1:w:458:G:H5'	28:Z:40:TRP:HE1	1.30	0.95
1:w:1613:G:O6	1:w:1617:C:H2'	1.65	0.95
1:w:2358:G:N3	1:w:2358:G:H2'	1.81	0.95
1:w:2359:C:O5'	1:w:2359:C:H6	1.50	0.95
1:w:2521:C:O2'	1:w:2564:A:N3	1.97	0.95
16:N:64:ARG:HG2	16:N:65:LYS:H	1.30	0.95
17:O:92:ARG:CB	17:O:94:ASN:HD21	1.79	0.95
20:R:54:VAL:CG2	20:R:78:LYS:H	1.79	0.95
31:y:180:U:O2	31:y:195:A:N7	1.99	0.95
31:y:497:U:C2'	31:y:498:A:H5''	1.96	0.95
31:y:889:A:N1	31:y:907:A:H5''	1.79	0.95
31:y:1154:G:H3'	31:y:1155:G:H8	1.31	0.95
33:0:63:C:H2'	33:0:64:A:C8	2.01	0.95
40:h:78:ARG:HG2	40:h:79:ARG:H	1.27	0.95
40:h:124:LEU:O	40:h:127:ALA:HB3	1.67	0.95
1:w:109:G:H3'	1:w:110:G:C8	2.01	0.95
1:w:324:A:N6	1:w:338:G:C1'	2.27	0.95
1:w:609(B):G:H2'	1:w:610:C:C6	2.01	0.95
1:w:751:A:C6	1:w:789:A:N6	2.34	0.95
1:w:813:U:O3'	18:P:86:GLY:HA3	1.67	0.95
1:w:886:C:OP1	1:w:890:A:N1	1.98	0.95
1:w:1500:G:H21	4:B:100:GLY:CA	1.80	0.95
31:y:267:C:N3	31:y:268:C:C5	2.35	0.95
31:y:653:A:C2	41:i:56:LYS:HG3	2.02	0.95
31:y:767:A:C2'	31:y:768:A:H5'	1.96	0.95
31:y:779:C:H5'	44:l:120:ARG:O	1.66	0.95
31:y:1016:A:H2'	31:y:1017:G:C8	2.01	0.95
31:y:1109:C:H3'	31:y:1110:A:C8	2.01	0.95
31:y:1244:C:O2'	31:y:1245:A:O5'	1.83	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1287:A:O2'	31:y:1288:A:H5'	1.67	0.95
37:e:8:VAL:HG12	37:e:21:LEU:HD12	1.48	0.95
41:i:50:ARG:HA	41:i:59:LEU:CG	1.97	0.95
46:n:84:ILE:HD12	52:t:74:PHE:HZ	1.31	0.95
53:u:75:ASN:ND2	53:u:79:ARG:HH12	1.64	0.95
1:w:996:A:H4'	17:O:92:ARG:HD3	1.49	0.95
1:w:2066:C:N4	1:w:2067:G:O6	1.99	0.95
1:w:2077:A:H2'	1:w:2078:C:H6	1.32	0.95
1:w:2213:U:H3'	1:w:2215:G:H8	1.31	0.95
1:w:2281:C:H2'	1:w:2282:G:C5'	1.96	0.95
3:A:164:PHE:CZ	3:A:197:LEU:HA	1.99	0.95
5:C:198:VAL:HG12	5:C:199:ARG:H	0.82	0.95
10:H:80:ALA:HB3	10:H:146:TYR:O	1.66	0.95
14:L:37:THR:HA	14:L:111:LEU:CA	1.96	0.95
16:N:29:ARG:CG	16:N:86:ILE:H	1.79	0.95
29:a:59:LYS:H	29:a:59:LYS:HE3	1.31	0.95
31:y:160:A:H1'	31:y:344:A:C2	2.00	0.95
31:y:193:C:HO2'	31:y:194:C:H5'	1.23	0.95
31:y:228:A:HO2'	49:q:59:TRP:HZ3	0.97	0.95
31:y:671:G:H4'	39:g:77:ARG:HH12	1.30	0.95
31:y:1104:G:H4'	35:c:111:ARG:HH21	1.02	0.95
31:y:1315:U:H2'	31:y:1316:G:H5'	1.48	0.95
36:d:152:ILE:CG2	36:d:152:ILE:O	2.15	0.95
42:j:24:GLY:CA	42:j:60:ASP:HA	1.96	0.95
45:m:109:VAL:HG23	45:m:119:TYR:HB3	1.45	0.95
1:w:149:A:H2'	1:w:150:C:H5'	1.46	0.95
1:w:331:A:H1'	1:w:1209:G:N2	1.82	0.95
1:w:594:U:C2	1:w:663:G:O6	2.20	0.95
1:w:751:A:C5	1:w:789:A:N6	2.35	0.95
1:w:999:U:H3	1:w:1155:A:N6	1.64	0.95
1:w:1741:C:H3'	1:w:1742:C:H5''	1.45	0.95
1:w:1790:C:O3'	1:w:1791:A:C8	2.18	0.95
1:w:2402:C:H2'	1:w:2403:C:H5'	1.46	0.95
1:w:2466:C:O2'	1:w:2467:C:H5'	1.66	0.95
8:F:118:PRO:HD2	8:F:121:ILE:CB	1.96	0.95
31:y:245:C:C4	31:y:284:G:C2	2.55	0.95
31:y:565:U:C3'	31:y:566:G:H8	1.78	0.95
31:y:687:A:H5''	44:l:42:TRP:CZ2	2.02	0.95
31:y:791:G:N2	31:y:1497:G:H4'	1.82	0.95
31:y:1280:A:H5'	43:k:43:ARG:HH22	1.31	0.95
35:c:55:PHE:O	35:c:58:ILE:HB	1.67	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:104:GLN:HG2	36:d:105:GLU:H	1.29	0.95
38:f:52:PRO:O	38:f:55:VAL:HG22	1.65	0.95
48:p:54:ARG:HD2	48:p:55:GLY:N	1.81	0.95
48:p:69:TYR:HD2	48:p:69:TYR:C	1.74	0.95
1:w:532:A:H2'	1:w:2021:C:N4	1.80	0.95
1:w:1794:U:H1'	1:w:1900:A:H2	1.30	0.95
1:w:2576:G:N2	1:w:2576:G:OP1	1.99	0.95
3:A:185:LYS:O	3:A:189:ASN:HB2	1.65	0.95
17:O:93:LYS:HD2	17:O:93:LYS:N	1.78	0.95
22:T:4:ARG:HG3	22:T:58:VAL:HB	1.49	0.95
26:X:10:LYS:HG2	26:X:53:LEU:HA	1.47	0.95
31:y:236:G:C3'	31:y:237:C:H6	1.80	0.95
31:y:757:U:H3'	31:y:758:G:C8	2.01	0.95
35:c:69:LEU:HD23	35:c:70:PHE:N	1.81	0.95
37:e:9:CYS:HB3	37:e:31:CYS:C	1.90	0.95
37:e:96:LEU:HD12	37:e:97:LEU:HD23	1.48	0.95
39:g:9:VAL:HA	39:g:59:TYR:O	1.66	0.95
1:w:297:C:C3'	1:w:298:G:H5''	1.95	0.95
1:w:386:G:H5''	1:w:387:U:H5	1.32	0.95
1:w:518:G:H2'	1:w:519:U:C5	2.02	0.95
1:w:850:C:O4'	26:X:21:ALA:HB3	1.67	0.95
1:w:1124:C:H2'	1:w:1125:G:O4'	1.67	0.95
1:w:2239:G:C6	1:w:2240:C:N4	2.34	0.95
1:w:2320:A:C2	1:w:2333:A:C8	2.53	0.95
1:w:2334:G:H5''	1:w:2335:A:OP2	1.66	0.95
1:w:2359:C:N4	12:J:55:ARG:HH12	1.64	0.95
4:B:63:ARG:HE	4:B:86:PRO:HD3	0.80	0.95
4:B:267:SER:HA	4:B:270:ILE:CG1	1.95	0.95
10:H:112:LYS:HE2	10:H:112:LYS:HA	1.48	0.95
14:L:56:LYS:CD	14:L:88:ARG:HA	1.97	0.95
15:M:71:ARG:HG2	15:M:104:GLY:O	1.65	0.95
25:W:47:ASN:CB	25:W:51:ARG:HD2	1.96	0.95
31:y:529:G:C6	45:m:48:ASN:HA	2.01	0.95
31:y:707:C:H2'	31:y:708:C:C6	2.00	0.95
31:y:913:A:O2'	31:y:914:A:C4'	2.13	0.95
35:c:163:PHE:HB2	35:c:185:ILE:CD1	1.97	0.95
45:m:84:ILE:H	45:m:84:ILE:CD1	1.76	0.95
46:n:22:ILE:HB	46:n:25:ILE:HD12	1.47	0.95
1:w:15:G:N3	1:w:15:G:H2'	1.80	0.95
1:w:295:G:H3'	1:w:296:C:C5'	1.95	0.95
1:w:379:G:O3'	24:V:21:ARG:HD2	1.66	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:627:A:O2'	1:w:628:G:C8	2.16	0.95
1:w:964:C:C2	1:w:2273:A:C2	2.55	0.95
1:w:1444:G:H2'	1:w:1445:C:C5	2.01	0.95
1:w:1796:U:H4'	4:B:256:GLY:H	1.21	0.95
1:w:1987:G:H5'	1:w:1987:G:C8	2.01	0.95
1:w:2240:C:H2'	1:w:2241:A:C5'	1.96	0.95
1:w:2332:U:C4'	1:w:2336:A:H61	1.80	0.95
1:w:2650:U:C2'	1:w:2651:C:H6	1.77	0.95
1:w:2682:U:O2'	1:w:2683:C:H5'	1.65	0.95
1:w:712(B):A:H5''	1:w:712(B):A:C4	2.02	0.95
4:B:155:LEU:CD2	4:B:157:ARG:HG2	1.97	0.95
10:H:62:ARG:O	10:H:65:TRP:HB2	1.66	0.95
12:J:35:HIS:CG	12:J:36:LYS:H	1.84	0.95
13:K:8:LYS:HB2	13:K:12:GLN:NE2	1.81	0.95
20:R:54:VAL:HG21	20:R:78:LYS:N	1.80	0.95
31:y:37:U:OP1	45:m:122:LYS:HG3	1.67	0.95
31:y:37:U:H3	31:y:397:A:N6	1.63	0.95
31:y:175:C:C4	31:y:176:C:C6	2.55	0.95
31:y:248:C:C4'	31:y:282:A:H2	1.78	0.95
31:y:321:A:H4'	31:y:1436:U:H5'	1.46	0.95
31:y:896:C:C5'	50:r:100:LYS:HZ2	1.77	0.95
31:y:972:C:C4'	43:k:57:LYS:HD3	1.97	0.95
31:y:1277:C:H2'	31:y:1279:A:C8	2.01	0.95
35:c:97:TRP:CZ3	35:c:99:GLY:HA2	2.02	0.95
36:d:156:ARG:N	36:d:160:ALA:HB3	1.81	0.95
42:j:85:LEU:HD13	42:j:86:VAL:N	1.81	0.95
49:q:4:ILE:N	49:q:66:PRO:HA	1.82	0.95
1:w:539:G:H2'	1:w:540:G:H8	1.25	0.94
1:w:833:U:H5'	12:J:52:GLU:HB2	1.49	0.94
1:w:1345:C:H2'	1:w:1346:G:C8	2.02	0.94
1:w:1944:U:O2'	1:w:1945:G:C5'	2.14	0.94
1:w:2055:C:OP2	1:w:2056:G:H4'	1.67	0.94
1:w:2319:G:N7	15:M:8:GLU:HG2	1.81	0.94
1:w:2870:C:O5'	1:w:2870:C:H6	1.47	0.94
2:x:41:U:O5'	2:x:41:U:H6	1.49	0.94
11:I:71:ARG:HB3	11:I:72:PRO:HD2	1.49	0.94
15:M:73:LEU:HA	15:M:76:LYS:HD3	0.97	0.94
17:O:12:ARG:HA	17:O:15:LYS:CD	1.95	0.94
19:Q:86:LEU:HD13	19:Q:87:PRO:O	1.67	0.94
24:V:60:PHE:HD1	24:V:87:PRO:HB3	1.15	0.94
27:Y:38:ALA:N	27:Y:49:CYS:HB2	1.82	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:301:G:H5'	50:r:31:LEU:HD22	1.49	0.94
31:y:572:A:C4'	31:y:917:G:H5'	1.97	0.94
31:y:679:C:O5'	31:y:679:C:C6	2.20	0.94
37:e:18:LYS:CA	37:e:33:MET:HG3	1.96	0.94
40:h:126:ASP:HB3	40:h:132:GLY:CA	1.97	0.94
50:r:25:ARG:HG2	50:r:25:ARG:HH11	1.30	0.94
1:w:796:C:H2'	1:w:797:C:H6	1.28	0.94
1:w:855:G:H21	23:U:27:GLU:CB	1.80	0.94
1:w:1707:G:H4'	1:w:1758:G:H1	1.30	0.94
1:w:2356:C:H2'	1:w:2357:U:H5'	1.49	0.94
1:w:2534:A:C2'	1:w:2535:G:C5'	2.39	0.94
2:x:40:U:O2	2:x:43:C:C4	2.20	0.94
3:A:165:ARG:HB2	3:A:165:ARG:NH1	1.80	0.94
6:D:150:LEU:HD12	6:D:169:VAL:HA	1.47	0.94
10:H:52:LYS:O	10:H:56:LEU:HD13	1.66	0.94
31:y:267:C:C2	31:y:268:C:C5	2.54	0.94
31:y:307:C:C5	31:y:308:C:H5	1.84	0.94
31:y:967:5MC:H4'	42:j:128:ARG:HD3	1.46	0.94
31:y:1103:C:H2'	31:y:1104:G:N9	1.81	0.94
31:y:1240:U:H5'	31:y:1241:G:C8	2.02	0.94
1:w:34:C:H2'	1:w:35:G:H5'	1.48	0.94
1:w:623:G:H2'	1:w:624:C:H6	1.31	0.94
1:w:974(A):G:H5'	1:w:1186:G:H22	1.24	0.94
1:w:1545:A:H3'	1:w:1546:A:C8	2.02	0.94
1:w:2048:G:H8	1:w:2048:G:OP2	1.49	0.94
1:w:2466:C:O3'	30:b:6:SER:HB3	1.67	0.94
1:w:2725:A:O2'	1:w:2726:U:O5'	1.83	0.94
6:D:119:LEU:HB2	6:D:188:VAL:HA	1.49	0.94
6:D:148:SER:HB3	6:D:184:THR:CG2	1.97	0.94
31:y:51:A:H2	31:y:353:A:H62	1.12	0.94
31:y:335:C:C4'	31:y:1433:A:O2'	2.14	0.94
31:y:385:C:H2'	31:y:386:C:O4'	1.68	0.94
31:y:911:U:C2'	31:y:912:C:C6	2.49	0.94
38:f:105:VAL:HG13	38:f:106:PRO:CD	1.96	0.94
43:k:16:LEU:H	43:k:16:LEU:HD23	1.32	0.94
47:o:29:ARG:CZ	47:o:42:ILE:HG13	1.97	0.94
1:w:116:C:H3'	1:w:117:G:C5'	1.98	0.94
1:w:143:C:H2'	1:w:144:C:H5''	0.95	0.94
1:w:286:C:H2'	1:w:287:C:C6	2.03	0.94
1:w:598:G:H1'	12:J:13:ASN:ND2	1.83	0.94
1:w:1791:A:H8	1:w:1791:A:P	1.89	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2419:U:C4	29:a:31:HIS:HB3	2.01	0.94
1:w:2420:C:H5''	29:a:35:GLN:OE1	1.66	0.94
1:w:2689:U:H4'	1:w:2690:C:H6	1.28	0.94
1:w:2817:G:N2	1:w:2829:C:O2	2.01	0.94
1:w:2857:G:HO2'	1:w:2858:C:H5	1.14	0.94
5:C:13:ARG:HB3	5:C:22:PRO:HA	1.50	0.94
7:E:20:ILE:CG2	7:E:21:ARG:H	1.78	0.94
13:K:33:GLY:N	13:K:132:VAL:HB	1.82	0.94
16:N:102:ILE:HG13	16:N:103:ARG:H	1.29	0.94
17:O:84:LYS:HD3	17:O:89:GLU:HG2	1.47	0.94
18:P:64:HIS:HA	18:P:96:ILE:HG23	1.47	0.94
24:V:85:LEU:HD13	24:V:87:PRO:HD2	1.47	0.94
31:y:37:U:O4	31:y:397:A:N1	2.00	0.94
31:y:1506:U:H3'	31:y:1507:A:H5'	1.48	0.94
33:0:74:C:H2'	33:0:75:C:O4'	1.65	0.94
37:e:33:MET:H	37:e:33:MET:HE3	0.80	0.94
38:f:76:ILE:HG13	38:f:118:ILE:HG23	1.49	0.94
38:f:115:VAL:HG12	38:f:118:ILE:HD11	1.48	0.94
43:k:48:THR:HG23	43:k:62:HIS:ND1	1.82	0.94
45:m:85:ARG:HG3	45:m:86:GLY:N	1.81	0.94
50:r:36:ILE:C	50:r:36:ILE:HD12	1.93	0.94
1:w:85:G:H1'	1:w:103:A:H2	1.22	0.94
1:w:615:G:N1	1:w:616:A:H1'	1.81	0.94
1:w:965:C:H4'	1:w:2273:A:H1'	1.47	0.94
1:w:1186:G:C4	1:w:1187:G:H1'	2.02	0.94
1:w:1933:G:O2'	1:w:1974:C:H4'	1.67	0.94
1:w:2060:A:OP2	6:D:64:HIS:HA	1.67	0.94
1:w:2512:C:H1'	5:C:141:ILE:HA	1.48	0.94
1:w:2574:G:H1'	5:C:143:ASN:HD22	1.23	0.94
1:w:2712:U:H5''	1:w:2714:G:C5'	1.97	0.94
2:x:14:U:H5'	2:x:106:G:N2	1.82	0.94
5:C:13:ARG:HB2	5:C:21:VAL:O	1.67	0.94
21:S:55:TYR:CG	21:S:56:PRO:HD2	2.01	0.94
26:X:8:LEU:HD11	26:X:33:GLN:H	1.30	0.94
31:y:6:G:H22	38:f:95:ALA:HB2	1.29	0.94
31:y:262:A:C5	31:y:263:A:N6	2.35	0.94
31:y:406:G:H2'	31:y:407:G:H8	1.30	0.94
31:y:509:A:H2'	31:y:510:A:C8	2.02	0.94
31:y:1025:U:H2'	31:y:1026:G:C8	2.01	0.94
37:e:57:ARG:HH21	38:f:107:ARG:CD	1.79	0.94
49:q:48:TRP:HE3	49:q:49:LEU:H	1.10	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:31:LEU:O	50:r:32:TYR:HB2	1.67	0.94
1:w:149:A:C2'	1:w:150:C:H5'	1.98	0.94
1:w:479:A:H4'	1:w:480:A:H5''	1.46	0.94
1:w:821:A:H2'	1:w:946:G:O4'	1.67	0.94
1:w:870:A:OP2	1:w:870:A:C8	2.20	0.94
1:w:1486:A:H2'	1:w:1487:G:H5''	1.50	0.94
1:w:2080:G:C2	1:w:2241:A:H1'	2.00	0.94
1:w:2304:G:C1'	7:E:132:ASN:HB3	1.95	0.94
1:w:2352:A:O5'	1:w:2352:A:C8	2.19	0.94
4:B:93:ALA:HB2	4:B:107:ALA:HB2	1.46	0.94
10:H:126:VAL:HG12	10:H:130:LEU:HD23	1.48	0.94
13:K:48:GLU:HA	13:K:51:ARG:NE	1.81	0.94
16:N:92:GLY:HA3	16:N:114:LEU:HD13	1.48	0.94
21:S:73:ARG:HG2	21:S:78:ALA:HB2	1.48	0.94
31:y:128:G:H5''	50:r:2:PRO:CB	1.95	0.94
31:y:635:G:H2'	31:y:636:U:H5'	1.46	0.94
31:y:1252:A:H2'	31:y:1253:G:C4'	1.98	0.94
31:y:1347:G:H4'	31:y:1348:U:OP1	1.66	0.94
31:y:1361:G:O5'	31:y:1361:G:H8	1.49	0.94
31:y:1408:A:H2'	31:y:1409:C:H6	1.33	0.94
35:c:11:LEU:O	35:c:13:ALA:N	2.01	0.94
42:j:50:LEU:HA	42:j:54:ASP:HA	1.50	0.94
48:p:35:ARG:O	48:p:39:LEU:HG	1.67	0.94
49:q:3:LYS:HA	49:q:65:GLN:C	1.92	0.94
50:r:29:HIS:N	50:r:34:LYS:O	1.99	0.94
1:w:466:A:H5'	28:Z:21:ARG:HH22	1.31	0.94
1:w:1774:C:O2	1:w:1774:C:H2'	1.67	0.94
1:w:1858:G:H22	1:w:1883:G:C3'	1.81	0.94
1:w:2085:C:O2	1:w:2235:G:C2	2.19	0.94
1:w:2302:G:H2'	1:w:2303:G:H8	1.31	0.94
1:w:2355:C:H3'	1:w:2356:C:H5''	1.48	0.94
5:C:28:ALA:HB3	5:C:180:ASN:CB	1.97	0.94
7:E:97:ASP:HA	7:E:100:TRP:HB2	1.48	0.94
10:H:50:ALA:CA	10:H:53:ILE:HD12	1.96	0.94
16:N:108:ARG:HH11	16:N:108:ARG:HG2	1.32	0.94
17:O:36:ARG:HA	17:O:39:LEU:CD1	1.96	0.94
31:y:121:C:H41	31:y:235:C:H3'	1.33	0.94
31:y:136:C:H4'	49:q:1:MET:HB2	1.47	0.94
31:y:186(B):C:H42	31:y:191(F):U:H3	1.09	0.94
31:y:230:G:H5'	49:q:26:ARG:HD3	1.50	0.94
31:y:475:G:O2'	31:y:476:G:H5'	1.68	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:518:C:H5'	31:y:530:G:O4'	1.68	0.94
31:y:556:C:C2	31:y:557:G:C8	2.56	0.94
31:y:738:C:H2'	31:y:739:C:C6	2.03	0.94
31:y:750:G:H21	48:p:23:GLY:C	1.74	0.94
31:y:924:C:O2'	31:y:925:G:H5'	1.67	0.94
31:y:1308:U:OP2	46:n:99:ARG:CD	2.14	0.94
36:d:84:ILE:HA	36:d:87:LEU:HD21	1.48	0.94
37:e:13:ARG:HG3	37:e:37:PRO:HA	1.48	0.94
1:w:137(A):C:H2'	1:w:137(B):G:C8	2.02	0.94
1:w:142:G:H2'	1:w:143:C:H5''	1.49	0.94
1:w:494:G:H5''	19:Q:8:ARG:HH22	1.33	0.94
1:w:589:C:H2'	1:w:590:A:C8	2.01	0.94
1:w:683:C:H4'	28:Z:21:ARG:NH1	1.82	0.94
1:w:690:G:H2'	1:w:691:C:C6	2.03	0.94
1:w:896:A:H5'	1:w:897:C:OP1	1.67	0.94
1:w:957:A:N1	1:w:2458:G:C5'	2.30	0.94
1:w:992:C:C4'	18:P:89:GLN:HE22	1.79	0.94
1:w:1169:G:H3'	1:w:1170:G:C5'	1.96	0.94
1:w:2162:G:C2'	1:w:2163:C:H5'	1.96	0.94
1:w:2620:C:H4'	5:C:156:MET:HB3	1.48	0.94
1:w:2730:C:C4	1:w:2731:G:N7	2.35	0.94
1:w:2786:U:C1'	5:C:64:LYS:HG2	1.97	0.94
1:w:2875:C:C3'	1:w:2876:G:C5'	2.45	0.94
2:x:82:G:N2	2:x:94:C:O2	2.00	0.94
3:A:21:TYR:CD1	3:A:26:ALA:HB2	2.03	0.94
5:C:13:ARG:HA	5:C:23:VAL:HG22	1.47	0.94
5:C:20:ALA:HB2	11:I:73:ASP:CB	1.97	0.94
5:C:59:VAL:CG2	5:C:63:LEU:HA	1.98	0.94
10:H:26:THR:O	10:H:27:TYR:HB2	1.63	0.94
13:K:125:LEU:HD13	13:K:126:PRO:CD	1.97	0.94
14:L:37:THR:HG23	14:L:40:LYS:NZ	1.83	0.94
18:P:35:LEU:HB2	18:P:60:GLU:O	1.67	0.94
18:P:47:VAL:HG22	18:P:48:GLY:H	1.32	0.94
19:Q:95:ILE:O	19:Q:96:ILE:HG23	1.68	0.94
22:T:99:TYR:CD2	22:T:124:ILE:HA	2.02	0.94
29:a:52:LYS:H	29:a:53:PRO:HD2	1.28	0.94
31:y:343:U:O2	31:y:347:G:N1	1.99	0.94
31:y:444:C:H2'	31:y:445:G:C8	2.02	0.94
31:y:523:A:N3	31:y:523:A:H2'	1.83	0.94
31:y:936:C:H1'	31:y:1383:C:H42	1.14	0.94
31:y:1211:U:O2'	31:y:1213:A:N3	1.99	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1348:U:O2'	31:y:1349:A:H5'	1.66	0.94
31:y:1460:A:C2	31:y:1461:G:H1'	2.02	0.94
35:c:23:ARG:CZ	35:c:24:TRP:H	1.81	0.94
36:d:40:ARG:HA	36:d:43:LEU:CD2	1.98	0.94
37:e:94:LEU:HD23	37:e:200:GLU:CB	1.97	0.94
37:e:145:GLU:HG3	37:e:184:LYS:CB	1.96	0.94
40:h:92:SER:OG	40:h:93:PRO:HD2	1.68	0.94
44:l:94:ALA:O	44:l:98:LEU:HG	1.68	0.94
45:m:38:VAL:HB	45:m:56:LYS:HB2	1.48	0.94
45:m:71:GLY:O	45:m:72:GLU:HG3	1.66	0.94
45:m:112:ARG:HB3	45:m:121:THR:OG1	1.68	0.94
49:q:27:LYS:HG2	49:q:28:ARG:H	1.33	0.94
51:s:51:LEU:HD12	51:s:52:PRO:HD2	1.49	0.94
1:w:16:G:C5'	27:Y:17:ASP:HB3	1.98	0.94
1:w:1168:G:N2	1:w:1181:C:O2	2.01	0.94
1:w:2128:C:C5'	3:A:37:LYS:HE3	1.97	0.94
1:w:2189:U:C3'	1:w:2190:G:H5''	1.98	0.94
1:w:2437:U:O2	1:w:2438:U:C5	2.21	0.94
2:x:63:G:C3'	2:x:64:C:C5'	2.46	0.94
4:B:247:ALA:HA	4:B:253:GLN:HA	1.50	0.94
6:D:148:SER:HG	6:D:167:TRP:CD1	1.86	0.94
7:E:33:ARG:HH21	7:E:33:ARG:HB3	1.33	0.94
12:J:31:ALA:O	12:J:32:THR:HG23	1.68	0.94
12:J:137:LYS:C	12:J:138:LEU:HD12	1.93	0.94
14:L:79:LEU:HD22	14:L:83:ILE:HG13	1.45	0.94
14:L:109:ALA:HB1	14:L:111:LEU:HD13	1.50	0.94
26:X:22:ALA:O	26:X:26:LEU:CG	2.15	0.94
31:y:17:U:H2'	31:y:1079:G:H21	1.31	0.94
31:y:357:G:OP1	31:y:367:U:O5'	1.84	0.94
31:y:644:G:N7	31:y:645:C:C5	2.36	0.94
31:y:770:C:H2'	31:y:771:G:H5''	1.50	0.94
31:y:811:C:C2'	31:y:812:C:H5''	1.98	0.94
31:y:954:G:H1	46:n:104:ARG:NH1	1.57	0.94
31:y:1054:C:O2'	31:y:1055:A:C5'	2.15	0.94
31:y:1160:G:H2'	31:y:1161:C:C5'	1.97	0.94
36:d:59:ARG:HG3	36:d:64:VAL:HG22	1.50	0.94
42:j:97:LYS:HB3	42:j:98:PRO:HD3	1.50	0.94
45:m:42:VAL:C	45:m:52:ARG:HH21	1.75	0.94
1:w:2014:A:C2'	1:w:2015:A:C8	2.51	0.94
1:w:2075:U:C4	1:w:2238:G:N7	2.36	0.94
1:w:712(B):A:N3	1:w:712(B):A:C5'	2.31	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2747:G:N2	1:w:2756:U:C5'	2.29	0.94
1:w:2747:G:H1'	1:w:2757:A:H61	1.31	0.94
1:w:2818:G:O4'	1:w:2837:G:H5'	1.68	0.94
5:C:117:MET:CA	5:C:122:PHE:H	1.78	0.94
31:y:484:G:O2'	31:y:485:G:OP2	1.86	0.94
31:y:961:U:H2'	31:y:962:C:C5'	1.97	0.94
31:y:1053:G:OP1	31:y:1053:G:H4'	1.67	0.94
31:y:1157:A:N6	31:y:1178:G:C1'	2.30	0.94
37:e:59:ARG:HG3	37:e:60:GLU:N	1.83	0.94
41:i:119:LEU:HD13	41:i:124:ALA:CA	1.97	0.94
42:j:23:ASN:HA	42:j:57:GLY:HA2	1.48	0.94
51:s:61:LYS:HA	51:s:64:ARG:HD2	1.47	0.94
53:u:45:GLN:HA	53:u:91:LEU:HB3	1.46	0.94
1:w:307:G:H21	1:w:330:A:H61	1.01	0.93
1:w:674:G:H5''	6:D:72:ASP:N	1.82	0.93
1:w:974(A):G:H1'	1:w:989:G:H22	1.32	0.93
1:w:1364:G:H3'	24:V:8:SER:N	1.83	0.93
1:w:1665:A:H2'	1:w:1666:G:H5'	1.50	0.93
1:w:1970:A:C5'	1:w:1971:A:OP1	2.15	0.93
1:w:2075:U:OP2	1:w:2238:G:O2'	1.85	0.93
1:w:2865:U:H5''	1:w:2865:U:H6	1.31	0.93
2:x:89(A):G:O2'	2:x:89(B):A:H5'	1.69	0.93
7:E:3:LEU:CD2	7:E:101:ILE:HD12	1.97	0.93
23:U:30:VAL:HG22	23:U:31:VAL:N	1.76	0.93
23:U:50:ASN:HB2	23:U:81:VAL:HG11	1.49	0.93
31:y:37:U:H3	31:y:397:A:H61	0.94	0.93
31:y:50:A:H62	31:y:361:G:H4'	1.33	0.93
31:y:245:C:N4	31:y:284:G:C6	2.37	0.93
31:y:334:C:O2'	31:y:1434:A:H4'	1.66	0.93
31:y:565:U:H3'	31:y:566:G:C8	2.02	0.93
31:y:733:A:O2'	31:y:734:G:C5'	2.15	0.93
31:y:835:U:OP1	51:s:64:ARG:NH1	2.01	0.93
31:y:862:C:H2'	31:y:863:U:H5'	1.50	0.93
31:y:1003:G:N3	31:y:1004:A:H1'	1.81	0.93
31:y:1139:G:N2	31:y:1142:G:N7	2.16	0.93
31:y:1441:G:C5'	31:y:1442:G:H5'	1.98	0.93
33:0:13:C:H2'	33:0:14:A:H1'	1.49	0.93
35:c:20:GLU:HG2	35:c:190:THR:OG1	1.66	0.93
36:d:153:VAL:CG1	36:d:166:GLU:HB3	1.98	0.93
44:l:80:VAL:HG22	44:l:104:GLN:O	1.68	0.93
1:w:124:G:H2'	28:Z:19:ARG:CZ	1.99	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:216:A:H2'	1:w:217:G:H8	1.32	0.93
1:w:590:A:H2'	1:w:591:C:C6	2.02	0.93
1:w:1130:U:H3	1:w:2025:C:C5'	1.81	0.93
1:w:1772:G:O2'	1:w:1773:A:H5'	1.68	0.93
1:w:1791:A:C8	1:w:1791:A:OP2	2.22	0.93
1:w:1799:G:C5'	1:w:1819:A:N6	2.26	0.93
1:w:2024:G:H2'	1:w:2025:C:H6	1.23	0.93
1:w:2352:A:H2	23:U:33:ALA:CB	1.80	0.93
1:w:2683:C:H1'	5:C:13:ARG:NH2	1.83	0.93
8:F:141:VAL:HG13	8:F:144:VAL:CG1	1.98	0.93
15:M:28:VAL:HG12	15:M:29:PHE:N	1.82	0.93
31:y:923:A:H5'	38:f:21:ALA:HB2	1.48	0.93
31:y:1266:G:C2'	31:y:1268:A:OP2	2.16	0.93
31:y:1379:G:N2	31:y:1381:U:O4	1.99	0.93
33:0:9:A:H62	33:0:23:A:H62	1.06	0.93
35:c:14:GLY:HA2	35:c:17:PHE:CE2	2.03	0.93
40:h:72:ARG:HD3	40:h:138:LYS:HE3	1.47	0.93
1:w:1208:C:O5'	1:w:1208:C:C6	2.19	0.93
1:w:1258:C:H2'	1:w:1259:G:H8	1.30	0.93
1:w:1394:U:C4'	1:w:1603:A:H4'	1.99	0.93
1:w:1858:G:N2	1:w:1883:G:H2'	1.83	0.93
1:w:2579:C:H2'	1:w:2580:U:C5'	1.98	0.93
2:x:57:A:N6	7:E:29:TRP:HB2	1.83	0.93
2:x:74:U:C3'	2:x:75:G:H8	1.80	0.93
3:A:21:TYR:HD1	3:A:26:ALA:HB2	1.33	0.93
7:E:131:TYR:HD2	7:E:132:ASN:H	1.10	0.93
10:H:78:VAL:HB	10:H:149:PRO:HA	1.50	0.93
31:y:148:G:C2	31:y:149:A:C8	2.56	0.93
31:y:226:G:H2'	31:y:227:G:H8	1.12	0.93
31:y:582:U:H5''	48:p:68:ARG:NH1	1.83	0.93
32:z:18:G:H8	32:z:18:G:O5'	1.51	0.93
35:c:27:LYS:CG	35:c:194:PRO:HD2	1.97	0.93
36:d:138:VAL:HG22	36:d:169:ALA:CB	1.96	0.93
37:e:23:GLY:HA2	37:e:112:VAL:CG2	1.98	0.93
40:h:116:ALA:HA	40:h:120:ILE:CD1	1.98	0.93
40:h:127:ALA:HA	40:h:135:VAL:CG2	1.96	0.93
43:k:30:SER:HB2	43:k:84:GLN:HB3	1.50	0.93
1:w:1479:G:C5	1:w:1480:G:C8	2.56	0.93
1:w:1530:G:C6	1:w:1541:U:O2	2.21	0.93
1:w:1818:U:C2'	4:B:155:LEU:HG	1.98	0.93
1:w:2393:A:O2'	1:w:2394:C:O4'	1.85	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2598:A:H8	1:w:2598:A:O5'	1.51	0.93
2:x:106:G:H2'	2:x:107:U:C6	2.03	0.93
4:B:75:ILE:CG2	4:B:98:VAL:HB	1.99	0.93
4:B:173:VAL:HG12	4:B:187:GLY:HA2	1.50	0.93
4:B:183:ARG:HE	4:B:270:ILE:HG23	1.33	0.93
10:H:112:LYS:HZ3	10:H:115:ALA:HB3	1.27	0.93
12:J:41:ARG:NH2	12:J:45:LEU:HD12	1.82	0.93
13:K:125:LEU:CG	13:K:126:PRO:HD2	1.97	0.93
21:S:84:ARG:HD2	21:S:84:ARG:N	1.83	0.93
36:d:68:VAL:HG12	36:d:69:HIS:N	1.75	0.93
47:o:34:TYR:CE2	47:o:36:PHE:HB2	2.03	0.93
1:w:299:A:H62	1:w:339:U:H3	0.95	0.93
1:w:308:G:N2	1:w:329:G:H21	1.66	0.93
1:w:506:G:O2'	1:w:507:A:C8	2.20	0.93
1:w:992:C:C2'	1:w:993:G:H5'	1.97	0.93
1:w:1136:G:H2'	1:w:1137:G:N7	1.82	0.93
1:w:1318:C:C4	1:w:1319:G:N7	2.35	0.93
1:w:1431:U:H2'	1:w:1432:C:H5'	1.50	0.93
1:w:1664:A:O4'	1:w:2686:G:H5'	1.67	0.93
1:w:2051:A:H2'	1:w:2614:A:H61	1.21	0.93
1:w:2507:C:O2	1:w:2553:G:N2	2.02	0.93
1:w:2776:A:H5''	1:w:2777:G:OP1	1.69	0.93
7:E:135:LEU:HD12	7:E:135:LEU:C	1.93	0.93
9:G:130:TYR:HD2	9:G:138:ILE:CG2	1.82	0.93
14:L:47:PHE:CD1	14:L:47:PHE:C	2.47	0.93
18:P:60:GLU:CA	18:P:101:GLY:HA2	1.98	0.93
24:V:18:ILE:HG13	24:V:43:TYR:HE1	1.30	0.93
31:y:234:C:H2'	31:y:235:C:H6	1.28	0.93
31:y:818:G:C2'	31:y:819:A:C5'	2.47	0.93
31:y:864:A:C2	31:y:917:G:N2	2.30	0.93
31:y:1065:U:H5''	31:y:1190:G:N2	1.81	0.93
50:r:15:MET:H	50:r:15:MET:HE3	1.33	0.93
1:w:55:G:H2'	1:w:56:A:H8	1.21	0.93
1:w:2153:G:OP2	1:w:2153:G:C8	2.22	0.93
1:w:2585:U:H4'	1:w:2586:C:H5'	1.49	0.93
2:x:18:G:HO2'	2:x:19:G:H8	0.93	0.93
3:A:214:TYR:HB3	3:A:223:VAL:H	1.33	0.93
9:G:101:LEU:CD1	9:G:107:ILE:HG23	1.96	0.93
11:I:98:VAL:HG22	11:I:99:PHE:N	1.80	0.93
18:P:76:LYS:CE	18:P:78:LYS:HB2	1.97	0.93
18:P:78:LYS:N	18:P:83:ARG:HA	1.83	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:51:VAL:CG1	24:V:52:ARG:N	2.27	0.93
31:y:136:C:H4'	49:q:1:MET:N	1.83	0.93
31:y:303:A:C5	31:y:304:U:C5	2.56	0.93
31:y:775:G:N2	31:y:776:G:H1'	1.82	0.93
31:y:943:U:O2'	31:y:944:G:H5'	1.69	0.93
31:y:1469:G:OP2	31:y:1469:G:H8	1.48	0.93
32:z:9:A:C8	32:z:11:C:N4	2.36	0.93
40:h:119:ARG:HG3	40:h:120:ILE:CD1	1.98	0.93
43:k:40:LEU:HD13	43:k:69:ASN:O	1.67	0.93
1:w:270(K):G:C2	1:w:270(L):C:C1'	2.52	0.93
1:w:1999:C:H5'	1:w:2723:C:O2'	1.66	0.93
1:w:2342:C:O2	1:w:2374:C:C4'	2.15	0.93
1:w:2670:A:C5'	1:w:2671:A:OP2	2.16	0.93
2:x:41:U:C5	7:E:69:ALA:HB1	2.04	0.93
7:E:12:TYR:HD2	7:E:12:TYR:H	1.11	0.93
8:F:157:TYR:HA	8:F:172:LYS:N	1.83	0.93
16:N:3:ARG:HB2	16:N:7:ILE:HD11	1.48	0.93
21:S:97:ARG:HD2	21:S:97:ARG:C	1.94	0.93
23:U:62:LEU:HD13	23:U:63:VAL:H	1.29	0.93
31:y:343:U:H1'	31:y:347:G:H22	1.22	0.93
31:y:594:G:H22	31:y:596:C:N4	1.66	0.93
31:y:860:A:O2'	31:y:861:G:H5'	1.69	0.93
31:y:1222:G:C8	31:y:1222:G:O5'	2.21	0.93
41:i:28:ALA:HB2	41:i:57:PRO:HB2	1.49	0.93
41:i:36:LEU:HD21	41:i:61:VAL:CG1	1.98	0.93
43:k:79:ARG:O	43:k:82:ILE:HG22	1.68	0.93
1:w:463:G:N3	1:w:465:G:OP2	2.01	0.93
1:w:669:G:C4	1:w:801:G:C6	2.55	0.93
1:w:733:G:O6	1:w:761:A:H3'	1.68	0.93
1:w:865:C:H42	1:w:909:A:N6	1.66	0.93
1:w:889:C:H1'	1:w:890:A:H1'	1.48	0.93
1:w:933:A:O2'	1:w:934:G:H5'	1.68	0.93
1:w:1007:C:OP1	1:w:1008:C:H3'	1.67	0.93
1:w:1297:C:OP2	1:w:2710:C:C4'	2.15	0.93
1:w:1301:A:N1	1:w:1641:A:N1	2.16	0.93
1:w:1533:C:H3'	1:w:1534:G:C8	2.04	0.93
1:w:1801:G:H5'	1:w:1815:A:N6	1.83	0.93
1:w:1818:U:H2'	4:B:155:LEU:CG	1.98	0.93
1:w:2887:U:C2	1:w:2888:C:C5	2.56	0.93
2:x:14:U:H5	2:x:71:C:H1'	1.33	0.93
4:B:72:LYS:HD2	4:B:75:ILE:HD12	1.49	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:19:ARG:NH1	5:C:21:VAL:HG12	1.83	0.93
10:H:120:ARG:O	10:H:123:GLU:HB2	1.69	0.93
17:O:48:ALA:C	17:O:50:ARG:H	1.76	0.93
26:X:5:LYS:HE3	26:X:7:LYS:HE3	1.49	0.93
31:y:253:U:H4'	31:y:276:G:O4'	1.69	0.93
31:y:644:G:N7	31:y:645:C:C6	2.37	0.93
31:y:1299:A:C2	31:y:1300:G:C5'	2.50	0.93
37:e:71:SER:OG	37:e:74:GLN:OE1	1.86	0.93
37:e:94:LEU:HD12	37:e:94:LEU:N	1.83	0.93
37:e:127:THR:HG22	37:e:147:ALA:O	1.68	0.93
45:m:59:LEU:HD11	45:m:61:SER:HB2	1.51	0.93
51:s:38:GLU:HA	51:s:41:LYS:CD	1.97	0.93
1:w:655:A:OP1	1:w:655:A:H3'	1.68	0.93
1:w:669:G:C5	1:w:801:G:C6	2.56	0.93
1:w:890:A:H8	1:w:890:A:C5'	1.79	0.93
1:w:1161:C:O5'	1:w:1161:C:C6	2.21	0.93
1:w:1169:G:C8	1:w:1170:G:O4'	2.21	0.93
1:w:1203:G:O5'	1:w:1204:A:H5''	1.68	0.93
1:w:1539:G:H3'	1:w:1540:G:C5'	1.99	0.93
1:w:2472:G:C2'	1:w:2478:A:H61	1.81	0.93
1:w:2734:A:C2'	1:w:2735:G:H5'	1.98	0.93
5:C:117:MET:HB3	5:C:136:ARG:NH2	1.84	0.93
12:J:92:GLU:O	12:J:94:GLU:N	2.02	0.93
14:L:56:LYS:HA	14:L:84:ALA:CB	1.96	0.93
16:N:62:THR:HB	16:N:75:ILE:HA	0.96	0.93
17:O:90:VAL:CG1	17:O:91:ASP:H	1.82	0.93
21:S:61:ILE:HG23	21:S:62:GLU:N	1.75	0.93
23:U:28:GLY:HA2	23:U:67:VAL:O	1.69	0.93
26:X:27:GLY:HA2	26:X:29:ARG:NH1	1.84	0.93
31:y:635:G:H2'	31:y:636:U:C5'	1.99	0.93
31:y:770:C:C2'	31:y:771:G:H5''	1.97	0.93
31:y:1300:G:O2'	31:y:1301:U:H5	1.52	0.93
31:y:1347:G:H21	31:y:1373:G:H2'	1.30	0.93
36:d:40:ARG:HA	36:d:43:LEU:HD23	1.50	0.93
37:e:197:PRO:O	37:e:198:VAL:HG13	1.69	0.93
38:f:76:ILE:HB	38:f:94:ALA:H	1.32	0.93
44:l:39:PRO:O	44:l:40:ILE:HD13	1.69	0.93
1:w:261:G:C4'	1:w:609(A):A:C2	2.47	0.93
1:w:1170:G:C2'	1:w:1171:G:C8	2.50	0.93
1:w:1531:C:O2'	1:w:1532:C:H5'	1.69	0.93
1:w:1669:A:H3'	1:w:1670:C:H5'	0.93	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2330:G:N3	23:U:41:ARG:NH2	2.15	0.93
1:w:2619:C:H5''	5:C:152:LYS:HD2	1.51	0.93
1:w:2639:A:H1'	1:w:2778:A:C2	2.03	0.93
1:w:2680:C:OP1	5:C:189:PRO:HB3	1.67	0.93
4:B:260:ARG:HH22	4:B:264:LYS:HB2	1.33	0.93
6:D:165:LEU:HB2	6:D:168:VAL:HG23	1.49	0.93
7:E:46:ALA:H	7:E:84:LYS:HD2	1.33	0.93
8:F:172:LYS:HA	8:F:172:LYS:HZ1	1.31	0.93
10:H:39:ILE:HG13	10:H:40:ASP:H	1.31	0.93
10:H:138:ARG:O	10:H:141:LYS:HG2	1.69	0.93
13:K:16:ARG:C	13:K:17:LEU:HD13	1.93	0.93
13:K:34:LEU:HD22	13:K:118:LEU:HG	1.49	0.93
14:L:50:HIS:HD2	14:L:53:HIS:HE1	1.11	0.93
26:X:20:LYS:HA	26:X:23:LEU:CD2	1.99	0.93
31:y:754:C:H1'	48:p:69:TYR:HD1	1.27	0.93
31:y:1065:U:H5'	31:y:1190:G:N2	1.84	0.93
31:y:1272:G:H2'	31:y:1273:G:O4'	1.69	0.93
32:z:9:A:C5	32:z:46:7MG:N2	2.37	0.93
39:g:10:LEU:HD23	39:g:59:TYR:HB3	1.49	0.93
43:k:42:THR:HG22	43:k:44:VAL:HG13	1.51	0.93
1:w:14:A:C4	1:w:15:G:H1'	2.04	0.92
1:w:204:A:H1'	1:w:206:U:C5	2.03	0.92
1:w:270(A):A:H2'	1:w:270(B):A:O4'	1.67	0.92
1:w:518:G:O2'	19:Q:76:VAL:HG23	1.69	0.92
1:w:921:G:H2'	1:w:922:U:C6	2.04	0.92
1:w:1170:G:H2'	1:w:1171:G:H8	1.12	0.92
1:w:1294:U:C4'	14:L:26:LYS:HE3	2.00	0.92
1:w:2051:A:C2'	1:w:2614:A:H61	1.82	0.92
1:w:2654:A:C8	1:w:2656:U:C5	2.56	0.92
6:D:150:LEU:O	6:D:187:LEU:HG	1.68	0.92
7:E:129:GLY:HA3	7:E:161:THR:O	1.69	0.92
8:F:54:ARG:HB2	8:F:55:PRO:CD	1.98	0.92
9:G:60:GLU:O	9:G:64:GLU:HB2	1.69	0.92
10:H:124:HIS:HA	10:H:127:LYS:HD2	1.49	0.92
31:y:16:A:C2'	31:y:17:U:H6	1.81	0.92
31:y:582:U:O5'	31:y:582:U:H6	1.52	0.92
31:y:1181:G:O2'	31:y:1182:G:H5'	1.68	0.92
46:n:4:ILE:HG23	46:n:57:ARG:O	1.70	0.92
51:s:37:VAL:O	51:s:41:LYS:HB3	1.68	0.92
1:w:142:G:H2'	1:w:143:C:H5'	1.51	0.92
1:w:765:G:C2'	1:w:766:C:O4'	2.15	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:890:A:H2'	1:w:892:G:C5'	1.98	0.92
1:w:1259:G:C2'	1:w:1260:G:H8	1.82	0.92
1:w:1613:G:C6	1:w:1617:C:H2'	2.03	0.92
1:w:1862:G:C2	1:w:1881:C:C2	2.57	0.92
1:w:1989:G:H2'	1:w:1990:C:C5'	1.97	0.92
1:w:2354:G:C1'	23:U:36:ILE:HD13	1.99	0.92
1:w:2483:C:O5'	1:w:2483:C:H6	1.50	0.92
1:w:2828:C:H2'	1:w:2829:C:C6	2.05	0.92
4:B:8:PRO:HB3	4:B:14:ARG:O	1.69	0.92
9:G:44:LEU:O	9:G:47:LEU:HG	1.69	0.92
10:H:79:ASN:CA	10:H:147:ALA:HA	2.00	0.92
11:I:17:ARG:HG2	11:I:47:ILE:HG12	1.52	0.92
11:I:90:GLN:O	11:I:92:GLU:N	2.02	0.92
13:K:125:LEU:HD22	13:K:126:PRO:HD2	1.48	0.92
14:L:49:ASP:HA	14:L:94:TYR:HE1	1.32	0.92
31:y:236:G:H3'	31:y:237:C:C5	2.02	0.92
31:y:363:A:H2'	31:y:364:A:O4'	1.68	0.92
31:y:457:C:C2'	31:y:458:C:H5'	1.99	0.92
31:y:618:C:H2'	31:y:618:C:O2	1.67	0.92
31:y:670:G:N2	31:y:736:C:O2	2.02	0.92
31:y:959:A:H61	52:t:79:THR:HG21	0.80	0.92
31:y:1060:C:C2'	31:y:1061:G:H5'	1.99	0.92
33:0:24:G:C8	33:0:25:C:C5	2.57	0.92
36:d:30:ARG:O	36:d:34:LEU:HD13	1.70	0.92
36:d:161:GLU:HG3	36:d:162:GLN:N	1.81	0.92
37:e:28:SER:O	37:e:34:GLU:HG2	1.68	0.92
51:s:38:GLU:O	51:s:41:LYS:NZ	2.01	0.92
1:w:145:G:C3'	1:w:146:G:H5''	1.99	0.92
1:w:781:A:H2	1:w:1776:G:N3	1.66	0.92
1:w:852:G:H1'	26:X:41:PRO:HB3	1.50	0.92
1:w:1033:U:H3'	30:b:18:ARG:NH1	1.83	0.92
1:w:1270:C:O2'	1:w:1648:C:OP1	1.87	0.92
1:w:1371:G:O2'	1:w:1372:U:H5'	1.68	0.92
1:w:1441:G:H4'	1:w:1628:G:OP1	1.69	0.92
1:w:1624:G:H2'	1:w:1625:C:H6	1.21	0.92
1:w:2017:U:C5'	27:Y:8:LYS:HG3	1.98	0.92
1:w:2128:C:H5'	3:A:37:LYS:HE3	1.48	0.92
1:w:2159:G:H2'	1:w:2160:G:O4'	1.69	0.92
1:w:2466:C:C2'	1:w:2467:C:H5'	1.99	0.92
1:w:2822:G:OP2	14:L:2:ARG:HB2	1.67	0.92
4:B:60:ARG:CD	4:B:86:PRO:HB2	1.99	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:7:LEU:N	8:F:8:PRO:HD2	1.84	0.92
10:H:38:LEU:HD13	10:H:39:ILE:H	1.35	0.92
13:K:37:LEU:HD12	13:K:128:LYS:H	1.33	0.92
13:K:42:ILE:HD11	13:K:46:GLN:HB2	1.52	0.92
13:K:54:MET:HB3	13:K:58:PHE:CE1	2.04	0.92
22:T:19:ARG:NE	22:T:25:PRO:HG2	1.84	0.92
31:y:297:G:H2'	31:y:298:A:H8	1.28	0.92
31:y:310:G:O2'	31:y:311:C:H5'	1.68	0.92
31:y:650:G:C2'	31:y:651:C:H5'	1.98	0.92
31:y:651:C:C4	31:y:652:U:O4	2.23	0.92
31:y:699:C:H2'	31:y:700:G:C8	2.04	0.92
31:y:946:A:O5'	31:y:946:A:C8	2.21	0.92
31:y:1029:G:H1'	31:y:103(B):G:N2	1.83	0.92
35:c:82:ARG:HH12	35:c:93:VAL:HA	1.34	0.92
38:f:106:PRO:HA	38:f:109:ILE:CD1	1.97	0.92
42:j:65:VAL:O	42:j:66:ARG:HG3	1.70	0.92
1:w:242:G:C5	29:a:5:LYS:HD3	2.03	0.92
1:w:394:A:H2'	1:w:395:U:C4'	2.00	0.92
1:w:833:U:H5'	12:J:52:GLU:HB3	1.47	0.92
1:w:1370:C:O2'	4:B:46:GLN:NE2	2.02	0.92
1:w:1488:G:OP2	1:w:1488:G:H8	1.51	0.92
1:w:1675:C:C4	1:w:1676:A:C8	2.56	0.92
1:w:2193:G:H2'	1:w:2194:G:C5'	2.00	0.92
1:w:2328:A:O5'	1:w:2328:A:H8	1.51	0.92
1:w:2332:U:H4'	1:w:2336:A:N6	1.85	0.92
1:w:2573:C:H5''	1:w:2574:G:O5'	1.68	0.92
1:w:2633:G:H21	5:C:64:LYS:HD3	1.34	0.92
2:x:23:G:C2'	2:x:24:G:C8	2.51	0.92
4:B:35:LYS:HB2	4:B:36:PRO:HA	1.52	0.92
4:B:164:GLN:HG3	4:B:176:ARG:HB3	1.49	0.92
7:E:33:ARG:HB3	7:E:33:ARG:NH2	1.83	0.92
9:G:81:VAL:HG11	9:G:144:VAL:HG13	1.50	0.92
13:K:50:ALA:HB2	13:K:124:LYS:HD2	1.49	0.92
15:M:26:LEU:CB	15:M:87:PHE:HD1	1.78	0.92
17:O:92:ARG:HB2	18:P:11:GLN:OE1	1.69	0.92
19:Q:18:ARG:HA	19:Q:76:VAL:HG12	1.51	0.92
22:T:56:VAL:HG12	22:T:70:LEU:HD12	1.51	0.92
30:b:27:CYS:HG	30:b:32:HIS:HB2	1.17	0.92
31:y:391:G:C2'	31:y:392:G:H5''	2.00	0.92
31:y:842:C:H5''	31:y:848:C:H42	1.33	0.92
31:y:976:G:H2'	31:y:1359:C:H5'	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1077:G:N1	31:y:1079:G:H5''	1.83	0.92
31:y:1374:A:H2'	31:y:1375:A:H5'	0.92	0.92
31:y:1461:G:H2'	31:y:1462:G:C8	2.04	0.92
32:z:3:C:H2'	32:z:4:C:H6	1.32	0.92
51:s:16:PRO:HB2	51:s:18:ARG:HH11	1.32	0.92
1:w:13:A:O2'	1:w:14:A:H8	1.51	0.92
1:w:671:C:C2'	1:w:672:C:H5'	1.98	0.92
1:w:801:G:C6	6:D:49:ARG:HA	2.05	0.92
1:w:812:C:H5'	12:J:25:SER:OG	1.70	0.92
1:w:1263:U:H2'	1:w:1264:G:C4	2.04	0.92
1:w:2563:U:C2	1:w:2566:A:C8	2.57	0.92
1:w:2602:A:N6	32:z:76:A:C5'	2.33	0.92
1:w:2657:A:H62	1:w:2664:G:H1'	1.35	0.92
1:w:2795:G:H2'	1:w:2798:C:OP2	1.68	0.92
1:w:2824:C:C5	1:w:2825:G:O6	2.22	0.92
2:x:115:G:H2'	2:x:116:G:C8	2.04	0.92
5:C:38:THR:HA	5:C:44:TYR:O	1.69	0.92
7:E:46:ALA:HB2	7:E:84:LYS:HB3	1.48	0.92
7:E:78:SER:HB3	32:z:19:G:H21	1.31	0.92
28:Z:2:LYS:HD3	28:Z:2:LYS:N	1.85	0.92
29:a:52:LYS:O	29:a:56:GLU:OE1	1.88	0.92
31:y:157:G:C2'	31:y:158:G:H5'	1.98	0.92
31:y:718:G:H5''	31:y:720:C:N4	1.83	0.92
31:y:1053:G:C5	31:y:1199:U:C5	2.57	0.92
31:y:1229:A:O2'	32:z:30:G:OP1	1.87	0.92
35:c:69:LEU:HD23	35:c:70:PHE:H	1.31	0.92
42:j:69:GLY:O	42:j:73:GLN:HG3	1.68	0.92
43:k:82:ILE:HA	43:k:85:LEU:CD2	1.99	0.92
1:w:650:C:O2'	29:a:17:THR:HG21	1.68	0.92
1:w:671:C:C2'	1:w:672:C:C5'	2.48	0.92
1:w:706:A:H61	1:w:725:G:H1'	1.31	0.92
1:w:1620:G:H1'	28:Z:2:LYS:HD2	1.50	0.92
1:w:1707:G:H3'	1:w:1708:C:C6	2.04	0.92
1:w:2019:A:H61	1:w:2035:G:H1	1.07	0.92
1:w:2762:G:C3'	1:w:2763:G:H5'	1.97	0.92
2:x:71:C:H2'	2:x:72:G:C8	2.04	0.92
6:D:27:LEU:HD13	6:D:27:LEU:H	1.35	0.92
6:D:196:VAL:HG22	6:D:197:PHE:CD1	2.05	0.92
11:I:67:LYS:HG2	11:I:68:GLU:N	1.77	0.92
12:J:62:LEU:HD12	29:a:27:THR:HG22	1.51	0.92
14:L:26:LYS:O	14:L:29:LEU:HB3	1.68	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:82:GLY:HA3	17:O:113:ALA:HB1	1.50	0.92
22:T:111:VAL:HA	22:T:115:GLY:N	1.84	0.92
31:y:95:G:C2'	31:y:96:G:H8	1.72	0.92
31:y:653:A:C2	41:i:56:LYS:HA	2.04	0.92
31:y:659:U:OP2	31:y:659:U:C5	2.22	0.92
31:y:1343:G:O2'	42:j:122:ALA:N	2.03	0.92
45:m:37:THR:HG22	45:m:56:LYS:HB3	1.52	0.92
53:u:91:LEU:O	53:u:95:ALA:HB3	1.68	0.92
1:w:8:A:C2'	1:w:9:U:H5'	1.98	0.92
1:w:483:A:H61	1:w:497:A:C1'	1.81	0.92
1:w:535:C:OP2	1:w:535:C:H6	1.51	0.92
1:w:1294:U:C5'	14:L:26:LYS:HE3	2.00	0.92
1:w:1303:G:N2	1:w:1625:C:O2	2.01	0.92
1:w:2154:G:H2'	1:w:2155:G:C8	2.05	0.92
1:w:2321:G:C2'	1:w:2322:A:H5'	1.98	0.92
7:E:12:TYR:HD2	7:E:12:TYR:N	1.67	0.92
7:E:151:ALA:O	7:E:152:LEU:HB3	1.69	0.92
9:G:120:ILE:CG1	9:G:121:LYS:H	1.79	0.92
9:G:125:GLU:HA	9:G:142:VAL:O	1.69	0.92
10:H:48:ARG:HB3	10:H:48:ARG:NH1	1.85	0.92
15:M:51:ALA:HB3	15:M:73:LEU:HD21	1.49	0.92
16:N:92:GLY:HA2	16:N:115:ARG:N	1.84	0.92
17:O:105:VAL:HA	18:P:43:GLU:CD	1.93	0.92
22:T:120:ILE:HB	22:T:171:ILE:O	1.70	0.92
31:y:137:C:H2'	31:y:138:G:C8	2.04	0.92
31:y:280:C:OP2	31:y:281:G:N7	2.02	0.92
31:y:413:G:O2'	31:y:428:G:N2	2.02	0.92
31:y:1073:U:C2'	31:y:1074:G:H5'	2.00	0.92
31:y:1077:G:C6	31:y:1079:G:H5''	2.04	0.92
31:y:1202:G:N2	47:o:26:ARG:HH12	1.66	0.92
37:e:61:LYS:HD2	37:e:61:LYS:C	1.94	0.92
40:h:31:MET:CG	40:h:32:ARG:H	1.82	0.92
53:u:75:ASN:HD22	53:u:79:ARG:NH1	1.68	0.92
1:w:37:C:H2'	1:w:38:A:C8	2.05	0.92
1:w:729:G:H2'	1:w:729:G:N3	1.82	0.92
1:w:1267:U:O2'	1:w:1268:A:H5'	1.69	0.92
1:w:1334:G:C2'	1:w:1335:U:O4'	2.18	0.92
1:w:2134:A:N1	1:w:2158:A:H1'	1.85	0.92
6:D:120:LEU:HD13	6:D:123:ALA:CB	1.99	0.92
7:E:19:LEU:HD23	7:E:25:TYR:CE2	2.05	0.92
11:I:25:LEU:CD1	11:I:26:LYS:H	1.82	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:5:LYS:CG	14:L:6:SER:H	1.81	0.92
15:M:68:GLN:HA	15:M:71:ARG:HH11	1.31	0.92
16:N:95:ARG:HD2	16:N:96:ARG:NH1	1.85	0.92
24:V:88:LYS:HG3	24:V:89:GLU:H	1.30	0.92
31:y:230:G:C5'	49:q:31:LYS:HZ2	1.83	0.92
31:y:857:C:H2'	31:y:858:G:C8	2.04	0.92
31:y:1303:C:H2'	31:y:1304:G:O4'	1.69	0.92
37:e:118:ARG:HG3	37:e:119:GLN:H	1.32	0.92
38:f:101:ILE:HD12	38:f:119:LEU:HD23	1.52	0.92
41:i:85:ARG:C	41:i:86:ILE:HD12	1.94	0.92
1:w:14:A:N3	1:w:15:G:H1'	1.84	0.92
1:w:53:A:O5'	1:w:53:A:H8	1.53	0.92
1:w:76:C:O2'	1:w:77:C:H5'	1.70	0.92
1:w:1441:G:O3'	1:w:1628:G:H5''	1.69	0.92
1:w:2117:A:H3'	1:w:2118:U:C5'	1.99	0.92
1:w:2615:U:C5	27:Y:7:PRO:HG3	2.04	0.92
1:w:2746:U:H3	1:w:2756:U:H5	1.11	0.92
2:x:7:G:N2	15:M:47:THR:OG1	2.01	0.92
6:D:90:ARG:NH2	6:D:92:TYR:HA	1.84	0.92
7:E:128:ARG:HG2	7:E:129:GLY:H	1.35	0.92
9:G:6:LEU:HD13	9:G:35:LEU:CD2	1.99	0.92
9:G:81:VAL:O	9:G:148:GLU:HG3	1.69	0.92
11:I:102:VAL:O	11:I:122:LEU:O	1.87	0.92
13:K:132:VAL:HG23	13:K:133:ARG:NH2	1.85	0.92
17:O:78:THR:O	17:O:81:HIS:HB3	1.67	0.92
26:X:43:ILE:H	26:X:43:ILE:CD1	1.82	0.92
29:a:32:LEU:HG	29:a:35:GLN:H	1.33	0.92
31:y:370:C:H2'	31:y:371:G:C8	2.04	0.92
31:y:1046:A:H2'	31:y:1047:G:H5'	1.50	0.92
44:l:51:LYS:O	44:l:55:LYS:HG3	1.69	0.92
1:w:64:A:H4'	20:R:63:LYS:HD2	1.48	0.92
1:w:117:G:C4'	1:w:126:A:H2	1.80	0.92
1:w:126:A:N7	1:w:127:A:C6	2.37	0.92
1:w:579:G:C2	1:w:580:C:C2	2.58	0.92
1:w:661:C:H5''	12:J:18:ARG:HH11	1.34	0.92
1:w:1652:A:H2'	1:w:1653:G:H8	1.34	0.92
1:w:1915:U:H3'	1:w:1916:A:H8	1.15	0.92
1:w:2559:C:O2'	1:w:2560:C:H5'	1.70	0.92
1:w:2711:A:H5''	1:w:2712:U:O5'	1.70	0.92
2:x:42:C:H1'	7:E:92:VAL:HG21	1.52	0.92
9:G:133:HIS:HE2	9:G:136:VAL:HB	1.32	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:101:PRO:O	11:I:102:VAL:HG13	1.70	0.92
13:K:11:LYS:CD	13:K:12:GLN:H	1.83	0.92
18:P:18:LEU:O	18:P:98:GLU:HG2	1.69	0.92
31:y:584:G:C4	31:y:585:G:C8	2.57	0.92
31:y:675:A:H3'	31:y:676:A:H5'	1.50	0.92
31:y:945:G:H1	31:y:1236:A:H61	1.10	0.92
31:y:1521:G:O2'	31:y:1522:U:H5'	1.70	0.92
35:c:102:LEU:CD1	35:c:176:GLU:HB2	1.99	0.92
36:d:87:LEU:O	36:d:91:LEU:HD13	1.70	0.92
48:p:55:GLY:O	48:p:58:MET:HG2	1.69	0.92
52:t:36:ARG:O	52:t:37:ARG:HB2	1.67	0.92
1:w:491:G:OP2	1:w:492:A:N6	2.02	0.91
1:w:543:C:O5'	1:w:543:C:H6	1.53	0.91
1:w:1828:G:H8	4:B:222:ARG:HH21	0.98	0.91
1:w:2032:G:OP2	1:w:2455:G:H5'	1.69	0.91
1:w:2187:G:C3'	1:w:2188:C:H5''	2.00	0.91
1:w:2369:A:H2'	1:w:2370:G:H5'	1.50	0.91
6:D:59:ILE:HD11	6:D:73:ILE:CB	1.97	0.91
8:F:98:LEU:HB3	8:F:123:PHE:HE2	1.34	0.91
10:H:26:THR:HG22	10:H:27:TYR:N	1.86	0.91
14:L:37:THR:H	14:L:40:LYS:HZ1	1.16	0.91
17:O:83:LEU:O	17:O:86:ALA:HB3	1.69	0.91
31:y:175:C:H2'	31:y:176:C:C5'	1.96	0.91
31:y:256:U:N3	31:y:270:A:N1	2.17	0.91
31:y:286:G:H2'	31:y:287:U:C6	2.04	0.91
31:y:376:G:H5'	49:q:6:LEU:HD21	1.48	0.91
31:y:750:G:H21	48:p:23:GLY:CA	1.82	0.91
31:y:860:A:H2'	31:y:861:G:H5'	1.52	0.91
31:y:891:U:C2'	31:y:892:A:H8	1.83	0.91
31:y:934:C:C5	31:y:1345:U:H5'	2.05	0.91
31:y:1246:C:H2'	31:y:1247:U:H6	1.29	0.91
31:y:1258:G:H2'	31:y:1259:C:C5	2.03	0.91
31:y:1310:G:O2'	31:y:1311:G:H5'	1.70	0.91
31:y:1320:C:O2'	31:y:1321:C:H5'	1.70	0.91
31:y:1344:C:O2'	42:j:120:ARG:O	1.87	0.91
31:y:1353:G:N2	31:y:1369:C:O2	2.02	0.91
35:c:125:PRO:HA	35:c:128:GLU:CB	1.98	0.91
36:d:125:GLU:HG3	36:d:126:ARG:HD3	1.52	0.91
41:i:122:ARG:HG2	41:i:123:GLU:N	1.83	0.91
45:m:46:LYS:HB3	45:m:47:PRO:CD	1.99	0.91
48:p:18:PHE:HD2	48:p:21:ASP:CA	1.82	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:308:G:H3'	1:w:309:G:C8	2.04	0.91
1:w:489:G:N2	1:w:491:G:C6	2.38	0.91
1:w:788:A:H5''	1:w:789:A:OP1	1.70	0.91
1:w:2016:U:C5'	1:w:2058:A:H5''	2.01	0.91
1:w:2168:G:N2	1:w:2171:A:OP2	2.02	0.91
1:w:2206:C:O2'	1:w:2207:C:H5'	1.70	0.91
1:w:2397:G:H2'	1:w:2398:U:C6	2.05	0.91
1:w:712(B):A:O2'	14:L:13:HIS:CE1	2.23	0.91
1:w:2726:U:HO2'	1:w:2727:G:H8	1.09	0.91
4:B:24:ILE:HA	4:B:91:ARG:HH12	1.33	0.91
8:F:153:LYS:HB2	8:F:154:PRO:HD3	1.50	0.91
8:F:172:LYS:HA	8:F:172:LYS:NZ	1.85	0.91
15:M:75:GLU:HA	15:M:78:LEU:HG	1.50	0.91
16:N:46:GLU:O	16:N:47:GLY:O	1.89	0.91
28:Z:21:ARG:O	28:Z:23:ARG:N	2.02	0.91
29:a:52:LYS:N	29:a:53:PRO:CD	2.32	0.91
31:y:422:C:C4'	31:y:423:G:H5''	2.00	0.91
31:y:1316:G:O4'	31:y:1360:A:C2	2.23	0.91
31:y:1379:G:OP2	40:h:4:ARG:O	1.88	0.91
33:0:41:U:H2'	33:0:42:G:O4'	1.70	0.91
45:m:37:THR:CG2	45:m:56:LYS:HB3	1.99	0.91
53:u:54:LYS:HZ3	53:u:54:LYS:HB3	1.36	0.91
1:w:387:U:H1'	1:w:388:G:C8	2.05	0.91
1:w:459:U:H5'	28:Z:40:TRP:CE3	2.04	0.91
1:w:553:U:O2'	1:w:554:U:H5'	1.70	0.91
1:w:715:G:H4'	48:p:89:GLY:O	1.71	0.91
1:w:778:G:H4'	4:B:48:ARG:HH22	1.25	0.91
1:w:2024:G:H4'	5:C:149:ARG:NH1	1.84	0.91
1:w:2596:U:H2'	1:w:2597:G:C8	2.04	0.91
1:w:2783:G:N2	5:C:37:ARG:HH22	1.66	0.91
1:w:2799:A:H8	1:w:2799:A:OP2	1.53	0.91
1:w:2835:A:H62	1:w:2878:U:C3'	1.83	0.91
3:A:167:ASP:N	3:A:171:ALA:HA	1.83	0.91
7:E:77:ILE:HG23	32:z:56:C:C2	2.05	0.91
7:E:111:LEU:HB2	7:E:112:PRO:HD3	1.49	0.91
13:K:111:GLU:HB2	13:K:115:MET:HG2	1.50	0.91
16:N:113:LYS:HE3	16:N:113:LYS:HA	1.52	0.91
22:T:24:LEU:HG	22:T:40:ASP:C	1.96	0.91
22:T:130:PRO:C	22:T:133:ILE:HG12	1.94	0.91
24:V:22:GLY:HA3	24:V:39:LYS:HB3	1.53	0.91
26:X:22:ALA:HB1	26:X:46:ASN:HB3	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:a:53:PRO:C	29:a:56:GLU:OE1	2.13	0.91
31:y:298:A:H2'	31:y:299:G:C8	2.06	0.91
31:y:411:A:H2'	31:y:412:A:H4'	1.49	0.91
31:y:859:A:H2'	31:y:860:A:H5'	1.52	0.91
31:y:1230:C:H2'	31:y:1231:G:H5'	1.50	0.91
32:z:67:C:O2	32:z:67:C:H2'	1.70	0.91
38:f:79:GLU:HG2	38:f:93:PRO:CD	2.00	0.91
41:i:120:THR:HG23	41:i:123:GLU:CD	1.94	0.91
45:m:33:ARG:HA	45:m:84:ILE:HD11	1.51	0.91
45:m:76:LEU:CD2	45:m:80:SER:HB2	2.01	0.91
1:w:39:C:OP2	1:w:39:C:H6	1.53	0.91
1:w:231:C:O2'	1:w:232:G:H5'	1.71	0.91
1:w:340:A:C2'	1:w:341:G:H5'	2.01	0.91
1:w:469:G:C6	28:Z:39:ARG:NH1	2.37	0.91
1:w:863:A:H2	1:w:914:C:N4	1.69	0.91
1:w:885:C:H2'	1:w:886:C:H5'	1.52	0.91
1:w:1056:G:N2	1:w:1103:A:H62	1.68	0.91
1:w:1161:C:H2'	1:w:1162:G:C8	2.05	0.91
1:w:1173:G:H1'	1:w:1177:A:H62	1.35	0.91
1:w:1287:A:N7	14:L:106:GLY:HA3	1.85	0.91
1:w:2058:A:O5'	1:w:2058:A:C8	2.23	0.91
1:w:2585:U:C5'	32:z:76:A:OP2	2.18	0.91
1:w:2646:C:C2'	1:w:2647:U:H5''	2.00	0.91
2:x:78:A:C2	2:x:99:A:C5	2.58	0.91
9:G:95:LYS:CD	9:G:95:LYS:H	1.83	0.91
17:O:40:PHE:HB3	18:P:78:LYS:HE2	1.49	0.91
18:P:15:GLU:CB	18:P:16:PRO:HD3	2.00	0.91
18:P:96:ILE:HG22	18:P:97:LYS:H	0.74	0.91
21:S:75:ILE:HG23	21:S:76:CYS:H	1.36	0.91
31:y:756:C:C2'	31:y:757:U:H5'	1.99	0.91
31:y:914:A:O2'	31:y:915:A:C5'	2.18	0.91
31:y:1073:U:H2'	31:y:1074:G:C5'	1.99	0.91
31:y:1253:G:H2'	31:y:1254:C:O4'	1.70	0.91
31:y:1299:A:N3	31:y:1299:A:H3'	1.86	0.91
35:c:164:VAL:HG22	35:c:165:VAL:N	1.82	0.91
37:e:121:VAL:HG13	37:e:136:PRO:CG	1.98	0.91
45:m:45:LYS:O	45:m:47:PRO:HD2	1.71	0.91
45:m:85:ARG:HB3	45:m:99:ILE:C	1.95	0.91
49:q:1:MET:HG3	49:q:65:GLN:OE1	1.68	0.91
1:w:488:G:O2'	19:Q:49:LYS:NZ	2.02	0.91
1:w:489:G:H2'	1:w:491:G:C8	2.04	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1315:C:O2	1:w:1392:A:C2	2.24	0.91
1:w:1702:G:C3'	1:w:1703:G:H5''	2.01	0.91
1:w:2741:A:H2'	1:w:2742:C:H5'	1.50	0.91
1:w:2807:G:N1	1:w:2893:G:O6	2.02	0.91
5:C:54:GLN:HG2	5:C:75:VAL:HG21	1.50	0.91
6:D:48:THR:HG23	6:D:49:ARG:H	1.32	0.91
6:D:156:GLU:HA	6:D:159:ARG:HD2	1.51	0.91
8:F:20:ALA:CB	8:F:21:PRO:HD2	2.00	0.91
15:M:75:GLU:HA	15:M:78:LEU:HD12	1.50	0.91
16:N:121:ILE:HG23	16:N:122:ASP:N	1.84	0.91
23:U:28:GLY:HA2	23:U:67:VAL:HG13	1.52	0.91
31:y:5:U:O2'	31:y:6:G:H5''	1.71	0.91
31:y:135:C:H42	31:y:228:A:H61	0.94	0.91
31:y:210:U:O3'	31:y:216:G:H8	1.53	0.91
31:y:724:G:H2'	31:y:725:G:H8	1.35	0.91
36:d:21:ARG:HB3	43:k:92:THR:HG21	1.53	0.91
38:f:37:ARG:HG2	38:f:112:LEU:HA	1.53	0.91
45:m:41:THR:HA	45:m:54:VAL:HG13	1.51	0.91
1:w:35:G:C6	1:w:36:G:C5	2.59	0.91
1:w:357:A:H2'	1:w:358:U:C6	2.06	0.91
1:w:1394:U:H5''	1:w:1603:A:O2'	1.70	0.91
1:w:1920:C:H5''	31:y:1517:G:N9	1.85	0.91
1:w:2030:A:H5'	1:w:2031:A:C8	2.05	0.91
1:w:2176:A:H1'	3:A:45:HIS:ND1	1.84	0.91
1:w:2329:G:H22	23:U:41:ARG:HH22	0.99	0.91
1:w:2602:A:N1	32:z:76:A:H8	1.67	0.91
1:w:2899:G:H8	1:w:2899:G:O5'	1.52	0.91
5:C:31:CYS:O	5:C:49:LEU:HD12	1.70	0.91
7:E:77:ILE:HG13	32:z:56:C:N4	1.85	0.91
8:F:122:THR:C	8:F:134:SER:HB3	1.96	0.91
10:H:32:VAL:HG12	10:H:35:ARG:HH22	1.32	0.91
12:J:35:HIS:CD2	12:J:36:LYS:N	2.38	0.91
12:J:138:LEU:HA	12:J:142:GLY:CA	1.99	0.91
14:L:22:ARG:O	14:L:26:LYS:HB2	1.70	0.91
19:Q:19:LEU:HB2	27:Y:25:LEU:CD2	2.01	0.91
22:T:41:LEU:O	22:T:44:PHE:CD2	2.23	0.91
22:T:56:VAL:HG12	22:T:70:LEU:CD1	2.01	0.91
22:T:152:ALA:HB1	22:T:166:SER:O	1.70	0.91
23:U:28:GLY:CA	23:U:67:VAL:O	2.18	0.91
29:a:14:VAL:CG1	29:a:15:LYS:N	2.32	0.91
31:y:673:G:H2'	31:y:674:G:H8	1.14	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:701:C:H5'	31:y:703:G:C5'	1.98	0.91
31:y:1316:G:C4'	31:y:1360:A:C2	2.53	0.91
40:h:121:ALA:HA	40:h:124:LEU:CD1	2.01	0.91
45:m:96:ARG:O	45:m:97:TYR:CD2	2.23	0.91
50:r:17:LYS:O	50:r:45:HIS:HD2	1.52	0.91
52:t:48:THR:HB	52:t:61:TYR:HA	1.52	0.91
1:w:229:A:H3'	1:w:230:U:H5'	1.51	0.91
1:w:1262:A:H2	27:Y:10:LYS:HZ1	1.15	0.91
1:w:1782:C:C1'	1:w:2609:U:H5''	2.00	0.91
1:w:1789:A:H3'	1:w:1790:C:C5	2.04	0.91
1:w:1945:G:C8	1:w:1945:G:O5'	2.22	0.91
1:w:2080:G:C5'	24:V:23:LYS:HG3	1.98	0.91
1:w:2783:G:H21	5:C:37:ARG:HH22	0.91	0.91
1:w:2785:C:C5'	1:w:2785:C:H6	1.83	0.91
2:x:109:G:C2'	2:x:110:G:O5'	2.19	0.91
5:C:54:GLN:HG2	5:C:75:VAL:CG2	2.00	0.91
7:E:110:ALA:HB2	7:E:142:PRO:HD3	1.52	0.91
10:H:80:ALA:HA	10:H:83:ILE:CD1	2.00	0.91
13:K:35:VAL:HG22	13:K:130:LYS:H	1.33	0.91
13:K:38:GLU:HB2	13:K:127:ILE:CG2	2.01	0.91
14:L:37:THR:OG1	14:L:40:LYS:HE2	1.69	0.91
18:P:13:ARG:HD3	18:P:13:ARG:H	1.34	0.91
31:y:686:U:C1'	31:y:687:A:H5'	2.00	0.91
31:y:889:A:C4'	31:y:890:G:H4'	2.00	0.91
31:y:1012:U:C2'	31:y:1013:G:H5'	2.00	0.91
31:y:1323:G:C2'	31:y:1324:A:C8	2.54	0.91
31:y:1513:A:C6	31:y:1514:C:C5	2.58	0.91
35:c:8:LYS:HE3	35:c:10:LEU:CD2	2.00	0.91
36:d:202:ILE:CG2	36:d:204:LEU:HD11	2.01	0.91
38:f:72:GLN:H	38:f:72:GLN:NE2	1.68	0.91
38:f:95:ALA:O	38:f:117:ASP:HB3	1.69	0.91
40:h:79:ARG:O	40:h:80:VAL:HG23	1.70	0.91
46:n:71:ARG:HA	46:n:74:VAL:HG21	1.53	0.91
50:r:51:TYR:HB3	50:r:57:VAL:HG21	1.51	0.91
1:w:270(B):A:H62	1:w:270(Z):G:H1'	1.32	0.91
1:w:598:G:H1'	12:J:13:ASN:OD1	1.69	0.91
1:w:727:A:OP1	1:w:1432:C:H5''	1.71	0.91
1:w:930:U:H5''	1:w:931:G:OP1	1.71	0.91
1:w:1215:G:C2'	1:w:1216:G:H5'	2.01	0.91
1:w:1529:A:H62	1:w:1542:G:H21	1.08	0.91
1:w:1529:A:H62	1:w:1542:G:N2	1.68	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1699:G:H2'	1:w:1700:A:H5''	1.53	0.91
1:w:1991:U:H2'	1:w:1992:G:H5''	0.92	0.91
1:w:2176:A:O4'	3:A:216:THR:HG21	1.70	0.91
1:w:2303:G:N2	7:E:132:ASN:ND2	2.18	0.91
1:w:2320:A:H1'	1:w:2333:A:N6	1.86	0.91
2:x:74:U:O5'	2:x:74:U:H6	1.51	0.91
3:A:21:TYR:HB2	3:A:26:ALA:HB2	1.51	0.91
14:L:48:VAL:HA	14:L:51:LEU:HD21	1.52	0.91
16:N:24:PRO:CA	16:N:49:VAL:HG11	2.01	0.91
17:O:14:HIS:HD2	17:O:32:PHE:HB2	1.36	0.91
17:O:83:LEU:HD11	17:O:89:GLU:HA	1.50	0.91
17:O:92:ARG:O	17:O:94:ASN:N	2.04	0.91
31:y:5:U:C4	38:f:97:GLY:HA3	2.04	0.91
31:y:140:A:O5'	31:y:140:A:C8	2.23	0.91
31:y:170:U:O2'	31:y:171:A:H5'	1.71	0.91
31:y:362:G:C2'	31:y:364:A:N7	2.33	0.91
31:y:874:G:OP1	31:y:874:G:H3'	1.69	0.91
31:y:1201:A:O2'	31:y:1202:G:H5''	1.70	0.91
31:y:1361:G:O5'	31:y:1361:G:C8	2.24	0.91
37:e:128:VAL:HA	37:e:146:ILE:HD11	1.50	0.91
1:w:96:G:H1'	25:W:41:ILE:HG21	1.53	0.91
1:w:379:G:N2	1:w:396:G:C5	2.38	0.91
1:w:1601:G:O2'	1:w:1602:U:H5'	1.71	0.91
1:w:1657:C:C4	1:w:1658:C:C5	2.59	0.91
1:w:1825:A:C2	1:w:1826:G:N7	2.37	0.91
1:w:1894:C:H2'	1:w:1895:C:C6	2.06	0.91
1:w:2051:A:H2'	1:w:2614:A:C6	2.06	0.91
1:w:2195:C:O2'	1:w:2196:C:H5'	1.71	0.91
4:B:172:TYR:HD1	4:B:187:GLY:H	0.93	0.91
5:C:5:LEU:HD12	5:C:5:LEU:H	1.35	0.91
10:H:77:VAL:HG12	10:H:80:ALA:HB2	1.53	0.91
12:J:101:VAL:HG13	12:J:102:ARG:H	1.32	0.91
23:U:47:PRO:HA	23:U:51:VAL:CG2	2.01	0.91
29:a:5:LYS:O	29:a:6:THR:O	1.87	0.91
31:y:689:C:H5''	44:l:27:ASN:ND2	1.86	0.91
31:y:1089:G:H2'	31:y:1090:U:H5'	1.51	0.91
31:y:1109:C:H2'	31:y:1110:A:O4'	1.71	0.91
35:c:173:ALA:O	35:c:176:GLU:N	2.04	0.91
36:d:152:ILE:O	36:d:152:ILE:HG22	1.70	0.91
37:e:58:LEU:HA	37:e:206:PHE:CZ	2.06	0.91
39:g:4:TYR:OH	39:g:69:GLU:HB3	1.71	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:45:ASP:O	40:h:49:ILE:HG12	1.71	0.91
45:m:42:VAL:H	45:m:52:ARG:NH2	1.68	0.91
1:w:451:C:C2'	1:w:453:C:C5	2.41	0.91
1:w:546:C:H2'	1:w:547:A:O4'	1.71	0.91
1:w:1173:G:O2'	1:w:1177:A:N6	2.04	0.91
1:w:1361:G:H2'	1:w:1362:C:H5''	1.53	0.91
1:w:149(B):A:C1'	1:w:1529:A:H2	1.82	0.91
1:w:1652:A:H2'	1:w:1653:G:C8	2.06	0.91
1:w:2065:C:H2'	1:w:2066:C:H5''	0.91	0.91
1:w:2461:C:H2'	1:w:2462:U:C5	2.06	0.91
1:w:2465:C:H4'	30:b:4:ARG:CZ	2.00	0.91
1:w:2534:A:H2'	1:w:2535:G:H5'	1.53	0.91
3:A:216:THR:HA	3:A:221:PRO:O	1.71	0.91
4:B:185:VAL:CG1	4:B:186:HIS:N	2.33	0.91
5:C:11:MET:HE3	5:C:12:THR:O	1.71	0.91
6:D:56:GLY:H	6:D:73:ILE:HD13	1.36	0.91
18:P:68:LYS:HB3	18:P:94:LEU:HD23	1.51	0.91
24:V:91:LYS:N	24:V:91:LYS:HE3	1.86	0.91
31:y:193:C:O2'	31:y:194:C:C5'	2.18	0.91
31:y:237:C:O2	31:y:238:G:C8	2.24	0.91
31:y:568:G:O6	45:m:4:PRO:HD3	1.70	0.91
31:y:635:G:O2'	31:y:636:U:H5'	1.71	0.91
31:y:885:G:O2'	31:y:886:G:H5'	1.70	0.91
33:0:9:A:H62	33:0:23:A:N6	1.68	0.91
37:e:133:VAL:HG12	37:e:134:ASP:H	1.36	0.91
40:h:64:GLN:HE22	40:h:68:ASN:HB2	1.34	0.91
41:i:24:THR:HG22	41:i:24:THR:O	1.68	0.91
1:w:26:G:HO2'	1:w:1260:G:H4'	1.36	0.90
1:w:123:G:H2'	1:w:124:G:O4'	1.71	0.90
1:w:313:C:H2'	1:w:314:A:C8	2.05	0.90
1:w:528:A:H2	1:w:2042:A:H3'	1.36	0.90
1:w:591:C:O2	1:w:666:G:N2	2.04	0.90
1:w:722:A:H8	1:w:722:A:OP2	1.54	0.90
1:w:817:C:H2'	1:w:818:G:H5'	1.53	0.90
1:w:950:G:H2'	1:w:951:C:C6	2.06	0.90
1:w:1148:A:H3'	1:w:1149:G:C8	2.04	0.90
1:w:1365:A:H5'	24:V:8:SER:N	1.86	0.90
1:w:1534:G:H4'	1:w:1536:A:N1	1.86	0.90
1:w:1637:A:H2'	1:w:1638:C:H6	1.36	0.90
4:B:172:TYR:HB3	4:B:184:LYS:HD3	1.51	0.90
5:C:52:LEU:HD13	5:C:76:ARG:HB2	1.51	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:76:VAL:O	8:F:79:VAL:HG22	1.71	0.90
8:F:114:VAL:HG22	8:F:115:VAL:H	1.35	0.90
9:G:23:PRO:HB2	9:G:27:ARG:NE	1.85	0.90
16:N:108:ARG:HH12	31:y:1431:C:H3'	1.33	0.90
24:V:26:ARG:HG2	24:V:27:GLU:N	1.87	0.90
31:y:268:C:H2'	31:y:269:C:O4'	1.71	0.90
31:y:1157:A:H61	31:y:1178:G:H1'	1.02	0.90
31:y:1196:U:H5'	31:y:1196:U:H6	1.35	0.90
31:y:1326:C:H4'	54:v:19:GLY:HA2	0.91	0.90
31:y:1367:C:C5'	43:k:60:ARG:NH2	2.34	0.90
35:c:97:TRP:HH2	35:c:176:GLU:HG3	1.09	0.90
40:h:111:ARG:HD3	40:h:119:ARG:O	1.71	0.90
45:m:99:ILE:HG13	45:m:100:VAL:H	1.33	0.90
52:t:15:LEU:O	52:t:18:LYS:HB2	1.71	0.90
1:w:35:G:O5'	1:w:35:G:C8	2.24	0.90
1:w:270(X):G:H2'	1:w:270(Y):G:O4'	1.71	0.90
1:w:479:A:H5'	1:w:480:A:C8	2.06	0.90
1:w:1138:G:OP2	1:w:1138:G:H8	1.48	0.90
1:w:1138:G:C4'	10:H:128:GLY:HA3	2.01	0.90
1:w:1746:G:C5	1:w:1747:G:H1'	2.06	0.90
1:w:1932:A:H62	1:w:1968:G:H21	1.19	0.90
1:w:1991:U:N3	1:w:1993:U:O4	2.04	0.90
1:w:2159:G:H3'	1:w:2160:G:H5''	1.53	0.90
1:w:2602:A:H62	32:z:76:A:H5''	1.34	0.90
2:x:63:G:H2'	2:x:64:C:C5'	2.01	0.90
4:B:63:ARG:CZ	4:B:86:PRO:HD3	2.01	0.90
4:B:79:VAL:HA	4:B:95:LEU:CB	1.99	0.90
7:E:120:LEU:CB	7:E:179:PRO:HG2	2.00	0.90
12:J:35:HIS:CD2	12:J:36:LYS:H	1.88	0.90
13:K:23:GLY:H	13:K:99:PRO:HD2	1.24	0.90
20:R:12:VAL:HG22	20:R:13:LEU:HD23	1.49	0.90
21:S:38:ILE:O	21:S:62:GLU:HG2	1.71	0.90
22:T:80:ARG:HD2	22:T:82:ARG:HD3	1.50	0.90
31:y:341:C:C2	31:y:342:C:C5	2.60	0.90
31:y:564:C:C5	31:y:565:U:C5	2.59	0.90
31:y:585:G:O2'	31:y:879:C:O3'	1.89	0.90
31:y:810:C:H2'	31:y:811:C:C6	2.07	0.90
31:y:1053:G:O2'	31:y:1054:C:OP2	1.89	0.90
31:y:1071:C:H2'	31:y:1072:G:C8	2.05	0.90
32:z:32:PSU:O2'	32:z:33:U:H5'	1.71	0.90
33:0:26:G:H2'	33:0:27:C:H5'	1.50	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:54:THR:C	35:c:58:ILE:HG12	1.96	0.90
38:f:72:GLN:CD	38:f:72:GLN:N	2.29	0.90
38:f:93:PRO:HG2	41:i:105:ARG:HD3	1.51	0.90
44:l:83:ILE:HG12	44:l:109:VAL:HB	1.54	0.90
48:p:57:LEU:C	48:p:57:LEU:HD13	1.96	0.90
50:r:11:VAL:HG22	50:r:21:VAL:HA	1.53	0.90
51:s:82:THR:HG23	51:s:83:GLU:N	1.84	0.90
1:w:668:G:H2'	1:w:670:A:N7	1.86	0.90
1:w:819:A:H62	1:w:1188:U:H3	1.13	0.90
1:w:970:C:H2'	1:w:971:C:H6	1.36	0.90
4:B:27:THR:O	4:B:29:PRO:HD2	1.71	0.90
9:G:124:GLY:HA2	9:G:144:VAL:CB	2.01	0.90
10:H:36:TRP:O	10:H:37:VAL:HG23	1.70	0.90
13:K:23:GLY:CA	13:K:98:LYS:HB3	1.99	0.90
16:N:31:SER:HB2	16:N:43:GLN:O	1.71	0.90
22:T:19:ARG:HH21	22:T:25:PRO:HB2	1.37	0.90
31:y:64:G:N2	31:y:68:G:O6	2.03	0.90
31:y:156:G:C3'	31:y:157:G:H5''	2.00	0.90
31:y:781:A:N6	31:y:801:U:H3	1.68	0.90
31:y:1207:2MG:C2'	31:y:1208:C:C5	2.55	0.90
36:d:124:ILE:HD13	36:d:128:PHE:CB	1.99	0.90
37:e:100:ARG:CZ	37:e:137:SER:HA	2.01	0.90
37:e:142:PRO:HA	37:e:185:PHE:CD2	2.05	0.90
43:k:48:THR:HG23	43:k:62:HIS:CG	2.07	0.90
48:p:32:LEU:O	48:p:36:ILE:HG12	1.70	0.90
54:v:18:TYR:HA	54:v:22:ARG:HD2	1.54	0.90
1:w:1124:C:H3'	1:w:1125:G:H8	1.31	0.90
1:w:2060:A:P	6:D:64:HIS:HA	2.10	0.90
1:w:2080:G:N3	1:w:2081:C:C5	2.39	0.90
1:w:2084:C:C4	1:w:2085:C:C5	2.58	0.90
1:w:2239:G:N3	1:w:2239:G:H2'	1.86	0.90
1:w:2655:G:O4'	1:w:2655:G:OP2	1.90	0.90
1:w:2795:G:C4	1:w:2799:A:OP1	2.24	0.90
2:x:42:C:H2'	2:x:43:C:C6	2.05	0.90
4:B:25:THR:OG1	4:B:27:THR:HG23	1.71	0.90
6:D:149:VAL:C	6:D:150:LEU:HD22	1.96	0.90
10:H:151:HIS:NE2	10:H:154:GLN:HB2	1.87	0.90
11:I:6:THR:HG22	11:I:7:TYR:N	1.86	0.90
20:R:82:GLN:HG3	20:R:83:VAL:N	1.85	0.90
31:y:295:C:O2'	31:y:296:U:H5'	1.71	0.90
31:y:408:A:H2'	31:y:409:G:H8	1.34	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:936:C:C1'	31:y:1383:C:N4	2.29	0.90
31:y:1275:A:C2'	31:y:1276:G:H5'	2.02	0.90
31:y:1281:U:C5'	31:y:1282:C:C5	2.46	0.90
31:y:1387:G:H2'	31:y:1388:C:C5'	2.01	0.90
37:e:17:VAL:C	37:e:19:LEU:H	1.79	0.90
37:e:100:ARG:NH2	37:e:137:SER:HB3	1.87	0.90
1:w:128:C:H5''	1:w:128:C:H6	1.36	0.90
1:w:494:G:H5''	19:Q:8:ARG:NH2	1.87	0.90
1:w:918:A:C5	1:w:919:G:H1'	2.07	0.90
1:w:936:C:O2'	1:w:937:U:H5'	1.72	0.90
1:w:1284:A:H2	19:Q:45:TYR:HH	0.95	0.90
1:w:1818:U:H3'	4:B:155:LEU:HD21	1.52	0.90
1:w:1825:A:C1'	4:B:254:THR:HG21	1.97	0.90
1:w:2369:A:O2'	1:w:2370:G:H5'	1.70	0.90
2:x:113:C:C2'	15:M:47:THR:HG22	2.01	0.90
4:B:25:THR:HB	4:B:82:ILE:O	1.72	0.90
8:F:124:GLU:HB2	8:F:132:ARG:HG2	1.52	0.90
9:G:13:GLY:HA2	9:G:17:GLN:CG	2.01	0.90
10:H:40:ASP:CG	10:H:77:VAL:HG13	1.95	0.90
11:I:8:LEU:HD13	11:I:82:ASN:CB	2.01	0.90
11:I:17:ARG:CZ	11:I:47:ILE:HB	2.01	0.90
13:K:51:ARG:NH1	13:K:52:VAL:N	2.19	0.90
14:L:40:LYS:HD3	14:L:40:LYS:N	1.86	0.90
17:O:88:ILE:HD13	18:P:53:GLU:HA	1.51	0.90
22:T:69:THR:CG2	22:T:89:PHE:O	2.19	0.90
26:X:8:LEU:O	26:X:9:VAL:HG22	1.70	0.90
31:y:118:U:C6	31:y:288:A:N6	2.39	0.90
31:y:234:C:O4'	50:r:64:PRO:HG2	1.71	0.90
31:y:843:U:H5'	31:y:848:C:C5	2.07	0.90
31:y:1206:G:H8	31:y:1206:G:O5'	1.53	0.90
32:z:2:C:O5'	32:z:2:C:H6	1.55	0.90
35:c:63:MET:HA	35:c:226:ARG:NH2	1.86	0.90
39:g:51:PRO:HA	39:g:56:PRO:CA	2.00	0.90
44:l:121:PRO:C	44:l:122:LYS:HE2	1.97	0.90
45:m:42:VAL:HG22	45:m:43:THR:N	1.86	0.90
45:m:87:GLY:H	45:m:97:TYR:HA	1.35	0.90
1:w:918:A:H4'	2:x:97:G:N2	1.85	0.90
1:w:1443:G:C2'	1:w:1444:G:H8	1.81	0.90
1:w:2230:G:H2'	1:w:2231:C:H6	1.37	0.90
7:E:61:ALA:O	7:E:64:THR:HG22	1.71	0.90
7:E:137:GLU:OE2	7:E:140:ILE:HG12	1.72	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:153:LYS:HB2	8:F:154:PRO:CD	2.01	0.90
11:I:65:THR:HB	11:I:82:ASN:ND2	1.86	0.90
11:I:88:ASN:H	11:I:93:PRO:HA	1.34	0.90
14:L:45:ARG:CG	14:L:46:GLY:H	1.80	0.90
15:M:39:ILE:HD11	15:M:49:VAL:CG2	1.99	0.90
20:R:11:PRO:HG3	20:R:28:PHE:HD2	1.36	0.90
31:y:298:A:C2	31:y:299:G:C5	2.60	0.90
31:y:602:A:O2'	31:y:603:U:H5'	1.70	0.90
31:y:663:A:H2'	31:y:664:G:H5'	1.51	0.90
31:y:961:U:C2'	31:y:962:C:H5'	2.02	0.90
1:w:43:G:C8	1:w:43:G:OP2	2.25	0.90
1:w:800:A:H2'	1:w:800:A:N3	1.82	0.90
1:w:1153:C:C2'	1:w:1154:G:H5'	2.02	0.90
1:w:1279:G:H5''	14:L:34:ILE:HG23	1.52	0.90
1:w:1318:C:C4	1:w:1319:G:C8	2.60	0.90
1:w:1448:G:H2'	1:w:149(B):A:C8	2.07	0.90
1:w:1614:A:N6	19:Q:91:GLY:H	1.69	0.90
1:w:1669:A:C2'	1:w:1670:C:H5''	2.00	0.90
1:w:2055:C:H5'	1:w:2056:G:O5'	1.71	0.90
1:w:2527:C:H2'	1:w:2528:U:H6	1.30	0.90
1:w:2694:G:C2'	1:w:2695:C:C5'	2.49	0.90
1:w:2773:C:H5''	5:C:164:ARG:HB3	1.53	0.90
1:w:2818:G:C6	1:w:2819:G:N7	2.39	0.90
1:w:2838:G:O2'	1:w:2839:G:H5'	1.70	0.90
2:x:35:U:O2'	2:x:36:C:H5'	1.72	0.90
4:B:65:ILE:CD1	4:B:105:ILE:HA	2.01	0.90
4:B:263:ARG:H	4:B:263:ARG:HE	1.15	0.90
9:G:77:LEU:HB3	9:G:142:VAL:CG2	2.01	0.90
11:I:98:VAL:CG2	11:I:99:PHE:H	1.84	0.90
13:K:46:GLN:NE2	13:K:125:LEU:CD2	2.35	0.90
26:X:9:VAL:HG12	26:X:32:GLN:HA	1.53	0.90
31:y:497:U:H2'	31:y:498:A:C5'	1.99	0.90
31:y:505:G:H4'	31:y:534:U:N3	1.85	0.90
31:y:562:C:H5''	31:y:563:A:OP1	1.72	0.90
31:y:1015:A:H2'	31:y:1016:A:O4'	1.71	0.90
31:y:1077:G:H22	31:y:1079:G:H3'	1.32	0.90
36:d:123:GLN:NE2	36:d:124:ILE:HG12	1.87	0.90
37:e:172:PRO:HB2	37:e:193:ASP:OD1	1.71	0.90
37:e:187:ARG:CG	37:e:187:ARG:HH11	1.85	0.90
40:h:12:LEU:HD22	40:h:28:ASN:HD21	1.34	0.90
1:w:1051:G:H2'	1:w:1052:C:C6	2.07	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1200:C:C2'	1:w:1201:C:H5''	2.00	0.90
1:w:1656:C:O2'	1:w:1657:C:H5'	1.72	0.90
1:w:1759:A:H2	1:w:1760:A:N7	1.69	0.90
1:w:1913:A:H62	31:y:1494:G:H1'	1.36	0.90
1:w:2239:G:OP2	4:B:232:PRO:HB3	1.72	0.90
1:w:2271:G:H5''	23:U:20:ARG:HG3	1.54	0.90
1:w:2471:C:H2'	1:w:2472:G:O4'	1.72	0.90
1:w:2517:C:O2'	1:w:2518:A:H2'	1.72	0.90
1:w:2828:C:C4	1:w:2829:C:C4	2.60	0.90
3:A:223:VAL:HG12	3:A:224:ARG:N	1.86	0.90
5:C:59:VAL:HG11	5:C:63:LEU:HD12	1.54	0.90
7:E:51:ARG:O	7:E:54:GLU:HG3	1.71	0.90
16:N:35:LYS:HG2	16:N:38:ASN:ND2	1.87	0.90
21:S:33:LYS:HB2	21:S:65:ALA:HB1	1.51	0.90
22:T:111:VAL:HA	22:T:115:GLY:H	1.35	0.90
31:y:50:A:N6	31:y:361:G:H4'	1.87	0.90
31:y:479:C:H3'	31:y:480:U:C6	2.05	0.90
31:y:521:G:C6	45:m:48:ASN:ND2	2.40	0.90
31:y:714:G:H8	31:y:714:G:O5'	1.55	0.90
31:y:1332:A:H2'	31:y:1333:A:O4'	1.71	0.90
31:y:1479:C:H2'	31:y:1480:G:H8	1.37	0.90
37:e:108:LEU:HB3	37:e:110:PHE:CE1	2.07	0.90
44:l:59:TYR:CE1	44:l:63:LEU:HD21	2.07	0.90
53:u:26:ASN:O	53:u:30:LYS:HG3	1.72	0.90
1:w:182:A:C2	1:w:433:C:H1'	2.07	0.90
1:w:261:G:H4'	1:w:609(A):A:H2	1.15	0.90
1:w:648:G:C4'	1:w:2351:G:H4'	2.02	0.90
1:w:743:G:H5''	5:C:131:ALA:O	1.71	0.90
1:w:957:A:C2	1:w:2458:G:H5''	2.06	0.90
1:w:962:G:C2'	1:w:963:U:H5''	2.02	0.90
1:w:1500:G:O2'	4:B:101:GLU:HA	1.70	0.90
1:w:1753:G:N9	1:w:1755:A:OP2	2.05	0.90
1:w:1830:C:C2	1:w:1831:G:C8	2.58	0.90
1:w:2488:A:H2'	1:w:2489:G:O4'	1.69	0.90
1:w:2820:A:H4'	5:C:109:LYS:NZ	1.87	0.90
1:w:2863:C:C2'	1:w:2864:G:H5''	2.02	0.90
1:w:2900:A:H3'	1:w:2901:C:H5''	1.54	0.90
6:D:105:LEU:O	6:D:109:VAL:HG22	1.70	0.90
13:K:51:ARG:O	13:K:55:VAL:HG23	1.72	0.90
31:y:242:C:O2'	31:y:243:A:H5'	1.72	0.90
31:y:303:A:C4	31:y:304:U:C6	2.59	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:562:C:O2	31:y:562:C:H2'	1.69	0.90
31:y:899:C:H3'	31:y:900:A:C8	2.05	0.90
31:y:1235:U:H4'	54:v:3:LYS:HB3	1.54	0.90
31:y:1334:G:OP2	31:y:1334:G:C8	2.24	0.90
31:y:1374:A:C2'	31:y:1375:A:C5'	2.48	0.90
36:d:110:ASN:HD22	36:d:141:VAL:HA	1.35	0.90
41:i:24:THR:HG22	41:i:61:VAL:HG23	1.53	0.90
1:w:465:G:H22	1:w:794:G:H22	1.18	0.90
1:w:787:U:H3'	1:w:791:C:N4	1.86	0.90
1:w:1115:G:H2'	1:w:1116:C:C6	2.07	0.90
1:w:1136:G:H2'	1:w:1137:G:H8	1.16	0.90
1:w:1303:G:O2'	1:w:1642:G:O2'	1.90	0.90
1:w:1413:G:H2'	1:w:1414:G:O4'	1.70	0.90
1:w:1431:U:H2'	1:w:1432:C:C5'	2.02	0.90
1:w:2083:G:N1	1:w:2084:C:N4	2.20	0.90
1:w:2163:C:H2'	1:w:2164:C:O4'	1.72	0.90
1:w:2461:C:H6	1:w:2461:C:O5'	1.55	0.90
1:w:2722:G:H5''	14:L:4:LEU:CD1	2.00	0.90
9:G:94:ALA:O	9:G:97:ILE:HG23	1.72	0.90
9:G:113:ARG:CB	9:G:132:PRO:HA	1.96	0.90
14:L:39:PRO:HB2	14:L:40:LYS:HD3	1.54	0.90
21:S:80:GLY:O	21:S:97:ARG:HG3	1.71	0.90
22:T:150:LEU:HD12	22:T:171:ILE:HD11	1.54	0.90
23:U:50:ASN:HB2	23:U:81:VAL:CB	2.02	0.90
26:X:47:VAL:O	26:X:50:VAL:HG22	1.71	0.90
27:Y:29:ILE:O	27:Y:30:LEU:HB2	1.71	0.90
31:y:246:A:H62	31:y:281:G:H21	1.20	0.90
31:y:286:G:H2'	31:y:287:U:H6	1.36	0.90
31:y:422:C:H5'	31:y:423:G:C5	2.07	0.90
31:y:667:G:H2'	31:y:668:G:C8	2.07	0.90
31:y:1188:A:H1'	47:o:60:SER:HB2	1.54	0.90
31:y:1348:U:H3	31:y:1374:A:H8	1.20	0.90
31:y:1435:G:H2'	31:y:1436:U:C5	2.06	0.90
33:0:30:G:N2	40:h:144:MET:HE1	1.86	0.90
33:0:56:C:O2'	33:0:57:G:OP1	1.88	0.90
46:n:95:GLY:HA3	46:n:111:LYS:HG3	1.54	0.90
48:p:54:ARG:O	48:p:57:LEU:HB3	1.71	0.90
49:q:43:LYS:HE2	49:q:43:LYS:N	1.87	0.90
52:t:5:LEU:HD12	52:t:9:VAL:HA	1.53	0.90
1:w:412:A:N6	1:w:2411:A:N3	2.19	0.89
1:w:585:G:H3'	1:w:1251:C:H42	1.10	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1131:G:O2'	1:w:1132:A:C8	2.24	0.89
1:w:1412:A:H2	1:w:1590:U:O2	1.53	0.89
1:w:1746:G:C3'	1:w:1747:G:H4'	2.02	0.89
1:w:2310:A:C2	7:E:81:LYS:HE2	2.06	0.89
1:w:2349:G:H8	29:a:42:ARG:HH22	1.17	0.89
1:w:2585:U:H4'	1:w:2586:C:C5'	2.03	0.89
4:B:16:MET:HG3	4:B:206:LEU:O	1.70	0.89
4:B:157:ARG:HA	4:B:196:VAL:HG21	1.50	0.89
8:F:118:PRO:CD	8:F:121:ILE:HB	2.02	0.89
9:G:25:TYR:HB3	9:G:30:LEU:HD12	1.52	0.89
12:J:41:ARG:HA	12:J:45:LEU:HG	1.54	0.89
22:T:85:HIS:HD2	22:T:86:VAL:N	1.69	0.89
27:Y:13:LYS:O	27:Y:16:ARG:CB	2.20	0.89
30:b:13:LYS:HB2	30:b:27:CYS:HB2	1.52	0.89
31:y:247:G:OP2	50:r:99:SER:HB3	1.71	0.89
31:y:438:G:H4'	37:e:123:HIS:NE2	1.87	0.89
31:y:738:C:C4	31:y:739:C:N4	2.40	0.89
31:y:894:G:N3	31:y:894:G:H2'	1.87	0.89
31:y:1329:A:H5''	46:n:26:GLY:HA3	1.49	0.89
31:y:1435:G:C4	31:y:1436:U:C5	2.60	0.89
36:d:149:ALA:HA	36:d:201:TYR:O	1.72	0.89
37:e:9:CYS:CA	37:e:26:CYS:SG	2.59	0.89
1:w:227:A:N6	1:w:410:G:H1'	1.87	0.89
1:w:533:G:O2'	17:O:42:ALA:HB2	1.71	0.89
1:w:666:G:H5''	12:J:49:ARG:CB	2.02	0.89
1:w:776:G:H4'	1:w:777:A:H5''	1.54	0.89
1:w:872:A:H2	1:w:905:U:H3	0.93	0.89
1:w:989:G:OP1	26:X:31:LEU:HD21	1.70	0.89
1:w:1136:G:C2'	1:w:1137:G:H8	1.76	0.89
1:w:1797:C:O2'	4:B:259:THR:HB	1.71	0.89
1:w:1858:G:H22	1:w:1883:G:H3'	1.37	0.89
1:w:1897:G:H2'	1:w:1898:U:C5'	2.02	0.89
1:w:1904:G:O2'	1:w:1905:C:H5'	1.72	0.89
1:w:2669:G:H2'	1:w:2670:A:H1'	1.51	0.89
2:x:93:C:H2'	2:x:94:C:C6	2.08	0.89
3:A:60:ARG:HA	3:A:164:PHE:O	1.72	0.89
11:I:78:ARG:CB	16:N:73:GLU:HB2	2.03	0.89
18:P:84:LYS:HE3	18:P:84:LYS:HA	1.53	0.89
19:Q:88:ARG:NH1	19:Q:92:ARG:O	2.04	0.89
20:R:12:VAL:HG13	20:R:13:LEU:N	1.83	0.89
22:T:102:LEU:HD13	22:T:123:ASP:C	1.98	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:227:G:C6	31:y:228:A:N7	2.39	0.89
31:y:372:C:O2	31:y:389:A:N6	2.04	0.89
31:y:558:G:C2'	31:y:559:A:C2	2.44	0.89
31:y:582:U:C5'	48:p:68:ARG:HH12	1.85	0.89
31:y:663:A:H2	31:y:742:G:H22	1.20	0.89
31:y:683:G:H21	44:l:39:PRO:HG3	1.37	0.89
31:y:1067:A:O2'	31:y:1068:G:C4'	2.20	0.89
31:y:1431:C:O2'	31:y:1432:G:H5'	1.72	0.89
35:c:61:LEU:HD12	35:c:64:ARG:NH2	1.87	0.89
40:h:134:ALA:O	40:h:137:LYS:HB2	1.72	0.89
40:h:149:ARG:C	44:l:59:TYR:HB2	1.96	0.89
1:w:45:G:N2	1:w:433:C:O2	2.06	0.89
1:w:315:G:H2'	1:w:316:C:O4'	1.70	0.89
1:w:865:C:OP2	1:w:865:C:H6	1.54	0.89
1:w:980:A:C2	1:w:2037:G:O2'	2.25	0.89
1:w:1225:G:H1'	18:P:86:GLY:O	1.73	0.89
1:w:2283:C:H2'	1:w:2284:C:C6	2.08	0.89
1:w:2594:C:H2'	1:w:2595:G:H8	1.35	0.89
4:B:140:THR:OG1	4:B:165:ILE:HD13	1.72	0.89
5:C:59:VAL:HG21	5:C:63:LEU:CA	2.02	0.89
5:C:144:ARG:HB3	5:C:144:ARG:NH1	1.85	0.89
7:E:173:LEU:O	7:E:178:PHE:HD1	1.55	0.89
11:I:19:ILE:HG22	11:I:44:LYS:H	1.35	0.89
11:I:41:ALA:N	11:I:57:VAL:HG13	1.87	0.89
14:L:38:VAL:HG12	14:L:39:PRO:CD	1.99	0.89
14:L:44:LEU:HD22	14:L:47:PHE:HE2	1.37	0.89
15:M:69:VAL:O	15:M:73:LEU:HD13	1.71	0.89
24:V:88:LYS:CG	24:V:89:GLU:H	1.85	0.89
29:a:14:VAL:CG1	29:a:15:LYS:H	1.85	0.89
31:y:36:C:C2'	31:y:37:U:C5	2.55	0.89
31:y:251:G:N2	31:y:254:G:O6	2.05	0.89
31:y:1238:A:N7	31:y:1301:U:O2	2.05	0.89
31:y:1312:G:H2'	31:y:1313:U:C5'	2.02	0.89
31:y:1443:G:H4'	31:y:1446:A:H5'	0.91	0.89
36:d:130:VAL:O	36:d:134:ILE:HG12	1.72	0.89
40:h:12:LEU:HD22	40:h:28:ASN:ND2	1.86	0.89
41:i:88:LYS:C	41:i:92:ARG:HH12	1.80	0.89
43:k:99:LYS:HD3	43:k:100:THR:N	1.85	0.89
45:m:42:VAL:C	45:m:52:ARG:NH2	2.29	0.89
1:w:207:A:H2'	1:w:208:C:O4'	1.73	0.89
1:w:1259:G:C2'	1:w:1260:G:C8	2.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1345:C:H2'	1:w:1346:G:H8	1.37	0.89
1:w:1378:A:N6	1:w:1570:A:C2	2.39	0.89
1:w:1627:G:O2'	1:w:1628:G:H8	1.55	0.89
1:w:1945:G:O2'	1:w:1946:U:H5'	1.72	0.89
1:w:2299:G:N2	1:w:2317:C:O2	2.05	0.89
1:w:2467:C:H2'	1:w:2468:G:C8	2.07	0.89
1:w:2589:A:C6	1:w:2590:A:N7	2.40	0.89
5:C:91:VAL:HG13	5:C:95:ILE:CD1	2.02	0.89
14:L:113:LEU:HD11	14:L:115:GLU:HG2	1.52	0.89
22:T:69:THR:CG2	22:T:70:LEU:H	1.86	0.89
22:T:155:LEU:CD1	22:T:156:LYS:H	1.85	0.89
23:U:41:ARG:HD3	23:U:42:GLY:N	1.87	0.89
31:y:89:U:H2'	31:y:90:C:H6	1.32	0.89
31:y:113:G:H2'	31:y:114:U:H6	1.34	0.89
31:y:685:G:O2'	31:y:686:U:C5'	2.20	0.89
31:y:1014:A:C2'	31:y:1015:A:H5'	2.01	0.89
31:y:1348:U:N3	31:y:1374:A:C8	2.40	0.89
31:y:1353:G:H2'	31:y:1354:C:C6	2.08	0.89
36:d:64:VAL:HB	36:d:99:VAL:HG12	1.52	0.89
40:h:23:VAL:HG22	40:h:62:PHE:HE2	1.34	0.89
40:h:24:THR:O	40:h:27:ILE:HG22	1.72	0.89
44:l:85:ARG:HA	44:l:111:ASP:O	1.73	0.89
46:n:97:PRO:HB3	46:n:109:THR:HG21	1.55	0.89
50:r:87:LYS:HD3	50:r:87:LYS:C	1.97	0.89
1:w:410:G:OP1	1:w:411:G:C5'	2.20	0.89
1:w:599:G:C4'	6:D:27:LEU:HD12	2.00	0.89
1:w:979:G:H5''	1:w:980:A:H5''	1.54	0.89
1:w:1304:C:H2'	1:w:1305:C:H5''	0.90	0.89
1:w:1429:G:H1'	1:w:1568:G:N3	1.86	0.89
1:w:2061:G:OP1	6:D:63:LYS:NZ	2.06	0.89
1:w:2296:U:O2'	1:w:2297:C:C6	2.17	0.89
1:w:2419:U:C5	29:a:31:HIS:CB	2.55	0.89
1:w:2585:U:H5'	32:z:76:A:OP2	1.71	0.89
1:w:2680:C:P	5:C:189:PRO:HB3	2.13	0.89
1:w:2697:G:O2'	1:w:2698:U:H5'	1.73	0.89
2:x:102:G:C3'	2:x:103:U:H5''	2.03	0.89
3:A:8:TYR:CB	3:A:12:LEU:HD13	2.02	0.89
6:D:96:LEU:HB3	6:D:97:PRO:CD	2.03	0.89
9:G:124:GLY:CA	9:G:144:VAL:HG23	2.01	0.89
9:G:127:VAL:HA	9:G:141:LYS:HE3	1.53	0.89
10:H:90:LEU:HA	10:H:110:LEU:HB2	1.52	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:59:LYS:HB3	11:I:94:ARG:HH12	1.36	0.89
17:O:55:ARG:HA	17:O:58:ARG:HD2	1.53	0.89
31:y:531:U:H4'	31:y:532:A:H5'	1.55	0.89
31:y:781:A:H62	31:y:801:U:H3	0.92	0.89
31:y:1013:G:H1'	31:y:1016:A:C2	2.08	0.89
31:y:1061:G:H2'	31:y:1062:U:C5	2.06	0.89
31:y:1209:C:O2'	31:y:1210:C:H5'	1.71	0.89
32:z:1:G:N3	32:z:1:G:H2'	1.87	0.89
40:h:101:LEU:HA	40:h:104:LEU:HD23	1.53	0.89
45:m:40:ARG:HH21	45:m:54:VAL:CG2	1.82	0.89
47:o:40:CYS:SG	47:o:42:ILE:HB	2.13	0.89
1:w:54:G:H21	1:w:126:A:H61	1.20	0.89
1:w:149:A:H2'	1:w:150:C:C5'	2.02	0.89
1:w:633:A:C8	1:w:633:A:O5'	2.26	0.89
1:w:707:G:H2'	1:w:708:C:C6	2.08	0.89
1:w:713:G:H1'	1:w:718:A:H61	1.36	0.89
1:w:789:A:OP1	1:w:790:C:N4	2.05	0.89
1:w:817:C:H5'	1:w:932:G:N1	1.86	0.89
1:w:970:C:H2'	1:w:971:C:C6	2.07	0.89
1:w:1298:C:N4	1:w:1643:G:N1	2.21	0.89
1:w:1421:G:OP2	1:w:1421:G:C8	2.25	0.89
1:w:2552:U:H5''	1:w:2552:U:H6	1.38	0.89
1:w:2620:C:H2'	1:w:2621:A:H8	1.30	0.89
4:B:185:VAL:CG1	4:B:186:HIS:H	1.86	0.89
9:G:125:GLU:N	9:G:143:SER:HA	1.86	0.89
11:I:111:PHE:CB	11:I:114:ILE:HD11	2.02	0.89
14:L:37:THR:N	14:L:40:LYS:HZ1	1.71	0.89
23:U:23:VAL:HA	23:U:38:VAL:HG22	1.54	0.89
23:U:47:PRO:HA	23:U:51:VAL:HG21	1.52	0.89
26:X:2:PRO:HB2	26:X:39:ASP:OD2	1.70	0.89
26:X:50:VAL:O	26:X:53:LEU:HD23	1.73	0.89
31:y:99:C:H2'	31:y:101:A:N7	1.87	0.89
31:y:222:U:H2'	31:y:223:U:H4'	1.54	0.89
31:y:342:C:N4	31:y:348:G:N1	2.21	0.89
31:y:583:A:H3'	31:y:584:G:C8	2.07	0.89
31:y:611:A:H2	31:y:629:G:H22	1.13	0.89
31:y:918:A:H2'	31:y:919:A:O4'	1.73	0.89
31:y:1402:4OC:C2'	31:y:1403:C:C6	2.55	0.89
33:O:14:A:N6	33:O:21:A:C2	2.41	0.89
37:e:22:LYS:N	37:e:26:CYS:HB2	1.87	0.89
41:i:52:ASP:HA	41:i:58:TYR:H	1.37	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:69:ARG:HG3	41:i:70:GLN:N	1.88	0.89
43:k:31:GLY:HA3	43:k:81:THR:N	1.88	0.89
1:w:38:A:O2'	6:D:43:THR:HB	1.72	0.89
1:w:598:G:H8	1:w:598:G:O5'	1.56	0.89
1:w:958:U:C2	13:K:18:LYS:HE2	2.07	0.89
1:w:1175:U:H2'	1:w:1176:G:H8	1.35	0.89
1:w:1439:A:H62	1:w:1552:G:H21	0.90	0.89
1:w:1620:G:H4'	28:Z:2:LYS:HZ1	1.37	0.89
1:w:1815:A:H5'	1:w:1817:G:C1'	2.03	0.89
1:w:2175:C:H2'	1:w:2176:A:C5'	2.03	0.89
1:w:2520:C:O2'	1:w:2521:C:H5'	1.73	0.89
1:w:2654:A:O4'	1:w:2656:U:H5	1.53	0.89
5:C:51:PHE:CD1	5:C:52:LEU:HD12	2.07	0.89
7:E:91:ARG:HD2	7:E:91:ARG:C	1.95	0.89
13:K:39:PRO:HB3	13:K:99:PRO:HG3	0.95	0.89
19:Q:11:ARG:HA	19:Q:100:THR:HG22	1.52	0.89
22:T:137:ILE:HG12	22:T:138:GLU:N	1.85	0.89
24:V:85:LEU:HD13	24:V:87:PRO:CD	2.02	0.89
31:y:32:A:H5''	31:y:398:C:O2'	1.72	0.89
31:y:918:A:H2'	31:y:919:A:C8	2.06	0.89
35:c:130:ARG:HB3	35:c:131:PRO:HD3	1.55	0.89
36:d:124:ILE:HD11	36:d:133:ALA:HB3	1.53	0.89
1:w:1341:U:O2'	1:w:1342:A:H5'	1.73	0.89
1:w:1686:C:H2'	1:w:1687:G:C5'	2.03	0.89
1:w:2009:G:H4'	19:Q:41:LYS:CG	2.02	0.89
1:w:2009:G:H5'	19:Q:41:LYS:CE	2.03	0.89
1:w:2083:G:H8	1:w:2083:G:P	1.96	0.89
1:w:2226:C:OP2	1:w:2226:C:H6	1.55	0.89
6:D:55:SER:HB2	6:D:73:ILE:HG23	1.54	0.89
7:E:137:GLU:O	7:E:138:GLN:HG3	1.71	0.89
12:J:50:ARG:NH1	12:J:57:THR:HB	1.88	0.89
12:J:95:VAL:O	12:J:125:VAL:HA	1.73	0.89
15:M:35:ILE:CD1	15:M:69:VAL:HB	2.03	0.89
31:y:36:C:H2'	31:y:37:U:H5	1.36	0.89
31:y:129(B):G:O2'	31:y:189:U:C2'	2.18	0.89
31:y:451:A:C6	31:y:480:U:H2'	2.06	0.89
31:y:529:G:N1	45:m:48:ASN:CG	2.31	0.89
31:y:546:G:O4'	31:y:548:G:O2'	1.87	0.89
31:y:564:C:C4	31:y:565:U:C4	2.61	0.89
31:y:691:G:O6	44:l:52:GLY:CA	2.19	0.89
35:c:121:LEU:HD23	35:c:126:GLU:HG3	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:8:VAL:C	37:e:12:CYS:HG	1.80	0.89
37:e:204:ILE:HG13	37:e:205:GLU:H	1.36	0.89
39:g:6:VAL:HG22	39:g:63:TYR:N	1.87	0.89
44:l:110:ASP:CB	51:s:85:LEU:HD13	2.02	0.89
50:r:60:ILE:HG12	50:r:61:GLU:O	1.73	0.89
1:w:603:A:H4'	1:w:604:G:C4'	2.02	0.89
1:w:769:G:H2'	1:w:770:G:H8	1.36	0.89
1:w:2286:A:C5'	1:w:2287:A:O5'	2.21	0.89
1:w:2575:C:H5'	5:C:144:ARG:HD2	1.52	0.89
1:w:2841:C:O2'	1:w:2842:G:H5'	1.71	0.89
2:x:66:A:C6	2:x:108:C:H1'	2.08	0.89
6:D:56:GLY:N	6:D:73:ILE:HD13	1.87	0.89
10:H:113:MET:SD	10:H:121:VAL:HG22	2.13	0.89
12:J:50:ARG:HD3	12:J:51:PHE:N	1.87	0.89
15:M:35:ILE:CD1	15:M:66:ALA:HA	2.03	0.89
17:O:84:LYS:CD	17:O:89:GLU:HG2	2.03	0.89
31:y:49:U:H2'	31:y:49:U:O2	1.71	0.89
31:y:237:C:H2'	31:y:238:G:H8	1.36	0.89
31:y:422:C:H5'	31:y:423:G:C4	2.07	0.89
31:y:500:G:H2'	31:y:501:C:C6	2.08	0.89
31:y:718:G:H1'	44:l:116:HIS:CB	2.02	0.89
31:y:1489:G:H2'	31:y:1490:C:H6	1.12	0.89
35:c:121:LEU:HA	35:c:126:GLU:HB3	0.89	0.89
37:e:31:CYS:HB3	37:e:34:GLU:HB3	1.52	0.89
37:e:31:CYS:O	37:e:33:MET:HE3	1.72	0.89
37:e:199:ASN:ND2	37:e:202:LEU:HG	1.87	0.89
38:f:43:LEU:O	38:f:62:ALA:HA	1.72	0.89
41:i:50:ARG:CA	41:i:59:LEU:HG	2.03	0.89
1:w:559:G:N7	1:w:560:C:C5	2.41	0.89
1:w:1699:G:H3'	1:w:1700:A:H5''	0.92	0.89
1:w:2809:A:N6	1:w:2892:A:O4'	2.06	0.89
1:w:2899:G:H2'	1:w:2900:A:O4'	1.73	0.89
2:x:43:C:H2'	2:x:44:G:C5'	2.02	0.89
4:B:76:PRO:HB2	4:B:117:VAL:HG12	1.53	0.89
5:C:4:ILE:HG12	5:C:5:LEU:N	1.87	0.89
5:C:116:VAL:HG21	5:C:122:PHE:CE1	2.08	0.89
9:G:101:LEU:HG	9:G:109:ILE:CG2	2.02	0.89
10:H:113:MET:SD	10:H:116:THR:HG23	2.12	0.89
11:I:19:ILE:HA	11:I:44:LYS:CG	2.03	0.89
13:K:73:PRO:HA	13:K:92:GLY:O	1.73	0.89
19:Q:92:ARG:HA	19:Q:92:ARG:NE	1.86	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:27:G:H2'	31:y:28:G:H5'	1.52	0.89
31:y:376:G:O2'	31:y:377:G:H5'	1.73	0.89
31:y:538:G:P	45:m:114:LYS:HG3	2.13	0.89
31:y:1506:U:H3'	31:y:1507:A:C5'	1.99	0.89
32:z:75:C:O5'	32:z:75:C:H6	1.56	0.89
35:c:8:LYS:HA	35:c:48:MET:HE1	1.54	0.89
35:c:68:ILE:HG22	35:c:69:LEU:N	1.87	0.89
40:h:111:ARG:HB3	40:h:111:ARG:NH1	1.87	0.89
1:w:216:A:N7	1:w:431:U:O2	2.07	0.88
1:w:402:A:H2'	1:w:403:U:H5'	1.52	0.88
1:w:144(B):A:C4'	1:w:1460:A:O2'	2.21	0.88
1:w:1604:C:O5'	1:w:1604:C:H6	1.56	0.88
1:w:1670:C:C5	1:w:1671:U:C2	2.60	0.88
1:w:1805:U:OP1	4:B:252:TRP:HZ2	1.52	0.88
1:w:2335:A:H4'	1:w:2336:A:N7	1.86	0.88
1:w:2462:U:H2'	1:w:2463:C:C5'	2.01	0.88
1:w:2747:G:H1	1:w:2756:U:P	1.95	0.88
1:w:2785:C:H3'	1:w:2786:U:H6	1.37	0.88
1:w:2837:G:H2'	1:w:2838:G:C5'	2.02	0.88
3:A:61:GLY:O	3:A:163:GLU:HA	1.72	0.88
10:H:63:PRO:O	17:O:64:ARG:HD3	1.73	0.88
16:N:64:ARG:HG2	16:N:65:LYS:N	1.83	0.88
24:V:49:VAL:HG12	24:V:50:ARG:N	1.86	0.88
24:V:85:LEU:C	24:V:87:PRO:HD2	1.98	0.88
31:y:131:C:H4'	31:y:263:A:C8	2.09	0.88
31:y:227:G:N2	49:q:62:VAL:HB	1.88	0.88
31:y:230:G:N2	31:y:231:G:H1'	1.88	0.88
31:y:236:G:H3'	31:y:237:C:H6	1.35	0.88
31:y:955:U:H2'	31:y:956:U:H4'	1.53	0.88
31:y:1050:G:N2	31:y:1208:C:O2	2.05	0.88
31:y:1435:G:H2'	31:y:1436:U:C6	2.07	0.88
1:w:477:A:H3'	1:w:478:A:C8	2.09	0.88
1:w:532:A:N3	1:w:532:A:H3'	1.89	0.88
1:w:763:G:C8	1:w:765:G:OP2	2.26	0.88
1:w:1746:G:H3'	1:w:1747:G:H4'	1.56	0.88
1:w:2176:A:H8	1:w:2176:A:H5'	1.37	0.88
1:w:2721:A:H3'	1:w:2722:G:H8	1.35	0.88
9:G:94:ALA:HB2	9:G:116:LEU:HD23	1.54	0.88
10:H:50:ALA:HA	10:H:53:ILE:CD1	2.00	0.88
15:M:44:LYS:O	15:M:46:VAL:N	2.06	0.88
16:N:121:ILE:HG23	16:N:122:ASP:H	1.37	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:8:VAL:HG13	17:O:11:ARG:HE	1.33	0.88
20:R:12:VAL:HA	20:R:29:TRP:HE1	1.32	0.88
21:S:42:VAL:HB	21:S:61:ILE:CG2	2.01	0.88
22:T:15:PRO:C	22:T:19:ARG:HD3	1.97	0.88
31:y:59:A:H5'	31:y:60:A:H5''	1.55	0.88
31:y:253:U:H4'	31:y:276:G:H1'	1.53	0.88
31:y:361:G:H2'	31:y:362:G:O4'	1.72	0.88
31:y:431:A:H2'	31:y:432:A:O4'	1.73	0.88
31:y:667:G:H2'	31:y:668:G:H8	1.37	0.88
31:y:730:G:H4'	31:y:814:A:H61	1.37	0.88
31:y:1347:G:O2'	31:y:1373:G:C2	2.25	0.88
39:g:6:VAL:HG22	39:g:63:TYR:H	1.36	0.88
46:n:15:VAL:CG2	46:n:41:PRO:HA	2.03	0.88
1:w:37:C:H4'	1:w:451:C:OP1	1.71	0.88
1:w:1017:G:H2'	1:w:1018:C:C6	2.07	0.88
1:w:1244:G:H1'	12:J:7:ARG:NH2	1.88	0.88
1:w:2007:C:O4'	1:w:2824:C:H4'	1.72	0.88
1:w:2443:C:H2'	1:w:2444:G:H8	1.32	0.88
1:w:2573:C:H3'	1:w:2573:C:C6	2.08	0.88
1:w:2610:C:O2'	1:w:2611:U:OP2	1.90	0.88
2:x:110:G:H2'	2:x:111:U:C5'	2.02	0.88
6:D:108:ALA:O	6:D:112:ARG:HG2	1.72	0.88
10:H:101:TYR:HB2	10:H:102:PRO:HD3	1.56	0.88
11:I:24:VAL:HG22	11:I:25:LEU:N	1.87	0.88
13:K:21:THR:HG23	13:K:98:LYS:HG2	1.54	0.88
19:Q:39:THR:OG1	27:Y:28:PRO:CG	2.21	0.88
20:R:20:GLY:CA	20:R:25:LYS:HA	2.02	0.88
31:y:97:U:C4	31:y:99:C:N4	2.42	0.88
31:y:346:G:H2'	31:y:347:G:H5''	1.55	0.88
31:y:563:A:H5'	31:y:566:G:N3	1.88	0.88
31:y:1379:G:H3'	31:y:1380:U:H5''	1.53	0.88
31:y:1422:G:H2'	31:y:1423:G:C8	2.07	0.88
36:d:124:ILE:HG21	36:d:130:VAL:CG1	2.01	0.88
46:n:91:ARG:HH11	46:n:91:ARG:CB	1.86	0.88
49:q:60:LEU:HA	49:q:64:ALA:HB3	1.54	0.88
50:r:62:SER:OG	50:r:70:ARG:C	2.15	0.88
53:u:33:ILE:HG13	53:u:34:LYS:N	1.82	0.88
1:w:463:G:C4	1:w:465:G:OP2	2.25	0.88
1:w:481:G:H21	1:w:506:G:H1'	1.36	0.88
1:w:674:G:H2'	1:w:675:A:H5'	1.53	0.88
1:w:1279:G:OP1	14:L:35:THR:HG22	1.74	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1544:C:H2'	1:w:1546:A:H62	1.38	0.88
1:w:2158:A:H2'	1:w:2159:G:O4'	1.74	0.88
1:w:2186:G:C2'	1:w:2187:G:C8	2.56	0.88
1:w:2623:G:C4'	1:w:2825:G:H21	1.86	0.88
5:C:105:THR:HG22	5:C:106:GLY:H	1.28	0.88
10:H:62:ARG:NH2	10:H:63:PRO:HD2	1.88	0.88
11:I:12:ASP:OD1	11:I:86:ILE:HD13	1.74	0.88
11:I:35:VAL:HA	11:I:62:VAL:CG1	2.03	0.88
12:J:138:LEU:CA	12:J:142:GLY:HA3	2.02	0.88
20:R:81:VAL:HG22	20:R:82:GLN:N	1.86	0.88
22:T:80:ARG:HG3	22:T:81:ARG:H	1.38	0.88
23:U:47:PRO:HA	23:U:51:VAL:CB	2.03	0.88
31:y:745:C:H5''	31:y:851:G:H1'	1.55	0.88
31:y:889:A:H4'	31:y:890:G:H4'	1.54	0.88
31:y:1089:G:C2	31:y:1090:U:O4'	2.26	0.88
31:y:1092:A:N6	31:y:1093:A:H61	1.72	0.88
31:y:1242:C:O2	31:y:1295:G:N2	2.05	0.88
36:d:123:GLN:CD	36:d:124:ILE:H	1.81	0.88
1:w:629:G:O2'	1:w:639:U:H1'	1.73	0.88
1:w:974(A):G:H5''	1:w:1186:G:H21	1.19	0.88
1:w:1154:G:H2'	1:w:1155:A:H5''	1.56	0.88
1:w:1283:G:H2'	1:w:1285:G:N7	1.88	0.88
1:w:1350:C:C2'	1:w:1351:C:H5'	2.02	0.88
1:w:1533:C:O2	1:w:1538:G:N2	2.07	0.88
1:w:2053:G:C4'	5:C:145:LYS:HG2	2.03	0.88
1:w:2098:U:H2'	1:w:2099:U:C6	2.09	0.88
1:w:2354:G:O2'	23:U:36:ILE:N	2.05	0.88
1:w:2451:A:C8	1:w:2451:A:C3'	2.56	0.88
1:w:2584:U:H2'	1:w:2585:U:C3'	2.03	0.88
1:w:2726:U:O2'	1:w:2727:G:O5'	1.91	0.88
1:w:2747:G:O2'	8:F:67:LEU:HD22	1.73	0.88
5:C:84:PHE:CZ	5:C:86:PRO:HG3	2.09	0.88
13:K:47:ILE:O	13:K:51:ARG:CD	2.21	0.88
13:K:133:ARG:HG2	13:K:134:ARG:H	1.37	0.88
15:M:28:VAL:CG1	15:M:29:PHE:H	1.86	0.88
31:y:278:G:O5'	31:y:278:G:C8	2.26	0.88
31:y:1112:C:N3	36:d:177:THR:HA	1.88	0.88
31:y:1230:C:H5''	32:z:30:G:O3'	1.72	0.88
31:y:1358:U:OP1	47:o:35:ARG:HG2	1.72	0.88
33:O:29:A:H2	33:O:41:U:O2	1.57	0.88
41:i:79:VAL:C	41:i:80:ILE:HD12	1.99	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:j:116:LYS:HG2	42:j:122:ALA:HB2	1.55	0.88
49:q:67:THR:HG22	49:q:68:ASP:H	1.38	0.88
1:w:92:G:C2'	1:w:93:C:C6	2.54	0.88
1:w:597:U:O2'	12:J:15:ARG:HB2	1.74	0.88
1:w:723:G:H3'	1:w:724:U:C5	2.08	0.88
1:w:799:G:OP2	6:D:57:ARG:NH1	2.07	0.88
1:w:830:G:H1'	1:w:2448:A:C2	2.08	0.88
1:w:1296:G:O2'	1:w:1297:C:H5'	1.74	0.88
1:w:1360:A:H62	1:w:1371:G:N2	1.71	0.88
1:w:1527:G:C2	1:w:1543:A:N6	2.41	0.88
1:w:1796:U:C1'	4:B:255:LYS:HA	2.03	0.88
1:w:1931:U:H2'	1:w:1932:A:C8	2.08	0.88
1:w:2307:G:H1'	1:w:2311:A:C5	2.08	0.88
1:w:2419:U:O5'	29:a:32:LEU:HB2	1.73	0.88
1:w:2419:U:C5'	29:a:32:LEU:HD22	2.00	0.88
2:x:82:G:H4'	26:X:49:LYS:HZ3	1.37	0.88
2:x:104:A:H5''	22:T:72:ARG:NH2	1.88	0.88
4:B:44:ASN:CA	4:B:49:ILE:HA	2.02	0.88
5:C:37:ARG:HA	5:C:42:ASP:OD2	1.73	0.88
22:T:137:ILE:CG1	22:T:138:GLU:H	1.86	0.88
31:y:222:U:C3'	31:y:223:U:H5''	2.03	0.88
31:y:546:G:HO2'	31:y:547:A:C1'	1.86	0.88
31:y:654:G:OP2	31:y:654:G:H8	1.57	0.88
31:y:842:C:H4'	31:y:848:C:H42	1.21	0.88
31:y:896:C:H5''	50:r:100:LYS:HZ3	1.38	0.88
31:y:1081:G:OP1	38:f:18:ARG:HD3	1.72	0.88
31:y:1323:G:H5''	31:y:136(B):C:N4	1.88	0.88
31:y:1369:C:OP2	42:j:112:LYS:N	2.07	0.88
37:e:15:GLU:HG2	37:e:63:LYS:HD3	1.52	0.88
37:e:65:ARG:HD3	37:e:66:ARG:HD3	1.53	0.88
45:m:59:LEU:HD13	45:m:61:SER:N	1.88	0.88
1:w:388:G:OP2	24:V:33:LYS:HB3	1.73	0.88
1:w:445:C:H2'	1:w:446:G:O4'	1.74	0.88
1:w:450:G:H2'	1:w:451:C:H5''	1.53	0.88
1:w:479:A:C2	1:w:506:G:N2	2.42	0.88
1:w:1284:A:H62	1:w:1285:G:H21	1.19	0.88
1:w:1348:G:N3	1:w:1349:A:N7	2.22	0.88
1:w:1839:G:H2'	1:w:1840:G:H8	1.39	0.88
1:w:1897:G:C8	1:w:1898:U:C6	2.62	0.88
1:w:2080:G:N1	1:w:2081:C:C4	2.42	0.88
1:w:2084:C:H2'	1:w:2085:C:O4'	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2373:G:H2'	1:w:2374:C:C5	2.09	0.88
1:w:2470:G:H2'	1:w:2471:C:C5'	2.04	0.88
1:w:2756:U:H3'	30:b:19:ARG:HG3	1.56	0.88
1:w:2835:A:N6	1:w:2878:U:H2'	1.87	0.88
4:B:49:ILE:O	4:B:49:ILE:CD1	2.21	0.88
4:B:148:GLU:HG3	4:B:149:PRO:HD2	1.55	0.88
5:C:28:ALA:HB3	5:C:180:ASN:HB3	1.52	0.88
5:C:51:PHE:CB	5:C:76:ARG:HD2	2.03	0.88
5:C:128:SER:O	5:C:129:HIS:CD2	2.27	0.88
7:E:171:ALA:O	7:E:175:LEU:HG	1.73	0.88
18:P:60:GLU:HA	18:P:101:GLY:CA	2.03	0.88
18:P:66:ARG:HD2	18:P:94:LEU:HD22	1.56	0.88
22:T:4:ARG:HA	22:T:58:VAL:HB	1.53	0.88
22:T:106:GLY:C	22:T:108:PRO:HD3	1.98	0.88
25:W:22:GLU:HA	25:W:25:VAL:HG13	1.56	0.88
27:Y:16:ARG:HA	27:Y:20:ARG:CZ	2.02	0.88
31:y:97:U:C4	31:y:99:C:C4	2.62	0.88
31:y:227:G:C4	31:y:228:A:C8	2.61	0.88
31:y:1349:A:H2'	31:y:1350:A:O4'	1.73	0.88
31:y:1402:4OC:H2'	31:y:1403:C:H6	1.35	0.88
31:y:1507:A:C2'	31:y:1508:G:H5'	2.02	0.88
33:O:47:U:C4	33:O:50:U:H5''	2.08	0.88
41:i:65:TYR:HB3	41:i:78:GLN:NE2	1.87	0.88
44:l:73:MET:HE1	44:l:103:LEU:N	1.88	0.88
1:w:117:G:OP1	1:w:126:A:H1'	1.73	0.88
1:w:483:A:N6	1:w:497:A:H1'	1.89	0.88
1:w:900:A:H2'	1:w:901:A:C8	2.08	0.88
1:w:1155:A:H8	1:w:1155:A:H5'	1.37	0.88
1:w:1683:C:H6	1:w:1683:C:O5'	1.56	0.88
2:x:109:G:H2'	2:x:110:G:O5'	1.74	0.88
7:E:120:LEU:O	7:E:122:PRO:HD3	1.74	0.88
9:G:124:GLY:HA2	9:G:144:VAL:N	1.88	0.88
10:H:63:PRO:HA	17:O:64:ARG:CZ	2.02	0.88
12:J:7:ARG:HD2	12:J:10:PRO:CD	2.02	0.88
20:R:8:ILE:HG23	20:R:30:VAL:HG22	1.55	0.88
31:y:1087:G:C2'	31:y:1088:G:C8	2.48	0.88
31:y:1253:G:HO2'	31:y:1356:G:H5'	1.35	0.88
31:y:1517:G:H2'	31:y:1518:MA6:O5'	1.73	0.88
35:c:23:ARG:NE	35:c:24:TRP:H	1.71	0.88
38:f:43:LEU:CD1	38:f:65:ASN:HD22	1.84	0.88
41:i:134:ILE:HG22	41:i:135:CYS:N	1.89	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:612:G:N2	1:w:613:U:C2	2.42	0.88
1:w:666:G:H21	29:a:2:PRO:CA	1.86	0.88
1:w:1657:C:OP1	5:C:134:ILE:HA	1.74	0.88
1:w:1663:C:H2'	1:w:1664:A:OP2	1.74	0.88
1:w:1814:G:H8	1:w:1815:A:H2'	1.39	0.88
1:w:1910:G:O2'	1:w:1911:U:H5'	1.73	0.88
1:w:2653:U:C5'	1:w:2654:A:H2'	2.03	0.88
1:w:2743:C:C2'	1:w:2744:G:C5'	2.29	0.88
1:w:2759:G:C2'	1:w:2760:C:H6	1.86	0.88
1:w:2793:G:C3'	1:w:2794:C:C6	2.57	0.88
4:B:131:LEU:HD21	4:B:135:PHE:HB2	1.54	0.88
9:G:2:LYS:HG3	9:G:20:ASP:H	1.36	0.88
20:R:54:VAL:HG22	20:R:77:LYS:CE	2.03	0.88
26:X:41:PRO:HA	26:X:44:ARG:HD3	1.56	0.88
31:y:257:G:N2	31:y:269:C:O2	2.07	0.88
31:y:402:G:H4'	31:y:620:C:N4	1.87	0.88
31:y:436:C:HO2'	31:y:437:U:H6	0.88	0.88
31:y:663:A:C2'	31:y:664:G:H5'	2.04	0.88
31:y:1244:C:H2'	31:y:1245:A:C8	2.09	0.88
31:y:1347:G:N7	42:j:107:ARG:HB2	1.87	0.88
31:y:1348:U:C5'	42:j:120:ARG:HD3	2.04	0.88
36:d:124:ILE:HD11	36:d:133:ALA:HB2	1.55	0.88
39:g:78:GLU:O	39:g:81:ILE:HG13	1.74	0.88
49:q:17:TYR:HB2	49:q:39:TYR:CD2	2.08	0.88
1:w:120:U:H5''	1:w:121:G:OP1	1.72	0.88
1:w:817:C:C5'	1:w:932:G:C6	2.55	0.88
1:w:965:C:C4	1:w:966:G:N7	2.42	0.88
1:w:1025:G:C4	1:w:1135:C:O4'	2.27	0.88
1:w:1137:G:H1'	1:w:2039:C:H5'	1.54	0.88
1:w:1282:U:H2'	1:w:1283:G:C4'	2.03	0.88
1:w:1814:G:C8	1:w:1815:A:H2'	2.09	0.88
1:w:1815:A:H4'	1:w:1816:G:C4'	2.04	0.88
1:w:2124:G:N2	3:A:218:THR:CA	2.34	0.88
1:w:2681:C:H5''	1:w:2682:U:OP1	1.72	0.88
1:w:2828:C:C4	1:w:2829:C:N4	2.42	0.88
6:D:100:VAL:C	6:D:102:LYS:H	1.82	0.88
8:F:156:ALA:HB2	8:F:169:VAL:CG2	2.03	0.88
9:G:80:PRO:HA	9:G:145:VAL:O	1.74	0.88
10:H:65:TRP:HB3	17:O:64:ARG:HD2	1.55	0.88
12:J:85:LEU:H	12:J:85:LEU:HD22	1.35	0.88
17:O:74:LEU:HD21	17:O:110:VAL:HG22	1.53	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:105:VAL:HG13	18:P:43:GLU:HB3	1.54	0.88
18:P:5:VAL:HG22	18:P:6:LYS:N	1.87	0.88
18:P:22:VAL:O	18:P:23:GLU:CD	2.17	0.88
19:Q:38:TYR:HE2	27:Y:41:PRO:HG3	1.39	0.88
21:S:14:LEU:CD2	21:S:39:VAL:HG11	2.04	0.88
21:S:31:LEU:HB2	21:S:32:PRO:HD3	1.55	0.88
23:U:37:LEU:HG	23:U:59:LEU:O	1.72	0.88
25:W:3:LEU:HD11	25:W:8:LYS:HD3	1.55	0.88
26:X:30:ARG:HD3	26:X:33:GLN:HG2	1.55	0.88
31:y:267:C:P	50:r:67:LYS:HB2	2.13	0.88
31:y:303:A:C1'	31:y:555:C:H4'	2.04	0.88
31:y:402:G:C4'	31:y:620:C:H42	1.86	0.88
31:y:576:G:H5''	31:y:577:G:OP2	1.73	0.88
31:y:584:G:H2'	31:y:585:G:O4'	1.72	0.88
31:y:652:U:H3	31:y:753:A:N6	1.70	0.88
31:y:657:G:C1'	48:p:23:GLY:HA2	2.03	0.88
31:y:943:U:O5'	31:y:943:U:C6	2.25	0.88
31:y:1175:G:O2'	31:y:1176:A:H5'	1.74	0.88
31:y:1395:C:C2'	31:y:1396:A:H5'	2.04	0.88
41:i:16:ALA:HA	41:i:19:VAL:HG12	1.56	0.88
51:s:23:LYS:HE2	51:s:23:LYS:HA	1.53	0.88
51:s:33:ASP:OD1	51:s:35:ARG:HG3	1.74	0.88
1:w:271(C):G:H1'	1:w:271(D):U:H5''	1.55	0.87
1:w:347:A:H2'	1:w:348:G:O4'	1.71	0.87
1:w:465:G:N3	1:w:683:C:H2'	1.88	0.87
1:w:848:G:H5'	1:w:929:G:H1	1.38	0.87
1:w:1592:C:H2'	1:w:1593:G:H8	1.35	0.87
1:w:1604:C:H2'	1:w:1605:C:H5'	1.57	0.87
1:w:2753:A:O2'	1:w:2754:U:H5'	1.74	0.87
2:x:42:C:C2	7:E:92:VAL:CG2	2.57	0.87
5:C:44:TYR:CE2	5:C:46:ALA:HB2	2.10	0.87
5:C:98:PRO:HB3	5:C:173:VAL:O	1.74	0.87
5:C:144:ARG:O	5:C:148:GLY:HA2	1.74	0.87
6:D:98:LYS:HG2	6:D:101:ARG:HD2	1.55	0.87
8:F:114:VAL:HG22	8:F:115:VAL:N	1.89	0.87
10:H:48:ARG:HB3	10:H:48:ARG:HH11	1.35	0.87
12:J:111:ARG:NH2	12:J:148:LEU:HD21	1.89	0.87
13:K:67:ARG:O	13:K:68:ILE:CG1	2.21	0.87
19:Q:22:ASP:HA	19:Q:25:ARG:CG	2.04	0.87
21:S:49:VAL:HG12	21:S:50:ARG:N	1.87	0.87
23:U:49:LYS:O	23:U:81:VAL:HB	1.75	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:51:VAL:HG13	24:V:52:ARG:H	1.37	0.87
31:y:59:A:C5'	31:y:60:A:H5''	2.04	0.87
31:y:262:A:C4	31:y:263:A:N6	2.42	0.87
31:y:364:A:H8	31:y:364:A:O5'	1.57	0.87
31:y:571:U:H3'	31:y:572:A:C5'	2.03	0.87
31:y:1287:A:C2'	31:y:1288:A:H5'	2.04	0.87
33:0:33:U:H3	33:0:36:A:P	1.96	0.87
35:c:196:LEU:HG	35:c:197:VAL:HG13	1.54	0.87
36:d:15:THR:CG2	36:d:180:ALA:H	1.86	0.87
1:w:125:G:O3'	28:Z:19:ARG:HB2	1.74	0.87
1:w:182:A:H3'	1:w:183:C:C6	2.08	0.87
1:w:204:A:H1'	1:w:206:U:C6	2.09	0.87
1:w:460:A:H3'	1:w:461:C:H6	1.39	0.87
1:w:824:A:H8	1:w:824:A:O5'	1.55	0.87
1:w:1327:C:C4	1:w:1328:G:C6	2.62	0.87
1:w:1660:C:O2'	1:w:1661:G:H5'	1.73	0.87
1:w:1772:G:H2'	1:w:1773:A:C4'	2.03	0.87
1:w:2073:C:H5''	4:B:229:VAL:HG13	1.55	0.87
4:B:35:LYS:HG3	4:B:63:ARG:HA	1.56	0.87
7:E:107:LEU:HA	7:E:111:LEU:CD1	2.04	0.87
9:G:27:ARG:NH2	9:G:27:ARG:HB2	1.89	0.87
22:T:73:GLN:HB3	22:T:87:ASP:CG	1.98	0.87
29:a:34:TRP:CZ3	29:a:41:ILE:HG13	2.09	0.87
31:y:310:G:C2	31:y:311:C:C6	2.62	0.87
31:y:322:C:OP1	31:y:1436:U:H5''	1.74	0.87
31:y:754:C:C6	48:p:69:TYR:HE1	1.91	0.87
31:y:807:A:H2'	31:y:808:C:H6	1.32	0.87
31:y:1112:C:H42	36:d:177:THR:HA	1.39	0.87
31:y:1248:A:C2	31:y:1289:A:N6	2.41	0.87
31:y:1518:MA6:C9	31:y:1519:MA6:H92	2.05	0.87
36:d:25:GLY:HA2	36:d:29:TYR:CE2	2.09	0.87
37:e:82:ALA:HA	37:e:87:GLY:HA3	1.56	0.87
38:f:142:LEU:CA	38:f:143:ARG:HE	1.87	0.87
51:s:63:GLN:HA	51:s:66:LEU:CB	2.03	0.87
1:w:99:U:H5''	1:w:101:G:C5'	2.03	0.87
1:w:253:C:H2'	1:w:254:G:H5'	1.53	0.87
1:w:270(F):G:H2'	1:w:270(G):U:O4'	1.73	0.87
1:w:460:A:OP2	1:w:461:C:H5	1.57	0.87
1:w:466:A:H4'	28:Z:30:VAL:CG2	2.04	0.87
1:w:589:C:O4'	6:D:88:LYS:HE3	1.74	0.87
1:w:1620:G:H4'	28:Z:2:LYS:NZ	1.89	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2556:C:C2'	1:w:2557:G:H8	1.87	0.87
1:w:2679:A:O2'	5:C:188:VAL:HA	1.74	0.87
5:C:15:PHE:O	5:C:16:ARG:HB2	1.71	0.87
5:C:187:ALA:O	5:C:188:VAL:HB	1.73	0.87
6:D:155:ASN:O	6:D:159:ARG:HG3	1.74	0.87
7:E:3:LEU:HD21	7:E:101:ILE:HD12	1.53	0.87
11:I:17:ARG:HE	11:I:47:ILE:HB	0.72	0.87
14:L:13:HIS:HD2	14:L:16:HIS:CG	1.92	0.87
17:O:106:PHE:O	17:O:109:LEU:HG	1.74	0.87
22:T:39:VAL:CG1	22:T:40:ASP:H	1.88	0.87
31:y:247:G:C2	31:y:278:G:C2	2.62	0.87
31:y:623:C:H2'	31:y:624:C:H6	1.31	0.87
31:y:668:G:O4'	48:p:49:ASP:HA	1.74	0.87
31:y:817:C:O2'	31:y:1527:C:H5'	1.74	0.87
31:y:1296:C:H2'	31:y:1297:C:H5'	1.55	0.87
35:c:35:GLU:HA	35:c:41:ILE:HD13	1.56	0.87
43:k:8:LEU:CB	43:k:96:ILE:HG13	2.04	0.87
45:m:87:GLY:N	45:m:97:TYR:CD2	2.41	0.87
50:r:9:VAL:H	50:r:21:VAL:HG13	1.37	0.87
1:w:307:G:H2'	1:w:309:G:N7	1.89	0.87
1:w:593:G:H5'	29:a:62:LEU:HD21	1.57	0.87
1:w:702:G:C3'	1:w:703:U:C5	2.56	0.87
1:w:783:A:C8	1:w:784:A:H1'	2.09	0.87
1:w:830:G:H1'	1:w:2448:A:C6	2.10	0.87
1:w:1161:C:H2'	1:w:1162:G:H8	1.39	0.87
1:w:1186:G:H2'	1:w:1187:G:C4'	2.05	0.87
1:w:1283:G:O3'	1:w:1285:G:O6	1.91	0.87
1:w:1797:C:C5'	4:B:256:GLY:O	2.22	0.87
1:w:2006:C:H2'	1:w:2007:C:C5	2.09	0.87
1:w:2439:A:H2'	1:w:2439:A:N3	1.89	0.87
1:w:2566:A:H61	11:I:28:SER:CB	1.88	0.87
1:w:2793:G:C3'	1:w:2794:C:H6	1.86	0.87
1:w:2821:A:O2'	1:w:2822:G:H5'	1.73	0.87
1:w:2867:G:H1'	1:w:2868:A:C8	2.10	0.87
2:x:21:G:H2'	2:x:22:U:H6	1.30	0.87
4:B:88:ARG:HG2	4:B:88:ARG:HH11	1.38	0.87
7:E:96:ARG:HD3	7:E:97:ASP:N	1.89	0.87
11:I:111:PHE:HB3	11:I:114:ILE:CD1	2.05	0.87
14:L:37:THR:HG22	14:L:111:LEU:CG	2.03	0.87
17:O:33:ARG:O	17:O:37:GLU:OE1	1.92	0.87
17:O:92:ARG:HB2	18:P:11:GLN:CD	2.00	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:45:ASP:HA	22:T:48:PHE:CE2	2.09	0.87
31:y:117:G:H3'	31:y:118:U:C5	2.10	0.87
31:y:194:C:H5''	53:u:65:LYS:HZ1	1.38	0.87
31:y:248:C:C2	31:y:277:C:C2	2.63	0.87
31:y:283:C:C2'	31:y:284:G:H5'	2.05	0.87
31:y:623:C:H2'	31:y:624:C:O4'	1.75	0.87
31:y:976:G:N7	31:y:1358:U:C2	2.41	0.87
31:y:1215:G:H2'	31:y:1216:G:H8	1.37	0.87
31:y:1268:A:O2'	54:v:20:LYS:N	2.07	0.87
31:y:1318:A:O5'	31:y:1318:A:C8	2.25	0.87
32:z:18:G:H2'	32:z:57:G:N2	1.90	0.87
35:c:127:ILE:HA	35:c:131:PRO:HG2	1.56	0.87
35:c:211:ILE:HA	35:c:214:ILE:CD1	2.04	0.87
36:d:152:ILE:HG21	36:d:199:LYS:HB2	1.56	0.87
37:e:121:VAL:CG1	37:e:136:PRO:HG2	2.04	0.87
39:g:45:LEU:HA	39:g:59:TYR:HA	1.57	0.87
44:l:57:THR:OG1	44:l:58:PRO:HD2	1.73	0.87
48:p:81:LEU:HA	48:p:84:LYS:HZ1	1.40	0.87
1:w:14:A:N3	1:w:14:A:H2'	1.88	0.87
1:w:438:G:C2'	1:w:439:G:H5'	2.05	0.87
1:w:634:C:C2	1:w:635:C:C5	2.62	0.87
1:w:830:G:C1'	1:w:2448:A:N1	2.37	0.87
1:w:863:A:H2	1:w:914:C:H41	1.20	0.87
1:w:865:C:H42	1:w:909:A:H62	0.88	0.87
1:w:996:A:H2'	1:w:997:G:H8	1.39	0.87
1:w:1451:C:O5'	1:w:1453:A:H8	1.58	0.87
1:w:1669:A:H5'	1:w:1671:U:O4	1.75	0.87
1:w:1707:G:H3'	1:w:1708:C:C5	2.09	0.87
1:w:1753:G:H21	1:w:1755:A:H3'	1.34	0.87
1:w:2009:G:H5'	19:Q:41:LYS:HE3	1.54	0.87
1:w:2093:G:C1'	1:w:2198:A:H61	1.86	0.87
2:x:14:U:H5'	2:x:106:G:H22	1.38	0.87
4:B:95:LEU:H	4:B:95:LEU:HD23	1.38	0.87
16:N:135:VAL:HG13	16:N:136:GLN:H	1.39	0.87
18:P:86:GLY:O	18:P:87:HIS:CD2	2.28	0.87
19:Q:69:LEU:HD23	19:Q:108:GLY:O	1.73	0.87
20:R:11:PRO:HA	20:R:28:PHE:CA	2.04	0.87
22:T:98:MET:HG2	22:T:99:TYR:H	1.39	0.87
26:X:10:LYS:HB2	26:X:53:LEU:CB	2.04	0.87
26:X:41:PRO:CA	26:X:44:ARG:HD3	2.03	0.87
31:y:31:G:OP1	31:y:31:G:H8	1.58	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:117:G:C2'	31:y:118:U:C6	2.57	0.87
31:y:330:C:O2'	31:y:331:G:H5'	1.74	0.87
31:y:342:C:N4	31:y:348:G:H1	1.73	0.87
31:y:346:G:H2'	31:y:347:G:C5'	2.03	0.87
31:y:868:C:O2	31:y:872:A:H1'	1.73	0.87
31:y:102(B):C:C2'	31:y:102(C):C:H5''	2.04	0.87
31:y:1429:C:C2'	31:y:1430:C:H5'	2.04	0.87
31:y:1455:G:H2'	31:y:1459:C:H6	1.32	0.87
43:k:85:LEU:HD12	43:k:86:MET:N	1.88	0.87
46:n:39:ILE:HG13	46:n:56:LEU:CD1	2.04	0.87
1:w:181:A:C2	1:w:434:U:H1'	2.09	0.87
1:w:886:C:H4'	1:w:887:A:C8	2.09	0.87
1:w:1154:G:C2'	1:w:1155:A:H5''	2.03	0.87
1:w:1755:A:H2'	1:w:1756:G:O4'	1.74	0.87
1:w:2016:U:C5'	1:w:2058:A:C5'	2.52	0.87
1:w:2126:A:O2'	1:w:2127:G:O4'	1.92	0.87
1:w:2199:A:H61	1:w:2224:G:H1'	1.39	0.87
1:w:2654:A:H8	1:w:2654:A:OP1	1.58	0.87
1:w:2733:A:H2'	1:w:2734:A:H5'	1.53	0.87
5:C:113:PHE:HD2	5:C:113:PHE:C	1.81	0.87
10:H:26:THR:HG22	10:H:28:VAL:N	1.87	0.87
17:O:88:ILE:HG12	18:P:53:GLU:H	1.38	0.87
22:T:45:ASP:O	22:T:47:VAL:N	2.07	0.87
23:U:62:LEU:HD12	23:U:63:VAL:HG23	1.55	0.87
24:V:37:ILE:N	24:V:39:LYS:HZ1	1.73	0.87
28:Z:13:ALA:HA	28:Z:17:GLY:HA3	1.57	0.87
28:Z:18:PHE:O	28:Z:22:MET:HB2	1.74	0.87
30:b:24:TYR:CB	30:b:35:ARG:HA	2.04	0.87
31:y:302:G:O2'	31:y:556:C:OP2	1.93	0.87
31:y:560:U:C2	31:y:566:G:O4'	2.27	0.87
31:y:1010:G:H2'	31:y:1011:G:C8	2.10	0.87
31:y:1074:G:N1	31:y:1083:U:O2	2.06	0.87
31:y:1497:G:H5''	31:y:1497:G:H8	1.38	0.87
38:f:34:VAL:HG21	38:f:62:ALA:CB	2.04	0.87
38:f:34:VAL:CG2	38:f:62:ALA:HB1	2.05	0.87
41:i:109:ILE:HD11	41:i:137:VAL:HG21	1.56	0.87
45:m:59:LEU:HD22	45:m:60:THR:N	1.90	0.87
1:w:372:G:O2'	1:w:373:U:OP2	1.92	0.87
1:w:585:G:H21	1:w:1254:A:N6	1.72	0.87
1:w:877:U:H6	1:w:877:U:O5'	1.57	0.87
1:w:1128:A:O2'	1:w:1129:A:OP2	1.91	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1201:C:H4'	6:D:40:ARG:HH22	1.39	0.87
1:w:1364:G:H5''	24:V:8:SER:CB	2.04	0.87
1:w:1378:A:C2'	1:w:1380:G:N7	2.37	0.87
1:w:1699:G:H3'	1:w:1700:A:H5'	1.54	0.87
1:w:2013:A:H2'	1:w:2014:A:C5'	2.05	0.87
1:w:2136:C:H2'	1:w:2137:C:H6	1.39	0.87
1:w:2542:A:O2'	1:w:2543:G:OP2	1.90	0.87
1:w:2653:U:H5'	1:w:2654:A:O5'	1.75	0.87
2:x:70:C:H2'	2:x:71:C:C6	2.10	0.87
3:A:165:ARG:HH22	3:A:172:ILE:HB	1.35	0.87
7:E:78:SER:CB	32:z:19:G:C2	2.57	0.87
8:F:86:GLU:HA	8:F:132:ARG:HA	1.57	0.87
10:H:51:THR:HG23	10:H:52:LYS:H	1.40	0.87
10:H:123:GLU:O	10:H:127:LYS:HG3	1.74	0.87
13:K:55:VAL:O	13:K:58:PHE:HB2	1.74	0.87
18:P:17:GLY:HA2	18:P:98:GLU:HG3	1.56	0.87
25:W:3:LEU:HD23	25:W:4:SER:N	1.90	0.87
28:Z:29:LYS:O	28:Z:33:ARG:HG3	1.72	0.87
31:y:108:G:N2	31:y:108:G:OP2	2.08	0.87
31:y:298:A:N1	31:y:299:G:C6	2.42	0.87
31:y:408:A:H2'	31:y:409:G:C8	2.09	0.87
31:y:619:U:O2'	31:y:620:C:H5'	1.75	0.87
31:y:935:A:C1'	31:y:1384:C:O2	2.22	0.87
31:y:956:U:O2	31:y:960:U:N3	2.08	0.87
31:y:1378:C:O5'	31:y:1378:C:C6	2.27	0.87
39:g:7:ASN:C	39:g:8:ILE:HD12	1.99	0.87
1:w:26:G:C2'	1:w:27:G:O4'	2.21	0.87
1:w:562:U:N3	1:w:2036:C:H5'	1.90	0.87
1:w:688:U:H2'	1:w:689:A:H5'	1.56	0.87
1:w:936:C:H6	1:w:936:C:O5'	1.57	0.87
1:w:1303:G:H4'	1:w:1642:G:O2'	1.75	0.87
1:w:1700:A:C2'	1:w:1701:A:H5'	2.04	0.87
1:w:1860:G:C4'	3:A:207:GLY:HA2	2.05	0.87
1:w:1931:U:H2'	1:w:1932:A:H8	1.39	0.87
1:w:2094:G:H2'	1:w:2095:C:O4'	1.74	0.87
1:w:2167:U:O2	1:w:2171:A:N6	2.06	0.87
1:w:2694:G:H2'	1:w:2695:C:C5'	2.05	0.87
5:C:31:CYS:HG	5:C:51:PHE:HB2	1.40	0.87
6:D:48:THR:HG23	6:D:49:ARG:N	1.89	0.87
6:D:172:ALA:HB3	6:D:173:PRO:CD	2.04	0.87
9:G:2:LYS:HA	9:G:20:ASP:HA	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:33:ARG:NH2	9:G:33:ARG:HB2	1.89	0.87
9:G:114:LEU:HA	9:G:130:TYR:CE1	2.09	0.87
10:H:106:LYS:HG3	10:H:107:LYS:H	1.40	0.87
12:J:35:HIS:C	12:J:36:LYS:HD2	1.99	0.87
14:L:104:ARG:HG2	14:L:105:ARG:H	1.37	0.87
15:M:24:LEU:HB3	15:M:85:VAL:HG23	1.57	0.87
17:O:99:ALA:HA	17:O:103:PRO:CB	2.03	0.87
18:P:64:HIS:HA	18:P:96:ILE:CG2	2.04	0.87
24:V:78:LYS:HD2	24:V:78:LYS:C	2.00	0.87
25:W:3:LEU:HG	25:W:7:ARG:HG3	1.57	0.87
31:y:509:A:C2'	31:y:510:A:H5'	2.05	0.87
31:y:960:U:C4	31:y:1225:A:C2	2.62	0.87
31:y:985:C:HO2'	31:y:986:A:H5'	1.36	0.87
31:y:1159:U:O2'	31:y:1160:G:OP2	1.93	0.87
31:y:1285:A:O2'	31:y:1286:A:H5''	1.74	0.87
31:y:1349:A:H61	31:y:1373:G:C2'	1.87	0.87
31:y:1511:G:N2	31:y:1524:C:O2	2.08	0.87
32:z:31:A:H2	32:z:39:PSU:HN3	1.22	0.87
32:z:38:A:C8	32:z:38:A:O5'	2.27	0.87
35:c:23:ARG:NE	35:c:24:TRP:N	2.22	0.87
36:d:179:ARG:HD2	36:d:206:GLU:HG2	1.55	0.87
37:e:10:ARG:O	37:e:13:ARG:HB3	1.75	0.87
37:e:19:LEU:CB	37:e:21:LEU:HD21	2.02	0.87
44:l:91:ARG:HG3	44:l:92:GLU:N	1.87	0.87
53:u:13:LEU:O	53:u:13:LEU:HD23	1.75	0.87
1:w:179:G:H2'	1:w:180:G:H8	1.40	0.87
1:w:813:U:O2'	1:w:1225:G:H1'	1.74	0.87
1:w:954:G:H5''	13:K:17:LEU:HG	0.87	0.87
1:w:1284:A:N7	1:w:1285:G:N2	2.23	0.87
1:w:1575:C:H2'	1:w:1576:U:O4'	1.75	0.87
1:w:1687:G:H2'	1:w:1701:A:H61	0.72	0.87
1:w:1759:A:C2	1:w:1760:A:N7	2.42	0.87
1:w:2037:G:H3'	1:w:2038:G:H8	1.39	0.87
1:w:2330:G:C2	23:U:41:ARG:NH2	2.43	0.87
1:w:2332:U:O4'	1:w:2336:A:N6	2.08	0.87
1:w:2512:C:C4	1:w:2513:G:C8	2.62	0.87
1:w:2747:G:N1	1:w:2756:U:P	2.48	0.87
1:w:2850:A:C2	1:w:2851:A:H1'	2.09	0.87
5:C:55:ASN:HD21	5:C:75:VAL:HG22	1.38	0.87
7:E:6:ALA:HB3	7:E:104:GLU:OE2	1.75	0.87
8:F:14:GLY:O	8:F:15:VAL:HG22	1.75	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:63:VAL:O	17:O:65:ILE:N	2.08	0.87
20:R:8:ILE:HG23	20:R:30:VAL:CG2	2.05	0.87
24:V:49:VAL:CG1	24:V:50:ARG:H	1.88	0.87
26:X:13:ILE:HD13	26:X:13:ILE:H	1.39	0.87
31:y:191(A):G:H8	31:y:191(A):G:O5'	1.56	0.87
31:y:248:C:H4'	31:y:282:A:C2	2.08	0.87
31:y:302:G:H2'	31:y:303:A:H8	1.36	0.87
31:y:719:C:H1'	51:s:49:LYS:HD3	1.53	0.87
31:y:770:C:O2	31:y:809:G:N2	2.06	0.87
31:y:908:A:C2'	31:y:909:A:C8	2.54	0.87
31:y:1091:U:H1'	31:y:1095:U:C2	2.08	0.87
31:y:1106:G:H5''	36:d:172:ARG:CD	2.05	0.87
31:y:1508:G:H2'	31:y:1509:C:C6	2.10	0.87
35:c:185:ILE:HG22	35:c:199:TYR:HB2	1.57	0.87
37:e:5:ILE:HD11	37:e:118:ARG:HH22	1.40	0.87
37:e:89:THR:HG22	37:e:93:PHE:CE2	2.10	0.87
39:g:14:LEU:HD12	39:g:14:LEU:H	1.39	0.87
41:i:103:VAL:HG11	41:i:110:ALA:N	1.90	0.87
42:j:28:VAL:HG12	42:j:36:TYR:CD2	2.10	0.87
46:n:107:ALA:O	46:n:109:THR:N	2.08	0.87
50:r:9:VAL:H	50:r:21:VAL:CG1	1.86	0.87
50:r:96:GLN:HG3	50:r:97:SER:H	1.37	0.87
1:w:55:G:C2	1:w:56:A:C5	2.63	0.86
1:w:119:A:H4'	1:w:120:U:O5'	1.73	0.86
1:w:338:G:H2'	1:w:339:U:C5	2.10	0.86
1:w:439:G:O2'	1:w:440:G:H5'	1.73	0.86
1:w:557:U:O2'	1:w:558:G:H5'	1.75	0.86
1:w:691:C:O2'	4:B:43:ARG:HD2	1.74	0.86
1:w:724:U:H3'	1:w:725:G:H8	1.40	0.86
1:w:783:A:C2'	1:w:784:A:H4'	2.03	0.86
1:w:851:U:H4'	26:X:45:GLY:HA3	1.55	0.86
1:w:906:G:H2'	1:w:907:U:C5'	2.01	0.86
1:w:953:A:H2'	1:w:954:G:H8	1.37	0.86
1:w:1268:A:H2'	1:w:1269:A:O4'	1.75	0.86
1:w:1310:G:N2	1:w:1610:A:C2	2.42	0.86
1:w:1691:C:O2'	1:w:1977:A:H4'	1.74	0.86
1:w:1801:G:H4'	1:w:1815:A:N1	1.90	0.86
1:w:1944:U:C2'	1:w:1945:G:H5''	2.05	0.86
1:w:2092:U:H4'	1:w:2093:G:H5''	1.56	0.86
1:w:2320:A:N6	1:w:2333:A:O2'	2.08	0.86
1:w:2341:G:H2'	1:w:2342:C:C6	2.10	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2658:C:H5''	8:F:158:HIS:CE1	2.09	0.86
4:B:183:ARG:NE	4:B:270:ILE:HG23	1.90	0.86
12:J:95:VAL:HG22	12:J:123:LEU:HD22	1.54	0.86
15:M:46:VAL:HG12	15:M:48:LEU:H	1.40	0.86
30:b:24:TYR:HB3	30:b:35:ARG:HA	1.57	0.86
31:y:102(C):C:O2	31:y:1029:G:H1'	1.75	0.86
31:y:1315:U:O4	31:y:1316:G:C6	2.27	0.86
36:d:29:TYR:HD1	36:d:33:LEU:HG	1.37	0.86
36:d:135:LYS:HA	36:d:138:VAL:CG2	2.04	0.86
37:e:32:ALA:HB3	37:e:33:MET:HE3	1.55	0.86
39:g:8:ILE:O	39:g:9:VAL:HG13	1.75	0.86
41:i:35:ILE:HD13	41:i:38:ILE:HD12	1.57	0.86
43:k:74:ILE:HG12	43:k:75:ILE:H	1.39	0.86
44:l:27:ASN:HA	44:l:55:LYS:HB3	1.55	0.86
46:n:91:ARG:HA	46:n:96:LEU:HD12	1.57	0.86
1:w:361:G:H8	1:w:361:G:OP2	1.56	0.86
1:w:432:A:C2'	1:w:433:C:H6	1.84	0.86
1:w:441:U:H2'	1:w:442:G:H8	1.37	0.86
1:w:576:U:H2'	1:w:577:G:H8	1.39	0.86
1:w:781:A:N1	1:w:1776:G:H2'	1.89	0.86
1:w:783:A:H2'	1:w:784:A:C4'	2.04	0.86
1:w:818:G:OP2	1:w:1187:G:O6	1.93	0.86
1:w:962:G:H2'	1:w:963:U:H5''	1.58	0.86
1:w:1319:G:C6	1:w:1334:G:O6	2.28	0.86
1:w:1693:U:O2'	1:w:1694:C:OP1	1.92	0.86
1:w:1702:G:H3'	1:w:1703:G:H5''	1.55	0.86
1:w:2351:G:O2'	1:w:2366:A:N6	2.08	0.86
1:w:2558:C:C2'	1:w:2559:C:C6	2.58	0.86
1:w:2669:G:H2'	1:w:2670:A:C1'	2.05	0.86
1:w:2721:A:H3'	1:w:2722:G:C8	2.10	0.86
1:w:2745:C:H2'	1:w:2746:U:H6	1.33	0.86
1:w:2818:G:H4'	1:w:2837:G:H4'	1.55	0.86
2:x:7:G:H21	15:M:47:THR:HG1	1.15	0.86
2:x:77:U:H2'	2:x:78:A:O4'	1.74	0.86
8:F:43:VAL:HG22	8:F:44:VAL:N	1.90	0.86
14:L:73:VAL:HG22	14:L:77:ARG:HB3	1.57	0.86
16:N:31:SER:CB	16:N:43:GLN:O	2.22	0.86
20:R:65:ARG:NE	20:R:65:ARG:HA	1.89	0.86
24:V:10:LYS:HD2	24:V:15:ALA:H	1.38	0.86
24:V:58:ILE:HG21	24:V:86:SER:HB3	1.57	0.86
31:y:656:C:O2'	31:y:657:G:H5'	1.75	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1131:G:H5'	42:j:3:GLN:HE22	1.37	0.86
31:y:1206:G:C5	31:y:1207:2MG:H1'	2.09	0.86
36:d:123:GLN:HE21	36:d:133:ALA:CB	1.83	0.86
1:w:226:G:O6	1:w:418:G:N2	2.06	0.86
1:w:356:G:C2'	1:w:357:A:H5'	2.05	0.86
1:w:465:G:N2	1:w:684:G:C1'	2.20	0.86
1:w:851:U:O3'	26:X:45:GLY:HA3	1.75	0.86
1:w:988:A:O5'	1:w:988:A:C8	2.25	0.86
1:w:992:C:O2	1:w:1162:G:N2	2.08	0.86
1:w:1332:G:O6	1:w:1609:A:C6	2.28	0.86
1:w:1367:A:O2'	1:w:1368:G:H5'	1.75	0.86
1:w:1827:C:C5'	1:w:1971:A:H4'	2.05	0.86
1:w:2080:G:C6	1:w:2081:C:N4	2.43	0.86
1:w:2126:A:O2'	1:w:2127:G:OP2	1.92	0.86
1:w:2747:G:N1	1:w:2756:U:OP1	2.07	0.86
1:w:2824:C:O5'	1:w:2824:C:C6	2.28	0.86
3:A:59:VAL:O	3:A:165:ARG:HA	1.74	0.86
4:B:6:PHE:O	4:B:8:PRO:HD3	1.75	0.86
5:C:184:VAL:HG23	5:C:185:LYS:H	1.39	0.86
10:H:62:ARG:HG3	10:H:71:MET:CG	2.05	0.86
10:H:62:ARG:HG3	10:H:71:MET:HG3	1.57	0.86
10:H:133:GLY:O	10:H:137:ARG:HG3	1.75	0.86
13:K:51:ARG:HH11	13:K:51:ARG:CA	1.86	0.86
14:L:37:THR:H	14:L:40:LYS:NZ	1.71	0.86
18:P:24:LYS:HA	18:P:94:LEU:HG	1.57	0.86
31:y:842:C:C4'	31:y:848:C:N4	2.32	0.86
31:y:976:G:H8	31:y:1358:U:H2'	1.39	0.86
31:y:1197:G:OP2	31:y:1197:G:H8	1.53	0.86
35:c:8:LYS:HE3	35:c:10:LEU:HD21	1.55	0.86
36:d:135:LYS:HA	36:d:138:VAL:HG21	1.57	0.86
37:e:61:LYS:HD3	37:e:207:TYR:HE1	1.40	0.86
38:f:100:VAL:HA	38:f:118:ILE:N	1.88	0.86
48:p:29:VAL:HG12	48:p:30:ALA:N	1.88	0.86
1:w:484:C:P	21:S:56:PRO:HG3	2.15	0.86
1:w:1731:G:H2'	1:w:1732:A:C8	2.09	0.86
1:w:1871:A:H2'	1:w:1872:A:H8	1.40	0.86
1:w:2232:U:O2'	1:w:2233:U:H5'	1.74	0.86
1:w:2356:C:H2'	1:w:2357:U:C5'	2.05	0.86
1:w:2677:G:C2'	1:w:2678:C:H6	1.83	0.86
1:w:2818:G:N1	1:w:2819:G:C8	2.43	0.86
2:x:42:C:H6	7:E:91:ARG:NH2	1.72	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:73:A:H2'	2:x:74:U:C6	2.10	0.86
4:B:169:GLU:HG3	4:B:174:ILE:HD11	1.55	0.86
6:D:112:ARG:HA	6:D:115:GLU:CG	2.04	0.86
8:F:122:THR:O	8:F:134:SER:HB3	1.75	0.86
12:J:75:ILE:HD11	12:J:77:ARG:HH12	1.39	0.86
17:O:44:ASN:HD21	18:P:78:LYS:HB3	1.36	0.86
22:T:80:ARG:HH11	22:T:82:ARG:HB2	1.37	0.86
23:U:52:GLY:CA	23:U:62:LEU:HB2	2.05	0.86
31:y:158:G:H2'	31:y:159:G:O4'	1.76	0.86
31:y:186(B):C:H1'	53:u:89:ARG:NH1	1.90	0.86
31:y:321:A:C2'	31:y:322:C:O5'	2.23	0.86
31:y:652:U:H3	31:y:753:A:H62	0.88	0.86
31:y:974:A:OP2	47:o:41:ARG:CZ	2.22	0.86
31:y:996:A:H8	31:y:996:A:O5'	1.55	0.86
31:y:1237:C:H5'	31:y:1238:A:C4'	2.05	0.86
31:y:1421:G:H2'	31:y:1422:G:H5'	1.57	0.86
35:c:132:LYS:HA	35:c:135:GLN:HG3	1.56	0.86
37:e:59:ARG:HG3	37:e:60:GLU:H	1.37	0.86
38:f:11:ILE:HD13	38:f:105:VAL:HG21	1.56	0.86
40:h:47:CYS:C	40:h:58:PRO:HB3	1.99	0.86
41:i:24:THR:O	41:i:24:THR:CG2	2.23	0.86
41:i:69:ARG:CG	41:i:70:GLN:H	1.88	0.86
42:j:10:ARG:HG3	42:j:104:ARG:NE	1.88	0.86
42:j:86:VAL:HG12	42:j:90:PRO:HA	1.54	0.86
47:o:29:ARG:NH2	47:o:42:ILE:HG13	1.90	0.86
1:w:335:C:O2'	21:S:67:LEU:HG	1.76	0.86
1:w:458:G:H5'	28:Z:40:TRP:CD1	2.11	0.86
1:w:583:G:C6	1:w:584:C:N4	2.43	0.86
1:w:800:A:C2	1:w:802:A:H8	1.94	0.86
1:w:1189:A:H8	1:w:1189:A:O5'	1.58	0.86
1:w:2135:A:N6	1:w:2156:G:O2'	2.07	0.86
1:w:2491:U:H2'	1:w:2492:U:H5'	1.57	0.86
1:w:2744:G:OP2	1:w:2755:C:N4	2.09	0.86
4:B:31:LYS:HD3	4:B:32:SER:N	1.90	0.86
4:B:117:VAL:CG1	4:B:128:GLY:O	2.23	0.86
6:D:4:ILE:HG12	6:D:12:ARG:HG2	1.56	0.86
7:E:68:PRO:HB2	7:E:91:ARG:O	1.74	0.86
10:H:94:ILE:HG22	10:H:96:THR:HG23	1.57	0.86
11:I:59:LYS:HE2	11:I:87:ILE:HG22	1.57	0.86
20:R:27:THR:HA	20:R:78:LYS:HB3	1.57	0.86
22:T:128:VAL:HG11	22:T:134:PRO:HD2	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:27:GLU:HA	23:U:69:PHE:CD2	2.11	0.86
31:y:66:G:C5'	31:y:173:U:O4	2.23	0.86
31:y:136:C:H4'	49:q:1:MET:H1	1.34	0.86
31:y:582:U:H2'	31:y:583:A:H5'	1.57	0.86
31:y:586:C:H4'	41:i:89:PRO:O	1.74	0.86
31:y:883:C:O5'	31:y:883:C:C6	2.28	0.86
31:y:1046:A:N6	31:y:1211:U:O2	2.09	0.86
31:y:1401:G:H8	31:y:1401:G:O5'	1.58	0.86
41:i:69:ARG:HG2	41:i:74:PRO:HA	1.58	0.86
48:p:84:LYS:CD	48:p:85:LEU:HG	2.05	0.86
1:w:270(U):G:H2'	1:w:270(V):C:C6	2.11	0.86
1:w:848:G:O6	1:w:931:G:H1'	1.74	0.86
1:w:990:A:H5''	1:w:1157:G:OP1	1.74	0.86
1:w:1149:G:O2'	1:w:1150:C:C5'	2.22	0.86
1:w:1589:C:H2'	1:w:1590:U:C6	2.11	0.86
1:w:1914:C:H3'	1:w:1914:C:O2	1.73	0.86
1:w:1986:A:H2'	1:w:1987:G:H5''	1.55	0.86
1:w:2660:A:C8	1:w:2661:G:N7	2.44	0.86
1:w:2783:G:C2'	1:w:2784:C:C6	2.57	0.86
4:B:31:LYS:HB2	4:B:104:TYR:OH	1.74	0.86
4:B:121:PRO:C	4:B:131:LEU:HG	2.00	0.86
13:K:119:ARG:HH22	13:K:131:ILE:HG22	1.39	0.86
14:L:116:LEU:HD12	14:L:116:LEU:H	1.40	0.86
22:T:15:PRO:O	22:T:19:ARG:HD3	1.74	0.86
24:V:50:ARG:HG2	24:V:60:PHE:O	1.76	0.86
26:X:15:TYR:HB3	26:X:16:PRO:HD2	1.56	0.86
28:Z:16:HIS:CA	28:Z:21:ARG:HG3	2.04	0.86
29:a:49:VAL:CB	29:a:53:PRO:HD3	2.04	0.86
31:y:80:G:H3'	31:y:81:G:C8	2.11	0.86
31:y:180:U:O2'	31:y:181:G:H5'	1.74	0.86
31:y:651:C:N3	31:y:652:U:C4	2.44	0.86
31:y:691:G:C6	44:l:52:GLY:HA2	2.10	0.86
31:y:1023:G:H2'	31:y:1024:G:H5'	1.55	0.86
31:y:1138:G:H2'	31:y:1140:C:O4'	1.74	0.86
31:y:1367:C:H4'	43:k:60:ARG:HH12	1.40	0.86
47:o:3:ARG:HG3	47:o:3:ARG:HH11	1.39	0.86
49:q:4:ILE:HG23	49:q:20:VAL:O	1.76	0.86
54:v:22:ARG:H	54:v:23:PRO:CD	1.89	0.86
1:w:465:G:O4'	28:Z:16:HIS:CE1	2.29	0.86
1:w:805:G:H5''	1:w:806:C:OP2	1.75	0.86
1:w:1133:U:C2'	1:w:1137:G:C5'	2.52	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1806:C:H6	1:w:1806:C:H5'	1.41	0.86
1:w:2056:G:N2	27:Y:6:VAL:H	1.73	0.86
1:w:2285:C:H2'	1:w:2346:A:N6	1.90	0.86
1:w:2736:G:C8	1:w:2736:G:C5'	2.54	0.86
1:w:2747:G:H22	1:w:2756:U:H5'	1.36	0.86
2:x:81:G:C6	2:x:96:G:C6	2.64	0.86
3:A:50:ILE:CD1	3:A:52:PRO:HD3	2.05	0.86
4:B:4:LYS:HE3	4:B:20:ASP:HA	1.56	0.86
4:B:123:ALA:HB1	4:B:124:PRO:HD2	1.55	0.86
6:D:151:LEU:H	6:D:169:VAL:HG21	1.40	0.86
8:F:30:LYS:HG3	8:F:31:GLY:H	1.40	0.86
8:F:94:TYR:HD2	8:F:129:THR:HB	1.40	0.86
11:I:18:LYS:O	11:I:44:LYS:HB2	1.75	0.86
11:I:21:CYS:SG	11:I:22:ILE:N	2.49	0.86
25:W:14:ARG:HD3	25:W:14:ARG:N	1.89	0.86
31:y:411:A:H62	31:y:429:U:H5''	1.41	0.86
31:y:730:G:H4'	31:y:814:A:N6	1.90	0.86
31:y:1001:G:H2'	31:y:1002:G:H5''	1.56	0.86
31:y:1064:G:H21	31:y:1190:G:H2'	1.32	0.86
31:y:1406:U:C5	31:y:1407:5MC:CM5	2.58	0.86
31:y:1408:A:H2'	31:y:1409:C:C6	2.10	0.86
32:z:52:G:N2	32:z:62:C:O2	2.08	0.86
51:s:38:GLU:C	51:s:41:LYS:HD2	2.00	0.86
51:s:42:ARG:HB2	51:s:42:ARG:NH1	1.90	0.86
1:w:80:G:H1'	1:w:347:A:C5	2.11	0.86
1:w:667:U:H2'	1:w:668:G:C4'	2.04	0.86
1:w:667:U:O5'	1:w:667:U:H6	1.57	0.86
1:w:830:G:C1'	1:w:2448:A:C2	2.58	0.86
1:w:965:C:H2'	1:w:966:G:C5'	2.06	0.86
1:w:1221:C:H2'	1:w:122(A):C:H6	1.40	0.86
1:w:1620:G:C1'	28:Z:2:LYS:HD2	2.04	0.86
1:w:1825:A:C5'	4:B:223:GLY:HA3	2.06	0.86
1:w:2025:C:H2'	1:w:2026:C:H6	1.34	0.86
1:w:2133:G:H8	1:w:2133:G:OP2	1.58	0.86
1:w:2192:G:H2'	1:w:2193:G:H5'	1.58	0.86
1:w:2681:C:O2	1:w:2725:A:N6	2.09	0.86
2:x:25:A:N7	2:x:26:A:C8	2.43	0.86
2:x:26:A:H3'	2:x:27:C:H5	1.41	0.86
2:x:64:C:H2'	2:x:65:C:O4'	1.74	0.86
4:B:62:TYR:HE1	4:B:64:ILE:HB	1.31	0.86
5:C:16:ARG:O	5:C:19:ARG:HG3	1.75	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:72:ARG:HA	7:E:87:PRO:CB	2.06	0.86
10:H:26:THR:HG22	10:H:27:TYR:H	1.40	0.86
11:I:69:VAL:HG12	11:I:77:ILE:H	1.40	0.86
12:J:79:ARG:CD	12:J:108:LYS:O	2.24	0.86
14:L:98:LEU:O	14:L:112:ALA:HB1	1.74	0.86
21:S:49:VAL:O	21:S:50:ARG:HG3	1.76	0.86
24:V:34:THR:CG2	24:V:35:THR:H	1.88	0.86
29:a:14:VAL:HG12	29:a:15:LYS:N	1.88	0.86
31:y:251:G:N2	31:y:253:U:O4	2.09	0.86
31:y:389:A:H3'	31:y:390:C:C6	2.10	0.86
31:y:1228:C:H5'	46:n:114:ARG:HD2	1.58	0.86
33:0:24:G:N7	33:0:25:C:C4	2.43	0.86
35:c:178:ARG:HH11	35:c:184:VAL:HG21	1.39	0.86
41:i:86:ILE:CD1	41:i:135:CYS:HA	2.05	0.86
46:n:31:LYS:O	46:n:35:GLU:HB2	1.75	0.86
1:w:90:U:H5''	1:w:91:A:OP2	1.75	0.86
1:w:441:U:H2'	1:w:442:G:C8	2.10	0.86
1:w:454:A:H4'	1:w:455:C:OP2	1.72	0.86
1:w:549:G:OP1	1:w:549:G:H4'	1.75	0.86
1:w:950:G:H2'	1:w:951:C:H6	1.40	0.86
1:w:975:G:H1'	1:w:990:A:H2	1.41	0.86
1:w:1120:G:H2'	1:w:1121:C:H6	1.41	0.86
1:w:1326:U:O5'	1:w:1326:U:H6	1.59	0.86
1:w:1670:C:O2	1:w:1993:U:O2	1.94	0.86
1:w:2051:A:C2'	1:w:2614:A:N6	2.39	0.86
1:w:2320:A:N3	1:w:2320:A:H2'	1.90	0.86
1:w:2620:C:H4'	5:C:156:MET:HB2	1.54	0.86
4:B:73:VAL:HG13	4:B:121:PRO:HD3	1.55	0.86
19:Q:9:TYR:H	19:Q:102:HIS:CE1	1.94	0.86
24:V:17:SER:O	24:V:44:PRO:HG2	1.75	0.86
31:y:518:C:OP1	31:y:518:C:H4'	1.74	0.86
31:y:703:G:H3'	31:y:703:G:OP2	1.76	0.86
31:y:1074:G:N3	31:y:1101:A:H2	1.74	0.86
31:y:1103:C:H2'	31:y:1104:G:C1'	2.06	0.86
31:y:1176:A:H3'	31:y:1177:G:H8	1.36	0.86
1:w:1007:C:O5'	1:w:1008:C:H5''	1.74	0.86
1:w:1142:C:C5'	1:w:114(B):A:H5''	2.06	0.86
1:w:1258:C:H2'	1:w:1259:G:C8	2.11	0.86
1:w:1275:A:H2'	1:w:1275:A:N3	1.89	0.86
1:w:1344:G:O2'	1:w:1385:G:C5'	2.23	0.86
1:w:1350:C:H2'	1:w:1351:C:H5'	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2175:C:O2'	3:A:221:PRO:HA	1.74	0.86
1:w:2728:U:C4	1:w:2729:G:N7	2.44	0.86
2:x:26:A:H3'	2:x:27:C:C6	2.10	0.86
2:x:73:A:C4	2:x:104:A:C2	2.64	0.86
2:x:110:G:O2'	2:x:111:U:H5'	1.75	0.86
4:B:24:ILE:HG12	4:B:25:THR:N	1.91	0.86
8:F:127:GLU:HB3	8:F:129:THR:N	1.89	0.86
11:I:19:ILE:HG21	11:I:43:VAL:HA	1.58	0.86
14:L:83:ILE:HD13	14:L:86:ARG:HD3	1.56	0.86
18:P:76:LYS:CG	18:P:85:LYS:HB2	2.05	0.86
25:W:50:ILE:O	25:W:51:ARG:HB3	1.73	0.86
29:a:32:LEU:HD21	29:a:35:GLN:O	1.76	0.86
31:y:36:C:C2'	31:y:37:U:C6	2.58	0.86
31:y:102:G:H2'	31:y:103:C:C6	2.10	0.86
31:y:157:G:H2'	31:y:158:G:H5'	1.58	0.86
31:y:267:C:OP2	50:r:67:LYS:HD2	1.76	0.86
31:y:272:C:H2'	31:y:273:A:H8	1.39	0.86
31:y:324:G:N2	31:y:327:A:O5'	2.09	0.86
31:y:375:U:O2'	49:q:6:LEU:HD21	1.76	0.86
31:y:436:C:H5''	31:y:436:C:H6	1.39	0.86
31:y:546:G:O3'	31:y:547:A:H4'	1.75	0.86
31:y:615:C:O2	31:y:625:G:N2	2.08	0.86
31:y:650:G:O2'	31:y:651:C:H5'	1.75	0.86
31:y:664:G:OP1	51:s:61:LYS:NZ	2.08	0.86
31:y:754:C:H6	48:p:69:TYR:CE1	1.92	0.86
31:y:756:C:O2'	31:y:757:U:H5'	1.76	0.86
31:y:1196:U:P	31:y:1197:G:H5''	2.15	0.86
41:i:45:ILE:HG12	41:i:46:LYS:H	1.40	0.86
41:i:82:HIS:O	41:i:83:ILE:HG13	1.76	0.86
44:l:14:VAL:HB	44:l:77:MET:HE3	1.57	0.86
1:w:299:A:C6	1:w:322:A:H2'	2.11	0.85
1:w:356:G:H2'	1:w:357:A:O4'	1.77	0.85
1:w:766:C:O2'	1:w:767:U:H5'	1.76	0.85
1:w:981:A:N3	1:w:2037:G:H1'	1.91	0.85
1:w:1033:U:H2'	30:b:18:ARG:NH1	1.89	0.85
1:w:1313:U:H5'	1:w:1332:G:O3'	1.76	0.85
1:w:1361:G:C2'	1:w:1362:C:H5''	2.06	0.85
1:w:1560:G:H2'	1:w:1561:G:C8	2.10	0.85
1:w:1816:G:O5'	4:B:39:LYS:HD2	1.75	0.85
1:w:2051:A:H5''	1:w:2614:A:H62	1.42	0.85
1:w:2271:G:H4'	23:U:19:LYS:HA	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2478:A:H5'	1:w:2528:U:H5'	1.58	0.85
1:w:2659:G:O2'	1:w:2660:A:N7	2.09	0.85
1:w:2785:C:H3'	1:w:2786:U:C6	2.11	0.85
1:w:2841:C:H2'	1:w:2842:G:O4'	1.74	0.85
1:w:2900:A:H2'	1:w:2901:C:O4'	1.75	0.85
9:G:109:ILE:HD13	9:G:109:ILE:H	1.41	0.85
11:I:6:THR:CG2	11:I:7:TYR:H	1.88	0.85
19:Q:88:ARG:HD2	19:Q:92:ARG:C	2.00	0.85
21:S:33:LYS:CB	21:S:65:ALA:HB1	2.05	0.85
22:T:166:SER:HB3	22:T:169:GLU:HB2	1.54	0.85
31:y:37:U:N3	31:y:38:G:H1'	1.90	0.85
31:y:117:G:H2'	31:y:118:U:H6	1.39	0.85
31:y:297:G:H21	31:y:300:A:N6	1.73	0.85
31:y:302:G:H8	31:y:302:G:O5'	1.57	0.85
31:y:911:U:H2'	31:y:912:C:C5	2.09	0.85
31:y:1331:G:OP2	31:y:1331:G:N9	2.09	0.85
31:y:1351:U:H2'	31:y:1352:C:C6	2.10	0.85
36:d:20:SER:HB2	47:o:54:PRO:HB3	1.58	0.85
38:f:105:VAL:CG1	38:f:106:PRO:CD	2.53	0.85
1:w:126:A:OP1	28:Z:19:ARG:HD2	1.76	0.85
1:w:287:C:C2	1:w:288:C:C5	2.63	0.85
1:w:1426:G:C3'	1:w:1427:A:H5''	2.06	0.85
1:w:1486:A:H2	1:w:1503:U:O2	1.59	0.85
1:w:1931:U:H3	1:w:1969:A:H62	1.22	0.85
1:w:2050:C:H5''	5:C:137:HIS:CE1	2.11	0.85
2:x:73:A:H2	22:T:34:ASN:ND2	1.73	0.85
2:x:100:G:C2'	2:x:101:A:H5'	2.04	0.85
4:B:142:VAL:HG22	4:B:143:HIS:N	1.91	0.85
10:H:46:LEU:HD21	10:H:83:ILE:HB	1.57	0.85
12:J:79:ARG:HG2	12:J:109:GLY:HA2	1.58	0.85
14:L:28:LEU:O	14:L:32:GLY:HA2	1.76	0.85
16:N:50:ILE:HB	16:N:63:VAL:HA	1.57	0.85
16:N:107:ASP:O	16:N:111:ARG:HG2	1.74	0.85
20:R:8:ILE:HA	20:R:30:VAL:HG13	1.58	0.85
21:S:88:LYS:HG3	21:S:89:PHE:CD1	2.11	0.85
31:y:346:G:C3'	31:y:347:G:H5''	2.06	0.85
31:y:582:U:O5'	31:y:582:U:C6	2.28	0.85
31:y:860:A:H2'	31:y:861:G:C5'	2.06	0.85
31:y:1269:A:H1'	31:y:1326:C:H1'	1.58	0.85
31:y:1360:A:H3'	31:y:1361:G:N7	1.91	0.85
31:y:1380:U:H5''	40:h:4:ARG:HB3	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:189:ASP:OD1	35:c:205:ASP:N	2.09	0.85
36:d:66:VAL:O	36:d:102:ASN:O	1.94	0.85
42:j:99:LEU:HB2	42:j:101:PHE:CE1	2.10	0.85
45:m:36:CYS:H	45:m:81:VAL:HA	1.41	0.85
1:w:77:C:N4	1:w:78:A:H62	1.74	0.85
1:w:396:G:O3'	24:V:46:LEU:HB3	1.77	0.85
1:w:589:C:C2'	1:w:590:A:C8	2.58	0.85
1:w:1021:A:H1'	1:w:1122:G:O2'	1.76	0.85
1:w:1361:G:C3'	1:w:1362:C:H5''	2.07	0.85
1:w:1568:G:H5''	4:B:61:LEU:CD2	2.05	0.85
1:w:2526:G:H2'	1:w:2527:C:C6	2.12	0.85
3:A:21:TYR:CA	3:A:25:GLU:OE2	2.25	0.85
4:B:249:PRO:HB3	4:B:250:TRP:CZ3	2.11	0.85
8:F:153:LYS:CB	8:F:154:PRO:CD	2.54	0.85
11:I:87:ILE:CG2	11:I:91:LEU:HA	2.05	0.85
17:O:90:VAL:HG13	18:P:11:GLN:NE2	1.90	0.85
31:y:123:C:H2'	31:y:124:G:H5'	1.56	0.85
31:y:303:A:H2'	31:y:304:U:H5'	1.56	0.85
31:y:1154:G:C3'	31:y:1155:G:H8	1.90	0.85
31:y:1158:C:H2'	31:y:1159:U:H4'	1.57	0.85
31:y:1239:A:N7	31:y:1299:A:N7	2.24	0.85
31:y:1323:G:C3'	31:y:1324:A:H8	1.90	0.85
31:y:1338:G:O2'	32:z:41:C:H4'	1.76	0.85
31:y:1350:A:N6	31:y:1351:U:C4	2.45	0.85
31:y:1378:C:OP2	40:h:5:ARG:CD	2.23	0.85
36:d:50:ALA:HB2	36:d:75:VAL:HG23	1.57	0.85
37:e:173:TRP:HZ3	37:e:194:LEU:HD21	1.41	0.85
49:q:4:ILE:HD12	49:q:21:VAL:HA	1.56	0.85
1:w:89:G:H2'	1:w:90:U:C1'	2.06	0.85
1:w:182:A:H3'	1:w:183:C:H6	1.42	0.85
1:w:237:C:O2'	1:w:609(A):A:H4'	1.75	0.85
1:w:532:A:C2'	1:w:2021:C:H42	1.86	0.85
1:w:1342:A:H8	1:w:1342:A:O5'	1.59	0.85
1:w:1343:G:H2'	1:w:1344:G:H5''	0.87	0.85
1:w:1508:A:H2'	1:w:1510:A:C6	2.10	0.85
1:w:1857:G:H2'	1:w:1858:G:O4'	1.76	0.85
1:w:2068:U:N3	1:w:2430:A:H2	1.74	0.85
1:w:2226:C:OP2	1:w:2226:C:C6	2.29	0.85
1:w:2835:A:HO2'	1:w:2836:U:H5	1.23	0.85
1:w:2846:G:OP2	16:N:54:ARG:HG3	1.77	0.85
2:x:41:U:H5''	2:x:42:C:H5'	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:45:A:H5'	2:x:46:A:OP2	1.77	0.85
2:x:45:A:N3	2:x:45:A:H2'	1.90	0.85
2:x:47:C:H42	2:x:48:A:N6	1.74	0.85
2:x:72:G:H2'	2:x:103:U:O4	1.76	0.85
3:A:225:ILE:HG22	3:A:226:ASN:H	1.41	0.85
8:F:95:ARG:HE	8:F:107:VAL:CA	1.89	0.85
10:H:76:VAL:HG12	10:H:77:VAL:H	1.41	0.85
11:I:86:ILE:HG21	11:I:94:ARG:HD3	1.57	0.85
12:J:100:LEU:O	12:J:102:ARG:N	2.10	0.85
13:K:11:LYS:HG2	13:K:12:GLN:N	1.89	0.85
19:Q:58:ALA:HA	19:Q:62:HIS:HB2	1.58	0.85
31:y:191(B):G:O2'	31:y:191(C):G:H5'	1.76	0.85
31:y:676:A:H2'	31:y:677:U:C6	2.12	0.85
31:y:820:U:H5'	31:y:820:U:C6	2.11	0.85
31:y:859:A:H2'	31:y:860:A:C5'	2.07	0.85
31:y:945:G:H1	31:y:1236:A:N6	1.75	0.85
31:y:1315:U:O2	31:y:1361:G:H1'	1.76	0.85
31:y:1377:A:H2'	40:h:5:ARG:CZ	2.06	0.85
31:y:1429:C:O2'	31:y:1430:C:H5'	1.77	0.85
35:c:28:PHE:CE1	35:c:31:TYR:HB2	2.11	0.85
37:e:9:CYS:SG	37:e:26:CYS:N	2.49	0.85
40:h:88:PRO:HG3	40:h:148:ASN:HB2	1.58	0.85
40:h:92:SER:O	40:h:96:GLN:HG2	1.76	0.85
1:w:106:C:O2	1:w:293:U:H1'	1.74	0.85
1:w:215:G:H4'	1:w:216:A:H4'	1.56	0.85
1:w:571:A:H2	1:w:2030:A:C2	1.94	0.85
1:w:870:A:H4'	13:K:6:ARG:NH1	1.90	0.85
1:w:1202:C:H2'	1:w:1203:G:O4'	1.77	0.85
1:w:1218:C:O2'	1:w:1219:G:H5'	1.77	0.85
1:w:1716:U:C2'	1:w:1717:G:N7	2.39	0.85
1:w:1841:U:O2	1:w:1901:A:C2	2.29	0.85
1:w:2311:A:P	1:w:2312:U:H5	1.99	0.85
1:w:2865:U:H6	1:w:2865:U:C5'	1.89	0.85
1:w:2873:A:N3	1:w:2873:A:H2'	1.92	0.85
2:x:57:A:H1'	7:E:30:GLU:HG2	1.58	0.85
4:B:250:TRP:HE3	4:B:250:TRP:N	1.75	0.85
5:C:4:ILE:HD11	5:C:29:GLY:CA	2.06	0.85
5:C:51:PHE:HB3	5:C:76:ARG:NE	1.92	0.85
9:G:125:GLU:O	9:G:126:TYR:HB3	1.75	0.85
9:G:132:PRO:CD	9:G:138:ILE:HG22	2.07	0.85
9:G:132:PRO:HD3	9:G:138:ILE:HG22	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:44:LYS:C	10:H:84:ARG:HB3	2.01	0.85
11:I:8:LEU:CD1	11:I:82:ASN:HB3	2.07	0.85
11:I:86:ILE:HG22	11:I:94:ARG:HH11	1.41	0.85
24:V:57:GLU:O	24:V:58:ILE:HG23	1.75	0.85
25:W:13:ALA:C	25:W:14:ARG:HD3	2.02	0.85
31:y:528:C:H5'	31:y:535:A:N6	1.92	0.85
31:y:553:A:C4'	45:m:30:PRO:HG2	2.06	0.85
31:y:1108:G:H2'	31:y:1109:C:H5''	1.58	0.85
31:y:1253:G:O2'	31:y:1356:G:C5'	2.23	0.85
33:0:75:C:H5'	33:0:76:A:OP1	1.75	0.85
35:c:54:THR:HG22	35:c:58:ILE:CD1	2.06	0.85
37:e:105:VAL:HG11	37:e:120:LEU:HD21	1.56	0.85
38:f:144:THR:HG22	38:f:145:LYS:N	1.91	0.85
46:n:79:LYS:HA	46:n:82:MET:SD	2.17	0.85
49:q:21:VAL:HG23	49:q:33:ILE:O	1.76	0.85
1:w:674:G:C5'	6:D:72:ASP:H	1.88	0.85
1:w:723:G:H3'	1:w:724:U:H5	1.39	0.85
1:w:887:A:C8	1:w:889:C:C2'	2.59	0.85
1:w:1360:A:N6	1:w:1371:G:H21	1.72	0.85
1:w:1471:A:C2	1:w:1472:A:C8	2.65	0.85
1:w:1578:U:H2'	1:w:1579:A:H5''	1.59	0.85
1:w:1653:G:O6	14:L:10:LEU:HG	1.76	0.85
1:w:1952:A:O2'	1:w:2560:C:O2'	1.89	0.85
1:w:2080:G:O2'	1:w:2081:C:H5'	1.77	0.85
1:w:2466:C:H5''	30:b:5:ALA:HB3	1.59	0.85
1:w:2468:G:C5	1:w:2481:G:C2	2.65	0.85
1:w:2567:G:H8	1:w:2567:G:H5'	1.39	0.85
1:w:2877:G:H2'	1:w:2878:U:O4'	1.77	0.85
4:B:64:ILE:HD11	4:B:67:PHE:HZ	1.40	0.85
5:C:110:GLY:HA2	5:C:161:GLY:HA3	1.57	0.85
9:G:73:GLU:HG2	9:G:138:ILE:HD11	1.57	0.85
9:G:78:THR:CG2	9:G:143:SER:HB3	2.06	0.85
12:J:48:PRO:HA	12:J:51:PHE:CE2	2.12	0.85
13:K:66:ILE:HD12	13:K:66:ILE:O	1.77	0.85
18:P:40:LEU:HD13	18:P:41:GLY:N	1.91	0.85
31:y:159:G:O2'	31:y:162:A:N6	2.08	0.85
31:y:332:G:H21	53:u:16:HIS:CE1	1.94	0.85
31:y:365:U:H3'	31:y:365:U:O2	1.75	0.85
31:y:474:G:OP1	49:q:75:ARG:CG	2.20	0.85
31:y:509:A:H8	31:y:509:A:O5'	1.59	0.85
31:y:598:U:C4'	41:i:94:TYR:HB3	2.05	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:718:G:C3'	31:y:720:C:H41	1.88	0.85
31:y:895:G:N2	31:y:904:C:O2	2.10	0.85
31:y:1181:G:H2'	31:y:1182:G:C8	2.12	0.85
31:y:1500:A:OP2	31:y:1505:G:OP2	1.95	0.85
35:c:27:LYS:CG	35:c:194:PRO:CD	2.53	0.85
35:c:28:PHE:HE1	35:c:31:TYR:N	1.74	0.85
37:e:22:LYS:HB3	37:e:25:ARG:HB2	1.56	0.85
37:e:33:MET:O	37:e:35:ARG:N	2.08	0.85
40:h:69:VAL:HG22	40:h:135:VAL:HG22	1.57	0.85
41:i:28:ALA:CB	41:i:57:PRO:HB2	2.06	0.85
45:m:102:GLY:O	45:m:103:VAL:HG23	1.76	0.85
46:n:78:ILE:HG13	46:n:79:LYS:N	1.90	0.85
53:u:75:ASN:HD22	53:u:79:ARG:HH12	1.19	0.85
53:u:92:LEU:HB3	53:u:98:PRO:HA	1.56	0.85
1:w:481:G:C5	1:w:507:A:C2	2.65	0.85
1:w:499:U:C6	1:w:500:G:C8	2.65	0.85
1:w:802:A:H3'	1:w:803:U:H6	0.75	0.85
1:w:1753:G:HO2'	1:w:1754:C:H6	1.07	0.85
1:w:1796:U:HO2'	1:w:1797:C:H6	1.20	0.85
1:w:1970:A:O4'	1:w:1972:A:H1'	1.75	0.85
1:w:2068:U:N3	1:w:2430:A:C2	2.44	0.85
1:w:2081:C:H2'	1:w:2082:A:O4'	1.76	0.85
1:w:2098:U:O2	1:w:2191:G:N1	2.07	0.85
1:w:2290:G:H22	1:w:2343:C:H1'	1.36	0.85
1:w:2466:C:H5''	30:b:5:ALA:CB	2.06	0.85
1:w:2486:G:C5'	13:K:126:PRO:HB3	2.06	0.85
1:w:2709:G:H2'	1:w:2710:C:C6	2.11	0.85
1:w:2743:C:C3'	1:w:2744:G:H5''	2.06	0.85
3:A:19:LYS:HA	3:A:19:LYS:HE3	1.59	0.85
4:B:78:LYS:HB3	4:B:116:GLN:NE2	1.92	0.85
4:B:134:ARG:CZ	4:B:187:GLY:HA3	2.06	0.85
9:G:121:LYS:O	9:G:122:GLU:HB3	1.76	0.85
10:H:40:ASP:CB	10:H:77:VAL:HG13	2.06	0.85
10:H:44:LYS:O	10:H:84:ARG:HB3	1.76	0.85
13:K:11:LYS:HB2	13:K:14:ARG:NH1	1.92	0.85
14:L:38:VAL:CG1	14:L:39:PRO:CD	2.55	0.85
20:R:63:LYS:HE2	20:R:64:LYS:HZ2	1.39	0.85
22:T:16:SER:CA	22:T:19:ARG:HD3	2.06	0.85
29:a:59:LYS:O	29:a:60:LEU:HD23	1.75	0.85
31:y:344:A:H3'	31:y:346:G:O6	1.76	0.85
31:y:451:A:H2'	31:y:481:G:O6	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:954:G:H1	46:n:104:ARG:HH12	0.89	0.85
35:c:92:TYR:HD1	35:c:93:VAL:N	1.75	0.85
35:c:97:TRP:HZ3	35:c:99:GLY:HA2	1.39	0.85
35:c:97:TRP:CZ2	35:c:176:GLU:HG3	2.10	0.85
36:d:118:GLN:HA	36:d:187:ALA:HB1	1.57	0.85
37:e:62:GLN:HB2	37:e:66:ARG:HH21	1.39	0.85
37:e:199:ASN:CB	37:e:202:LEU:HG	2.06	0.85
40:h:70:LYS:O	40:h:72:ARG:NH1	2.08	0.85
47:o:8:GLU:O	47:o:11:LYS:HB3	1.75	0.85
1:w:322:A:OP2	1:w:322:A:C8	2.29	0.85
1:w:450:G:C2	1:w:451:C:H5	1.95	0.85
1:w:668:G:H2'	1:w:670:A:C5	2.11	0.85
1:w:697:C:H42	1:w:698:C:H41	1.23	0.85
1:w:716:A:O5'	1:w:716:A:C8	2.27	0.85
1:w:1037:G:H2'	1:w:1038:C:C6	2.12	0.85
1:w:1120:G:H2'	1:w:1121:C:C6	2.12	0.85
1:w:1154:G:H5''	17:O:59:ARG:HH21	1.39	0.85
1:w:1298:C:N4	1:w:1643:G:C2	2.43	0.85
1:w:1501:C:H6	1:w:1501:C:O5'	1.60	0.85
1:w:1543:A:H3'	1:w:1544:C:O4'	1.77	0.85
1:w:2030:A:C5'	1:w:2031:A:H8	1.89	0.85
1:w:2055:C:H4'	1:w:2056:G:C5'	2.07	0.85
1:w:2831:G:C4'	1:w:2883:A:H2	1.89	0.85
4:B:242:ARG:HD2	4:B:242:ARG:N	1.91	0.85
7:E:19:LEU:HD23	7:E:25:TYR:HE2	1.41	0.85
9:G:2:LYS:HA	9:G:20:ASP:CA	2.07	0.85
10:H:91:GLU:N	10:H:110:LEU:HB2	1.92	0.85
14:L:34:ILE:CG2	14:L:35:THR:H	1.80	0.85
21:S:67:LEU:O	21:S:68:HIS:CG	2.30	0.85
24:V:85:LEU:HD11	24:V:88:LYS:H	1.42	0.85
31:y:714:G:H1'	31:y:777:A:C8	2.10	0.85
31:y:943:U:H2'	31:y:944:G:O4'	1.77	0.85
31:y:1309:G:N2	31:y:1328:C:O2	2.10	0.85
31:y:1375:A:C2'	31:y:1376:U:O4'	2.25	0.85
32:z:38:A:O5'	32:z:38:A:H8	1.60	0.85
35:c:164:VAL:CG2	35:c:165:VAL:H	1.90	0.85
36:d:55:VAL:HA	36:d:68:VAL:HG13	1.58	0.85
36:d:78:GLY:HA3	36:d:82:GLU:CG	2.06	0.85
45:m:78:GLU:HG3	45:m:79:HIS:H	1.39	0.85
45:m:109:VAL:CG2	45:m:119:TYR:CB	2.48	0.85
49:q:21:VAL:CG1	49:q:26:ARG:HH21	1.89	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:54:GLY:O	50:r:85:VAL:HG21	1.76	0.85
1:w:668:G:H2'	1:w:670:A:N6	1.85	0.85
1:w:670:A:H5''	1:w:671:C:H5'	1.56	0.85
1:w:1298:C:C4	1:w:1299:G:N7	2.43	0.85
1:w:2037:G:H2'	1:w:2038:G:C8	2.11	0.85
1:w:2073:C:H2'	1:w:2074:U:C6	2.10	0.85
1:w:2133:G:H8	1:w:2133:G:P	2.00	0.85
1:w:2333:A:H5'	1:w:2335:A:C4	2.12	0.85
1:w:2634:G:H2'	1:w:2635:C:C6	2.12	0.85
1:w:2651:C:C2	1:w:2652:C:C5	2.64	0.85
4:B:138:VAL:HG23	4:B:139:GLY:N	1.92	0.85
8:F:24:VAL:HG12	8:F:26:VAL:HG23	1.57	0.85
13:K:125:LEU:CD2	13:K:126:PRO:CD	2.51	0.85
14:L:97:VAL:C	14:L:98:LEU:HD12	2.02	0.85
17:O:106:PHE:C	17:O:109:LEU:HG	2.01	0.85
26:X:8:LEU:HD12	26:X:9:VAL:H	1.42	0.85
31:y:117:G:N7	31:y:118:U:O4	2.10	0.85
31:y:129(B):G:O4'	31:y:191(A):G:H5'	1.77	0.85
31:y:343:U:O2	31:y:347:G:C6	2.30	0.85
31:y:714:G:H1'	31:y:777:A:N7	1.91	0.85
31:y:1342:C:H4'	42:j:125:TYR:CE2	2.12	0.85
31:y:1442:G:H3'	31:y:1442:G:N3	1.92	0.85
36:d:153:VAL:HG13	36:d:166:GLU:HB3	1.58	0.85
37:e:96:LEU:O	37:e:99:SER:HB2	1.77	0.85
38:f:79:GLU:CG	38:f:93:PRO:HD3	2.06	0.85
42:j:116:LYS:HG2	42:j:122:ALA:CB	2.06	0.85
49:q:6:LEU:H	49:q:6:LEU:HD23	1.41	0.85
1:w:132:G:H3'	1:w:133:C:C5	2.11	0.85
1:w:217:G:C2'	1:w:218:A:H8	1.90	0.85
1:w:330:A:O2'	1:w:1210:A:C2	2.29	0.85
1:w:372:G:HO2'	1:w:373:U:P	1.97	0.85
1:w:1516:U:O2	1:w:1557:C:H4'	1.77	0.85
1:w:1531:C:H6	1:w:1531:C:O5'	1.59	0.85
1:w:2162:G:H2'	1:w:2163:C:H5'	1.59	0.85
1:w:2558:C:C2'	1:w:2559:C:H6	1.88	0.85
1:w:2754:U:OP2	1:w:2754:U:C6	2.30	0.85
2:x:10:C:O2'	2:x:11:C:H5'	1.76	0.85
4:B:27:THR:HG21	4:B:81:ALA:HB1	1.58	0.85
5:C:110:GLY:O	14:L:3:HIS:HB2	1.77	0.85
11:I:16:ALA:O	11:I:17:ARG:NH1	2.10	0.85
12:J:85:LEU:HD23	12:J:86:LYS:H	1.39	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:17:ARG:O	14:L:20:LEU:HB3	1.76	0.85
17:O:47:TYR:O	17:O:50:ARG:N	2.10	0.85
17:O:95:LEU:C	17:O:97:ASP:H	1.83	0.85
21:S:49:VAL:CG1	21:S:50:ARG:H	1.90	0.85
24:V:34:THR:HG22	24:V:35:THR:H	1.40	0.85
31:y:26:A:H2'	31:y:27:G:H5'	1.56	0.85
31:y:38:G:H1'	31:y:397:A:N6	1.92	0.85
31:y:252:U:O2'	31:y:275:G:N2	2.09	0.85
31:y:332:G:O2'	31:y:333:G:H5'	1.77	0.85
31:y:531:U:C6	31:y:531:U:O5'	2.30	0.85
31:y:657:G:O2'	48:p:27:VAL:HG11	1.76	0.85
31:y:1029:G:O2'	31:y:103(A):A:N6	2.09	0.85
31:y:1312:G:N2	31:y:1313:U:H1'	1.92	0.85
35:c:23:ARG:HH22	35:c:40:HIS:HE1	1.25	0.85
36:d:120:VAL:HG13	36:d:123:GLN:NE2	1.92	0.85
37:e:9:CYS:CA	37:e:22:LYS:HG3	2.07	0.85
37:e:66:ARG:O	37:e:69:GLY:N	2.09	0.85
43:k:11:PHE:HB2	43:k:15:THR:HG21	1.59	0.85
44:l:42:TRP:CZ3	44:l:47:VAL:HG11	2.12	0.85
45:m:59:LEU:HB3	45:m:63:TYR:HB2	1.59	0.85
51:s:53:ARG:CD	51:s:58:LEU:HD22	2.07	0.85
52:t:39:THR:HA	52:t:70:LYS:HG3	1.59	0.85
1:w:49:A:N6	1:w:177:G:C2	2.44	0.84
1:w:304:G:H2'	1:w:305:U:C5	2.11	0.84
1:w:817:C:C2'	1:w:818:G:H5'	2.07	0.84
1:w:1038:C:C2'	1:w:1039:G:H5'	2.07	0.84
1:w:1313:U:C5'	1:w:1332:G:O3'	2.25	0.84
1:w:1711:C:O2'	1:w:1712:C:H5'	1.77	0.84
1:w:1841:U:O2	1:w:1901:A:H2	1.57	0.84
1:w:1919:A:O5'	1:w:1919:A:H8	1.58	0.84
1:w:2140:C:H2'	1:w:2141:G:C8	2.12	0.84
1:w:2192:G:C2'	1:w:2193:G:H5'	2.07	0.84
1:w:2359:C:C2	1:w:2360:A:C1'	2.59	0.84
1:w:2549:G:C2'	1:w:2550:G:H5'	2.06	0.84
2:x:78:A:C2	2:x:99:A:C6	2.65	0.84
4:B:121:PRO:CA	4:B:131:LEU:HG	2.06	0.84
5:C:19:ARG:HH11	5:C:21:VAL:CG1	1.89	0.84
5:C:63:LEU:CD2	5:C:65:GLY:H	1.83	0.84
8:F:45:VAL:O	8:F:45:VAL:HG13	1.77	0.84
13:K:53:ALA:O	13:K:57:HIS:HB3	1.76	0.84
17:O:91:ASP:O	17:O:92:ARG:O	1.95	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:41:ARG:HD3	23:U:41:ARG:C	2.02	0.84
28:Z:2:LYS:HB2	28:Z:6:GLN:NE2	1.92	0.84
31:y:52:G:N1	31:y:359:U:O2	2.08	0.84
31:y:253:U:H2'	31:y:254:G:O4'	1.76	0.84
31:y:518:C:H5''	31:y:530:G:H4'	1.58	0.84
31:y:564:C:H3'	31:y:566:G:C2'	2.07	0.84
31:y:675:A:C3'	31:y:676:A:H5'	2.06	0.84
31:y:735:C:H5'	51:s:71:LYS:HD3	1.59	0.84
31:y:860:A:H2'	31:y:861:G:O4'	1.77	0.84
31:y:1507:A:O2'	31:y:1508:G:C5'	2.23	0.84
36:d:202:ILE:HG22	36:d:204:LEU:CD1	2.07	0.84
37:e:22:LYS:HB2	37:e:26:CYS:CB	2.06	0.84
41:i:91:ARG:HH11	41:i:91:ARG:CA	1.90	0.84
44:l:21:ILE:HB	44:l:84:VAL:HA	1.57	0.84
49:q:19:ILE:HB	49:q:37:GLY:O	1.76	0.84
1:w:107:C:H2'	1:w:348:G:N2	1.92	0.84
1:w:363(G):A:N3	1:w:364:C:N4	2.25	0.84
1:w:584:C:H2'	1:w:585:G:H8	1.41	0.84
1:w:926:A:OP2	1:w:926:A:H8	1.58	0.84
1:w:2319:G:C5	15:M:8:GLU:HG2	2.11	0.84
2:x:25:A:C8	2:x:26:A:C8	2.65	0.84
3:A:186:LEU:O	3:A:190:ILE:HG13	1.77	0.84
8:F:76:VAL:HA	8:F:79:VAL:HG13	1.56	0.84
9:G:88:ILE:HG12	9:G:89:TYR:N	1.89	0.84
9:G:130:TYR:H	9:G:139:GLN:HA	1.42	0.84
10:H:26:THR:CG2	10:H:28:VAL:H	1.88	0.84
14:L:57:ARG:HB3	14:L:60:LEU:HD11	1.59	0.84
16:N:35:LYS:NZ	16:N:35:LYS:HB3	1.92	0.84
16:N:45:PHE:HE1	16:N:67:SER:HB2	1.39	0.84
20:R:81:VAL:HG21	20:R:86:GLY:N	1.91	0.84
25:W:5:GLU:OE2	25:W:9:GLN:HA	1.77	0.84
26:X:8:LEU:HD21	26:X:28:LEU:HD12	1.56	0.84
31:y:555:C:C3'	31:y:556:C:H5''	2.05	0.84
31:y:696:A:H1'	31:y:786:G:O2'	1.77	0.84
31:y:912:C:C6	31:y:912:C:OP2	2.30	0.84
31:y:958:A:C2'	31:y:959:A:H8	1.90	0.84
31:y:1073:U:H2'	31:y:1074:G:H5'	1.56	0.84
31:y:1160:G:C2	31:y:1161:C:H1'	2.12	0.84
31:y:1221:G:C2	31:y:1222:G:C1'	2.60	0.84
31:y:1275:A:O2'	31:y:1276:G:H5'	1.77	0.84
31:y:1360:A:H2'	31:y:1361:G:C8	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1421:G:C2'	31:y:1422:G:H5'	2.06	0.84
32:z:54:5MU:H3'	32:z:55:PSU:H5'	1.59	0.84
37:e:9:CYS:SG	37:e:22:LYS:HB2	2.16	0.84
38:f:82:VAL:O	38:f:88:LYS:HG3	1.77	0.84
40:h:134:ALA:HA	40:h:137:LYS:CG	2.07	0.84
41:i:93:VAL:O	41:i:93:VAL:HG12	1.75	0.84
45:m:95:VAL:HG12	45:m:97:TYR:H	1.40	0.84
46:n:12:ASN:O	46:n:13:LYS:HG3	1.76	0.84
46:n:65:LYS:HB3	46:n:69:GLU:CD	2.03	0.84
51:s:61:LYS:HD2	51:s:64:ARG:HB2	1.60	0.84
1:w:324:A:N6	1:w:338:G:O2'	2.11	0.84
1:w:441:U:C2	1:w:442:G:C8	2.66	0.84
1:w:486:C:C2'	1:w:487:C:H5'	2.06	0.84
1:w:1309:G:H8	1:w:1309:G:O5'	1.60	0.84
1:w:1871:A:H2'	1:w:1872:A:C8	2.11	0.84
1:w:2076:U:C5'	1:w:2238:G:H1	1.89	0.84
1:w:2090:G:H22	24:V:47:GLN:NE2	1.74	0.84
1:w:2296:U:H4'	1:w:2297:C:H5'	0.86	0.84
1:w:2319:G:H5''	15:M:7:TYR:OH	1.77	0.84
1:w:2572:A:OP2	5:C:146:THR:OG1	1.95	0.84
1:w:2572:A:P	1:w:2574:G:H4'	2.16	0.84
3:A:30:VAL:HA	3:A:33:LEU:CD1	2.05	0.84
4:B:65:ILE:HB	4:B:104:TYR:O	1.77	0.84
4:B:79:VAL:CG2	4:B:95:LEU:HD13	2.07	0.84
6:D:181:ILE:HA	6:D:184:THR:OG1	1.77	0.84
8:F:10:PRO:HB2	8:F:12:PRO:HD3	1.57	0.84
11:I:7:TYR:C	11:I:8:LEU:HD22	2.01	0.84
19:Q:22:ASP:HA	19:Q:25:ARG:CD	2.07	0.84
19:Q:22:ASP:CA	19:Q:25:ARG:HG3	2.06	0.84
22:T:71:VAL:HG12	22:T:72:ARG:H	1.41	0.84
24:V:10:LYS:O	24:V:11:ARG:HB2	1.74	0.84
24:V:46:LEU:H	24:V:46:LEU:HD23	1.40	0.84
31:y:265:G:H21	31:y:267:C:H5'	1.38	0.84
31:y:947:G:O2'	31:y:1306:A:C4'	2.25	0.84
31:y:959:A:C2	31:y:960:U:H1'	2.12	0.84
31:y:1104:G:C4'	35:c:111:ARG:HH21	1.88	0.84
36:d:156:ARG:H	36:d:160:ALA:CB	1.90	0.84
37:e:26:CYS:HA	37:e:31:CYS:CA	2.06	0.84
37:e:111:ALA:HB1	37:e:116:GLN:HG2	1.60	0.84
42:j:117:HIS:HB2	42:j:121:ARG:CZ	2.05	0.84
44:l:74:ALA:C	44:l:75:TYR:CD2	2.55	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:90:ILE:HG13	50:r:91:ARG:N	1.90	0.84
1:w:465:G:C2'	1:w:683:C:O2'	2.25	0.84
1:w:618(B):C:H3'	1:w:619:G:H8	1.41	0.84
1:w:954:G:H5''	13:K:17:LEU:CD1	2.07	0.84
1:w:1000:A:N6	1:w:1155:A:C4	2.44	0.84
1:w:1441:G:O2'	1:w:1442:G:H5'	1.76	0.84
1:w:1464:C:O2'	1:w:1528:A:H1'	1.77	0.84
1:w:1565:C:C6	1:w:1565:C:OP2	2.30	0.84
1:w:1851:U:H5'	33:0:4:G:C4'	2.07	0.84
1:w:2373:G:C8	1:w:2373:G:O5'	2.29	0.84
1:w:2857:G:H22	1:w:2859:G:H3'	1.41	0.84
1:w:2858:C:N4	1:w:2859:G:C6	2.45	0.84
4:B:211:ARG:CG	4:B:215:LEU:HD11	2.07	0.84
5:C:132:HIS:O	5:C:133:LYS:HB2	1.76	0.84
7:E:113:ARG:HB2	46:n:3:ARG:HG2	1.57	0.84
7:E:144:ILE:O	7:E:144:ILE:HG22	1.75	0.84
9:G:4:ILE:HB	9:G:37:VAL:CB	2.08	0.84
10:H:44:LYS:HB2	10:H:83:ILE:HG21	1.59	0.84
10:H:138:ARG:CA	10:H:141:LYS:HE2	2.05	0.84
11:I:113:LYS:O	11:I:117:LEU:HG	1.77	0.84
14:L:13:HIS:CD2	14:L:16:HIS:CD2	2.64	0.84
19:Q:30:GLU:O	19:Q:33:ARG:HG2	1.77	0.84
19:Q:52:GLU:O	19:Q:56:ALA:HB2	1.76	0.84
24:V:11:ARG:HH22	24:V:61:ARG:H	1.26	0.84
28:Z:28:ARG:HA	28:Z:31:LEU:CG	2.07	0.84
31:y:282:A:C6	31:y:283:C:C2	2.65	0.84
31:y:329:A:N6	31:y:332:G:C2	2.45	0.84
31:y:529:G:C3'	31:y:530:G:H5''	2.08	0.84
31:y:557:G:H2'	31:y:558:G:O4'	1.77	0.84
31:y:1013:G:N3	31:y:1016:A:C6	2.44	0.84
31:y:102(B):C:H2'	31:y:102(C):C:C5'	2.06	0.84
31:y:1075:C:N4	31:y:1082:G:O6	2.11	0.84
31:y:1092:A:N6	31:y:1093:A:N6	2.23	0.84
31:y:1129:C:O2	31:y:1143:G:N2	2.10	0.84
31:y:1235:U:C5'	54:v:3:LYS:HG2	2.07	0.84
31:y:1255:G:O2'	31:y:1258:G:H1'	1.77	0.84
31:y:1269:A:H5'	54:v:19:GLY:CA	2.07	0.84
1:w:530:G:O2'	1:w:532:A:C8	2.24	0.84
1:w:634:C:H2'	1:w:635:C:H6	1.38	0.84
1:w:811:U:H1'	1:w:1251:C:C4'	2.07	0.84
1:w:979:G:C5'	1:w:980:A:H5''	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1272:A:H5'	1:w:1646:C:N3	1.92	0.84
1:w:1357:U:O4	1:w:1358:G:C6	2.30	0.84
1:w:1779:U:O4	1:w:1784:A:N7	2.10	0.84
1:w:1805:U:O2	4:B:50:THR:CB	2.25	0.84
1:w:2401:U:O2'	1:w:2402:C:C6	2.29	0.84
1:w:2470:G:O2'	1:w:2471:C:H5''	1.76	0.84
1:w:2514:U:C2	1:w:2515:C:C5	2.65	0.84
4:B:69:ARG:NH2	4:B:130:ALA:HB2	1.92	0.84
4:B:231:HIS:O	4:B:233:HIS:N	2.10	0.84
7:E:82:LEU:HD12	7:E:84:LYS:H	1.42	0.84
10:H:40:ASP:HB2	10:H:77:VAL:HG13	1.60	0.84
15:M:28:VAL:CG1	15:M:29:PHE:N	2.39	0.84
16:N:52:ILE:HG23	16:N:52:ILE:O	1.75	0.84
22:T:58:VAL:C	22:T:59:LEU:HD22	2.01	0.84
31:y:10:A:H8	31:y:10:A:O5'	1.59	0.84
31:y:130:A:N1	31:y:232:G:N2	2.24	0.84
31:y:283:C:H6	31:y:283:C:O5'	1.59	0.84
31:y:326:G:H2'	31:y:327:A:C5'	2.07	0.84
31:y:391:G:H3'	31:y:392:G:C5'	2.06	0.84
31:y:529:G:O6	45:m:48:ASN:CA	2.21	0.84
31:y:562:C:O2	45:m:15:GLU:O	1.96	0.84
31:y:893:C:H2'	31:y:894:G:H8	1.42	0.84
31:y:946:A:C1'	31:y:1333:A:O2'	2.25	0.84
31:y:975:A:C2	31:y:1357:A:H1'	2.12	0.84
31:y:1349:A:H5''	42:j:121:ARG:CB	2.08	0.84
33:0:64:A:H2'	33:0:65:G:C8	2.12	0.84
37:e:100:ARG:NE	37:e:137:SER:HA	1.92	0.84
38:f:11:ILE:HD13	38:f:105:VAL:CG2	2.07	0.84
38:f:118:ILE:CG2	38:f:120:THR:HG22	2.06	0.84
41:i:119:LEU:HD12	41:i:124:ALA:HA	1.59	0.84
53:u:39:LYS:O	53:u:43:LEU:HG	1.78	0.84
1:w:363(F):U:H3'	1:w:363(G):A:H8	1.36	0.84
1:w:469:G:O6	28:Z:39:ARG:HD2	1.78	0.84
1:w:630:G:H21	1:w:633:A:H62	1.25	0.84
1:w:705:A:H62	1:w:726:G:H1'	1.42	0.84
1:w:731:C:OP2	1:w:761:A:OP1	1.95	0.84
1:w:788:A:H5''	1:w:790:C:H41	1.42	0.84
1:w:887:A:N3	1:w:887:A:H5''	1.93	0.84
1:w:962:G:C3'	1:w:963:U:H5''	2.07	0.84
1:w:1054:A:H3'	1:w:1055:G:C8	2.12	0.84
1:w:1179:C:H5'	1:w:1180:C:OP1	1.78	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1323:U:O5'	1:w:1323:U:H6	1.60	0.84
1:w:1613:G:N1	1:w:1617:C:O2'	2.10	0.84
1:w:1862:G:C3'	1:w:1863:G:H5''	2.07	0.84
1:w:2818:G:O4'	1:w:2837:G:C5'	2.26	0.84
3:A:35:THR:HG22	3:A:36:ALA:H	1.41	0.84
5:C:176:ILE:CB	5:C:181:LEU:HB2	2.00	0.84
6:D:165:LEU:HD13	6:D:165:LEU:H	1.42	0.84
8:F:94:TYR:CD2	8:F:129:THR:HB	2.12	0.84
10:H:65:TRP:CH2	10:H:67:PRO:HA	2.13	0.84
15:M:8:GLU:O	15:M:9:ARG:HB2	1.75	0.84
16:N:35:LYS:HG2	16:N:38:ASN:HD21	1.40	0.84
18:P:40:LEU:HD23	18:P:50:PRO:HB3	1.60	0.84
24:V:51:VAL:HB	24:V:60:PHE:N	1.92	0.84
24:V:85:LEU:HD22	24:V:87:PRO:HG2	1.59	0.84
26:X:44:ARG:O	26:X:48:GLU:HG2	1.78	0.84
31:y:81:G:N2	31:y:88:C:O2	2.09	0.84
31:y:767:A:H2'	31:y:768:A:C5'	2.07	0.84
31:y:1316:G:C4'	31:y:1360:A:H2	1.90	0.84
31:y:1348:U:O2	31:y:1374:A:N7	2.11	0.84
31:y:1504:G:O2'	31:y:1505:G:OP2	1.93	0.84
38:f:48:ALA:CB	38:f:49:PRO:HD2	2.06	0.84
39:g:51:PRO:C	39:g:52:ILE:HD12	2.00	0.84
42:j:85:LEU:CD1	42:j:86:VAL:HG13	2.06	0.84
1:w:270(E):C:H2'	1:w:270(F):G:H8	1.37	0.84
1:w:516:C:O2	1:w:516:C:H2'	1.77	0.84
1:w:751:A:H3'	1:w:751:A:H8	1.40	0.84
1:w:1309:G:OP1	28:Z:9:ARG:HG3	1.78	0.84
1:w:1567:A:O4'	1:w:1568:G:N1	2.10	0.84
1:w:1636:C:H2'	1:w:1637:A:H8	1.40	0.84
1:w:1637:A:H2'	1:w:1638:C:C6	2.13	0.84
1:w:1728:G:N7	1:w:1730:U:OP2	2.10	0.84
1:w:1993:U:H2'	1:w:1994:C:C6	2.11	0.84
1:w:2065:C:C3'	1:w:2066:C:H5''	2.08	0.84
1:w:2471:C:H6	1:w:2471:C:C5'	1.87	0.84
1:w:2496:C:OP2	13:K:81:VAL:HG12	1.78	0.84
2:x:108:C:OP1	2:x:109:G:H4'	1.76	0.84
4:B:94:LEU:HG	4:B:104:TYR:HE2	1.43	0.84
5:C:192:ASN:HD22	5:C:193:GLY:N	1.75	0.84
11:I:64:ARG:HD3	11:I:102:VAL:HG11	1.59	0.84
22:T:53:ILE:HD13	22:T:53:ILE:N	1.91	0.84
22:T:102:LEU:HD22	22:T:123:ASP:O	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:23:VAL:HA	23:U:38:VAL:HG13	1.59	0.84
24:V:38:SER:C	24:V:39:LYS:HD2	2.02	0.84
31:y:245:C:C2'	31:y:246:A:H5'	2.03	0.84
31:y:597:G:N2	31:y:643:C:O2	2.10	0.84
31:y:775:G:N2	31:y:804:U:O4	2.09	0.84
31:y:817:C:C4'	31:y:818:G:H3'	2.08	0.84
31:y:1347:G:H2'	42:j:107:ARG:O	1.76	0.84
31:y:1373:G:H5''	40:h:36:LYS:HE3	1.60	0.84
32:z:4:C:C2	32:z:5:G:C8	2.64	0.84
37:e:158:ILE:HD12	37:e:158:ILE:N	1.90	0.84
41:i:35:ILE:HA	41:i:38:ILE:CD1	2.08	0.84
1:w:43:G:C8	1:w:43:G:P	2.70	0.84
1:w:77:C:N4	1:w:78:A:N6	2.25	0.84
1:w:466:A:H2'	1:w:467:G:H5'	1.58	0.84
1:w:719:C:C2	1:w:720:C:C5	2.65	0.84
1:w:929:G:H2'	1:w:930:U:O2	1.78	0.84
1:w:1042:G:H5''	1:w:1043:C:OP2	1.77	0.84
1:w:1056:G:C8	1:w:1056:G:O5'	2.30	0.84
1:w:1530:G:H1	1:w:1541:U:H1'	1.42	0.84
1:w:1805:U:OP1	4:B:252:TRP:CZ2	2.29	0.84
1:w:2162:G:O2'	1:w:2163:C:H5'	1.77	0.84
1:w:2354:G:H1'	23:U:34:GLY:O	1.77	0.84
1:w:2359:C:O2	1:w:2360:A:C1'	2.24	0.84
1:w:2393:A:H4'	12:J:62:LEU:HB3	1.59	0.84
1:w:2682:U:C1'	5:C:12:THR:HG22	2.07	0.84
1:w:2723:C:C4	1:w:2724:C:C6	2.66	0.84
1:w:2772:C:O5'	1:w:2772:C:H6	1.60	0.84
1:w:2822:G:N7	14:L:2:ARG:HB3	1.92	0.84
7:E:125:PHE:HB2	7:E:166:ASP:OD2	1.78	0.84
10:H:107:LYS:HG3	10:H:108:ILE:H	1.41	0.84
13:K:5:ARG:HG3	13:K:6:ARG:H	1.41	0.84
20:R:89:ILE:HD12	20:R:92:LEU:HB2	1.59	0.84
22:T:176:PRO:HB2	22:T:177:PRO:HD2	1.60	0.84
23:U:36:ILE:CA	23:U:60:PHE:HB2	2.07	0.84
26:X:5:LYS:HE2	26:X:7:LYS:HE3	1.59	0.84
26:X:8:LEU:O	26:X:53:LEU:O	1.96	0.84
28:Z:21:ARG:C	28:Z:23:ARG:H	1.83	0.84
31:y:5:U:H2'	31:y:5:U:O2	1.78	0.84
31:y:24:U:C2'	31:y:25:C:H5'	2.07	0.84
31:y:186(B):C:H5''	53:u:86:ARG:HH11	1.42	0.84
31:y:307:C:C6	31:y:308:C:H5	1.95	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:947:G:O2'	31:y:1306:A:C5'	2.25	0.84
31:y:1153:C:H2'	31:y:1154:G:O4'	1.78	0.84
31:y:1154:G:H3'	31:y:1155:G:C8	2.13	0.84
37:e:31:CYS:HB3	37:e:34:GLU:HB2	1.57	0.84
41:i:119:LEU:HB3	41:i:124:ALA:N	1.92	0.84
47:o:30:ALA:HA	47:o:33:VAL:CG1	2.08	0.84
1:w:92:G:C2'	1:w:93:C:H6	1.90	0.84
1:w:379:G:H4'	24:V:21:ARG:CD	2.07	0.84
1:w:519:U:C4	1:w:520:G:C5	2.65	0.84
1:w:812:C:H2'	1:w:813:U:H5'	1.58	0.84
1:w:1128:A:N6	1:w:2518:A:H61	1.69	0.84
1:w:1458:C:H1'	1:w:1459:G:N3	1.91	0.84
1:w:2082:A:C3'	1:w:2083:G:C8	2.61	0.84
1:w:2109:U:H2'	1:w:2110:G:N7	1.93	0.84
1:w:2886:G:H8	1:w:2886:G:O5'	1.61	0.84
4:B:65:ILE:HG21	4:B:105:ILE:HA	1.60	0.84
10:H:124:HIS:O	10:H:127:LYS:N	2.11	0.84
13:K:16:ARG:HD2	13:K:17:LEU:HD22	1.60	0.84
16:N:102:ILE:O	16:N:106:SER:HB3	1.76	0.84
18:P:64:HIS:C	18:P:96:ILE:HG23	2.03	0.84
21:S:28:LYS:HA	21:S:35:TYR:HB3	1.60	0.84
22:T:24:LEU:HD11	22:T:44:PHE:HB3	1.59	0.84
23:U:50:ASN:HA	23:U:63:VAL:CB	2.07	0.84
31:y:111:G:H21	31:y:389:A:C4'	1.91	0.84
31:y:1157:A:H61	31:y:1178:G:C1'	1.87	0.84
31:y:1299:A:N3	31:y:1300:G:H5'	1.89	0.84
35:c:12:GLU:C	35:c:14:GLY:H	1.83	0.84
37:e:12:CYS:HB3	37:e:19:LEU:HB2	0.87	0.84
37:e:101:LEU:HD12	37:e:138:TYR:O	1.78	0.84
39:g:8:ILE:HB	39:g:61:LEU:CG	2.07	0.84
47:o:61:TRP:HE3	47:o:61:TRP:H	0.88	0.84
53:u:46:GLU:O	53:u:96:GLY:HA3	1.78	0.84
53:u:75:ASN:ND2	53:u:79:ARG:HH22	1.75	0.84
1:w:64:A:H5''	20:R:63:LYS:HG3	1.60	0.84
1:w:412:A:N6	1:w:2411:A:H1'	1.92	0.84
1:w:588:U:C5	1:w:589:C:C4	2.65	0.84
1:w:613:U:C3'	1:w:615:G:OP2	2.26	0.84
1:w:649:G:OP1	1:w:2352:A:H5''	1.78	0.84
1:w:943:U:OP2	1:w:943:U:H6	1.61	0.84
1:w:1224:C:O2'	18:P:88:ARG:N	2.11	0.84
1:w:1301:A:O2'	1:w:1303:G:OP2	1.95	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1438:U:OP2	1:w:1438:U:H6	1.61	0.84
1:w:1567:A:OP2	1:w:1567:A:C2'	2.25	0.84
1:w:2049:G:C5	1:w:2050:C:N4	2.46	0.84
1:w:2396:G:C6	1:w:2397:G:N7	2.46	0.84
1:w:2437:U:H6	1:w:2437:U:O5'	1.61	0.84
1:w:2588:G:C6	1:w:2589:A:C5	2.65	0.84
4:B:72:LYS:C	4:B:74:GLY:H	1.85	0.84
9:G:4:ILE:HB	9:G:37:VAL:CG1	2.07	0.84
12:J:78:PRO:HB2	12:J:110:TYR:CD2	2.12	0.84
17:O:36:ARG:O	17:O:39:LEU:HG	1.77	0.84
17:O:59:ARG:HG2	17:O:62:ILE:HD12	1.58	0.84
21:S:23:ARG:NE	21:S:38:ILE:HG21	1.92	0.84
23:U:31:VAL:HG23	23:U:61:ALA:CA	2.07	0.84
24:V:90:ILE:HB	24:V:91:LYS:NZ	1.93	0.84
31:y:245:C:C5	31:y:284:G:C2	2.66	0.84
31:y:376:G:C4	31:y:377:G:C8	2.65	0.84
31:y:523:A:H61	45:m:91:ASP:HB2	1.42	0.84
31:y:545:C:H5''	37:e:72:GLU:HG2	1.58	0.84
31:y:546:G:H8	31:y:546:G:O5'	1.59	0.84
31:y:594:G:N2	31:y:596:C:N4	2.26	0.84
31:y:1349:A:H5''	42:j:121:ARG:HG2	1.60	0.84
31:y:1396:A:C5'	31:y:1398:A:H5''	2.07	0.84
36:d:58:GLU:O	36:d:64:VAL:HG13	1.77	0.84
36:d:139:GLN:O	36:d:143:GLU:HB2	1.76	0.84
41:i:90:GLY:CA	50:r:34:LYS:HE2	2.07	0.84
42:j:118:LYS:O	42:j:121:ARG:HG3	1.76	0.84
44:l:123:LYS:HA	44:l:126:ARG:HB3	1.59	0.84
53:u:75:ASN:HD22	53:u:79:ARG:NH2	1.74	0.84
1:w:394:A:C2'	1:w:395:U:H4'	2.08	0.83
1:w:761:A:C8	1:w:761:A:O5'	2.31	0.83
1:w:1103:A:C8	1:w:1103:A:OP2	2.31	0.83
1:w:1537:C:C5	1:w:1538:G:O2'	2.31	0.83
1:w:1619:G:H21	28:Z:2:LYS:H	1.24	0.83
1:w:1669:A:H2'	1:w:1670:C:C5'	2.08	0.83
1:w:1863:G:H8	1:w:1863:G:H5'	1.43	0.83
1:w:2080:G:N2	1:w:2081:C:C2	2.46	0.83
1:w:2305:A:O2'	1:w:2306:C:H5'	1.77	0.83
1:w:2556:C:H2'	1:w:2557:G:C8	2.10	0.83
2:x:74:U:C3'	2:x:75:G:C8	2.59	0.83
3:A:178:LYS:O	3:A:180:SER:N	2.10	0.83
5:C:7:VAL:HG21	5:C:27:LEU:HB3	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:37:ARG:HG3	5:C:46:ALA:HB3	1.60	0.83
6:D:60:TRP:HB3	6:D:61:PRO:HD2	1.60	0.83
8:F:96:ALA:HB3	8:F:128:PRO:O	1.77	0.83
31:y:90:C:H2'	31:y:91:C:C5	2.12	0.83
31:y:144:G:H2'	31:y:145:G:O4'	1.76	0.83
31:y:438:G:C2'	31:y:494:U:O4	2.23	0.83
31:y:874:G:H8	31:y:874:G:O5'	1.60	0.83
31:y:878:G:H5'	41:i:89:PRO:HG2	1.60	0.83
31:y:913:A:O2'	31:y:914:A:O5'	1.94	0.83
31:y:1084:G:H4'	31:y:1102:A:H5''	1.60	0.83
31:y:1346:A:O5'	42:j:120:ARG:NH2	2.09	0.83
31:y:1417:G:O2'	31:y:1483:A:N6	2.09	0.83
31:y:1442:G:H22	31:y:1447:G:P	2.01	0.83
37:e:94:LEU:N	37:e:94:LEU:CD1	2.41	0.83
38:f:9:LYS:O	38:f:32:VAL:HB	1.76	0.83
40:h:118:VAL:HG23	40:h:119:ARG:H	1.39	0.83
46:n:97:PRO:HA	46:n:110:ARG:CD	2.08	0.83
52:t:63:THR:HG22	52:t:64:GLU:H	1.43	0.83
1:w:82:G:N2	1:w:103:A:OP2	2.10	0.83
1:w:287:C:H2'	1:w:288:C:H6	1.44	0.83
1:w:535:C:H42	1:w:536:A:N6	1.75	0.83
1:w:633:A:O5'	1:w:633:A:H8	1.58	0.83
1:w:1194:A:C4	1:w:1195:G:C8	2.66	0.83
1:w:1791:A:O2'	4:B:207:GLY:O	1.96	0.83
1:w:2485:G:H4'	13:K:125:LEU:CD2	2.08	0.83
1:w:2699:C:O2'	1:w:2700:C:H5'	1.78	0.83
2:x:17:C:O5'	2:x:17:C:H6	1.60	0.83
2:x:41:U:H5	7:E:69:ALA:HB1	1.43	0.83
2:x:113:C:O2	15:M:47:THR:CB	2.25	0.83
3:A:201:LYS:HZ2	3:A:203:GLU:HA	1.44	0.83
10:H:41:ALA:O	10:H:83:ILE:HG23	1.78	0.83
10:H:98:TYR:O	10:H:105:LEU:CB	2.25	0.83
14:L:21:TYR:HA	14:L:24:GLN:HG2	1.58	0.83
14:L:38:VAL:HB	14:L:110:PRO:CB	2.08	0.83
14:L:117:VAL:HG13	14:L:118:GLU:H	1.43	0.83
16:N:119:LYS:HD3	16:N:119:LYS:H	1.43	0.83
23:U:71:ASP:HB3	23:U:77:ARG:HA	1.58	0.83
24:V:18:ILE:HG13	24:V:43:TYR:CE1	2.12	0.83
31:y:95:G:H2'	31:y:96:G:H8	1.24	0.83
31:y:464:G:N2	31:y:467:G:H8	1.75	0.83
31:y:594:G:H2'	31:y:595:G:C5'	2.07	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:944:G:N2	31:y:1339:A:N6	2.01	0.83
31:y:1379:G:N7	40:h:4:ARG:HA	1.93	0.83
31:y:1436:U:H2'	31:y:1437:C:H6	1.42	0.83
31:y:1521:G:C2'	31:y:1522:U:H5'	2.06	0.83
35:c:97:TRP:NE1	35:c:173:ALA:HB2	1.93	0.83
46:n:22:ILE:CB	46:n:25:ILE:HD11	2.04	0.83
49:q:48:TRP:HE3	49:q:49:LEU:N	1.76	0.83
1:w:82:G:H5''	1:w:295:G:H4'	1.60	0.83
1:w:315:G:C2'	1:w:316:C:H1'	2.06	0.83
1:w:469:G:N7	28:Z:39:ARG:CZ	2.41	0.83
1:w:536:A:H2'	1:w:537:C:C5	2.14	0.83
1:w:560:C:H4'	17:O:52:ARG:CZ	2.07	0.83
1:w:1052:C:H2'	1:w:1053:C:C6	2.12	0.83
1:w:1136:G:N3	1:w:2038:G:H4'	1.93	0.83
1:w:1214:A:H61	1:w:1235:G:H1'	1.43	0.83
1:w:1759:A:N7	1:w:2696:U:O2	2.10	0.83
1:w:2511:U:O2'	1:w:2512:C:H5''	1.76	0.83
4:B:36:PRO:HB2	4:B:62:TYR:H	1.42	0.83
4:B:79:VAL:CG2	4:B:111:LEU:HG	2.06	0.83
4:B:200:ASP:C	4:B:202:LYS:H	1.82	0.83
5:C:175:VAL:HB	5:C:182:LEU:HD11	1.57	0.83
6:D:117:LYS:NZ	6:D:186:ARG:HA	1.93	0.83
7:E:33:ARG:HH21	7:E:33:ARG:HA	1.43	0.83
7:E:63:ILE:HG23	7:E:144:ILE:HG13	1.58	0.83
8:F:148:ILE:HA	8:F:151:ILE:HG12	1.58	0.83
12:J:16:ARG:HE	12:J:17:LYS:N	1.74	0.83
13:K:37:LEU:CG	13:K:128:LYS:H	1.91	0.83
16:N:11:GLU:C	16:N:13:ARG:H	1.83	0.83
25:W:14:ARG:HB3	25:W:54:LYS:NZ	1.92	0.83
27:Y:51:TYR:HB2	27:Y:56:LYS:HE2	1.58	0.83
31:y:134:A:N6	49:q:25:ARG:CZ	2.41	0.83
31:y:227:G:C2	31:y:228:A:C8	2.66	0.83
31:y:479:C:H3'	31:y:480:U:H6	1.40	0.83
31:y:560:U:C5'	31:y:566:G:N2	2.41	0.83
31:y:985:C:C2'	31:y:986:A:H5'	2.07	0.83
31:y:1240:U:H5'	31:y:1241:G:N7	1.92	0.83
31:y:1323:G:H5''	31:y:136(B):C:H41	1.41	0.83
31:y:1390:U:H2'	31:y:1391:U:H6	1.39	0.83
31:y:1433:A:O2'	31:y:1434:A:H5'	1.78	0.83
35:c:55:PHE:CA	35:c:58:ILE:CG1	2.56	0.83
36:d:92:ALA:HA	36:d:98:ASN:HA	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:39:PRO:HA	43:k:70:ARG:HD2	1.60	0.83
50:r:82:MET:HB3	50:r:86:GLU:OE2	1.77	0.83
1:w:586:A:C2	1:w:809:G:N3	2.47	0.83
1:w:834:C:H4'	29:a:51:ALA:HB1	1.60	0.83
1:w:1055:G:H2'	1:w:1056:G:N7	1.92	0.83
1:w:1151:G:H2'	1:w:1152:C:C6	2.13	0.83
1:w:1614:A:P	28:Z:3:ARG:HE	2.01	0.83
1:w:1820:U:H3	4:B:202:LYS:HA	1.42	0.83
1:w:2207:C:H2'	1:w:2208:U:H5'	1.60	0.83
1:w:2485:G:O2'	13:K:126:PRO:CD	2.27	0.83
1:w:2587:A:H2'	1:w:2588:G:H5''	1.59	0.83
1:w:2694:G:H2'	1:w:2695:C:H5'	1.59	0.83
2:x:6:C:H2'	2:x:7:G:C8	2.13	0.83
2:x:100:G:H8	2:x:100:G:O5'	1.62	0.83
6:D:151:LEU:O	6:D:169:VAL:HG21	1.79	0.83
31:y:159:G:N2	31:y:163:C:H42	1.73	0.83
31:y:638:G:H2'	31:y:639:G:C8	2.14	0.83
31:y:650:G:H2'	31:y:651:C:H5'	1.60	0.83
31:y:668:G:H2'	31:y:669:U:H6	1.44	0.83
31:y:1092:A:C1'	31:y:1183:A:N6	2.40	0.83
35:c:28:PHE:CZ	35:c:32:ILE:HG23	2.14	0.83
40:h:26:PHE:CD1	40:h:101:LEU:HB3	2.13	0.83
46:n:71:ARG:HA	46:n:74:VAL:CG2	2.08	0.83
1:w:349:G:H2'	1:w:350:U:O4'	1.79	0.83
1:w:594:U:O2	1:w:663:G:C6	2.31	0.83
1:w:796:C:H2'	1:w:797:C:O4'	1.78	0.83
1:w:867:C:H2'	1:w:868:U:H5'	1.61	0.83
1:w:1356:G:O2'	1:w:1357:U:H5'	1.77	0.83
1:w:1619:G:H1'	28:Z:1:MET:H1	1.42	0.83
1:w:1653:G:H2'	14:L:9:LYS:CE	2.07	0.83
1:w:2207:C:C2'	1:w:2208:U:H5'	2.08	0.83
1:w:2657:A:H2'	1:w:2658:C:OP1	1.76	0.83
1:w:2784:C:C2'	1:w:2785:C:H5''	2.08	0.83
4:B:45:ASN:CG	4:B:46:GLN:H	1.85	0.83
4:B:45:ASN:CG	4:B:46:GLN:N	2.35	0.83
5:C:48:GLN:HB3	5:C:78:LEU:CD2	2.06	0.83
6:D:18:ASP:C	6:D:20:PRO:HD2	2.02	0.83
6:D:150:LEU:HD23	6:D:181:ILE:HG12	1.58	0.83
9:G:130:TYR:CE2	9:G:132:PRO:HG3	2.12	0.83
14:L:78:LYS:CE	14:L:82:GLU:HB3	2.09	0.83
16:N:11:GLU:HB2	16:N:57:PHE:CZ	2.14	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:88:ILE:HG22	16:N:89:VAL:HG23	1.58	0.83
18:P:60:GLU:OE1	18:P:62:LEU:HD11	1.79	0.83
26:X:5:LYS:HB3	26:X:57:GLU:O	1.78	0.83
27:Y:44:THR:HG22	27:Y:45:VAL:N	1.92	0.83
31:y:6:G:N2	38:f:119:LEU:HD11	1.91	0.83
31:y:36:C:OP1	45:m:120:GLY:HA3	1.78	0.83
31:y:136:C:O2'	49:q:1:MET:N	2.10	0.83
31:y:341:C:C2	31:y:342:C:H5	1.95	0.83
31:y:507:C:H2'	31:y:508:C:C5	2.13	0.83
31:y:556:C:N3	31:y:557:G:N7	2.25	0.83
31:y:601:C:H2'	31:y:602:A:C8	2.12	0.83
31:y:607:A:C2	31:y:608:A:C8	2.66	0.83
31:y:718:G:H5''	31:y:720:C:H42	1.42	0.83
31:y:1055:A:H3'	31:y:1056:U:H5''	1.60	0.83
31:y:1244:C:H2'	31:y:1245:A:N7	1.94	0.83
33:0:15:G:OP2	33:0:15:G:H8	1.61	0.83
33:0:74:C:H2'	33:0:75:C:C1'	2.08	0.83
35:c:132:LYS:O	35:c:135:GLN:HB2	1.77	0.83
36:d:150:LYS:HB3	36:d:201:TYR:HE1	1.43	0.83
37:e:47:ARG:HB3	37:e:47:ARG:NH1	1.92	0.83
37:e:67:ILE:HG22	37:e:68:TYR:CD1	2.13	0.83
39:g:71:ARG:O	39:g:75:LEU:HD13	1.77	0.83
50:r:28:PRO:HA	50:r:34:LYS:O	1.77	0.83
51:s:61:LYS:HD2	51:s:64:ARG:CB	2.07	0.83
53:u:27:LYS:HE3	53:u:27:LYS:HA	1.61	0.83
1:w:6:A:H2'	1:w:7:G:C8	2.14	0.83
1:w:736:C:H2'	1:w:737:C:C6	2.13	0.83
1:w:738:G:N2	1:w:1981:A:C2	2.47	0.83
1:w:1132:A:H2'	1:w:1133:U:C6	2.12	0.83
1:w:2020:A:O2'	1:w:2021:C:H5	1.61	0.83
1:w:2063:C:C5	1:w:2064:C:C5	2.67	0.83
1:w:2117:A:H5''	1:w:2118:U:C5'	2.09	0.83
1:w:2218:G:C4'	4:B:149:PRO:HG2	2.08	0.83
1:w:2520:C:H1'	1:w:2565:A:O2'	1.78	0.83
1:w:2556:C:C2	1:w:2557:G:C8	2.65	0.83
2:x:102:G:H2'	2:x:103:U:H5''	1.61	0.83
3:A:223:VAL:HG12	3:A:224:ARG:H	1.41	0.83
4:B:176:ARG:HA	4:B:182:LEU:HD12	1.59	0.83
6:D:126:GLY:HA3	6:D:133:GLU:CD	2.03	0.83
6:D:159:ARG:C	6:D:161:ALA:H	1.86	0.83
6:D:196:VAL:HG22	6:D:197:PHE:HD1	1.39	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:91:ARG:HD2	7:E:91:ARG:O	1.77	0.83
9:G:4:ILE:HB	9:G:37:VAL:HB	1.58	0.83
10:H:34:PRO:HB2	10:H:142:ARG:NH1	1.93	0.83
18:P:73:SER:O	18:P:74:LYS:HB2	1.78	0.83
25:W:32:LEU:HG	25:W:33:MET:H	1.43	0.83
31:y:346:G:C2'	31:y:347:G:H5''	2.07	0.83
31:y:363:A:H5''	45:m:33:ARG:HG3	1.60	0.83
31:y:750:G:P	31:y:750:G:H8	2.00	0.83
31:y:1075:C:C2'	31:y:1076:C:H5'	2.08	0.83
31:y:1524:C:H2'	31:y:1525:G:O4'	1.78	0.83
35:c:162:ILE:O	35:c:185:ILE:HD13	1.78	0.83
36:d:126:ARG:HB2	36:d:126:ARG:NH1	1.93	0.83
37:e:98:GLU:CD	37:e:103:ASN:HD22	1.86	0.83
38:f:100:VAL:HG22	38:f:116:THR:HA	1.57	0.83
40:h:30:ILE:O	40:h:31:MET:O	1.96	0.83
40:h:116:ALA:CA	40:h:120:ILE:HD13	2.07	0.83
40:h:134:ALA:HA	40:h:137:LYS:CD	2.09	0.83
41:i:14:ARG:C	41:i:17:THR:HG22	2.04	0.83
41:i:56:LYS:HD2	41:i:56:LYS:H	1.40	0.83
43:k:53:PRO:HB2	47:o:41:ARG:HH21	1.43	0.83
45:m:112:ARG:NE	45:m:112:ARG:HA	1.91	0.83
1:w:36:G:H4'	1:w:451:C:O2	1.77	0.83
1:w:593:G:H3'	1:w:594:U:H6	1.42	0.83
1:w:680:G:H2'	1:w:681:G:C8	2.13	0.83
1:w:1028:A:O2'	1:w:1029:A:H5'	1.78	0.83
1:w:1038:C:H2'	1:w:1039:G:C5'	2.07	0.83
1:w:1476:C:O5'	1:w:1476:C:H6	1.61	0.83
1:w:1676:A:H2'	1:w:1677:A:O4'	1.79	0.83
1:w:2093:G:O2'	1:w:2094:G:H5'	1.79	0.83
1:w:2107:C:H2'	1:w:2108:C:H6	1.44	0.83
1:w:2117:A:C5'	1:w:2118:U:H5'	2.09	0.83
1:w:2653:U:C5'	1:w:2654:A:O5'	2.27	0.83
2:x:14:U:OP2	2:x:70:C:H1'	1.78	0.83
2:x:73:A:H3'	2:x:74:U:C5	2.14	0.83
5:C:61:ARG:HG3	5:C:62:PRO:CD	2.08	0.83
5:C:188:VAL:HG22	5:C:189:PRO:HD2	0.88	0.83
8:F:127:GLU:CB	8:F:129:THR:H	1.90	0.83
10:H:37:VAL:HG13	10:H:159:GLU:HA	1.60	0.83
14:L:17:ARG:C	14:L:21:TYR:CE1	2.57	0.83
14:L:21:TYR:HD1	14:L:21:TYR:H	1.24	0.83
14:L:37:THR:CA	14:L:111:LEU:HA	2.04	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:64:HIS:CA	18:P:96:ILE:HG23	2.07	0.83
19:Q:10:VAL:HG12	19:Q:12:ILE:H	1.43	0.83
22:T:99:TYR:HA	22:T:124:ILE:C	2.02	0.83
31:y:186(F):C:C2	31:y:186(G):C:C5	2.67	0.83
31:y:689:C:H5''	44:l:27:ASN:HD21	1.41	0.83
31:y:954:G:O6	46:n:104:ARG:NH2	2.11	0.83
31:y:1516:G:N3	31:y:1518:MA6:OP1	2.11	0.83
37:e:67:ILE:CG2	37:e:68:TYR:HD1	1.91	0.83
37:e:115:ARG:HB2	37:e:116:GLN:OE1	1.79	0.83
38:f:54:ALA:HA	38:f:57:LYS:HZ1	1.44	0.83
39:g:6:VAL:CG2	39:g:7:ASN:H	1.86	0.83
45:m:42:VAL:H	45:m:52:ARG:HH22	1.23	0.83
45:m:85:ARG:HB3	45:m:99:ILE:O	1.77	0.83
46:n:97:PRO:HB3	46:n:109:THR:CB	2.08	0.83
50:r:58:GLU:HB3	50:r:74:LEU:O	1.79	0.83
53:u:33:ILE:HG22	53:u:62:LEU:HD13	1.60	0.83
1:w:270(D):C:H2'	1:w:270(E):C:H4'	1.60	0.83
1:w:585:G:H3'	1:w:1251:C:H41	1.44	0.83
1:w:715:G:H2'	1:w:716:A:O5'	1.76	0.83
1:w:872:A:H2	1:w:905:U:C2	1.96	0.83
1:w:901:A:H2'	1:w:902:C:H5'	1.61	0.83
1:w:1228:G:C4	1:w:1229:G:H1'	2.13	0.83
1:w:1323:U:O5'	19:Q:84:ARG:NH2	2.11	0.83
1:w:1789:A:H5'	4:B:221:VAL:HG12	1.60	0.83
1:w:1857:G:H1'	1:w:1885:A:N6	1.92	0.83
1:w:2451:A:N3	32:z:76:A:H3'	1.92	0.83
1:w:2618:G:C6	1:w:2619:C:C4	2.66	0.83
1:w:2867:G:HO2'	1:w:2868:A:H8	0.87	0.83
1:w:2887:U:C2	1:w:2888:C:H5	1.95	0.83
7:E:111:LEU:CB	7:E:112:PRO:HD3	2.07	0.83
9:G:6:LEU:HB3	9:G:35:LEU:HD13	1.59	0.83
9:G:64:GLU:O	9:G:67:ARG:NH2	2.11	0.83
12:J:92:GLU:C	12:J:94:GLU:H	1.85	0.83
14:L:2:ARG:CG	14:L:3:HIS:H	1.91	0.83
14:L:37:THR:H	14:L:40:LYS:CE	1.92	0.83
22:T:174:VAL:O	22:T:175:VAL:HG23	1.76	0.83
29:a:53:PRO:O	29:a:56:GLU:OE1	1.96	0.83
31:y:122:G:C2'	31:y:123:C:C6	2.59	0.83
31:y:196:A:H4'	31:y:222:U:H5'	1.61	0.83
31:y:344:A:OP2	31:y:345:C:H5	1.61	0.83
31:y:451:A:N1	31:y:480:U:H2'	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:700:G:O2'	31:y:703:G:H5'	1.78	0.83
31:y:719:C:O5'	31:y:720:C:H5	1.61	0.83
31:y:947:G:O2'	31:y:1306:A:H4'	1.78	0.83
31:y:1112:C:N4	36:d:177:THR:HA	1.93	0.83
31:y:1207:2MG:H3'	31:y:1208:C:C5	2.14	0.83
31:y:1339:A:H2	32:z:31:A:O4'	1.57	0.83
32:z:58:A:O2'	32:z:60:U:OP2	1.97	0.83
36:d:90:GLU:HA	36:d:93:LYS:HD2	1.59	0.83
36:d:134:ILE:CG1	36:d:135:LYS:H	1.88	0.83
42:j:73:GLN:O	42:j:77:ILE:HG13	1.79	0.83
44:l:51:LYS:HD2	44:l:51:LYS:N	1.93	0.83
46:n:97:PRO:HB3	46:n:109:THR:CG2	2.08	0.83
1:w:299:A:N6	1:w:322:A:O2'	2.12	0.83
1:w:569:U:H2'	1:w:570:G:H5'	1.61	0.83
1:w:634:C:H2'	1:w:635:C:C5	2.14	0.83
1:w:1532:C:H3'	1:w:1533:C:C6	2.14	0.83
1:w:2083:G:N1	1:w:2084:C:C4	2.47	0.83
1:w:2549:G:O2'	1:w:2550:G:C5'	2.22	0.83
1:w:2572:A:OP2	5:C:144:ARG:HG2	1.79	0.83
2:x:42:C:H6	7:E:91:ARG:HH22	1.22	0.83
5:C:9:VAL:CG2	5:C:26:ILE:CA	2.55	0.83
5:C:200:GLU:O	5:C:202:LYS:HE2	1.79	0.83
6:D:120:LEU:HD22	6:D:122:GLU:O	1.78	0.83
11:I:59:LYS:HD2	11:I:87:ILE:O	1.79	0.83
16:N:89:VAL:O	16:N:90:GLN:O	1.96	0.83
18:P:30:GLY:CA	18:P:64:HIS:HB3	2.09	0.83
19:Q:21:VAL:O	19:Q:25:ARG:HG3	1.79	0.83
21:S:54:LYS:HD3	21:S:55:TYR:H	1.44	0.83
29:a:16:ILE:O	29:a:16:ILE:CD1	2.27	0.83
31:y:300:A:HO2'	50:r:31:LEU:HD21	1.43	0.83
31:y:330:C:C2'	31:y:331:G:H5'	2.07	0.83
31:y:1288:A:N6	31:y:1371:G:H1'	1.93	0.83
31:y:1501:C:OP2	31:y:1504:G:H3'	1.78	0.83
33:0:21:A:N6	33:0:46:G:O2'	2.11	0.83
37:e:111:ALA:HB1	37:e:116:GLN:CG	2.08	0.83
42:j:63:ILE:HG22	42:j:64:THR:N	1.94	0.83
1:w:383:U:H2'	1:w:385:C:C5	2.13	0.83
1:w:510:C:H2'	1:w:511:U:C6	2.14	0.83
1:w:965:C:C3'	1:w:966:G:C5'	2.56	0.83
1:w:1243:G:O2'	12:J:9:ASN:HA	1.78	0.83
1:w:1830:C:O2'	1:w:1831:G:H5'	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1925:C:O5'	1:w:1925:C:C6	2.32	0.83
1:w:2116:G:N7	1:w:2117:A:H1'	1.94	0.83
1:w:2414:G:C6	1:w:2415:G:N7	2.46	0.83
1:w:2466:C:H2'	1:w:2467:C:H5'	1.59	0.83
1:w:2653:U:OP2	1:w:2654:A:H2'	1.79	0.83
1:w:2712:U:H1'	1:w:712(B):A:O5'	1.79	0.83
1:w:2864:G:H2'	1:w:2865:U:C6	2.13	0.83
3:A:201:LYS:CB	3:A:202:PRO:HD2	2.01	0.83
5:C:64:LYS:O	5:C:66:HIS:HD2	1.61	0.83
5:C:116:VAL:O	5:C:136:ARG:NH2	2.12	0.83
8:F:72:ILE:H	8:F:72:ILE:CD1	1.91	0.83
11:I:65:THR:HA	11:I:81:ASP:O	1.77	0.83
12:J:147:LEU:HB2	12:J:148:LEU:HD13	1.59	0.83
14:L:56:LYS:HD2	14:L:88:ARG:CA	2.04	0.83
15:M:26:LEU:HD21	15:M:39:ILE:CG2	2.08	0.83
16:N:93:ARG:HA	16:N:117:ASP:CB	2.06	0.83
18:P:34:GLU:CB	18:P:64:HIS:HE1	1.92	0.83
19:Q:29:LEU:HD11	19:Q:67:ASP:H	1.40	0.83
19:Q:71:VAL:HA	19:Q:107:LEU:CD2	2.06	0.83
22:T:41:LEU:O	22:T:44:PHE:HD2	1.60	0.83
24:V:34:THR:HG22	24:V:35:THR:N	1.91	0.83
26:X:40:THR:O	26:X:44:ARG:CD	2.27	0.83
31:y:117:G:H3'	31:y:118:U:H5	1.43	0.83
31:y:517:G:H3'	31:y:531:U:C5	2.13	0.83
31:y:689:C:C2'	31:y:690:G:H5'	2.08	0.83
33:0:54:U:H2'	33:0:55:PSU:O5'	1.78	0.83
35:c:100:GLY:O	35:c:104:ASN:C	2.22	0.83
37:e:47:ARG:HH11	37:e:47:ARG:CB	1.92	0.83
38:f:76:ILE:CG1	38:f:118:ILE:HG23	2.09	0.83
39:g:7:ASN:HB2	39:g:89:MET:CB	2.02	0.83
39:g:7:ASN:O	39:g:88:VAL:HB	1.77	0.83
41:i:91:ARG:HH11	41:i:91:ARG:C	1.87	0.83
46:n:39:ILE:CG1	46:n:56:LEU:HD11	2.07	0.83
1:w:48:G:H21	1:w:177:G:H21	0.86	0.82
1:w:254:G:N7	29:a:5:LYS:HD2	1.92	0.82
1:w:294:A:H62	1:w:344:G:H21	0.84	0.82
1:w:298:G:N1	1:w:339:U:C5	2.46	0.82
1:w:457:A:H4'	28:Z:40:TRP:CZ2	2.14	0.82
1:w:465:G:H22	1:w:794:G:N2	1.77	0.82
1:w:590:A:C2'	1:w:591:C:C6	2.62	0.82
1:w:1356:G:N2	1:w:1376:C:C4	2.46	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2134:A:OP2	1:w:2157:G:N2	2.12	0.82
1:w:2512:C:H3'	1:w:2512:C:C6	2.14	0.82
1:w:2746:U:H2'	1:w:2747:G:H5'	1.60	0.82
1:w:2747:G:N2	1:w:2748:A:N6	2.27	0.82
1:w:2835:A:H61	1:w:2878:U:H2'	1.43	0.82
5:C:113:PHE:HD2	5:C:114:ALA:N	1.75	0.82
10:H:86:THR:HG21	10:H:89:LYS:HZ2	1.41	0.82
13:K:64:ILE:HG13	13:K:105:GLU:C	2.04	0.82
21:S:44:ILE:O	21:S:58:GLY:HA3	1.78	0.82
24:V:50:ARG:HG3	24:V:61:ARG:HA	1.61	0.82
31:y:22:G:H2'	31:y:23:C:H6	1.43	0.82
31:y:126:G:H5''	31:y:127:G:OP2	1.77	0.82
31:y:253:U:C5'	31:y:276:G:H1'	2.09	0.82
31:y:748:C:O2'	31:y:749:C:OP2	1.96	0.82
31:y:801:U:C2	31:y:802:A:H8	1.95	0.82
31:y:830:G:OP1	35:c:24:TRP:HZ2	1.62	0.82
31:y:832:C:H5'	31:y:832:C:H6	1.43	0.82
31:y:1447:G:H8	31:y:1447:G:O5'	1.61	0.82
45:m:82:VAL:HG22	45:m:83:LEU:H	1.42	0.82
46:n:56:LEU:O	46:n:59:TYR:HB3	1.77	0.82
1:w:288:C:O5'	1:w:289:A:H2	1.60	0.82
1:w:363(E):G:C2'	1:w:363(F):U:H5''	2.08	0.82
1:w:389:G:C8	1:w:2413:G:C4'	2.50	0.82
1:w:558:G:P	10:H:134:PRO:HD2	2.19	0.82
1:w:569:U:C2'	1:w:570:G:H5'	2.10	0.82
1:w:765:G:H8	1:w:765:G:O5'	1.62	0.82
1:w:892:G:H8	1:w:892:G:O5'	1.62	0.82
1:w:1685:C:H2'	1:w:1686:C:H6	1.43	0.82
1:w:1837:C:H1'	1:w:1928:A:C1'	2.09	0.82
1:w:1850:G:H2'	1:w:1851:U:C6	2.14	0.82
1:w:2090:G:H22	24:V:47:GLN:HE21	1.25	0.82
1:w:2459:A:H3'	1:w:2460:U:C6	2.14	0.82
1:w:2819:G:O2'	1:w:2821:A:N7	2.11	0.82
1:w:2835:A:N6	1:w:2878:U:C2'	2.42	0.82
6:D:119:LEU:HA	6:D:188:VAL:CG2	2.04	0.82
16:N:29:ARG:HB3	16:N:86:ILE:O	1.79	0.82
19:Q:17:VAL:CG2	19:Q:18:ARG:N	2.42	0.82
22:T:99:TYR:O	22:T:123:ASP:CB	2.26	0.82
30:b:13:LYS:O	30:b:27:CYS:HA	1.79	0.82
31:y:956:U:H2'	31:y:957:U:O4'	1.77	0.82
31:y:974:A:OP2	47:o:41:ARG:NH2	2.12	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1154:G:H2'	31:y:1155:G:C8	2.13	0.82
31:y:1165:C:H2'	31:y:1166:G:H8	1.40	0.82
31:y:1202:G:H21	47:o:26:ARG:NH1	1.75	0.82
31:y:1202:G:O3'	47:o:3:ARG:NH2	2.12	0.82
31:y:1316:G:H1'	31:y:1318:A:H62	1.45	0.82
31:y:1379:G:H3'	40:h:4:ARG:CB	2.08	0.82
31:y:1398:A:H3'	31:y:1398:A:H8	1.42	0.82
36:d:84:ILE:O	36:d:88:ARG:HG3	1.78	0.82
36:d:87:LEU:CD1	36:d:88:ARG:N	2.38	0.82
36:d:120:VAL:CG1	36:d:123:GLN:HE22	1.92	0.82
39:g:6:VAL:CG2	39:g:7:ASN:N	2.38	0.82
42:j:103:THR:HG22	42:j:104:ARG:N	1.93	0.82
1:w:321:G:N7	1:w:340:A:H2	1.77	0.82
1:w:446:G:H5'	17:O:3:ARG:NH1	1.94	0.82
1:w:661:C:H4'	12:J:18:ARG:CD	2.08	0.82
1:w:803:U:C4	1:w:804:A:N6	2.46	0.82
1:w:805:G:N2	1:w:829:A:OP1	2.11	0.82
1:w:1202:C:O2'	1:w:1203:G:H5'	1.79	0.82
1:w:1515:C:H2'	1:w:1516:U:H5''	1.62	0.82
1:w:1533:C:C2	1:w:1534:G:H1'	2.13	0.82
1:w:1838:C:H41	1:w:1898:U:C2'	1.79	0.82
1:w:1857:G:C6	1:w:1858:G:C6	2.67	0.82
1:w:2304:G:H2'	1:w:2304:G:N3	1.92	0.82
1:w:2512:C:N4	1:w:2513:G:C8	2.47	0.82
1:w:2818:G:C2	1:w:2819:G:C8	2.67	0.82
4:B:144:ALA:O	4:B:191:ALA:HB1	1.80	0.82
5:C:32:PRO:HB3	5:C:69:LYS:CD	2.07	0.82
7:E:146:TYR:CE1	7:E:149:VAL:HG13	2.10	0.82
8:F:125:VAL:HA	8:F:131:VAL:CB	2.09	0.82
9:G:36:ALA:O	9:G:38:LEU:HD12	1.79	0.82
10:H:89:LYS:C	10:H:110:LEU:HG	2.04	0.82
13:K:27:VAL:CG1	13:K:136:ALA:HB3	2.06	0.82
17:O:62:ILE:O	17:O:65:ILE:HB	1.77	0.82
19:Q:87:PRO:O	19:Q:88:ARG:HB3	1.79	0.82
31:y:117:G:C4	31:y:118:U:C4	2.67	0.82
31:y:131:C:O2	31:y:231:G:N2	2.12	0.82
31:y:467:G:H2'	31:y:468:A:C8	2.14	0.82
31:y:514:C:H2'	31:y:515:G:C8	2.13	0.82
31:y:612:C:N4	31:y:628:G:O6	2.11	0.82
31:y:1399:C:C4'	31:y:1400:5MC:H5'	2.08	0.82
31:y:1399:C:H4'	31:y:1400:5MC:H5'	1.59	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:62:ASP:HA	36:d:97:LYS:HB2	1.62	0.82
45:m:59:LEU:CD1	45:m:61:SER:H	1.92	0.82
46:n:109:THR:HG22	46:n:110:ARG:HE	1.41	0.82
50:r:47:PRO:HD3	50:r:73:VAL:HG21	1.60	0.82
1:w:249:C:H4'	1:w:250:G:O5'	1.77	0.82
1:w:531:C:H5'	1:w:532:A:C8	2.14	0.82
1:w:812:C:C5	12:J:27:HIS:CD2	2.67	0.82
1:w:2717:G:H2'	1:w:2718:G:H1'	1.61	0.82
1:w:2822:G:N7	14:L:2:ARG:N	2.27	0.82
1:w:2900:A:C2'	1:w:2901:C:H5''	2.08	0.82
2:x:74:U:H2'	2:x:75:G:C8	2.14	0.82
5:C:116:VAL:HG21	5:C:122:PHE:CD1	2.15	0.82
15:M:27:SER:HA	15:M:89:ARG:HG3	0.88	0.82
17:O:40:PHE:HA	18:P:78:LYS:CG	2.08	0.82
22:T:69:THR:CG2	22:T:70:LEU:N	2.37	0.82
22:T:99:TYR:CB	22:T:123:ASP:OD2	2.25	0.82
24:V:65:SER:C	24:V:67:ILE:H	1.87	0.82
26:X:28:LEU:HD11	26:X:35:ARG:HG2	1.60	0.82
31:y:129(B):G:C6	31:y:188:U:H4'	2.15	0.82
31:y:426:G:C6	31:y:427:U:O4	2.33	0.82
31:y:564:C:O2'	31:y:565:U:H5'	1.80	0.82
31:y:1049:U:H5'	31:y:1201:A:P	2.19	0.82
31:y:1425:U:H2'	31:y:1426:C:C6	2.14	0.82
32:z:60:U:O2'	32:z:61:C:OP1	1.96	0.82
36:d:170:GLN:HG3	36:d:171:GLY:H	1.43	0.82
41:i:52:ASP:HA	41:i:57:PRO:HA	1.61	0.82
44:l:99:GLN:HB3	44:l:105:VAL:HG21	1.61	0.82
1:w:7:G:C5	1:w:8:A:C5	2.67	0.82
1:w:109:G:C3'	1:w:110:G:H8	1.91	0.82
1:w:142:G:C6	1:w:143:C:C5	2.68	0.82
1:w:738:G:N2	1:w:1981:A:H2	1.78	0.82
1:w:814:C:H2'	1:w:815:C:C6	2.13	0.82
1:w:901:A:C2	1:w:902:C:O4'	2.33	0.82
1:w:969:U:OP1	26:X:16:PRO:HA	1.79	0.82
1:w:1010:A:O5'	1:w:1010:A:H8	1.61	0.82
1:w:1033:U:H5''	30:b:18:ARG:HH22	1.44	0.82
1:w:1197:G:C5	1:w:1198:U:C5	2.67	0.82
1:w:1659:U:OP2	5:C:132:HIS:NE2	2.12	0.82
1:w:1862:G:H2'	1:w:1863:G:C5'	2.07	0.82
1:w:2349:G:H3'	29:a:42:ARG:HH21	1.43	0.82
1:w:2426:A:H3'	1:w:2427:C:C5'	2.09	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2654:A:C8	1:w:2654:A:OP1	2.33	0.82
1:w:2730:C:C2	1:w:2731:G:C8	2.67	0.82
1:w:2809:A:H2'	1:w:2810:A:H8	1.44	0.82
2:x:24:G:C8	2:x:24:G:OP2	2.32	0.82
4:B:83:GLU:OE1	4:B:92:ILE:HD11	1.80	0.82
5:C:11:MET:HG3	5:C:12:THR:N	1.93	0.82
7:E:122:PRO:CG	7:E:180:PHE:HA	2.08	0.82
8:F:157:TYR:CA	8:F:172:LYS:H	1.92	0.82
10:H:25:LYS:HG3	18:P:13:ARG:HH21	1.42	0.82
10:H:80:ALA:HA	10:H:83:ILE:CG1	2.09	0.82
11:I:64:ARG:HD3	11:I:102:VAL:CG1	2.10	0.82
20:R:57:LEU:O	20:R:58:HIS:HB2	1.79	0.82
22:T:4:ARG:NH1	22:T:4:ARG:HB2	1.93	0.82
26:X:55:ARG:NH1	26:X:56:VAL:O	2.13	0.82
28:Z:26:GLY:O	28:Z:29:LYS:HB2	1.79	0.82
31:y:134:A:N6	49:q:25:ARG:NE	2.28	0.82
31:y:714:G:N2	31:y:777:A:H1'	1.94	0.82
31:y:1053:G:OP1	31:y:1054:C:H6	1.62	0.82
31:y:1103:C:O2'	31:y:1104:G:H1'	1.79	0.82
31:y:1317:C:P	47:o:18:VAL:HG21	2.19	0.82
31:y:1350:A:H62	42:j:118:LYS:HE2	1.43	0.82
35:c:28:PHE:HE1	35:c:31:TYR:H	1.22	0.82
35:c:121:LEU:HA	35:c:126:GLU:CG	2.09	0.82
40:h:12:LEU:HD21	40:h:28:ASN:HD21	1.43	0.82
51:s:73:ALA:HA	51:s:76:LEU:HD12	1.61	0.82
1:w:581:C:H2'	1:w:582:G:C8	2.13	0.82
1:w:611:C:H2'	1:w:612:G:O4'	1.79	0.82
1:w:717:G:H2'	1:w:718:A:C5'	2.09	0.82
1:w:986:C:H2'	1:w:987:G:H8	1.43	0.82
1:w:1136:G:C2	1:w:2038:G:H5''	2.14	0.82
1:w:1256:G:O5'	6:D:68:ALA:HB2	1.80	0.82
1:w:1442:G:OP1	1:w:1628:G:H4'	1.79	0.82
1:w:1690:A:N1	1:w:1697:G:O2'	2.13	0.82
1:w:1702:G:H2'	1:w:1703:G:O4'	1.79	0.82
1:w:1742:C:C4	1:w:1743:G:C6	2.66	0.82
1:w:2090:G:N2	24:V:47:GLN:HE21	1.78	0.82
1:w:2356:C:C2'	1:w:2357:U:H5'	2.09	0.82
1:w:2372:G:H2'	1:w:2373:G:C8	2.13	0.82
1:w:2442:C:H2'	1:w:2443:C:C6	2.13	0.82
1:w:2485:G:O2'	13:K:126:PRO:HD3	1.80	0.82
1:w:2658:C:H2'	1:w:2659:G:O4'	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:73:A:O2'	2:x:74:U:H5'	1.79	0.82
4:B:79:VAL:HG22	4:B:95:LEU:HD13	1.60	0.82
4:B:235:GLY:HA2	4:B:240:ALA:HB3	1.60	0.82
5:C:105:THR:HG23	5:C:106:GLY:H	1.44	0.82
7:E:43:LEU:HD22	7:E:45:GLU:HG2	1.59	0.82
7:E:70:VAL:HA	7:E:90:LEU:CD1	2.09	0.82
7:E:82:LEU:HG	7:E:84:LYS:HE2	1.61	0.82
8:F:43:VAL:CG2	8:F:44:VAL:H	1.89	0.82
10:H:61:HIS:HE1	10:H:73:ASP:OD2	1.61	0.82
13:K:66:ILE:HG22	13:K:104:PHE:CE2	2.15	0.82
14:L:47:PHE:CD1	14:L:48:VAL:N	2.48	0.82
15:M:95:HIS:O	15:M:99:LYS:HG3	1.80	0.82
16:N:99:LEU:HD13	16:N:102:ILE:HD13	1.60	0.82
20:R:21:PHE:CD2	20:R:90:GLU:HG2	2.14	0.82
23:U:74:ARG:HD2	23:U:74:ARG:O	1.79	0.82
31:y:597:G:O2'	31:y:598:U:H5'	1.78	0.82
31:y:955:U:O5'	31:y:955:U:C6	2.33	0.82
32:z:4:C:H2'	32:z:5:G:H8	1.44	0.82
37:e:52:SER:OG	37:e:55:ALA:HB2	1.80	0.82
41:i:120:THR:HG23	41:i:123:GLU:OE2	1.79	0.82
43:k:74:ILE:HG12	43:k:75:ILE:N	1.95	0.82
44:l:77:MET:N	44:l:103:LEU:HG	1.93	0.82
50:r:54:GLY:HA2	50:r:85:VAL:HG11	1.58	0.82
1:w:19:C:H5''	17:O:22:LYS:HD2	1.62	0.82
1:w:466:A:C2'	1:w:467:G:H5'	2.09	0.82
1:w:776:G:N3	1:w:776:G:H2'	1.94	0.82
1:w:902:C:C4	1:w:903:C:N4	2.47	0.82
1:w:1041:C:H2'	1:w:1042:G:O4'	1.79	0.82
1:w:1197:G:C5	1:w:1250:G:C2	2.67	0.82
1:w:1264:G:H5'	27:Y:11:THR:CG2	2.09	0.82
1:w:1676:A:N3	1:w:1677:A:H1'	1.93	0.82
1:w:1761:C:O5'	1:w:1761:C:H6	1.63	0.82
1:w:1797:C:C5'	4:B:256:GLY:C	2.53	0.82
1:w:1848:A:N6	31:y:702:A:N6	2.27	0.82
1:w:1881:C:H2'	1:w:1882:C:C5	2.13	0.82
1:w:1923:U:H2'	1:w:1924:C:C5	2.12	0.82
1:w:1963:U:C4'	1:w:1964:G:OP1	2.25	0.82
1:w:2170:A:H8	1:w:2170:A:O5'	1.62	0.82
1:w:2875:C:H3'	1:w:2876:G:C5'	2.06	0.82
2:x:20:C:H2'	2:x:21:G:C8	2.14	0.82
3:A:211:ARG:HB2	3:A:211:ARG:NH1	1.95	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:8:PRO:HG3	4:B:15:PHE:CE2	2.14	0.82
4:B:226:MET:O	4:B:227:ASN:O	1.96	0.82
5:C:64:LYS:O	5:C:66:HIS:CD2	2.33	0.82
6:D:148:SER:H	6:D:167:TRP:NE1	1.76	0.82
7:E:120:LEU:HD13	7:E:121:ASN:N	1.95	0.82
8:F:146:ALA:C	8:F:148:ILE:H	1.86	0.82
10:H:78:VAL:HG12	10:H:146:TYR:HE2	1.44	0.82
14:L:102:GLU:HG3	14:L:103:ARG:N	1.92	0.82
16:N:78:LEU:O	16:N:81:PRO:HD2	1.79	0.82
22:T:102:LEU:CD2	22:T:124:ILE:HB	2.09	0.82
24:V:22:GLY:HA3	24:V:39:LYS:CB	2.09	0.82
24:V:87:PRO:HB2	24:V:91:LYS:HD3	1.61	0.82
31:y:422:C:H4'	31:y:423:G:C5'	2.08	0.82
31:y:481:G:O2'	31:y:483:C:N4	2.12	0.82
31:y:483:C:H3'	31:y:484:G:H8	1.44	0.82
31:y:580:U:C2	31:y:581:G:C8	2.67	0.82
31:y:716:A:H2'	31:y:717:C:C5'	2.10	0.82
35:c:10:LEU:CD1	35:c:11:LEU:H	1.93	0.82
35:c:40:HIS:C	35:c:41:ILE:HD12	2.05	0.82
36:d:122:GLU:HA	36:d:125:GLU:CD	2.04	0.82
41:i:88:LYS:O	41:i:92:ARG:NH1	2.12	0.82
46:n:29:ARG:NH1	46:n:64:TRP:CD1	2.48	0.82
47:o:34:TYR:HE2	47:o:36:PHE:HB2	1.42	0.82
50:r:100:LYS:HZ2	50:r:101:ARG:HD2	1.42	0.82
1:w:874:G:C3'	1:w:875:G:C8	2.63	0.82
1:w:883:G:H2'	1:w:884:C:C6	2.15	0.82
1:w:1059:G:H2'	1:w:1060:U:H3'	1.62	0.82
1:w:1669:A:C5'	1:w:1671:U:C4	2.57	0.82
1:w:2018:G:H2'	1:w:2019:A:O4'	1.79	0.82
1:w:2030:A:H4'	1:w:2031:A:H5''	1.61	0.82
1:w:2572:A:OP2	5:C:144:ARG:CG	2.26	0.82
1:w:2632:A:H1'	5:C:61:ARG:HH22	1.45	0.82
1:w:2781:A:O3'	1:w:2782:G:H8	1.61	0.82
2:x:102:G:H3'	2:x:103:U:H5''	1.60	0.82
4:B:148:GLU:HG2	4:B:149:PRO:HD2	1.61	0.82
4:B:183:ARG:HG3	4:B:270:ILE:CA	2.08	0.82
9:G:62:LYS:HZ3	9:G:133:HIS:CB	1.92	0.82
9:G:76:THR:HG23	9:G:141:LYS:O	1.80	0.82
12:J:47:ASP:HB2	12:J:51:PHE:HE2	1.39	0.82
16:N:27:THR:O	16:N:28:VAL:HG23	1.78	0.82
16:N:49:VAL:O	16:N:49:VAL:HG23	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:62:THR:CG2	16:N:75:ILE:HG12	2.08	0.82
31:y:253:U:H5''	50:r:68:ARG:NH1	1.94	0.82
31:y:412:A:H1'	31:y:413:G:C8	2.13	0.82
31:y:692:U:H3	44:l:53:SER:CA	1.86	0.82
31:y:902:G:HO2'	31:y:903:G:H5'	1.42	0.82
31:y:946:A:H1'	31:y:1333:A:O2'	1.80	0.82
31:y:947:G:O4'	31:y:1332:A:H2	1.63	0.82
31:y:1148:U:H2'	31:y:1149:C:C6	2.12	0.82
31:y:1280:A:H5'	43:k:43:ARG:NH2	1.94	0.82
31:y:1329:A:H5''	46:n:26:GLY:HA2	1.60	0.82
35:c:118:LEU:CD1	35:c:121:LEU:HD13	2.08	0.82
36:d:136:GLN:HB3	36:d:140:ARG:HE	1.44	0.82
37:e:9:CYS:SG	37:e:22:LYS:HB3	2.19	0.82
37:e:77:ASN:O	37:e:81:GLU:HG3	1.80	0.82
37:e:94:LEU:HD23	37:e:200:GLU:CG	2.09	0.82
38:f:43:LEU:HD13	38:f:43:LEU:H	1.42	0.82
50:r:61:GLU:HG2	50:r:71:PHE:HE1	1.45	0.82
52:t:53:ASN:OD1	52:t:56:GLN:N	2.12	0.82
1:w:944:G:C8	1:w:944:G:C3'	2.63	0.82
1:w:1064:C:O5'	1:w:1064:C:C6	2.30	0.82
1:w:1141:U:OP2	10:H:89:LYS:HE2	1.80	0.82
1:w:1557:C:C3'	1:w:1558:A:H5''	2.10	0.82
1:w:2158:A:O2'	1:w:2159:G:C5'	2.27	0.82
1:w:2192:G:C2	1:w:2193:G:C8	2.68	0.82
1:w:2745:C:C1'	8:F:143:GLN:HG2	2.07	0.82
3:A:217:THR:HB	3:A:220:GLY:HA3	1.62	0.82
5:C:119:ARG:NE	5:C:157:ALA:HA	1.94	0.82
6:D:112:ARG:O	6:D:117:LYS:HG2	1.78	0.82
8:F:172:LYS:HE3	8:F:173:PRO:HD2	1.61	0.82
9:G:67:ARG:HH21	9:G:67:ARG:CB	1.93	0.82
11:I:22:ILE:HG13	11:I:23:ARG:N	1.93	0.82
13:K:6:ARG:HD3	13:K:7:MET:N	1.95	0.82
13:K:132:VAL:HG22	13:K:133:ARG:N	1.95	0.82
16:N:50:ILE:HG13	16:N:99:LEU:HB2	1.62	0.82
16:N:100:TYR:HA	16:N:103:ARG:HH22	1.02	0.82
18:P:74:LYS:C	18:P:75:PHE:HD2	1.88	0.82
19:Q:42:ARG:HG3	19:Q:46:PHE:CE2	2.15	0.82
22:T:15:PRO:O	22:T:17:ALA:N	2.11	0.82
30:b:14:CYS:N	30:b:27:CYS:HB3	1.95	0.82
31:y:21:G:O2'	31:y:22:G:C5'	2.24	0.82
31:y:272:C:H2'	31:y:273:A:C8	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:541:G:N2	31:y:542:G:H1'	1.95	0.82
31:y:657:G:H1'	48:p:23:GLY:CA	2.07	0.82
31:y:1152:A:HO2'	31:y:1153:C:H5'	1.41	0.82
31:y:1375:A:N3	31:y:1376:U:H1'	1.94	0.82
33:0:51:G:H2'	33:0:52:U:O4'	1.80	0.82
35:c:55:PHE:CA	35:c:58:ILE:HG12	2.09	0.82
36:d:29:TYR:HD1	36:d:33:LEU:CG	1.92	0.82
36:d:195:VAL:O	36:d:196:LEU:HB2	1.78	0.82
37:e:23:GLY:CA	37:e:112:VAL:HG23	2.00	0.82
37:e:126:ILE:HA	37:e:149:ALA:N	1.95	0.82
41:i:16:ALA:HA	41:i:19:VAL:CG1	2.08	0.82
41:i:35:ILE:CD1	41:i:38:ILE:HD12	2.10	0.82
46:n:81:LEU:HD21	46:n:88:ARG:NH2	1.93	0.82
52:t:40:ILE:HG13	52:t:70:LYS:HA	1.62	0.82
1:w:439:G:H2'	1:w:440:G:O4'	1.80	0.82
1:w:535:C:N4	1:w:536:A:N6	2.28	0.82
1:w:781:A:C2	1:w:1776:G:N2	2.46	0.82
1:w:918:A:C6	1:w:919:G:H1'	2.14	0.82
1:w:939:G:N3	1:w:939:G:H2'	1.93	0.82
1:w:1072:C:N3	1:w:1092:C:N4	2.28	0.82
1:w:1198:U:H2'	1:w:1199:U:C5	2.15	0.82
1:w:1310:G:N2	1:w:1610:A:N3	2.27	0.82
1:w:2199:A:OP2	1:w:2199:A:H8	1.56	0.82
1:w:2213:U:H4'	24:V:57:GLU:HG3	1.62	0.82
1:w:2259:G:C5'	1:w:2427:C:H3'	2.10	0.82
1:w:2618:G:O6	1:w:2619:C:N4	2.11	0.82
1:w:2824:C:H2'	1:w:2825:G:C8	2.14	0.82
2:x:13:A:C6	2:x:70:C:H5''	2.14	0.82
5:C:51:PHE:H	5:C:76:ARG:CB	1.85	0.82
7:E:43:LEU:HD22	7:E:45:GLU:H	1.43	0.82
9:G:97:ILE:HD13	9:G:98:ALA:H	1.45	0.82
9:G:124:GLY:HA3	9:G:144:VAL:N	1.86	0.82
10:H:29:PRO:HG3	10:H:64:ASP:CB	2.09	0.82
11:I:71:ARG:N	11:I:74:GLY:O	2.12	0.82
12:J:25:SER:HB3	12:J:30:THR:HG21	1.62	0.82
26:X:7:LYS:H	26:X:55:ARG:HB3	1.45	0.82
29:a:48:PHE:HD2	29:a:48:PHE:C	1.87	0.82
31:y:41:G:C6	31:y:402:G:C6	2.68	0.82
31:y:425:G:C2	31:y:426:G:C1'	2.63	0.82
31:y:626:U:H5''	49:q:38:TYR:CB	2.09	0.82
31:y:693:G:H1'	34:1:-3:A:H1'	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:859:A:C2'	31:y:860:A:H5'	2.10	0.82
31:y:879:C:H3'	45:m:5:THR:HG21	1.61	0.82
31:y:911:U:C3'	31:y:912:C:H6	1.93	0.82
31:y:978:A:C2	31:y:1319:A:N3	2.48	0.82
31:y:1276:G:H1'	31:y:1282:C:O2'	1.79	0.82
31:y:1305:G:C6	31:y:1331:G:C2	2.68	0.82
35:c:16:HIS:HD2	35:c:210:SER:HB2	1.42	0.82
35:c:132:LYS:CD	35:c:133:LYS:H	1.92	0.82
36:d:59:ARG:HH12	36:d:97:LYS:HG3	1.42	0.82
36:d:93:LYS:HD3	36:d:94:LEU:H	1.41	0.82
41:i:56:LYS:HB2	41:i:58:TYR:CE2	2.14	0.82
45:m:37:THR:HG23	45:m:58:ARG:NH2	1.94	0.82
50:r:29:HIS:HD2	50:r:30:PRO:N	1.77	0.82
50:r:86:GLU:O	50:r:89:LEU:HB2	1.79	0.82
1:w:776:G:H4'	1:w:777:A:C5'	2.10	0.81
1:w:917:A:O2'	2:x:98:G:H4'	1.80	0.81
1:w:1122:G:O2'	1:w:1123:C:H5'	1.80	0.81
1:w:1184:G:HO2'	1:w:1185:C:H5'	1.44	0.81
1:w:1580:A:H2'	1:w:1581:G:C5'	2.10	0.81
1:w:1759:A:H2	1:w:1760:A:C8	1.97	0.81
1:w:1859:A:N6	1:w:1883:G:O2'	2.12	0.81
1:w:1967:C:N4	1:w:1968:G:C4	2.48	0.81
1:w:2077:A:C2'	1:w:2078:C:C6	2.63	0.81
1:w:2145:C:H2'	1:w:2146:C:C2	2.13	0.81
1:w:2355:C:H2'	23:U:17:GLN:CD	2.04	0.81
1:w:2572:A:OP1	1:w:2574:G:O4'	1.98	0.81
1:w:2682:U:H1'	5:C:12:THR:HG22	1.59	0.81
1:w:2803:C:H2'	1:w:2804:C:H5'	1.60	0.81
1:w:2807:G:H2'	1:w:2808:U:H5''	1.62	0.81
2:x:117:G:C2	2:x:118:G:N7	2.47	0.81
3:A:167:ASP:H	3:A:171:ALA:CA	1.92	0.81
5:C:5:LEU:HB2	5:C:76:ARG:HH11	1.43	0.81
6:D:19:LEU:N	6:D:20:PRO:HD2	1.95	0.81
6:D:55:SER:HB2	6:D:73:ILE:CG2	2.09	0.81
7:E:78:SER:HA	7:E:83:ARG:HG2	1.61	0.81
13:K:121:ALA:O	13:K:124:LYS:CG	2.28	0.81
26:X:50:VAL:HA	26:X:53:LEU:HD21	1.60	0.81
31:y:34:C:O2'	31:y:35:G:H5'	1.78	0.81
31:y:66:G:H5''	31:y:173:U:O4	1.79	0.81
31:y:363:A:H5'	45:m:32:ARG:HA	1.62	0.81
31:y:644:G:H2'	31:y:645:C:H5'	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1156:G:O5'	31:y:1156:G:H8	1.62	0.81
31:y:1369:C:OP2	42:j:112:LYS:HB3	1.80	0.81
37:e:7:PRO:HB2	37:e:10:ARG:HG2	1.62	0.81
37:e:9:CYS:HA	37:e:12:CYS:SG	2.20	0.81
37:e:9:CYS:CA	37:e:12:CYS:SG	2.68	0.81
40:h:107:ALA:HB1	40:h:123:GLU:CD	2.05	0.81
1:w:89:G:H3'	1:w:90:U:C6	2.15	0.81
1:w:353:G:O2'	1:w:354:G:H5'	1.80	0.81
1:w:489:G:H2'	1:w:491:G:H8	1.40	0.81
1:w:590:A:H3'	1:w:591:C:C6	2.15	0.81
1:w:591:C:C2	1:w:592:G:C8	2.67	0.81
1:w:684:G:OP1	28:Z:21:ARG:HD3	1.80	0.81
1:w:996:A:H2'	1:w:997:G:C8	2.15	0.81
1:w:1184:G:C2'	1:w:1185:C:C5'	2.57	0.81
1:w:1434:A:C3'	1:w:1435:G:H5'	2.10	0.81
1:w:1668:A:C2	1:w:1674:G:C8	2.67	0.81
1:w:1701:A:H2'	1:w:1702:G:H5'	1.60	0.81
1:w:2092:U:H5	1:w:2199:A:HO2'	1.28	0.81
1:w:2095:C:H2'	1:w:2096:U:C1'	2.09	0.81
1:w:2120:G:N2	1:w:2121:G:C8	2.48	0.81
1:w:2433:A:O2'	1:w:2434:A:P	2.38	0.81
1:w:2512:C:O2'	5:C:141:ILE:HB	1.79	0.81
1:w:2635:C:H4'	5:C:78:LEU:O	1.80	0.81
1:w:2875:C:C2'	1:w:2876:G:C5'	2.47	0.81
3:A:57:GLN:CG	3:A:202:PRO:HB3	2.08	0.81
7:E:11:TYR:HA	7:E:15:VAL:HG23	1.60	0.81
14:L:9:LYS:O	14:L:10:LEU:HB2	1.80	0.81
16:N:64:ARG:CZ	16:N:103:ARG:HA	2.10	0.81
16:N:64:ARG:NH2	16:N:66:VAL:HG23	1.95	0.81
17:O:44:ASN:O	17:O:48:ALA:CB	2.29	0.81
22:T:44:PHE:CG	22:T:45:ASP:N	2.48	0.81
22:T:101:PRO:HB2	22:T:136:PHE:HB3	1.61	0.81
26:X:6:VAL:O	26:X:6:VAL:HG12	1.80	0.81
31:y:246:A:H62	31:y:281:G:N2	1.77	0.81
31:y:335:C:H1'	31:y:1433:A:N3	1.94	0.81
31:y:392:G:H2'	31:y:393:A:O4'	1.80	0.81
31:y:434:U:H2'	31:y:435:C:C6	2.14	0.81
31:y:861:G:N2	31:y:874:G:H5'	1.95	0.81
31:y:1248:A:N6	31:y:1288:A:OP2	2.13	0.81
33:O:6:U:C3'	33:O:7:U:H5''	2.09	0.81
37:e:12:CYS:CA	37:e:19:LEU:HD12	2.10	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:144:THR:CG2	38:f:145:LYS:H	1.93	0.81
39:g:92:LYS:HD2	39:g:92:LYS:N	1.96	0.81
41:i:49:GLU:O	41:i:59:LEU:HA	1.81	0.81
48:p:84:LYS:HD3	48:p:85:LEU:HG	1.60	0.81
50:r:40:LYS:NZ	50:r:42:TYR:OH	2.13	0.81
1:w:88:G:C2'	1:w:89:G:H5'	2.09	0.81
1:w:145:G:H3'	1:w:146:G:C5'	2.07	0.81
1:w:509:C:C2'	1:w:510:C:H5''	2.10	0.81
1:w:562:U:O2'	1:w:563:G:C5'	2.28	0.81
1:w:729:G:N2	1:w:1775:U:C6	2.48	0.81
1:w:802:A:C3'	1:w:803:U:C6	2.49	0.81
1:w:855:G:C3'	1:w:856:C:H6	1.89	0.81
1:w:1024:G:OP2	1:w:1024:G:C8	2.33	0.81
1:w:1075:C:O5'	1:w:1075:C:H6	1.62	0.81
1:w:1122:G:C2'	1:w:1123:C:H5'	2.10	0.81
1:w:1275:A:N1	1:w:1296:G:H1'	1.95	0.81
1:w:1283:G:O2'	1:w:1285:G:O6	1.96	0.81
1:w:1351:C:H2'	1:w:1352:U:C6	2.15	0.81
1:w:1372:U:O2'	1:w:1373:A:H5'	1.79	0.81
1:w:1378:A:N6	1:w:1570:A:H2	1.77	0.81
1:w:1426:G:C8	1:w:1426:G:OP2	2.33	0.81
1:w:1426:G:OP2	1:w:1426:G:H8	1.61	0.81
1:w:1604:C:C2'	1:w:1605:C:H5'	2.10	0.81
1:w:1699:G:C2'	1:w:1700:A:C5'	2.54	0.81
1:w:1751:C:O5'	1:w:1751:C:H6	1.62	0.81
1:w:1753:G:H8	1:w:1753:G:OP2	1.64	0.81
1:w:1798:U:OP1	4:B:258:LYS:HA	1.80	0.81
1:w:1832:C:C5'	31:y:900:A:H1'	2.10	0.81
1:w:2013:A:C2'	1:w:2014:A:H5'	2.09	0.81
1:w:2158:A:N3	1:w:2159:G:H1'	1.94	0.81
1:w:2165:G:H2'	1:w:2166:G:H5'	1.63	0.81
1:w:2285:C:H2'	1:w:2346:A:H62	1.44	0.81
1:w:2323:G:H2'	1:w:2324:C:C6	2.15	0.81
1:w:2324:C:C1'	1:w:2337:G:H4'	2.10	0.81
1:w:2419:U:O3'	29:a:32:LEU:HD23	1.79	0.81
1:w:2558:C:C2	1:w:2559:C:C5	2.68	0.81
1:w:2725:A:O2'	1:w:2726:U:H2'	1.81	0.81
1:w:2822:G:C2'	1:w:2823:A:C5'	2.49	0.81
1:w:2839:G:H5''	14:L:46:GLY:CA	2.08	0.81
2:x:42:C:O4'	7:E:68:PRO:HA	1.80	0.81
3:A:194:ILE:O	3:A:197:LEU:HG	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:79:VAL:HG21	4:B:111:LEU:CG	2.06	0.81
4:B:106:ILE:O	4:B:106:ILE:HG13	1.79	0.81
4:B:209:ALA:O	4:B:212:SER:HB3	1.79	0.81
5:C:24:THR:CB	5:C:186:GLY:HA2	2.07	0.81
10:H:82:LYS:O	10:H:83:ILE:O	1.97	0.81
10:H:126:VAL:HG12	10:H:130:LEU:CD2	2.11	0.81
12:J:7:ARG:NH1	12:J:10:PRO:HG2	1.94	0.81
16:N:100:TYR:HB2	16:N:101:PHE:HD2	1.45	0.81
17:O:40:PHE:CA	18:P:78:LYS:HG3	2.10	0.81
20:R:10:ALA:O	20:R:29:TRP:HB2	1.79	0.81
22:T:108:PRO:HB2	22:T:111:VAL:HG23	1.62	0.81
24:V:21:ARG:HG3	24:V:22:GLY:N	1.92	0.81
25:W:32:LEU:HG	25:W:33:MET:N	1.95	0.81
29:a:14:VAL:HG13	29:a:15:LYS:H	1.43	0.81
31:y:29:G:N2	31:y:554:C:O2	2.13	0.81
31:y:392:G:C8	31:y:393:A:C8	2.69	0.81
31:y:476:G:C2'	31:y:477:G:H8	1.93	0.81
31:y:943:U:C2'	31:y:944:G:H5'	2.10	0.81
31:y:1029:G:H1'	31:y:103(B):G:H22	1.45	0.81
31:y:1225:A:OP2	46:n:103:THR:CG2	2.28	0.81
31:y:1237:C:O2'	31:y:1300:G:N2	2.13	0.81
31:y:1268:A:H4'	54:v:20:LYS:HA	1.61	0.81
31:y:1291:G:H2'	31:y:1292:U:O4'	1.80	0.81
31:y:1452:C:H4'	31:y:1453:G:C4	2.15	0.81
33:0:56:C:HO2'	33:0:57:G:P	2.02	0.81
35:c:133:LYS:O	35:c:136:VAL:HG12	1.80	0.81
36:d:34:LEU:CD2	36:d:38:ARG:HH21	1.91	0.81
37:e:140:VAL:HG23	37:e:140:VAL:O	1.77	0.81
40:h:148:ASN:HB3	40:h:151:TYR:CZ	2.14	0.81
41:i:69:ARG:O	41:i:70:GLN:HG3	1.81	0.81
42:j:93:ARG:HE	42:j:102:LEU:HD22	1.45	0.81
44:l:58:PRO:CD	44:l:89:ALA:HB1	2.10	0.81
1:w:239:U:H2'	1:w:240:G:C8	2.16	0.81
1:w:532:A:O2'	1:w:533:G:OP2	1.99	0.81
1:w:686:G:H22	1:w:788:A:H61	1.25	0.81
1:w:689:A:H2'	1:w:690:G:C8	2.16	0.81
1:w:691:C:C2	1:w:692:C:C6	2.67	0.81
1:w:886:C:H4'	1:w:887:A:N9	1.95	0.81
1:w:954:G:H21	1:w:2274:A:H2	1.26	0.81
1:w:957:A:P	13:K:76:LYS:HA	2.19	0.81
1:w:965:C:H3'	1:w:966:G:C5'	2.10	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1125:G:H3'	1:w:1126:A:C5'	2.10	0.81
1:w:1709:U:C2'	1:w:2859:G:H21	1.92	0.81
1:w:2017:U:H1'	27:Y:9:LYS:O	1.80	0.81
1:w:2050:C:O5'	1:w:2050:C:H6	1.62	0.81
1:w:2603:G:H2'	1:w:2604:U:H5'	1.63	0.81
1:w:2695:C:H2'	1:w:2696:U:C5	2.16	0.81
1:w:2822:G:O6	14:L:1:MET:HA	1.81	0.81
2:x:70:C:H2'	2:x:71:C:H6	1.44	0.81
3:A:217:THR:HG22	3:A:219:MET:N	1.94	0.81
4:B:177:LEU:HB2	4:B:180:GLY:O	1.80	0.81
5:C:19:ARG:NH1	5:C:21:VAL:CG1	2.44	0.81
6:D:4:ILE:CG1	6:D:12:ARG:HG2	2.09	0.81
6:D:51:GLU:O	6:D:52:VAL:HG12	1.80	0.81
9:G:26:ALA:O	9:G:32:PRO:CD	2.28	0.81
10:H:78:VAL:CB	10:H:149:PRO:HA	2.09	0.81
11:I:86:ILE:O	11:I:94:ARG:NH1	2.13	0.81
17:O:91:ASP:OD1	17:O:96:ALA:HB2	1.81	0.81
22:T:41:LEU:HD13	22:T:42:VAL:HG23	1.59	0.81
28:Z:10:ARG:O	28:Z:13:ALA:HB3	1.81	0.81
31:y:52:G:O2'	31:y:53:A:H5'	1.81	0.81
31:y:161:A:H8	31:y:161:A:O5'	1.62	0.81
31:y:265:G:C2	31:y:267:C:O4'	2.34	0.81
31:y:894:G:C2	31:y:895:G:C8	2.68	0.81
31:y:1376:U:H3	31:y:1377:A:N6	1.78	0.81
31:y:1516:G:C2	31:y:1518:MA6:H3'	2.16	0.81
35:c:16:HIS:CD2	35:c:210:SER:HB2	2.15	0.81
37:e:80:GLU:O	37:e:82:ALA:N	2.13	0.81
42:j:41:VAL:C	42:j:43:ALA:H	1.87	0.81
47:o:9:LYS:C	47:o:9:LYS:HD3	2.06	0.81
47:o:24:CYS:CB	47:o:28:GLY:HA2	2.09	0.81
47:o:24:CYS:CB	47:o:39:LEU:HA	2.09	0.81
51:s:47:THR:HG22	51:s:82:THR:OG1	1.81	0.81
52:t:22:LEU:CA	52:t:25:LYS:HE2	2.09	0.81
1:w:78:A:H2	1:w:348:G:O2'	1.62	0.81
1:w:867:C:N3	1:w:912:C:C1'	2.43	0.81
1:w:885:C:C3'	1:w:886:C:C5'	2.48	0.81
1:w:1005:C:C3'	1:w:1006:C:H5''	2.11	0.81
1:w:1025:G:C5'	1:w:1026:U:H5'	2.09	0.81
1:w:1137:G:O5'	1:w:1137:G:H8	1.62	0.81
1:w:1221:C:H2'	1:w:122(A):C:C6	2.15	0.81
1:w:1347:G:H5'	1:w:1348:G:OP2	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1851:U:H5'	33:0:4:G:O4'	1.80	0.81
1:w:1974:C:H2'	1:w:1975:G:H5''	1.63	0.81
1:w:2076:U:OP1	1:w:2076:U:C6	2.31	0.81
1:w:2114:A:H3'	1:w:2115:G:H8	1.42	0.81
1:w:2352:A:H62	1:w:2365:G:H21	1.26	0.81
1:w:2467:C:O2'	1:w:2468:G:H5'	1.81	0.81
1:w:2837:G:N2	14:L:45:ARG:HE	1.77	0.81
2:x:17:C:C5	2:x:18:G:C8	2.68	0.81
2:x:24:G:N2	2:x:56:G:N2	2.28	0.81
4:B:48:ARG:HD3	4:B:49:ILE:H	1.46	0.81
5:C:26:ILE:O	5:C:182:LEU:O	1.98	0.81
6:D:105:LEU:CD1	6:D:109:VAL:HG22	2.11	0.81
6:D:112:ARG:HG3	6:D:112:ARG:NH2	1.95	0.81
10:H:40:ASP:OD2	10:H:77:VAL:CG1	2.29	0.81
17:O:5:LYS:HG3	17:O:6:THR:N	1.95	0.81
20:R:81:VAL:CG2	20:R:82:GLN:H	1.91	0.81
22:T:150:LEU:HD12	22:T:171:ILE:CD1	2.10	0.81
22:T:152:ALA:CB	22:T:166:SER:O	2.28	0.81
25:W:5:GLU:CD	25:W:9:GLN:HA	2.04	0.81
25:W:7:ARG:C	25:W:8:LYS:HD2	2.04	0.81
31:y:89:U:H2'	31:y:90:C:C5	2.16	0.81
31:y:654:G:C4	31:y:655:A:C8	2.68	0.81
31:y:767:A:HO2'	31:y:1524:C:HO2'	0.97	0.81
31:y:778:G:H3'	31:y:779:C:H6	1.44	0.81
31:y:1157:A:H62	31:y:1178:G:H1'	1.44	0.81
37:e:104:VAL:O	37:e:108:LEU:HD13	1.81	0.81
38:f:76:ILE:HB	38:f:94:ALA:N	1.95	0.81
41:i:81:HIS:O	41:i:82:HIS:HB2	1.80	0.81
41:i:95:VAL:HG23	41:i:96:GLY:N	1.94	0.81
45:m:86:GLY:HA2	45:m:97:TYR:HB3	1.61	0.81
45:m:87:GLY:N	45:m:97:TYR:HA	1.94	0.81
45:m:87:GLY:N	45:m:97:TYR:HD2	1.78	0.81
46:n:32:GLU:HA	46:n:35:GLU:HB3	1.60	0.81
46:n:59:TYR:O	46:n:64:TRP:CZ3	2.33	0.81
46:n:74:VAL:O	46:n:78:ILE:HG12	1.81	0.81
52:t:70:LYS:CG	52:t:71:LEU:H	1.93	0.81
1:w:117:G:P	1:w:126:A:H1'	2.21	0.81
1:w:126:A:C5	28:Z:18:PHE:CZ	2.69	0.81
1:w:394:A:O5'	1:w:394:A:C8	2.32	0.81
1:w:465:G:H4'	28:Z:16:HIS:ND1	1.95	0.81
1:w:479:A:H1'	1:w:481:G:O4'	1.79	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:531:C:O2'	17:O:28:ARG:NH2	2.12	0.81
1:w:724:U:C2'	1:w:725:G:O4'	2.25	0.81
1:w:981:A:H2	1:w:2027:G:H21	1.27	0.81
1:w:1131:G:C5	1:w:2025:C:H1'	2.16	0.81
1:w:1262:A:C2	27:Y:10:LYS:NZ	2.47	0.81
1:w:1540:G:H3'	1:w:1541:U:H6	1.43	0.81
1:w:1884:A:C3'	1:w:1885:A:H5''	2.11	0.81
1:w:2057:A:H1'	27:Y:6:VAL:HB	1.63	0.81
1:w:2083:G:C2	1:w:2084:C:C4	2.68	0.81
1:w:2396:G:O3'	24:V:31:GLY:HA2	1.80	0.81
1:w:2451:A:O5'	1:w:2451:A:C8	2.31	0.81
1:w:2461:C:H1'	1:w:2491:U:O4	1.80	0.81
1:w:2795:G:H1'	1:w:2801:A:H62	1.40	0.81
4:B:44:ASN:ND2	4:B:45:ASN:H	1.79	0.81
4:B:148:GLU:O	4:B:149:PRO:C	2.23	0.81
5:C:3:GLY:HA2	5:C:198:VAL:HB	1.62	0.81
5:C:4:ILE:HD11	5:C:29:GLY:N	1.96	0.81
5:C:93:VAL:HG12	5:C:182:LEU:HD13	1.63	0.81
8:F:64:LEU:HD12	8:F:65:HIS:N	1.96	0.81
10:H:60:LYS:HE3	10:H:60:LYS:CA	2.10	0.81
11:I:19:ILE:HB	11:I:42:SER:O	1.80	0.81
22:T:98:MET:CA	22:T:125:LEU:HD12	2.09	0.81
31:y:36:C:C2	31:y:37:U:C5	2.68	0.81
31:y:592:G:N2	31:y:647:C:O2	2.14	0.81
31:y:741:G:H1'	48:p:52:SER:OG	1.81	0.81
31:y:878:G:C5'	41:i:89:PRO:HG2	2.11	0.81
31:y:1188:A:N7	31:y:1189:C:C5	2.48	0.81
31:y:1248:A:H2	31:y:1289:A:N6	1.76	0.81
31:y:1347:G:O2'	31:y:1373:G:N2	2.12	0.81
31:y:1348:U:H4'	42:j:120:ARG:HB2	1.62	0.81
31:y:1363:A:C1'	31:y:1365:G:C8	2.64	0.81
31:y:1501:C:H2'	31:y:1504:G:O6	1.81	0.81
35:c:97:TRP:HB2	35:c:172:ILE:HD12	0.84	0.81
38:f:100:VAL:CG1	38:f:118:ILE:HG12	2.08	0.81
40:h:62:PHE:O	40:h:65:ALA:N	2.14	0.81
41:i:9:MET:CB	41:i:13:ILE:HD13	2.10	0.81
41:i:33:GLU:HA	41:i:36:LEU:HD12	1.61	0.81
42:j:85:LEU:HD11	42:j:86:VAL:HG13	1.62	0.81
46:n:73:GLU:HG3	46:n:77:ASN:HD21	1.44	0.81
50:r:61:GLU:HA	50:r:71:PHE:HD1	1.43	0.81
50:r:87:LYS:O	50:r:90:ILE:HG12	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:s:61:LYS:HA	51:s:64:ARG:CD	2.11	0.81
53:u:75:ASN:HD22	53:u:79:ARG:CZ	1.92	0.81
1:w:281:G:N2	1:w:358:U:H3'	1.96	0.81
1:w:319:C:H2'	1:w:320:A:O4'	1.80	0.81
1:w:481:G:H1'	1:w:506:G:H21	1.44	0.81
1:w:519:U:H4'	19:Q:74:ALA:O	1.81	0.81
1:w:716:A:C8	1:w:716:A:OP2	2.34	0.81
1:w:775:G:C5	1:w:794:G:C8	2.68	0.81
1:w:1303:G:H4'	1:w:1642:G:C2'	2.10	0.81
1:w:1356:G:C2	1:w:1357:U:C2	2.69	0.81
1:w:1357:U:C4	1:w:1358:G:C5	2.69	0.81
1:w:1570:A:O2'	1:w:1571:A:O4'	1.98	0.81
1:w:1707:G:H2'	1:w:1708:C:N1	1.95	0.81
1:w:1707:G:H1'	1:w:1758:G:O6	1.80	0.81
1:w:2025:C:C2	1:w:2026:C:C4	2.69	0.81
1:w:2167:U:C2'	1:w:2168:G:O4'	2.28	0.81
1:w:2319:G:H1'	1:w:2320:A:C5	2.15	0.81
1:w:2536:G:H3'	1:w:2537:U:C5	2.16	0.81
4:B:172:TYR:CE1	4:B:186:HIS:HA	2.16	0.81
5:C:52:LEU:HB2	5:C:76:ARG:N	1.96	0.81
7:E:172:LEU:CA	7:E:175:LEU:HD12	2.06	0.81
9:G:65:ALA:HB2	9:G:113:ARG:HH22	1.46	0.81
10:H:86:THR:CG2	10:H:89:LYS:HZ2	1.92	0.81
15:M:58:LEU:HD23	15:M:59:LYS:N	1.94	0.81
19:Q:14:PRO:CB	19:Q:78:GLU:HG2	2.11	0.81
20:R:65:ARG:HA	20:R:65:ARG:HE	1.44	0.81
31:y:17:U:H2'	31:y:1079:G:N2	1.94	0.81
31:y:573:A:C8	31:y:574:A:N7	2.48	0.81
31:y:643:C:O5'	31:y:643:C:H6	1.64	0.81
31:y:896:C:H5'	50:r:100:LYS:NZ	1.96	0.81
31:y:1077:G:C6	31:y:1079:G:C5'	2.64	0.81
31:y:1246:C:C2'	31:y:1247:U:C6	2.62	0.81
35:c:92:TYR:CD1	35:c:93:VAL:N	2.48	0.81
37:e:178:VAL:O	37:e:180:GLY:N	2.14	0.81
38:f:136:MET:HB3	38:f:140:ARG:HH12	1.46	0.81
47:o:29:ARG:NE	47:o:42:ILE:HG13	1.96	0.81
52:t:19:VAL:HG22	52:t:23:ASN:HD22	1.45	0.81
1:w:13:A:O2'	1:w:14:A:C8	2.27	0.81
1:w:143:C:H4'	20:R:36:LYS:CG	2.07	0.81
1:w:205:G:HO2'	1:w:206:U:P	2.04	0.81
1:w:363(F):U:C3'	1:w:363(G):A:H8	1.94	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:518:G:H2'	1:w:519:U:H5	1.42	0.81
1:w:783:A:H5''	1:w:2588:G:O2'	1.80	0.81
1:w:1536:A:N6	1:w:1538:G:N2	2.28	0.81
1:w:1944:U:C6	1:w:1955:U:O4'	2.34	0.81
1:w:2257:U:O2'	1:w:2258:C:H5'	1.79	0.81
1:w:2472:G:C6	1:w:2476:A:H4'	2.14	0.81
1:w:2581:G:O6	1:w:2610:C:O2	1.99	0.81
1:w:2744:G:C6	1:w:2761:G:C6	2.69	0.81
1:w:2840:C:C4	1:w:2841:C:N4	2.49	0.81
4:B:27:THR:HG21	4:B:83:GLU:HG3	1.62	0.81
6:D:62:GLN:OE1	6:D:69:ARG:NE	2.14	0.81
6:D:159:ARG:HG2	6:D:172:ALA:HB2	1.63	0.81
8:F:23:ARG:HD3	8:F:34:GLU:OE1	1.81	0.81
9:G:113:ARG:NH1	9:G:133:HIS:HB3	1.96	0.81
13:K:51:ARG:HH11	13:K:51:ARG:C	1.88	0.81
16:N:29:ARG:C	16:N:44:ASP:OD2	2.24	0.81
16:N:74:ARG:HD2	16:N:76:PHE:CZ	2.16	0.81
24:V:51:VAL:HG11	24:V:60:PHE:HD2	1.46	0.81
26:X:9:VAL:HB	26:X:32:GLN:HG2	1.62	0.81
31:y:136:C:C4'	49:q:1:MET:N	2.42	0.81
31:y:210:U:O4'	31:y:216:G:N7	2.13	0.81
31:y:245:C:C6	31:y:284:G:N2	2.47	0.81
31:y:483:C:H3'	31:y:484:G:C8	2.15	0.81
31:y:759:A:C8	31:y:759:A:OP2	2.33	0.81
31:y:838:G:C2'	31:y:841:U:H5''	2.10	0.81
36:d:46:GLU:HA	36:d:46:GLU:OE2	1.80	0.81
37:e:18:LYS:HA	37:e:33:MET:CG	2.10	0.81
51:s:74:ARG:NE	51:s:79:LEU:HD22	1.95	0.81
52:t:15:LEU:HD12	52:t:16:LEU:H	1.45	0.81
52:t:25:LYS:HD3	52:t:26:GLY:N	1.95	0.81
1:w:371:A:C1'	1:w:373:U:C6	2.60	0.81
1:w:390:A:OP2	1:w:390:A:H8	1.64	0.81
1:w:479:A:H4'	1:w:480:A:O5'	1.80	0.81
1:w:535:C:N4	1:w:536:A:H62	1.77	0.81
1:w:718:A:O2'	1:w:719:C:H4'	1.80	0.81
1:w:1203:G:O6	1:w:1204:A:N1	2.14	0.81
1:w:1305:C:H5'	1:w:1305:C:H6	1.45	0.81
1:w:1500:G:H21	4:B:100:GLY:HA2	1.45	0.81
1:w:1918:A:H2'	1:w:1919:A:N7	1.96	0.81
1:w:2359:C:H2'	1:w:2360:A:C4'	2.10	0.81
1:w:2860:A:O5'	1:w:2860:A:C8	2.28	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2872:G:O2'	1:w:2873:A:C8	2.33	0.81
3:A:224:ARG:NH2	3:A:225:ILE:H	1.78	0.81
4:B:101:GLU:C	4:B:102:LYS:HE2	2.06	0.81
4:B:266:SER:C	4:B:269:PHE:HE1	1.89	0.81
7:E:131:TYR:HD2	7:E:132:ASN:N	1.79	0.81
9:G:95:LYS:H	9:G:95:LYS:HD3	1.43	0.81
11:I:65:THR:O	11:I:79:PHE:CD1	2.34	0.81
15:M:39:ILE:HD13	15:M:39:ILE:H	1.45	0.81
22:T:80:ARG:CG	22:T:81:ARG:H	1.92	0.81
22:T:99:TYR:CE1	22:T:125:LEU:HD22	2.15	0.81
24:V:76:ARG:HH12	24:V:90:ILE:HG23	1.46	0.81
31:y:125:U:O2	31:y:236:G:N1	2.14	0.81
31:y:691:G:O6	44:l:55:LYS:HE3	1.81	0.81
31:y:1137:C:H1'	31:y:1138:G:C2	2.15	0.81
31:y:1230:C:H2'	31:y:1231:G:C5'	2.10	0.81
31:y:1276:G:C2'	31:y:1282:C:H1'	2.10	0.81
36:d:56:ASP:C	36:d:57:ILE:HD12	2.06	0.81
36:d:152:ILE:CG2	36:d:199:LYS:HB2	2.11	0.81
45:m:90:LYS:C	45:m:92:LEU:H	1.88	0.81
48:p:57:LEU:HD13	48:p:57:LEU:O	1.81	0.81
51:s:53:ARG:HD2	51:s:58:LEU:CD2	2.11	0.81
52:t:12:ASP:HB2	52:t:15:LEU:CG	2.10	0.81
1:w:96:G:O4'	25:W:41:ILE:HG13	1.81	0.81
1:w:391:G:H2'	1:w:392:C:H6	1.46	0.81
1:w:590:A:H4'	6:D:90:ARG:HG2	1.60	0.81
1:w:919:G:N2	1:w:2268:A:C8	2.49	0.81
1:w:1118:C:H2'	1:w:1119:C:C6	2.15	0.81
1:w:1198:U:H2'	1:w:1199:U:H5	1.44	0.81
1:w:2195:C:C2	1:w:2196:C:C6	2.68	0.81
1:w:2242:G:H2'	1:w:2243:U:C6	2.15	0.81
1:w:2431:U:H2'	1:w:2433:A:OP2	1.80	0.81
1:w:2485:G:C5'	13:K:46:GLN:HG2	2.10	0.81
1:w:2625:G:H2'	1:w:2626:C:H6	1.45	0.81
1:w:2795:G:N3	1:w:2799:A:OP1	2.13	0.81
2:x:8:U:H2'	2:x:9:G:C8	2.16	0.81
6:D:39:ARG:HG3	6:D:40:ARG:N	1.96	0.81
8:F:117:PRO:CA	8:F:121:ILE:HD12	2.11	0.81
8:F:141:VAL:HG13	8:F:144:VAL:HG11	1.62	0.81
12:J:61:ARG:N	12:J:61:ARG:HE	1.79	0.81
12:J:122:PRO:HB2	12:J:142:GLY:HA3	1.60	0.81
13:K:136:ALA:C	13:K:137:TYR:CD1	2.58	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:75:GLU:CA	15:M:78:LEU:HG	2.10	0.81
16:N:92:GLY:H	16:N:115:ARG:C	1.89	0.81
19:Q:10:VAL:HG21	19:Q:101:SER:HB2	1.63	0.81
25:W:14:ARG:HB3	25:W:54:LYS:HZ3	1.44	0.81
25:W:55:ARG:HH11	25:W:55:ARG:H	1.29	0.81
28:Z:37:LYS:HE3	28:Z:39:ARG:HE	1.45	0.81
31:y:12:U:O3'	31:y:526:C:H4'	1.80	0.81
31:y:400:C:O2'	31:y:401:C:H5'	1.81	0.81
31:y:495:A:O4'	31:y:496:A:C8	2.34	0.81
31:y:506:G:N7	31:y:507:C:N4	2.28	0.81
31:y:584:G:H5'	50:r:91:ARG:HH22	1.45	0.81
31:y:911:U:C3'	31:y:912:C:C6	2.64	0.81
31:y:1064:G:P	31:y:1386:G:H4'	2.21	0.81
31:y:1230:C:P	32:z:30:G:H4'	2.21	0.81
31:y:1312:G:N7	52:t:2:PRO:CB	2.44	0.81
31:y:1360:A:OP1	47:o:21:TYR:HA	1.81	0.81
31:y:1479:C:H2'	31:y:1480:G:C8	2.16	0.81
37:e:80:GLU:OE2	37:e:84:LYS:HB3	1.81	0.81
41:i:51:VAL:CG2	41:i:60:ARG:HH21	1.94	0.81
44:l:23:ALA:HA	44:l:28:THR:HG23	1.63	0.81
46:n:121:LYS:HA	46:n:121:LYS:HE3	1.63	0.81
49:q:35:LYS:O	49:q:37:GLY:N	2.14	0.81
1:w:295:G:C8	1:w:295:G:OP2	2.34	0.80
1:w:414:C:H5''	1:w:414:C:H6	1.45	0.80
1:w:612:G:C2	1:w:617:G:C6	2.69	0.80
1:w:994:C:H5''	1:w:995:C:OP1	1.79	0.80
1:w:1033:U:C2'	30:b:18:ARG:HH12	1.93	0.80
1:w:1486:A:H2'	1:w:1487:G:C5'	2.11	0.80
1:w:1567:A:C4'	1:w:1568:G:C2	2.64	0.80
1:w:2018:G:C8	27:Y:9:LYS:NZ	2.48	0.80
1:w:2245:U:H5'	1:w:2246:G:C5'	2.09	0.80
1:w:2650:U:O2'	1:w:2651:C:H5'	1.79	0.80
1:w:2658:C:H5''	8:F:158:HIS:HE2	1.45	0.80
1:w:2680:C:H5'	5:C:189:PRO:HA	1.63	0.80
1:w:2734:A:H2'	1:w:2735:G:C5'	2.11	0.80
1:w:2747:G:H22	1:w:2756:U:C5'	1.93	0.80
1:w:2786:U:H1'	5:C:64:LYS:HG3	1.61	0.80
2:x:19:G:C2'	2:x:20:C:H5'	2.11	0.80
2:x:25:A:N7	2:x:26:A:N9	2.30	0.80
3:A:225:ILE:HG22	3:A:226:ASN:N	1.94	0.80
4:B:6:PHE:CE1	4:B:18:VAL:HG23	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:78:VAL:HG12	10:H:146:TYR:CE2	2.17	0.80
10:H:140:PHE:O	10:H:143:LEU:HD12	1.81	0.80
22:T:19:ARG:HA	22:T:23:LYS:H	1.46	0.80
31:y:37:U:C4'	45:m:116:ARG:HH22	1.94	0.80
31:y:129(A):U:H1'	31:y:130:A:N6	1.95	0.80
31:y:245:C:C4	31:y:284:G:N1	2.49	0.80
31:y:245:C:C2'	31:y:246:A:C5'	2.59	0.80
31:y:256:U:N3	31:y:270:A:C2	2.47	0.80
31:y:300:A:O3'	50:r:31:LEU:HD22	1.81	0.80
31:y:371:G:H21	31:y:373:A:H62	1.27	0.80
31:y:659:U:O5'	31:y:659:U:H6	1.64	0.80
31:y:750:G:N2	48:p:23:GLY:C	2.39	0.80
31:y:1103:C:H2'	31:y:1104:G:C8	2.16	0.80
31:y:1375:A:H5''	40:h:29:LYS:HG2	1.61	0.80
33:0:14:A:H62	33:0:21:A:H2	1.29	0.80
33:0:47:U:N3	33:0:50:U:H5''	1.95	0.80
37:e:21:LEU:N	37:e:26:CYS:HB3	1.96	0.80
38:f:10:MET:HA	38:f:32:VAL:CG1	2.11	0.80
49:q:27:LYS:HG2	49:q:28:ARG:N	1.93	0.80
51:s:34:TYR:O	51:s:37:VAL:HG23	1.82	0.80
1:w:92:G:H2'	1:w:93:C:H6	1.05	0.80
1:w:126:A:OP1	1:w:126:A:H4'	1.78	0.80
1:w:480:A:H4'	21:S:44:ILE:HG22	1.61	0.80
1:w:509:C:H2'	1:w:510:C:H5''	1.63	0.80
1:w:1058:G:H3'	1:w:1059:G:H5''	1.63	0.80
1:w:1398:C:OP2	1:w:1399:C:OP2	1.97	0.80
1:w:1451:C:H5'	1:w:1453:A:C5'	2.11	0.80
1:w:1701:A:C2'	1:w:1702:G:H5'	2.11	0.80
1:w:1791:A:P	1:w:1828:G:H22	2.03	0.80
1:w:1848:A:C4	1:w:1849:G:H1'	2.17	0.80
1:w:2352:A:H2	23:U:33:ALA:HB1	1.45	0.80
1:w:2415:G:C4'	12:J:66:GLY:O	2.30	0.80
1:w:2485:G:H5''	13:K:46:GLN:NE2	1.96	0.80
1:w:2654:A:H8	1:w:2656:U:C5	1.99	0.80
1:w:2825:G:C2	1:w:2826:A:H1'	2.17	0.80
2:x:24:G:H8	2:x:24:G:P	2.03	0.80
4:B:73:VAL:HG12	4:B:120:GLY:HA2	1.62	0.80
5:C:4:ILE:HD11	5:C:29:GLY:H	1.46	0.80
8:F:17:VAL:HG21	8:F:44:VAL:CG2	2.11	0.80
10:H:34:PRO:HB2	10:H:142:ARG:HH12	1.45	0.80
10:H:96:THR:CG2	10:H:107:LYS:HA	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:85:LEU:HD22	12:J:85:LEU:N	1.96	0.80
13:K:134:ARG:NH1	22:T:53:ILE:CD1	2.44	0.80
14:L:78:LYS:HB3	14:L:82:GLU:OE2	1.81	0.80
16:N:50:ILE:CG2	16:N:62:THR:C	2.49	0.80
17:O:64:ARG:HB3	17:O:64:ARG:HH21	1.44	0.80
18:P:4:ILE:HG12	18:P:13:ARG:CB	2.09	0.80
19:Q:65:LEU:HB3	19:Q:68:ARG:NH1	1.95	0.80
31:y:16:A:C2'	31:y:17:U:C6	2.58	0.80
31:y:297:G:H4'	31:y:557:G:O2'	1.82	0.80
31:y:337:C:H2'	31:y:338:A:H8	1.43	0.80
31:y:796:C:O2'	31:y:797:C:H5'	1.80	0.80
31:y:864:A:H8	31:y:864:A:OP1	1.65	0.80
31:y:1055:A:O5'	31:y:1055:A:H8	1.64	0.80
31:y:1178:G:OP2	31:y:1178:G:H8	1.63	0.80
31:y:1365:G:H2'	31:y:1366:C:C6	2.16	0.80
32:z:60:U:C2'	32:z:61:C:OP1	2.29	0.80
33:0:9:A:N6	33:0:23:A:C5	2.48	0.80
35:c:133:LYS:NZ	35:c:137:ARG:HH22	1.79	0.80
36:d:175:LEU:HB2	36:d:180:ALA:CB	2.12	0.80
40:h:66:VAL:HG13	40:h:70:LYS:HB2	1.62	0.80
46:n:9:ILE:N	46:n:10:PRO:HD2	1.95	0.80
46:n:15:VAL:HG21	46:n:41:PRO:CA	2.08	0.80
50:r:22:LEU:HA	50:r:41:LYS:CB	2.11	0.80
53:u:21:LYS:H	53:u:21:LYS:HD2	1.46	0.80
1:w:35:G:C5	1:w:36:G:C8	2.70	0.80
1:w:101:G:H4'	1:w:102:G:H8	1.46	0.80
1:w:460:A:H3'	1:w:461:C:C6	2.16	0.80
1:w:483:A:H2'	1:w:484:C:C6	2.16	0.80
1:w:743:G:C8	1:w:743:G:OP2	2.34	0.80
1:w:812:C:H1'	1:w:1250:G:N2	1.95	0.80
1:w:1045:A:H4'	1:w:1047:G:C5'	2.08	0.80
1:w:1056:G:H5''	1:w:1057:A:H5'	1.63	0.80
1:w:1215:G:H2'	1:w:1216:G:H5'	1.64	0.80
1:w:1270:C:H5''	1:w:1271:G:C5'	2.10	0.80
1:w:1309:G:H2'	1:w:1310:G:C5'	2.08	0.80
1:w:1792:G:OP1	4:B:206:LEU:HB3	1.80	0.80
1:w:1794:U:C1'	1:w:1900:A:N1	2.41	0.80
1:w:2076:U:OP1	1:w:2076:U:H3'	1.80	0.80
1:w:2090:G:C2'	1:w:2091:U:H5'	2.11	0.80
1:w:2840:C:H2'	1:w:2841:C:C6	2.16	0.80
2:x:102:G:C2'	2:x:103:U:H5''	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:35:GLU:OE2	7:E:160:VAL:HG13	1.82	0.80
9:G:41:GLU:O	9:G:44:LEU:HB3	1.80	0.80
9:G:125:GLU:HG2	9:G:126:TYR:N	1.96	0.80
12:J:79:ARG:HG2	12:J:81:GLN:NE2	1.96	0.80
13:K:21:THR:O	13:K:23:GLY:N	2.13	0.80
17:O:48:ALA:O	17:O:50:ARG:N	2.14	0.80
19:Q:30:GLU:HA	19:Q:33:ARG:NE	1.97	0.80
31:y:32:A:H2'	31:y:33:A:C8	2.15	0.80
31:y:97:U:H2'	31:y:99:C:C6	2.16	0.80
31:y:411:A:C8	31:y:411:A:C3'	2.60	0.80
31:y:485:G:O3'	31:y:486:U:H6	1.63	0.80
31:y:517:G:C2'	31:y:531:U:C6	2.58	0.80
31:y:876:G:O2'	41:i:7:ALA:HB1	1.81	0.80
31:y:958:A:H2'	31:y:959:A:C8	2.13	0.80
31:y:959:A:H3'	31:y:960:U:C4'	2.10	0.80
31:y:1075:C:H5'	31:y:1101:A:H61	1.45	0.80
31:y:1209:C:C2'	31:y:1210:C:H5'	2.11	0.80
32:z:18:G:H2'	32:z:57:G:H22	1.46	0.80
33:0:24:G:C6	33:0:25:C:C2	2.70	0.80
36:d:175:LEU:HB2	36:d:180:ALA:HB1	1.62	0.80
39:g:91:VAL:HG22	39:g:92:LYS:H	1.45	0.80
44:l:14:VAL:HG13	44:l:35:PRO:CG	2.10	0.80
46:n:81:LEU:CD2	46:n:88:ARG:HH21	1.94	0.80
1:w:7:G:H3'	1:w:8:A:C8	2.17	0.80
1:w:231:C:H2'	1:w:232:G:C5'	2.10	0.80
1:w:345:A:H1'	1:w:346:A:N7	1.95	0.80
1:w:372:G:C8	24:V:68:PRO:HD3	2.17	0.80
1:w:782:A:H1'	1:w:783:A:C5	2.16	0.80
1:w:1203:G:P	1:w:1204:A:H3'	2.20	0.80
1:w:1260:G:C2'	1:w:1261:C:C6	2.64	0.80
1:w:1818:U:C3'	4:B:155:LEU:HD21	2.11	0.80
1:w:2018:G:O2'	1:w:2019:A:H5'	1.82	0.80
1:w:2073:C:H2'	1:w:2074:U:O4'	1.82	0.80
1:w:2135:A:H61	1:w:2156:G:C2'	1.93	0.80
1:w:2556:C:C5'	1:w:2556:C:H6	1.94	0.80
1:w:2828:C:N4	1:w:2829:C:N4	2.29	0.80
4:B:99:ASP:OD2	4:B:101:GLU:HB2	1.82	0.80
6:D:46:THR:HG22	6:D:87:PRO:HD2	1.62	0.80
6:D:150:LEU:HA	6:D:169:VAL:CB	2.12	0.80
7:E:69:ALA:O	7:E:90:LEU:HG	1.80	0.80
11:I:69:VAL:HG22	11:I:70:LYS:H	1.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:124:ASP:HB2	16:N:125:ARG:NH1	1.96	0.80
17:O:106:PHE:HA	17:O:109:LEU:CG	2.11	0.80
22:T:99:TYR:CE1	22:T:125:LEU:HB2	2.16	0.80
25:W:5:GLU:O	25:W:8:LYS:N	2.15	0.80
31:y:191(A):G:H2'	31:y:191(B):G:O4'	1.82	0.80
31:y:324:G:OP1	53:u:70:SER:OG	1.98	0.80
31:y:729:A:HO2'	31:y:816:A:HO2'	1.19	0.80
31:y:784:C:C2	31:y:785:G:C8	2.69	0.80
31:y:791:G:H5''	31:y:792:A:OP2	1.82	0.80
31:y:793:U:H5'	31:y:794:A:O5'	1.81	0.80
31:y:1170:A:O5'	31:y:1170:A:H8	1.64	0.80
31:y:1379:G:C8	40:h:4:ARG:HA	2.16	0.80
31:y:1395:C:H2'	31:y:1396:A:C5'	2.12	0.80
31:y:1395:C:OP2	31:y:1395:C:H6	1.63	0.80
36:d:124:ILE:HA	36:d:128:PHE:HB2	1.64	0.80
39:g:95:GLU:HB2	51:s:32:ARG:CG	2.10	0.80
1:w:12:U:O2	1:w:12:U:H2'	1.79	0.80
1:w:612:G:O2'	1:w:616:A:N6	2.14	0.80
1:w:814:C:H5''	18:P:85:LYS:O	1.82	0.80
1:w:836:G:C5	1:w:837:C:N4	2.49	0.80
1:w:1323:U:P	19:Q:84:ARG:NH2	2.55	0.80
1:w:1823:G:H2'	1:w:1824:G:C1'	2.12	0.80
1:w:2053:G:O3'	5:C:145:LYS:HE2	1.82	0.80
1:w:2254:C:O5'	1:w:2254:C:H6	1.64	0.80
1:w:2349:G:C8	29:a:42:ARG:NH2	2.48	0.80
1:w:2358:G:N1	1:w:2359:C:N4	2.29	0.80
1:w:2393:A:H4'	12:J:61:ARG:O	1.81	0.80
1:w:2657:A:H3'	1:w:2658:C:C5	2.15	0.80
4:B:16:MET:HE2	4:B:207:GLY:HA2	1.63	0.80
4:B:78:LYS:C	4:B:95:LEU:HB2	2.06	0.80
5:C:30:PRO:HG3	5:C:180:ASN:ND2	1.96	0.80
6:D:153:THR:O	6:D:172:ALA:HA	1.80	0.80
7:E:146:TYR:CG	7:E:147:ASP:N	2.41	0.80
8:F:149:ARG:HD2	8:F:153:LYS:HE2	1.63	0.80
9:G:68:LEU:HA	9:G:71:ILE:HG22	1.62	0.80
9:G:88:ILE:HG12	9:G:89:TYR:H	1.46	0.80
11:I:80:ASP:CG	16:N:71:GLY:HA3	2.06	0.80
11:I:86:ILE:CG2	11:I:94:ARG:CD	2.48	0.80
12:J:148:LEU:CD2	12:J:149:GLU:H	1.94	0.80
13:K:103:MET:C	13:K:104:PHE:CD1	2.59	0.80
14:L:44:LEU:HD22	14:L:47:PHE:CE2	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:64:HIS:O	18:P:96:ILE:HG23	1.82	0.80
19:Q:59:VAL:HG12	19:Q:59:VAL:O	1.82	0.80
21:S:40:GLU:HB3	21:S:62:GLU:HA	1.64	0.80
21:S:97:ARG:HA	21:S:102:CYS:O	1.80	0.80
23:U:45:PHE:CA	23:U:77:ARG:O	2.23	0.80
23:U:67:VAL:HG23	23:U:79:VAL:CG1	2.12	0.80
31:y:406:G:H2'	31:y:407:G:C8	2.16	0.80
31:y:582:U:OP2	31:y:758:G:N2	2.15	0.80
31:y:618:C:N4	31:y:623:C:C4	2.46	0.80
31:y:754:C:H1'	48:p:69:TYR:CE1	2.17	0.80
31:y:758:G:P	31:y:758:G:H8	2.04	0.80
31:y:802:A:OP2	31:y:803:G:N7	2.14	0.80
31:y:1114:C:O2'	31:y:1115:C:H5'	1.81	0.80
31:y:1125:U:C4	31:y:1127:G:C8	2.69	0.80
31:y:1441:G:H1'	31:y:1461:G:C2	2.16	0.80
37:e:8:VAL:HG23	37:e:22:LYS:HG2	1.63	0.80
37:e:126:ILE:HD13	37:e:146:ILE:HG23	1.63	0.80
41:i:104:ARG:HH11	41:i:104:ARG:HA	1.46	0.80
46:n:52:GLU:O	46:n:56:LEU:HD22	1.81	0.80
46:n:52:GLU:C	46:n:56:LEU:HD22	2.07	0.80
50:r:62:SER:HG	50:r:70:ARG:C	1.89	0.80
1:w:18:C:O5'	1:w:18:C:H6	1.65	0.80
1:w:29:U:OP1	1:w:583:G:H4'	1.82	0.80
1:w:183:C:H1'	1:w:432:A:N3	1.96	0.80
1:w:593:G:N3	1:w:593:G:H2'	1.94	0.80
1:w:843:G:H2'	1:w:844:C:C6	2.17	0.80
1:w:902:C:H2'	1:w:903:C:C6	2.17	0.80
1:w:1146:C:H2'	1:w:1147:C:C6	2.16	0.80
1:w:1186:G:C4	1:w:1187:G:C1'	2.65	0.80
1:w:1440:G:C2'	1:w:1441:G:H5'	2.10	0.80
1:w:1669:A:C2'	1:w:1670:C:C5'	2.59	0.80
1:w:1779:U:O4	1:w:1784:A:C8	2.34	0.80
1:w:1844:C:N4	1:w:1896:G:O6	2.12	0.80
1:w:1926:U:C1'	1:w:1929:G:N1	2.43	0.80
4:B:242:ARG:HH11	4:B:242:ARG:H	1.25	0.80
5:C:84:PHE:O	5:C:86:PRO:HD3	1.81	0.80
5:C:116:VAL:HG22	5:C:117:MET:N	1.97	0.80
5:C:154:LYS:HE3	5:C:154:LYS:HA	1.61	0.80
7:E:131:TYR:HB3	7:E:159:VAL:HG22	1.63	0.80
9:G:127:VAL:HA	9:G:141:LYS:CE	2.11	0.80
11:I:102:VAL:O	11:I:122:LEU:N	2.13	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:102:ARG:HD2	12:J:102:ARG:O	1.82	0.80
13:K:21:THR:OG1	13:K:98:LYS:HE2	1.81	0.80
15:M:106:ARG:HE	15:M:106:ARG:C	1.90	0.80
19:Q:92:ARG:HE	19:Q:92:ARG:CA	1.94	0.80
23:U:32:ARG:N	23:U:61:ALA:HB1	1.96	0.80
25:W:26:ARG:HA	25:W:29:LYS:CG	2.12	0.80
25:W:40:SER:O	25:W:44:LEU:HG	1.82	0.80
31:y:44:G:O2'	31:y:45:U:H5'	1.80	0.80
31:y:209:U:O2'	31:y:210:U:H5	1.64	0.80
31:y:236:G:H2'	31:y:237:C:C6	2.17	0.80
31:y:335:C:H2'	31:y:336:C:C6	2.16	0.80
31:y:874:G:H2'	31:y:875:C:H6	1.42	0.80
35:c:92:TYR:O	35:c:151:GLY:CA	2.23	0.80
35:c:137:ARG:HB3	35:c:137:ARG:HH11	1.45	0.80
35:c:184:VAL:CG2	35:c:198:ASP:H	1.95	0.80
38:f:92:LYS:HD2	38:f:93:PRO:HD2	1.63	0.80
53:u:51:GLU:O	53:u:55:ILE:HG22	1.82	0.80
1:w:58:G:O2'	1:w:73:A:N1	2.14	0.80
1:w:183:C:H3'	1:w:184:C:H5''	1.63	0.80
1:w:364:C:H2'	1:w:365(A):C:H6	1.47	0.80
1:w:528:A:C2	1:w:2042:A:C3'	2.65	0.80
1:w:577:G:O2'	1:w:578:A:H5'	1.81	0.80
1:w:577:G:H2'	1:w:578:A:O4'	1.82	0.80
1:w:590:A:C3'	1:w:591:C:C6	2.64	0.80
1:w:732:C:H2'	1:w:733:G:C4'	2.12	0.80
1:w:957:A:C6	1:w:2458:G:H4'	2.17	0.80
1:w:970:C:C2	1:w:971:C:C5	2.70	0.80
1:w:1029:A:H2'	1:w:1030:G:O4'	1.81	0.80
1:w:1153:C:H2'	1:w:1154:G:C5'	2.10	0.80
1:w:1184:G:H2'	1:w:1185:C:H5'	1.61	0.80
1:w:1208:C:H2'	1:w:1209:G:H8	1.45	0.80
1:w:1411:C:H2'	1:w:1412:A:C8	2.16	0.80
1:w:1533:C:C3'	1:w:1534:G:H8	1.92	0.80
1:w:2820:A:H3'	14:L:2:ARG:O	1.82	0.80
2:x:42:C:C6	7:E:91:ARG:NH2	2.49	0.80
2:x:79:C:H2'	2:x:80:U:C5'	2.12	0.80
4:B:183:ARG:HA	4:B:269:PHE:O	1.82	0.80
5:C:113:PHE:C	5:C:113:PHE:CD2	2.54	0.80
14:L:43:GLU:OE1	14:L:43:GLU:HA	1.81	0.80
14:L:104:ARG:HH21	14:L:107:ASP:HB2	1.44	0.80
15:M:29:PHE:CG	15:M:30:ARG:N	2.50	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:76:LYS:HE3	18:P:78:LYS:CB	2.05	0.80
23:U:50:ASN:HB2	23:U:81:VAL:HB	1.62	0.80
24:V:12:PRO:HG2	24:V:13:ILE:N	1.96	0.80
26:X:56:VAL:O	26:X:57:GLU:HB2	1.81	0.80
29:a:48:PHE:C	29:a:48:PHE:CD2	2.56	0.80
31:y:58:C:O2'	31:y:388:G:N7	2.15	0.80
31:y:102:G:C2	31:y:103:C:N3	2.50	0.80
31:y:500:G:C5	31:y:546:G:N2	2.49	0.80
31:y:577:G:O2'	31:y:578:C:H5'	1.81	0.80
31:y:593:G:C2	31:y:594:G:C8	2.69	0.80
31:y:811:C:O5'	31:y:811:C:H6	1.63	0.80
31:y:936:C:H3'	31:y:937:A:C8	2.17	0.80
31:y:1221:G:N1	31:y:1222:G:H1'	1.97	0.80
31:y:1291:G:C6	31:y:1292:U:C4	2.70	0.80
31:y:1344:C:O2'	42:j:120:ARG:CA	2.29	0.80
31:y:1410:G:N2	31:y:1490:C:O2	2.15	0.80
48:p:8:LYS:O	48:p:12:ILE:HD12	1.81	0.80
1:w:35:G:C4	1:w:36:G:C8	2.69	0.80
1:w:36:G:H4'	1:w:451:C:N3	1.97	0.80
1:w:281:G:H22	1:w:358:U:H5''	1.46	0.80
1:w:593:G:C6	1:w:594:U:C4	2.70	0.80
1:w:814:C:H4'	18:P:87:HIS:CD2	2.16	0.80
1:w:987:G:O3'	26:X:11:SER:HB2	1.82	0.80
1:w:1310:G:H5'	28:Z:9:ARG:HH22	1.41	0.80
1:w:1815:A:H5'	1:w:1817:G:H1'	1.64	0.80
1:w:1816:G:O2'	1:w:1817:G:OP2	1.99	0.80
1:w:2782:G:P	1:w:2782:G:C8	2.75	0.80
1:w:2803:C:H2'	1:w:2804:C:C5'	2.12	0.80
3:A:21:TYR:HD1	3:A:26:ALA:CB	1.93	0.80
3:A:217:THR:HB	3:A:220:GLY:CA	2.12	0.80
6:D:151:LEU:HB3	6:D:169:VAL:HG11	1.64	0.80
7:E:124:SER:C	7:E:131:TYR:CE2	2.60	0.80
11:I:15:GLY:H	11:I:50:GLY:HA3	1.47	0.80
15:M:11:LYS:HD2	15:M:11:LYS:H	1.46	0.80
16:N:121:ILE:CG2	16:N:122:ASP:H	1.95	0.80
17:O:85:LYS:HA	17:O:85:LYS:CE	2.05	0.80
18:P:13:ARG:HD3	18:P:13:ARG:N	1.95	0.80
23:U:50:ASN:CB	23:U:81:VAL:CG1	2.58	0.80
24:V:11:ARG:NH2	24:V:61:ARG:N	2.29	0.80
31:y:439:A:OP2	31:y:493:G:N2	2.15	0.80
31:y:664:G:H1	31:y:741:G:H1	1.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:682:G:H2'	31:y:683:G:H8	1.43	0.80
31:y:699:C:H2'	31:y:700:G:H8	1.46	0.80
31:y:861:G:O2'	31:y:874:G:O2'	1.99	0.80
31:y:925:G:O2'	31:y:927:G:OP1	1.99	0.80
31:y:1060:C:O2'	31:y:1061:G:C5'	2.25	0.80
31:y:1087:G:H2'	31:y:1088:G:N7	1.97	0.80
31:y:1266:G:N2	31:y:1269:A:OP2	2.14	0.80
31:y:1376:U:H3	31:y:1377:A:H62	1.29	0.80
31:y:1379:G:C2'	31:y:1381:U:H5	1.95	0.80
31:y:1470:G:O2'	31:y:1471:G:H5'	1.79	0.80
31:y:1521:G:H2'	31:y:1522:U:H5'	1.63	0.80
36:d:156:ARG:HH21	36:d:161:GLU:HB3	1.45	0.80
38:f:9:LYS:HD2	38:f:33:VAL:HG12	1.64	0.80
40:h:137:LYS:HB3	40:h:137:LYS:NZ	1.96	0.80
41:i:21:LYS:HD2	41:i:24:THR:N	1.97	0.80
52:t:70:LYS:HG2	52:t:71:LEU:N	1.94	0.80
1:w:188:G:C5'	24:V:18:ILE:HG12	2.11	0.80
1:w:245:G:H4'	12:J:71:VAL:HA	1.62	0.80
1:w:588:U:O2	6:D:85:PHE:HB2	1.82	0.80
1:w:674:G:H5''	6:D:72:ASP:HB3	1.62	0.80
1:w:1380:G:C6	1:w:1381:G:C5	2.69	0.80
1:w:1416:G:H1'	1:w:1417:C:C6	2.17	0.80
1:w:1667:G:OP1	11:I:6:THR:CA	2.26	0.80
1:w:1852:C:O2	1:w:1890:A:N6	2.14	0.80
1:w:2296:U:OP2	15:M:9:ARG:CZ	2.30	0.80
1:w:2563:U:H4'	11:I:28:SER:HB3	0.94	0.80
1:w:2563:U:O2	1:w:2566:A:C8	2.35	0.80
1:w:2596:U:H2'	1:w:2597:G:H8	1.46	0.80
4:B:248:SER:HB2	4:B:249:PRO:HD2	1.64	0.80
8:F:17:VAL:HA	8:F:26:VAL:CG2	2.05	0.80
9:G:38:LEU:HD12	9:G:38:LEU:H	1.44	0.80
13:K:52:VAL:HG23	13:K:53:ALA:N	1.96	0.80
16:N:50:ILE:HD12	16:N:64:ARG:HB2	1.62	0.80
18:P:17:GLY:O	18:P:97:LYS:HD2	1.82	0.80
19:Q:42:ARG:O	19:Q:44:ALA:N	2.14	0.80
31:y:10:A:O5'	31:y:10:A:C8	2.34	0.80
31:y:77:C:H2'	31:y:78:G:O4'	1.81	0.80
31:y:514:C:N4	31:y:537:G:O6	2.15	0.80
31:y:1367:C:H5'	43:k:60:ARG:NH2	1.95	0.80
31:y:1510:U:H2'	31:y:1511:G:C8	2.17	0.80
36:d:45:LYS:H	36:d:48:TYR:CB	1.94	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:59:ARG:HG3	36:d:64:VAL:CG2	2.12	0.80
36:d:131:ARG:HH12	38:f:52:PRO:HD2	1.47	0.80
41:i:118:VAL:HG12	41:i:119:LEU:N	1.96	0.80
42:j:17:VAL:HG13	42:j:63:ILE:HG13	1.63	0.80
46:n:67:GLU:HA	46:n:67:GLU:OE2	1.81	0.80
1:w:13:A:C4	1:w:526:A:N6	2.50	0.80
1:w:446:G:H1'	1:w:449:A:H2	1.46	0.80
1:w:519:U:C5'	19:Q:76:VAL:HG22	2.10	0.80
1:w:532:A:C5'	17:O:28:ARG:NH1	2.45	0.80
1:w:765:G:C5	1:w:766:C:C4	2.70	0.80
1:w:1741:C:H2'	1:w:1742:C:C4'	2.11	0.80
1:w:1815:A:C5'	1:w:1816:G:H5'	2.12	0.80
1:w:1828:G:H8	4:B:222:ARG:NH2	1.78	0.80
1:w:2164:C:N3	1:w:2165:G:N7	2.29	0.80
1:w:2335:A:O2'	1:w:2337:G:C5	2.19	0.80
1:w:2348:U:C5	1:w:2382:G:N2	2.50	0.80
1:w:2359:C:H5''	29:a:50:LEU:HB3	1.64	0.80
1:w:2832:U:C1'	1:w:2834:G:H1'	2.12	0.80
2:x:82:G:C2'	2:x:83:G:C8	2.62	0.80
4:B:20:ASP:O	4:B:24:ILE:HB	1.82	0.80
4:B:172:TYR:HD1	4:B:187:GLY:N	1.77	0.80
6:D:8:SER:HB2	6:D:9:PRO:CD	2.11	0.80
6:D:95:THR:C	6:D:96:LEU:HD22	2.07	0.80
6:D:148:SER:CB	6:D:184:THR:HG22	2.12	0.80
14:L:2:ARG:HG3	14:L:3:HIS:H	1.47	0.80
15:M:61:ASN:O	15:M:62:LYS:HG3	1.82	0.80
18:P:7:THR:HG21	18:P:22:VAL:HG21	1.63	0.80
18:P:46:VAL:O	18:P:47:VAL:HB	1.78	0.80
22:T:45:ASP:OD1	22:T:48:PHE:CE2	2.34	0.80
23:U:37:LEU:HD12	23:U:38:VAL:CB	2.12	0.80
26:X:43:ILE:HD12	26:X:43:ILE:N	1.96	0.80
31:y:50:A:N6	31:y:361:G:C4'	2.45	0.80
31:y:134:A:H61	49:q:25:ARG:NE	1.80	0.80
31:y:258:G:C6	31:y:259:G:C5	2.70	0.80
31:y:420:U:C2'	31:y:422:C:N4	2.35	0.80
31:y:517:G:H22	31:y:532:A:H4'	1.47	0.80
31:y:855:G:C5	31:y:856:C:N4	2.50	0.80
31:y:1014:A:H4'	52:t:14:HIS:CD2	2.16	0.80
31:y:1324:A:C8	31:y:1324:A:OP2	2.34	0.80
31:y:1344:C:H4'	42:j:120:ARG:HA	1.64	0.80
35:c:97:TRP:CZ3	35:c:99:GLY:CA	2.65	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:161:GLU:CG	36:d:162:GLN:H	1.90	0.80
37:e:115:ARG:O	37:e:118:ARG:CG	2.29	0.80
41:i:82:HIS:CD2	41:i:83:ILE:H	2.00	0.80
44:l:91:ARG:CG	44:l:92:GLU:H	1.90	0.80
44:l:93:GLN:H	44:l:93:GLN:HE21	1.27	0.80
45:m:87:GLY:C	45:m:97:TYR:HA	2.07	0.80
48:p:69:TYR:C	48:p:69:TYR:CD2	2.50	0.80
49:q:3:LYS:HB3	49:q:3:LYS:NZ	1.94	0.80
51:s:16:PRO:HB2	51:s:18:ARG:NH1	1.97	0.80
52:t:31:ILE:HG22	52:t:32:LYS:H	1.44	0.80
1:w:139:G:C5	1:w:140:A:N7	2.50	0.79
1:w:576:U:H2'	1:w:577:G:C8	2.17	0.79
1:w:863:A:C2	1:w:914:C:N4	2.50	0.79
1:w:904:C:O2'	1:w:905:U:H5'	1.81	0.79
1:w:1595:G:H2'	1:w:1595:G:N3	1.94	0.79
1:w:1676:A:N3	1:w:1677:A:C1'	2.44	0.79
1:w:1692:U:C2'	1:w:1693:U:H5''	2.11	0.79
1:w:1805:U:H2'	1:w:1806:C:C5'	2.11	0.79
1:w:2131:G:H5'	1:w:2132:U:N3	1.97	0.79
1:w:2286:A:C5'	1:w:2287:A:O4'	2.29	0.79
1:w:2376:A:N7	15:M:94:TYR:CE1	2.50	0.79
1:w:2565:A:O5'	1:w:2565:A:H8	1.66	0.79
1:w:2622:C:O2'	1:w:2824:C:N4	2.14	0.79
1:w:2867:G:O2'	1:w:2868:A:H8	1.65	0.79
2:x:41:U:O5'	2:x:41:U:C6	2.34	0.79
2:x:79:C:H2'	2:x:80:U:O4'	1.83	0.79
4:B:36:PRO:HB2	4:B:62:TYR:N	1.95	0.79
4:B:78:LYS:O	4:B:95:LEU:HB2	1.82	0.79
4:B:142:VAL:HG22	4:B:143:HIS:O	1.82	0.79
6:D:58:LYS:O	6:D:59:ILE:HG13	1.82	0.79
6:D:112:ARG:NH1	6:D:185:GLU:OE2	2.15	0.79
8:F:55:PRO:HG3	8:F:61:HIS:CD2	2.16	0.79
8:F:92:ILE:HD13	8:F:92:ILE:H	1.45	0.79
14:L:104:ARG:HG2	14:L:105:ARG:N	1.97	0.79
15:M:25:ARG:NE	15:M:40:ILE:HG22	1.96	0.79
18:P:100:ARG:HD2	18:P:101:GLY:N	1.98	0.79
27:Y:30:LEU:CD2	27:Y:31:VAL:H	1.93	0.79
31:y:62:U:O2'	31:y:379:C:O2	2.00	0.79
31:y:87:A:C2'	31:y:88:C:H5'	2.10	0.79
31:y:255:G:O2'	31:y:256:U:H5'	1.82	0.79
31:y:283:C:H2'	31:y:284:G:H5'	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:284:G:C4	31:y:285:G:C8	2.70	0.79
31:y:510:A:C5'	31:y:511:C:OP2	2.29	0.79
31:y:560:U:H5'	31:y:566:G:H21	1.46	0.79
31:y:565:U:H2'	31:y:566:G:C8	2.16	0.79
31:y:717:C:O2'	31:y:734:G:H5'	1.82	0.79
31:y:876:G:C2'	41:i:7:ALA:HB1	2.12	0.79
31:y:1013:G:O2'	31:y:1016:A:H2	1.65	0.79
31:y:1238:A:OP2	31:y:1301:U:O4	1.99	0.79
32:z:40:C:H2'	32:z:41:C:H6	1.45	0.79
35:c:155:LEU:HD21	35:c:158:LEU:O	1.82	0.79
41:i:21:LYS:HD2	41:i:24:THR:H	1.45	0.79
41:i:65:TYR:CB	41:i:78:GLN:HE22	1.94	0.79
41:i:74:PRO:C	41:i:76:PRO:HD3	2.07	0.79
41:i:104:ARG:HG2	41:i:108:GLY:H	1.46	0.79
45:m:74:HIS:CD2	45:m:75:ASN:H	2.00	0.79
50:r:54:GLY:HA3	50:r:82:MET:SD	2.22	0.79
1:w:83:G:N2	1:w:102:G:O2'	2.16	0.79
1:w:180:G:H5''	28:Z:36:GLN:HE22	1.47	0.79
1:w:185:U:H4'	1:w:218:A:O2'	1.82	0.79
1:w:543:C:O5'	1:w:543:C:C6	2.36	0.79
1:w:588:U:C2'	1:w:589:C:C5'	2.55	0.79
1:w:669:G:N2	1:w:670:A:O4'	2.14	0.79
1:w:773:U:O2'	4:B:48:ARG:CZ	2.30	0.79
1:w:982:C:H1'	1:w:2029:G:C5'	2.12	0.79
1:w:1004:C:H5'	1:w:1010:A:C6	2.16	0.79
1:w:1024:G:P	1:w:1026:U:OP1	2.39	0.79
1:w:1201:C:H4'	6:D:40:ARG:HH12	1.45	0.79
1:w:1277:G:H2'	1:w:1278:A:O4'	1.82	0.79
1:w:1797:C:H5'	4:B:256:GLY:C	2.07	0.79
1:w:2092:U:C4'	1:w:2093:G:H5''	2.12	0.79
1:w:2199:A:N6	1:w:2224:G:H1'	1.97	0.79
1:w:2297:C:H2'	1:w:2298:A:C8	2.18	0.79
1:w:2355:C:N4	1:w:2356:C:C6	2.50	0.79
1:w:2578:G:C8	5:C:140:SER:HB2	2.16	0.79
1:w:2642:G:H2'	1:w:2643:G:C8	2.16	0.79
1:w:2711:A:C5'	1:w:2712:U:O5'	2.28	0.79
1:w:2745:C:H1'	8:F:143:GLN:CG	2.07	0.79
1:w:2797:U:H5''	1:w:2798:C:OP1	1.81	0.79
3:A:35:THR:HG22	3:A:36:ALA:N	1.98	0.79
6:D:170:THR:O	6:D:170:THR:HG22	1.81	0.79
6:D:179:TYR:O	6:D:182:VAL:HG22	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:31:VAL:HG12	7:E:33:ARG:HD3	1.64	0.79
7:E:148:MET:O	7:E:151:ALA:HB3	1.82	0.79
8:F:126:PRO:HG2	8:F:130:ARG:HB2	1.63	0.79
21:S:67:LEU:HD13	21:S:68:HIS:H	1.47	0.79
31:y:175:C:N4	31:y:176:C:C6	2.51	0.79
31:y:179:A:C5	31:y:180:U:C5	2.70	0.79
31:y:447:G:H1'	31:y:487:A:N6	1.97	0.79
31:y:529:G:C2	45:m:48:ASN:ND2	2.51	0.79
31:y:1013:G:O2'	31:y:1016:A:C2	2.36	0.79
31:y:1128:C:H4'	31:y:1148:U:O2'	1.82	0.79
31:y:1256:A:O3'	31:y:1257:U:H4'	1.80	0.79
31:y:1436:U:C2'	31:y:1437:C:C6	2.65	0.79
35:c:130:ARG:NE	35:c:131:PRO:HD3	1.96	0.79
38:f:48:ALA:CB	38:f:49:PRO:CD	2.60	0.79
42:j:99:LEU:HB2	42:j:101:PHE:CD1	2.17	0.79
50:r:54:GLY:O	50:r:81:ARG:NH1	2.15	0.79
1:w:17:G:N3	1:w:17:G:H2'	1.97	0.79
1:w:120:U:O4	1:w:177:G:O6	2.01	0.79
1:w:527:C:H4'	1:w:528:A:O5'	1.79	0.79
1:w:584:C:N4	1:w:585:G:O6	2.14	0.79
1:w:994:C:H4'	1:w:995:C:OP1	1.83	0.79
1:w:1219:G:C2	1:w:1221:C:N4	2.50	0.79
1:w:1270:C:O2'	1:w:1648:C:OP2	2.00	0.79
1:w:1301:A:C2	1:w:1641:A:N6	2.51	0.79
1:w:2079:U:O2	1:w:2241:A:H2	1.65	0.79
1:w:2101:G:C2'	1:w:2102:U:C5'	2.52	0.79
1:w:2119:A:H2	1:w:2171:A:O4'	1.64	0.79
1:w:2646:C:O2'	1:w:2647:U:OP1	2.00	0.79
4:B:69:ARG:HG2	4:B:69:ARG:O	1.83	0.79
4:B:151:LYS:O	4:B:151:LYS:HG3	1.82	0.79
9:G:101:LEU:HB2	9:G:109:ILE:HD12	1.63	0.79
10:H:32:VAL:CG1	10:H:35:ARG:HH12	1.96	0.79
13:K:3:MET:H	13:K:4:PRO:HD3	1.47	0.79
13:K:136:ALA:C	13:K:137:TYR:HD1	1.89	0.79
17:O:5:LYS:NZ	17:O:7:GLY:HA2	1.96	0.79
23:U:31:VAL:HG13	23:U:65:GLY:N	1.98	0.79
25:W:55:ARG:HD2	25:W:55:ARG:N	1.98	0.79
31:y:59:A:H1'	31:y:354:G:N2	1.97	0.79
31:y:160:A:H61	31:y:347:G:C1'	1.89	0.79
31:y:295:C:OP2	31:y:295:C:H6	1.66	0.79
31:y:317:G:H2'	31:y:318:G:H8	1.42	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:671:G:N1	31:y:736:C:C4	2.51	0.79
31:y:967:5MC:H3'	31:y:968:A:H2'	1.64	0.79
31:y:1095:U:H5'	31:y:1109:C:O2	1.83	0.79
31:y:1126:U:H2'	31:y:1126:U:O2	1.81	0.79
31:y:1225:A:OP2	46:n:103:THR:HG21	1.80	0.79
31:y:1379:G:O2'	31:y:1381:U:C5	2.35	0.79
33:0:18:G:H21	33:0:58:A:C5'	1.95	0.79
36:d:39:ILE:C	36:d:41:GLY:H	1.87	0.79
45:m:109:VAL:HG21	45:m:119:TYR:HB2	1.63	0.79
1:w:39:C:OP2	1:w:39:C:C6	2.35	0.79
1:w:77:C:H2'	1:w:78:A:H5'	1.65	0.79
1:w:590:A:C3'	1:w:591:C:H6	1.95	0.79
1:w:663:G:N7	1:w:664:C:C5	2.51	0.79
1:w:722:A:H2'	1:w:723:G:O4'	1.81	0.79
1:w:751:A:H3'	1:w:751:A:C8	2.17	0.79
1:w:1497:U:C4	1:w:1578:U:OP1	2.35	0.79
1:w:1567:A:H4'	1:w:1568:G:N3	1.97	0.79
1:w:1649:G:N3	14:L:107:ASP:OD2	2.14	0.79
1:w:1756:G:H4'	1:w:1757:U:OP1	1.79	0.79
1:w:1798:U:O2'	1:w:1802:A:N3	2.14	0.79
1:w:1799:G:C6	4:B:179:SER:HB2	2.16	0.79
1:w:2066:C:C2	1:w:2445:G:C2	2.71	0.79
1:w:2419:U:O4	29:a:31:HIS:CG	2.35	0.79
1:w:2721:A:C3'	1:w:2722:G:H8	1.94	0.79
1:w:2743:C:H2'	1:w:2744:G:H5''	0.79	0.79
1:w:2807:G:C3'	1:w:2808:U:H5''	2.13	0.79
1:w:2834:G:H5'	1:w:2835:A:OP2	1.83	0.79
2:x:32:C:O2	2:x:50:G:N2	2.15	0.79
5:C:9:VAL:HG21	5:C:26:ILE:HA	1.64	0.79
7:E:78:SER:CB	32:z:19:G:H21	1.85	0.79
9:G:94:ALA:HB2	9:G:116:LEU:CD2	2.13	0.79
10:H:50:ALA:HB1	10:H:126:VAL:HG13	1.65	0.79
10:H:114:LEU:HD12	10:H:115:ALA:N	1.98	0.79
19:Q:18:ARG:HA	19:Q:76:VAL:CG1	2.11	0.79
21:S:84:ARG:HD2	21:S:84:ARG:H	1.43	0.79
30:b:2:LYS:N	30:b:35:ARG:HB2	1.98	0.79
31:y:302:G:H1'	31:y:556:C:P	2.22	0.79
31:y:328:C:H4'	31:y:329:A:H5'	1.64	0.79
31:y:556:C:C4	31:y:557:G:N7	2.51	0.79
31:y:673:G:H2'	31:y:674:G:N9	1.98	0.79
31:y:721:G:P	31:y:721:G:H8	2.03	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:739:C:C2'	31:y:740:U:H5'	2.13	0.79
31:y:959:A:N1	31:y:960:U:C6	2.51	0.79
31:y:976:G:N7	31:y:1358:U:O2	2.16	0.79
31:y:976:G:O2'	31:y:977:A:OP2	2.00	0.79
31:y:1499:A:O2'	31:y:1500:A:H5'	1.83	0.79
37:e:129:ASN:N	37:e:129:ASN:HD22	1.78	0.79
43:k:30:SER:OG	43:k:84:GLN:HB3	1.81	0.79
44:l:51:LYS:HA	44:l:55:LYS:CG	2.12	0.79
1:w:43:G:P	1:w:43:G:H8	2.06	0.79
1:w:139:G:O6	1:w:1595:G:O2'	2.00	0.79
1:w:142:G:C2'	1:w:143:C:C5'	2.61	0.79
1:w:307:G:N2	1:w:309:G:C3'	2.41	0.79
1:w:438:G:H2'	1:w:439:G:C5'	2.10	0.79
1:w:787:U:OP1	1:w:1780:A:N6	2.16	0.79
1:w:1557:C:H2'	1:w:1558:A:H5''	1.62	0.79
1:w:1886:C:O2'	1:w:1887:C:H5'	1.83	0.79
1:w:2092:U:H5''	9:G:27:ARG:NH1	1.97	0.79
1:w:2195:C:C2	1:w:2196:C:C5	2.70	0.79
1:w:2496:C:P	13:K:81:VAL:HG12	2.22	0.79
1:w:2533:A:C2'	1:w:2534:A:H5'	2.11	0.79
1:w:2639:A:N7	1:w:2775:A:H2	1.80	0.79
1:w:2784:C:N3	1:w:2785:C:C5	2.51	0.79
1:w:2808:U:N3	1:w:2892:A:C8	2.48	0.79
1:w:2900:A:H2'	1:w:2901:C:H5''	1.64	0.79
3:A:187:ALA:HA	3:A:190:ILE:HD12	1.65	0.79
4:B:106:ILE:O	4:B:108:PRO:HD3	1.82	0.79
4:B:117:VAL:C	4:B:126:GLN:NE2	2.40	0.79
5:C:81:ILE:HD12	5:C:81:ILE:N	1.98	0.79
6:D:79:VAL:O	6:D:79:VAL:HG13	1.82	0.79
6:D:85:PHE:HB3	6:D:88:LYS:HE2	1.63	0.79
13:K:11:LYS:HG2	13:K:13:GLN:H	1.45	0.79
13:K:34:LEU:CD2	13:K:118:LEU:HG	2.11	0.79
13:K:111:GLU:CB	13:K:115:MET:HE3	2.11	0.79
17:O:17:ILE:HG21	17:O:35:ALA:HB3	1.63	0.79
19:Q:42:ARG:HD2	19:Q:46:PHE:CZ	2.18	0.79
19:Q:72:LYS:HD2	19:Q:106:ILE:HB	1.62	0.79
21:S:62:GLU:O	21:S:63:LYS:HB2	1.80	0.79
22:T:15:PRO:C	22:T:19:ARG:CD	2.53	0.79
22:T:98:MET:HG2	22:T:99:TYR:N	1.95	0.79
23:U:45:PHE:HD2	23:U:78:TYR:C	1.91	0.79
26:X:7:LYS:N	26:X:55:ARG:HB3	1.97	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:b:26:ILE:HG12	30:b:33:LYS:HA	1.65	0.79
31:y:128:G:H4'	50:r:3:LYS:CD	2.11	0.79
31:y:502:G:O2'	31:y:550:G:H4'	1.82	0.79
31:y:686:U:O2'	31:y:687:A:OP2	2.00	0.79
31:y:700:G:O2'	31:y:703:G:H5''	1.81	0.79
31:y:864:A:H2	31:y:917:G:H21	0.84	0.79
31:y:931:C:H2'	31:y:932:C:H6	1.48	0.79
36:d:77:ILE:HA	36:d:84:ILE:CB	2.12	0.79
36:d:77:ILE:CG1	36:d:84:ILE:HG21	2.02	0.79
36:d:124:ILE:HD13	36:d:128:PHE:HB2	1.62	0.79
40:h:133:GLY:O	40:h:137:LYS:CG	2.29	0.79
41:i:122:ARG:HD3	41:i:123:GLU:OE1	1.82	0.79
45:m:27:LYS:HA	45:m:27:LYS:CE	2.09	0.79
1:w:45:G:O3'	1:w:46:C:O4'	2.01	0.79
1:w:387:U:H4'	1:w:388:G:O5'	1.81	0.79
1:w:537:C:H5'	17:O:57:PHE:HZ	1.48	0.79
1:w:611:C:C2	1:w:612:G:C8	2.70	0.79
1:w:1442:G:N2	1:w:1549:C:O2	2.13	0.79
1:w:1801:G:C6	1:w:2207:C:H4'	2.17	0.79
1:w:1998:G:H5''	1:w:2725:A:OP1	1.81	0.79
1:w:2309:A:H3'	1:w:2310:A:H8	1.39	0.79
1:w:2461:C:H2'	1:w:2462:U:H6	1.42	0.79
1:w:2470:G:C2'	1:w:2471:C:C5'	2.58	0.79
1:w:2712:U:C1'	1:w:712(B):A:O5'	2.30	0.79
2:x:55:U:C2'	2:x:56:G:H5'	2.12	0.79
2:x:79:C:C2'	2:x:80:U:C5'	2.60	0.79
4:B:16:MET:C	4:B:205:VAL:HB	2.08	0.79
4:B:75:ILE:H	4:B:76:PRO:CD	1.94	0.79
5:C:92:THR:O	5:C:95:ILE:HG13	1.82	0.79
6:D:39:ARG:HG3	6:D:40:ARG:H	1.44	0.79
11:I:67:LYS:CG	11:I:68:GLU:H	1.84	0.79
18:P:85:LYS:HZ3	18:P:86:GLY:H	1.27	0.79
21:S:1:MET:HG2	21:S:2:ARG:N	1.97	0.79
31:y:245:C:C5	31:y:284:G:N2	2.50	0.79
31:y:703:G:H3'	31:y:703:G:P	2.21	0.79
31:y:739:C:H2'	31:y:740:U:H5'	1.64	0.79
31:y:745:C:H5''	31:y:851:G:O2'	1.83	0.79
31:y:889:A:H4'	31:y:890:G:OP1	1.81	0.79
31:y:967:5MC:H2'	31:y:968:A:C8	2.18	0.79
31:y:1392:G:H2'	31:y:1393:U:H6	1.48	0.79
35:c:44:LEU:HA	35:c:47:THR:HG23	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:120:VAL:HG13	36:d:133:ALA:HB1	1.64	0.79
36:d:136:GLN:HA	36:d:139:GLN:OE1	1.83	0.79
36:d:160:ALA:HB1	36:d:164:ARG:HD3	1.64	0.79
37:e:129:ASN:HD22	37:e:129:ASN:H	1.30	0.79
37:e:173:TRP:CZ3	37:e:194:LEU:HD21	2.17	0.79
41:i:44:PHE:HD1	41:i:79:VAL:HB	1.46	0.79
44:l:17:GLY:C	44:l:18:ARG:HD2	2.07	0.79
50:r:8:GLY:HA2	50:r:59:ILE:HG12	1.65	0.79
50:r:88:TYR:CD2	50:r:89:LEU:HD12	2.18	0.79
54:v:8:THR:C	54:v:9:ARG:HD2	2.07	0.79
1:w:106:C:H1'	1:w:293:U:C4'	2.12	0.79
1:w:153:C:C2	1:w:154:G:N7	2.50	0.79
1:w:321:G:N1	1:w:341:G:H4'	1.98	0.79
1:w:651:G:H2'	1:w:651:G:N3	1.96	0.79
1:w:806:C:OP2	12:J:39:LYS:HE3	1.81	0.79
1:w:1225:G:H5'	18:P:88:ARG:H	1.47	0.79
1:w:1598:C:H6	1:w:1598:C:O5'	1.65	0.79
1:w:1627:G:HO2'	1:w:1628:G:H8	0.81	0.79
1:w:1893:C:H2'	1:w:1894:C:C5'	2.12	0.79
1:w:1917:U:H2'	1:w:1918:A:C1'	2.11	0.79
1:w:1923:U:O2'	32:z:12:U:O2'	2.01	0.79
1:w:1992:G:C4'	1:w:1994:C:H41	1.96	0.79
1:w:2096:U:H2'	1:w:2096:U:O2	1.82	0.79
1:w:2458:G:C4	1:w:2490:G:C6	2.70	0.79
1:w:2633:G:N2	5:C:64:LYS:HD3	1.98	0.79
1:w:712(B):A:N3	1:w:712(B):A:H2'	1.96	0.79
1:w:2729:G:H2'	1:w:2730:C:C5	2.18	0.79
1:w:2762:G:H3'	1:w:2763:G:H5'	1.65	0.79
1:w:2819:G:OP1	14:L:5:LYS:HG3	1.82	0.79
4:B:57:GLY:N	4:B:216:GLY:HA2	1.98	0.79
4:B:165:ILE:HG12	4:B:173:VAL:CG2	2.12	0.79
4:B:184:LYS:HG2	4:B:185:VAL:H	1.47	0.79
6:D:70:HIS:HE1	6:D:72:ASP:C	1.90	0.79
8:F:124:GLU:HG2	8:F:132:ARG:NE	1.96	0.79
12:J:71:VAL:CB	12:J:72:PRO:HD3	2.13	0.79
13:K:5:ARG:HG3	13:K:6:ARG:N	1.97	0.79
16:N:25:GLY:O	16:N:48:ILE:CG2	2.29	0.79
17:O:45:TYR:O	17:O:49:HIS:CB	2.31	0.79
19:Q:5:ALA:HB2	19:Q:54:ALA:CB	2.12	0.79
19:Q:14:PRO:HB2	19:Q:78:GLU:HG2	1.64	0.79
21:S:73:ARG:HG2	21:S:78:ALA:CB	2.11	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:9:GLY:O	24:V:48:LYS:HE2	1.83	0.79
31:y:122:G:C2'	31:y:123:C:H6	1.89	0.79
31:y:136:C:H2'	31:y:137:C:H6	1.45	0.79
31:y:259:G:H2'	31:y:260:G:C8	2.16	0.79
31:y:668:G:H4'	48:p:49:ASP:CA	2.12	0.79
31:y:866:C:O5'	31:y:866:C:H6	1.65	0.79
31:y:1097:C:H2'	31:y:1098:C:H6	1.42	0.79
31:y:1235:U:H4'	54:v:3:LYS:CB	2.12	0.79
31:y:1365:G:C2	31:y:1366:C:C2	2.71	0.79
32:z:9:A:H5'	32:z:46:7MG:H1'	1.63	0.79
35:c:168:THR:HG21	35:c:191:ASP:HB2	1.64	0.79
35:c:211:ILE:HA	35:c:214:ILE:HD13	1.63	0.79
36:d:61:ALA:O	36:d:62:ASP:HB2	1.79	0.79
37:e:84:LYS:HG3	37:e:85:LYS:N	1.96	0.79
38:f:59:GLY:O	38:f:62:ALA:HB3	1.82	0.79
45:m:85:ARG:CG	45:m:86:GLY:N	2.45	0.79
47:o:24:CYS:HA	47:o:39:LEU:HA	1.63	0.79
52:t:21:GLU:HB3	52:t:25:LYS:HZ3	1.48	0.79
1:w:182:A:H61	1:w:215:G:H1	0.83	0.79
1:w:220:G:H2'	1:w:221:A:C8	2.16	0.79
1:w:301:G:H5'	1:w:334:C:O2	1.83	0.79
1:w:541:C:H2'	1:w:542:C:H5	1.46	0.79
1:w:677:A:C2	1:w:678:C:C6	2.70	0.79
1:w:751:A:OP1	1:w:1614:A:N1	2.15	0.79
1:w:965:C:H2'	1:w:966:G:O4'	1.82	0.79
1:w:1385:G:O2'	1:w:1386:C:C4'	2.31	0.79
1:w:1447:G:N2	1:w:1464:C:O2	2.15	0.79
1:w:1471:A:N6	1:w:1522:G:C2	2.50	0.79
1:w:1607:C:N4	1:w:1622:G:O6	2.16	0.79
1:w:1764:G:C6	1:w:1989:G:C2	2.71	0.79
1:w:2037:G:C2	1:w:2038:G:C4	2.71	0.79
1:w:2048:G:OP2	1:w:2048:G:C8	2.34	0.79
1:w:2128:C:H5'	3:A:37:LYS:CE	2.11	0.79
1:w:2133:G:H2'	1:w:2157:G:H21	1.48	0.79
1:w:2134:A:OP2	1:w:2156:G:N1	2.15	0.79
1:w:2822:G:O2'	1:w:2823:A:H3'	1.82	0.79
2:x:73:A:H2	22:T:34:ASN:HD21	1.26	0.79
3:A:190:ILE:O	3:A:194:ILE:HG13	1.82	0.79
6:D:159:ARG:NE	6:D:172:ALA:HB1	1.98	0.79
9:G:130:TYR:HD2	9:G:138:ILE:HG23	1.48	0.79
13:K:24:GLY:O	13:K:101:ARG:HA	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:45:PHE:CD1	16:N:46:GLU:N	2.50	0.79
21:S:14:LEU:HG	21:S:21:LYS:O	1.83	0.79
24:V:85:LEU:HD11	24:V:88:LYS:N	1.97	0.79
29:a:16:ILE:HD13	29:a:16:ILE:C	2.07	0.79
31:y:564:C:C5	50:r:32:TYR:CE2	2.71	0.79
31:y:574:A:C2	31:y:882:C:O2	2.35	0.79
31:y:688:G:H2'	31:y:689:C:C6	2.17	0.79
31:y:714:G:O5'	31:y:714:G:C8	2.35	0.79
31:y:777:A:N3	31:y:778:G:C8	2.50	0.79
31:y:855:G:C5'	31:y:871:U:O4	2.31	0.79
31:y:945:G:N3	31:y:945:G:C2'	2.46	0.79
31:y:1053:G:O6	31:y:1199:U:H2'	1.82	0.79
31:y:1188:A:O2'	47:o:58:LYS:HG3	1.82	0.79
31:y:1510:U:H2'	31:y:1511:G:N7	1.98	0.79
32:z:40:C:HO2'	32:z:41:C:H5'	1.46	0.79
36:d:15:THR:HG23	36:d:180:ALA:H	1.47	0.79
37:e:33:MET:O	37:e:37:PRO:HD3	1.82	0.79
44:l:62:GLN:HA	44:l:94:ALA:CB	2.12	0.79
45:m:8:GLN:HA	45:m:11:ARG:CD	2.12	0.79
48:p:36:ILE:CG1	48:p:63:ARG:HH22	1.95	0.79
1:w:115:C:N3	1:w:116:C:C5	2.51	0.79
1:w:245:G:H4'	12:J:71:VAL:N	1.98	0.79
1:w:293:U:H3'	1:w:294:A:H4'	1.65	0.79
1:w:297:C:H2'	1:w:298:G:O4'	1.83	0.79
1:w:457:A:C5'	28:Z:40:TRP:HZ2	1.96	0.79
1:w:460:A:OP2	1:w:461:C:C5	2.35	0.79
1:w:814:C:H4'	18:P:87:HIS:CE1	2.18	0.79
1:w:944:G:O3'	1:w:946:G:OP2	2.00	0.79
1:w:985:C:H2'	1:w:986:C:C5	2.18	0.79
1:w:1138:G:H1'	10:H:129:MET:N	1.98	0.79
1:w:1318:C:N4	1:w:1319:G:N7	2.30	0.79
1:w:1438:U:OP2	1:w:1438:U:C6	2.36	0.79
1:w:1681:G:O2'	1:w:1762:A:C2'	2.31	0.79
1:w:1741:C:C3'	1:w:1742:C:H5''	2.12	0.79
1:w:1838:C:H42	1:w:1898:U:H2'	1.43	0.79
1:w:1913:A:N3	1:w:1913:A:H2'	1.97	0.79
1:w:2311:A:OP1	1:w:2312:U:H5	1.66	0.79
1:w:2394:C:H5	29:a:30:ARG:HH12	1.31	0.79
1:w:2485:G:C4'	13:K:46:GLN:HE21	1.94	0.79
1:w:2580:U:H5''	5:C:131:ALA:HB3	1.63	0.79
1:w:2584:U:OP2	1:w:2584:U:C6	2.36	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:20:C:H3'	2:x:21:G:H8	1.48	0.79
2:x:71:C:C4	2:x:72:G:C6	2.70	0.79
4:B:78:LYS:CB	4:B:114:GLY:O	2.29	0.79
6:D:132:LYS:HG3	6:D:133:GLU:H	1.47	0.79
6:D:135:LEU:O	6:D:138:ALA:N	2.14	0.79
7:E:139:LEU:HB3	7:E:146:TYR:O	1.83	0.79
9:G:69:LYS:HG3	9:G:138:ILE:HD13	1.65	0.79
9:G:73:GLU:HG2	9:G:138:ILE:CD1	2.12	0.79
13:K:125:LEU:HD13	13:K:127:ILE:HG23	1.65	0.79
21:S:14:LEU:HD22	21:S:39:VAL:HG11	1.65	0.79
24:V:21:ARG:CG	24:V:22:GLY:H	1.95	0.79
31:y:341:C:O2	31:y:342:C:C5	2.36	0.79
31:y:476:G:C2	31:y:477:G:C5	2.70	0.79
31:y:541:G:C2	31:y:542:G:H1'	2.16	0.79
31:y:558:G:H2'	31:y:559:A:H2	0.71	0.79
31:y:757:U:C2'	31:y:758:G:H1'	2.10	0.79
31:y:842:C:H5''	31:y:848:C:N4	1.97	0.79
31:y:1100:C:O5'	31:y:1100:C:H6	1.66	0.79
32:z:1:G:N3	32:z:1:G:C2'	2.45	0.79
38:f:36:ASP:CG	38:f:40:ARG:HB3	2.07	0.79
41:i:119:LEU:HB2	41:i:124:ALA:HB2	1.64	0.79
48:p:63:ARG:HB2	48:p:63:ARG:HH11	1.45	0.79
51:s:41:LYS:HD3	51:s:42:ARG:N	1.97	0.79
51:s:61:LYS:CA	51:s:64:ARG:HD2	2.13	0.79
1:w:299:A:N1	1:w:322:A:H2'	1.97	0.79
1:w:1195:G:C2	1:w:1196:C:C6	2.70	0.79
1:w:1268:A:C8	1:w:1269:A:C8	2.71	0.79
1:w:1403:C:H4'	1:w:1471:A:N9	1.98	0.79
1:w:1557:C:H3'	1:w:1558:A:H5''	1.63	0.79
1:w:1646:C:O2	1:w:1646:C:H2'	1.81	0.79
1:w:1651:G:N2	1:w:2007:C:C4	2.51	0.79
1:w:1678:G:H8	1:w:1678:G:O5'	1.66	0.79
1:w:1796:U:C3'	4:B:256:GLY:H	1.96	0.79
1:w:1851:U:H5''	33:0:4:G:H5'	1.65	0.79
1:w:1902:C:H4'	4:B:243:GLY:C	2.07	0.79
1:w:2354:G:H1'	23:U:36:ILE:CD1	2.12	0.79
1:w:2514:U:H4'	5:C:151:TYR:OH	1.83	0.79
1:w:2879:C:N4	1:w:2883:A:C6	2.51	0.79
4:B:31:LYS:HB3	4:B:104:TYR:HE1	1.46	0.79
5:C:4:ILE:CD1	5:C:29:GLY:H	1.96	0.79
5:C:25:VAL:O	5:C:26:ILE:HD13	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:78:LEU:C	5:C:79:ARG:NE	2.41	0.79
6:D:65:THR:O	6:D:67:ARG:N	2.15	0.79
6:D:98:LYS:HD2	6:D:101:ARG:NH2	1.98	0.79
6:D:183:ARG:CZ	12:J:7:ARG:HB3	2.12	0.79
8:F:7:LEU:HB3	8:F:50:VAL:O	1.83	0.79
10:H:80:ALA:C	10:H:83:ILE:HG12	2.08	0.79
14:L:31:HIS:CG	14:L:34:ILE:HD11	2.18	0.79
17:O:14:HIS:CD2	17:O:32:PHE:HB2	2.18	0.79
17:O:106:PHE:HA	17:O:109:LEU:HG	1.65	0.79
21:S:26:LYS:N	21:S:37:VAL:HG12	1.98	0.79
21:S:45:VAL:HA	21:S:58:GLY:H	1.48	0.79
22:T:17:ALA:HA	22:T:20:ARG:CZ	2.12	0.79
22:T:166:SER:CB	22:T:169:GLU:HB2	2.12	0.79
23:U:15:ASP:OD1	23:U:20:ARG:HB3	1.82	0.79
23:U:52:GLY:HA3	23:U:62:LEU:HB2	1.65	0.79
24:V:26:ARG:O	33:O:74:C:OP1	2.00	0.79
29:a:14:VAL:HG22	29:a:24:ALA:CB	2.12	0.79
31:y:68:G:C2	31:y:101:A:H2	2.01	0.79
31:y:272:C:C2	31:y:273:A:C8	2.70	0.79
31:y:427:U:O4	31:y:428:G:O6	2.01	0.79
31:y:1398:A:OP2	31:y:1401:G:H4'	1.83	0.79
31:y:1419:G:O2'	31:y:1420:C:H5'	1.83	0.79
31:y:1489:G:H2'	31:y:1490:C:C5	2.17	0.79
37:e:12:CYS:SG	37:e:21:LEU:HG	2.23	0.79
39:g:23:LYS:HB2	39:g:23:LYS:NZ	1.98	0.79
46:n:22:ILE:HG22	46:n:23:TYR:H	1.48	0.79
47:o:29:ARG:CB	47:o:40:CYS:CB	2.42	0.79
1:w:142:G:H1'	20:R:38:GLU:OE1	1.83	0.78
1:w:636:G:O5'	1:w:636:G:H8	1.66	0.78
1:w:722:A:OP2	1:w:722:A:C8	2.36	0.78
1:w:961:C:H41	1:w:2456:C:C5'	1.93	0.78
1:w:1519:G:C2	1:w:1520:U:H1'	2.17	0.78
1:w:2082:A:N6	1:w:2237:G:H1'	1.98	0.78
1:w:2563:U:H5''	11:I:27:GLY:O	1.83	0.78
1:w:2734:A:H62	1:w:2770:G:H21	1.29	0.78
2:x:82:G:C4'	26:X:49:LYS:NZ	2.44	0.78
4:B:25:THR:HB	4:B:82:ILE:C	2.08	0.78
4:B:57:GLY:N	4:B:216:GLY:CA	2.46	0.78
4:B:115:GLN:HE22	4:B:127:VAL:HB	1.46	0.78
5:C:4:ILE:CG1	5:C:5:LEU:N	2.43	0.78
5:C:31:CYS:O	5:C:91:VAL:HG23	1.82	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:183:LEU:HD12	5:C:183:LEU:O	1.83	0.78
6:D:190:ASP:O	6:D:194:TRP:CB	2.32	0.78
7:E:137:GLU:C	7:E:138:GLN:HG3	2.08	0.78
9:G:97:ILE:HD11	9:G:111:PRO:HG3	1.63	0.78
11:I:62:VAL:HG12	11:I:63:VAL:N	1.97	0.78
12:J:137:LYS:O	12:J:138:LEU:HD12	1.83	0.78
13:K:119:ARG:HD2	13:K:119:ARG:N	1.97	0.78
16:N:49:VAL:HA	16:N:63:VAL:HG12	1.66	0.78
17:O:83:LEU:HD23	17:O:84:LYS:NZ	1.98	0.78
19:Q:72:LYS:HB2	19:Q:106:ILE:O	1.81	0.78
24:V:33:LYS:HD3	24:V:33:LYS:H	1.46	0.78
24:V:50:ARG:HG2	24:V:51:VAL:N	1.95	0.78
24:V:88:LYS:HG3	24:V:89:GLU:N	1.98	0.78
25:W:47:ASN:C	25:W:51:ARG:HH11	1.90	0.78
27:Y:40:LYS:HD2	27:Y:51:TYR:CE1	2.17	0.78
31:y:228:A:H3'	31:y:229:U:H5	1.47	0.78
31:y:412:A:O2'	31:y:413:G:C8	2.36	0.78
31:y:796:C:C2'	31:y:797:C:H5'	2.13	0.78
31:y:898:G:C1'	31:y:901:A:H61	1.95	0.78
31:y:1053:G:H4'	31:y:1054:C:H3'	1.62	0.78
31:y:1501:C:OP1	31:y:1502:A:OP2	2.01	0.78
33:0:56:C:C6	33:0:56:C:O5'	2.35	0.78
37:e:76:ARG:CZ	37:e:79:PHE:HB3	2.13	0.78
38:f:13:ILE:HG12	38:f:14:ARG:N	1.97	0.78
39:g:11:ASN:HD21	39:g:13:ASN:CG	1.91	0.78
39:g:94:GLN:NE2	51:s:33:ASP:HA	1.98	0.78
52:t:21:GLU:O	52:t:25:LYS:CD	2.31	0.78
1:w:20:C:C2	1:w:21:A:N7	2.52	0.78
1:w:107:C:H2'	1:w:348:G:H22	1.45	0.78
1:w:173:G:H3'	1:w:174:C:H6	1.47	0.78
1:w:328:U:O5'	1:w:328:U:H6	1.66	0.78
1:w:668:G:H2'	1:w:670:A:C6	2.19	0.78
1:w:674:G:C2'	1:w:675:A:H5'	2.12	0.78
1:w:836:G:H2'	1:w:837:C:C6	2.18	0.78
1:w:947:G:C4	1:w:948:G:N7	2.51	0.78
1:w:1201:C:C4'	6:D:40:ARG:HH22	1.96	0.78
1:w:1317:A:H2'	1:w:1318:C:C5	2.18	0.78
1:w:1401:G:H2'	1:w:1402:C:C5	2.17	0.78
1:w:144(B):A:H5''	1:w:1445:C:OP2	1.83	0.78
1:w:2009:G:H5'	19:Q:41:LYS:NZ	1.98	0.78
1:w:2085:C:H5''	4:B:263:ARG:NH1	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2114:A:C2	1:w:2168:G:H4'	2.18	0.78
1:w:2472:G:H5''	1:w:2473:U:H5''	1.66	0.78
1:w:2514:U:H2'	1:w:2515:C:C6	2.17	0.78
1:w:2626:C:H2'	1:w:2627:G:H8	1.46	0.78
1:w:2671:A:O2'	1:w:2672:G:H5'	1.83	0.78
3:A:57:GLN:HG2	3:A:202:PRO:HB3	1.66	0.78
7:E:46:ALA:N	7:E:84:LYS:HD2	1.98	0.78
7:E:166:ASP:HA	7:E:169:ALA:HB3	1.66	0.78
8:F:19:VAL:HG22	8:F:24:VAL:CG2	2.12	0.78
8:F:19:VAL:CG2	8:F:24:VAL:HG22	2.12	0.78
9:G:47:LEU:O	9:G:51:ILE:HG13	1.82	0.78
10:H:69:VAL:HG13	10:H:71:MET:CE	2.12	0.78
11:I:77:ILE:HD11	16:N:72:VAL:HA	1.64	0.78
11:I:104:ARG:HH11	11:I:104:ARG:CB	1.92	0.78
14:L:40:LYS:O	14:L:44:LEU:HG	1.84	0.78
14:L:46:GLY:HA2	14:L:49:ASP:CG	2.07	0.78
15:M:71:ARG:HB3	15:M:108:GLY:N	1.98	0.78
16:N:3:ARG:HB2	16:N:7:ILE:CD1	2.12	0.78
22:T:128:VAL:HG23	22:T:160:GLY:O	1.83	0.78
27:Y:54:GLY:O	27:Y:55:ARG:HB2	1.82	0.78
28:Z:13:ALA:O	28:Z:20:ALA:CB	2.30	0.78
29:a:44:LYS:CD	29:a:45:GLY:H	1.97	0.78
31:y:230:G:C5'	49:q:31:LYS:NZ	2.45	0.78
31:y:253:U:H5''	31:y:276:G:H1'	1.64	0.78
31:y:448:A:C2	31:y:449:C:C4	2.71	0.78
31:y:691:G:H5''	31:y:798:G:OP1	1.82	0.78
31:y:713:G:H2'	31:y:714:G:C8	2.17	0.78
31:y:777:A:N3	31:y:777:A:H2'	1.96	0.78
31:y:868:C:H2'	31:y:869:G:H5'	1.64	0.78
31:y:1163:C:O2	31:y:1173:G:N2	2.15	0.78
31:y:1176:A:H2'	31:y:1177:G:O4'	1.83	0.78
31:y:1179:A:H2'	31:y:1180:A:C8	2.18	0.78
31:y:1306:A:H3'	31:y:1307:U:C6	2.18	0.78
31:y:1349:A:H5''	42:j:121:ARG:CG	2.13	0.78
31:y:1436:U:C2'	31:y:1437:C:H6	1.96	0.78
35:c:107:THR:O	35:c:110:GLN:HG2	1.82	0.78
35:c:176:GLU:O	35:c:180:LEU:HG	1.83	0.78
43:k:67:THR:HG22	43:k:68:HIS:N	1.99	0.78
50:r:61:GLU:HA	50:r:71:PHE:CE1	2.18	0.78
53:u:75:ASN:HD22	53:u:79:ARG:HH22	1.28	0.78
1:w:35:G:C5	1:w:36:G:N7	2.51	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:86:C:H2'	1:w:87:C:H5'	1.64	0.78
1:w:92:G:H2'	1:w:93:C:C5	2.17	0.78
1:w:270(D):C:C4	1:w:270(E):C:H1'	2.17	0.78
1:w:811:U:C6	1:w:1251:C:C1'	2.65	0.78
1:w:917:A:H2	2:x:79:C:O2	1.66	0.78
1:w:937:U:H3'	1:w:938:G:C8	2.18	0.78
1:w:947:G:H2'	1:w:948:G:H8	1.48	0.78
1:w:1344:G:C2	1:w:1385:G:N7	2.52	0.78
1:w:2303:G:H4'	7:E:125:PHE:O	1.82	0.78
1:w:2472:G:N2	1:w:2477:C:C5'	2.33	0.78
1:w:2838:G:O2'	14:L:45:ARG:CZ	2.31	0.78
7:E:173:LEU:O	7:E:178:PHE:CD1	2.36	0.78
8:F:88:LEU:CB	8:F:129:THR:O	2.31	0.78
8:F:156:ALA:CB	8:F:169:VAL:HG23	2.12	0.78
9:G:88:ILE:CG1	9:G:89:TYR:HD1	1.96	0.78
9:G:95:LYS:H	9:G:95:LYS:CE	1.94	0.78
13:K:26:TYR:CD2	13:K:27:VAL:HG22	2.18	0.78
16:N:50:ILE:H	16:N:63:VAL:HA	1.48	0.78
22:T:15:PRO:O	22:T:19:ARG:HD2	1.80	0.78
31:y:407:G:H5'	37:e:118:ARG:HD3	1.65	0.78
31:y:509:A:O2'	31:y:510:A:C5'	2.28	0.78
31:y:833:U:H2'	31:y:833:U:O2	1.83	0.78
31:y:959:A:N6	52:t:79:THR:CG2	2.36	0.78
31:y:975:A:H5''	31:y:976:G:C5'	2.13	0.78
31:y:1073:U:H2'	31:y:1074:G:O5'	1.82	0.78
31:y:1221:G:H5''	52:t:36:ARG:NH2	1.97	0.78
31:y:1241:G:H2'	31:y:1242:C:H5'	1.66	0.78
31:y:1244:C:C2'	31:y:1245:A:C8	2.66	0.78
31:y:1308:U:P	46:n:99:ARG:HD3	2.22	0.78
31:y:1345:U:O2	31:y:1376:U:O2	2.01	0.78
31:y:1441:G:H1'	31:y:1461:G:N1	1.99	0.78
31:y:1522:U:N3	31:y:1523:G:N7	2.32	0.78
36:d:12:LEU:HD12	47:o:57:ARG:HG3	1.65	0.78
37:e:26:CYS:HA	37:e:31:CYS:HB2	1.65	0.78
37:e:31:CYS:CB	37:e:34:GLU:HB3	2.13	0.78
37:e:76:ARG:NH1	37:e:80:GLU:H	1.81	0.78
47:o:29:ARG:O	47:o:33:VAL:HG12	1.84	0.78
50:r:21:VAL:O	50:r:41:LYS:CG	2.30	0.78
1:w:265:A:H1'	1:w:266:G:H4'	1.66	0.78
1:w:341:G:C2'	1:w:342:G:C8	2.65	0.78
1:w:374:A:H3'	1:w:375:C:C5	2.18	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:465:G:N2	1:w:683:C:O2	2.16	0.78
1:w:533:G:O2'	17:O:42:ALA:CB	2.31	0.78
1:w:602:G:H4'	1:w:605:C:H5'	1.64	0.78
1:w:634:C:C2'	1:w:635:C:C6	2.67	0.78
1:w:936:C:H2'	1:w:937:U:H6	1.47	0.78
1:w:1123:C:O2'	1:w:1124:C:H5'	1.84	0.78
1:w:1253:A:O2'	1:w:1254:A:OP1	2.01	0.78
1:w:1471:A:N1	1:w:1472:A:C8	2.52	0.78
1:w:1742:C:N4	1:w:1743:G:C6	2.51	0.78
1:w:1746:G:H3'	1:w:1747:G:C4'	2.13	0.78
1:w:2134:A:C4	1:w:2158:A:C2	2.72	0.78
1:w:2567:G:C5	1:w:2568:C:C5	2.71	0.78
1:w:2653:U:O2	1:w:2653:U:H2'	1.82	0.78
1:w:2784:C:C4	1:w:2785:C:C5	2.71	0.78
1:w:2846:G:H2'	1:w:2847:U:C6	2.18	0.78
2:x:48:A:C5'	15:M:95:HIS:ND1	2.46	0.78
4:B:2:ALA:HA	4:B:200:ASP:HB3	0.86	0.78
4:B:65:ILE:CD1	4:B:105:ILE:HG13	2.14	0.78
6:D:155:ASN:CG	6:D:157:LEU:HD12	2.09	0.78
6:D:165:LEU:HB2	6:D:168:VAL:CG2	2.14	0.78
7:E:45:GLU:HA	7:E:84:LYS:HE3	1.63	0.78
9:G:7:GLU:CG	9:G:8:PRO:CD	2.56	0.78
10:H:45:THR:O	10:H:49:LEU:HD13	1.84	0.78
12:J:97:PRO:CD	12:J:126:VAL:HB	2.14	0.78
13:K:46:GLN:HE21	13:K:125:LEU:CD2	1.95	0.78
13:K:111:GLU:CB	13:K:115:MET:HG2	2.13	0.78
20:R:75:ASP:O	20:R:76:ARG:HD3	1.83	0.78
31:y:222:U:H2'	31:y:223:U:C4'	2.13	0.78
31:y:321:A:O2'	31:y:322:C:H5'	1.84	0.78
31:y:1171:G:H2'	31:y:1172:C:C6	2.18	0.78
31:y:1259:C:C2'	31:y:1283:G:H1'	2.13	0.78
31:y:1280:A:O2'	31:y:1281:U:O5'	2.02	0.78
31:y:1440:C:H2'	31:y:1441:G:C5'	2.13	0.78
31:y:1461:G:H2'	31:y:1462:G:H8	1.46	0.78
36:d:119:ARG:HD2	36:d:119:ARG:C	2.09	0.78
41:i:51:VAL:HG21	41:i:60:ARG:NH2	1.97	0.78
47:o:9:LYS:HD3	47:o:10:ALA:N	1.98	0.78
50:r:39:SER:O	50:r:40:LYS:HB2	1.80	0.78
1:w:88:G:O2'	1:w:89:G:H5'	1.82	0.78
1:w:172:C:C4	1:w:173:G:N7	2.50	0.78
1:w:271(D):U:H2'	1:w:271:G:C5'	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:478:A:H61	1:w:502:A:H61	1.30	0.78
1:w:592:G:H2'	1:w:592:G:N3	1.96	0.78
1:w:728:G:C5'	1:w:729:G:OP2	2.32	0.78
1:w:833:U:H1'	12:J:53:GLY:O	1.83	0.78
1:w:915:C:O2'	2:x:100:G:H4'	1.84	0.78
1:w:957:A:N1	1:w:2458:G:C4'	2.47	0.78
1:w:957:A:N1	1:w:2458:G:H4'	1.99	0.78
1:w:971:C:O2'	1:w:983:A:N3	2.15	0.78
1:w:1152:C:H1'	17:O:77:SER:CA	2.13	0.78
1:w:1319:G:C2	1:w:1334:G:C6	2.71	0.78
1:w:1577:C:O2'	1:w:1578:U:O5'	2.01	0.78
1:w:1668:A:N6	1:w:1993:U:C4	2.51	0.78
1:w:1799:G:O6	4:B:179:SER:CB	2.31	0.78
1:w:1816:G:P	4:B:39:LYS:HD2	2.24	0.78
1:w:2052:G:H21	5:C:149:ARG:HA	1.48	0.78
1:w:2124:G:O2'	3:A:43:GLU:CG	2.32	0.78
1:w:2133:G:OP2	1:w:2133:G:C8	2.36	0.78
1:w:2562:U:H2'	1:w:2563:U:H5'	1.63	0.78
1:w:2571:C:H2'	5:C:143:ASN:ND2	1.98	0.78
4:B:183:ARG:NH2	4:B:266:SER:HB3	1.99	0.78
6:D:148:SER:HB2	6:D:184:THR:HA	1.66	0.78
7:E:124:SER:O	7:E:131:TYR:CE2	2.36	0.78
8:F:41:MET:HG3	8:F:54:ARG:HB3	1.64	0.78
9:G:22:LYS:HB2	9:G:23:PRO:HD2	1.63	0.78
14:L:13:HIS:CD2	14:L:16:HIS:H	2.01	0.78
14:L:47:PHE:C	14:L:47:PHE:HD1	1.89	0.78
21:S:16:ALA:HB2	21:S:20:TYR:HA	1.66	0.78
31:y:185:A:C2	31:y:192:U:N3	2.49	0.78
31:y:346:G:H3'	31:y:347:G:H5''	1.66	0.78
31:y:373:A:H2'	31:y:374:A:H5'	1.66	0.78
31:y:563:A:O2'	31:y:564:C:OP2	2.01	0.78
31:y:687:A:H5''	44:l:42:TRP:HZ2	1.43	0.78
31:y:689:C:O5'	31:y:689:C:C6	2.35	0.78
31:y:760:G:C2	50:r:105:ALA:HA	2.18	0.78
31:y:826:C:H4'	41:i:12:ARG:HD3	1.64	0.78
31:y:976:G:C8	31:y:1358:U:H2'	2.17	0.78
31:y:1087:G:H2'	31:y:1088:G:H8	1.03	0.78
31:y:1157:A:H4'	31:y:1158:C:C5'	2.11	0.78
31:y:1238:A:N7	31:y:1301:U:C2	2.51	0.78
31:y:1305:G:C6	31:y:1331:G:N3	2.51	0.78
31:y:1382:C:O2'	31:y:1383:C:H5'	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:182:ILE:HG12	36:d:203:PHE:CA	2.13	0.78
37:e:21:LEU:O	37:e:26:CYS:SG	2.42	0.78
38:f:46:GLY:HA3	38:f:58:ALA:CA	2.13	0.78
44:l:34:ASP:OD1	44:l:38:ASN:HB2	1.83	0.78
46:n:62:ASN:O	46:n:63:THR:HG22	1.83	0.78
50:r:10:VAL:HA	50:r:21:VAL:HG22	1.63	0.78
1:w:7:G:H3'	1:w:8:A:H8	1.47	0.78
1:w:301:G:OP1	1:w:301:G:H4'	1.84	0.78
1:w:331:A:H1'	1:w:1209:G:C2	2.19	0.78
1:w:957:A:C5'	13:K:74:TYR:OH	2.30	0.78
1:w:1028:A:H2'	1:w:1029:A:C8	2.19	0.78
1:w:1131:G:N2	1:w:1132:A:C6	2.51	0.78
1:w:1306:C:H2'	1:w:1307:A:H8	1.49	0.78
1:w:1816:G:H5''	4:B:39:LYS:HZ3	1.49	0.78
1:w:2051:A:H5''	1:w:2614:A:N6	1.99	0.78
1:w:2090:G:H2'	1:w:2091:U:H5'	1.64	0.78
1:w:2574:G:OP2	1:w:2575:C:OP2	2.01	0.78
1:w:2653:U:H3	1:w:2667:C:H42	1.31	0.78
1:w:2785:C:C6	1:w:2785:C:C5'	2.62	0.78
4:B:30:GLU:HG3	4:B:63:ARG:HH12	1.48	0.78
4:B:57:GLY:O	4:B:59:LYS:N	2.15	0.78
6:D:8:SER:HB2	6:D:9:PRO:HD3	1.65	0.78
6:D:78:PHE:HD2	6:D:78:PHE:H	1.28	0.78
8:F:114:VAL:CG2	8:F:115:VAL:H	1.97	0.78
12:J:92:GLU:CD	12:J:123:LEU:HB3	2.09	0.78
13:K:66:ILE:HA	13:K:104:PHE:CD2	2.18	0.78
13:K:81:VAL:O	13:K:82:ARG:HB3	1.82	0.78
17:O:95:LEU:O	17:O:97:ASP:N	2.16	0.78
18:P:24:LYS:HA	18:P:94:LEU:CD1	2.14	0.78
22:T:24:LEU:HD21	22:T:41:LEU:HA	1.64	0.78
24:V:11:ARG:CG	24:V:61:ARG:HB3	2.09	0.78
31:y:147:G:H2'	31:y:148:G:C8	2.18	0.78
31:y:157:G:OP1	31:y:157:G:H4'	1.84	0.78
31:y:195:A:N3	31:y:222:U:O2'	2.17	0.78
31:y:279:A:OP1	31:y:279:A:H4'	1.81	0.78
31:y:290:C:N3	31:y:291:C:C5	2.50	0.78
31:y:955:U:H2'	31:y:956:U:C4'	2.13	0.78
31:y:1016:A:H2'	31:y:1017:G:H8	1.47	0.78
31:y:1442:G:H2'	31:y:1446:A:H2	1.46	0.78
33:O:48:C:H6	33:O:48:C:H5''	1.47	0.78
36:d:163:ALA:O	36:d:164:ARG:C	2.27	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:g:60:PHE:C	39:g:61:LEU:HD23	2.08	0.78
40:h:85:TYR:HD2	40:h:85:TYR:N	1.81	0.78
40:h:109:ASN:C	40:h:119:ARG:HH21	1.91	0.78
41:i:14:ARG:O	41:i:18:ARG:HB2	1.84	0.78
44:l:108:ILE:HD12	44:l:108:ILE:H	1.47	0.78
46:n:8:GLU:C	46:n:10:PRO:HD2	2.08	0.78
46:n:76:ALA:O	46:n:80:ARG:CB	2.30	0.78
48:p:43:LEU:HD21	48:p:53:HIS:CE1	2.18	0.78
53:u:33:ILE:CG1	53:u:34:LYS:H	1.94	0.78
1:w:220:G:O2'	1:w:221:A:C8	2.35	0.78
1:w:637:A:H61	1:w:654:U:H3	1.32	0.78
1:w:668:G:N2	1:w:670:A:C2	2.52	0.78
1:w:1000:A:C6	1:w:1001:A:N7	2.52	0.78
1:w:1791:A:C8	1:w:1791:A:P	2.76	0.78
1:w:1912:A:O2'	1:w:1913:A:N7	2.17	0.78
1:w:2057:A:N6	1:w:2058:A:C2	2.51	0.78
1:w:2089:U:C2'	1:w:2090:G:C8	2.65	0.78
1:w:2261:C:H42	23:U:11:LYS:HB2	1.47	0.78
1:w:2286:A:H1'	1:w:2287:A:C5	2.18	0.78
1:w:2359:C:C4	12:J:55:ARG:NH1	2.51	0.78
1:w:2631:G:H4'	1:w:2892:A:C4'	2.11	0.78
3:A:164:PHE:HZ	3:A:197:LEU:CA	1.95	0.78
4:B:75:ILE:N	4:B:76:PRO:HD2	1.97	0.78
4:B:92:ILE:HD12	4:B:92:ILE:O	1.82	0.78
4:B:172:TYR:CB	4:B:184:LYS:HD3	2.14	0.78
6:D:59:ILE:HD12	6:D:59:ILE:N	1.99	0.78
9:G:24:GLY:H	9:G:27:ARG:NE	1.80	0.78
9:G:89:TYR:H	9:G:89:TYR:HD1	1.31	0.78
9:G:124:GLY:C	9:G:144:VAL:H	1.91	0.78
11:I:19:ILE:CG2	11:I:43:VAL:HA	2.14	0.78
11:I:90:GLN:OE1	11:I:92:GLU:HB3	1.84	0.78
15:M:94:TYR:HE2	15:M:99:LYS:HA	1.47	0.78
18:P:37:VAL:HB	18:P:55:ALA:CB	2.14	0.78
18:P:84:LYS:HA	18:P:84:LYS:CE	2.10	0.78
19:Q:33:ARG:O	19:Q:37:ARG:HB2	1.84	0.78
24:V:26:ARG:CG	24:V:27:GLU:H	1.85	0.78
26:X:8:LEU:C	26:X:53:LEU:O	2.27	0.78
31:y:17:U:C2'	31:y:1079:G:H21	1.97	0.78
31:y:230:G:H1'	49:q:25:ARG:NE	1.98	0.78
31:y:363:A:H5'	45:m:32:ARG:CA	2.14	0.78
31:y:818:G:O2'	31:y:819:A:P	2.42	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:825:G:N2	31:y:875:C:O2	2.16	0.78
31:y:826:C:C6	31:y:826:C:O5'	2.35	0.78
31:y:920:U:N3	31:y:921:U:C5	2.52	0.78
31:y:1003:G:C4	31:y:1004:A:H1'	2.19	0.78
31:y:1074:G:N3	31:y:1101:A:C2	2.51	0.78
31:y:1199:U:H4'	43:k:54:PHE:HZ	1.49	0.78
31:y:1290:G:C2'	31:y:1291:G:C5'	2.49	0.78
31:y:1406:U:C4	31:y:1407:5MC:HM51	2.18	0.78
31:y:1443:G:C8	31:y:1447:G:OP1	2.36	0.78
36:d:47:LEU:O	36:d:48:TYR:C	2.27	0.78
37:e:8:VAL:C	37:e:12:CYS:SG	2.67	0.78
37:e:101:LEU:O	37:e:105:VAL:HG23	1.82	0.78
40:h:84:ASN:H	40:h:84:ASN:HD22	1.29	0.78
41:i:14:ARG:HB2	41:i:18:ARG:NH2	1.99	0.78
44:l:82:VAL:HG22	44:l:105:VAL:O	1.84	0.78
1:w:457:A:C5'	28:Z:40:TRP:CZ2	2.67	0.78
1:w:464:U:H2'	1:w:465:G:C8	2.19	0.78
1:w:518:G:N2	19:Q:75:TYR:CE2	2.52	0.78
1:w:540:G:H2'	1:w:541:C:H6	1.47	0.78
1:w:874:G:H2'	1:w:875:G:C8	2.18	0.78
1:w:882:G:H2'	1:w:883:G:H5''	1.65	0.78
1:w:1301:A:H2	1:w:1641:A:N6	1.82	0.78
1:w:1378:A:O2'	1:w:1379:A:H5''	1.83	0.78
1:w:1453:A:N1	1:w:2702:U:OP1	2.17	0.78
1:w:1857:G:H2'	1:w:1858:G:C1'	2.12	0.78
1:w:1863:G:O2'	1:w:1864:U:H4'	1.84	0.78
1:w:1945:G:C8	1:w:1945:G:P	2.77	0.78
1:w:1975:G:C6	1:w:1976:U:C4	2.72	0.78
1:w:2088:G:N1	1:w:2232:U:C4	2.52	0.78
1:w:2102:U:H2'	1:w:2103:C:C6	2.19	0.78
1:w:2359:C:O5'	1:w:2359:C:C6	2.36	0.78
1:w:2788:C:H6	1:w:2788:C:O5'	1.66	0.78
2:x:73:A:N7	2:x:103:U:O2	2.16	0.78
2:x:77:U:C2	2:x:78:A:C8	2.71	0.78
2:x:100:G:O5'	2:x:100:G:C8	2.37	0.78
5:C:4:ILE:CD1	5:C:91:VAL:CG1	2.62	0.78
5:C:44:TYR:HE2	5:C:46:ALA:HB2	1.48	0.78
6:D:32:VAL:O	6:D:36:LEU:HD23	1.83	0.78
8:F:110:SER:O	8:F:113:VAL:HG23	1.84	0.78
10:H:151:HIS:CD2	10:H:154:GLN:HB2	2.19	0.78
13:K:98:LYS:HB2	13:K:101:ARG:HG2	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:74:ALA:CB	15:M:109:GLY:HA3	2.13	0.78
19:Q:7:ALA:HB3	19:Q:103:ILE:O	1.83	0.78
22:T:3:TYR:O	22:T:57:ILE:CD1	2.30	0.78
26:X:28:LEU:HD13	26:X:35:ARG:HG2	1.65	0.78
31:y:36:C:O2	31:y:37:U:C4	2.37	0.78
31:y:114:U:H2'	31:y:115:G:H5''	1.66	0.78
31:y:190:G:O2'	31:y:191(A):G:OP1	1.99	0.78
31:y:258:G:O6	31:y:259:G:O6	2.02	0.78
31:y:324:G:H22	31:y:327:A:C5'	1.97	0.78
31:y:418:C:C4	31:y:426:G:N2	2.52	0.78
31:y:489:C:H2'	31:y:490:G:H8	1.49	0.78
31:y:817:C:C4'	31:y:819:A:H5'	2.13	0.78
31:y:1165:C:O5'	31:y:1165:C:H6	1.67	0.78
31:y:1213:A:H2'	31:y:1215:G:N7	1.98	0.78
32:z:4:C:H2'	32:z:5:G:C8	2.17	0.78
35:c:200:ILE:C	35:c:201:ILE:HD12	2.08	0.78
36:d:71:ALA:HA	36:d:106:VAL:HB	1.66	0.78
37:e:96:LEU:CD1	37:e:97:LEU:HD23	2.14	0.78
40:h:118:VAL:O	40:h:121:ALA:N	2.16	0.78
47:o:24:CYS:HB2	47:o:40:CYS:H	1.48	0.78
48:p:32:LEU:HA	48:p:35:ARG:HB3	1.64	0.78
1:w:26:G:H21	1:w:514:A:H62	1.29	0.78
1:w:76:C:H42	1:w:110:G:H1	1.31	0.78
1:w:346:A:O2'	1:w:347:A:C8	2.36	0.78
1:w:759:G:H2'	1:w:760:G:H8	1.47	0.78
1:w:786:C:O2'	1:w:787:U:H5'	1.83	0.78
1:w:982:C:O2'	1:w:2029:G:H4'	1.82	0.78
1:w:999:U:H3	1:w:1155:A:H62	0.82	0.78
1:w:1041:C:N3	1:w:1115:G:N2	2.31	0.78
1:w:1041:C:C2	1:w:1042:G:C8	2.72	0.78
1:w:1133:U:O2	1:w:1137:G:H5'	1.84	0.78
1:w:1264:G:O6	1:w:2014:A:OP2	2.00	0.78
1:w:1515:C:C2'	1:w:1516:U:H5''	2.14	0.78
1:w:1676:A:C2	1:w:1677:A:C1'	2.64	0.78
1:w:2195:C:H2'	1:w:2196:C:C6	2.15	0.78
1:w:2240:C:C4	1:w:2241:A:C8	2.72	0.78
1:w:2373:G:C4	1:w:2374:C:C5	2.71	0.78
1:w:2900:A:C6	1:w:2901:C:C5	2.72	0.78
2:x:46:A:C2'	2:x:47:C:H5'	2.13	0.78
4:B:231:HIS:C	4:B:233:HIS:H	1.91	0.78
4:B:233:HIS:HD2	4:B:234:GLY:H	1.32	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:32:PRO:HB3	5:C:69:LYS:HD2	1.62	0.78
5:C:34:VAL:O	5:C:35:GLN:HB2	1.83	0.78
6:D:30:GLU:HA	6:D:33:ARG:CZ	2.14	0.78
8:F:138:LYS:CA	8:F:141:VAL:HB	2.13	0.78
10:H:39:ILE:HG13	10:H:40:ASP:N	1.98	0.78
10:H:49:LEU:O	10:H:53:ILE:HG13	1.84	0.78
10:H:118:PRO:O	10:H:122:LEU:HD13	1.83	0.78
14:L:47:PHE:CE1	14:L:48:VAL:HG12	2.19	0.78
20:R:57:LEU:HG	20:R:58:HIS:N	1.95	0.78
31:y:36:C:C2	31:y:37:U:C4	2.71	0.78
31:y:391:G:H2'	31:y:392:G:H5''	1.65	0.78
31:y:524:G:H2'	31:y:525:C:C6	2.18	0.78
31:y:872:A:HO2'	31:y:873:A:H3'	1.45	0.78
31:y:1324:A:H5''	31:y:136(B):C:C5'	2.14	0.78
33:0:18:G:C2	33:0:57:G:C2	2.72	0.78
35:c:61:LEU:CD1	35:c:64:ARG:HH21	1.92	0.78
36:d:170:GLN:HG3	36:d:171:GLY:N	1.99	0.78
37:e:22:LYS:N	37:e:113:SER:HB2	1.97	0.78
37:e:70:ILE:HG13	37:e:71:SER:N	1.96	0.78
45:m:87:GLY:H	45:m:97:TYR:CA	1.96	0.78
45:m:102:GLY:C	45:m:103:VAL:HG23	2.09	0.78
45:m:123:LYS:HB3	45:m:126:GLU:OE1	1.84	0.78
1:w:383:U:H5''	1:w:384:U:OP2	1.82	0.78
1:w:911:A:OP1	1:w:912:C:C6	2.37	0.78
1:w:1459:G:C2	1:w:1461:G:C5	2.72	0.78
1:w:1696:G:C8	1:w:1696:G:OP2	2.37	0.78
1:w:1789:A:OP1	4:B:222:ARG:N	2.16	0.78
1:w:1812:A:O4'	4:B:46:GLN:HB2	1.83	0.78
1:w:1897:G:H2'	1:w:1898:U:H5'	1.64	0.78
1:w:2439:A:O4'	1:w:2587:A:H5''	1.84	0.78
1:w:2711:A:P	1:w:2712:U:H5'	2.23	0.78
6:D:105:LEU:HD13	6:D:105:LEU:C	2.07	0.78
14:L:56:LYS:CA	14:L:84:ALA:HB1	2.14	0.78
15:M:71:ARG:HB3	15:M:108:GLY:H	1.49	0.78
16:N:70:VAL:CG1	16:N:71:GLY:N	2.47	0.78
17:O:85:LYS:HE3	17:O:85:LYS:CA	2.07	0.78
23:U:50:ASN:CB	23:U:81:VAL:HG11	2.13	0.78
23:U:71:ASP:CB	23:U:77:ARG:HA	2.12	0.78
31:y:232:G:H8	31:y:232:G:O5'	1.66	0.78
31:y:361:G:H2'	31:y:362:G:C8	2.19	0.78
31:y:402:G:O4'	31:y:621:A:C2	2.37	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:406:G:N7	31:y:495:A:C2'	2.47	0.78
31:y:425:G:N2	31:y:426:G:H1'	1.98	0.78
31:y:674:G:N1	31:y:675:A:N6	2.32	0.78
31:y:896:C:H5'	50:r:100:LYS:CD	2.14	0.78
31:y:910:C:C2'	31:y:911:U:H6	1.96	0.78
31:y:1225:A:OP1	52:t:78:ARG:NH1	2.16	0.78
31:y:1269:A:O4'	31:y:1326:C:O4'	2.01	0.78
31:y:1276:G:O5'	31:y:1276:G:H8	1.67	0.78
33:0:50:U:O2'	33:0:51:G:H5'	1.84	0.78
33:0:76:A:OP2	33:0:76:A:H3'	1.84	0.78
35:c:185:ILE:CG2	35:c:199:TYR:HB2	2.14	0.78
36:d:21:ARG:HB3	43:k:92:THR:CG2	2.13	0.78
41:i:3:THR:CG2	41:i:89:PRO:HG3	2.14	0.78
41:i:109:ILE:CD1	41:i:137:VAL:HG21	2.13	0.78
45:m:59:LEU:CB	45:m:63:TYR:HB2	2.14	0.78
1:w:594:U:H2'	1:w:595:C:C5	2.18	0.77
1:w:641:C:O2'	1:w:642:G:H5'	1.84	0.77
1:w:811:U:H3	1:w:1250:G:H5'	1.49	0.77
1:w:1124:C:H1'	30:b:36:GLN:HE21	1.49	0.77
1:w:1531:C:H3'	1:w:1531:C:C6	2.19	0.77
1:w:2285:C:H5''	1:w:2286:A:OP2	1.85	0.77
1:w:2574:G:H1'	5:C:143:ASN:HD21	1.46	0.77
1:w:2602:A:C6	32:z:76:A:H5''	2.19	0.77
1:w:2785:C:C3'	1:w:2786:U:H6	1.95	0.77
1:w:2822:G:H2'	1:w:2823:A:H5''	0.82	0.77
4:B:65:ILE:HD13	4:B:105:ILE:HA	1.65	0.77
8:F:10:PRO:C	8:F:12:PRO:HD2	2.09	0.77
8:F:38:SER:HB2	8:F:39:PRO:HD2	1.66	0.77
15:M:23:ARG:HB2	15:M:24:LEU:HD22	1.66	0.77
20:R:20:GLY:HA3	20:R:25:LYS:HA	1.64	0.77
21:S:54:LYS:CD	21:S:55:TYR:H	1.97	0.77
23:U:31:VAL:HG23	23:U:61:ALA:HA	1.64	0.77
24:V:68:PRO:O	24:V:70:VAL:N	2.17	0.77
24:V:87:PRO:O	24:V:88:LYS:C	2.27	0.77
31:y:242:C:C2'	31:y:243:A:C5'	2.51	0.77
31:y:520:A:OP1	45:m:51:LEU:O	2.02	0.77
31:y:1300:G:HO2'	31:y:1301:U:H5	0.82	0.77
35:c:185:ILE:HA	35:c:199:TYR:O	1.83	0.77
35:c:211:ILE:O	35:c:214:ILE:CG1	2.32	0.77
36:d:40:ARG:HB3	36:d:40:ARG:NH1	1.96	0.77
45:m:88:ARG:HG2	45:m:96:ARG:HA	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:o:41:ARG:HA	47:o:44:LEU:CD1	2.13	0.77
48:p:49:ASP:HB3	48:p:53:HIS:NE2	1.99	0.77
1:w:281:G:C2'	1:w:359:A:H61	1.96	0.77
1:w:413:C:O2'	1:w:1863:G:N2	2.17	0.77
1:w:465:G:C4'	28:Z:16:HIS:CE1	2.67	0.77
1:w:534:U:O2'	17:O:45:TYR:O	2.03	0.77
1:w:812:C:OP2	12:J:26:GLY:HA3	1.84	0.77
1:w:1014:U:C4	1:w:1015:G:N7	2.52	0.77
1:w:1422:G:C2	1:w:1423:G:C4	2.72	0.77
1:w:1589:C:H2'	1:w:1590:U:H6	1.47	0.77
1:w:1797:C:H2'	1:w:1798:U:O4'	1.83	0.77
1:w:1827:C:H5'	1:w:1971:A:C2'	2.13	0.77
1:w:2136:C:H2'	1:w:2137:C:C6	2.18	0.77
1:w:2456:C:H2'	1:w:2457:U:O4'	1.84	0.77
1:w:2488:A:N1	1:w:2489:G:C2	2.52	0.77
2:x:99:A:H3'	2:x:100:G:N7	1.99	0.77
5:C:55:ASN:CG	5:C:75:VAL:HG22	2.08	0.77
9:G:77:LEU:HD22	9:G:78:THR:H	1.49	0.77
10:H:44:LYS:HB2	10:H:83:ILE:CG2	2.15	0.77
10:H:53:ILE:O	10:H:56:LEU:HB2	1.84	0.77
10:H:79:ASN:N	10:H:147:ALA:HA	1.98	0.77
11:I:67:LYS:O	11:I:68:GLU:HG2	1.84	0.77
13:K:111:GLU:HB2	13:K:115:MET:CG	2.14	0.77
14:L:37:THR:H	14:L:40:LYS:HE3	1.49	0.77
14:L:103:ARG:HG3	19:Q:40:ASN:CG	2.09	0.77
16:N:55:ASN:ND2	16:N:58:ASN:H	1.81	0.77
21:S:42:VAL:HB	21:S:61:ILE:HG22	1.66	0.77
24:V:18:ILE:HD12	24:V:18:ILE:N	2.00	0.77
29:a:32:LEU:CD1	29:a:34:TRP:HE3	1.97	0.77
29:a:62:LEU:N	29:a:63:PRO:HD2	1.99	0.77
31:y:126:G:N2	31:y:235:C:O2	2.16	0.77
31:y:507:C:C2	31:y:508:C:H5	2.01	0.77
31:y:593:G:C6	31:y:594:G:N7	2.52	0.77
31:y:889:A:C6	31:y:907:A:H5''	2.19	0.77
31:y:103(A):A:H2'	31:y:103(B):G:O4'	1.85	0.77
31:y:1306:A:N6	31:y:1331:G:C2	2.53	0.77
31:y:1398:A:H3'	31:y:1398:A:C8	2.18	0.77
31:y:1470:G:H2'	31:y:1471:G:H5'	1.64	0.77
33:0:33:U:O2	33:0:35:A:H3'	1.84	0.77
35:c:23:ARG:NH2	35:c:40:HIS:HE1	1.81	0.77
37:e:94:LEU:CD1	37:e:94:LEU:H	1.96	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:106:TYR:CG	37:e:107:ARG:N	2.51	0.77
40:h:64:GLN:NE2	40:h:68:ASN:CB	2.48	0.77
40:h:88:PRO:HG3	40:h:148:ASN:CB	2.13	0.77
41:i:9:MET:HB2	41:i:13:ILE:CD1	2.12	0.77
41:i:56:LYS:HD2	41:i:56:LYS:N	1.99	0.77
47:o:26:ARG:H	47:o:39:LEU:CD2	1.97	0.77
49:q:52:ASP:OD2	49:q:55:ARG:HG2	1.84	0.77
1:w:784:A:OP1	1:w:2589:A:P	2.43	0.77
1:w:850:C:H5''	26:X:18:ASP:CG	2.10	0.77
1:w:894:C:H2'	1:w:895:U:C5	2.19	0.77
1:w:1233:C:C2	1:w:1234:U:C5	2.72	0.77
1:w:1363:C:H1'	1:w:1809:A:H2	1.47	0.77
1:w:1557:C:C2'	1:w:1558:A:H5''	2.13	0.77
1:w:1675:C:H2'	1:w:1676:A:H5'	1.66	0.77
1:w:1772:G:C2'	1:w:1773:A:H5'	2.12	0.77
1:w:2080:G:N1	1:w:2081:C:N4	2.32	0.77
1:w:2117:A:H5''	1:w:2118:U:H5'	1.67	0.77
1:w:2437:U:H2'	1:w:2438:U:C5	2.18	0.77
1:w:2735:G:H2'	1:w:2736:G:C5'	2.13	0.77
1:w:2842:G:C4	1:w:2843:G:N7	2.52	0.77
7:E:3:LEU:HB3	7:E:5:LEU:CD2	2.15	0.77
8:F:153:LYS:HB3	8:F:154:PRO:HD3	1.65	0.77
11:I:10:VAL:HG23	11:I:10:VAL:O	1.83	0.77
14:L:79:LEU:HD22	14:L:83:ILE:CG1	2.14	0.77
16:N:32:TYR:CD1	16:N:33:LYS:N	2.52	0.77
17:O:99:ALA:CA	17:O:103:PRO:HB3	2.05	0.77
22:T:153:SER:HB3	22:T:167:PRO:O	1.84	0.77
24:V:10:LYS:HD2	24:V:15:ALA:N	2.00	0.77
31:y:510:A:O5'	31:y:510:A:C8	2.34	0.77
31:y:597:G:H3'	31:y:597:G:P	2.23	0.77
31:y:613:C:H2'	31:y:614:A:O4'	1.84	0.77
31:y:1119:C:H2'	31:y:1120:G:H8	1.48	0.77
31:y:1379:G:O2'	31:y:1381:U:H5	1.67	0.77
31:y:1390:U:H2'	31:y:1391:U:C5	2.18	0.77
32:z:61:C:C2'	32:z:62:C:H5'	2.14	0.77
35:c:91:PRO:HG3	35:c:154:LEU:HB2	1.64	0.77
37:e:96:LEU:O	37:e:99:SER:CB	2.32	0.77
37:e:118:ARG:CG	37:e:119:GLN:N	2.46	0.77
37:e:165:MET:SD	37:e:168:ARG:HB2	2.23	0.77
39:g:85:VAL:O	39:g:85:VAL:HG23	1.83	0.77
41:i:82:HIS:O	41:i:138:TRP:CD1	2.37	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:270(A):A:OP2	1:w:270(Z):G:C2	2.37	0.77
1:w:803:U:C3'	1:w:804:A:C8	2.68	0.77
1:w:978:G:C8	1:w:979:G:C8	2.73	0.77
1:w:1171:G:N7	1:w:1173:G:C8	2.53	0.77
1:w:1343:G:N2	1:w:1384:A:O2'	2.12	0.77
1:w:1606:G:H4'	1:w:1608:A:N3	1.99	0.77
1:w:1716:U:O2	1:w:1743:G:N1	2.18	0.77
1:w:1735:U:H2'	1:w:1741:C:C6	2.19	0.77
1:w:2049:G:N2	1:w:2620:C:H1'	1.99	0.77
1:w:2154:G:H2'	1:w:2155:G:H8	1.43	0.77
1:w:2525:G:O2'	1:w:2742:C:H4'	1.84	0.77
1:w:2547:U:C5	1:w:2566:A:H2'	2.19	0.77
1:w:2744:G:C2	8:F:143:GLN:OE1	2.37	0.77
1:w:2786:U:H2'	1:w:2786:U:O2	1.84	0.77
1:w:2808:U:H3	1:w:2892:A:H8	1.26	0.77
2:x:48:A:H5''	15:M:95:HIS:ND1	1.98	0.77
4:B:24:ILE:CG1	4:B:25:THR:H	1.93	0.77
4:B:260:ARG:HH12	4:B:262:ARG:HA	1.50	0.77
5:C:27:LEU:HD23	5:C:28:ALA:O	1.84	0.77
6:D:29:TRP:HE3	6:D:33:ARG:HH11	1.32	0.77
6:D:111:ASP:HA	6:D:114:ARG:HG2	1.65	0.77
7:E:12:TYR:N	7:E:12:TYR:CD2	2.42	0.77
8:F:13:LYS:HE2	8:F:29:PRO:HA	1.66	0.77
10:H:81:ASP:HA	10:H:118:PRO:HB2	1.66	0.77
13:K:35:VAL:HG21	13:K:130:LYS:HB2	1.67	0.77
13:K:61:GLY:HA2	22:T:183:LEU:O	1.84	0.77
13:K:67:ARG:C	13:K:68:ILE:HG13	2.09	0.77
14:L:10:LEU:O	14:L:17:ARG:NH2	2.16	0.77
18:P:78:LYS:HD3	18:P:78:LYS:C	2.10	0.77
21:S:38:ILE:HG23	21:S:39:VAL:N	1.94	0.77
26:X:58:VAL:HG11	26:X:60:GLU:OE2	1.83	0.77
29:a:39:LYS:O	29:a:40:GLU:HB2	1.83	0.77
30:b:13:LYS:CB	30:b:27:CYS:HB2	2.14	0.77
31:y:23:C:H4'	31:y:913:A:H61	1.46	0.77
31:y:257:G:H2'	31:y:258:G:O4'	1.84	0.77
31:y:426:G:C6	31:y:427:U:C4	2.73	0.77
31:y:448:A:H2'	31:y:449:C:C6	2.19	0.77
31:y:568:G:N2	31:y:574:A:H2	1.82	0.77
31:y:825:G:H2'	31:y:826:C:C5	2.20	0.77
31:y:954:G:C6	46:n:104:ARG:NH1	2.44	0.77
31:y:964:A:H2'	31:y:965:A:H5'	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1127:G:N2	31:y:1145:C:O2	2.16	0.77
31:y:1246:C:O2	31:y:1291:G:N2	2.18	0.77
37:e:9:CYS:HB2	37:e:22:LYS:HZ2	0.70	0.77
37:e:26:CYS:CA	37:e:31:CYS:SG	2.72	0.77
40:h:46:ALA:O	40:h:50:ILE:HG12	1.85	0.77
40:h:108:ALA:HB1	40:h:120:ILE:HD12	1.65	0.77
40:h:120:ILE:O	40:h:124:LEU:HG	1.82	0.77
42:j:85:LEU:CD2	42:j:92:TYR:HB2	2.11	0.77
45:m:36:CYS:HB2	45:m:81:VAL:N	1.99	0.77
49:q:73:LEU:HD12	49:q:73:LEU:N	1.98	0.77
54:v:6:ARG:HG2	54:v:7:ARG:H	1.48	0.77
1:w:65:C:H5''	20:R:68:ARG:N	1.99	0.77
1:w:216:A:C6	1:w:217:G:C2	2.72	0.77
1:w:463:G:H2'	1:w:464:U:O5'	1.85	0.77
1:w:492:A:C8	1:w:492:A:OP2	2.38	0.77
1:w:540:G:H2'	1:w:541:C:C6	2.19	0.77
1:w:568:U:H2'	1:w:570:G:OP2	1.85	0.77
1:w:813:U:H5'	1:w:813:U:H6	1.50	0.77
1:w:1751:C:H2'	1:w:1752:C:C6	2.20	0.77
1:w:1819:A:H2'	4:B:179:SER:CB	2.15	0.77
1:w:1831:G:C5	1:w:1832:C:N4	2.52	0.77
1:w:2485:G:H5''	13:K:46:GLN:CG	2.13	0.77
1:w:2870:C:O5'	1:w:2870:C:C6	2.34	0.77
5:C:116:VAL:C	5:C:118:LYS:N	2.42	0.77
6:D:165:LEU:O	6:D:165:LEU:HD22	1.83	0.77
7:E:18:GLU:O	7:E:19:LEU:C	2.27	0.77
7:E:31:VAL:HG22	7:E:32:PRO:HD2	1.66	0.77
7:E:128:ARG:HA	7:E:165:THR:CA	2.13	0.77
10:H:35:ARG:HB2	10:H:73:ASP:CG	2.09	0.77
10:H:38:LEU:CD2	10:H:76:VAL:HB	2.13	0.77
12:J:41:ARG:HH21	12:J:45:LEU:HD12	1.47	0.77
12:J:148:LEU:H	12:J:148:LEU:CD1	1.94	0.77
20:R:17:ALA:HA	20:R:26:TYR:CB	2.13	0.77
22:T:39:VAL:CG1	22:T:40:ASP:N	2.47	0.77
24:V:12:PRO:CG	24:V:13:ILE:H	1.96	0.77
31:y:47:C:C6	31:y:365:U:H2'	2.19	0.77
31:y:265:G:H4'	50:r:65:ILE:O	1.84	0.77
31:y:489:C:C5'	37:e:132:ARG:NH2	2.47	0.77
31:y:761:G:H2'	31:y:762:C:C6	2.19	0.77
31:y:790:A:C8	32:z:38:A:O2'	2.38	0.77
31:y:883:C:O5'	31:y:883:C:H6	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:913:A:O2'	31:y:914:A:H4'	1.83	0.77
31:y:1000:A:O5'	31:y:1000:A:H8	1.67	0.77
31:y:1037:C:H2'	31:y:1038:C:H6	1.49	0.77
31:y:1371:G:H5''	42:j:69:GLY:N	2.00	0.77
31:y:1516:G:H1'	31:y:1518:MA6:OP1	1.83	0.77
32:z:18:G:C6	32:z:57:G:C6	2.73	0.77
32:z:61:C:H2'	32:z:62:C:H5'	1.67	0.77
35:c:223:ILE:HG13	35:c:230:VAL:HG23	1.65	0.77
37:e:21:LEU:C	37:e:26:CYS:SG	2.68	0.77
45:m:36:CYS:HB3	45:m:80:SER:C	2.09	0.77
48:p:18:PHE:HD2	48:p:21:ASP:HA	1.50	0.77
48:p:18:PHE:CD2	48:p:21:ASP:HA	2.19	0.77
1:w:461:C:C2'	1:w:462:C:C6	2.66	0.77
1:w:551:G:H2'	1:w:552:G:H8	1.48	0.77
1:w:860:U:OP2	1:w:916:G:N1	2.15	0.77
1:w:919:G:O2'	1:w:920:G:H5'	1.84	0.77
1:w:1272:A:OP2	1:w:1647:G:OP1	2.02	0.77
1:w:1276:A:OP2	1:w:1645:G:O2'	2.02	0.77
1:w:1430:C:OP2	1:w:1430:C:C6	2.37	0.77
1:w:1837:C:C1'	1:w:1928:A:H1'	2.12	0.77
1:w:2184:G:H2'	1:w:2185:C:O4'	1.83	0.77
1:w:2619:C:H5''	5:C:152:LYS:CD	2.14	0.77
3:A:215:VAL:O	3:A:223:VAL:HG23	1.84	0.77
5:C:62:PRO:O	5:C:64:LYS:NZ	2.18	0.77
6:D:119:LEU:CB	6:D:188:VAL:CA	2.54	0.77
7:E:129:GLY:HA2	7:E:163:ALA:HB3	1.67	0.77
9:G:44:LEU:O	9:G:44:LEU:HD22	1.85	0.77
9:G:112:LYS:C	9:G:114:LEU:H	1.89	0.77
22:T:77:ASP:H	22:T:83:PRO:HA	1.46	0.77
26:X:26:LEU:HB3	26:X:28:LEU:HD23	1.67	0.77
30:b:26:ILE:HG12	30:b:34:GLN:H	1.50	0.77
31:y:253:U:C4'	31:y:276:G:H1'	2.15	0.77
31:y:502:G:OP1	45:m:117:SER:HB3	1.84	0.77
31:y:569:C:H6	31:y:569:C:O5'	1.66	0.77
31:y:677:U:C2'	31:y:678:U:C6	2.60	0.77
31:y:880:C:N3	31:y:881:G:N7	2.32	0.77
31:y:1120:G:C6	31:y:1154:G:N1	2.52	0.77
31:y:1217:C:C2	31:y:1218:C:C5	2.71	0.77
31:y:1238:A:N6	31:y:1301:U:O2'	2.18	0.77
31:y:1244:C:O2'	31:y:1245:A:H8	1.68	0.77
31:y:1344:C:O2'	42:j:120:ARG:C	2.27	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:84:ILE:HA	36:d:87:LEU:CD2	2.15	0.77
44:l:77:MET:HB3	44:l:80:VAL:CG1	2.08	0.77
44:l:77:MET:C	44:l:80:VAL:HG13	2.10	0.77
45:m:37:THR:CG2	45:m:58:ARG:CZ	2.60	0.77
46:n:3:ARG:HH12	46:n:7:VAL:HG12	1.49	0.77
1:w:13:A:H2'	1:w:15:G:N7	1.99	0.77
1:w:340:A:H2'	1:w:341:G:H5'	1.65	0.77
1:w:590:A:C5	1:w:591:C:C4	2.71	0.77
1:w:613:U:C1'	1:w:616:A:N7	2.47	0.77
1:w:712:G:C2	1:w:720:C:C2	2.72	0.77
1:w:759:G:H8	1:w:759:G:O5'	1.68	0.77
1:w:781:A:C2	1:w:1776:G:N3	2.51	0.77
1:w:842:G:C6	1:w:843:G:C5	2.73	0.77
1:w:991:C:H2'	1:w:992:C:H5''	1.66	0.77
1:w:1189:A:O2'	12:J:34:GLY:HA2	1.84	0.77
1:w:1840:G:C2	1:w:1841:U:C6	2.73	0.77
1:w:1936:A:C2	1:w:1945:G:C8	2.72	0.77
1:w:1966:A:O5'	1:w:1966:A:C8	2.36	0.77
1:w:2355:C:H1'	23:U:39:ARG:NH2	2.00	0.77
1:w:2584:U:OP2	1:w:2584:U:H6	1.68	0.77
1:w:2688:U:H2'	1:w:2719:G:H22	1.48	0.77
1:w:2818:G:O5'	1:w:2837:G:H4'	1.84	0.77
4:B:24:ILE:HG13	4:B:91:ARG:HH11	1.49	0.77
5:C:133:LYS:C	5:C:134:ILE:HG13	2.09	0.77
6:D:172:ALA:HB3	6:D:173:PRO:HD2	1.66	0.77
10:H:25:LYS:HG3	18:P:13:ARG:NH2	2.00	0.77
13:K:21:THR:CG2	13:K:98:LYS:HG2	2.14	0.77
13:K:35:VAL:HG22	13:K:130:LYS:N	1.98	0.77
13:K:37:LEU:CD1	13:K:128:LYS:N	2.45	0.77
13:K:52:VAL:CG2	13:K:53:ALA:H	1.93	0.77
23:U:49:LYS:O	23:U:51:VAL:HG23	1.83	0.77
31:y:161:A:O2'	31:y:162:A:H5'	1.85	0.77
31:y:275:G:H5'	31:y:276:G:OP2	1.85	0.77
31:y:325:A:OP2	53:u:70:SER:HA	1.85	0.77
31:y:363:A:C2	45:m:31:PHE:CE2	2.72	0.77
31:y:412:A:O2'	31:y:413:G:H8	1.67	0.77
31:y:893:C:H2'	31:y:894:G:C8	2.18	0.77
31:y:1077:G:H21	31:y:1080:A:H62	1.32	0.77
31:y:1212:U:HO2'	31:y:1213:A:H5''	1.49	0.77
31:y:1347:G:O2'	31:y:1373:G:N1	2.18	0.77
31:y:1348:U:C2	31:y:1374:A:N7	2.53	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1384:C:O5'	31:y:1384:C:H6	1.67	0.77
33:0:16:U:H2'	33:0:17:U:H5'	1.67	0.77
35:c:97:TRP:CG	35:c:172:ILE:HB	2.20	0.77
37:e:9:CYS:O	37:e:12:CYS:SG	2.43	0.77
38:f:53:LEU:HA	38:f:56:GLN:HG2	1.66	0.77
46:n:14:ARG:HA	46:n:44:ARG:HA	1.67	0.77
47:o:22:THR:CG2	47:o:38:GLY:HA2	2.14	0.77
50:r:41:LYS:HG2	50:r:42:TYR:N	1.99	0.77
1:w:215:G:O2'	1:w:216:A:O4'	2.03	0.77
1:w:463:G:N2	1:w:467:G:N7	2.32	0.77
1:w:668:G:N3	1:w:670:A:C5	2.53	0.77
1:w:1103:A:OP2	1:w:1103:A:H8	1.65	0.77
1:w:1128:A:H62	1:w:2518:A:N6	1.80	0.77
1:w:1252:G:C3'	1:w:1253:A:C8	2.66	0.77
1:w:1531:C:N3	1:w:1532:C:C5	2.52	0.77
1:w:1793:C:O2	1:w:1970:A:H2	1.66	0.77
1:w:1799:G:H4'	1:w:1800:C:H6	1.49	0.77
1:w:1843:C:N4	1:w:1844:C:N4	2.33	0.77
1:w:2158:A:N3	1:w:2159:G:C1'	2.48	0.77
1:w:2305:A:N1	7:E:154:GLY:HA3	2.00	0.77
1:w:2656:U:OP2	1:w:2664:G:N2	2.18	0.77
1:w:2716:U:O2'	1:w:2717:G:H5'	1.83	0.77
1:w:2731:G:H21	1:w:2732:G:N2	1.83	0.77
1:w:2735:G:H8	1:w:2735:G:O5'	1.68	0.77
1:w:2746:U:N3	1:w:2756:U:H5	1.83	0.77
4:B:250:TRP:N	4:B:250:TRP:CE3	2.51	0.77
5:C:172:VAL:HG22	5:C:184:VAL:CG1	2.15	0.77
8:F:153:LYS:O	8:F:161:GLY:HA3	1.83	0.77
10:H:131:PRO:O	10:H:132:LYS:HB3	1.84	0.77
11:I:93:PRO:C	11:I:95:GLY:N	2.42	0.77
12:J:85:LEU:HD23	12:J:86:LYS:N	1.99	0.77
13:K:50:ALA:HB2	13:K:124:LYS:CD	2.14	0.77
15:M:71:ARG:HB3	15:M:108:GLY:CA	2.15	0.77
17:O:92:ARG:HB2	18:P:11:GLN:CG	2.14	0.77
17:O:106:PHE:CA	17:O:109:LEU:HG	2.14	0.77
21:S:88:LYS:HG3	21:S:89:PHE:HD1	1.48	0.77
23:U:23:VAL:CA	23:U:38:VAL:HG22	2.14	0.77
24:V:12:PRO:HB2	24:V:66:HIS:ND1	2.00	0.77
31:y:516:PSU:HN3	31:y:533:A:N6	1.82	0.77
31:y:517:G:H4'	31:y:519:C:C5	2.19	0.77
31:y:602:A:C2'	31:y:603:U:H5'	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:675:A:H3'	31:y:676:A:C5'	2.15	0.77
31:y:683:G:N2	44:l:39:PRO:CG	2.44	0.77
31:y:1077:G:N1	31:y:1079:G:C5'	2.48	0.77
31:y:1326:C:H4'	54:v:19:GLY:HA3	1.65	0.77
31:y:1442:G:C4	31:y:1446:A:C2	2.72	0.77
37:e:12:CYS:HA	37:e:19:LEU:CD1	2.13	0.77
37:e:26:CYS:HA	37:e:31:CYS:HA	1.65	0.77
38:f:89:ILE:HD11	38:f:134:ALA:CB	2.14	0.77
40:h:12:LEU:HD22	40:h:25:ALA:HA	1.66	0.77
42:j:11:LYS:HG3	42:j:69:GLY:HA3	1.65	0.77
43:k:51:ARG:HB3	43:k:59:SER:HB3	1.66	0.77
46:n:97:PRO:HA	46:n:110:ARG:HD2	1.64	0.77
48:p:74:ASP:HB3	48:p:77:ARG:HG2	1.67	0.77
1:w:843:G:N2	1:w:935:C:O2	2.17	0.77
1:w:926:A:C3'	1:w:928:G:P	2.73	0.77
1:w:957:A:N6	1:w:2458:G:H4'	2.00	0.77
1:w:980:A:H2	1:w:2037:G:O2'	1.68	0.77
1:w:1313:U:H2'	1:w:1313:U:O2	1.84	0.77
1:w:1518:C:H2'	1:w:1519:G:H5''	1.66	0.77
1:w:1698:A:O4'	1:w:1700:A:H5'	1.85	0.77
1:w:2034:U:H3'	1:w:2035:G:C5'	2.13	0.77
1:w:2117:A:C3'	1:w:2118:U:H5''	2.13	0.77
1:w:2194:G:H2'	1:w:2195:C:C6	2.20	0.77
1:w:2419:U:H2'	1:w:2420:C:H6	1.50	0.77
1:w:2582:G:C8	1:w:2582:G:O5'	2.37	0.77
5:C:179:GLU:H	5:C:181:LEU:HD21	1.49	0.77
10:H:127:LYS:HA	10:H:130:LEU:CG	2.14	0.77
13:K:36:ALA:O	13:K:37:LEU:HD23	1.85	0.77
14:L:37:THR:HG23	14:L:40:LYS:HZ1	1.49	0.77
21:S:23:ARG:CZ	21:S:38:ILE:HG21	2.14	0.77
23:U:37:LEU:HD12	23:U:38:VAL:HB	1.66	0.77
24:V:50:ARG:CG	24:V:60:PHE:O	2.33	0.77
26:X:15:TYR:HB3	26:X:16:PRO:CD	2.14	0.77
31:y:49:U:H3'	31:y:50:A:C5'	2.14	0.77
31:y:194:C:H5''	53:u:65:LYS:NZ	2.00	0.77
31:y:436:C:O2'	31:y:437:U:H6	1.66	0.77
31:y:651:C:C4	31:y:652:U:C4	2.72	0.77
31:y:1112:C:C4	36:d:177:THR:HA	2.19	0.77
31:y:1179:A:H2'	31:y:1180:A:O4'	1.85	0.77
31:y:1244:C:HO2'	31:y:1245:A:P	2.07	0.77
35:c:197:VAL:HG23	35:c:200:ILE:HG23	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:76:VAL:O	36:d:83:ARG:HB2	1.85	0.77
36:d:131:ARG:HD3	36:d:166:GLU:CD	2.10	0.77
36:d:135:LYS:CA	36:d:168:ALA:HB1	2.14	0.77
37:e:105:VAL:O	37:e:110:PHE:HB2	1.83	0.77
38:f:17:ALA:HA	38:f:18:ARG:NH2	2.00	0.77
38:f:143:ARG:HG3	38:f:147:ASP:CG	2.10	0.77
39:g:72:VAL:O	39:g:75:LEU:HD22	1.85	0.77
41:i:7:ALA:HA	41:i:10:LEU:HG	1.66	0.77
41:i:107:LEU:O	41:i:109:ILE:HG23	1.85	0.77
44:l:82:VAL:CG2	44:l:105:VAL:O	2.33	0.77
45:m:37:THR:HB	45:m:56:LYS:C	2.10	0.77
46:n:56:LEU:O	46:n:59:TYR:CB	2.31	0.77
46:n:76:ALA:O	46:n:80:ARG:HB2	1.85	0.77
48:p:50:HIS:H	48:p:53:HIS:HD2	1.31	0.77
52:t:49:ILE:N	52:t:49:ILE:HD13	2.00	0.77
1:w:13:A:N3	1:w:14:A:N7	2.33	0.77
1:w:213:A:H8	1:w:213:A:O5'	1.68	0.77
1:w:592:G:N2	1:w:665:C:O2	2.18	0.77
1:w:674:G:C5'	6:D:72:ASP:HB3	2.14	0.77
1:w:980:A:C5	1:w:1136:G:H5'	2.19	0.77
1:w:1232:G:H2'	1:w:1233:C:C6	2.20	0.77
1:w:1323:U:C5'	19:Q:84:ARG:HH21	1.97	0.77
1:w:1338:G:N2	1:w:1393:A:C2	2.53	0.77
1:w:1567:A:H5''	4:B:60:ARG:HH22	1.50	0.77
1:w:1707:G:C3'	1:w:1708:C:H6	1.95	0.77
1:w:1709:U:H2'	1:w:2859:G:H21	1.47	0.77
1:w:2015:A:C8	1:w:2016:U:C5	2.73	0.77
1:w:2057:A:H8	1:w:2057:A:O5'	1.68	0.77
1:w:2295:C:H5'	15:M:9:ARG:HD3	1.67	0.77
1:w:2307:G:H2'	1:w:2307:G:N3	1.98	0.77
1:w:2359:C:H4'	29:a:50:LEU:H	1.48	0.77
1:w:2636:U:H4'	5:C:80:GLU:OE1	1.85	0.77
1:w:2852:G:O6	1:w:2864:G:O6	2.01	0.77
4:B:184:LYS:HB3	4:B:269:PHE:HB3	1.67	0.77
6:D:55:SER:CB	6:D:73:ILE:HG23	2.14	0.77
6:D:105:LEU:CD1	6:D:109:VAL:CG2	2.63	0.77
7:E:59:GLU:HG3	7:E:60:LEU:HD23	1.67	0.77
11:I:104:ARG:HD3	11:I:105:GLU:OE1	1.85	0.77
19:Q:11:ARG:O	19:Q:98:LYS:HE2	1.85	0.77
30:b:16:VAL:HA	30:b:25:VAL:HB	1.66	0.77
31:y:7:G:C5	31:y:298:A:H1'	2.20	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:122:G:O2'	31:y:123:C:H5'	1.85	0.77
31:y:200:G:N2	31:y:217:C:O2	2.16	0.77
31:y:465:A:H2'	31:y:465:A:N3	1.98	0.77
31:y:475:G:O2'	31:y:476:G:C5'	2.33	0.77
31:y:563:A:H4'	31:y:566:G:H1'	1.66	0.77
31:y:622:A:OP2	31:y:623:C:H5	1.67	0.77
31:y:623:C:C2'	31:y:624:C:H6	1.98	0.77
31:y:843:U:H5'	31:y:848:C:H5	1.47	0.77
31:y:1246:C:C2'	31:y:1247:U:H6	1.97	0.77
31:y:1252:A:C2'	31:y:1253:G:O4'	2.32	0.77
31:y:1290:G:H2'	31:y:1291:G:H5'	1.65	0.77
32:z:49:C:H2'	32:z:50:U:C6	2.20	0.77
35:c:163:PHE:HE1	35:c:186:ALA:HA	1.49	0.77
37:e:89:THR:HG23	38:f:97:GLY:O	1.84	0.77
38:f:77:PRO:HG3	38:f:142:LEU:HD11	1.66	0.77
46:n:97:PRO:CB	46:n:109:THR:HG21	2.15	0.77
50:r:12:SER:O	50:r:19:VAL:HB	1.84	0.77
50:r:23:VAL:H	50:r:41:LYS:HB3	1.50	0.77
50:r:81:ARG:HH21	50:r:83:ASP:HB2	1.50	0.77
51:s:53:ARG:HA	51:s:58:LEU:CD1	2.15	0.77
1:w:58:G:OP1	20:R:72:LYS:CA	2.32	0.76
1:w:76:C:H2'	1:w:77:C:H6	1.49	0.76
1:w:585:G:O3'	1:w:586:A:C8	2.37	0.76
1:w:607:U:O4	1:w:620:G:OP2	2.01	0.76
1:w:630:G:H4'	1:w:640:C:O4'	1.85	0.76
1:w:848:G:H5'	1:w:929:G:H22	1.47	0.76
1:w:865:C:OP2	1:w:865:C:C6	2.37	0.76
1:w:874:G:C3'	1:w:875:G:H8	1.98	0.76
1:w:1197:G:C4	1:w:1250:G:N2	2.53	0.76
1:w:1777:U:H2'	1:w:1778:U:O4'	1.84	0.76
1:w:1860:G:H4'	3:A:207:GLY:CA	2.11	0.76
1:w:2297:C:H2'	1:w:2298:A:H8	1.49	0.76
1:w:2432:A:O2'	1:w:2433:A:H5'	1.86	0.76
1:w:2654:A:C8	1:w:2656:U:C4	2.73	0.76
2:x:83:G:H4'	26:X:52:HIS:HB3	1.67	0.76
3:A:34:ALA:HB2	3:A:179:ALA:CB	2.14	0.76
4:B:136:ILE:HG12	4:B:137:PRO:HD2	1.65	0.76
6:D:179:TYR:HD2	6:D:179:TYR:H	1.33	0.76
7:E:106:LEU:HD12	7:E:107:LEU:N	1.99	0.76
12:J:41:ARG:CZ	12:J:45:LEU:HB2	2.15	0.76
13:K:14:ARG:HD2	13:K:14:ARG:H	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:13:HIS:NE2	14:L:15:SER:HB2	2.00	0.76
16:N:124:ASP:HB2	16:N:125:ARG:HH12	1.48	0.76
20:R:75:ASP:C	20:R:76:ARG:HD3	2.10	0.76
23:U:67:VAL:HG23	23:U:79:VAL:HB	1.67	0.76
25:W:26:ARG:HA	25:W:29:LYS:HG2	1.65	0.76
31:y:64:G:H1	31:y:101:A:H61	1.31	0.76
31:y:159:G:C2	31:y:161:A:OP2	2.38	0.76
31:y:266:G:N2	31:y:270:A:N7	2.32	0.76
31:y:483:C:O5'	31:y:483:C:H6	1.68	0.76
31:y:565:U:C3'	31:y:566:G:C8	2.64	0.76
31:y:779:C:H5''	44:l:122:LYS:CE	2.14	0.76
31:y:939:G:H5'	40:h:102:ARG:HH12	1.50	0.76
31:y:969:A:N3	31:y:969:A:H2'	1.97	0.76
31:y:1047:G:H21	31:y:1215:G:H4'	1.50	0.76
31:y:1229:A:O3'	32:z:30:G:C5'	2.32	0.76
31:y:1323:G:C5'	31:y:136(B):C:H41	1.97	0.76
32:z:18:G:O4'	32:z:60:U:C4	2.38	0.76
35:c:175:ARG:HG3	35:c:179:LYS:CE	2.14	0.76
36:d:160:ALA:CB	36:d:164:ARG:HD3	2.14	0.76
37:e:9:CYS:H	37:e:22:LYS:HG3	0.63	0.76
40:h:64:GLN:HE22	40:h:68:ASN:CB	1.98	0.76
45:m:122:LYS:HD2	45:m:122:LYS:N	2.01	0.76
1:w:63:U:O2'	1:w:64:A:N7	2.19	0.76
1:w:250:G:OP1	1:w:2394:C:H4'	1.86	0.76
1:w:258:G:H2'	1:w:259:G:C8	2.19	0.76
1:w:271(D):U:C2'	1:w:271:G:H4'	2.09	0.76
1:w:511:U:H4'	1:w:1236:G:H5'	1.66	0.76
1:w:728:G:H5'	4:B:13:ARG:HH22	1.49	0.76
1:w:759:G:H2'	1:w:760:G:C8	2.19	0.76
1:w:1012:U:H5	10:H:52:LYS:HZ3	1.33	0.76
1:w:1208:C:H2'	1:w:1209:G:C8	2.19	0.76
1:w:1255:U:H5	1:w:2502:G:H21	1.33	0.76
1:w:1542:G:C8	1:w:1542:G:C3'	2.68	0.76
1:w:1657:C:N4	1:w:1658:C:N4	2.32	0.76
1:w:1869:G:C2	1:w:1871:A:O5'	2.38	0.76
1:w:2013:A:H4'	19:Q:96:ILE:HG21	1.66	0.76
1:w:2131:G:O4'	1:w:2131:G:OP1	2.03	0.76
1:w:2142:C:O2	1:w:2149:G:N2	2.16	0.76
1:w:2296:U:HO2'	1:w:2297:C:H6	0.76	0.76
2:x:118:G:C8	2:x:118:G:OP2	2.38	0.76
3:A:201:LYS:HG2	3:A:209:PHE:CZ	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:105:ILE:HG12	4:B:106:ILE:N	2.01	0.76
5:C:119:ARG:HB3	5:C:120:TRP:CD1	2.20	0.76
6:D:131:THR:HA	6:D:134:PHE:CD2	2.19	0.76
7:E:173:LEU:HG	7:E:178:PHE:O	1.85	0.76
8:F:138:LYS:HA	8:F:141:VAL:HB	1.66	0.76
9:G:2:LYS:HG2	9:G:18:VAL:HG12	1.68	0.76
9:G:124:GLY:O	9:G:143:SER:HA	1.85	0.76
9:G:126:TYR:C	9:G:141:LYS:HE3	2.09	0.76
12:J:70:GLN:OE1	12:J:71:VAL:HG12	1.85	0.76
17:O:76:TYR:O	17:O:79:PHE:HB3	1.85	0.76
24:V:85:LEU:HD13	24:V:88:LYS:H	1.50	0.76
30:b:26:ILE:HD13	30:b:33:LYS:HB2	1.66	0.76
31:y:508:C:O2	31:y:509:A:N6	2.18	0.76
31:y:562:C:O2	45:m:14:ARG:NE	2.18	0.76
32:z:74:C:H2'	32:z:75:C:C5	2.21	0.76
35:c:10:LEU:HD12	35:c:11:LEU:H	1.50	0.76
37:e:170:VAL:CG2	37:e:171:GLY:H	1.97	0.76
42:j:9:ARG:HA	42:j:14:VAL:HG22	1.68	0.76
45:m:36:CYS:SG	45:m:76:LEU:HD21	2.26	0.76
47:o:25:VAL:H	47:o:39:LEU:HD23	1.50	0.76
47:o:30:ALA:HA	47:o:33:VAL:HG13	1.67	0.76
53:u:34:LYS:HB2	53:u:34:LYS:NZ	2.00	0.76
1:w:8:A:H5'	10:H:74:PHE:HZ	1.50	0.76
1:w:49:A:H5''	1:w:49:A:N3	1.99	0.76
1:w:328:U:H3	1:w:332:A:H62	1.32	0.76
1:w:519:U:H5'	19:Q:76:VAL:CG2	2.14	0.76
1:w:665:C:H5'	12:J:48:PRO:HD2	1.67	0.76
1:w:855:G:N2	23:U:27:GLU:N	2.32	0.76
1:w:1323:U:P	19:Q:84:ARG:HH21	2.09	0.76
1:w:1563:G:H2'	1:w:1564:C:H6	1.49	0.76
1:w:1689:A:O2'	1:w:1690:A:H5'	1.84	0.76
1:w:1772:G:N2	1:w:1774:C:H4'	2.00	0.76
1:w:1892:C:H2'	1:w:1893:C:H5'	1.67	0.76
1:w:2031:A:N3	1:w:2455:G:O2'	2.18	0.76
1:w:2124:G:H1'	3:A:43:GLU:HG2	1.67	0.76
1:w:2353:G:N3	23:U:34:GLY:HA3	2.00	0.76
1:w:2472:G:O6	1:w:2476:A:C5'	2.34	0.76
1:w:2478:A:C4'	1:w:2528:U:O4'	2.28	0.76
1:w:2485:G:H5'	13:K:46:GLN:HG2	1.65	0.76
1:w:2517:C:H2'	1:w:2519:U:C5	2.21	0.76
1:w:2630:G:O2'	1:w:2631:G:H5'	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2821:A:OP1	5:C:110:GLY:N	2.17	0.76
3:A:211:ARG:HB2	3:A:211:ARG:HH11	1.47	0.76
5:C:11:MET:CG	5:C:12:THR:H	1.97	0.76
6:D:58:LYS:C	6:D:59:ILE:HD12	2.11	0.76
7:E:77:ILE:CG1	32:z:56:C:C4	2.68	0.76
7:E:114:ILE:O	46:n:6:GLY:CA	2.33	0.76
9:G:62:LYS:NZ	9:G:133:HIS:HB2	1.98	0.76
10:H:82:LYS:O	10:H:82:LYS:HG2	1.82	0.76
14:L:28:LEU:HD11	14:L:114:VAL:HG12	1.66	0.76
24:V:58:ILE:HG21	24:V:86:SER:CB	2.16	0.76
31:y:116:A:H2'	31:y:117:G:O4'	1.84	0.76
31:y:222:U:H3'	31:y:223:U:C5'	2.09	0.76
31:y:652:U:O4	31:y:753:A:N7	2.19	0.76
31:y:781:A:O5'	31:y:1523:G:H5'	1.84	0.76
31:y:1230:C:C5'	32:z:30:G:O3'	2.33	0.76
31:y:1428:A:H2'	31:y:1429:C:H6	1.48	0.76
35:c:68:ILE:CG2	35:c:69:LEU:H	1.98	0.76
36:d:43:LEU:CD1	36:d:44:GLU:H	1.96	0.76
37:e:199:ASN:HB3	37:e:202:LEU:CG	2.14	0.76
43:k:25:GLU:O	43:k:27:ALA:N	2.18	0.76
44:l:82:VAL:CG1	44:l:105:VAL:HB	2.11	0.76
45:m:33:ARG:O	45:m:60:THR:OG1	2.02	0.76
50:r:9:VAL:O	50:r:11:VAL:HG13	1.85	0.76
1:w:618(A):G:H3'	1:w:618(B):C:C6	2.20	0.76
1:w:1175:U:H2'	1:w:1176:G:C8	2.21	0.76
1:w:1175:U:C2'	1:w:1176:G:H8	1.97	0.76
1:w:1628:G:H2'	1:w:1629:U:C6	2.21	0.76
1:w:1796:U:H1'	4:B:255:LYS:HA	1.65	0.76
1:w:1910:G:O6	1:w:1921:G:C5	2.39	0.76
1:w:1976:U:O2'	1:w:1977:A:N7	2.17	0.76
1:w:2193:G:C3'	1:w:2194:G:H5''	2.14	0.76
1:w:2285:C:O4'	1:w:2288:A:C6	2.38	0.76
1:w:2485:G:H5''	13:K:46:GLN:CD	2.11	0.76
1:w:2514:U:C4	1:w:2515:C:N4	2.53	0.76
1:w:2618:G:H2'	5:C:150:VAL:HB	1.66	0.76
2:x:48:A:H5'	15:M:95:HIS:HA	1.68	0.76
3:A:49:GLY:N	3:A:211:ARG:NH1	2.33	0.76
4:B:116:GLN:O	4:B:117:VAL:HG23	1.83	0.76
4:B:165:ILE:HG13	4:B:174:ILE:O	1.86	0.76
4:B:172:TYR:CD1	4:B:187:GLY:N	2.52	0.76
4:B:228:PRO:O	4:B:231:HIS:N	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:140:ILE:HD11	46:n:7:VAL:CG1	2.16	0.76
16:N:24:PRO:HG3	16:N:49:VAL:HG21	1.67	0.76
17:O:94:ASN:ND2	17:O:95:LEU:H	1.84	0.76
22:T:51:ALA:HB1	22:T:55:HIS:O	1.84	0.76
26:X:50:VAL:O	26:X:53:LEU:CD2	2.34	0.76
31:y:37:U:C2	31:y:38:G:H1'	2.20	0.76
31:y:310:G:C2	31:y:311:C:C5	2.74	0.76
31:y:324:G:H5''	53:u:70:SER:HB2	1.67	0.76
31:y:608:A:HO2'	49:q:9:PHE:HZ	1.34	0.76
31:y:890:G:O3'	31:y:891:U:C5	2.39	0.76
31:y:979:C:C2'	31:y:980:C:H5'	2.14	0.76
31:y:1073:U:C2'	31:y:1074:G:C5'	2.61	0.76
31:y:1084:G:H1'	31:y:1103:C:H41	1.47	0.76
31:y:1106:G:H2'	31:y:1107:C:H5'	1.67	0.76
32:z:18:G:O5'	32:z:18:G:C8	2.38	0.76
42:j:118:LYS:HB2	42:j:121:ARG:CD	2.15	0.76
44:l:57:THR:HA	44:l:89:ALA:CB	2.15	0.76
47:o:29:ARG:HB2	47:o:40:CYS:HB3	0.82	0.76
51:s:85:LEU:HD23	51:s:85:LEU:C	2.09	0.76
1:w:408:G:N2	1:w:420:C:H1'	2.00	0.76
1:w:557:U:N3	1:w:558:G:N7	2.33	0.76
1:w:565:C:N3	1:w:576:U:O4	2.19	0.76
1:w:648:G:H2'	1:w:649:G:H8	1.51	0.76
1:w:708:C:C4	1:w:709:U:C5	2.74	0.76
1:w:787:U:P	1:w:1780:A:H62	2.09	0.76
1:w:860:U:O4	1:w:917:A:N7	2.19	0.76
1:w:941:A:C2	1:w:942:G:C5	2.74	0.76
1:w:1261:C:H2'	1:w:1262:A:O4'	1.86	0.76
1:w:1971:A:H2'	1:w:1971:A:N3	2.00	0.76
1:w:2057:A:H4'	27:Y:8:LYS:NZ	2.00	0.76
1:w:2294:C:O2	1:w:2338:G:N2	2.17	0.76
1:w:2355:C:O2	23:U:17:GLN:NE2	2.18	0.76
1:w:2589:A:C2	1:w:2590:A:C8	2.72	0.76
1:w:2755:C:H2'	1:w:2756:U:OP2	1.85	0.76
1:w:2823:A:H8	1:w:2823:A:O5'	1.67	0.76
2:x:77:U:C2'	2:x:78:A:O4'	2.34	0.76
4:B:69:ARG:CZ	4:B:130:ALA:HB2	2.16	0.76
5:C:5:LEU:HD13	5:C:31:CYS:HB2	1.65	0.76
5:C:76:ARG:O	5:C:77:ILE:O	2.04	0.76
8:F:124:GLU:O	8:F:126:PRO:HD3	1.85	0.76
9:G:13:GLY:CA	9:G:17:GLN:HG3	2.14	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:125:GLU:HG2	9:G:126:TYR:H	1.49	0.76
13:K:59:ARG:HD2	13:K:59:ARG:N	1.99	0.76
13:K:136:ALA:O	13:K:137:TYR:HD1	1.66	0.76
15:M:13:ARG:CG	15:M:91:PRO:HA	2.15	0.76
18:P:47:VAL:HG22	18:P:48:GLY:N	2.00	0.76
23:U:25:ARG:CG	23:U:37:LEU:HB2	2.13	0.76
24:V:10:LYS:C	24:V:12:PRO:CD	2.57	0.76
26:X:28:LEU:CD1	26:X:33:GLN:HB3	2.12	0.76
31:y:68:G:H2'	31:y:69:G:H4'	1.66	0.76
31:y:227:G:H21	49:q:62:VAL:CG1	1.98	0.76
31:y:518:C:H2'	31:y:530:G:N3	2.00	0.76
31:y:571:U:C3'	31:y:572:A:H5''	2.15	0.76
31:y:855:G:C2'	31:y:856:C:C6	2.68	0.76
31:y:1075:C:O4'	31:y:1101:A:C6	2.39	0.76
31:y:1092:A:C5	31:y:1093:A:N6	2.53	0.76
31:y:1182:G:H8	31:y:1182:G:O5'	1.65	0.76
31:y:1206:G:N7	31:y:1207:2MG:H1'	2.01	0.76
31:y:1219:U:H2'	31:y:1220:G:O4'	1.84	0.76
31:y:1249:C:O2'	42:j:68:GLY:HA2	1.84	0.76
31:y:1291:G:C5	31:y:1292:U:C4	2.74	0.76
31:y:1379:G:H5''	40:h:4:ARG:HB2	1.66	0.76
33:0:12:U:H3	33:0:23:A:H61	1.28	0.76
36:d:29:TYR:CA	36:d:33:LEU:HD23	2.15	0.76
37:e:13:ARG:CB	37:e:33:MET:HE2	2.14	0.76
37:e:170:VAL:HG23	37:e:171:GLY:N	1.95	0.76
37:e:208:SER:O	37:e:209:ARG:HG3	1.85	0.76
38:f:34:VAL:HA	38:f:112:LEU:CD2	2.15	0.76
38:f:132:ALA:O	38:f:135:THR:HB	1.85	0.76
44:l:73:MET:HE3	44:l:73:MET:HA	1.66	0.76
46:n:54:VAL:HG23	46:n:55:ARG:N	2.01	0.76
1:w:270(J):G:C2	1:w:270(K):G:C5	2.73	0.76
1:w:594:U:H2'	1:w:595:C:H5	1.51	0.76
1:w:987:G:H1'	1:w:1001:A:H1'	1.66	0.76
1:w:1173:G:C1'	1:w:1177:A:N6	2.48	0.76
1:w:1186:G:C2'	1:w:1187:G:O4'	2.30	0.76
1:w:1241:A:O2'	1:w:1242:A:H5'	1.86	0.76
1:w:1458:C:C5'	1:w:1459:G:O5'	2.33	0.76
1:w:1636:C:O2'	1:w:1760:A:C4	2.38	0.76
1:w:2040:C:H2'	1:w:2041:U:C6	2.19	0.76
1:w:2230:G:H2'	1:w:2231:C:C6	2.21	0.76
1:w:2591:C:O2'	1:w:2592:G:H5'	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2619:C:C2'	1:w:2620:C:C5'	2.55	0.76
1:w:2620:C:C4'	5:C:156:MET:CB	2.62	0.76
1:w:2636:U:H2'	1:w:2637:U:C6	2.18	0.76
1:w:2745:C:C5	1:w:2755:C:O4'	2.38	0.76
1:w:2749:A:H62	1:w:2753:A:H2	1.32	0.76
1:w:2773:C:H5''	5:C:164:ARG:CB	2.14	0.76
1:w:2886:G:H2'	1:w:2887:U:O4'	1.86	0.76
3:A:166:ASN:HA	3:A:171:ALA:CB	2.16	0.76
4:B:249:PRO:HB3	4:B:250:TRP:CE3	2.20	0.76
5:C:77:ILE:HG22	5:C:79:ARG:HH21	1.50	0.76
5:C:116:VAL:HG11	5:C:122:PHE:CD2	2.20	0.76
6:D:190:ASP:O	6:D:194:TRP:HB2	1.85	0.76
8:F:49:VAL:HG12	8:F:50:VAL:H	1.49	0.76
9:G:111:PRO:C	9:G:112:LYS:HD2	2.10	0.76
10:H:78:VAL:HA	10:H:146:TYR:HE2	1.47	0.76
14:L:68:ARG:CZ	14:L:69:ASP:HB2	2.16	0.76
18:P:9:GLY:O	18:P:10:LYS:HG3	1.85	0.76
20:R:64:LYS:O	20:R:65:ARG:O	2.04	0.76
20:R:68:ARG:O	20:R:69:TYR:HB2	1.84	0.76
21:S:45:VAL:HA	21:S:57:GLN:HA	1.68	0.76
22:T:9:TYR:CE2	22:T:62:PRO:HD2	2.20	0.76
22:T:69:THR:HG22	22:T:70:LEU:H	1.46	0.76
31:y:62:U:H2'	31:y:63:C:H6	1.43	0.76
31:y:136:C:H4'	49:q:1:MET:CB	2.16	0.76
31:y:241:C:C2'	31:y:242:C:H5'	2.16	0.76
31:y:372:C:H2'	31:y:387:U:O4	1.85	0.76
31:y:552:U:C4'	45:m:85:ARG:HH12	1.99	0.76
31:y:1306:A:H62	31:y:1331:G:N2	1.84	0.76
31:y:1368:G:P	42:j:114:TYR:HB3	2.26	0.76
35:c:187:LEU:HD22	35:c:188:ALA:H	1.49	0.76
38:f:18:ARG:HH21	38:f:27:ARG:N	1.84	0.76
38:f:44:GLY:HA2	38:f:62:ALA:CB	2.14	0.76
40:h:123:GLU:HA	40:h:126:ASP:OD1	1.84	0.76
40:h:134:ALA:HA	40:h:137:LYS:HG3	1.68	0.76
48:p:57:LEU:O	48:p:57:LEU:HD22	1.85	0.76
1:w:63:U:O2'	1:w:64:A:C8	2.39	0.76
1:w:589:C:O2'	1:w:590:A:H5'	1.86	0.76
1:w:670:A:OP1	12:J:44:GLY:HA2	1.85	0.76
1:w:749:C:H1'	1:w:1618:A:OP1	1.85	0.76
1:w:785:G:OP2	1:w:792:G:H8	1.69	0.76
1:w:865:C:N3	1:w:868:U:O4	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1130:U:C2	1:w:2025:C:H5''	2.21	0.76
1:w:1282:U:C2'	1:w:1283:G:O4'	2.30	0.76
1:w:1553:A:H5'	1:w:1554:A:OP2	1.85	0.76
1:w:1665:A:C2'	1:w:1666:G:H5'	2.15	0.76
1:w:1804:C:O3'	4:B:252:TRP:CZ2	2.39	0.76
1:w:2054:A:N7	1:w:2577:A:N1	2.33	0.76
1:w:2266:A:H4'	1:w:2267:A:O5'	1.83	0.76
1:w:2352:A:C2	23:U:33:ALA:CB	2.68	0.76
1:w:2689:U:H4'	1:w:2690:C:C5	2.20	0.76
1:w:2838:G:HO2'	1:w:2839:G:H5'	1.47	0.76
2:x:43:C:N3	2:x:45:A:N7	2.34	0.76
2:x:95:U:H2'	2:x:96:G:C8	2.21	0.76
5:C:109:LYS:NZ	14:L:4:LEU:HG	2.01	0.76
5:C:169:ASN:C	5:C:170:LEU:HD12	2.11	0.76
7:E:59:GLU:HG3	7:E:60:LEU:N	1.98	0.76
10:H:65:TRP:CE3	10:H:71:MET:SD	2.79	0.76
10:H:121:VAL:HA	10:H:124:HIS:CD2	2.21	0.76
11:I:85:VAL:C	11:I:86:ILE:CD1	2.55	0.76
11:I:94:ARG:HD2	11:I:94:ARG:H	1.48	0.76
12:J:85:LEU:CD2	12:J:86:LYS:H	1.98	0.76
13:K:32:PHE:HB2	13:K:106:VAL:HG12	1.67	0.76
16:N:50:ILE:HG23	16:N:51:ARG:N	1.99	0.76
17:O:48:ALA:C	17:O:50:ARG:N	2.41	0.76
19:Q:70:TYR:CE1	19:Q:108:GLY:HA3	2.20	0.76
20:R:25:LYS:NZ	20:R:26:TYR:CE1	2.53	0.76
22:T:98:MET:HA	22:T:125:LEU:CD1	2.16	0.76
26:X:6:VAL:HG13	26:X:54:VAL:HB	1.67	0.76
31:y:80:G:H3'	31:y:81:G:H8	1.50	0.76
31:y:321:A:H1'	31:y:1435:G:O2'	1.85	0.76
31:y:585:G:O6	31:y:755:G:O6	2.04	0.76
31:y:653:A:H2	41:i:56:LYS:HG3	1.47	0.76
31:y:700:G:H2'	31:y:700:G:N3	1.99	0.76
31:y:853:G:O2'	31:y:854:G:H5'	1.86	0.76
31:y:976:G:C5'	31:y:1358:U:O2'	2.33	0.76
31:y:1367:C:C2	31:y:1368:G:C8	2.74	0.76
31:y:1408:A:C2	31:y:1494:G:C2	2.74	0.76
33:O:27:C:C2'	33:O:28:C:C6	2.67	0.76
35:c:63:MET:HA	35:c:226:ARG:HH22	1.49	0.76
40:h:120:ILE:O	40:h:124:LEU:CD2	2.34	0.76
40:h:123:GLU:HA	40:h:126:ASP:CB	2.15	0.76
41:i:13:ILE:O	41:i:17:THR:HB	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:42:GLU:HB3	41:i:44:PHE:CE2	2.20	0.76
41:i:52:ASP:HA	41:i:58:TYR:N	1.99	0.76
42:j:41:VAL:O	42:j:43:ALA:N	2.17	0.76
50:r:10:VAL:HG13	50:r:57:VAL:HG23	1.68	0.76
53:u:14:LYS:O	53:u:18:GLN:HG3	1.86	0.76
1:w:106:C:H1'	1:w:293:U:H4'	1.66	0.76
1:w:137(A):C:O2'	1:w:137(B):G:H5'	1.85	0.76
1:w:563:G:N1	1:w:2018:G:C2	2.54	0.76
1:w:618(A):G:C5	1:w:618(B):C:N4	2.53	0.76
1:w:646:A:OP2	1:w:646:A:C8	2.39	0.76
1:w:729:G:O2'	1:w:1775:U:H1'	1.85	0.76
1:w:818:G:N7	1:w:1187:G:N7	2.34	0.76
1:w:1036:G:N2	1:w:1119:C:O2	2.18	0.76
1:w:1079:C:HO2'	1:w:1080:C:H5	1.33	0.76
1:w:1186:G:N7	1:w:1187:G:N3	2.33	0.76
1:w:1298:C:C4	1:w:1643:G:C2	2.74	0.76
1:w:1530:G:N1	1:w:1541:U:H1'	2.01	0.76
1:w:1615:C:H2'	1:w:1617:C:C5	2.20	0.76
1:w:1834:U:O2'	1:w:1969:A:H2'	1.86	0.76
1:w:2137:C:O2	1:w:2154:G:N2	2.17	0.76
1:w:2297:C:N4	1:w:2320:A:H8	1.84	0.76
1:w:2588:G:O6	1:w:2606:C:N4	2.18	0.76
1:w:2770:G:H8	1:w:2770:G:OP2	1.69	0.76
1:w:2854:G:H2'	1:w:2855:C:C6	2.21	0.76
1:w:2857:G:N2	1:w:2860:A:OP2	2.19	0.76
2:x:12:C:OP1	23:U:73:GLY:HA2	1.86	0.76
2:x:110:G:C5	2:x:111:U:C6	2.74	0.76
6:D:145:GLY:HA2	6:D:167:TRP:CD2	2.21	0.76
7:E:114:ILE:HG12	7:E:115:ARG:N	2.00	0.76
10:H:96:THR:HG22	10:H:107:LYS:HA	1.68	0.76
13:K:106:VAL:HG22	13:K:107:ALA:H	1.48	0.76
14:L:31:HIS:O	14:L:33:ARG:N	2.15	0.76
15:M:38:GLN:O	15:M:40:ILE:HG13	1.85	0.76
18:P:85:LYS:HG2	18:P:87:HIS:H	1.50	0.76
22:T:17:ALA:O	22:T:20:ARG:HG2	1.86	0.76
22:T:45:ASP:HB3	22:T:49:ARG:NH2	2.01	0.76
24:V:71:TYR:HA	24:V:74:VAL:HG23	1.67	0.76
29:a:44:LYS:HD3	29:a:45:GLY:H	1.49	0.76
29:a:62:LEU:H	29:a:63:PRO:HD2	1.50	0.76
31:y:41:G:C2	31:y:42:G:C5	2.74	0.76
31:y:136:C:HO2'	49:q:63:GLY:HA2	1.48	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:149:A:H61	31:y:172:A:H62	1.32	0.76
31:y:357:G:H1'	31:y:368:U:O2	1.85	0.76
31:y:902:G:C2'	31:y:903:G:C5'	2.64	0.76
31:y:907:A:C6	31:y:908:A:C4	2.74	0.76
31:y:933:G:N2	31:y:935:A:C1'	2.48	0.76
31:y:1014:A:O2'	31:y:1015:A:C5'	2.29	0.76
31:y:1208:C:O5'	31:y:1208:C:H6	1.69	0.76
31:y:1299:A:H2	31:y:1300:G:H5'	1.43	0.76
31:y:1408:A:O2'	31:y:1409:C:H5'	1.86	0.76
32:z:31:A:C8	32:z:31:A:O5'	2.39	0.76
32:z:51:U:H2'	32:z:52:G:H8	1.51	0.76
37:e:170:VAL:C	37:e:174:LEU:HD12	2.11	0.76
40:h:51:GLN:HA	40:h:54:THR:O	1.85	0.76
40:h:123:GLU:O	40:h:126:ASP:HB2	1.85	0.76
41:i:29:SER:HB3	41:i:32:LYS:CG	2.15	0.76
41:i:78:GLN:O	41:i:80:ILE:N	2.19	0.76
43:k:93:GLY:O	43:k:94:VAL:CG2	2.32	0.76
46:n:51:ALA:O	46:n:55:ARG:HG2	1.86	0.76
48:p:49:ASP:HB3	48:p:53:HIS:CD2	2.21	0.76
48:p:63:ARG:HH11	48:p:63:ARG:CB	1.98	0.76
53:u:34:LYS:HD3	53:u:35:THR:N	2.00	0.76
1:w:20:C:H2'	1:w:21:A:H8	1.49	0.76
1:w:126:A:N7	1:w:127:A:C5	2.54	0.76
1:w:270(T):G:H2'	1:w:270(U):G:O4'	1.85	0.76
1:w:363(B):A:H2'	1:w:363(C):G:C8	2.20	0.76
1:w:370:G:O2'	1:w:424:G:OP1	2.03	0.76
1:w:528:A:H2'	1:w:2042:A:C2	2.20	0.76
1:w:887:A:H8	1:w:889:C:C2'	1.98	0.76
1:w:906:G:O6	1:w:907:U:C5	2.39	0.76
1:w:1124:C:C3'	1:w:1125:G:C8	2.68	0.76
1:w:1140:C:O5'	10:H:48:ARG:HD3	1.86	0.76
1:w:1519:G:C2'	1:w:1520:U:H5'	2.16	0.76
1:w:1612:C:H5'	28:Z:7:PRO:CG	2.16	0.76
1:w:1790:C:OP1	4:B:220:HIS:N	2.19	0.76
1:w:1800:C:H2'	1:w:1800:C:O2	1.86	0.76
1:w:2117:A:C3'	1:w:2118:U:C5'	2.64	0.76
1:w:2306:C:C6	1:w:2311:A:N6	2.54	0.76
1:w:2373:G:O5'	1:w:2373:G:H8	1.67	0.76
1:w:2576:G:H3'	1:w:2576:G:N3	2.00	0.76
1:w:2602:A:H4'	1:w:2603:G:H5'	1.68	0.76
1:w:2899:G:O2'	1:w:2900:A:H5'	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:42:C:H2'	2:x:43:C:H6	1.51	0.76
5:C:32:PRO:CB	5:C:69:LYS:HD2	2.16	0.76
8:F:149:ARG:CA	8:F:153:LYS:HG3	2.14	0.76
15:M:26:LEU:CD2	15:M:39:ILE:HG22	2.13	0.76
17:O:63:VAL:C	17:O:65:ILE:N	2.41	0.76
19:Q:42:ARG:HD2	19:Q:46:PHE:HZ	1.49	0.76
31:y:39:G:H2'	31:y:40:C:O4'	1.85	0.76
31:y:159:G:H22	31:y:163:C:N4	1.82	0.76
31:y:352:C:H4'	31:y:354:G:OP1	1.85	0.76
31:y:517:G:H2'	31:y:531:U:C5	2.21	0.76
31:y:611:A:C2	31:y:612:C:N4	2.53	0.76
31:y:818:G:H2'	31:y:819:A:H5''	1.68	0.76
31:y:888:G:H3'	31:y:889:A:H3'	1.67	0.76
31:y:1013:G:N2	31:y:1016:A:H62	1.78	0.76
31:y:1402:4OC:C2'	31:y:1403:C:H6	1.95	0.76
37:e:172:PRO:HG3	37:e:193:ASP:CB	2.11	0.76
1:w:210:C:O2'	1:w:1366:A:C2	2.40	0.76
1:w:224:G:OP2	1:w:408:G:N2	2.18	0.76
1:w:242:G:C6	29:a:5:LYS:HD3	2.20	0.76
1:w:245:G:O3'	12:J:71:VAL:HA	1.86	0.76
1:w:359:A:H3'	1:w:360:G:C8	2.21	0.76
1:w:745:G:H1'	1:w:750:A:N6	2.01	0.76
1:w:1082:U:H3'	1:w:1083:U:H5''	1.67	0.76
1:w:1138:G:C2'	1:w:1139:G:C5'	2.64	0.76
1:w:1309:G:C3'	1:w:1310:G:H5''	2.15	0.76
1:w:1318:C:N3	1:w:1319:G:C8	2.54	0.76
1:w:1527:G:HO2'	1:w:1528:A:H8	1.29	0.76
1:w:1743:G:H2'	1:w:1746:G:C8	2.20	0.76
1:w:1863:G:H5'	1:w:1863:G:C8	2.21	0.76
1:w:2328:A:O5'	1:w:2328:A:C8	2.38	0.76
1:w:2401:U:H2'	1:w:2402:C:H5''	1.67	0.76
1:w:2450:A:N3	32:z:76:A:C2	2.54	0.76
1:w:2484:G:HO2'	13:K:46:GLN:HA	1.51	0.76
2:x:23:G:C6	2:x:61:G:C6	2.74	0.76
4:B:14:ARG:O	4:B:15:PHE:CG	2.38	0.76
7:E:55:LYS:HD3	7:E:56:ALA:H	1.50	0.76
8:F:54:ARG:HD2	8:F:65:HIS:CE1	2.21	0.76
10:H:112:LYS:HE2	10:H:112:LYS:CA	2.15	0.76
12:J:79:ARG:CG	12:J:109:GLY:HA2	2.15	0.76
14:L:68:ARG:HH21	14:L:69:ASP:HB2	1.45	0.76
15:M:10:ARG:HH21	15:M:11:LYS:HZ3	1.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:28:VAL:HG13	15:M:36:TYR:O	1.86	0.76
15:M:63:THR:CG2	15:M:96:GLY:HA3	2.15	0.76
16:N:23:ARG:HB2	16:N:24:PRO:CD	2.15	0.76
23:U:74:ARG:HD2	23:U:74:ARG:C	2.10	0.76
25:W:8:LYS:HD2	25:W:8:LYS:N	1.99	0.76
25:W:59:ARG:HE	25:W:62:THR:HA	1.51	0.76
27:Y:8:LYS:O	27:Y:9:LYS:HG2	1.85	0.76
28:Z:11:LYS:HE3	28:Z:15:THR:OG1	1.87	0.76
28:Z:18:PHE:HE2	28:Z:22:MET:HE2	1.48	0.76
30:b:2:LYS:N	30:b:35:ARG:HD2	2.01	0.76
30:b:16:VAL:HA	30:b:25:VAL:CB	2.16	0.76
31:y:130:A:H2'	31:y:130:A:N3	1.99	0.76
31:y:216:G:H2'	31:y:217:C:O4'	1.85	0.76
31:y:258:G:N1	31:y:259:G:C5	2.54	0.76
31:y:404:U:C2'	31:y:405:U:H5'	2.15	0.76
31:y:507:C:P	31:y:508:C:H3'	2.25	0.76
31:y:1177:G:H8	31:y:1177:G:OP2	1.69	0.76
31:y:1377:A:H2'	40:h:5:ARG:NH2	2.00	0.76
31:y:1506:U:C3'	31:y:1507:A:H5'	2.16	0.76
36:d:20:SER:CB	47:o:54:PRO:HB3	2.16	0.76
36:d:113:ALA:HB2	36:d:183:ASP:O	1.85	0.76
41:i:29:SER:O	41:i:32:LYS:HB2	1.86	0.76
45:m:42:VAL:N	45:m:52:ARG:NH2	2.33	0.76
48:p:28:GLN:HA	48:p:31:LEU:HD22	1.67	0.76
54:v:22:ARG:H	54:v:23:PRO:HD2	1.49	0.76
1:w:132:G:H3'	1:w:133:C:C6	2.22	0.75
1:w:254:G:H4'	1:w:384:U:H5'	1.68	0.75
1:w:456:C:OP1	1:w:456:C:C6	2.39	0.75
1:w:466:A:P	1:w:466:A:H8	2.09	0.75
1:w:503:A:H4'	1:w:505:A:H5''	1.65	0.75
1:w:732:C:C2'	1:w:733:G:O4'	2.25	0.75
1:w:794:G:H2'	1:w:795:C:C6	2.21	0.75
1:w:978:G:H2'	1:w:979:G:O4'	1.86	0.75
1:w:1479:G:O6	1:w:1514:U:N3	2.18	0.75
1:w:1690:A:H61	1:w:1697:G:C2'	1.99	0.75
1:w:1845:G:C2'	1:w:1846:G:C8	2.69	0.75
1:w:2009:G:H5''	19:Q:41:LYS:HE3	1.69	0.75
1:w:2306:C:H42	7:E:43:LEU:HA	1.50	0.75
1:w:2358:G:H1	1:w:2359:C:H41	1.34	0.75
1:w:2432:A:C2'	1:w:2433:A:H5'	2.16	0.75
1:w:2442:C:H2'	1:w:2443:C:H6	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2642:G:H2'	1:w:2643:G:H8	1.51	0.75
1:w:2653:U:O4	1:w:2654:A:N1	2.18	0.75
1:w:2679:A:C6	1:w:2729:G:C6	2.74	0.75
1:w:2824:C:C4	1:w:2825:G:C6	2.74	0.75
4:B:142:VAL:HG23	4:B:192:THR:O	1.84	0.75
5:C:8:LYS:HA	5:C:26:ILE:HD12	1.68	0.75
5:C:120:TRP:CD2	5:C:155:LYS:HB3	2.21	0.75
6:D:195:GLU:HG3	6:D:196:VAL:N	2.00	0.75
10:H:37:VAL:HG12	10:H:38:LEU:N	2.01	0.75
10:H:58:ARG:O	10:H:71:MET:SD	2.44	0.75
10:H:89:LYS:O	10:H:110:LEU:CD2	2.34	0.75
11:I:19:ILE:HA	11:I:44:LYS:HG2	1.68	0.75
11:I:24:VAL:CG2	11:I:25:LEU:H	1.92	0.75
12:J:98:GLU:H	12:J:101:VAL:CG1	1.98	0.75
14:L:31:HIS:HB2	14:L:34:ILE:HD11	1.68	0.75
17:O:51:LYS:O	17:O:55:ARG:HG3	1.86	0.75
26:X:17:LYS:HD3	26:X:17:LYS:C	2.11	0.75
31:y:152:A:H62	31:y:169:C:H42	0.79	0.75
31:y:160:A:H1'	31:y:344:A:C4	2.21	0.75
31:y:361:G:H3'	31:y:362:G:C8	2.21	0.75
31:y:502:G:C4'	31:y:550:G:O2'	2.33	0.75
31:y:668:G:O2'	48:p:48:LYS:O	2.03	0.75
31:y:674:G:N3	31:y:675:A:N7	2.33	0.75
31:y:940:C:H2'	31:y:941:G:C8	2.22	0.75
31:y:1046:A:C2'	31:y:1047:G:H5'	2.16	0.75
31:y:1125:U:O4	31:y:1127:G:C1'	2.34	0.75
31:y:1347:G:N2	31:y:1349:A:N6	2.35	0.75
31:y:1392:G:H2'	31:y:1393:U:C6	2.20	0.75
31:y:1433:A:H8	31:y:1433:A:OP2	1.69	0.75
32:z:56:C:C2'	32:z:57:G:H5'	2.16	0.75
35:c:46:LYS:H	35:c:46:LYS:HE3	1.50	0.75
36:d:118:GLN:N	36:d:187:ALA:CB	2.49	0.75
42:j:27:THR:O	42:j:63:ILE:HB	1.86	0.75
45:m:86:GLY:O	45:m:98:HIS:CE1	2.39	0.75
49:q:19:ILE:HD13	49:q:37:GLY:O	1.84	0.75
53:u:45:GLN:HA	53:u:91:LEU:CB	2.15	0.75
1:w:77:C:H42	1:w:109:G:H1	1.33	0.75
1:w:133:C:O2	1:w:146:G:N2	2.16	0.75
1:w:204:A:O4'	1:w:204:A:OP1	2.04	0.75
1:w:287:C:C4	1:w:288:C:N4	2.54	0.75
1:w:307:G:H1'	1:w:310:A:C6	2.21	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:371:A:O4'	1:w:373:U:H1'	1.87	0.75
1:w:467:G:C4'	1:w:796:C:O2'	2.33	0.75
1:w:716:A:H2'	1:w:717:G:O4'	1.86	0.75
1:w:803:U:N3	1:w:804:A:C6	2.54	0.75
1:w:869:G:N2	1:w:908:C:O2	2.17	0.75
1:w:1054:A:H5'	1:w:1055:G:OP2	1.85	0.75
1:w:1321:A:C2'	1:w:1322:A:O4'	2.29	0.75
1:w:1652:A:C2'	1:w:1653:G:H8	1.99	0.75
1:w:1688:U:O2'	1:w:1700:A:N6	2.19	0.75
1:w:1904:G:C2'	1:w:1905:C:H5'	2.16	0.75
1:w:2303:G:H21	7:E:132:ASN:HD22	1.30	0.75
1:w:2419:U:P	29:a:32:LEU:HB2	2.27	0.75
2:x:44:G:C1'	2:x:46:A:H62	2.00	0.75
4:B:249:PRO:CB	4:B:250:TRP:CE3	2.70	0.75
9:G:124:GLY:C	9:G:143:SER:CA	2.56	0.75
11:I:37:ASP:O	11:I:62:VAL:HG23	1.85	0.75
12:J:75:ILE:HD11	12:J:77:ARG:NH1	2.00	0.75
13:K:3:MET:N	13:K:4:PRO:CD	2.48	0.75
13:K:27:VAL:HG11	13:K:136:ALA:CB	2.09	0.75
13:K:134:ARG:C	13:K:134:ARG:CD	2.59	0.75
16:N:50:ILE:HD11	16:N:73:GLU:OE1	1.86	0.75
17:O:59:ARG:HG2	17:O:62:ILE:CD1	2.15	0.75
18:P:38:LEU:H	18:P:55:ALA:HB2	1.49	0.75
21:S:73:ARG:CG	21:S:78:ALA:HB2	2.16	0.75
26:X:17:LYS:HE2	26:X:21:ALA:HB2	1.66	0.75
31:y:99:C:C3'	31:y:101:A:C8	2.69	0.75
31:y:107:G:N7	53:u:15:ARG:NH2	2.34	0.75
31:y:153:C:C2'	31:y:154:C:H5'	2.16	0.75
31:y:158:G:H3'	31:y:159:G:H8	1.50	0.75
31:y:167:G:H2'	31:y:168:G:O4'	1.86	0.75
31:y:246:A:O2'	50:r:99:SER:HA	1.86	0.75
31:y:302:G:O5'	31:y:302:G:C8	2.39	0.75
31:y:363:A:C6	31:y:364:A:C2	2.74	0.75
31:y:565:U:C2'	31:y:566:G:C8	2.69	0.75
31:y:625:G:H2'	31:y:626:U:H6	1.48	0.75
31:y:667:G:H4'	48:p:51:HIS:CB	2.16	0.75
31:y:756:C:H2'	31:y:757:U:C4'	2.16	0.75
31:y:761:G:O2'	50:r:105:ALA:HB2	1.86	0.75
31:y:1164:G:C8	31:y:1173:G:N2	2.54	0.75
31:y:1265:G:H3'	31:y:1266:G:H8	1.51	0.75
31:y:1425:U:H2'	31:y:1426:C:H6	1.48	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:0:14:A:H2'	33:0:15:G:H5'	1.68	0.75
36:d:77:ILE:CA	36:d:84:ILE:HB	2.15	0.75
36:d:151:VAL:HG13	36:d:152:ILE:N	2.00	0.75
37:e:172:PRO:CG	37:e:193:ASP:HB3	2.11	0.75
38:f:46:GLY:CA	38:f:58:ALA:HA	2.16	0.75
40:h:15:ASP:HA	40:h:24:THR:HG21	1.68	0.75
40:h:116:ALA:O	40:h:120:ILE:CB	2.25	0.75
40:h:134:ALA:HA	40:h:137:LYS:HD3	1.67	0.75
41:i:38:ILE:O	41:i:42:GLU:HG2	1.86	0.75
41:i:51:VAL:HG12	41:i:52:ASP:N	2.00	0.75
48:p:81:LEU:HA	48:p:84:LYS:NZ	1.99	0.75
52:t:12:ASP:CG	52:t:15:LEU:HD21	2.10	0.75
52:t:52:TYR:HE1	52:t:56:GLN:HA	1.52	0.75
1:w:77:C:H5''	25:W:53:LEU:HD12	1.68	0.75
1:w:116:C:H4'	1:w:127:A:O4'	1.86	0.75
1:w:126:A:C8	1:w:127:A:C5	2.74	0.75
1:w:408:G:H22	1:w:420:C:H1'	1.51	0.75
1:w:1005:C:H2'	1:w:1006:C:C5'	2.14	0.75
1:w:1033:U:O2'	1:w:1034:G:OP1	2.04	0.75
1:w:1364:G:H5''	24:V:8:SER:HB3	1.68	0.75
1:w:1471:A:H2'	1:w:1471:A:N3	2.00	0.75
1:w:1506:C:C3'	1:w:1508:A:P	2.75	0.75
1:w:1858:G:O3'	1:w:1859:A:C8	2.37	0.75
1:w:2037:G:H3'	1:w:2038:G:C8	2.22	0.75
1:w:2281:C:C2'	1:w:2282:G:C5'	2.64	0.75
1:w:2444:G:C2	1:w:2445:G:C8	2.74	0.75
1:w:2459:A:H3'	1:w:2460:U:H6	1.49	0.75
1:w:2475:C:O5'	1:w:2475:C:H6	1.68	0.75
1:w:2483:C:O5'	1:w:2483:C:C6	2.38	0.75
1:w:2658:C:C2'	1:w:2659:G:H5'	2.16	0.75
1:w:2679:A:H2'	1:w:2680:C:H6	1.51	0.75
1:w:2771:C:O2	1:w:2771:C:C2'	2.33	0.75
1:w:2807:G:C2'	1:w:2808:U:H5''	2.16	0.75
1:w:2840:C:C4	1:w:2841:C:C4	2.74	0.75
5:C:60:ASN:O	5:C:62:PRO:N	2.19	0.75
9:G:82:ARG:HB3	9:G:89:TYR:CE1	2.20	0.75
14:L:21:TYR:HA	14:L:24:GLN:CG	2.16	0.75
16:N:23:ARG:HB2	16:N:24:PRO:HD2	1.67	0.75
16:N:135:VAL:HG13	16:N:136:GLN:N	2.01	0.75
18:P:34:GLU:H	18:P:64:HIS:CE1	2.03	0.75
18:P:98:GLU:O	18:P:99:ILE:HG12	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:57:ASN:CA	19:Q:60:ASN:HB2	2.12	0.75
19:Q:65:LEU:O	19:Q:68:ARG:HD2	1.86	0.75
21:S:33:LYS:O	21:S:65:ALA:HA	1.87	0.75
22:T:90:VAL:HG22	22:T:91:LEU:N	2.01	0.75
28:Z:35:ARG:HA	28:Z:42:LEU:HD21	1.68	0.75
29:a:49:VAL:CG1	29:a:53:PRO:HD3	2.15	0.75
31:y:44:G:C2'	31:y:45:U:H5'	2.17	0.75
31:y:161:A:N6	31:y:162:A:C2	2.54	0.75
31:y:297:G:C2'	31:y:298:A:C8	2.68	0.75
31:y:558:G:H3'	31:y:559:A:N3	2.00	0.75
31:y:628:G:H2'	31:y:629:G:O4'	1.86	0.75
31:y:665:A:N3	31:y:733:A:H5''	2.00	0.75
31:y:779:C:H5''	44:l:122:LYS:HE3	1.68	0.75
31:y:865:A:H2	31:y:918:A:H4'	1.51	0.75
31:y:896:C:C5'	50:r:100:LYS:HZ3	1.95	0.75
31:y:920:U:C2	31:y:921:U:C5	2.74	0.75
31:y:959:A:H3'	31:y:960:U:H4'	1.66	0.75
31:y:1064:G:H4'	31:y:1065:U:O5'	1.84	0.75
31:y:1267:C:O2	54:v:20:LYS:HD2	1.85	0.75
31:y:1438:G:N2	31:y:1463:C:O2	2.18	0.75
32:z:30:G:H2'	32:z:31:A:H8	1.50	0.75
35:c:117:GLU:C	35:c:121:LEU:HD12	2.10	0.75
37:e:84:LYS:CG	37:e:85:LYS:H	1.94	0.75
37:e:94:LEU:CD2	37:e:200:GLU:CG	2.64	0.75
39:g:19:LEU:HD11	39:g:59:TYR:CD2	2.21	0.75
45:m:30:PRO:C	45:m:31:PHE:CD1	2.64	0.75
45:m:51:LEU:HA	45:m:52:ARG:HE	1.50	0.75
46:n:48:LEU:HD12	46:n:53:VAL:CG2	2.15	0.75
1:w:73:A:H8	1:w:73:A:OP1	1.69	0.75
1:w:609(B):G:H3'	1:w:610:C:H5	1.52	0.75
1:w:1030:G:O2'	1:w:1031:G:H5'	1.86	0.75
1:w:1190:G:P	12:J:32:THR:HB	2.26	0.75
1:w:1359:A:H8	1:w:1359:A:H5'	1.50	0.75
1:w:1361:G:C6	1:w:1362:C:C5	2.75	0.75
1:w:1385:G:O2'	1:w:1386:C:H4'	1.85	0.75
1:w:1816:G:H5''	4:B:39:LYS:NZ	2.02	0.75
1:w:1858:G:N2	1:w:1883:G:C2'	2.49	0.75
1:w:2080:G:H5'	24:V:23:LYS:CD	2.17	0.75
1:w:2092:U:H5''	9:G:27:ARG:HH12	1.50	0.75
1:w:2679:A:HO2'	5:C:188:VAL:HA	1.50	0.75
1:w:2820:A:N1	5:C:194:GLY:CA	2.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:172:VAL:HA	5:C:184:VAL:HG12	1.68	0.75
5:C:183:LEU:HD12	5:C:183:LEU:C	2.11	0.75
6:D:26:HIS:CB	12:J:13:ASN:CB	2.57	0.75
6:D:121:VAL:HG13	6:D:191:LEU:N	2.00	0.75
7:E:18:GLU:OE2	7:E:18:GLU:HA	1.84	0.75
8:F:10:PRO:C	8:F:12:PRO:CD	2.59	0.75
9:G:27:ARG:HB2	9:G:27:ARG:HH21	1.49	0.75
10:H:34:PRO:HG3	10:H:71:MET:C	2.11	0.75
10:H:44:LYS:C	10:H:84:ARG:CB	2.59	0.75
10:H:79:ASN:O	10:H:83:ILE:HD11	1.86	0.75
14:L:45:ARG:HG3	14:L:45:ARG:HH11	1.50	0.75
15:M:25:ARG:HE	15:M:40:ILE:CG2	1.99	0.75
20:R:15:GLU:HA	20:R:18:TYR:HD2	1.51	0.75
22:T:9:TYR:HE2	22:T:62:PRO:HD2	1.50	0.75
22:T:43:GLU:O	22:T:44:PHE:C	2.29	0.75
24:V:78:LYS:HD2	24:V:79:GLY:N	2.00	0.75
25:W:52:ASP:O	25:W:55:ARG:HD3	1.87	0.75
27:Y:44:THR:HG22	27:Y:45:VAL:H	1.49	0.75
31:y:68:G:H1	31:y:101:A:H2	0.80	0.75
31:y:510:A:H1'	31:y:543:C:O4'	1.85	0.75
31:y:608:A:H2'	31:y:609:A:O4'	1.86	0.75
31:y:621:A:H2'	31:y:622:A:O5'	1.86	0.75
31:y:643:C:H1'	41:i:132:GLU:OE1	1.87	0.75
31:y:761:G:C1'	50:r:105:ALA:HB2	2.15	0.75
31:y:801:U:N3	31:y:802:A:C8	2.54	0.75
31:y:833:U:C2	31:y:854:G:C6	2.75	0.75
31:y:1300:G:O3'	31:y:1301:U:C6	2.39	0.75
31:y:1314:C:H2'	31:y:1315:U:C5	2.21	0.75
31:y:1319:A:O2'	31:y:1323:G:N7	2.19	0.75
31:y:1494:G:C5	31:y:1495:U:C4	2.74	0.75
33:0:56:C:O5'	33:0:56:C:H6	1.68	0.75
35:c:112:VAL:HG12	35:c:116:GLU:OE2	1.85	0.75
35:c:132:LYS:HD3	35:c:133:LYS:H	1.50	0.75
37:e:167:GLY:O	37:e:168:ARG:HG3	1.85	0.75
38:f:100:VAL:CG2	38:f:116:THR:HA	2.15	0.75
44:l:51:LYS:HA	44:l:55:LYS:HG2	1.67	0.75
45:m:39:VAL:HG21	45:m:76:LEU:HD12	1.69	0.75
46:n:20:THR:CA	46:n:25:ILE:HG21	2.17	0.75
50:r:36:ILE:HD12	50:r:36:ILE:O	1.86	0.75
1:w:321:G:OP2	6:D:131:THR:OG1	2.04	0.75
1:w:466:A:C3'	1:w:467:G:H5'	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:518:G:O2'	19:Q:76:VAL:CG2	2.35	0.75
1:w:548:A:H8	1:w:548:A:O5'	1.70	0.75
1:w:566:U:H5''	1:w:566:U:H6	1.51	0.75
1:w:784:A:OP1	4:B:237:GLU:HG3	1.86	0.75
1:w:848:G:N3	1:w:933:A:O2'	2.20	0.75
1:w:952:G:N2	1:w:2267:A:N7	2.32	0.75
1:w:1284:A:H2	19:Q:45:TYR:OH	1.67	0.75
1:w:1653:G:C6	14:L:10:LEU:HA	2.22	0.75
1:w:1858:G:O2'	1:w:1884:A:N6	2.19	0.75
1:w:1986:A:H3'	1:w:1987:G:H5''	1.66	0.75
1:w:2276:G:OP2	13:K:83:MET:CA	2.33	0.75
1:w:2281:C:O5'	1:w:2281:C:H6	1.68	0.75
1:w:2327:A:H2'	1:w:2328:A:C8	2.21	0.75
1:w:2581:G:O6	1:w:2610:C:N3	2.18	0.75
1:w:2818:G:C5'	1:w:2837:G:H4'	2.15	0.75
1:w:2822:G:H8	14:L:2:ARG:CB	1.90	0.75
2:x:19:G:H2'	2:x:20:C:H5'	1.66	0.75
2:x:47:C:N4	2:x:48:A:N6	2.34	0.75
5:C:52:LEU:HD13	5:C:76:ARG:CB	2.17	0.75
8:F:61:HIS:O	8:F:65:HIS:HB2	1.86	0.75
8:F:157:TYR:HB3	8:F:172:LYS:HB3	1.66	0.75
10:H:90:LEU:HA	10:H:110:LEU:HB3	1.67	0.75
15:M:18:ILE:HG23	15:M:19:LYS:N	2.00	0.75
15:M:30:ARG:HA	15:M:36:TYR:CD1	2.22	0.75
16:N:80:SER:HB2	16:N:81:PRO:HD3	1.69	0.75
16:N:101:PHE:N	16:N:101:PHE:CD2	2.23	0.75
16:N:108:ARG:NH1	31:y:1431:C:H3'	2.01	0.75
17:O:91:ASP:O	17:O:92:ARG:C	2.30	0.75
19:Q:23:LEU:HD22	27:Y:25:LEU:HB3	1.69	0.75
19:Q:44:ALA:O	19:Q:46:PHE:N	2.20	0.75
21:S:47:LYS:CG	21:S:48:ALA:H	1.98	0.75
24:V:12:PRO:CG	24:V:63:ALA:N	2.44	0.75
25:W:9:GLN:O	25:W:14:ARG:HD2	1.86	0.75
29:a:29:LYS:HG3	29:a:41:ILE:HG22	1.67	0.75
31:y:82:U:H3'	31:y:84:U:H5''	1.67	0.75
31:y:115:G:O2'	31:y:116:A:C8	2.39	0.75
31:y:157:G:N1	31:y:164:U:O2	2.16	0.75
31:y:236:G:C2'	31:y:237:C:C6	2.69	0.75
31:y:483:C:O5'	31:y:484:G:H3'	1.87	0.75
31:y:529:G:C2'	31:y:530:G:C5'	2.47	0.75
31:y:673:G:C3'	31:y:674:G:H8	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:712:A:H2'	31:y:713:G:C8	2.22	0.75
31:y:1266:G:C5	31:y:1268:A:OP1	2.40	0.75
31:y:1363:A:C1'	31:y:1365:G:N7	2.48	0.75
32:z:71:G:C6	32:z:72:C:C6	2.74	0.75
36:d:48:TYR:O	36:d:50:ALA:N	2.19	0.75
36:d:124:ILE:HG23	36:d:128:PHE:O	1.86	0.75
40:h:117:ALA:O	40:h:121:ALA:HB2	1.87	0.75
42:j:24:GLY:N	42:j:56:LEU:O	2.18	0.75
52:t:41:VAL:HG23	52:t:44:MET:SD	2.26	0.75
1:w:270(Y):G:H3'	1:w:270(Z):G:C8	2.21	0.75
1:w:338:G:H2'	1:w:339:U:C6	2.22	0.75
1:w:449:A:H4'	6:D:79:VAL:HG22	1.69	0.75
1:w:618(B):C:H3'	1:w:619:G:C8	2.20	0.75
1:w:671:C:H5''	12:J:41:ARG:NH1	2.02	0.75
1:w:1276:A:C2	1:w:1294:U:O2	2.40	0.75
1:w:1729:A:N6	1:w:1731:G:C6	2.53	0.75
1:w:1807:G:C2	1:w:1809:A:H5''	2.21	0.75
1:w:2029:G:N2	1:w:2033:A:C5	2.55	0.75
1:w:2358:G:N2	12:J:55:ARG:NH2	2.34	0.75
1:w:2472:G:H3'	1:w:2475:C:H42	1.51	0.75
1:w:2517:C:H6	1:w:2517:C:H5''	1.51	0.75
1:w:2822:G:H8	14:L:2:ARG:HB3	0.99	0.75
2:x:117:G:N3	2:x:117:G:H2'	2.00	0.75
4:B:142:VAL:CG2	4:B:192:THR:O	2.34	0.75
8:F:146:ALA:HA	8:F:149:ARG:CG	2.17	0.75
9:G:125:GLU:CA	9:G:142:VAL:O	2.35	0.75
10:H:25:LYS:HE3	18:P:13:ARG:HH21	1.52	0.75
10:H:75:VAL:HG12	10:H:76:VAL:N	2.01	0.75
10:H:146:TYR:CD2	10:H:147:ALA:N	2.54	0.75
13:K:11:LYS:O	13:K:12:GLN:HB2	1.84	0.75
15:M:87:PHE:CG	15:M:88:ASP:N	2.55	0.75
16:N:107:ASP:HA	16:N:111:ARG:CZ	2.16	0.75
21:S:38:ILE:HG13	21:S:60:PHE:CZ	2.21	0.75
22:T:102:LEU:CD1	22:T:124:ILE:HG22	2.10	0.75
31:y:81:G:H2'	31:y:82:U:H5''	1.68	0.75
31:y:363:A:C5'	45:m:32:ARG:HA	2.16	0.75
31:y:517:G:N2	31:y:532:A:C4'	2.44	0.75
31:y:772:U:C4	31:y:773:G:N7	2.55	0.75
31:y:862:C:O2'	31:y:863:U:H5'	1.84	0.75
31:y:1187:G:H2'	47:o:60:SER:OG	1.86	0.75
31:y:1277:C:H1'	31:y:1282:C:C2	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1326:C:OP1	54:v:12:LYS:NZ	2.19	0.75
31:y:1369:C:OP2	42:j:112:LYS:CB	2.35	0.75
31:y:1371:G:H5''	42:j:69:GLY:CA	2.17	0.75
31:y:1498:UR3:O4	34:l:2:U:C4'	2.32	0.75
35:c:77:ALA:O	35:c:81:VAL:HG23	1.86	0.75
37:e:76:ARG:HH12	37:e:80:GLU:H	1.35	0.75
38:f:92:LYS:HB3	38:f:119:LEU:O	1.87	0.75
41:i:35:ILE:HG22	41:i:39:LEU:CD2	2.17	0.75
47:o:24:CYS:CA	47:o:39:LEU:HA	2.17	0.75
1:w:270(N):U:C5	1:w:270(O):G:N3	2.54	0.75
1:w:378:C:H2'	1:w:379:G:C8	2.21	0.75
1:w:489:G:N2	1:w:491:G:O6	2.18	0.75
1:w:494:G:H5''	19:Q:8:ARG:NH1	2.01	0.75
1:w:577:G:H2'	1:w:578:A:H5'	1.66	0.75
1:w:695:G:OP1	1:w:1569:A:N6	2.20	0.75
1:w:721:C:H2'	1:w:722:A:C8	2.21	0.75
1:w:855:G:N2	23:U:26:TYR:CD1	2.51	0.75
1:w:869:G:H4'	13:K:12:GLN:HE21	1.51	0.75
1:w:885:C:H3'	1:w:886:C:H3'	1.68	0.75
1:w:947:G:H2'	1:w:948:G:C8	2.22	0.75
1:w:1255:U:O2	1:w:1255:U:H2'	1.86	0.75
1:w:1451:C:O5'	1:w:1453:A:C8	2.39	0.75
1:w:1479:G:N2	1:w:1480:G:H1'	2.00	0.75
1:w:1567:A:H5''	4:B:60:ARG:NH2	2.00	0.75
1:w:1798:U:OP2	1:w:1798:U:C6	2.40	0.75
1:w:1907:G:N1	1:w:1923:U:O2	2.17	0.75
1:w:1918:A:H2'	1:w:1919:A:C8	2.21	0.75
1:w:2119:A:C2	1:w:2171:A:O4'	2.39	0.75
1:w:2124:G:O2'	3:A:43:GLU:HG3	1.87	0.75
1:w:2229:C:H2'	1:w:2230:G:C8	2.22	0.75
1:w:2342:C:C4	1:w:2343:C:C5	2.75	0.75
1:w:2562:U:H2'	1:w:2563:U:C5'	2.16	0.75
3:A:30:VAL:CA	3:A:33:LEU:HD12	2.10	0.75
4:B:90:ALA:HB1	4:B:106:ILE:CG2	2.16	0.75
4:B:117:VAL:HG12	4:B:118:VAL:H	1.52	0.75
4:B:117:VAL:HG12	4:B:118:VAL:N	2.02	0.75
6:D:145:GLY:HA2	6:D:167:TRP:CE3	2.22	0.75
6:D:148:SER:HB3	6:D:184:THR:CB	2.17	0.75
6:D:181:ILE:HD11	6:D:185:GLU:O	1.87	0.75
7:E:69:ALA:HB3	7:E:91:ARG:CZ	2.16	0.75
16:N:108:ARG:NH1	31:y:1431:C:P	2.60	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:11:PRO:CA	20:R:28:PHE:HA	2.11	0.75
23:U:27:GLU:HA	23:U:69:PHE:CB	2.17	0.75
31:y:97:U:H2'	31:y:99:C:H6	1.51	0.75
31:y:160:A:H8	31:y:160:A:P	2.08	0.75
31:y:327:A:O2'	31:y:329:A:H5'	1.86	0.75
31:y:443:C:H2'	31:y:444:C:H5'	1.68	0.75
31:y:604:G:C6	31:y:605:U:C4	2.74	0.75
31:y:623:C:O2'	49:q:14:ASN:ND2	2.18	0.75
31:y:650:G:H2'	31:y:651:C:C5'	2.17	0.75
31:y:689:C:H2'	31:y:690:G:C5'	2.13	0.75
31:y:954:G:C8	31:y:954:G:O5'	2.39	0.75
31:y:1103:C:C2'	31:y:1104:G:C1'	2.64	0.75
31:y:1516:G:C2	31:y:1518:MA6:H5''	2.22	0.75
36:d:92:ALA:CA	36:d:98:ASN:HA	2.16	0.75
38:f:43:LEU:O	38:f:43:LEU:HD22	1.86	0.75
38:f:77:PRO:HD2	38:f:91:LEU:HD11	1.67	0.75
42:j:111:ARG:HG3	42:j:112:LYS:N	2.02	0.75
46:n:5:ALA:HB3	46:n:8:GLU:OE2	1.86	0.75
46:n:93:ARG:O	46:n:94:ARG:CG	2.33	0.75
49:q:23:ASP:HB3	49:q:26:ARG:CG	2.17	0.75
49:q:81:ARG:O	49:q:82:GLN:HB2	1.87	0.75
52:t:41:VAL:CG2	52:t:44:MET:SD	2.75	0.75
1:w:23:G:N2	1:w:517:C:O2	2.19	0.75
1:w:58:G:N3	1:w:73:A:H2	1.82	0.75
1:w:154:G:H2'	1:w:155:C:O4'	1.87	0.75
1:w:184:C:N3	1:w:213:A:C2	2.54	0.75
1:w:253:C:C2'	1:w:254:G:C5'	2.59	0.75
1:w:565:C:OP1	18:P:80:GLN:OE1	2.05	0.75
1:w:969:U:C2'	1:w:970:C:C6	2.70	0.75
1:w:1081:U:O2'	1:w:1082:U:C6	2.38	0.75
1:w:1101:U:C2	1:w:1102:C:C6	2.75	0.75
1:w:1240:U:O2'	1:w:1241:A:H5'	1.86	0.75
1:w:1363:C:H2'	1:w:1364:G:O4'	1.86	0.75
1:w:1446:C:O2	1:w:154(B):C:OP2	2.05	0.75
1:w:1793:C:H1'	1:w:1970:A:C2	2.22	0.75
1:w:2063:C:H2'	1:w:2064:C:H5'	1.66	0.75
1:w:2111:C:H41	1:w:2144:U:C4'	1.97	0.75
1:w:2311:A:P	1:w:2312:U:C5	2.80	0.75
1:w:2638:G:O2'	1:w:2775:A:N1	2.19	0.75
1:w:2695:C:H2'	1:w:2696:U:C6	2.22	0.75
3:A:7:ARG:HH11	3:A:7:ARG:HB2	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:20:ALA:CB	11:I:73:ASP:CB	2.61	0.75
7:E:110:ALA:O	7:E:113:ARG:HG3	1.85	0.75
9:G:78:THR:HA	9:G:143:SER:O	1.87	0.75
10:H:27:TYR:CZ	17:O:100:VAL:HG22	2.22	0.75
11:I:114:ILE:HG13	11:I:115:VAL:N	2.01	0.75
15:M:71:ARG:CG	15:M:104:GLY:O	2.34	0.75
16:N:100:TYR:HB2	16:N:101:PHE:CE2	2.22	0.75
16:N:123:LYS:NZ	16:N:123:LYS:CB	2.48	0.75
24:V:60:PHE:CD1	24:V:87:PRO:CB	2.58	0.75
31:y:200:G:H2'	31:y:201:C:C6	2.21	0.75
31:y:428:G:C4'	31:y:429:U:OP1	2.33	0.75
31:y:467:G:C8	31:y:468:A:N7	2.55	0.75
31:y:914:A:H2'	31:y:915:A:O5'	1.87	0.75
35:c:102:LEU:CD1	35:c:176:GLU:CB	2.61	0.75
36:d:70:VAL:HG11	36:d:76:VAL:HG21	1.67	0.75
36:d:118:GLN:N	36:d:187:ALA:HB2	2.00	0.75
37:e:8:VAL:N	37:e:22:LYS:HE3	2.02	0.75
37:e:57:ARG:NH2	38:f:107:ARG:HB3	2.02	0.75
38:f:11:ILE:H	38:f:32:VAL:HG12	1.51	0.75
39:g:74:ASP:O	39:g:77:ARG:HB2	1.87	0.75
40:h:22:LEU:H	40:h:22:LEU:HD23	1.51	0.75
40:h:88:PRO:HD3	40:h:151:TYR:CD1	2.22	0.75
41:i:104:ARG:NH1	41:i:104:ARG:HA	2.02	0.75
45:m:59:LEU:HD13	45:m:61:SER:H	1.47	0.75
48:p:32:LEU:O	48:p:63:ARG:NH2	2.19	0.75
48:p:47:LYS:HZ2	48:p:47:LYS:HB2	1.51	0.75
50:r:21:VAL:O	50:r:41:LYS:HG2	1.87	0.75
1:w:63:U:H6	1:w:63:U:O5'	1.69	0.75
1:w:124:G:N3	28:Z:19:ARG:NH2	2.35	0.75
1:w:246:C:O5'	1:w:246:C:H6	1.70	0.75
1:w:270(X):G:C8	1:w:270(Y):G:C8	2.75	0.75
1:w:289:A:N3	1:w:289:A:C5'	2.50	0.75
1:w:526:A:O2'	1:w:2043:C:H2'	1.87	0.75
1:w:528:A:H2	1:w:2043:C:P	2.10	0.75
1:w:696:G:N2	1:w:767:U:C1'	2.45	0.75
1:w:828:U:H4'	1:w:831:G:N1	2.01	0.75
1:w:1284:A:C5	1:w:1285:G:N3	2.54	0.75
1:w:2032:G:C6	1:w:2454:G:H4'	2.22	0.75
1:w:2625:G:C5	1:w:2626:C:C4	2.75	0.75
1:w:2652:C:C2	1:w:2653:U:C5	2.75	0.75
1:w:2731:G:N2	1:w:2732:G:C2	2.55	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2758:A:C2'	1:w:2759:G:H5''	2.16	0.75
1:w:2792:G:H2'	1:w:2793:G:C8	2.21	0.75
1:w:2839:G:H5'	14:L:46:GLY:HA3	1.67	0.75
1:w:2876:G:OP2	16:N:1:MET:HB3	1.86	0.75
4:B:99:ASP:CG	4:B:101:GLU:HB2	2.11	0.75
5:C:141:ILE:H	5:C:141:ILE:HD13	1.52	0.75
6:D:92:TYR:HB3	6:D:94:TYR:CE2	2.20	0.75
6:D:165:LEU:O	6:D:165:LEU:CD2	2.35	0.75
8:F:7:LEU:O	8:F:50:VAL:HB	1.87	0.75
9:G:127:VAL:CA	9:G:141:LYS:HE3	2.17	0.75
11:I:64:ARG:CB	11:I:102:VAL:HG11	2.14	0.75
13:K:59:ARG:HG2	13:K:60:ARG:H	1.52	0.75
14:L:79:LEU:C	14:L:80:PHE:HD2	1.93	0.75
15:M:23:ARG:HG3	15:M:24:LEU:H	1.52	0.75
15:M:40:ILE:HG12	15:M:47:THR:HA	1.68	0.75
16:N:30:VAL:O	16:N:85:LYS:HG2	1.86	0.75
17:O:5:LYS:HZ1	17:O:7:GLY:HA2	1.52	0.75
17:O:59:ARG:O	17:O:62:ILE:HB	1.87	0.75
19:Q:28:SER:C	19:Q:71:VAL:HG23	2.10	0.75
21:S:65:ALA:CB	21:S:66:PRO:HD3	2.16	0.75
22:T:110:GLY:HA3	22:T:146:ILE:HG23	1.68	0.75
23:U:47:PRO:HA	23:U:51:VAL:HB	1.67	0.75
31:y:36:C:C2	31:y:37:U:O4	2.40	0.75
31:y:189:U:O5'	31:y:189:U:H6	1.68	0.75
31:y:389:A:H3'	31:y:390:C:C5	2.21	0.75
31:y:450:G:H4'	49:q:42:ARG:HH22	1.49	0.75
31:y:695:A:OP1	44:l:53:SER:HB2	1.86	0.75
31:y:745:C:C5'	31:y:851:G:H1'	2.15	0.75
31:y:991:U:O2	31:y:1213:A:N7	2.19	0.75
31:y:1066:C:H3'	31:y:1067:A:H8	1.47	0.75
31:y:1335:C:H5'	31:y:1336:C:OP1	1.87	0.75
36:d:87:LEU:HD12	36:d:88:ARG:CA	2.17	0.75
36:d:125:GLU:HB2	36:d:190:ARG:O	1.87	0.75
38:f:93:PRO:CG	41:i:105:ARG:HD3	2.17	0.75
41:i:69:ARG:HG2	41:i:74:PRO:CA	2.15	0.75
42:j:11:LYS:HB3	42:j:72:GLY:HA3	1.67	0.75
44:l:51:LYS:C	44:l:55:LYS:HG3	2.11	0.75
45:m:32:ARG:HG2	45:m:33:ARG:H	1.52	0.75
45:m:41:THR:N	45:m:54:VAL:HG22	2.01	0.75
49:q:1:MET:CA	49:q:65:GLN:HB2	2.17	0.75
50:r:10:VAL:HG23	50:r:54:GLY:N	2.02	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:61:G:H2'	1:w:62:C:H6	1.50	0.74
1:w:247:G:H4'	1:w:386:G:N1	2.01	0.74
1:w:585:G:O3'	1:w:586:A:H8	1.70	0.74
1:w:602:G:O2'	1:w:655:A:C2	2.40	0.74
1:w:1015:G:C6	1:w:1016:G:C6	2.75	0.74
1:w:1124:C:H1'	30:b:36:GLN:NE2	2.02	0.74
1:w:1373:A:H2'	1:w:1374:G:O4'	1.87	0.74
1:w:1430:C:OP2	1:w:1430:C:H6	1.70	0.74
1:w:1800:C:H1'	1:w:1802:A:C1'	2.16	0.74
1:w:1802:A:C2'	1:w:1803:A:H5'	2.17	0.74
1:w:1870:C:N3	1:w:1871:A:C6	2.54	0.74
1:w:1911:U:N1	1:w:1919:A:N6	2.35	0.74
1:w:2320:A:C4	1:w:2333:A:C5	2.75	0.74
1:w:2342:C:N3	1:w:2343:C:C6	2.55	0.74
1:w:2358:G:H1	1:w:2359:C:N4	1.84	0.74
1:w:2373:G:H2'	1:w:2374:C:H6	1.43	0.74
1:w:2559:C:C2'	1:w:2560:C:H5'	2.17	0.74
1:w:2641:G:C6	1:w:2642:G:C5	2.75	0.74
1:w:2747:G:H1'	1:w:2757:A:N6	2.01	0.74
1:w:2790:A:C4'	1:w:2893:G:H21	1.93	0.74
1:w:2858:C:N4	1:w:2859:G:C5	2.55	0.74
4:B:177:LEU:O	4:B:179:SER:N	2.20	0.74
4:B:227:ASN:HB3	4:B:228:PRO:HD2	1.68	0.74
5:C:172:VAL:HG22	5:C:184:VAL:HG11	1.69	0.74
6:D:176:LEU:HD11	6:D:178:VAL:HG13	1.68	0.74
7:E:41:GLN:HE21	7:E:155:MET:HA	1.52	0.74
7:E:44:GLY:O	7:E:84:LYS:HG3	1.87	0.74
7:E:77:ILE:HB	7:E:86:MET:HE1	1.69	0.74
10:H:29:PRO:CG	10:H:64:ASP:HB3	2.16	0.74
10:H:78:VAL:HA	10:H:146:TYR:CD2	2.21	0.74
13:K:60:ARG:HD2	13:K:61:GLY:N	2.02	0.74
13:K:133:ARG:HE	13:K:134:ARG:N	1.85	0.74
16:N:28:VAL:HG21	16:N:46:GLU:HA	1.69	0.74
16:N:87:ASP:OD2	16:N:90:GLN:HG3	1.87	0.74
16:N:93:ARG:NH2	16:N:118:ARG:HG2	2.01	0.74
17:O:44:ASN:O	17:O:48:ALA:HB3	1.86	0.74
18:P:24:LYS:HA	18:P:94:LEU:CG	2.17	0.74
20:R:89:ILE:HG23	20:R:89:ILE:O	1.86	0.74
22:T:19:ARG:HH21	22:T:25:PRO:CB	2.00	0.74
24:V:51:VAL:CB	24:V:60:PHE:H	1.97	0.74
25:W:22:GLU:HA	25:W:25:VAL:CG1	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:18:C:C6	31:y:1079:G:N2	2.55	0.74
31:y:253:U:C4'	31:y:276:G:C1'	2.64	0.74
31:y:557:G:C6	31:y:558:G:C2	2.75	0.74
31:y:580:U:H2'	31:y:581:G:H8	1.51	0.74
31:y:707:C:H2'	31:y:708:C:H6	1.51	0.74
31:y:783:C:O2'	31:y:784:C:H5'	1.87	0.74
31:y:1003:G:N2	31:y:1004:A:O2'	2.20	0.74
31:y:1011:G:H2'	31:y:1012:U:H6	1.52	0.74
31:y:1037:C:H2'	31:y:1038:C:C6	2.20	0.74
31:y:1114:C:H2'	31:y:1115:C:O4'	1.87	0.74
31:y:1147:C:H2'	31:y:1148:U:O4'	1.87	0.74
31:y:1207:2MG:C3'	31:y:1208:C:C5	2.70	0.74
31:y:1215:G:H2'	31:y:1216:G:C8	2.22	0.74
31:y:1279:A:N3	31:y:1279:A:C3'	2.50	0.74
31:y:1379:G:H2'	31:y:1381:U:H5	1.51	0.74
32:z:59:U:O5'	32:z:59:U:H6	1.70	0.74
35:c:11:LEU:HG	35:c:12:GLU:H	1.50	0.74
35:c:187:LEU:HD21	35:c:203:GLY:H	1.51	0.74
37:e:187:ARG:HH11	37:e:187:ARG:HG2	1.51	0.74
38:f:43:LEU:CD1	38:f:43:LEU:H	2.00	0.74
38:f:142:LEU:C	38:f:143:ARG:HE	1.95	0.74
50:r:17:LYS:O	50:r:45:HIS:CD2	2.38	0.74
1:w:64:A:C5	1:w:65:C:N4	2.55	0.74
1:w:76:C:H2'	1:w:77:C:C6	2.22	0.74
1:w:125:G:C1'	28:Z:13:ALA:HB1	2.17	0.74
1:w:387:U:H4'	1:w:388:G:O4'	1.86	0.74
1:w:546:C:H3'	1:w:547:A:H8	1.51	0.74
1:w:591:C:H3'	1:w:592:G:H8	1.50	0.74
1:w:597:U:H2'	1:w:598:G:N7	2.02	0.74
1:w:618(A):G:C2	1:w:618(B):C:N3	2.54	0.74
1:w:661:C:C2'	1:w:662:G:H5'	2.17	0.74
1:w:711:G:C2	1:w:712:G:C8	2.74	0.74
1:w:1270:C:C5'	1:w:1271:G:H5'	2.16	0.74
1:w:1378:A:O2'	1:w:1379:A:C8	2.39	0.74
1:w:1403:C:O2'	1:w:1471:A:H1'	1.86	0.74
1:w:1423:G:C2'	1:w:1424:G:C8	2.69	0.74
1:w:1458:C:H5''	1:w:1459:G:O5'	1.86	0.74
1:w:1651:G:N2	1:w:2007:C:N4	2.35	0.74
1:w:1653:G:H2'	14:L:9:LYS:HZ3	1.49	0.74
1:w:1695:G:H3'	1:w:1696:G:C8	2.22	0.74
1:w:1910:G:C5	1:w:1921:G:C2	2.75	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1986:A:H3'	1:w:1987:G:C5'	2.17	0.74
1:w:2164:C:C4	1:w:2165:G:N7	2.54	0.74
1:w:2263:C:H3'	1:w:2263:C:C6	2.22	0.74
1:w:2297:C:C2'	1:w:2298:A:H8	2.01	0.74
1:w:2324:C:O2'	1:w:2337:G:H5''	1.85	0.74
1:w:2352:A:H2	23:U:33:ALA:HB3	1.52	0.74
1:w:2358:G:H22	12:J:55:ARG:NH2	1.85	0.74
1:w:2462:U:C6	1:w:2491:U:O4	2.40	0.74
1:w:2835:A:N6	1:w:2878:U:H3'	2.03	0.74
2:x:42:C:C4'	7:E:68:PRO:HA	2.16	0.74
5:C:109:LYS:O	5:C:161:GLY:HA3	1.87	0.74
6:D:120:LEU:CD1	6:D:123:ALA:HB2	2.15	0.74
7:E:96:ARG:HD3	7:E:97:ASP:H	1.48	0.74
11:I:65:THR:CB	11:I:82:ASN:HD22	2.01	0.74
13:K:25:ASP:CB	13:K:102:VAL:HG23	2.17	0.74
13:K:124:LYS:NZ	13:K:125:LEU:HD23	2.01	0.74
14:L:44:LEU:HD13	14:L:47:PHE:CE2	2.22	0.74
16:N:121:ILE:CG2	16:N:122:ASP:N	2.50	0.74
17:O:40:PHE:HB3	18:P:78:LYS:CE	2.18	0.74
19:Q:85:VAL:HG13	19:Q:95:ILE:HG12	1.67	0.74
22:T:85:HIS:CD2	22:T:86:VAL:N	2.54	0.74
22:T:101:PRO:HB2	22:T:136:PHE:CB	2.17	0.74
25:W:51:ARG:O	25:W:55:ARG:CZ	2.35	0.74
31:y:122:G:C2	31:y:123:C:C2	2.74	0.74
31:y:216:G:H2'	31:y:217:C:C6	2.22	0.74
31:y:542:G:C6	31:y:543:C:N4	2.54	0.74
31:y:584:G:N2	31:y:585:G:H1'	2.03	0.74
31:y:765:G:C8	31:y:812:C:N4	2.55	0.74
31:y:892:A:N6	31:y:906:G:H1'	2.02	0.74
31:y:992:U:C2'	31:y:993:G:OP2	2.34	0.74
31:y:1104:G:H2'	31:y:1105:A:H8	1.52	0.74
31:y:1228:C:H5'	46:n:114:ARG:CD	2.17	0.74
31:y:1307:U:H2'	31:y:1308:U:C6	2.21	0.74
31:y:1331:G:OP2	31:y:1331:G:C8	2.40	0.74
31:y:1409:C:H2'	31:y:1410:G:H5'	1.69	0.74
31:y:1424:C:OP2	31:y:1424:C:C5	2.40	0.74
31:y:1428:A:H2'	31:y:1429:C:C5	2.21	0.74
35:c:23:ARG:NH2	35:c:40:HIS:CE1	2.54	0.74
35:c:72:GLY:C	35:c:81:VAL:HG21	2.12	0.74
35:c:233:SER:HB3	35:c:234:PRO:HD2	1.68	0.74
36:d:124:ILE:HD13	36:d:128:PHE:HB3	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:72:GLN:NE2	38:f:72:GLN:N	2.34	0.74
38:f:76:ILE:HG23	38:f:77:PRO:HD2	1.69	0.74
40:h:115:ARG:N	40:h:119:ARG:HD2	2.01	0.74
50:r:15:MET:H	50:r:15:MET:CE	1.98	0.74
50:r:16:GLN:O	50:r:17:LYS:HG2	1.87	0.74
50:r:100:LYS:HD2	50:r:101:ARG:HG3	1.67	0.74
1:w:64:A:H5''	20:R:63:LYS:CD	2.17	0.74
1:w:153:C:N3	1:w:154:G:N7	2.35	0.74
1:w:363(G):A:H2'	1:w:364:C:H5	1.52	0.74
1:w:457:A:H1'	1:w:459:U:C5	2.23	0.74
1:w:482:A:H4'	1:w:483:A:H5''	1.69	0.74
1:w:610:C:H2'	1:w:611:C:C6	2.22	0.74
1:w:670:A:H4'	1:w:671:C:C5'	2.17	0.74
1:w:755:C:C4	1:w:756:C:N4	2.55	0.74
1:w:985:C:H2'	1:w:986:C:H5	1.52	0.74
1:w:1194:A:C5	1:w:1195:G:N7	2.55	0.74
1:w:1516:U:O2'	1:w:1517:G:C8	2.39	0.74
1:w:1636:C:H2'	1:w:1637:A:C8	2.22	0.74
1:w:1665:A:OP2	1:w:1665:A:C8	2.37	0.74
1:w:2308:G:C8	1:w:2310:A:N6	2.54	0.74
1:w:2677:G:C5	1:w:2678:C:C4	2.75	0.74
1:w:2840:C:O2'	14:L:91:GLN:NE2	2.19	0.74
2:x:44:G:H1'	2:x:46:A:H62	1.51	0.74
3:A:49:GLY:N	3:A:211:ARG:HH12	1.85	0.74
5:C:102:VAL:CG1	5:C:200:GLU:HA	2.17	0.74
6:D:125:ALA:HB1	6:D:134:PHE:HA	1.69	0.74
8:F:162:ILE:HD13	8:F:163:TYR:N	2.02	0.74
9:G:123:LEU:H	9:G:123:LEU:HD22	1.52	0.74
13:K:3:MET:N	13:K:4:PRO:HD3	2.01	0.74
13:K:56:ARG:C	13:K:58:PHE:H	1.94	0.74
13:K:58:PHE:HB3	13:K:61:GLY:O	1.86	0.74
16:N:66:VAL:O	16:N:68:TYR:N	2.21	0.74
19:Q:66:GLU:HG2	19:Q:67:ASP:H	1.52	0.74
22:T:130:PRO:O	22:T:133:ILE:HG12	1.86	0.74
26:X:40:THR:C	26:X:44:ARG:HD3	2.12	0.74
26:X:43:ILE:CD1	26:X:43:ILE:N	2.47	0.74
27:Y:38:ALA:CB	27:Y:49:CYS:N	2.48	0.74
27:Y:40:LYS:NZ	27:Y:50:GLY:O	2.20	0.74
31:y:872:A:O2'	31:y:873:A:C3'	2.36	0.74
31:y:889:A:C5'	31:y:891:U:C6	2.68	0.74
31:y:948:C:OP2	46:n:106:ASN:OD1	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:965:A:O2'	31:y:966:M2G:P	2.44	0.74
31:y:1040:U:H2'	31:y:1041:A:C8	2.21	0.74
31:y:1074:G:C2	31:y:1075:C:C5	2.75	0.74
31:y:1326:C:O3'	54:v:19:GLY:HA3	1.86	0.74
31:y:1453:G:H2'	31:y:1454:G:O4'	1.88	0.74
33:0:18:G:N1	33:0:57:G:N1	2.34	0.74
36:d:32:LEU:HD12	36:d:33:LEU:HD22	1.67	0.74
40:h:111:ARG:HH11	40:h:119:ARG:HA	1.50	0.74
44:l:27:ASN:HB2	44:l:55:LYS:HD3	1.69	0.74
46:n:54:VAL:HG23	46:n:55:ARG:H	1.51	0.74
1:w:10:G:N2	1:w:2629:A:C6	2.54	0.74
1:w:173:G:H3'	1:w:174:C:C6	2.22	0.74
1:w:379:G:C2	1:w:396:G:C6	2.75	0.74
1:w:465:G:OP1	28:Z:12:ARG:NH2	2.20	0.74
1:w:1069:A:H4'	1:w:1070:A:H5''	1.69	0.74
1:w:1153:C:C5'	17:O:76:TYR:OH	2.35	0.74
1:w:1938:A:H5'	1:w:1939:U:OP2	1.88	0.74
1:w:2298:A:C1'	1:w:2321:G:N2	2.51	0.74
1:w:2367:G:H8	1:w:2367:G:O5'	1.71	0.74
1:w:2567:G:C6	1:w:2568:C:C5	2.75	0.74
1:w:2652:C:N3	1:w:2653:U:C4	2.55	0.74
1:w:2714:G:C2	1:w:2715:C:C4	2.76	0.74
1:w:2843:G:H3'	1:w:2844:G:H8	1.51	0.74
4:B:60:ARG:HD3	4:B:86:PRO:HB2	1.68	0.74
4:B:65:ILE:HD12	4:B:105:ILE:HG13	1.70	0.74
4:B:78:LYS:HA	4:B:116:GLN:HA	1.69	0.74
4:B:130:ALA:HB1	4:B:190:TYR:CZ	2.22	0.74
5:C:78:LEU:C	5:C:79:ARG:HE	1.95	0.74
6:D:119:LEU:HB2	6:D:189:MET:N	2.03	0.74
8:F:89:ILE:HA	8:F:162:ILE:HG12	1.69	0.74
9:G:79:ILE:HG23	9:G:80:PRO:HD2	1.68	0.74
10:H:49:LEU:O	10:H:52:LYS:HD2	1.87	0.74
11:I:10:VAL:HG21	11:I:17:ARG:HA	1.69	0.74
12:J:97:PRO:HD2	12:J:126:VAL:CG2	2.18	0.74
13:K:7:MET:HB2	13:K:8:LYS:NZ	2.03	0.74
17:O:80:ILE:O	17:O:83:LEU:HB3	1.87	0.74
17:O:110:VAL:O	17:O:114:LYS:HG2	1.86	0.74
19:Q:21:VAL:O	19:Q:25:ARG:CG	2.35	0.74
26:X:9:VAL:HG12	26:X:32:GLN:CA	2.17	0.74
30:b:14:CYS:HA	30:b:27:CYS:N	2.03	0.74
31:y:17:U:H1'	31:y:1080:A:C1'	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:918:A:C5	31:y:919:A:C5	2.75	0.74
31:y:1104:G:C4'	35:c:111:ARG:NH2	2.41	0.74
31:y:1293:G:O2'	31:y:1294:G:O4'	2.05	0.74
31:y:1503:A:O2'	31:y:1504:G:O5'	2.05	0.74
35:c:52:GLU:O	35:c:56:ARG:HD3	1.86	0.74
36:d:88:ARG:HA	36:d:101:LEU:HD21	1.69	0.74
36:d:110:ASN:HD22	36:d:141:VAL:CA	2.01	0.74
37:e:64:LEU:HD22	37:e:198:VAL:HB	1.68	0.74
38:f:122:GLU:C	38:f:123:LEU:HD22	2.12	0.74
39:g:7:ASN:HA	39:g:62:TRP:HA	1.69	0.74
39:g:51:PRO:HA	39:g:56:PRO:CB	2.16	0.74
42:j:10:ARG:HG2	42:j:11:LYS:H	1.52	0.74
47:o:23:ARG:HD3	47:o:24:CYS:N	2.02	0.74
49:q:68:ASP:O	49:q:71:ARG:HB3	1.88	0.74
53:u:80:ARG:NE	53:u:80:ARG:HA	2.02	0.74
1:w:64:A:H5''	20:R:63:LYS:CG	2.18	0.74
1:w:533:G:O2'	17:O:42:ALA:CA	2.35	0.74
1:w:722:A:C4	1:w:723:G:C8	2.74	0.74
1:w:874:G:H3'	1:w:875:G:C8	2.23	0.74
1:w:948:G:H2'	1:w:949:C:H6	1.53	0.74
1:w:993:G:OP1	17:O:50:ARG:HD2	1.88	0.74
1:w:1624:G:H2'	1:w:1625:C:C5	2.22	0.74
1:w:1702:G:C2'	1:w:1703:G:H5''	2.16	0.74
1:w:1996:C:H4'	1:w:1997:G:OP1	1.87	0.74
1:w:2094:G:H4'	9:G:25:TYR:CZ	2.22	0.74
1:w:2308:G:H5''	1:w:2310:A:H62	1.52	0.74
1:w:2512:C:C6	1:w:2512:C:C3'	2.70	0.74
1:w:2783:G:H2'	1:w:2784:C:C5	2.22	0.74
1:w:2839:G:O2'	14:L:92:GLY:HA2	1.88	0.74
4:B:31:LYS:CD	4:B:32:SER:H	2.00	0.74
5:C:59:VAL:HG11	5:C:63:LEU:HB2	1.69	0.74
6:D:163:ARG:HG3	6:D:164:ASN:N	2.00	0.74
8:F:17:VAL:HG21	8:F:44:VAL:HG23	1.68	0.74
9:G:4:ILE:CG1	9:G:18:VAL:HG22	2.17	0.74
9:G:48:GLU:HA	9:G:51:ILE:HD12	1.67	0.74
11:I:22:ILE:HG13	11:I:23:ARG:H	1.50	0.74
11:I:69:VAL:HG12	11:I:77:ILE:N	2.01	0.74
19:Q:75:TYR:CE1	19:Q:77:ASP:HB2	2.23	0.74
31:y:38:G:H1'	31:y:397:A:H61	1.51	0.74
31:y:241:C:O2'	31:y:242:C:H5'	1.87	0.74
31:y:284:G:H2'	31:y:285:G:O4'	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:714:G:C4'	31:y:775:G:O2'	2.33	0.74
31:y:781:A:O3'	31:y:1522:U:O2'	2.06	0.74
31:y:810:C:H2'	31:y:811:C:C5	2.22	0.74
31:y:102(C):C:C2	31:y:1029:G:C8	2.75	0.74
31:y:1497:G:H5''	31:y:1497:G:C8	2.22	0.74
32:z:54:5MU:C3'	32:z:55:PSU:H5'	2.16	0.74
40:h:34:GLY:O	40:h:35:LYS:HG2	1.87	0.74
40:h:43:PHE:CD1	40:h:44:TYR:N	2.55	0.74
40:h:118:VAL:O	40:h:119:ARG:C	2.27	0.74
42:j:103:THR:CG2	42:j:104:ARG:H	1.97	0.74
46:n:24:GLY:C	46:n:25:ILE:HD13	2.13	0.74
52:t:40:ILE:HG13	52:t:70:LYS:CA	2.18	0.74
1:w:64:A:C4'	20:R:63:LYS:HD2	2.17	0.74
1:w:126:A:C4	28:Z:18:PHE:CE2	2.76	0.74
1:w:129:C:H5'	1:w:1599:C:H1'	1.69	0.74
1:w:273(F):U:N3	1:w:363(B):A:C2	2.53	0.74
1:w:494:G:H5''	19:Q:8:ARG:HH12	1.53	0.74
1:w:541:C:H2'	1:w:542:C:C5	2.22	0.74
1:w:1131:G:C2	1:w:1132:A:C5	2.75	0.74
1:w:1201:C:H4'	6:D:40:ARG:NH2	2.03	0.74
1:w:1224:C:O2'	18:P:88:ARG:O	2.05	0.74
1:w:1249:U:H2'	1:w:1250:G:C4'	2.18	0.74
1:w:1319:G:H3'	1:w:1320:C:C6	2.22	0.74
1:w:1480:G:N2	1:w:1514:U:H1'	2.03	0.74
1:w:1685:C:H2'	1:w:1686:C:C6	2.23	0.74
1:w:1809:A:H2'	1:w:1809:A:N3	2.03	0.74
1:w:1838:C:H41	1:w:1898:U:H2'	0.91	0.74
1:w:1847:A:OP1	1:w:1847:A:C3'	2.32	0.74
1:w:2275:C:HO2'	13:K:83:MET:HB2	1.50	0.74
1:w:2298:A:H62	1:w:2318:G:H21	1.34	0.74
1:w:2569:G:C2	1:w:2570:G:C8	2.75	0.74
1:w:2714:G:C8	1:w:2714:G:O5'	2.40	0.74
1:w:2740:A:OP2	1:w:2763:G:N1	2.18	0.74
1:w:2799:A:H8	1:w:2799:A:P	2.11	0.74
2:x:104:A:H5''	22:T:72:ARG:HH21	1.50	0.74
2:x:114:G:O2'	15:M:50:SER:N	2.20	0.74
4:B:78:LYS:HB3	4:B:116:GLN:CD	2.10	0.74
4:B:144:ALA:HB3	4:B:192:THR:HG22	1.68	0.74
6:D:119:LEU:HB2	6:D:189:MET:H	1.52	0.74
6:D:156:GLU:HA	6:D:159:ARG:CD	2.17	0.74
8:F:8:PRO:CB	8:F:49:VAL:HG13	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:4:ILE:C	9:G:37:VAL:HB	2.12	0.74
9:G:26:ALA:O	9:G:32:PRO:HD2	1.86	0.74
9:G:127:VAL:HA	9:G:141:LYS:CD	2.17	0.74
9:G:128:LEU:CB	9:G:140:LEU:O	2.36	0.74
10:H:76:VAL:HG12	10:H:77:VAL:N	2.02	0.74
10:H:89:LYS:O	10:H:110:LEU:HG	1.86	0.74
10:H:113:MET:HG3	10:H:121:VAL:CG1	2.13	0.74
12:J:90:ARG:HE	12:J:91:PHE:HB3	1.53	0.74
12:J:91:PHE:HZ	12:J:99:LEU:HD21	1.53	0.74
15:M:68:GLN:C	15:M:70:GLY:H	1.96	0.74
18:P:42:GLY:C	18:P:47:VAL:HG11	2.12	0.74
20:R:50:LYS:HE2	20:R:51:VAL:H	1.51	0.74
23:U:66:VAL:C	23:U:81:VAL:HG13	2.13	0.74
24:V:36:GLY:C	24:V:39:LYS:HZ1	1.95	0.74
31:y:37:U:O4'	45:m:116:ARG:NH2	2.21	0.74
31:y:74:C:C4	31:y:75:C:N4	2.55	0.74
31:y:301:G:H5'	50:r:31:LEU:HD23	1.69	0.74
31:y:330:C:H2'	31:y:331:G:O4'	1.87	0.74
31:y:489:C:O5'	31:y:489:C:H6	1.69	0.74
31:y:659:U:O5'	31:y:659:U:C6	2.41	0.74
31:y:724:G:H2'	31:y:725:G:C8	2.22	0.74
31:y:975:A:C5'	31:y:976:G:H5''	2.16	0.74
31:y:1404:5MC:N4	31:y:1497:G:O6	2.19	0.74
32:z:24:G:C6	32:z:25:C:C2	2.75	0.74
33:0:29:A:C2	33:0:41:U:N3	2.55	0.74
35:c:178:ARG:HD3	35:c:197:VAL:HG12	1.68	0.74
38:f:44:GLY:CA	38:f:62:ALA:HB2	2.18	0.74
40:h:123:GLU:CA	40:h:126:ASP:CG	2.48	0.74
46:n:67:GLU:N	46:n:70:LEU:HG	2.02	0.74
50:r:57:VAL:HA	50:r:77:VAL:H	1.52	0.74
1:w:89:G:H3'	1:w:90:U:H6	1.52	0.74
1:w:356:G:H2'	1:w:357:A:C5'	2.17	0.74
1:w:404:C:H1'	1:w:406:G:N7	2.02	0.74
1:w:467:G:H2'	1:w:468:G:O4'	1.88	0.74
1:w:566:U:C6	1:w:566:U:H3'	2.22	0.74
1:w:646:A:OP2	1:w:646:A:H8	1.70	0.74
1:w:992:C:H2'	1:w:993:G:H5'	1.68	0.74
1:w:1023:U:C5	1:w:1024:G:C2	2.76	0.74
1:w:1028:A:OP2	1:w:1126:A:N6	2.20	0.74
1:w:1696:G:OP2	1:w:1696:G:H8	1.69	0.74
1:w:1778:U:O4	1:w:1784:A:H1'	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1799:G:C4'	1:w:1800:C:H6	2.00	0.74
1:w:2133:G:H2'	1:w:2157:G:N2	2.03	0.74
1:w:2229:C:O2	24:V:47:GLN:NE2	2.18	0.74
1:w:2599:G:H2'	1:w:2600:A:C8	2.22	0.74
1:w:2643:G:C8	1:w:2643:G:OP2	2.40	0.74
1:w:2722:G:H4'	14:L:4:LEU:CD1	2.17	0.74
1:w:2824:C:H3'	1:w:2825:G:N7	2.03	0.74
4:B:133:LEU:HD12	4:B:173:VAL:HG21	1.69	0.74
5:C:35:GLN:CB	5:C:48:GLN:OE1	2.35	0.74
6:D:15:LEU:HD13	6:D:19:LEU:HD21	1.69	0.74
6:D:52:VAL:O	6:D:52:VAL:HG13	1.87	0.74
7:E:139:LEU:HD13	7:E:139:LEU:H	1.53	0.74
10:H:138:ARG:HA	10:H:141:LYS:CE	2.09	0.74
12:J:75:ILE:CD1	12:J:77:ARG:HH12	2.00	0.74
14:L:37:THR:OG1	14:L:40:LYS:CE	2.35	0.74
15:M:57:LYS:HG3	15:M:58:LEU:N	2.03	0.74
17:O:94:ASN:H	17:O:94:ASN:HD22	1.35	0.74
23:U:24:LYS:HE2	23:U:37:LEU:O	1.86	0.74
26:X:8:LEU:CA	26:X:54:VAL:HA	2.10	0.74
31:y:33:A:H5''	31:y:364:A:O2'	1.88	0.74
31:y:62:U:H5''	31:y:385:C:H1'	1.69	0.74
31:y:95:G:O2'	31:y:96:G:C8	2.40	0.74
31:y:573:A:C2'	31:y:574:A:H8	1.97	0.74
31:y:653:A:N1	41:i:56:LYS:HA	2.02	0.74
31:y:668:G:H2'	31:y:669:U:C6	2.22	0.74
31:y:796:C:H2'	31:y:797:C:H5'	1.69	0.74
31:y:1007:C:H2'	31:y:1008:C:O4'	1.87	0.74
31:y:1165:C:C2'	31:y:1166:G:C8	2.71	0.74
31:y:1347:G:H1'	31:y:1348:U:C5	2.22	0.74
31:y:1468:A:H2'	31:y:1469:G:C4'	2.17	0.74
35:c:134:GLU:O	35:c:137:ARG:CD	2.35	0.74
37:e:31:CYS:CB	37:e:34:GLU:CB	2.64	0.74
37:e:31:CYS:O	37:e:33:MET:CE	2.34	0.74
37:e:32:ALA:HB3	37:e:33:MET:CE	2.16	0.74
37:e:57:ARG:HH21	38:f:107:ARG:CG	2.00	0.74
37:e:94:LEU:HD23	37:e:200:GLU:HG3	1.69	0.74
37:e:101:LEU:HD11	37:e:138:TYR:HB3	1.69	0.74
41:i:68:ARG:CZ	41:i:74:PRO:HG3	2.17	0.74
53:u:75:ASN:O	53:u:78:ALA:HB3	1.87	0.74
1:w:220:G:C2'	1:w:221:A:C8	2.70	0.74
1:w:243:U:C2'	1:w:244:A:H5'	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:391:G:H2'	1:w:392:C:C6	2.22	0.74
1:w:906:G:C6	1:w:907:U:C5	2.76	0.74
1:w:1022:G:N2	1:w:1140:C:C2	2.55	0.74
1:w:1025:G:C6	1:w:1135:C:H1'	2.22	0.74
1:w:1140:C:H5'	10:H:89:LYS:HZ3	1.51	0.74
1:w:1244:G:H1'	12:J:7:ARG:HH22	1.49	0.74
1:w:1527:G:N2	1:w:1545:A:H62	1.86	0.74
1:w:1906:G:C6	1:w:1929:G:N2	2.56	0.74
1:w:2013:A:H2'	1:w:2014:A:O5'	1.88	0.74
1:w:2024:G:O2'	1:w:2025:C:H5'	1.87	0.74
1:w:2049:G:C6	1:w:2050:C:N4	2.55	0.74
1:w:2101:G:O2'	1:w:2102:U:H5'	1.88	0.74
1:w:2239:G:C2	1:w:2240:C:C4	2.75	0.74
1:w:2517:C:H5''	1:w:2517:C:C6	2.23	0.74
1:w:2572:A:OP1	1:w:2574:G:C1'	2.35	0.74
1:w:2743:C:O2'	1:w:2744:G:H5''	1.87	0.74
1:w:2786:U:C1'	5:C:64:LYS:CG	2.58	0.74
1:w:2795:G:H8	1:w:2795:G:OP2	1.71	0.74
2:x:82:G:C4'	26:X:49:LYS:HZ1	1.98	0.74
4:B:70:TRP:CH2	4:B:190:TYR:HB3	2.22	0.74
4:B:148:GLU:O	4:B:150:LYS:N	2.21	0.74
4:B:166:GLN:CD	31:y:712:A:H5''	2.13	0.74
6:D:178:VAL:HG23	6:D:179:TYR:HD2	1.52	0.74
8:F:98:LEU:HB3	8:F:123:PHE:CZ	2.22	0.74
10:H:27:TYR:CE2	17:O:100:VAL:HG22	2.22	0.74
10:H:123:GLU:CB	10:H:127:LYS:HE3	2.08	0.74
11:I:91:LEU:N	11:I:91:LEU:CD1	2.46	0.74
12:J:111:ARG:HH22	12:J:148:LEU:HD21	1.52	0.74
12:J:139:LYS:C	12:J:141:ALA:H	1.94	0.74
13:K:11:LYS:CG	13:K:12:GLN:N	2.37	0.74
14:L:50:HIS:CD2	14:L:53:HIS:HE1	2.02	0.74
15:M:57:LYS:HG3	15:M:58:LEU:H	1.53	0.74
16:N:45:PHE:HE2	16:N:64:ARG:HA	1.53	0.74
19:Q:30:GLU:O	19:Q:34:ASN:OD1	2.06	0.74
24:V:10:LYS:O	24:V:12:PRO:HD2	1.88	0.74
31:y:191(F):U:H2'	31:y:191(G):G:N7	2.02	0.74
31:y:299:G:O6	31:y:566:G:O6	2.06	0.74
31:y:896:C:H4'	50:r:101:ARG:CG	2.17	0.74
31:y:102(C):C:H2'	31:y:1029:G:H8	1.53	0.74
31:y:1160:G:N1	31:y:1161:C:H1'	2.02	0.74
31:y:1261:A:H2'	31:y:1262:C:O4'	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:44:LEU:O	35:c:45:GLN:C	2.28	0.74
35:c:52:GLU:HA	35:c:56:ARG:NH1	2.03	0.74
35:c:226:ARG:HB2	35:c:226:ARG:NH1	2.01	0.74
36:d:3:ASN:C	36:d:4:LYS:HD3	2.12	0.74
37:e:8:VAL:CG2	37:e:22:LYS:HG2	2.17	0.74
37:e:8:VAL:CG1	37:e:21:LEU:HB2	2.17	0.74
38:f:67:VAL:CG2	38:f:140:ARG:NH2	2.51	0.74
41:i:3:THR:HG21	41:i:89:PRO:HG3	1.70	0.74
43:k:94:VAL:HG12	43:k:95:GLU:N	2.01	0.74
44:l:36:ASP:CG	44:l:38:ASN:HD22	1.95	0.74
45:m:24:PRO:CD	45:m:97:TYR:OH	2.27	0.74
45:m:85:ARG:NE	45:m:86:GLY:O	2.21	0.74
52:t:25:LYS:HE3	52:t:28:LYS:CD	2.09	0.74
1:w:17:G:OP1	27:Y:14:ALA:HA	1.86	0.74
1:w:246:C:O2	1:w:252:G:N2	2.18	0.74
1:w:326:G:O5'	1:w:326:G:H8	1.70	0.74
1:w:386:G:C5'	1:w:387:U:H5	2.00	0.74
1:w:445:C:O2'	17:O:3:ARG:NH1	2.20	0.74
1:w:889:C:O2'	1:w:890:A:C8	2.37	0.74
1:w:956:G:OP1	13:K:75:THR:HG21	1.86	0.74
1:w:1008:C:H6	1:w:1008:C:O5'	1.70	0.74
1:w:1277:G:N2	1:w:1293:C:O2	2.20	0.74
1:w:1342:A:O5'	1:w:1342:A:C8	2.39	0.74
1:w:1441:G:O3'	1:w:1628:G:C5'	2.35	0.74
1:w:1516:U:O2'	1:w:1517:G:O4'	2.06	0.74
1:w:1685:C:O5'	1:w:1685:C:H6	1.71	0.74
1:w:1698:A:H4'	1:w:1699:G:OP1	1.87	0.74
1:w:2025:C:C4	1:w:2026:C:N4	2.56	0.74
1:w:2192:G:H8	1:w:2192:G:OP2	1.70	0.74
1:w:2562:U:C4	1:w:2563:U:C5	2.76	0.74
1:w:2590:A:C2	1:w:2605:U:C2	2.75	0.74
1:w:2632:A:H1'	5:C:61:ARG:NH2	2.02	0.74
1:w:2635:C:O5'	1:w:2635:C:H6	1.71	0.74
1:w:2754:U:OP2	1:w:2754:U:H6	1.68	0.74
1:w:2888:C:H2'	1:w:2889:C:O4'	1.86	0.74
2:x:29:A:OP2	15:M:31:SER:HB2	1.87	0.74
6:D:182:VAL:HA	12:J:5:ASP:C	2.13	0.74
7:E:43:LEU:CD1	7:E:153:ARG:HD3	2.17	0.74
7:E:85:GLY:O	7:E:86:MET:HB2	1.87	0.74
7:E:106:LEU:O	7:E:111:LEU:HD13	1.87	0.74
8:F:7:LEU:HD22	8:F:52:VAL:HG13	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:76:VAL:HA	8:F:79:VAL:CG1	2.17	0.74
10:H:81:ASP:H	10:H:147:ALA:HB2	1.50	0.74
10:H:83:ILE:O	10:H:84:ARG:C	2.31	0.74
10:H:110:LEU:C	10:H:112:LYS:H	1.95	0.74
10:H:132:LYS:HE2	10:H:132:LYS:O	1.88	0.74
11:I:10:VAL:CG2	11:I:17:ARG:O	2.36	0.74
12:J:82:GLY:HA2	12:J:113:LYS:O	1.87	0.74
13:K:51:ARG:NH1	13:K:51:ARG:C	2.46	0.74
14:L:5:LYS:HG3	14:L:8:ARG:NH2	2.02	0.74
16:N:48:ILE:O	16:N:99:LEU:HD11	1.88	0.74
16:N:64:ARG:HH22	16:N:66:VAL:CG2	1.95	0.74
17:O:106:PHE:HA	17:O:109:LEU:HD12	1.70	0.74
17:O:109:LEU:HD23	17:O:109:LEU:N	2.01	0.74
19:Q:75:TYR:CD1	19:Q:77:ASP:HB2	2.23	0.74
21:S:47:LYS:HG2	21:S:48:ALA:N	2.01	0.74
26:X:41:PRO:N	26:X:44:ARG:HD3	2.02	0.74
31:y:134:A:H62	49:q:25:ARG:CZ	2.00	0.74
31:y:180:U:C2	31:y:195:A:N7	2.56	0.74
31:y:247:G:C4	31:y:278:G:N2	2.56	0.74
31:y:476:G:C2'	31:y:477:G:C8	2.68	0.74
31:y:500:G:C6	31:y:546:G:C2	2.75	0.74
31:y:613:C:C2'	31:y:614:A:H5'	2.18	0.74
31:y:778:G:H3'	31:y:779:C:C6	2.23	0.74
31:y:975:A:O2'	31:y:1358:U:O4'	2.05	0.74
31:y:978:A:C2	31:y:1319:A:C4	2.75	0.74
31:y:980:C:H2'	31:y:981:U:C5'	2.17	0.74
31:y:1014:A:C2'	31:y:1015:A:C5'	2.66	0.74
31:y:1054:C:C2'	31:y:1055:A:H5''	2.17	0.74
31:y:1359:C:H2'	31:y:1360:A:O5'	1.86	0.74
32:z:29:G:H2'	32:z:30:G:C8	2.23	0.74
37:e:101:LEU:HG	37:e:140:VAL:HG12	1.68	0.74
38:f:54:ALA:HA	38:f:57:LYS:NZ	2.03	0.74
41:i:57:PRO:O	41:i:58:TYR:HD2	1.70	0.74
41:i:103:VAL:HG11	41:i:109:ILE:C	2.13	0.74
1:w:51:G:O2'	1:w:118:A:N6	2.21	0.74
1:w:57:C:C4'	20:R:73:ARG:NH2	2.51	0.74
1:w:307:G:O3'	1:w:309:G:O6	2.06	0.74
1:w:372:G:H22	1:w:400:G:H2'	1.53	0.74
1:w:398:G:O2'	1:w:399:G:H5'	1.86	0.74
1:w:469:G:O6	28:Z:39:ARG:CD	2.36	0.74
1:w:487:C:H1'	19:Q:53:SER:HB3	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:609(B):G:C2	1:w:610:C:C2	2.75	0.74
1:w:628:G:H2'	1:w:629:G:C1'	2.18	0.74
1:w:691:C:H1'	4:B:43:ARG:HH11	1.53	0.74
1:w:784:A:P	4:B:237:GLU:HG3	2.27	0.74
1:w:890:A:C2'	1:w:892:G:H5'	2.12	0.74
1:w:1225:G:C5'	18:P:88:ARG:H	2.01	0.74
1:w:1229:G:H3'	1:w:1230:C:C5	2.22	0.74
1:w:1516:U:H5'	1:w:1516:U:H6	1.53	0.74
1:w:1686:C:N3	1:w:1687:G:H1'	2.03	0.74
1:w:1782:C:C1'	1:w:2609:U:C5'	2.63	0.74
1:w:2057:A:C6	1:w:2058:A:C2	2.75	0.74
1:w:2084:C:C2	1:w:2085:C:C6	2.75	0.74
1:w:2679:A:O3'	5:C:189:PRO:HD3	1.88	0.74
1:w:2728:U:N3	1:w:2729:G:N7	2.36	0.74
1:w:2784:C:C3'	1:w:2785:C:C5'	2.54	0.74
1:w:2887:U:N3	1:w:2888:C:N4	2.36	0.74
2:x:99:A:C2	2:x:100:G:C4	2.76	0.74
5:C:7:VAL:CG2	5:C:27:LEU:HB3	2.18	0.74
6:D:105:LEU:HD13	6:D:109:VAL:CG2	2.16	0.74
6:D:119:LEU:HB2	6:D:188:VAL:CA	2.17	0.74
10:H:80:ALA:CA	10:H:83:ILE:HD11	2.16	0.74
11:I:65:THR:CB	11:I:82:ASN:ND2	2.50	0.74
12:J:71:VAL:CG2	12:J:72:PRO:HD3	2.16	0.74
12:J:90:ARG:NE	12:J:91:PHE:HB3	2.03	0.74
15:M:38:GLN:CD	15:M:47:THR:HG1	1.96	0.74
16:N:26:ASP:CA	16:N:48:ILE:HG13	2.16	0.74
19:Q:29:LEU:HD23	19:Q:30:GLU:H	1.52	0.74
31:y:39:G:N7	31:y:547:A:C8	2.56	0.74
31:y:160:A:O2'	31:y:344:A:C2	2.39	0.74
31:y:241:C:H5'	45:m:18:ARG:HH22	1.52	0.74
31:y:319:G:N2	31:y:320:C:C2	2.56	0.74
31:y:330:C:H2'	31:y:331:G:C5'	2.17	0.74
31:y:339:C:O2'	31:y:340:U:H5'	1.88	0.74
31:y:584:G:H5'	50:r:91:ARG:HH21	1.50	0.74
31:y:596:C:H2'	31:y:596:C:O2	1.85	0.74
31:y:597:G:C6	31:y:644:G:O6	2.39	0.74
31:y:1516:G:C1'	31:y:1518:MA6:OP1	2.36	0.74
35:c:82:ARG:HH12	35:c:93:VAL:CA	2.00	0.74
35:c:129:GLU:O	35:c:131:PRO:HD2	1.88	0.74
37:e:173:TRP:O	37:e:186:LEU:HB3	1.88	0.74
38:f:14:ARG:HE	38:f:14:ARG:HA	1.50	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:77:PRO:HG2	38:f:91:LEU:HD21	1.68	0.74
40:h:109:ASN:HA	40:h:119:ARG:HH21	1.52	0.74
48:p:49:ASP:O	48:p:50:HIS:HB2	1.88	0.74
53:u:21:LYS:O	53:u:25:ARG:HB2	1.87	0.74
54:v:8:THR:O	54:v:9:ARG:HD2	1.88	0.74
1:w:132:G:H8	1:w:132:G:H5'	1.52	0.73
1:w:439:G:C4	1:w:440:G:C8	2.76	0.73
1:w:478:A:H61	1:w:502:A:N6	1.85	0.73
1:w:493:G:H4'	19:Q:9:TYR:HD1	1.53	0.73
1:w:511:U:C6	1:w:511:U:O5'	2.41	0.73
1:w:591:C:C3'	1:w:592:G:H8	2.00	0.73
1:w:909:A:O4'	13:K:69:PHE:CZ	2.40	0.73
1:w:1038:C:O2	1:w:1117:G:N2	2.19	0.73
1:w:1157:G:H2'	1:w:1157:G:N3	2.03	0.73
1:w:1301:A:H4'	1:w:1302:A:OP1	1.88	0.73
1:w:1413:G:H2'	1:w:1414:G:C8	2.23	0.73
1:w:1567:A:OP1	4:B:60:ARG:CZ	2.36	0.73
1:w:1676:A:H2'	1:w:1677:A:C8	2.22	0.73
1:w:1837:C:O2'	1:w:1927:A:H2'	1.88	0.73
1:w:1996:C:C1'	1:w:1997:G:H1'	2.03	0.73
1:w:2001:A:H2'	1:w:2002:G:O4'	1.88	0.73
1:w:2128:C:H5'	3:A:37:LYS:CD	2.18	0.73
1:w:2210:G:N2	1:w:2212:A:C2	2.55	0.73
1:w:2231:C:N3	1:w:2232:U:C5	2.56	0.73
1:w:2269:A:H3'	1:w:2270:G:N7	2.03	0.73
1:w:2270:G:C2	1:w:2271:G:C8	2.75	0.73
1:w:2319:G:C5'	15:M:7:TYR:OH	2.35	0.73
1:w:2848:G:O2'	1:w:2849:U:O5'	2.05	0.73
4:B:233:HIS:CD2	4:B:234:GLY:H	2.05	0.73
5:C:61:ARG:HG3	5:C:62:PRO:HD3	1.68	0.73
5:C:167:VAL:HG22	5:C:170:LEU:HD11	1.69	0.73
10:H:78:VAL:O	10:H:79:ASN:C	2.30	0.73
12:J:79:ARG:HB3	12:J:109:GLY:HA2	1.69	0.73
13:K:35:VAL:O	13:K:129:THR:CB	2.36	0.73
16:N:41:ARG:O	16:N:42:ILE:HG23	1.88	0.73
16:N:85:LYS:HB3	16:N:85:LYS:NZ	2.03	0.73
23:U:84:LEU:HG	23:U:85:ALA:H	1.53	0.73
31:y:27:G:O2'	31:y:28:G:H5'	1.86	0.73
31:y:135:C:C2'	31:y:136:C:C5'	2.47	0.73
31:y:338:A:O2'	31:y:339:C:H5'	1.88	0.73
31:y:339:C:H2'	31:y:340:U:C6	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:425:G:H2'	31:y:426:G:O4'	1.88	0.73
31:y:502:G:C6	31:y:503:C:C5	2.76	0.73
31:y:909:A:H2'	31:y:1413:A:O2'	1.88	0.73
31:y:968:A:H4'	31:y:969:A:OP2	1.86	0.73
31:y:1128:C:H2'	31:y:1129:C:H5'	1.70	0.73
31:y:1323:G:C2'	31:y:1324:A:H8	1.99	0.73
31:y:1348:U:N3	31:y:1374:A:N7	2.35	0.73
37:e:58:LEU:N	37:e:206:PHE:CE1	2.56	0.73
37:e:62:GLN:CG	37:e:63:LYS:N	2.50	0.73
43:k:82:ILE:HA	43:k:85:LEU:CG	2.18	0.73
46:n:11:ARG:O	46:n:12:ASN:HB2	1.85	0.73
1:w:48:G:N2	1:w:177:G:OP2	2.21	0.73
1:w:372:G:N2	1:w:400:G:H2'	2.03	0.73
1:w:588:U:C4	1:w:589:C:C4	2.77	0.73
1:w:886:C:OP1	1:w:890:A:C6	2.42	0.73
1:w:1024:G:C6	1:w:1025:G:C6	2.76	0.73
1:w:1194:A:C6	1:w:1195:G:C5	2.76	0.73
1:w:1549:C:H2'	1:w:1550:C:C6	2.22	0.73
1:w:1593:G:C6	1:w:1594:G:C5	2.76	0.73
1:w:1639:U:C2'	1:w:1640:C:H5''	2.13	0.73
1:w:1823:G:H2'	1:w:1824:G:H1'	1.69	0.73
1:w:2261:C:N4	23:U:11:LYS:CB	2.51	0.73
1:w:2323:G:N1	1:w:2332:U:O2	2.18	0.73
1:w:2374:C:H6	1:w:2374:C:O5'	1.71	0.73
1:w:2437:U:C2'	1:w:2438:U:C6	2.59	0.73
1:w:2450:A:C2	32:z:76:A:H2'	2.22	0.73
1:w:2536:G:H2'	1:w:2537:U:C6	2.22	0.73
1:w:2563:U:H1'	1:w:2566:A:C5	2.22	0.73
1:w:2659:G:H2'	1:w:2660:A:C8	2.23	0.73
1:w:2840:C:C2'	1:w:2841:C:O5'	2.35	0.73
6:D:69:ARG:HD3	6:D:70:HIS:H	1.51	0.73
9:G:81:VAL:HB	9:G:88:ILE:HD12	1.70	0.73
12:J:135:LEU:O	12:J:139:LYS:HB2	1.87	0.73
17:O:37:GLU:HA	17:O:40:PHE:CD1	2.23	0.73
17:O:103:PRO:O	17:O:106:PHE:N	2.18	0.73
30:b:8:LYS:O	30:b:9:ARG:HB3	1.87	0.73
31:y:36:C:H4'	45:m:116:ARG:O	1.88	0.73
31:y:314:C:C3'	31:y:315:A:H5''	2.17	0.73
31:y:336:C:H6	31:y:336:C:O5'	1.71	0.73
31:y:526:C:O5'	31:y:526:C:H6	1.70	0.73
31:y:673:G:C2	31:y:674:G:C5	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1089:G:C6	31:y:1090:U:C6	2.76	0.73
31:y:1136:U:OP2	31:y:1137:C:H5	1.71	0.73
31:y:1269:A:H5'	54:v:19:GLY:N	2.02	0.73
31:y:1499:A:H1'	31:y:1520:G:H4'	1.69	0.73
32:z:30:G:H2'	32:z:31:A:C8	2.24	0.73
37:e:21:LEU:H	37:e:26:CYS:CB	2.00	0.73
37:e:172:PRO:CB	37:e:193:ASP:OD1	2.35	0.73
40:h:54:THR:C	40:h:56:GLN:H	1.96	0.73
45:m:33:ARG:C	45:m:84:ILE:HD11	2.13	0.73
46:n:73:GLU:HG3	46:n:77:ASN:ND2	2.03	0.73
49:q:21:VAL:CB	49:q:33:ILE:HB	2.15	0.73
53:u:51:GLU:CD	53:u:51:GLU:H	1.96	0.73
1:w:180:G:N2	1:w:214:G:O6	2.16	0.73
1:w:301:G:H5''	1:w:317:G:N2	2.03	0.73
1:w:440:G:H2'	1:w:441:U:C1'	2.18	0.73
1:w:466:A:H8	1:w:466:A:O5'	1.70	0.73
1:w:532:A:C5'	17:O:28:ARG:HH12	1.95	0.73
1:w:831:G:H4'	12:J:39:LYS:HB2	1.70	0.73
1:w:909:A:O4'	13:K:69:PHE:HZ	1.70	0.73
1:w:1000:A:C6	1:w:1001:A:C8	2.76	0.73
1:w:1015:G:C3'	1:w:1016:G:H8	1.96	0.73
1:w:1444:G:H2'	1:w:1445:C:H5	1.52	0.73
1:w:1743:G:H2'	1:w:1746:G:H8	1.53	0.73
1:w:1858:G:N2	1:w:1884:A:OP2	2.21	0.73
1:w:1942:C:O5'	1:w:1942:C:H6	1.72	0.73
1:w:2013:A:C2'	1:w:2014:A:C5'	2.66	0.73
1:w:2023:G:O2'	1:w:2024:G:H5'	1.88	0.73
1:w:2032:G:O6	1:w:2454:G:H4'	1.87	0.73
1:w:2085:C:C2	1:w:2235:G:N1	2.57	0.73
1:w:2345:G:C4	1:w:2347:C:C5	2.75	0.73
1:w:2575:C:H5'	5:C:144:ARG:CD	2.18	0.73
1:w:2623:G:O4'	1:w:2825:G:N2	2.17	0.73
1:w:2631:G:H22	5:C:61:ARG:HH11	1.31	0.73
4:B:4:LYS:HD3	4:B:18:VAL:O	1.88	0.73
5:C:196:VAL:O	5:C:197:ILE:HG23	1.88	0.73
7:E:15:VAL:HG12	7:E:19:LEU:CD1	2.18	0.73
7:E:103:LEU:HA	7:E:106:LEU:CD2	2.17	0.73
10:H:65:TRP:O	17:O:64:ARG:HD2	1.88	0.73
14:L:1:MET:HE3	14:L:2:ARG:HH12	1.53	0.73
16:N:31:SER:OG	16:N:32:TYR:N	2.15	0.73
16:N:92:GLY:HA3	16:N:114:LEU:CD1	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:38:THR:C	17:O:40:PHE:N	2.43	0.73
17:O:47:TYR:O	17:O:50:ARG:CB	2.34	0.73
21:S:23:ARG:NH1	21:S:38:ILE:HG22	2.03	0.73
23:U:24:LYS:HG2	23:U:37:LEU:O	1.89	0.73
26:X:45:GLY:HA2	26:X:48:GLU:HG3	1.70	0.73
29:a:47:LYS:HE2	29:a:48:PHE:CE2	2.23	0.73
31:y:24:U:HO2'	31:y:25:C:H5'	1.52	0.73
31:y:61:G:H2'	31:y:62:U:O4'	1.88	0.73
31:y:155:C:C2'	31:y:156:G:H8	2.00	0.73
31:y:577:G:H2'	31:y:578:C:C5'	2.19	0.73
31:y:689:C:OP1	44:l:46:GLY:HA3	1.88	0.73
31:y:817:C:C6	31:y:817:C:H5'	2.24	0.73
31:y:818:G:HO2'	31:y:819:A:P	2.09	0.73
31:y:1047:G:O3'	47:o:4:LYS:HG2	1.89	0.73
31:y:1305:G:N1	31:y:1331:G:N3	2.37	0.73
31:y:1306:A:C2'	31:y:1307:U:O4'	2.24	0.73
31:y:1382:C:H4'	40:h:79:ARG:HG3	1.68	0.73
31:y:1450:U:H1'	31:y:1454:G:N2	2.03	0.73
33:0:34:G:H2'	33:0:35:A:C5'	2.18	0.73
36:d:36:ASP:O	36:d:40:ARG:HG2	1.87	0.73
37:e:70:ILE:CG1	37:e:71:SER:H	1.98	0.73
38:f:142:LEU:HA	38:f:143:ARG:HE	1.53	0.73
45:m:57:VAL:HG21	45:m:67:ALA:CB	2.18	0.73
53:u:14:LYS:HG3	53:u:17:ARG:HD2	1.71	0.73
1:w:49:A:H61	1:w:177:G:N2	1.86	0.73
1:w:68:G:H3'	1:w:69:C:C6	2.22	0.73
1:w:89:G:C8	1:w:90:U:C5	2.76	0.73
1:w:173:G:H2'	1:w:174:C:C1'	2.18	0.73
1:w:254:G:H4'	1:w:384:U:C5'	2.18	0.73
1:w:322:A:P	6:D:163:ARG:HB2	2.27	0.73
1:w:581:C:H5''	17:O:32:PHE:CZ	2.24	0.73
1:w:674:G:O3'	6:D:71:GLY:HA3	1.88	0.73
1:w:846:C:O2	1:w:931:G:N2	2.18	0.73
1:w:949:C:C2	1:w:950:G:N7	2.57	0.73
1:w:1204:A:N3	1:w:1206:G:O6	2.21	0.73
1:w:2017:U:H5'	27:Y:8:LYS:HG3	1.69	0.73
1:w:2573:C:C6	1:w:2573:C:C3'	2.70	0.73
1:w:2620:C:C4'	5:C:156:MET:HB2	2.18	0.73
1:w:2700:C:O2'	1:w:2701:C:H5'	1.88	0.73
1:w:2864:G:OP1	16:N:119:LYS:HE2	1.88	0.73
4:B:118:VAL:O	4:B:129:ASN:HA	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:60:ASN:O	5:C:62:PRO:CD	2.37	0.73
10:H:110:LEU:HD22	10:H:110:LEU:N	2.03	0.73
11:I:17:ARG:HB2	11:I:45:GLU:CG	2.18	0.73
13:K:32:PHE:HB2	13:K:106:VAL:CG1	2.18	0.73
14:L:55:ALA:O	14:L:80:PHE:HA	1.88	0.73
17:O:39:LEU:O	17:O:43:GLY:HA3	1.87	0.73
19:Q:24:ILE:HG12	19:Q:36:LEU:HD12	1.68	0.73
21:S:12:THR:O	21:S:13:VAL:HB	1.89	0.73
22:T:98:MET:O	22:T:125:LEU:HA	1.89	0.73
27:Y:31:VAL:HB	27:Y:32:PRO:HD3	1.69	0.73
31:y:127:G:OP1	31:y:634:C:O2	2.07	0.73
31:y:418:C:H1'	31:y:540:G:O2'	1.88	0.73
31:y:1047:G:H8	31:y:1047:G:O5'	1.71	0.73
31:y:1268:A:HO2'	31:y:1326:C:HO2'	1.34	0.73
31:y:1292:U:C2'	31:y:1293:G:C8	2.65	0.73
31:y:1486:G:H2'	31:y:1487:G:O4'	1.89	0.73
31:y:1497:G:N3	31:y:1518:MA6:H2	2.03	0.73
32:z:18:G:C8	32:z:18:G:P	2.80	0.73
33:0:24:G:H2'	33:0:25:C:C6	2.23	0.73
36:d:131:ARG:O	36:d:135:LYS:CG	2.26	0.73
37:e:48:ALA:O	37:e:49:ARG:HG3	1.88	0.73
43:k:32:ALA:N	43:k:78:ASN:HD21	1.86	0.73
49:q:4:ILE:CA	49:q:66:PRO:HA	2.17	0.73
50:r:57:VAL:CG1	50:r:58:GLU:N	2.52	0.73
51:s:51:LEU:HD21	51:s:55:ARG:HG2	1.70	0.73
1:w:58:G:C5'	20:R:72:LYS:HB2	2.03	0.73
1:w:161:U:H1'	1:w:171:G:C2	2.24	0.73
1:w:377:C:C2	1:w:397:G:N2	2.49	0.73
1:w:460:A:H2'	1:w:461:C:O4'	1.88	0.73
1:w:587:C:H6	1:w:587:C:O5'	1.71	0.73
1:w:854:G:H2'	1:w:855:G:C8	2.23	0.73
1:w:869:G:H2'	1:w:870:A:C8	2.23	0.73
1:w:1173:G:H5''	1:w:1174:A:OP2	1.88	0.73
1:w:1197:G:C6	1:w:1198:U:C4	2.76	0.73
1:w:1309:G:P	28:Z:9:ARG:HG3	2.29	0.73
1:w:1434:A:H3'	1:w:1435:G:C5'	2.19	0.73
1:w:1843:C:H42	1:w:1844:C:H41	1.33	0.73
1:w:1850:G:H2'	1:w:1851:U:H6	1.49	0.73
1:w:1986:A:C3'	1:w:1987:G:C5'	2.63	0.73
1:w:2037:G:C2	1:w:2038:G:N3	2.57	0.73
1:w:2218:G:H2'	1:w:2219:G:O5'	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2741:A:C2'	1:w:2742:C:H5'	2.18	0.73
1:w:2787:C:C2	5:C:61:ARG:NH1	2.55	0.73
4:B:65:ILE:HG22	4:B:104:TYR:HB3	1.69	0.73
4:B:228:PRO:O	4:B:230:ASP:N	2.21	0.73
5:C:10:GLY:O	5:C:11:MET:HB3	1.88	0.73
7:E:19:LEU:HB3	7:E:25:TYR:CZ	2.24	0.73
7:E:163:ALA:HA	7:E:168:GLU:CB	2.14	0.73
9:G:8:PRO:O	9:G:9:LEU:HB3	1.88	0.73
14:L:31:HIS:C	14:L:33:ARG:H	1.97	0.73
22:T:110:GLY:HA3	22:T:146:ILE:HD12	1.71	0.73
23:U:23:VAL:HA	23:U:38:VAL:CG2	2.19	0.73
29:a:32:LEU:CD1	29:a:34:TRP:CE3	2.69	0.73
31:y:10:A:C2'	31:y:507:C:HO2'	2.02	0.73
31:y:303:A:H2'	31:y:304:U:C5'	2.18	0.73
31:y:321:A:C1'	31:y:1435:G:O2'	2.37	0.73
31:y:571:U:H5''	31:y:572:A:OP2	1.89	0.73
31:y:745:C:H5''	31:y:851:G:C1'	2.19	0.73
31:y:776:G:H4'	31:y:777:A:C8	2.22	0.73
31:y:884:U:O2'	31:y:885:G:OP2	2.07	0.73
31:y:918:A:H2'	31:y:919:A:H8	1.50	0.73
31:y:1244:C:O2'	31:y:1245:A:C8	2.42	0.73
31:y:1305:G:O2'	31:y:1306:A:C8	2.40	0.73
33:0:24:G:C5	33:0:25:C:C4	2.76	0.73
36:d:28:GLN:HE21	36:d:32:LEU:HB2	1.52	0.73
36:d:40:ARG:HH11	36:d:40:ARG:CB	1.99	0.73
36:d:153:VAL:O	36:d:165:THR:HG23	1.87	0.73
40:h:78:ARG:HG2	40:h:79:ARG:N	2.02	0.73
41:i:62:TYR:O	41:i:63:LEU:HD12	1.89	0.73
43:k:82:ILE:HA	43:k:85:LEU:HG	1.71	0.73
46:n:59:TYR:HD2	46:n:60:VAL:HG13	1.54	0.73
50:r:62:SER:HB3	50:r:71:PHE:HA	1.70	0.73
52:t:60:VAL:O	52:t:62:ILE:N	2.20	0.73
53:u:87:LYS:O	53:u:91:LEU:N	2.20	0.73
1:w:38:A:C5	1:w:442:G:N2	2.57	0.73
1:w:317:G:O2'	1:w:318:C:H5'	1.88	0.73
1:w:388:G:N3	1:w:390:A:N6	2.36	0.73
1:w:648:G:H2'	1:w:649:G:C8	2.24	0.73
1:w:716:A:H8	1:w:716:A:P	2.11	0.73
1:w:1025:G:N3	1:w:1135:C:O5'	2.21	0.73
1:w:1303:G:C4'	1:w:1642:G:O2'	2.36	0.73
1:w:1633:G:O5'	1:w:1633:G:C8	2.34	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2051:A:H2	1:w:2052:G:O6	1.70	0.73
1:w:2063:C:N3	1:w:2450:A:N6	2.35	0.73
1:w:2503:A:H4'	1:w:2504:U:OP1	1.88	0.73
1:w:2517:C:H3'	1:w:2519:U:H5	1.53	0.73
1:w:2579:C:O2'	1:w:2580:U:H5'	1.87	0.73
1:w:2724:C:H2'	1:w:2724:C:O2	1.87	0.73
1:w:2782:G:C8	1:w:2782:G:O5'	2.42	0.73
1:w:2843:G:H2'	1:w:2844:G:O4'	1.88	0.73
1:w:2876:G:P	16:N:1:MET:HB3	2.28	0.73
2:x:42:C:C1'	7:E:92:VAL:CG2	2.65	0.73
2:x:71:C:C2'	2:x:72:G:C8	2.72	0.73
4:B:31:LYS:CB	4:B:104:TYR:HE1	2.01	0.73
5:C:9:VAL:HG23	5:C:26:ILE:CA	2.17	0.73
5:C:105:THR:HG23	5:C:165:VAL:O	1.89	0.73
10:H:86:THR:HG22	10:H:89:LYS:NZ	2.04	0.73
13:K:36:ALA:HB2	13:K:103:MET:SD	2.28	0.73
14:L:10:LEU:HD23	14:L:11:ASN:N	2.03	0.73
14:L:37:THR:CG2	14:L:111:LEU:HG	2.14	0.73
22:T:4:ARG:HB2	22:T:4:ARG:HH11	1.50	0.73
23:U:36:ILE:HA	23:U:60:PHE:HB3	1.71	0.73
26:X:8:LEU:HA	26:X:54:VAL:CA	2.10	0.73
27:Y:7:PRO:O	27:Y:8:LYS:HB2	1.87	0.73
31:y:15:G:OP1	31:y:1396:A:O2'	2.06	0.73
31:y:116:A:N3	31:y:117:G:H1'	2.04	0.73
31:y:162:A:OP2	31:y:163:C:C5	2.42	0.73
31:y:267:C:OP1	50:r:67:LYS:HB2	1.89	0.73
31:y:524:G:H2'	31:y:525:C:C5	2.23	0.73
31:y:730:G:O2'	31:y:766:A:O4'	2.06	0.73
31:y:889:A:N6	31:y:908:A:OP2	2.21	0.73
31:y:910:C:C2'	31:y:911:U:C6	2.69	0.73
31:y:1074:G:N1	31:y:1075:C:N4	2.36	0.73
31:y:1130:A:C4	31:y:1146:A:N6	2.54	0.73
31:y:1259:C:O5'	31:y:1259:C:H6	1.71	0.73
31:y:1304:G:OP1	54:v:2:GLY:N	2.20	0.73
31:y:1489:G:C4	31:y:1490:C:C5	2.76	0.73
33:0:18:G:C6	33:0:57:G:N1	2.56	0.73
36:d:11:ARG:HB3	36:d:15:THR:HB	1.69	0.73
37:e:108:LEU:HB3	37:e:110:PHE:CD1	2.23	0.73
38:f:76:ILE:HD12	38:f:92:LYS:O	1.89	0.73
40:h:136:LYS:O	40:h:136:LYS:HD2	1.89	0.73
43:k:53:PRO:HB2	47:o:41:ARG:NH2	2.02	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:90:LYS:O	45:m:92:LEU:HG	1.88	0.73
49:q:4:ILE:CD1	49:q:21:VAL:HG13	2.18	0.73
49:q:16:HIS:HA	49:q:41:PRO:CD	2.18	0.73
50:r:25:ARG:HG2	50:r:25:ARG:NH1	1.99	0.73
50:r:43:LEU:C	50:r:43:LEU:HD12	2.12	0.73
52:t:52:TYR:HA	52:t:57:HIS:HA	1.70	0.73
1:w:16:G:H5'	27:Y:17:ASP:HB3	1.70	0.73
1:w:68:G:H3'	1:w:69:C:H6	1.50	0.73
1:w:116:C:O3'	1:w:126:A:H1'	1.88	0.73
1:w:226:G:N2	1:w:227:A:C2	2.57	0.73
1:w:245:G:H5'	12:J:70:GLN:N	2.03	0.73
1:w:326:G:N2	1:w:336:C:O2	2.20	0.73
1:w:481:G:C4	1:w:507:A:C2	2.77	0.73
1:w:617:G:C5	1:w:618(A):G:H1'	2.24	0.73
1:w:650:C:O2'	29:a:17:THR:HG22	1.86	0.73
1:w:1079:C:O2'	1:w:1080:C:H5	1.70	0.73
1:w:1746:G:C4	1:w:1747:G:C1'	2.69	0.73
1:w:1848:A:N7	31:y:702:A:C6	2.57	0.73
1:w:1853:A:H2'	1:w:1854:A:O4'	1.88	0.73
1:w:1869:G:C4	1:w:1871:A:OP2	2.41	0.73
1:w:2014:A:C2'	1:w:2015:A:N7	2.46	0.73
1:w:2524:G:H2'	1:w:2741:A:H2	1.52	0.73
1:w:2556:C:O2'	1:w:2557:G:H5'	1.89	0.73
1:w:2809:A:H2'	1:w:2810:A:O4'	1.88	0.73
1:w:2821:A:OP2	5:C:110:GLY:O	2.05	0.73
2:x:57:A:N3	2:x:58:A:C8	2.56	0.73
4:B:44:ASN:CG	4:B:45:ASN:H	1.95	0.73
5:C:59:VAL:HG13	5:C:60:ASN:H	1.54	0.73
5:C:109:LYS:HZ1	14:L:4:LEU:HG	1.52	0.73
8:F:10:PRO:CB	8:F:12:PRO:HD3	2.18	0.73
10:H:76:VAL:HG13	10:H:144:LYS:C	2.13	0.73
12:J:50:ARG:HD3	12:J:50:ARG:C	2.14	0.73
14:L:28:LEU:HA	14:L:34:ILE:HG12	1.69	0.73
15:M:44:LYS:HB3	15:M:46:VAL:HG23	1.69	0.73
16:N:35:LYS:HD2	16:N:35:LYS:N	2.02	0.73
20:R:21:PHE:HB3	20:R:90:GLU:OE1	1.89	0.73
21:S:31:LEU:CB	21:S:32:PRO:HD3	2.18	0.73
21:S:46:LYS:H	21:S:57:GLN:C	1.97	0.73
22:T:45:ASP:HA	22:T:48:PHE:CD2	2.23	0.73
24:V:25:LYS:CE	24:V:37:ILE:HG12	2.17	0.73
24:V:88:LYS:CG	24:V:89:GLU:OE2	2.30	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:299:G:C6	31:y:566:G:O6	2.42	0.73
31:y:479:C:C3'	31:y:480:U:H6	2.00	0.73
31:y:508:C:O4'	31:y:509:A:N7	2.21	0.73
31:y:546:G:H5'	31:y:548:G:O3'	1.88	0.73
31:y:855:G:C4	31:y:856:C:C4	2.77	0.73
31:y:874:G:N2	41:i:11:THR:CG2	2.51	0.73
31:y:886:G:H2'	31:y:887:G:H5'	1.70	0.73
31:y:934:C:C5	31:y:1345:U:C5'	2.67	0.73
31:y:962:C:H2'	31:y:963:G:H8	1.54	0.73
31:y:1146:A:N3	31:y:1146:A:H2'	2.04	0.73
31:y:1308:U:O2	31:y:1329:A:H2	1.70	0.73
31:y:1360:A:C3'	31:y:1361:G:N7	2.51	0.73
31:y:1498:UR3:C4	34:l:2:U:H4'	2.17	0.73
31:y:1505:G:H5''	31:y:1506:U:H5'	1.69	0.73
32:z:19:G:N2	32:z:56:C:O2	2.21	0.73
37:e:14:ARG:HD3	37:e:14:ARG:C	2.14	0.73
37:e:15:GLU:CG	37:e:63:LYS:HD3	2.17	0.73
37:e:175:SER:HB3	37:e:184:LYS:O	1.86	0.73
37:e:196:LEU:HD12	37:e:196:LEU:O	1.89	0.73
42:j:118:LYS:CB	42:j:121:ARG:HD3	2.18	0.73
46:n:13:LYS:O	46:n:44:ARG:HG3	1.88	0.73
50:r:75:ARG:NH1	50:r:77:VAL:HA	2.03	0.73
52:t:52:TYR:CE1	52:t:56:GLN:HA	2.24	0.73
1:w:8:A:H2'	1:w:9:U:H5'	1.71	0.73
1:w:150:C:H5''	1:w:151:C:OP2	1.88	0.73
1:w:249:C:OP2	1:w:2394:C:O2'	2.06	0.73
1:w:253:C:H2'	1:w:254:G:O5'	1.88	0.73
1:w:271(C):G:O2'	1:w:271(D):U:C5'	2.36	0.73
1:w:274:G:H4'	1:w:275:G:H4'	1.69	0.73
1:w:371:A:H4'	1:w:373:U:O4'	1.88	0.73
1:w:465:G:H4'	28:Z:16:HIS:CE1	2.24	0.73
1:w:515:A:H2'	1:w:516:C:H6	1.53	0.73
1:w:557:U:H2'	1:w:558:G:H8	1.53	0.73
1:w:669:G:C6	1:w:801:G:O6	2.41	0.73
1:w:801:G:OP1	6:D:51:GLU:HA	1.88	0.73
1:w:814:C:C2	1:w:815:C:C5	2.77	0.73
1:w:1176:G:H2'	1:w:1176:G:N3	2.04	0.73
1:w:1257:C:O5'	1:w:1257:C:H6	1.72	0.73
1:w:1637:A:H5'	1:w:1760:A:H1'	1.69	0.73
1:w:1702:G:N1	1:w:1703:G:C5	2.56	0.73
1:w:2297:C:H1'	1:w:2322:A:C2	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2352:A:C2	23:U:33:ALA:HB1	2.23	0.73
1:w:2352:A:N6	1:w:2365:G:H21	1.86	0.73
1:w:2517:C:HO2'	1:w:2518:A:H2'	1.53	0.73
2:x:66:A:H62	2:x:108:C:C1'	2.02	0.73
3:A:197:LEU:HG	3:A:198:GLU:H	1.50	0.73
5:C:131:ALA:O	5:C:132:HIS:HB2	1.87	0.73
6:D:130:LYS:N	6:D:134:PHE:CZ	2.57	0.73
7:E:99:MET:O	7:E:103:LEU:HD21	1.87	0.73
10:H:65:TRP:HB3	17:O:64:ARG:HE	1.50	0.73
10:H:120:ARG:HG3	10:H:124:HIS:CE1	2.23	0.73
12:J:48:PRO:HA	12:J:51:PHE:HE2	1.52	0.73
13:K:61:GLY:CA	22:T:183:LEU:HG	2.19	0.73
13:K:72:LYS:O	13:K:94:VAL:HG22	1.89	0.73
14:L:23:ASN:HA	14:L:26:LYS:HB2	1.71	0.73
14:L:28:LEU:O	14:L:28:LEU:CD2	2.35	0.73
19:Q:3:ALA:HB3	19:Q:107:LEU:O	1.89	0.73
22:T:81:ARG:HG2	22:T:81:ARG:O	1.87	0.73
28:Z:35:ARG:HA	28:Z:42:LEU:CD2	2.19	0.73
31:y:137:C:C2	31:y:138:G:C8	2.76	0.73
31:y:230:G:C1'	49:q:25:ARG:CZ	2.58	0.73
31:y:397:A:H4'	31:y:398:C:OP1	1.89	0.73
31:y:624:C:H4'	49:q:10:GLY:CA	2.17	0.73
31:y:757:U:C2'	31:y:758:G:C1'	2.65	0.73
31:y:860:A:C2'	31:y:861:G:C5'	2.63	0.73
31:y:902:G:H2'	31:y:903:G:C5'	2.19	0.73
31:y:931:C:H2'	31:y:932:C:C6	2.23	0.73
31:y:1013:G:H1'	31:y:1016:A:N1	2.04	0.73
31:y:102(C):C:C2'	31:y:1029:G:H8	2.02	0.73
31:y:1057:G:H2'	31:y:1058:G:O4'	1.89	0.73
31:y:1103:C:O2'	31:y:1104:G:C1'	2.36	0.73
35:c:121:LEU:HB3	35:c:127:ILE:HG23	1.71	0.73
36:d:64:VAL:HB	36:d:99:VAL:CG1	2.19	0.73
41:i:84:ARG:O	41:i:135:CYS:CB	2.33	0.73
41:i:91:ARG:HH11	41:i:91:ARG:HA	1.52	0.73
46:n:2:ALA:O	46:n:8:GLU:HB2	1.89	0.73
51:s:45:SER:HB3	51:s:50:ILE:O	1.88	0.73
53:u:8:ARG:O	53:u:9:ASN:HB2	1.89	0.73
1:w:57:C:C4'	20:R:73:ARG:HH21	2.01	0.73
1:w:551:G:H4'	1:w:1220:A:H2	1.51	0.73
1:w:618(A):G:H3'	1:w:618(B):C:C5	2.23	0.73
1:w:779:U:O2'	1:w:780:G:H5'	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:842:G:C6	1:w:843:G:C6	2.76	0.73
1:w:993:G:O2'	1:w:994:C:H5'	1.89	0.73
1:w:1118:C:O5'	1:w:1118:C:H6	1.71	0.73
1:w:1141:U:H1'	1:w:114(B):A:C8	2.23	0.73
1:w:1262:A:H2	27:Y:10:LYS:NZ	1.86	0.73
1:w:1543:A:H2'	1:w:1544:C:H1'	1.71	0.73
1:w:1615:C:N3	1:w:1617:C:O2	2.22	0.73
1:w:1669:A:H2	1:w:1670:C:N1	1.87	0.73
1:w:1709:U:O2'	1:w:2859:G:N3	2.20	0.73
1:w:1844:C:H5''	4:B:258:LYS:HE3	1.70	0.73
1:w:2024:G:H4'	5:C:149:ARG:HH11	1.51	0.73
1:w:2218:G:H1'	4:B:148:GLU:OE2	1.88	0.73
1:w:2306:C:H42	7:E:43:LEU:CA	2.02	0.73
1:w:2362:G:H2'	1:w:2363:C:O4'	1.89	0.73
1:w:2366:A:H4'	23:U:62:LEU:HD21	1.68	0.73
1:w:2376:A:C6	1:w:2377:A:C2	2.77	0.73
1:w:2468:G:C6	1:w:2481:G:C2	2.76	0.73
2:x:71:C:H3'	2:x:72:G:C8	2.24	0.73
4:B:246:PRO:O	4:B:253:GLN:HA	1.89	0.73
5:C:8:LYS:HA	5:C:26:ILE:CD1	2.19	0.73
6:D:48:THR:CG2	6:D:49:ARG:H	2.02	0.73
6:D:62:GLN:O	6:D:64:HIS:N	2.21	0.73
6:D:134:PHE:CZ	6:D:161:ALA:HB1	2.23	0.73
6:D:151:LEU:H	6:D:169:VAL:CG2	2.01	0.73
7:E:41:GLN:HG2	7:E:155:MET:HA	1.69	0.73
7:E:128:ARG:CA	7:E:165:THR:HA	2.18	0.73
11:I:23:ARG:C	11:I:39:ILE:HG22	2.13	0.73
13:K:34:LEU:CD1	13:K:103:MET:CE	2.62	0.73
14:L:116:LEU:H	14:L:116:LEU:CD1	2.01	0.73
18:P:89:GLN:CG	18:P:90:PRO:HD2	2.19	0.73
21:S:84:ARG:NH2	21:S:94:LYS:HE3	2.04	0.73
22:T:14:LYS:HG3	22:T:15:PRO:HD2	1.71	0.73
25:W:17:SER:O	25:W:21:LEU:HB3	1.88	0.73
31:y:147:G:O6	31:y:175:C:N4	2.21	0.73
31:y:228:A:O2'	49:q:59:TRP:HZ3	1.72	0.73
31:y:423:G:N2	31:y:424:G:C8	2.57	0.73
31:y:583:A:C3'	31:y:584:G:C8	2.72	0.73
31:y:914:A:C2'	31:y:915:A:H5'	2.18	0.73
31:y:1074:G:N3	31:y:1075:C:C5	2.57	0.73
31:y:1077:G:C2	31:y:1079:G:H5''	2.23	0.73
31:y:1351:U:H2'	31:y:1352:C:C5	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1422:G:C2'	31:y:1423:G:H5'	2.18	0.73
31:y:1436:U:C3'	31:y:1437:C:H6	2.01	0.73
33:0:36:A:H8	33:0:36:A:OP2	1.72	0.73
33:0:54:U:N3	33:0:58:A:N6	2.17	0.73
36:d:23:TYR:HB3	43:k:94:VAL:H	1.54	0.73
36:d:132:ARG:O	36:d:134:ILE:N	2.21	0.73
36:d:153:VAL:HG11	36:d:166:GLU:HB3	1.69	0.73
37:e:57:ARG:HB3	37:e:206:PHE:HE1	1.54	0.73
38:f:12:LEU:HD22	38:f:12:LEU:C	2.14	0.73
40:h:108:ALA:CB	40:h:120:ILE:HA	2.19	0.73
46:n:92:HIS:HB3	46:n:98:VAL:CG1	2.18	0.73
47:o:58:LYS:C	47:o:60:SER:H	1.96	0.73
49:q:26:ARG:HB3	49:q:26:ARG:NH1	2.04	0.73
53:u:20:LEU:HD12	53:u:21:LYS:H	1.51	0.73
1:w:117:G:H4'	1:w:126:A:N3	2.02	0.73
1:w:152:G:H2'	1:w:153:C:C6	2.23	0.73
1:w:347:A:C2'	1:w:348:G:H5'	2.19	0.73
1:w:482:A:H4'	1:w:483:A:C5'	2.19	0.73
1:w:579:G:H4'	1:w:2017:U:H2'	0.81	0.73
1:w:632:A:H2'	1:w:633:A:C8	2.24	0.73
1:w:661:C:H5''	12:J:18:ARG:NH1	2.04	0.73
1:w:674:G:HO2'	6:D:70:HIS:C	1.97	0.73
1:w:808:G:N2	1:w:1254:A:H2	1.87	0.73
1:w:820:A:O2'	1:w:821:A:H5'	1.89	0.73
1:w:918:A:H3'	1:w:919:G:H8	1.54	0.73
1:w:114(B):A:H2	1:w:1143:A:HO2'	1.37	0.73
1:w:1156:A:OP2	1:w:1157:G:N7	2.21	0.73
1:w:1336:A:OP1	20:R:64:LYS:HE3	1.89	0.73
1:w:1549:C:H2'	1:w:1550:C:H5	1.53	0.73
1:w:1565:C:OP2	1:w:1565:C:H6	1.71	0.73
1:w:1838:C:O2'	1:w:1839:G:P	2.46	0.73
1:w:2210:G:N7	1:w:2212:A:OP1	2.22	0.73
1:w:2298:A:H1'	1:w:2322:A:H1'	1.69	0.73
1:w:2740:A:C2	1:w:2764:A:C4	2.77	0.73
1:w:2818:G:C6	1:w:2819:G:C8	2.77	0.73
3:A:29:LEU:HD12	3:A:32:GLU:OE2	1.88	0.73
3:A:51:ASP:OD1	3:A:53:ARG:HD2	1.89	0.73
4:B:21:PHE:C	4:B:24:ILE:HB	2.13	0.73
4:B:175:LEU:HD23	4:B:183:ARG:O	1.88	0.73
7:E:72:ARG:HA	7:E:87:PRO:HB3	1.71	0.73
8:F:121:ILE:O	8:F:121:ILE:HG12	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:13:ASN:C	11:I:17:ARG:NH1	2.47	0.73
11:I:38:VAL:HG13	11:I:60:ALA:O	1.89	0.73
11:I:64:ARG:HD2	16:N:70:VAL:HG21	1.71	0.73
14:L:27:SER:C	14:L:29:LEU:H	1.95	0.73
14:L:79:LEU:O	14:L:80:PHE:HD2	1.71	0.73
16:N:45:PHE:CZ	16:N:72:VAL:HB	2.24	0.73
19:Q:7:ALA:CB	19:Q:103:ILE:HG23	2.19	0.73
21:S:23:ARG:HG2	21:S:24:VAL:N	2.02	0.73
24:V:85:LEU:HD12	24:V:86:SER:H	1.54	0.73
24:V:90:ILE:HG22	24:V:94:LEU:HD21	1.70	0.73
31:y:7:G:HO2'	31:y:8:A:P	2.10	0.73
31:y:38:G:N1	31:y:397:A:O5'	2.19	0.73
31:y:50:A:O2'	31:y:51:A:OP2	2.07	0.73
31:y:328:C:C4'	31:y:329:A:C5'	2.63	0.73
31:y:400:C:C2'	31:y:401:C:H5'	2.19	0.73
31:y:865:A:H2	31:y:918:A:C4'	2.01	0.73
31:y:867:G:OP2	31:y:867:G:O4'	2.07	0.73
31:y:929:G:O2'	31:y:930:C:H5'	1.87	0.73
31:y:1007:C:H2'	31:y:1008:C:H6	1.54	0.73
31:y:1043:C:C2	31:y:1044:A:C8	2.77	0.73
36:d:59:ARG:CZ	36:d:64:VAL:HG21	2.19	0.73
36:d:123:GLN:CD	36:d:124:ILE:N	2.47	0.73
37:e:133:VAL:HG12	37:e:134:ASP:N	2.04	0.73
42:j:28:VAL:HG12	42:j:36:TYR:HD2	1.54	0.73
44:l:77:MET:O	44:l:103:LEU:HB3	1.88	0.73
48:p:32:LEU:C	48:p:63:ARG:NH2	2.47	0.73
49:q:2:VAL:HG23	49:q:63:GLY:HA3	1.68	0.73
50:r:29:HIS:CD2	50:r:30:PRO:N	2.56	0.73
51:s:74:ARG:HG2	51:s:79:LEU:HB3	1.69	0.73
1:w:82:G:H22	1:w:103:A:P	2.12	0.72
1:w:311:A:N3	1:w:332:A:H8	1.87	0.72
1:w:590:A:C6	1:w:668:G:N2	2.57	0.72
1:w:889:C:H4'	1:w:890:A:O5'	1.89	0.72
1:w:952:G:C6	1:w:966:G:N1	2.57	0.72
1:w:978:G:C3'	1:w:979:G:C8	2.59	0.72
1:w:1181:C:O3'	1:w:1182:A:O4'	2.06	0.72
1:w:1203:G:O6	1:w:1241:A:OP2	2.07	0.72
1:w:1232:G:H3'	1:w:1233:C:H5	1.54	0.72
1:w:1684:C:O5'	1:w:1684:C:C6	2.42	0.72
1:w:2092:U:C5'	9:G:27:ARG:HH12	2.02	0.72
1:w:2094:G:H2'	1:w:2095:C:C6	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2283:C:H2'	1:w:2284:C:H6	1.52	0.72
1:w:2289:G:H5''	1:w:2384:G:H4'	1.71	0.72
1:w:2369:A:H2'	1:w:2370:G:C5'	2.19	0.72
1:w:2436:G:N3	1:w:2598:A:H2	1.87	0.72
1:w:2472:G:O6	1:w:2475:C:H2'	1.89	0.72
4:B:136:ILE:HG12	4:B:137:PRO:CD	2.19	0.72
5:C:52:LEU:CD1	5:C:76:ARG:HB2	2.19	0.72
5:C:176:ILE:O	5:C:181:LEU:HD23	1.88	0.72
8:F:16:SER:O	8:F:26:VAL:HG13	1.88	0.72
8:F:87:LEU:HD21	8:F:133:VAL:HG13	1.69	0.72
9:G:82:ARG:CB	9:G:89:TYR:CE1	2.72	0.72
10:H:113:MET:SD	10:H:116:THR:O	2.47	0.72
12:J:127:ALA:HB1	12:J:130:PHE:CD1	2.25	0.72
14:L:23:ASN:HA	14:L:26:LYS:CB	2.19	0.72
15:M:27:SER:O	15:M:28:VAL:HG23	1.89	0.72
15:M:63:THR:HG21	15:M:96:GLY:HA3	1.69	0.72
15:M:82:ILE:HG23	15:M:85:VAL:HB	1.71	0.72
19:Q:38:TYR:CE2	27:Y:41:PRO:HG3	2.23	0.72
20:R:89:ILE:O	20:R:89:ILE:CG2	2.38	0.72
21:S:19:LYS:O	21:S:20:TYR:HB2	1.86	0.72
23:U:10:THR:C	23:U:11:LYS:HG2	2.14	0.72
24:V:84:GLY:O	24:V:86:SER:N	2.22	0.72
31:y:667:G:C2	31:y:740:U:C2	2.76	0.72
31:y:1064:G:HO2'	31:y:1065:U:P	2.12	0.72
31:y:1067:A:O2'	31:y:1068:G:O5'	2.06	0.72
31:y:1304:G:H5''	54:v:2:GLY:CA	2.20	0.72
36:d:108:ASN:CB	36:d:111:LEU:HD12	2.18	0.72
37:e:8:VAL:CB	37:e:22:LYS:HG2	2.19	0.72
37:e:22:LYS:O	37:e:25:ARG:HB2	1.89	0.72
37:e:154:ASN:C	37:e:155:LEU:HD22	2.14	0.72
38:f:41:VAL:HG22	38:f:113:ALA:HA	1.70	0.72
38:f:67:VAL:HG22	38:f:140:ARG:NH2	2.04	0.72
40:h:49:ILE:O	40:h:52:GLU:HB2	1.89	0.72
41:i:49:GLU:O	41:i:51:VAL:N	2.21	0.72
45:m:37:THR:HG1	45:m:58:ARG:H	1.37	0.72
49:q:21:VAL:HB	49:q:33:ILE:CB	2.14	0.72
1:w:545:G:C1'	1:w:548:A:H61	2.02	0.72
1:w:557:U:H5''	10:H:134:PRO:HG2	1.69	0.72
1:w:666:G:O2'	1:w:667:U:H5'	1.88	0.72
1:w:842:G:C5	1:w:843:G:C5	2.77	0.72
1:w:1196:C:O4'	1:w:1226:A:N3	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1313:U:H5''	1:w:1332:G:H4'	1.69	0.72
1:w:1477:A:H5'	1:w:1478:G:O5'	1.89	0.72
1:w:1501:C:H5'	4:B:102:LYS:CE	2.18	0.72
1:w:1558:A:O2'	1:w:1560:G:O4'	2.07	0.72
1:w:1759:A:C2	1:w:1760:A:C8	2.77	0.72
1:w:1774:C:O2	1:w:1774:C:C2'	2.37	0.72
1:w:1788:C:H2'	1:w:1789:A:O4'	1.89	0.72
1:w:1945:G:O5'	1:w:1945:G:H8	1.69	0.72
1:w:2013:A:H4'	19:Q:96:ILE:CG2	2.18	0.72
1:w:2146:C:H3'	1:w:2146:C:C6	2.24	0.72
1:w:2514:U:N3	1:w:2515:C:C4	2.57	0.72
1:w:2532:G:H3'	1:w:2533:A:H8	1.52	0.72
1:w:2658:C:C5'	8:F:158:HIS:NE2	2.47	0.72
1:w:2684:U:O5'	1:w:2684:U:H6	1.72	0.72
1:w:2840:C:H2'	1:w:2841:C:O5'	1.88	0.72
2:x:74:U:C2'	2:x:75:G:C8	2.72	0.72
3:A:34:ALA:HB2	3:A:179:ALA:HB2	1.69	0.72
5:C:93:VAL:CG1	5:C:182:LEU:HD13	2.18	0.72
6:D:90:ARG:HH21	6:D:92:TYR:HA	1.50	0.72
9:G:95:LYS:HD3	9:G:95:LYS:N	2.02	0.72
12:J:133:SER:O	12:J:137:LYS:HG2	1.88	0.72
13:K:132:VAL:C	13:K:133:ARG:HD3	2.14	0.72
14:L:42:LYS:O	14:L:44:LEU:N	2.21	0.72
18:P:52:VAL:HG23	18:P:52:VAL:O	1.89	0.72
22:T:102:LEU:HD11	22:T:124:ILE:CB	2.19	0.72
22:T:133:ILE:HG22	22:T:133:ILE:O	1.88	0.72
31:y:15:G:O4'	38:f:19:MET:SD	2.47	0.72
31:y:123:C:C4'	31:y:311:C:O2	2.28	0.72
31:y:220:G:N1	31:y:221:C:C5	2.57	0.72
31:y:511:C:O2'	31:y:512:U:OP2	2.07	0.72
31:y:519:C:H5''	31:y:529:G:H22	1.54	0.72
31:y:617:G:O2'	49:q:44:THR:HG21	1.88	0.72
31:y:790:A:H2'	31:y:791:G:N7	2.04	0.72
31:y:817:C:H5'	31:y:817:C:H6	1.54	0.72
31:y:889:A:N6	31:y:907:A:H3'	2.03	0.72
31:y:946:A:O4'	31:y:1333:A:O2'	2.06	0.72
31:y:1074:G:C2	31:y:1075:C:C4	2.78	0.72
31:y:1307:U:H4'	46:n:109:THR:HG23	1.71	0.72
31:y:1348:U:H4'	42:j:120:ARG:HD3	1.70	0.72
31:y:1521:G:H2'	31:y:1522:U:C5'	2.19	0.72
33:0:33:U:O2	33:0:35:A:C8	2.42	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:97:TRP:HZ2	35:c:102:LEU:HG	1.54	0.72
35:c:134:GLU:HA	35:c:137:ARG:NH1	2.04	0.72
37:e:23:GLY:C	37:e:25:ARG:H	1.95	0.72
38:f:41:VAL:HG12	38:f:42:GLY:N	2.04	0.72
45:m:35:VAL:HB	45:m:58:ARG:CB	2.19	0.72
47:o:24:CYS:HB2	47:o:40:CYS:N	2.04	0.72
49:q:43:LYS:H	49:q:43:LYS:CE	2.00	0.72
51:s:61:LYS:HA	51:s:64:ARG:HB2	1.69	0.72
52:t:33:THR:H	52:t:50:ALA:HB3	1.55	0.72
1:w:293:U:C3'	1:w:294:A:H4'	2.18	0.72
1:w:357:A:H2'	1:w:358:U:C5	2.23	0.72
1:w:465:G:C3'	1:w:466:A:C8	2.71	0.72
1:w:532:A:OP2	17:O:45:TYR:HE1	1.71	0.72
1:w:716:A:C8	1:w:716:A:P	2.82	0.72
1:w:1171:G:C8	1:w:1173:G:C8	2.77	0.72
1:w:1219:G:N2	1:w:1221:C:N4	2.37	0.72
1:w:1264:G:H21	1:w:2015:A:H62	1.34	0.72
1:w:1606:G:H4'	1:w:1608:A:C2	2.24	0.72
1:w:1917:U:H6	1:w:1917:U:O5'	1.72	0.72
1:w:2239:G:P	4:B:232:PRO:HB3	2.29	0.72
1:w:2305:A:C5	1:w:2306:C:C5	2.77	0.72
1:w:2394:C:OP1	12:J:63:PRO:CD	2.35	0.72
1:w:2470:G:H2'	1:w:2471:C:H5'	1.71	0.72
1:w:2478:A:H4'	1:w:2528:U:C1'	2.19	0.72
1:w:2507:C:C2	1:w:2553:G:N2	2.58	0.72
1:w:2523:G:H8	1:w:2523:G:H5'	1.54	0.72
1:w:2825:G:H8	1:w:2825:G:P	2.12	0.72
1:w:2885:C:H3'	1:w:2885:C:C6	2.24	0.72
2:x:24:G:C8	2:x:24:G:P	2.83	0.72
2:x:91:C:O2'	2:x:92:G:H5'	1.90	0.72
5:C:116:VAL:O	5:C:118:LYS:N	2.23	0.72
6:D:166:PRO:O	6:D:168:VAL:HG13	1.89	0.72
8:F:127:GLU:CB	8:F:130:ARG:HG3	2.19	0.72
9:G:26:ALA:O	9:G:32:PRO:HD3	1.89	0.72
9:G:117:GLU:HG3	9:G:118:LYS:HD2	1.70	0.72
13:K:8:LYS:HE3	13:K:70:PRO:HG2	1.70	0.72
15:M:35:ILE:HD11	15:M:66:ALA:HA	1.69	0.72
16:N:24:PRO:HG2	16:N:96:ARG:O	1.89	0.72
16:N:50:ILE:HB	16:N:63:VAL:CA	2.20	0.72
20:R:25:LYS:HZ2	20:R:26:TYR:HE1	1.30	0.72
22:T:5:LEU:HD13	22:T:6:LYS:H	1.51	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:26:ARG:O	33:0:74:C:H5''	1.89	0.72
24:V:90:ILE:HG22	24:V:94:LEU:CD2	2.19	0.72
29:a:29:LYS:O	29:a:31:HIS:N	2.21	0.72
31:y:118:U:H3'	31:y:288:A:H61	1.54	0.72
31:y:292:G:P	31:y:293:G:C8	2.82	0.72
31:y:303:A:H1'	31:y:555:C:C4'	2.18	0.72
31:y:429:U:H4'	31:y:430:A:O5'	1.87	0.72
31:y:580:U:N3	31:y:581:G:N7	2.38	0.72
31:y:652:U:C2'	31:y:653:A:H5''	2.19	0.72
31:y:712:A:C6	31:y:713:G:C6	2.78	0.72
31:y:1313:U:C5	52:t:4:SER:HB2	2.24	0.72
31:y:1441:G:H5'	31:y:1442:G:O4'	1.89	0.72
32:z:17:C:C5'	32:z:18:G:H5'	2.19	0.72
33:0:18:G:H21	33:0:58:A:H5'	1.54	0.72
36:d:78:GLY:HA3	36:d:82:GLU:HG2	1.71	0.72
37:e:5:ILE:CD1	37:e:118:ARG:NH2	2.52	0.72
37:e:204:ILE:HG13	37:e:205:GLU:N	2.03	0.72
38:f:100:VAL:HG22	38:f:116:THR:CA	2.19	0.72
44:l:73:MET:HA	44:l:73:MET:CE	2.19	0.72
45:m:59:LEU:CD1	45:m:61:SER:N	2.51	0.72
48:p:60:VAL:O	48:p:63:ARG:HB3	1.89	0.72
48:p:66:LEU:O	48:p:69:TYR:HB3	1.89	0.72
53:u:39:LYS:HB3	53:u:39:LYS:NZ	2.04	0.72
1:w:7:G:C3'	1:w:8:A:H8	2.02	0.72
1:w:164:U:OP1	1:w:165:U:C6	2.41	0.72
1:w:216:A:C2'	1:w:217:G:C8	2.67	0.72
1:w:341:G:OP2	1:w:341:G:C8	2.38	0.72
1:w:469:G:C5	28:Z:39:ARG:NH1	2.57	0.72
1:w:499:U:C5	1:w:500:G:C8	2.77	0.72
1:w:634:C:C2'	1:w:635:C:H6	2.01	0.72
1:w:1031:G:H4'	30:b:6:SER:H	1.54	0.72
1:w:1276:A:H2	1:w:1294:U:O2	1.71	0.72
1:w:1298:C:N4	1:w:1643:G:C6	2.57	0.72
1:w:1527:G:O2'	1:w:1528:A:C8	2.42	0.72
1:w:1696:G:H3'	1:w:1697:G:H8	1.54	0.72
1:w:1707:G:H4'	1:w:1758:G:N1	2.03	0.72
1:w:1780:A:OP2	1:w:1781:C:C3'	2.37	0.72
1:w:1832:C:H5''	31:y:900:A:H1'	1.72	0.72
1:w:1907:G:C2	1:w:1924:C:N3	2.57	0.72
1:w:2022:U:H1'	1:w:2034:U:N3	2.02	0.72
1:w:2258:C:O2'	1:w:2426:A:H4'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2263:C:H2'	1:w:2264:C:H5'	1.71	0.72
1:w:2437:U:C2	1:w:2438:U:C5	2.77	0.72
1:w:2594:C:H2'	1:w:2595:G:C8	2.22	0.72
1:w:2651:C:H2'	1:w:2652:C:H6	1.54	0.72
1:w:2652:C:C4	1:w:2653:U:O4	2.42	0.72
1:w:2679:A:H2'	1:w:2680:C:C6	2.24	0.72
1:w:2751:G:N3	1:w:2751:G:C2'	2.50	0.72
2:x:30:C:C2'	2:x:31:C:H5'	2.19	0.72
2:x:55:U:H4'	7:E:29:TRP:HH2	1.52	0.72
2:x:74:U:O5'	2:x:74:U:C6	2.39	0.72
4:B:78:LYS:CA	4:B:116:GLN:HA	2.20	0.72
4:B:137:PRO:CB	4:B:140:THR:HG22	2.13	0.72
5:C:181:LEU:N	5:C:181:LEU:HD22	2.04	0.72
6:D:179:TYR:CD2	6:D:179:TYR:N	2.56	0.72
9:G:113:ARG:HD3	9:G:132:PRO:HB3	1.70	0.72
10:H:72:GLY:O	10:H:73:ASP:OD2	2.07	0.72
11:I:88:ASN:N	11:I:93:PRO:HA	2.03	0.72
12:J:86:LYS:CG	12:J:118:GLY:HA3	2.20	0.72
12:J:111:ARG:NH2	12:J:148:LEU:CD2	2.52	0.72
13:K:42:ILE:O	13:K:94:VAL:HA	1.89	0.72
15:M:61:ASN:C	15:M:62:LYS:HG3	2.15	0.72
17:O:49:HIS:HA	17:O:52:ARG:HG3	1.70	0.72
29:a:52:LYS:O	29:a:56:GLU:CD	2.33	0.72
31:y:106:C:H2'	31:y:107:G:H8	1.54	0.72
31:y:117:G:N9	31:y:118:U:C5	2.58	0.72
31:y:241:C:H2'	31:y:242:C:H5'	1.71	0.72
31:y:291:C:OP2	31:y:305:G:N1	2.21	0.72
31:y:658:G:H2'	31:y:659:U:C6	2.24	0.72
31:y:898:G:O2'	31:y:900:A:N7	2.21	0.72
31:y:966:M2G:C8	32:z:34:G:H4'	2.24	0.72
31:y:1004:A:H2'	31:y:1005:A:H5'	1.70	0.72
31:y:1114:C:O5'	31:y:1114:C:C6	2.36	0.72
31:y:1281:U:OP1	31:y:1282:C:N4	2.22	0.72
31:y:1343:G:O5'	31:y:1343:G:H8	1.72	0.72
31:y:1347:G:C4	31:y:1348:U:H5	2.07	0.72
31:y:1451:A:N7	31:y:1453:G:N7	2.37	0.72
32:z:40:C:O2'	32:z:41:C:C5'	2.28	0.72
33:0:30:G:H21	40:h:144:MET:CE	2.02	0.72
35:c:106:LYS:O	35:c:108:ILE:N	2.22	0.72
36:d:29:TYR:CD1	36:d:33:LEU:HG	2.22	0.72
37:e:62:GLN:HG2	37:e:63:LYS:H	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:142:PRO:HA	37:e:185:PHE:HD2	1.54	0.72
37:e:203:VAL:O	37:e:204:ILE:C	2.32	0.72
38:f:55:VAL:O	38:f:58:ALA:HB3	1.88	0.72
45:m:83:LEU:HB2	45:m:104:TYR:CD1	2.24	0.72
48:p:43:LEU:HD11	48:p:53:HIS:CE1	2.24	0.72
1:w:768:G:C4	1:w:769:G:C8	2.78	0.72
1:w:975:G:H1'	1:w:990:A:C2	2.25	0.72
1:w:976:C:N4	1:w:987:G:O6	2.19	0.72
1:w:1021:A:H3'	1:w:1022:G:H5''	1.70	0.72
1:w:1277:G:N3	14:L:23:ASN:ND2	2.38	0.72
1:w:1446:C:C4	1:w:1466:G:N2	2.57	0.72
1:w:1557:C:C3'	1:w:1558:A:C5'	2.65	0.72
1:w:1802:A:O2'	1:w:1803:A:H5'	1.89	0.72
1:w:1892:C:C2'	1:w:1893:C:H5'	2.19	0.72
1:w:2319:G:H2'	1:w:2319:G:N3	2.04	0.72
1:w:2443:C:C2	1:w:2444:G:N7	2.57	0.72
1:w:2684:U:O5'	1:w:2684:U:C6	2.43	0.72
1:w:2715:C:H6	1:w:2715:C:O5'	1.72	0.72
4:B:70:TRP:HZ2	4:B:146:GLU:HB3	1.53	0.72
4:B:132:PRO:HB2	4:B:135:PHE:HE1	1.53	0.72
4:B:143:HIS:HA	4:B:156:ALA:CB	2.19	0.72
4:B:183:ARG:HG2	4:B:269:PHE:HB2	1.71	0.72
5:C:47:VAL:HG21	5:C:84:PHE:HB3	1.71	0.72
6:D:57:ARG:O	6:D:58:LYS:O	2.07	0.72
8:F:92:ILE:H	8:F:92:ILE:CD1	2.02	0.72
11:I:10:VAL:HG23	11:I:12:ASP:O	1.89	0.72
14:L:21:TYR:CD1	14:L:21:TYR:N	2.58	0.72
19:Q:87:PRO:HA	19:Q:88:ARG:NH2	2.04	0.72
21:S:23:ARG:CZ	21:S:38:ILE:CG2	2.68	0.72
21:S:36:ALA:O	21:S:37:VAL:CG1	2.38	0.72
22:T:71:VAL:HG12	22:T:72:ARG:N	2.04	0.72
22:T:107:THR:N	22:T:108:PRO:HD3	2.04	0.72
28:Z:30:VAL:O	28:Z:33:ARG:HB2	1.88	0.72
31:y:189:U:O5'	31:y:189:U:C6	2.42	0.72
31:y:276:G:O2'	31:y:277:C:H5'	1.88	0.72
31:y:573:A:C8	31:y:574:A:C8	2.77	0.72
31:y:573:A:O2'	31:y:574:A:O4'	2.08	0.72
31:y:671:G:C4'	39:g:77:ARG:HH12	2.02	0.72
31:y:815:A:H1'	31:y:817:C:C4	2.24	0.72
31:y:818:G:O2'	31:y:819:A:OP1	2.06	0.72
31:y:1064:G:N2	31:y:1190:G:C2'	2.48	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1188:A:N9	47:o:60:SER:OG	2.21	0.72
31:y:1367:C:H5''	43:k:60:ARG:NH2	2.04	0.72
31:y:1376:U:H2'	31:y:1377:A:H8	1.51	0.72
37:e:84:LYS:HE2	37:e:85:LYS:HB2	1.72	0.72
44:l:63:LEU:H	44:l:63:LEU:HD22	1.55	0.72
45:m:39:VAL:O	45:m:40:ARG:CB	2.38	0.72
50:r:22:LEU:HG	50:r:23:VAL:N	2.04	0.72
1:w:138:G:H3'	1:w:139:G:C5'	2.19	0.72
1:w:182:A:H2	1:w:433:C:H1'	1.52	0.72
1:w:229:A:C3'	1:w:230:U:H5'	2.20	0.72
1:w:273(G):C:C4	1:w:274:G:N7	2.56	0.72
1:w:590:A:H3'	1:w:591:C:C5	2.24	0.72
1:w:609(B):G:H2'	1:w:610:C:C5	2.24	0.72
1:w:648:G:C5'	1:w:2351:G:H4'	2.20	0.72
1:w:846:C:C1'	1:w:847:U:C5	2.72	0.72
1:w:954:G:O5'	13:K:17:LEU:HG	1.88	0.72
1:w:1040:C:H2'	1:w:1041:C:H6	1.52	0.72
1:w:1366:A:H5''	1:w:1367:A:N7	2.03	0.72
1:w:1479:G:H1'	1:w:1558:A:H4'	1.70	0.72
1:w:1563:G:H2'	1:w:1564:C:C6	2.24	0.72
1:w:1607:C:N4	1:w:1622:G:C6	2.56	0.72
1:w:1796:U:O5'	1:w:1796:U:H6	1.72	0.72
1:w:2189:U:C3'	1:w:2190:G:C5'	2.63	0.72
1:w:2236:C:H2'	1:w:2237:G:H5'	1.71	0.72
1:w:2261:C:N4	23:U:11:LYS:HB3	2.04	0.72
1:w:2364:C:O2	23:U:36:ILE:HD11	1.90	0.72
1:w:2747:G:N1	1:w:2755:C:O3'	2.23	0.72
1:w:2786:U:O2'	5:C:64:LYS:N	2.22	0.72
2:x:86:G:N1	2:x:91:C:N4	2.37	0.72
5:C:51:PHE:CG	5:C:52:LEU:N	2.57	0.72
6:D:75:ALA:HB1	6:D:77:ILE:HD12	1.71	0.72
6:D:87:PRO:O	6:D:88:LYS:HB2	1.90	0.72
6:D:112:ARG:HB3	6:D:117:LYS:HE2	1.70	0.72
8:F:12:PRO:C	8:F:14:GLY:H	1.96	0.72
8:F:54:ARG:NH1	8:F:61:HIS:HB2	2.03	0.72
9:G:101:LEU:CB	9:G:109:ILE:HD12	2.19	0.72
13:K:5:ARG:CG	13:K:6:ARG:H	2.03	0.72
13:K:6:ARG:HD3	13:K:6:ARG:C	2.13	0.72
14:L:82:GLU:HG2	14:L:83:ILE:H	1.53	0.72
18:P:28:GLU:HB2	18:P:29:PRO:CD	2.20	0.72
23:U:27:GLU:HA	23:U:69:PHE:HB2	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:51:VAL:C	24:V:59:THR:HG23	2.14	0.72
27:Y:31:VAL:HB	27:Y:32:PRO:HD2	1.71	0.72
29:a:6:THR:OG1	29:a:63:PRO:HG3	1.90	0.72
31:y:22:G:H5''	31:y:885:G:C5'	2.18	0.72
31:y:49:U:O2	31:y:49:U:C2'	2.37	0.72
31:y:82:U:H3'	31:y:84:U:C5'	2.19	0.72
31:y:143:A:O2'	31:y:144:G:OP2	2.07	0.72
31:y:268:C:C4	31:y:269:C:C4	2.78	0.72
31:y:300:A:O2'	31:y:564:C:N4	2.22	0.72
31:y:391:G:C3'	31:y:392:G:C5'	2.63	0.72
31:y:434:U:H2'	31:y:435:C:H6	1.53	0.72
31:y:520:A:H5''	31:y:521:G:OP2	1.89	0.72
31:y:621:A:C2'	31:y:622:A:O5'	2.37	0.72
31:y:1120:G:C6	31:y:1154:G:C6	2.78	0.72
31:y:1472:U:H2'	31:y:1473:A:C8	2.25	0.72
31:y:1525:G:C2	31:y:1526:G:C5	2.78	0.72
33:0:36:A:OP2	33:0:36:A:C8	2.41	0.72
35:c:50:GLU:O	35:c:51:LEU:C	2.33	0.72
35:c:127:ILE:CA	35:c:131:PRO:HG2	2.20	0.72
36:d:135:LYS:O	36:d:139:GLN:NE2	2.22	0.72
38:f:37:ARG:O	38:f:114:GLY:HA3	1.90	0.72
38:f:76:ILE:H	38:f:94:ALA:CB	2.02	0.72
40:h:74:GLU:HG2	40:h:90:GLU:O	1.90	0.72
41:i:45:ILE:O	41:i:64:LYS:HB2	1.89	0.72
42:j:63:ILE:CG2	42:j:64:THR:N	2.53	0.72
42:j:65:VAL:C	42:j:66:ARG:HG3	2.15	0.72
42:j:84:ALA:HA	42:j:87:GLN:HG3	1.72	0.72
43:k:6:ILE:HG23	43:k:97:GLU:O	1.88	0.72
45:m:109:VAL:HB	45:m:112:ARG:HG2	1.70	0.72
46:n:59:TYR:O	46:n:64:TRP:HZ3	1.70	0.72
47:o:23:ARG:HE	47:o:28:GLY:C	1.98	0.72
48:p:32:LEU:HA	48:p:35:ARG:CB	2.19	0.72
1:w:270(K):G:C2	1:w:270(R):C:C2	2.77	0.72
1:w:314:A:C6	1:w:315:G:O6	2.43	0.72
1:w:346:A:O2'	1:w:348:G:C8	2.43	0.72
1:w:356:G:H2'	1:w:357:A:H5'	1.69	0.72
1:w:594:U:H5'	29:a:61:LEU:HD13	0.88	0.72
1:w:682:G:C6	1:w:683:C:C4	2.78	0.72
1:w:724:U:H3'	1:w:725:G:C8	2.25	0.72
1:w:746:A:H2'	1:w:2611:U:HO2'	1.52	0.72
1:w:1017:G:C4	1:w:1018:C:C5	2.77	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1021:A:O2'	1:w:1123:C:C5'	2.26	0.72
1:w:1031:G:O2'	1:w:1032:A:H5'	1.88	0.72
1:w:1284:A:N6	1:w:1285:G:H21	1.87	0.72
1:w:1294:U:H4'	14:L:26:LYS:CE	2.16	0.72
1:w:1319:G:C4	1:w:1320:C:C5	2.78	0.72
1:w:1349:A:N3	1:w:1349:A:H2'	2.04	0.72
1:w:1625:C:N4	1:w:1626:G:C6	2.58	0.72
1:w:1712:C:H2'	1:w:1716:U:O4'	1.90	0.72
1:w:1830:C:N3	1:w:1831:G:C8	2.58	0.72
1:w:1976:U:O2'	1:w:1977:A:C8	2.42	0.72
1:w:2055:C:OP1	1:w:2056:G:H5''	1.88	0.72
1:w:2164:C:N4	1:w:2165:G:O6	2.23	0.72
1:w:2168:G:O3'	1:w:2170:A:N6	2.22	0.72
1:w:2321:G:N2	1:w:2322:A:O4'	2.22	0.72
1:w:2491:U:H4'	1:w:2569:G:O3'	1.90	0.72
1:w:2634:G:C5	1:w:2635:C:C4	2.78	0.72
1:w:2837:G:O2'	1:w:2838:G:H5'	1.89	0.72
3:A:43:GLU:OE2	3:A:218:THR:N	2.21	0.72
4:B:25:THR:HB	4:B:83:GLU:HA	1.71	0.72
4:B:27:THR:CG2	4:B:81:ALA:HB1	2.20	0.72
4:B:108:PRO:HB2	4:B:195:ALA:O	1.90	0.72
6:D:179:TYR:O	6:D:182:VAL:HG13	1.89	0.72
7:E:18:GLU:O	7:E:20:ILE:HG22	1.88	0.72
7:E:91:ARG:C	7:E:91:ARG:CD	2.62	0.72
9:G:131:LYS:O	9:G:131:LYS:HG3	1.88	0.72
10:H:93:LYS:HD2	10:H:94:ILE:N	2.03	0.72
10:H:124:HIS:O	10:H:126:VAL:N	2.22	0.72
10:H:156:GLN:O	10:H:157:ARG:HB3	1.89	0.72
15:M:8:GLU:HA	15:M:11:LYS:HE2	1.72	0.72
18:P:13:ARG:HG2	18:P:13:ARG:HH11	1.54	0.72
19:Q:17:VAL:HG23	19:Q:18:ARG:N	2.05	0.72
19:Q:65:LEU:O	19:Q:68:ARG:CD	2.37	0.72
19:Q:76:VAL:HA	19:Q:103:ILE:HD12	1.70	0.72
26:X:12:PRO:HD2	26:X:13:ILE:CD1	2.16	0.72
26:X:20:LYS:O	26:X:23:LEU:CG	2.27	0.72
28:Z:14:LYS:O	28:Z:20:ALA:HB1	1.89	0.72
29:a:30:ARG:O	29:a:31:HIS:HB2	1.90	0.72
30:b:3:VAL:CG1	30:b:34:GLN:HB3	2.20	0.72
31:y:186(B):C:N4	31:y:191(F):U:H3	1.85	0.72
31:y:276:G:N2	31:y:277:C:C1'	2.53	0.72
31:y:337:C:H2'	31:y:338:A:C8	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:411:A:N6	31:y:429:U:H5'	2.04	0.72
31:y:440:A:H2'	31:y:442:C:H5'	1.70	0.72
31:y:600:C:H2'	31:y:601:C:C6	2.25	0.72
31:y:944:G:C2	31:y:1339:A:N6	2.51	0.72
31:y:1055:A:O5'	31:y:1055:A:C8	2.43	0.72
31:y:1086:U:O5'	31:y:1086:U:H6	1.73	0.72
35:c:12:GLU:O	35:c:14:GLY:N	2.22	0.72
36:d:102:ASN:O	36:d:103:VAL:HG13	1.90	0.72
40:h:127:ALA:CA	40:h:135:VAL:HG21	2.14	0.72
46:n:23:TYR:O	46:n:25:ILE:HG12	1.89	0.72
46:n:65:LYS:HB3	46:n:69:GLU:OE2	1.90	0.72
46:n:88:ARG:O	46:n:91:ARG:HB2	1.89	0.72
1:w:80:G:C2'	1:w:81:G:H5'	2.20	0.72
1:w:281:G:O5'	1:w:281:G:H8	1.72	0.72
1:w:439:G:C2'	1:w:440:G:O4'	2.38	0.72
1:w:521:G:H2'	1:w:522:G:C8	2.23	0.72
1:w:558:G:H3'	1:w:559:G:C5'	2.19	0.72
1:w:705:A:N6	1:w:726:G:H1'	2.04	0.72
1:w:832:G:OP2	12:J:38:GLN:HA	1.90	0.72
1:w:1323:U:H3'	19:Q:84:ARG:NH2	2.05	0.72
1:w:1370:C:H2'	1:w:1371:G:C8	2.25	0.72
1:w:1691:C:O2'	1:w:1977:A:C4'	2.38	0.72
1:w:1707:G:C8	1:w:1756:G:N7	2.58	0.72
1:w:1838:C:O2'	1:w:1839:G:OP2	2.07	0.72
1:w:2040:C:H2'	1:w:2041:U:H6	1.53	0.72
1:w:2111:C:H41	1:w:2144:U:H4'	1.55	0.72
1:w:2396:G:O2'	24:V:31:GLY:C	2.33	0.72
1:w:2490:G:H4'	1:w:2491:U:OP1	1.90	0.72
1:w:2588:G:H8	1:w:2588:G:H5'	1.55	0.72
1:w:2639:A:N7	1:w:2775:A:C2	2.57	0.72
1:w:2784:C:OP2	1:w:2784:C:H5	1.71	0.72
1:w:2784:C:C2	1:w:2785:C:C6	2.77	0.72
1:w:2795:G:C2	1:w:2799:A:O5'	2.43	0.72
5:C:37:ARG:O	5:C:45:THR:HA	1.90	0.72
7:E:37:VAL:O	7:E:93:THR:HG23	1.90	0.72
7:E:54:GLU:O	7:E:57:ALA:HB3	1.90	0.72
8:F:106:THR:HG22	8:F:106:THR:O	1.88	0.72
9:G:88:ILE:CG1	9:G:89:TYR:H	2.03	0.72
10:H:58:ARG:HA	10:H:139:LEU:HD22	1.72	0.72
14:L:57:ARG:CB	14:L:60:LEU:HD11	2.19	0.72
14:L:104:ARG:CB	14:L:109:ALA:HB2	2.16	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:84:LYS:HD3	17:O:89:GLU:CG	2.19	0.72
24:V:12:PRO:HB3	24:V:62:VAL:HG23	1.71	0.72
24:V:60:PHE:HD1	24:V:87:PRO:CB	1.97	0.72
28:Z:28:ARG:CA	28:Z:31:LEU:HG	2.19	0.72
31:y:6:G:O6	41:i:102:ARG:NH1	2.23	0.72
31:y:176:C:H2'	31:y:177:C:C5	2.25	0.72
31:y:310:G:C2'	31:y:311:C:H5'	2.20	0.72
31:y:533:A:O5'	31:y:533:A:C8	2.43	0.72
31:y:556:C:C2'	31:y:557:G:H5'	2.18	0.72
31:y:781:A:H3'	31:y:782:A:H8	1.54	0.72
31:y:858:G:H1	31:y:869:G:H2'	1.54	0.72
31:y:1103:C:H5'	35:c:98:LEU:HD11	1.70	0.72
31:y:1258:G:H2'	31:y:1259:C:C6	2.23	0.72
31:y:1312:G:N1	31:y:1326:C:C4	2.58	0.72
31:y:1314:C:H2'	31:y:1315:U:C6	2.25	0.72
31:y:1388:C:N4	31:y:1389:C:N4	2.37	0.72
32:z:25:C:O2'	32:z:26:A:H5'	1.89	0.72
33:0:9:A:N6	33:0:23:A:H62	1.86	0.72
36:d:44:GLU:O	36:d:45:LYS:HB2	1.89	0.72
41:i:86:ILE:HB	41:i:133:LEU:CD2	2.19	0.72
45:m:121:THR:N	45:m:122:LYS:HZ3	1.86	0.72
47:o:40:CYS:HB2	47:o:42:ILE:CG1	2.19	0.72
47:o:42:ILE:O	47:o:43:CYS:C	2.32	0.72
1:w:221:A:H1'	1:w:233:A:O2'	1.89	0.72
1:w:375:C:N3	1:w:376:C:C5	2.58	0.72
1:w:535:C:H1'	17:O:49:HIS:CD2	2.25	0.72
1:w:592:G:C2	1:w:593:G:N7	2.58	0.72
1:w:601:C:H2'	1:w:602:G:O4'	1.90	0.72
1:w:666:G:N2	29:a:2:PRO:HA	1.96	0.72
1:w:781:A:H2	1:w:1776:G:C2	2.07	0.72
1:w:874:G:C1'	22:T:170:THR:HG21	2.19	0.72
1:w:1006:C:O2'	10:H:129:MET:CE	2.37	0.72
1:w:1022:G:C4'	1:w:1023:U:C5'	2.61	0.72
1:w:1125:G:C3'	1:w:1126:A:H5''	2.17	0.72
1:w:1152:C:H1'	17:O:77:SER:HB2	1.68	0.72
1:w:1735:U:H2'	1:w:1741:C:C5	2.25	0.72
1:w:2081:C:O5'	1:w:2081:C:C6	2.43	0.72
1:w:2081:C:O5'	1:w:2081:C:H6	1.72	0.72
1:w:2219:G:H2'	1:w:2224:G:O4'	1.90	0.72
1:w:2254:C:O5'	1:w:2254:C:C6	2.42	0.72
1:w:2275:C:O2'	13:K:83:MET:CB	2.28	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2441:C:H2'	1:w:2442:C:C5'	2.16	0.72
1:w:2689:U:C4'	1:w:2690:C:H6	2.02	0.72
1:w:2731:G:N2	1:w:2732:G:N2	2.37	0.72
1:w:2820:A:N1	5:C:194:GLY:HA2	2.05	0.72
2:x:4:C:H2'	2:x:5:C:C6	2.25	0.72
2:x:49:C:OP2	15:M:95:HIS:ND1	2.22	0.72
5:C:27:LEU:HD12	5:C:181:LEU:CD1	2.19	0.72
5:C:63:LEU:CD2	5:C:65:GLY:N	2.49	0.72
8:F:101:ARG:HH22	8:F:121:ILE:HG23	1.54	0.72
13:K:101:ARG:O	13:K:103:MET:SD	2.47	0.72
14:L:3:HIS:CE1	14:L:4:LEU:HG	2.24	0.72
16:N:65:LYS:O	16:N:67:SER:N	2.21	0.72
16:N:90:GLN:O	16:N:90:GLN:NE2	2.23	0.72
21:S:54:LYS:O	21:S:55:TYR:O	2.08	0.72
25:W:35:LEU:HA	25:W:37:PHE:CE2	2.25	0.72
25:W:47:ASN:CA	25:W:50:ILE:O	2.37	0.72
31:y:324:G:C5'	53:u:70:SER:HB2	2.19	0.72
31:y:495:A:C2	31:y:496:A:N1	2.58	0.72
31:y:692:U:C2'	31:y:694:A:OP2	2.36	0.72
31:y:798:G:C6	31:y:799:G:N7	2.58	0.72
31:y:902:G:H2'	31:y:903:G:H5'	1.72	0.72
31:y:1029:G:C2'	31:y:103(A):A:N6	2.53	0.72
31:y:1062:U:H2'	31:y:1063:C:C5	2.25	0.72
31:y:1064:G:C1'	31:y:1065:U:H5''	2.18	0.72
31:y:1196:U:H5'	31:y:1196:U:C6	2.24	0.72
31:y:1206:G:O5'	31:y:1206:G:C8	2.40	0.72
31:y:1396:A:H5''	31:y:1398:A:C5'	2.14	0.72
35:c:48:MET:O	35:c:51:LEU:HB3	1.90	0.72
35:c:50:GLU:C	35:c:50:GLU:CD	2.58	0.72
36:d:152:ILE:HG21	36:d:199:LYS:CE	2.11	0.72
36:d:156:ARG:HB3	36:d:193:TYR:HE2	1.54	0.72
37:e:13:ARG:NH2	37:e:36:ARG:HG2	2.05	0.72
37:e:206:PHE:HD2	37:e:207:TYR:CD1	2.07	0.72
39:g:88:VAL:HG23	39:g:89:MET:N	2.05	0.72
41:i:17:THR:HA	41:i:65:TYR:CD2	2.25	0.72
46:n:48:LEU:O	46:n:53:VAL:CG2	2.37	0.72
48:p:8:LYS:O	48:p:12:ILE:CD1	2.37	0.72
53:u:56:MET:HE3	53:u:84:LEU:HD21	1.72	0.72
1:w:77:C:C4	1:w:78:A:N7	2.57	0.72
1:w:142:G:C2'	1:w:143:C:H5''	2.19	0.72
1:w:558:G:N1	1:w:559:G:C5	2.58	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:579:G:N2	1:w:1262:A:C4	2.58	0.72
1:w:581:C:H2'	1:w:582:G:H8	1.54	0.72
1:w:660:G:O2'	1:w:661:C:H5'	1.90	0.72
1:w:674:G:H5''	6:D:72:ASP:CB	2.18	0.72
1:w:890:A:C8	1:w:890:A:C5'	2.66	0.72
1:w:942:G:O3'	12:J:35:HIS:O	2.06	0.72
1:w:1101:U:N3	1:w:1102:C:C5	2.58	0.72
1:w:1153:C:H5''	17:O:76:TYR:OH	1.89	0.72
1:w:1560:G:O2'	1:w:1561:G:H5'	1.90	0.72
1:w:1902:C:O3'	4:B:243:GLY:HA2	1.89	0.72
1:w:1920:C:H4'	31:y:1517:G:C2	2.25	0.72
1:w:2006:C:H2'	1:w:2007:C:H5	1.55	0.72
1:w:2007:C:H4'	1:w:2824:C:O2'	1.89	0.72
1:w:2079:U:O2'	24:V:38:SER:HB2	1.89	0.72
1:w:2343:C:O4'	1:w:2374:C:H5'	1.90	0.72
1:w:2712:U:O2'	1:w:712(B):A:O5'	2.08	0.72
1:w:2722:G:O3'	14:L:4:LEU:HD12	1.89	0.72
1:w:2782:G:H8	1:w:2782:G:P	2.09	0.72
1:w:2784:C:N3	1:w:2785:C:C6	2.57	0.72
1:w:2817:G:N1	1:w:2829:C:N3	2.34	0.72
3:A:30:VAL:HG12	3:A:31:LYS:N	2.05	0.72
4:B:138:VAL:CG2	4:B:139:GLY:H	1.99	0.72
4:B:247:ALA:HA	4:B:253:GLN:CA	2.19	0.72
4:B:248:SER:O	4:B:249:PRO:O	2.07	0.72
10:H:93:LYS:CB	10:H:110:LEU:HD21	2.20	0.72
16:N:66:VAL:HG22	16:N:71:GLY:CA	2.19	0.72
18:P:95:LEU:C	18:P:96:ILE:HD12	2.15	0.72
22:T:119:GLU:O	22:T:121:HIS:N	2.22	0.72
24:V:54:ALA:C	24:V:56:GLN:H	1.96	0.72
31:y:8:A:H1'	38:f:103:GLY:HA2	1.72	0.72
31:y:356:A:C2	31:y:357:G:H1'	2.24	0.72
31:y:552:U:H4'	45:m:85:ARG:HH12	1.54	0.72
31:y:564:C:N4	31:y:565:U:C4	2.58	0.72
31:y:660:G:H2'	31:y:661:G:O4'	1.89	0.72
31:y:954:G:H21	31:y:1227:A:H62	0.77	0.72
31:y:980:C:OP2	31:y:981:U:O4	2.06	0.72
31:y:1011:G:H2'	31:y:1012:U:C6	2.25	0.72
31:y:102(C):C:O2	31:y:1029:G:C1'	2.38	0.72
31:y:1075:C:O2'	31:y:1076:C:H5'	1.89	0.72
31:y:1113:C:O2	31:y:1113:C:H2'	1.89	0.72
31:y:1164:G:N2	31:y:1172:C:O2	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1275:A:H2	31:y:1282:C:O2'	1.72	0.72
31:y:1367:C:H5'	43:k:60:ARG:HH22	1.53	0.72
31:y:1408:A:C8	31:y:1408:A:H3'	2.25	0.72
31:y:1508:G:H2'	31:y:1509:C:C5	2.24	0.72
36:d:124:ILE:O	36:d:127:ARG:O	2.08	0.72
37:e:61:LYS:NZ	37:e:62:GLN:HA	2.05	0.72
37:e:141:ARG:HB3	37:e:142:PRO:CD	2.20	0.72
38:f:11:ILE:CG2	38:f:12:LEU:HD12	2.19	0.72
40:h:105:VAL:O	40:h:109:ASN:HB2	1.90	0.72
41:i:16:ALA:CA	41:i:19:VAL:HG12	2.20	0.72
49:q:3:LYS:H	49:q:65:GLN:HB3	1.52	0.72
1:w:177:G:C3'	1:w:178:G:H8	1.96	0.71
1:w:307:G:C2	1:w:309:G:C8	2.78	0.71
1:w:476:G:H2'	1:w:477:A:H5''	1.72	0.71
1:w:569:U:O2'	1:w:946:G:N2	2.23	0.71
1:w:715:G:C2'	1:w:716:A:O5'	2.38	0.71
1:w:723:G:C5	1:w:724:U:C4	2.78	0.71
1:w:854:G:H2'	1:w:855:G:H8	1.55	0.71
1:w:955:C:O2'	1:w:956:G:H5'	1.89	0.71
1:w:1188:U:H6	1:w:1188:U:O5'	1.72	0.71
1:w:1377:G:C8	1:w:1377:G:OP2	2.43	0.71
1:w:1430:C:H2'	1:w:1431:U:C6	2.24	0.71
1:w:1479:G:C2	1:w:1480:G:C1'	2.69	0.71
1:w:1843:C:N3	1:w:1844:C:C5	2.58	0.71
1:w:1906:G:C8	1:w:1929:G:H2'	2.25	0.71
1:w:2354:G:C1'	23:U:34:GLY:O	2.38	0.71
1:w:2478:A:H4'	1:w:2528:U:C4'	2.20	0.71
1:w:2762:G:C2'	1:w:2763:G:H5'	2.19	0.71
1:w:2780:G:O2'	1:w:2781:A:OP2	2.08	0.71
4:B:64:ILE:HD11	4:B:67:PHE:CZ	2.23	0.71
4:B:249:PRO:CB	4:B:250:TRP:HE3	2.02	0.71
5:C:137:HIS:ND1	5:C:138:PRO:HD2	2.05	0.71
8:F:144:VAL:CG1	8:F:145:ALA:N	2.53	0.71
9:G:94:ALA:CB	9:G:95:LYS:HZ3	2.02	0.71
10:H:61:HIS:O	10:H:63:PRO:HD3	1.90	0.71
11:I:49:ARG:HD3	11:I:49:ARG:N	2.04	0.71
11:I:62:VAL:CG1	11:I:63:VAL:N	2.53	0.71
12:J:148:LEU:HD23	12:J:149:GLU:H	1.55	0.71
16:N:50:ILE:HA	16:N:99:LEU:HG	0.89	0.71
17:O:64:ARG:NH2	17:O:64:ARG:HB3	2.05	0.71
19:Q:23:LEU:CD1	27:Y:27:PRO:HD3	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:25:ARG:HH21	19:Q:73:ALA:HB1	1.55	0.71
20:R:36:LYS:C	20:R:38:GLU:N	2.47	0.71
20:R:63:LYS:HD3	20:R:64:LYS:N	2.05	0.71
24:V:76:ARG:HH22	24:V:94:LEU:HD11	1.53	0.71
27:Y:38:ALA:HB2	27:Y:48:GLU:C	2.14	0.71
30:b:2:LYS:HA	30:b:2:LYS:HE3	1.71	0.71
31:y:362:G:C2'	31:y:364:A:OP2	2.38	0.71
31:y:376:G:H2'	31:y:377:G:O4'	1.90	0.71
31:y:562:C:O2	31:y:562:C:C2'	2.37	0.71
31:y:564:C:C4	31:y:565:U:C5	2.78	0.71
31:y:696:A:H2'	31:y:697:U:C5	2.24	0.71
31:y:721:G:H8	31:y:721:G:O5'	1.72	0.71
31:y:809:G:C2'	31:y:810:C:H5'	2.20	0.71
31:y:958:A:C2'	31:y:959:A:C8	2.73	0.71
31:y:962:C:C2	31:y:963:G:C8	2.77	0.71
31:y:984:C:N4	31:y:1222:G:N2	2.38	0.71
31:y:1047:G:H2'	31:y:1048:G:C4'	2.19	0.71
31:y:1179:A:H2'	31:y:1180:A:H8	1.52	0.71
31:y:1209:C:H2'	31:y:1210:C:H5'	1.72	0.71
35:c:50:GLU:CG	35:c:51:LEU:N	2.54	0.71
36:d:68:VAL:CG1	36:d:69:HIS:N	2.42	0.71
36:d:194:GLY:O	36:d:195:VAL:CG1	2.33	0.71
37:e:59:ARG:NH2	37:e:63:LYS:HB2	2.05	0.71
38:f:60:TYR:O	38:f:64:ARG:HG2	1.90	0.71
43:k:6:ILE:HG12	43:k:98:ILE:HA	1.71	0.71
43:k:49:VAL:HG12	43:k:50:ILE:H	1.53	0.71
45:m:74:HIS:CG	45:m:75:ASN:H	2.06	0.71
48:p:71:GLN:C	48:p:73:GLU:H	1.97	0.71
49:q:5:ARG:HD2	49:q:28:ARG:CB	2.10	0.71
1:w:251:A:H8	1:w:251:A:O5'	1.71	0.71
1:w:279:C:H2'	1:w:280:C:H5'	1.72	0.71
1:w:440:G:H2'	1:w:441:U:C6	2.24	0.71
1:w:886:C:O2'	1:w:887:A:OP2	2.08	0.71
1:w:919:G:N3	1:w:920:G:C8	2.57	0.71
1:w:1022:G:N3	1:w:1023:U:H5	1.88	0.71
1:w:1153:C:H5'	17:O:76:TYR:CZ	2.24	0.71
1:w:1287:A:C8	14:L:106:GLY:HA3	2.25	0.71
1:w:1653:G:C4	14:L:9:LYS:HE2	2.25	0.71
1:w:1782:C:C6	1:w:2609:U:C5	2.78	0.71
1:w:1827:C:H5''	4:B:222:ARG:NH1	2.04	0.71
1:w:1910:G:C2'	1:w:1911:U:H5'	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1999:C:C5'	1:w:2723:C:O2'	2.38	0.71
1:w:2022:U:O2'	1:w:2034:U:C2	2.40	0.71
1:w:2083:G:C8	1:w:2083:G:P	2.81	0.71
1:w:2247:A:N6	1:w:2257:U:H3	1.88	0.71
1:w:2257:U:O2'	1:w:2258:C:C5'	2.38	0.71
1:w:2308:G:N3	1:w:2308:G:H2'	2.05	0.71
1:w:2349:G:H2'	1:w:2350:C:H5''	1.71	0.71
1:w:2373:G:C2	1:w:2374:C:C4	2.78	0.71
1:w:2376:A:C5	15:M:94:TYR:CE1	2.78	0.71
1:w:2437:U:O5'	1:w:2437:U:C6	2.43	0.71
1:w:2620:C:C4'	5:C:156:MET:HB3	2.21	0.71
2:x:67:G:C4	2:x:68:C:C5	2.78	0.71
3:A:61:GLY:HA3	3:A:164:PHE:CE2	2.25	0.71
5:C:4:ILE:HG13	5:C:5:LEU:HD12	1.72	0.71
5:C:13:ARG:CB	5:C:22:PRO:HA	2.20	0.71
5:C:51:PHE:C	5:C:53:PRO:HD3	2.15	0.71
5:C:90:THR:HG22	5:C:91:VAL:N	2.03	0.71
5:C:108:SER:HA	5:C:189:PRO:HG2	1.72	0.71
9:G:4:ILE:HB	9:G:37:VAL:HG11	1.71	0.71
11:I:43:VAL:HG23	11:I:56:ASP:O	1.90	0.71
11:I:65:THR:C	11:I:79:PHE:CD1	2.69	0.71
11:I:69:VAL:HG13	11:I:70:LYS:N	2.04	0.71
11:I:91:LEU:H	11:I:91:LEU:CD1	1.95	0.71
13:K:8:LYS:O	13:K:10:ARG:N	2.23	0.71
14:L:82:GLU:CG	14:L:83:ILE:N	2.53	0.71
19:Q:68:ARG:HD3	19:Q:69:LEU:N	2.04	0.71
23:U:31:VAL:CG1	23:U:65:GLY:H	2.00	0.71
24:V:53:VAL:O	24:V:58:ILE:O	2.08	0.71
25:W:55:ARG:HH11	25:W:55:ARG:N	1.87	0.71
26:X:10:LYS:HG3	26:X:53:LEU:HA	1.70	0.71
31:y:572:A:H4'	31:y:917:G:H5'	1.71	0.71
31:y:585:G:H2'	31:y:879:C:H4'	1.71	0.71
31:y:896:C:C4'	50:r:101:ARG:HG2	2.20	0.71
31:y:936:C:H3'	31:y:937:A:H8	1.53	0.71
31:y:1074:G:H4'	35:c:103:THR:O	1.89	0.71
31:y:1108:G:H3'	31:y:1109:C:C5'	2.18	0.71
31:y:1405:G:H1'	31:y:1519:MA6:O4'	1.88	0.71
32:z:11:C:H2'	32:z:12:U:C5	2.24	0.71
35:c:82:ARG:HG2	35:c:82:ARG:HH11	1.54	0.71
37:e:141:ARG:HB3	37:e:142:PRO:HD2	1.73	0.71
38:f:115:VAL:HB	38:f:118:ILE:HG13	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:85:TYR:N	40:h:85:TYR:CD2	2.54	0.71
41:i:35:ILE:HA	41:i:38:ILE:CG1	2.20	0.71
44:l:74:ALA:O	44:l:75:TYR:HD2	1.74	0.71
47:o:29:ARG:HB2	47:o:29:ARG:NH1	2.05	0.71
48:p:27:VAL:O	48:p:31:LEU:HD13	1.88	0.71
1:w:20:C:O2'	1:w:21:A:H5'	1.90	0.71
1:w:149:A:H2'	1:w:150:C:C4'	2.20	0.71
1:w:176:G:O2'	1:w:177:G:H5'	1.91	0.71
1:w:216:A:N7	1:w:431:U:C2	2.58	0.71
1:w:340:A:O5'	1:w:340:A:H8	1.72	0.71
1:w:359:A:H2'	1:w:360:G:H8	1.55	0.71
1:w:450:G:C2'	1:w:451:C:H5''	2.19	0.71
1:w:731:C:OP2	1:w:761:A:P	2.48	0.71
1:w:744:G:H5'	5:C:132:HIS:CD2	2.18	0.71
1:w:802:A:H2'	1:w:803:U:O4'	1.90	0.71
1:w:808:G:N2	1:w:1254:A:C2	2.59	0.71
1:w:910:A:N7	13:K:16:ARG:HD3	2.05	0.71
1:w:1022:G:N3	1:w:1023:U:C5	2.59	0.71
1:w:1131:G:O2'	1:w:1132:A:H8	1.71	0.71
1:w:1527:G:H21	1:w:1545:A:N6	1.88	0.71
1:w:1565:C:C2	1:w:1567:A:C8	2.77	0.71
1:w:1655:A:H4'	5:C:114:ALA:HA	1.72	0.71
1:w:1712:C:C4	1:w:1747:G:C2	2.78	0.71
1:w:1789:A:C8	1:w:1790:C:C5	2.78	0.71
1:w:1817:G:H2'	1:w:1817:G:N3	2.06	0.71
1:w:1921:G:H2'	1:w:1922:G:C8	2.26	0.71
1:w:2029:G:N1	1:w:2033:A:C8	2.57	0.71
1:w:2535:G:H2'	1:w:2536:G:C8	2.24	0.71
1:w:2612:C:O2	27:Y:5:PRO:HA	1.88	0.71
1:w:2793:G:C2'	1:w:2794:C:H6	2.02	0.71
1:w:2809:A:H2'	1:w:2810:A:C8	2.25	0.71
1:w:2842:G:C2'	1:w:2843:G:H8	1.97	0.71
1:w:2876:G:OP2	16:N:1:MET:HE2	1.90	0.71
2:x:114:G:C2	15:M:38:GLN:NE2	2.57	0.71
7:E:153:ARG:HE	7:E:154:GLY:H	1.37	0.71
8:F:89:ILE:HA	8:F:162:ILE:CG1	2.20	0.71
10:H:32:VAL:HG12	10:H:35:ARG:NH2	2.05	0.71
11:I:19:ILE:HA	11:I:44:LYS:HG3	1.72	0.71
12:J:95:VAL:HG23	12:J:124:LYS:O	1.89	0.71
16:N:61:PHE:C	16:N:62:THR:HG22	2.15	0.71
16:N:128:GLU:O	16:N:128:GLU:HG3	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:55:ALA:HA	19:Q:58:ALA:HB3	1.73	0.71
19:Q:75:TYR:N	19:Q:103:ILE:HG13	2.06	0.71
22:T:150:LEU:C	22:T:150:LEU:HD13	2.15	0.71
23:U:48:GLY:O	23:U:49:LYS:HG3	1.90	0.71
27:Y:38:ALA:CB	27:Y:49:CYS:CB	2.68	0.71
29:a:26:LYS:HE3	29:a:47:LYS:CB	2.19	0.71
30:b:14:CYS:SG	30:b:27:CYS:HB3	2.30	0.71
31:y:184:G:N2	31:y:193:C:O2	2.14	0.71
31:y:580:U:H3'	31:y:580:U:C6	2.25	0.71
31:y:683:G:H22	44:l:39:PRO:HG3	1.48	0.71
31:y:851:G:H2'	31:y:852:G:H8	1.54	0.71
31:y:1307:U:C5'	46:n:109:THR:HG23	2.21	0.71
31:y:1317:C:OP2	47:o:18:VAL:HG21	1.88	0.71
31:y:1371:G:H5''	42:j:69:GLY:HA2	1.72	0.71
31:y:1375:A:C2	31:y:1376:U:H1'	2.26	0.71
32:z:56:C:O2'	32:z:57:G:H5'	1.90	0.71
37:e:59:ARG:C	37:e:59:ARG:NE	2.45	0.71
38:f:100:VAL:N	38:f:117:ASP:HA	2.05	0.71
45:m:92:LEU:HD12	45:m:92:LEU:O	1.91	0.71
1:w:77:C:N4	1:w:109:G:H1	1.89	0.71
1:w:182:A:C8	1:w:182:A:OP2	2.43	0.71
1:w:270(N):U:H5	1:w:270(O):G:N2	1.89	0.71
1:w:397:G:H5''	24:V:47:GLN:H	1.55	0.71
1:w:469:G:O6	28:Z:39:ARG:NH1	2.23	0.71
1:w:529:A:O2'	1:w:530:G:OP2	2.08	0.71
1:w:707:G:H2'	1:w:708:C:H6	1.53	0.71
1:w:940:G:C4	1:w:941:A:C8	2.78	0.71
1:w:1031:G:H4'	30:b:6:SER:HA	1.71	0.71
1:w:1322:A:H62	1:w:1331:A:N6	1.88	0.71
1:w:1441:G:C2'	1:w:1442:G:H5'	2.20	0.71
1:w:1836:C:O5'	1:w:1836:C:C6	2.35	0.71
1:w:2053:G:H2'	1:w:2054:A:H5'	1.73	0.71
1:w:2076:U:H5''	1:w:2238:G:H1	1.54	0.71
1:w:2107:C:H2'	1:w:2108:C:C6	2.24	0.71
1:w:2247:A:H61	1:w:2257:U:H3	1.37	0.71
1:w:2512:C:H1'	5:C:141:ILE:CA	2.20	0.71
1:w:2563:U:C2'	1:w:2565:A:OP2	2.37	0.71
1:w:2638:G:C8	1:w:2775:A:N6	2.58	0.71
1:w:2643:G:H2'	1:w:2644:G:C8	2.25	0.71
1:w:2644:G:H8	1:w:2644:G:OP2	1.73	0.71
1:w:2729:G:H1'	5:C:187:ALA:CB	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2740:A:C6	1:w:2764:A:C8	2.77	0.71
1:w:2744:G:O2'	1:w:2745:C:H5'	1.91	0.71
1:w:2835:A:N6	1:w:2878:U:C3'	2.54	0.71
1:w:2875:C:H4'	16:N:5:ALA:H	1.56	0.71
3:A:22:THR:OG1	3:A:25:GLU:HG2	1.91	0.71
5:C:7:VAL:O	5:C:7:VAL:HG23	1.90	0.71
7:E:70:VAL:HA	7:E:90:LEU:HD11	1.72	0.71
7:E:129:GLY:CA	7:E:163:ALA:HB3	2.21	0.71
13:K:133:ARG:CG	13:K:134:ARG:H	1.98	0.71
15:M:29:PHE:CD1	15:M:30:ARG:N	2.58	0.71
19:Q:17:VAL:HG22	19:Q:18:ARG:H	1.54	0.71
19:Q:46:PHE:O	19:Q:48:ALA:N	2.22	0.71
31:y:251:G:N2	31:y:266:G:C6	2.58	0.71
31:y:715:A:OP1	31:y:805:C:O2'	2.08	0.71
31:y:748:C:H5''	31:y:748:C:C6	2.19	0.71
31:y:777:A:C2	31:y:778:G:C4	2.78	0.71
31:y:815:A:O4'	31:y:817:C:C5	2.43	0.71
31:y:896:C:H4'	50:r:101:ARG:HG2	1.72	0.71
31:y:959:A:C2'	31:y:960:U:H4'	2.20	0.71
31:y:1078:U:C5	31:y:1079:G:C8	2.79	0.71
31:y:1127:G:HO2'	31:y:1149:C:H1'	1.54	0.71
31:y:1380:U:O5'	40:h:4:ARG:HG2	1.90	0.71
36:d:114:PRO:O	36:d:118:GLN:HG3	1.90	0.71
37:e:108:LEU:HD11	37:e:174:LEU:CD2	2.19	0.71
37:e:128:VAL:HB	37:e:133:VAL:HG22	1.72	0.71
40:h:147:ALA:C	40:h:148:ASN:HD22	1.98	0.71
42:j:11:LYS:NZ	42:j:108:VAL:HG12	2.04	0.71
42:j:83:ARG:NH1	42:j:83:ARG:HB2	2.04	0.71
51:s:81:PHE:O	51:s:82:THR:CG2	2.35	0.71
1:w:3:U:C4	1:w:4:C:C5	2.78	0.71
1:w:141(B):C:H2'	1:w:142:G:O4'	1.90	0.71
1:w:380:U:H2'	1:w:381:G:C8	2.25	0.71
1:w:396:G:H4'	24:V:46:LEU:HD22	1.73	0.71
1:w:526:A:O2'	1:w:2043:C:C2'	2.37	0.71
1:w:571:A:C2	1:w:2030:A:C2	2.79	0.71
1:w:627:A:C2	1:w:637:A:C4	2.79	0.71
1:w:712:G:C8	1:w:712:G:O5'	2.43	0.71
1:w:801:G:C8	6:D:50:GLY:HA2	2.25	0.71
1:w:1560:G:N3	1:w:1561:G:C8	2.59	0.71
1:w:1664:A:OP1	1:w:1665:A:N7	2.24	0.71
1:w:1703:G:H2'	1:w:1704:G:O4'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1801:G:C5'	1:w:1815:A:H61	2.03	0.71
1:w:1923:U:O2'	1:w:1924:C:C6	2.44	0.71
1:w:2015:A:H8	1:w:2015:A:O5'	1.73	0.71
1:w:2019:A:H4'	17:O:27:LEU:HD12	1.72	0.71
1:w:2050:C:O5'	1:w:2050:C:C6	2.43	0.71
1:w:2051:A:C3'	1:w:2614:A:H61	2.03	0.71
1:w:2398:U:H5'	1:w:2399:G:OP2	1.91	0.71
2:x:61:G:C6	2:x:62:C:C4	2.78	0.71
3:A:197:LEU:HD12	3:A:198:GLU:N	2.05	0.71
4:B:126:GLN:HG2	4:B:129:ASN:HD22	1.56	0.71
7:E:120:LEU:N	7:E:181:ARG:HD2	2.04	0.71
7:E:135:LEU:HG	7:E:155:MET:O	1.90	0.71
10:H:25:LYS:HD2	10:H:25:LYS:N	2.06	0.71
10:H:62:ARG:HH21	10:H:63:PRO:HD2	1.52	0.71
19:Q:29:LEU:CD1	19:Q:67:ASP:H	2.04	0.71
19:Q:38:TYR:HE2	27:Y:41:PRO:CG	2.04	0.71
20:R:28:PHE:C	20:R:29:TRP:HD1	1.98	0.71
21:S:75:ILE:HG12	21:S:76:CYS:N	2.05	0.71
24:V:10:LYS:O	24:V:12:PRO:CD	2.39	0.71
24:V:34:THR:CG2	24:V:35:THR:N	2.50	0.71
24:V:39:LYS:HD2	24:V:39:LYS:N	2.05	0.71
31:y:5:U:O4	37:e:86:LYS:O	2.08	0.71
31:y:229:U:H5'	49:q:59:TRP:CH2	2.25	0.71
31:y:251:G:C2	31:y:266:G:C6	2.78	0.71
31:y:519:C:O3'	45:m:50:ALA:CB	2.34	0.71
31:y:719:C:N3	51:s:74:ARG:NH2	2.39	0.71
31:y:1047:G:O3'	47:o:4:LYS:CG	2.39	0.71
31:y:1177:G:H3'	31:y:1178:G:C8	2.26	0.71
31:y:1330:U:O2	31:y:1330:U:H2'	1.89	0.71
33:0:41:U:H5'	33:0:41:U:H6	1.56	0.71
33:0:54:U:C2'	33:0:55:PSU:O5'	2.38	0.71
36:d:120:VAL:HG13	36:d:123:GLN:HE22	1.51	0.71
37:e:21:LEU:H	37:e:26:CYS:HB3	1.55	0.71
38:f:11:ILE:HG13	38:f:32:VAL:HA	1.71	0.71
38:f:39:GLY:O	38:f:41:VAL:HG23	1.91	0.71
38:f:143:ARG:NE	38:f:143:ARG:N	2.38	0.71
41:i:53:VAL:HG21	41:i:60:ARG:HD3	1.70	0.71
42:j:93:ARG:NE	42:j:102:LEU:HD22	2.05	0.71
50:r:57:VAL:HG12	50:r:59:ILE:HD13	1.72	0.71
1:w:55:G:C2	1:w:56:A:C6	2.79	0.71
1:w:346:A:H1'	1:w:347:A:C8	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:388:G:C4	1:w:390:A:N7	2.58	0.71
1:w:449:A:H4'	6:D:79:VAL:CG2	2.21	0.71
1:w:500:G:O2'	1:w:505:A:N6	2.23	0.71
1:w:536:A:H2'	1:w:537:C:C6	2.24	0.71
1:w:748:G:O6	1:w:751:A:C5'	2.37	0.71
1:w:921:G:C4'	1:w:2269:A:C8	2.68	0.71
1:w:953:A:H2'	1:w:954:G:C8	2.21	0.71
1:w:1215:G:O2'	1:w:1216:G:H5'	1.91	0.71
1:w:1275:A:C2	1:w:1645:G:N2	2.55	0.71
1:w:1512:G:H8	1:w:1512:G:O5'	1.74	0.71
1:w:1746:G:C2'	1:w:1747:G:H4'	2.20	0.71
1:w:1758:G:H2'	1:w:2695:C:O2'	1.90	0.71
1:w:1827:C:H5'	1:w:1971:A:C4'	2.21	0.71
1:w:2023:G:OP2	1:w:2617:C:H4'	1.91	0.71
1:w:2037:G:C2'	1:w:2038:G:C8	2.74	0.71
1:w:2359:C:N3	12:J:55:ARG:NH1	2.39	0.71
1:w:2373:G:N3	1:w:2374:C:C5	2.58	0.71
1:w:2623:G:C4'	1:w:2825:G:N2	2.53	0.71
1:w:2652:C:C2	1:w:2669:G:C2	2.79	0.71
4:B:45:ASN:ND2	4:B:46:GLN:H	1.89	0.71
7:E:74:LYS:HB2	7:E:86:MET:HB3	1.72	0.71
7:E:120:LEU:HD12	7:E:179:PRO:O	1.90	0.71
8:F:42:ARG:H	8:F:53:GLU:CB	2.01	0.71
9:G:60:GLU:C	9:G:64:GLU:HB2	2.15	0.71
9:G:125:GLU:C	9:G:142:VAL:O	2.34	0.71
10:H:38:LEU:HD22	10:H:76:VAL:HB	1.71	0.71
15:M:39:ILE:HG13	15:M:49:VAL:CG1	2.13	0.71
15:M:40:ILE:HG22	15:M:41:ASP:N	2.06	0.71
16:N:48:ILE:CG2	16:N:49:VAL:N	2.54	0.71
17:O:92:ARG:C	17:O:94:ASN:H	1.99	0.71
22:T:4:ARG:HA	22:T:58:VAL:CB	2.20	0.71
23:U:84:LEU:HG	23:U:85:ALA:N	2.04	0.71
24:V:27:GLU:HG3	33:O:74:C:H4'	1.72	0.71
31:y:126:G:H4'	31:y:634:C:H1'	1.72	0.71
31:y:136:C:C4'	49:q:1:MET:H1	2.00	0.71
31:y:137:C:C2'	31:y:138:G:H8	2.00	0.71
31:y:232:G:C2'	31:y:233:C:H5'	2.20	0.71
31:y:276:G:H1'	50:r:68:ARG:NH1	2.06	0.71
31:y:682:G:C2	31:y:683:G:C5	2.78	0.71
31:y:777:A:C3'	31:y:778:G:C8	2.50	0.71
31:y:796:C:H2'	31:y:797:C:C5'	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:859:A:O2'	31:y:860:A:H5'	1.90	0.71
31:y:868:C:C2'	31:y:869:G:H5'	2.20	0.71
31:y:884:U:O5'	31:y:884:U:H6	1.73	0.71
31:y:891:U:C2'	31:y:892:A:C8	2.63	0.71
31:y:1225:A:H5'	46:n:103:THR:HG21	1.70	0.71
31:y:1274:G:O5'	31:y:1274:G:H8	1.73	0.71
31:y:1305:G:H22	31:y:1331:G:H1'	1.55	0.71
31:y:1443:G:N3	31:y:1447:G:H5''	2.06	0.71
33:0:13:C:H2'	33:0:14:A:C1'	2.20	0.71
35:c:12:GLU:C	35:c:14:GLY:N	2.47	0.71
37:e:68:TYR:CE2	37:e:103:ASN:HB3	2.25	0.71
40:h:111:ARG:CZ	40:h:112:PRO:HD2	2.21	0.71
42:j:55:ALA:HA	42:j:58:ARG:HD2	1.73	0.71
48:p:33:THR:HA	48:p:63:ARG:HH21	1.53	0.71
1:w:16:G:C8	1:w:16:G:OP2	2.44	0.71
1:w:108:U:O5'	1:w:108:U:H6	1.73	0.71
1:w:748:G:O6	1:w:751:A:H5'	1.89	0.71
1:w:760:G:C4	1:w:761:A:C8	2.79	0.71
1:w:1024:G:C5	1:w:1025:G:C6	2.79	0.71
1:w:1381:G:C4	1:w:1382:G:C8	2.78	0.71
1:w:1562:A:C4	1:w:1563:G:N7	2.59	0.71
1:w:1746:G:C6	1:w:1747:G:C4	2.78	0.71
1:w:1832:C:H5'	31:y:900:A:H1'	1.73	0.71
1:w:2073:C:C5'	4:B:229:VAL:HG13	2.19	0.71
1:w:2189:U:H2'	1:w:2190:G:O4'	1.91	0.71
1:w:2213:U:H3'	1:w:2215:G:C8	2.21	0.71
1:w:2420:C:H5''	29:a:35:GLN:CD	2.14	0.71
1:w:2439:A:H1'	1:w:2587:A:OP1	1.91	0.71
1:w:2483:C:C6	1:w:2483:C:H3'	2.26	0.71
1:w:2488:A:N6	1:w:2489:G:N1	2.38	0.71
1:w:2598:A:H5'	4:B:234:GLY:HA2	1.71	0.71
1:w:2653:U:H5'	1:w:2654:A:C5'	2.20	0.71
1:w:2747:G:H2'	1:w:2748:A:C8	2.25	0.71
1:w:2820:A:O2'	1:w:2821:A:C5'	2.39	0.71
4:B:211:ARG:C	4:B:215:LEU:HD22	2.15	0.71
6:D:27:LEU:HA	6:D:30:GLU:OE1	1.91	0.71
6:D:119:LEU:C	6:D:188:VAL:HG13	2.15	0.71
6:D:127:VAL:N	6:D:133:GLU:OE1	2.17	0.71
6:D:164:ASN:O	6:D:166:PRO:HD2	1.90	0.71
7:E:15:VAL:C	7:E:19:LEU:HD12	2.15	0.71
7:E:56:ALA:O	7:E:60:LEU:CG	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:18:LEU:HA	14:L:21:TYR:CD1	2.26	0.71
16:N:22:PHE:HD1	16:N:22:PHE:C	1.99	0.71
16:N:50:ILE:CG2	16:N:51:ARG:N	2.54	0.71
16:N:64:ARG:CD	16:N:103:ARG:HB2	2.21	0.71
18:P:30:GLY:HA2	18:P:64:HIS:CB	2.19	0.71
20:R:30:VAL:HG12	20:R:31:HIS:N	2.06	0.71
22:T:10:ARG:NE	22:T:36:LYS:HB3	2.05	0.71
22:T:99:TYR:CD2	22:T:124:ILE:CA	2.74	0.71
26:X:17:LYS:CE	26:X:21:ALA:HB2	2.21	0.71
26:X:44:ARG:HB3	26:X:48:GLU:OE1	1.90	0.71
31:y:27:G:H2'	31:y:28:G:C5'	2.20	0.71
31:y:396:G:H2'	31:y:398:C:OP1	1.89	0.71
31:y:575:G:N2	31:y:880:C:O2	2.24	0.71
31:y:772:U:H2'	31:y:773:G:O5'	1.90	0.71
31:y:778:G:C5	31:y:779:C:C4	2.79	0.71
31:y:1138:G:O2'	31:y:1140:C:H5'	1.90	0.71
31:y:1164:G:C6	31:y:1165:C:N4	2.58	0.71
31:y:1292:U:O2'	31:y:1293:G:H5'	1.90	0.71
31:y:1359:C:O2'	31:y:1361:G:O6	2.03	0.71
35:c:129:GLU:O	35:c:130:ARG:HB3	1.91	0.71
35:c:173:ALA:O	35:c:174:VAL:C	2.34	0.71
37:e:7:PRO:HB2	37:e:10:ARG:CG	2.21	0.71
37:e:54:TYR:CA	37:e:57:ARG:HB2	2.19	0.71
37:e:61:LYS:HB2	37:e:203:VAL:HG22	1.71	0.71
39:g:7:ASN:O	39:g:8:ILE:HG13	1.89	0.71
39:g:45:LEU:HG	39:g:46:ARG:N	2.06	0.71
39:g:51:PRO:HA	39:g:56:PRO:HB3	1.71	0.71
40:h:92:SER:HB3	40:h:95:ARG:HD2	1.72	0.71
42:j:49:PRO:HB2	42:j:55:ALA:HB2	1.73	0.71
44:l:77:MET:H	44:l:103:LEU:HG	1.53	0.71
45:m:27:LYS:C	45:m:29:ALA:H	1.94	0.71
45:m:52:ARG:HB2	45:m:52:ARG:NH1	2.06	0.71
48:p:18:PHE:CD1	48:p:19:PRO:HD2	2.25	0.71
48:p:24:SER:CB	48:p:27:VAL:HG23	2.19	0.71
48:p:70:LEU:HD22	48:p:73:GLU:HB2	1.71	0.71
1:w:346:A:H5''	1:w:347:A:OP1	1.90	0.71
1:w:494:G:H5''	19:Q:8:ARG:CZ	2.19	0.71
1:w:543:C:OP2	1:w:543:C:H5	1.72	0.71
1:w:582:G:C4	1:w:583:G:C8	2.78	0.71
1:w:615:G:O6	1:w:616:A:N3	2.24	0.71
1:w:751:A:N6	1:w:1614:A:C2	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:887:A:H3'	1:w:887:A:C4	2.25	0.71
1:w:964:C:N4	1:w:965:C:C4	2.59	0.71
1:w:989:G:OP1	26:X:31:LEU:HD11	1.90	0.71
1:w:1035:U:C5'	8:F:59:ARG:HH22	2.04	0.71
1:w:1440:G:H2'	1:w:1441:G:H5'	1.71	0.71
1:w:1519:G:H2'	1:w:1520:U:H5'	1.71	0.71
1:w:1663:C:H1'	1:w:2686:G:O2'	1.91	0.71
1:w:1717:G:C6	1:w:1743:G:C2	2.79	0.71
1:w:1799:G:O4'	1:w:1800:C:C5	2.44	0.71
1:w:1893:C:C2'	1:w:1894:C:H5'	2.19	0.71
1:w:2064:C:OP1	32:z:75:C:H1'	1.90	0.71
1:w:2619:C:O2	5:C:156:MET:HG3	1.91	0.71
1:w:2649:U:H2'	1:w:2650:U:C6	2.26	0.71
1:w:2679:A:O2'	5:C:189:PRO:CD	2.39	0.71
1:w:2712:U:C2'	1:w:712(B):A:O5'	2.38	0.71
2:x:88:C:C2'	2:x:89(A):G:N7	2.39	0.71
4:B:142:VAL:CG2	4:B:143:HIS:N	2.54	0.71
5:C:4:ILE:CG1	5:C:5:LEU:H	2.04	0.71
5:C:12:THR:O	5:C:13:ARG:HB3	1.90	0.71
5:C:102:VAL:HG12	5:C:200:GLU:HA	1.72	0.71
7:E:172:LEU:HD12	7:E:172:LEU:C	2.16	0.71
8:F:7:LEU:N	8:F:8:PRO:CD	2.54	0.71
8:F:8:PRO:HA	8:F:50:VAL:H	1.55	0.71
8:F:88:LEU:HG	8:F:90:LYS:NZ	2.06	0.71
10:H:113:MET:O	10:H:115:ALA:N	2.24	0.71
11:I:97:ARG:HA	11:I:97:ARG:CZ	2.21	0.71
12:J:121:LYS:HD3	12:J:121:LYS:H	1.56	0.71
13:K:7:MET:HB2	13:K:8:LYS:HZ3	1.56	0.71
17:O:44:ASN:CG	18:P:78:LYS:HB3	2.16	0.71
19:Q:88:ARG:HG3	19:Q:92:ARG:HB2	1.71	0.71
23:U:23:VAL:C	23:U:38:VAL:HG22	2.16	0.71
29:a:56:GLU:CD	29:a:56:GLU:N	2.37	0.71
31:y:78:G:C6	31:y:79:G:C6	2.79	0.71
31:y:314:C:H2'	31:y:315:A:C4'	2.20	0.71
31:y:342:C:H2'	31:y:343:U:O4'	1.91	0.71
31:y:618:C:H5'	31:y:619:U:H5''	1.72	0.71
31:y:959:A:H5''	31:y:960:U:OP2	1.90	0.71
31:y:1234:C:H2'	31:y:1235:U:O5'	1.90	0.71
31:y:1423:G:H2'	31:y:1424:C:C6	2.26	0.71
31:y:1471:G:H2'	31:y:1472:U:H6	1.53	0.71
31:y:1506:U:C3'	31:y:1507:A:C5'	2.67	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:0:69:U:H2'	33:0:70:C:H6	1.52	0.71
35:c:114:ARG:O	35:c:115:LEU:C	2.34	0.71
36:d:50:ALA:HB2	36:d:75:VAL:CG2	2.20	0.71
36:d:55:VAL:O	36:d:56:ASP:HB2	1.88	0.71
36:d:150:LYS:O	36:d:200:ALA:HA	1.91	0.71
39:g:10:LEU:HD12	39:g:14:LEU:HD11	1.73	0.71
40:h:108:ALA:HB1	40:h:120:ILE:CD1	2.21	0.71
40:h:142:GLU:O	40:h:146:GLU:N	2.22	0.71
41:i:9:MET:HA	41:i:12:ARG:HB3	1.72	0.71
42:j:40:LEU:O	42:j:41:VAL:O	2.09	0.71
42:j:45:ALA:C	42:j:47:LEU:H	1.97	0.71
51:s:58:LEU:HD12	51:s:58:LEU:N	2.06	0.71
1:w:141(B):C:H2'	1:w:142:G:C8	2.26	0.71
1:w:164:U:OP1	1:w:165:U:C5	2.44	0.71
1:w:183:C:HO2'	1:w:432:A:H1'	1.56	0.71
1:w:322:A:H5'	1:w:340:A:O4'	1.91	0.71
1:w:456:C:N3	20:R:66:LEU:HG	2.06	0.71
1:w:467:G:OP2	28:Z:34:ARG:NE	2.24	0.71
1:w:534:U:O2'	17:O:46:ALA:HA	1.90	0.71
1:w:582:G:H3'	1:w:583:G:H8	1.56	0.71
1:w:585:G:H2'	1:w:586:A:N7	2.05	0.71
1:w:717:G:H2'	1:w:718:A:H5''	1.73	0.71
1:w:994:C:C4'	1:w:995:C:OP1	2.38	0.71
1:w:1031:G:C2'	1:w:1032:A:C5'	2.60	0.71
1:w:1530:G:C5'	1:w:1531:C:OP2	2.37	0.71
1:w:1975:G:C5	1:w:1976:U:C5	2.78	0.71
1:w:2010:G:O2'	1:w:2011:U:H5'	1.91	0.71
1:w:2619:C:O5'	1:w:2619:C:H6	1.72	0.71
1:w:2677:G:C6	1:w:2731:G:C6	2.79	0.71
1:w:2740:A:N1	1:w:2764:A:C4	2.59	0.71
1:w:2822:G:C5'	5:C:159:HIS:HE1	1.98	0.71
1:w:2875:C:C2'	1:w:2876:G:C4'	2.64	0.71
4:B:157:ARG:HG3	4:B:158:ALA:H	1.55	0.71
4:B:218:ARG:CG	4:B:219:PRO:HD2	2.18	0.71
4:B:248:SER:HB2	4:B:249:PRO:HD3	1.71	0.71
5:C:54:GLN:O	5:C:55:ASN:HB2	1.91	0.71
6:D:112:ARG:CA	6:D:115:GLU:HG2	2.20	0.71
7:E:103:LEU:CA	7:E:106:LEU:HG	2.15	0.71
9:G:3:VAL:O	9:G:21:VAL:HG22	1.91	0.71
9:G:69:LYS:O	9:G:69:LYS:HG2	1.91	0.71
9:G:103:ARG:HD2	9:G:104:GLN:H	1.52	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:29:LEU:HD23	14:L:30:THR:N	2.06	0.71
14:L:64:ARG:HH11	14:L:64:ARG:HG2	1.55	0.71
14:L:82:GLU:HG2	14:L:83:ILE:N	2.06	0.71
17:O:112:ARG:HG2	17:O:112:ARG:HH11	1.56	0.71
29:a:56:GLU:OE1	29:a:56:GLU:N	2.24	0.71
31:y:62:U:C2'	31:y:63:C:C6	2.64	0.71
31:y:290:C:C2	31:y:291:C:C5	2.78	0.71
31:y:411:A:C5	31:y:429:U:C5	2.79	0.71
31:y:628:G:H3'	31:y:629:G:C8	2.26	0.71
31:y:888:G:H21	31:y:909:A:H62	1.35	0.71
31:y:901:A:H3'	31:y:901:A:H8	1.56	0.71
31:y:1196:U:OP1	31:y:1197:G:C4'	2.36	0.71
31:y:1237:C:H1'	31:y:1334:G:O2'	1.91	0.71
31:y:1379:G:H3'	40:h:4:ARG:HB3	1.71	0.71
31:y:1417:G:H1'	31:y:1483:A:N6	2.06	0.71
32:z:51:U:H2'	32:z:52:G:C8	2.26	0.71
33:0:26:G:O2'	33:0:27:C:H5'	1.90	0.71
35:c:24:TRP:HA	35:c:190:THR:HB	1.73	0.71
36:d:11:ARG:HD3	36:d:15:THR:CG2	2.17	0.71
37:e:21:LEU:N	37:e:26:CYS:CB	2.54	0.71
40:h:138:LYS:O	40:h:142:GLU:HG3	1.91	0.71
41:i:44:PHE:CD1	41:i:80:ILE:HD11	2.25	0.71
41:i:97:VAL:HG13	41:i:98:LYS:H	1.56	0.71
45:m:36:CYS:CB	45:m:81:VAL:N	2.54	0.71
45:m:59:LEU:HB3	45:m:63:TYR:CB	2.20	0.71
46:n:60:VAL:HA	46:n:64:TRP:CE3	2.26	0.71
49:q:4:ILE:H	49:q:66:PRO:CA	2.01	0.71
50:r:57:VAL:HG22	50:r:76:LEU:HA	1.73	0.71
53:u:59:ALA:O	53:u:63:ILE:HG13	1.91	0.71
1:w:54:G:H21	1:w:126:A:N6	1.89	0.71
1:w:189:G:H2'	1:w:205:G:N2	2.05	0.71
1:w:191:A:O2'	1:w:192:C:H5'	1.91	0.71
1:w:384:U:H6	1:w:384:U:O5'	1.74	0.71
1:w:396:G:C3'	24:V:46:LEU:HB3	2.21	0.71
1:w:412:A:H61	1:w:2411:A:C1'	2.00	0.71
1:w:695:G:N1	1:w:768:G:C6	2.59	0.71
1:w:833:U:C1'	12:J:53:GLY:O	2.39	0.71
1:w:1064:C:H2'	1:w:1065:U:C6	2.26	0.71
1:w:1298:C:N3	1:w:1299:G:C8	2.59	0.71
1:w:1319:G:H5'	1:w:1320:C:OP2	1.90	0.71
1:w:1338:G:OP1	20:R:13:LEU:HD11	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1354:A:H2'	1:w:1355:G:H5'	1.72	0.71
1:w:1654:A:O2'	1:w:1655:A:H5'	1.91	0.71
1:w:1729:A:H2'	1:w:1730:U:H5''	1.71	0.71
1:w:1753:G:OP2	1:w:1753:G:C8	2.43	0.71
1:w:2061:G:N7	1:w:2501:C:O2	2.24	0.71
1:w:2079:U:O5'	1:w:2079:U:H6	1.73	0.71
1:w:2093:G:C2'	1:w:2094:G:H5'	2.21	0.71
1:w:2399:G:H5'	1:w:2400:G:OP2	1.91	0.71
1:w:2588:G:C6	1:w:2589:A:C6	2.79	0.71
1:w:2688:U:H2'	1:w:2719:G:N2	2.04	0.71
2:x:103:U:H2'	2:x:104:A:C8	2.26	0.71
4:B:211:ARG:O	4:B:215:LEU:HD13	1.90	0.71
5:C:32:PRO:HA	5:C:90:THR:HA	1.72	0.71
7:E:112:PRO:C	7:E:114:ILE:H	1.99	0.71
7:E:163:ALA:CA	7:E:168:GLU:HB2	2.14	0.71
8:F:61:HIS:HA	8:F:64:LEU:HG	1.73	0.71
9:G:77:LEU:CB	9:G:142:VAL:HG22	2.17	0.71
10:H:44:LYS:H	10:H:84:ARG:HB2	1.55	0.71
12:J:47:ASP:OD1	12:J:49:ARG:NE	2.24	0.71
12:J:92:GLU:HG3	12:J:95:VAL:CG1	2.14	0.71
14:L:37:THR:HG23	14:L:40:LYS:HZ3	1.55	0.71
16:N:92:GLY:H	16:N:116:ALA:N	1.89	0.71
17:O:5:LYS:HZ1	17:O:7:GLY:CA	2.03	0.71
17:O:76:TYR:O	17:O:79:PHE:N	2.23	0.71
19:Q:97:LYS:HD2	19:Q:98:LYS:N	2.06	0.71
22:T:30:ASN:HA	22:T:89:PHE:CE1	2.25	0.71
22:T:58:VAL:O	22:T:59:LEU:HD13	1.91	0.71
22:T:97:GLU:HB2	22:T:126:VAL:O	1.90	0.71
23:U:35:ASN:N	23:U:35:ASN:HD22	1.87	0.71
23:U:37:LEU:HD12	23:U:38:VAL:CG2	2.20	0.71
24:V:90:ILE:O	24:V:94:LEU:HD13	1.91	0.71
27:Y:34:PRO:HB3	27:Y:52:TYR:HE2	1.56	0.71
29:a:18:ALA:O	29:a:20:GLY:N	2.24	0.71
31:y:478:A:H2'	31:y:479:C:C5	2.26	0.71
31:y:558:G:OP1	31:y:560:U:OP1	2.09	0.71
31:y:577:G:C2'	31:y:578:C:H5'	2.20	0.71
31:y:586:C:O2'	31:y:878:G:H4'	1.91	0.71
31:y:787:A:H3'	31:y:788:U:H6	1.55	0.71
31:y:1181:G:O2'	31:y:1182:G:C5'	2.39	0.71
31:y:1190:G:OP1	36:d:4:LYS:C	2.34	0.71
31:y:1347:G:H22	31:y:1373:G:C3'	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1357:A:H5'	43:k:47:PHE:HE2	1.55	0.71
31:y:1357:A:H2'	31:y:1358:U:O4'	1.91	0.71
31:y:1439:C:C4	31:y:1440:C:N3	2.59	0.71
35:c:67:THR:O	35:c:160:ASP:HB2	1.90	0.71
35:c:82:ARG:HH11	35:c:82:ARG:CG	2.04	0.71
35:c:125:PRO:CA	35:c:128:GLU:HB2	2.09	0.71
38:f:14:ARG:HE	38:f:15:ARG:N	1.89	0.71
40:h:50:ILE:CG2	40:h:61:VAL:HG21	2.19	0.71
41:i:35:ILE:HD13	41:i:38:ILE:CD1	2.21	0.71
45:m:37:THR:HG22	45:m:38:VAL:HG23	1.72	0.71
45:m:57:VAL:HG12	45:m:65:VAL:HG23	1.73	0.71
46:n:84:ILE:HD12	52:t:74:PHE:CZ	2.22	0.71
47:o:34:TYR:OH	47:o:36:PHE:HD2	1.73	0.71
50:r:82:MET:HB3	50:r:86:GLU:CD	2.16	0.71
52:t:39:THR:HA	52:t:70:LYS:CG	2.21	0.71
54:v:12:LYS:HD2	54:v:17:THR:OG1	1.91	0.71
1:w:13:A:H2'	1:w:15:G:C5	2.25	0.70
1:w:474:G:O2'	1:w:475:U:OP1	2.09	0.70
1:w:539:G:C2'	1:w:540:G:H8	2.04	0.70
1:w:584:C:OP1	17:O:6:THR:HB	1.91	0.70
1:w:1542:G:H2'	1:w:1543:A:C4	2.25	0.70
1:w:1685:C:O2'	1:w:1686:C:H5'	1.89	0.70
1:w:1791:A:OP2	1:w:1828:G:N2	2.24	0.70
1:w:2020:A:O2'	1:w:2021:C:C5	2.38	0.70
1:w:2394:C:O2'	1:w:2395:C:H5'	1.90	0.70
1:w:2465:C:H4'	30:b:4:ARG:NH1	2.06	0.70
1:w:2486:G:H8	1:w:2486:G:O5'	1.73	0.70
1:w:2679:A:C4	1:w:2680:C:C5	2.79	0.70
4:B:70:TRP:CZ2	4:B:146:GLU:HB3	2.26	0.70
4:B:73:VAL:CG1	4:B:121:PRO:HD3	2.21	0.70
5:C:103:ASP:OD2	5:C:202:LYS:HE3	1.91	0.70
5:C:177:PRO:HG2	5:C:178:GLU:H	1.56	0.70
8:F:141:VAL:HA	8:F:144:VAL:HG12	1.73	0.70
8:F:141:VAL:HA	8:F:144:VAL:CG1	2.21	0.70
10:H:79:ASN:HA	10:H:147:ALA:HA	1.73	0.70
11:I:61:VAL:O	11:I:84:ALA:HA	1.91	0.70
14:L:45:ARG:HH11	14:L:46:GLY:N	1.89	0.70
16:N:50:ILE:CB	16:N:63:VAL:HA	2.21	0.70
18:P:51:VAL:HG12	18:P:52:VAL:N	1.98	0.70
19:Q:30:GLU:HA	19:Q:33:ARG:CZ	2.21	0.70
23:U:62:LEU:O	23:U:64:ASP:N	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:82:LEU:O	24:V:82:LEU:HD23	1.90	0.70
29:a:49:VAL:HB	29:a:53:PRO:CD	2.20	0.70
31:y:123:C:H5''	31:y:311:C:O2'	1.91	0.70
31:y:161:A:C6	31:y:162:A:C2	2.79	0.70
31:y:250:A:O2'	31:y:251:G:P	2.48	0.70
31:y:322:C:OP2	31:y:323:U:OP2	2.08	0.70
31:y:489:C:H2'	31:y:490:G:C8	2.24	0.70
31:y:967:5MC:C4'	42:j:128:ARG:HD3	2.18	0.70
31:y:1315:U:C2'	31:y:1316:G:H5'	2.21	0.70
31:y:1462:G:H2'	31:y:1463:C:O4'	1.90	0.70
33:0:48:C:H5''	33:0:48:C:C6	2.26	0.70
35:c:29:ALA:O	35:c:32:ILE:HG13	1.91	0.70
35:c:50:GLU:HG3	35:c:51:LEU:N	2.06	0.70
35:c:115:LEU:HD12	35:c:142:LEU:HD11	1.73	0.70
37:e:121:VAL:HG13	37:e:136:PRO:CB	2.21	0.70
38:f:13:ILE:CG1	38:f:14:ARG:H	1.98	0.70
40:h:47:CYS:O	40:h:50:ILE:HB	1.91	0.70
41:i:11:THR:HA	41:i:14:ARG:CG	2.13	0.70
41:i:14:ARG:HB2	41:i:18:ARG:HH21	1.55	0.70
41:i:17:THR:HA	41:i:65:TYR:HD2	1.56	0.70
45:m:35:VAL:HB	45:m:58:ARG:HB3	1.73	0.70
46:n:116:THR:HG22	46:n:117:VAL:N	2.05	0.70
1:w:126:A:H5''	28:Z:18:PHE:HB3	1.71	0.70
1:w:249:C:O5'	1:w:250:G:OP1	2.09	0.70
1:w:457:A:H5'	28:Z:40:TRP:CH2	2.26	0.70
1:w:461:C:C3'	1:w:462:C:H6	2.03	0.70
1:w:564:C:H1'	17:O:37:GLU:OE2	1.90	0.70
1:w:579:G:H1'	1:w:2017:U:C2	2.27	0.70
1:w:854:G:H2'	1:w:855:G:O4'	1.90	0.70
1:w:923:C:O2'	1:w:924:C:H5'	1.90	0.70
1:w:987:G:O2'	1:w:1000:A:C2	2.44	0.70
1:w:1128:A:N6	1:w:2518:A:C6	2.57	0.70
1:w:1291:C:O5'	1:w:1291:C:H6	1.73	0.70
1:w:1309:G:O3'	28:Z:7:PRO:HB3	1.91	0.70
1:w:1364:G:H1'	1:w:1368:G:N2	2.05	0.70
1:w:1478:G:H2'	1:w:1479:G:C8	2.26	0.70
1:w:1516:U:C2'	1:w:1517:G:C8	2.74	0.70
1:w:1535:U:H3'	1:w:1536:A:O4'	1.89	0.70
1:w:1536:A:H62	1:w:1538:G:H21	1.39	0.70
1:w:1568:G:C5'	4:B:61:LEU:HD22	2.15	0.70
1:w:1598:C:H4'	20:R:37:THR:HB	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1664:A:H61	1:w:1996:C:H42	1.37	0.70
1:w:1691:C:O2	1:w:1696:G:N2	2.18	0.70
1:w:1812:A:H1'	4:B:46:GLN:N	2.06	0.70
1:w:1845:G:H2'	1:w:1846:G:H8	1.50	0.70
1:w:1996:C:O2	1:w:1997:G:N3	2.24	0.70
1:w:2061:G:O2'	1:w:2062:A:H5''	1.91	0.70
1:w:2090:G:O6	1:w:2229:C:N4	2.17	0.70
1:w:2092:U:H5	1:w:2199:A:O2'	1.73	0.70
1:w:2293:C:C2'	1:w:2294:C:H5''	2.20	0.70
1:w:2720:U:C2	1:w:2721:A:C8	2.78	0.70
1:w:2838:G:O2'	14:L:45:ARG:NH1	2.24	0.70
1:w:2840:C:H2'	1:w:2841:C:H6	1.56	0.70
4:B:17:THR:OG1	4:B:205:VAL:HG23	1.92	0.70
4:B:121:PRO:HB3	4:B:132:PRO:CD	2.21	0.70
4:B:157:ARG:HA	4:B:196:VAL:CG2	2.19	0.70
7:E:56:ALA:HB1	7:E:60:LEU:HD11	1.73	0.70
8:F:34:GLU:HG2	8:F:35:VAL:N	2.06	0.70
8:F:49:VAL:HG12	8:F:50:VAL:N	2.05	0.70
13:K:59:ARG:O	22:T:184:ALA:HB2	1.90	0.70
13:K:103:MET:O	13:K:104:PHE:CG	2.44	0.70
19:Q:33:ARG:HG3	19:Q:33:ARG:HH11	1.57	0.70
20:R:40:LYS:HA	20:R:43:VAL:CG1	2.21	0.70
31:y:135:C:H2'	31:y:136:C:H5'	1.73	0.70
31:y:298:A:H2'	31:y:299:G:H8	1.56	0.70
31:y:551:U:H2'	31:y:552:U:C5	2.26	0.70
31:y:663:A:H2	31:y:742:G:N2	1.89	0.70
31:y:761:G:H1'	50:r:105:ALA:CB	2.19	0.70
31:y:967:5MC:O3'	42:j:128:ARG:NH1	2.24	0.70
31:y:102(C):C:H2'	31:y:1029:G:C8	2.26	0.70
33:0:18:G:H21	33:0:58:A:C4'	2.02	0.70
35:c:45:GLN:O	35:c:49:GLU:HG3	1.90	0.70
35:c:121:LEU:CD2	35:c:126:GLU:HG3	2.21	0.70
36:d:32:LEU:CD1	36:d:33:LEU:HD22	2.21	0.70
36:d:132:ARG:C	36:d:136:GLN:HG3	2.16	0.70
36:d:135:LYS:HA	36:d:168:ALA:HB1	1.72	0.70
38:f:106:PRO:HA	38:f:109:ILE:CG1	2.20	0.70
40:h:40:ALA:O	40:h:43:PHE:CD2	2.44	0.70
41:i:112:LEU:HD21	41:i:119:LEU:HB2	1.73	0.70
42:j:11:LYS:HZ3	42:j:108:VAL:HG12	1.56	0.70
43:k:63:PHE:N	43:k:63:PHE:CD1	2.58	0.70
50:r:10:VAL:CG2	50:r:54:GLY:C	2.63	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:204:A:H4'	1:w:205:G:O5'	1.90	0.70
1:w:270(Z):G:H8	1:w:270(Z):G:OP2	1.73	0.70
1:w:572:A:H2'	1:w:573:G:O4'	1.90	0.70
1:w:1146:C:H2'	1:w:1147:C:H6	1.54	0.70
1:w:1151:G:H2'	1:w:1152:C:H6	1.56	0.70
1:w:1252:G:H3'	1:w:1253:A:N7	2.06	0.70
1:w:1702:G:H2'	1:w:1703:G:H5''	1.72	0.70
1:w:2111:C:H2'	1:w:2145:C:H42	1.53	0.70
1:w:2305:A:H2'	1:w:2306:C:C5'	2.21	0.70
1:w:2461:C:C2'	1:w:2462:U:C6	2.73	0.70
1:w:2565:A:H8	1:w:2565:A:P	2.15	0.70
1:w:2776:A:O2'	1:w:2781:A:C1'	2.40	0.70
3:A:7:ARG:CB	3:A:7:ARG:NH1	2.38	0.70
4:B:79:VAL:CB	4:B:111:LEU:CD1	2.68	0.70
4:B:155:LEU:HD13	4:B:156:ALA:H	1.56	0.70
6:D:121:VAL:CA	6:D:189:MET:O	2.39	0.70
7:E:60:LEU:O	7:E:63:ILE:HB	1.91	0.70
8:F:97:ARG:H	8:F:125:VAL:HG11	1.56	0.70
10:H:80:ALA:H	10:H:147:ALA:HA	1.55	0.70
12:J:122:PRO:HG3	12:J:141:ALA:O	1.91	0.70
14:L:79:LEU:CA	14:L:83:ILE:HB	2.18	0.70
15:M:8:GLU:O	15:M:9:ARG:CB	2.39	0.70
15:M:10:ARG:NH2	15:M:11:LYS:NZ	2.39	0.70
16:N:51:ARG:NH2	16:N:60:THR:HB	2.05	0.70
17:O:12:ARG:CA	17:O:15:LYS:HD3	2.11	0.70
18:P:78:LYS:O	18:P:79:VAL:HG23	1.91	0.70
20:R:11:PRO:HG3	20:R:28:PHE:CD2	2.25	0.70
20:R:35:THR:O	20:R:37:THR:N	2.23	0.70
23:U:45:PHE:CE2	23:U:70:GLN:O	2.45	0.70
23:U:47:PRO:CA	23:U:51:VAL:HB	2.20	0.70
27:Y:44:THR:CG2	27:Y:45:VAL:H	2.04	0.70
28:Z:33:ARG:O	28:Z:37:LYS:HB2	1.91	0.70
31:y:123:C:O3'	31:y:311:C:H1'	1.91	0.70
31:y:324:G:H5'	53:u:22:ARG:HD3	1.71	0.70
31:y:519:C:H3'	31:y:520:A:C8	2.26	0.70
31:y:769:G:H2'	31:y:770:C:H5'	1.72	0.70
31:y:817:C:O2'	31:y:1527:C:C5'	2.40	0.70
31:y:951:G:C6	31:y:1231:G:C6	2.79	0.70
31:y:1037:C:C2	31:y:1038:C:C5	2.80	0.70
31:y:1327:C:OP2	54:v:6:ARG:NH1	2.24	0.70
31:y:1348:U:H2'	31:y:1349:A:H8	1.50	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1513:A:C2	31:y:1514:C:C6	2.79	0.70
33:0:10:G:C6	33:0:26:G:C5	2.79	0.70
36:d:32:LEU:O	36:d:35:GLU:N	2.25	0.70
36:d:68:VAL:H	36:d:103:VAL:HG12	1.54	0.70
36:d:100:ALA:C	36:d:101:LEU:HD23	2.16	0.70
37:e:59:ARG:CG	37:e:60:GLU:N	2.52	0.70
37:e:187:ARG:CG	37:e:187:ARG:NH1	2.52	0.70
41:i:85:ARG:NH1	41:i:85:ARG:HB3	2.06	0.70
43:k:29:ARG:O	43:k:30:SER:CB	2.39	0.70
43:k:39:PRO:O	43:k:40:LEU:HB3	1.91	0.70
43:k:50:ILE:HG23	43:k:59:SER:HB2	1.72	0.70
43:k:94:VAL:HG12	43:k:95:GLU:H	1.56	0.70
53:u:75:ASN:CB	53:u:79:ARG:NH1	2.54	0.70
1:w:6:A:O2'	10:H:153:HIS:CB	2.37	0.70
1:w:63:U:O5'	1:w:63:U:C6	2.43	0.70
1:w:143:C:C3'	1:w:144:C:H5''	2.21	0.70
1:w:348:G:H3'	1:w:349:G:O4'	1.91	0.70
1:w:446:G:OP1	17:O:3:ARG:HD3	1.91	0.70
1:w:562:U:C2	1:w:2036:C:H5'	2.25	0.70
1:w:600:G:C4	1:w:601:C:C5	2.79	0.70
1:w:904:C:H2'	1:w:905:U:H6	1.57	0.70
1:w:993:G:C2'	1:w:994:C:H5'	2.21	0.70
1:w:1007:C:P	1:w:1008:C:H3'	2.31	0.70
1:w:1058:G:C3'	1:w:1059:G:H5''	2.21	0.70
1:w:1189:A:H2'	1:w:1190:G:H5'	1.73	0.70
1:w:1346:G:OP2	1:w:1384:A:N6	2.23	0.70
1:w:1347:G:OP2	1:w:1382:G:N1	2.23	0.70
1:w:1430:C:H2'	1:w:1431:U:H6	1.57	0.70
1:w:1445:C:O2'	1:w:1446:C:H5'	1.91	0.70
1:w:1512:G:C8	1:w:1512:G:O5'	2.44	0.70
1:w:1538:G:C2'	1:w:1539:G:N7	2.50	0.70
1:w:1709:U:H1'	1:w:2860:A:H1'	1.72	0.70
1:w:1765:C:O2	1:w:1987:G:N2	2.16	0.70
1:w:1834:U:H4'	1:w:1969:A:C2	2.26	0.70
1:w:2746:U:C4	1:w:2747:G:C8	2.79	0.70
2:x:58:A:C4	2:x:59:A:C8	2.79	0.70
2:x:102:G:H2'	2:x:103:U:C5'	2.22	0.70
3:A:201:LYS:CB	3:A:202:PRO:CD	2.61	0.70
4:B:108:PRO:CB	4:B:195:ALA:O	2.40	0.70
4:B:260:ARG:NH2	4:B:264:LYS:HB2	2.03	0.70
5:C:11:MET:HG3	5:C:12:THR:H	1.52	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:153:ARG:HG3	7:E:154:GLY:N	2.07	0.70
7:E:165:THR:OG1	7:E:167:GLU:CG	2.33	0.70
9:G:4:ILE:HD12	9:G:4:ILE:N	2.06	0.70
13:K:37:LEU:H	13:K:127:ILE:HD12	1.54	0.70
13:K:40:ALA:O	13:K:97:VAL:CG2	2.38	0.70
14:L:90:ARG:HH22	14:L:118:GLU:HG3	1.55	0.70
15:M:13:ARG:HG3	15:M:90:GLY:C	2.16	0.70
17:O:92:ARG:CB	17:O:94:ASN:ND2	2.47	0.70
20:R:80:ILE:O	20:R:81:VAL:HB	1.92	0.70
31:y:102:G:C2'	31:y:103:C:C6	2.74	0.70
31:y:598:U:H4'	41:i:94:TYR:HB2	1.71	0.70
31:y:756:C:H6	31:y:756:C:O5'	1.74	0.70
31:y:874:G:H8	31:y:874:G:P	2.15	0.70
31:y:896:C:H5'	50:r:100:LYS:HD3	1.73	0.70
31:y:1182:G:C8	31:y:1182:G:O5'	2.45	0.70
31:y:1339:A:C2	32:z:31:A:C1'	2.74	0.70
31:y:1468:A:H3'	31:y:1469:G:C8	2.26	0.70
32:z:29:G:H2'	32:z:30:G:H8	1.56	0.70
35:c:115:LEU:HD11	35:c:146:GLN:HE22	1.56	0.70
37:e:9:CYS:HB3	37:e:31:CYS:O	1.91	0.70
37:e:57:ARG:NH2	38:f:107:ARG:HD2	2.05	0.70
40:h:22:LEU:O	40:h:25:ALA:HB3	1.91	0.70
40:h:122:HIS:O	40:h:126:ASP:OD2	2.10	0.70
41:i:19:VAL:CG1	41:i:20:TYR:N	2.54	0.70
1:w:79:G:N3	1:w:347:A:H2	1.88	0.70
1:w:126:A:C5'	28:Z:18:PHE:HB3	2.20	0.70
1:w:215:G:C5'	1:w:216:A:OP1	2.39	0.70
1:w:216:A:C5	1:w:217:G:C5	2.80	0.70
1:w:545:G:N2	1:w:548:A:OP2	2.24	0.70
1:w:590:A:N6	1:w:668:G:C2	2.60	0.70
1:w:642:G:H21	1:w:646:A:H62	1.37	0.70
1:w:941:A:H2'	1:w:941:A:N3	2.07	0.70
1:w:996:A:H4'	17:O:92:ARG:CD	2.21	0.70
1:w:1059:G:O2'	1:w:1060:U:O5'	2.08	0.70
1:w:1122:G:H2'	1:w:1123:C:H5'	1.72	0.70
1:w:1189:A:C2'	1:w:1190:G:H5'	2.22	0.70
1:w:1258:C:O2'	1:w:1259:G:H5'	1.92	0.70
1:w:1676:A:H2	1:w:1677:A:H1'	1.54	0.70
1:w:1933:G:O2'	1:w:1974:C:C4'	2.39	0.70
1:w:2037:G:C6	1:w:2038:G:C6	2.79	0.70
1:w:2094:G:H2'	1:w:2095:C:C1'	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2300:G:H2'	1:w:2301:C:H5'	1.74	0.70
1:w:2478:A:C4'	1:w:2528:U:C4'	2.70	0.70
1:w:2677:G:O6	1:w:2731:G:C6	2.44	0.70
1:w:2717:G:H2'	1:w:2718:G:C1'	2.21	0.70
1:w:2747:G:H4'	8:F:67:LEU:CD1	2.22	0.70
1:w:2781:A:O3'	1:w:2782:G:C8	2.44	0.70
1:w:2793:G:H3'	1:w:2794:C:H5	1.55	0.70
4:B:132:PRO:HB2	4:B:135:PHE:CE1	2.26	0.70
4:B:201:HIS:ND1	4:B:201:HIS:C	2.49	0.70
5:C:156:MET:HE2	5:C:157:ALA:H	1.55	0.70
7:E:84:LYS:O	7:E:86:MET:HG3	1.91	0.70
7:E:123:ASN:C	7:E:125:PHE:H	1.99	0.70
7:E:170:ARG:O	7:E:173:LEU:CB	2.39	0.70
8:F:42:ARG:N	8:F:53:GLU:HB3	2.03	0.70
8:F:152:ARG:N	8:F:152:ARG:CD	2.50	0.70
12:J:146:VAL:HG22	12:J:147:LEU:H	1.57	0.70
14:L:33:ARG:HA	14:L:115:GLU:HB3	1.71	0.70
15:M:72:ALA:O	15:M:74:ALA:N	2.25	0.70
15:M:78:LEU:HD23	15:M:82:ILE:HB	1.72	0.70
18:P:19:LYS:HZ3	18:P:96:ILE:HB	1.55	0.70
22:T:6:LYS:HA	22:T:60:GLU:HB2	1.72	0.70
31:y:153:C:O2'	31:y:154:C:H5'	1.91	0.70
31:y:191(A):G:C8	31:y:191(A):G:OP2	2.45	0.70
31:y:255:G:O6	31:y:266:G:O6	2.09	0.70
31:y:297:G:C2'	31:y:298:A:H8	2.02	0.70
31:y:404:U:H5''	37:e:122:ARG:HD2	1.73	0.70
31:y:412:A:H4'	31:y:413:G:N7	2.05	0.70
31:y:582:U:C4	31:y:758:G:N2	2.58	0.70
31:y:594:G:N2	31:y:596:C:H41	1.88	0.70
31:y:599:C:C2	31:y:640:A:C2	2.79	0.70
31:y:728:A:H2'	31:y:729:A:H8	1.50	0.70
31:y:738:C:N3	31:y:739:C:C4	2.59	0.70
31:y:1075:C:O2'	35:c:175:ARG:NH1	2.24	0.70
31:y:1197:G:H2'	31:y:1198:G:H8	1.56	0.70
31:y:1304:G:O6	31:y:1331:G:C8	2.44	0.70
32:z:18:G:O2'	32:z:19:G:OP1	2.10	0.70
32:z:24:G:C2	32:z:25:C:H1'	2.25	0.70
32:z:45:U:H3'	32:z:45:U:C6	2.26	0.70
32:z:70:G:H2'	32:z:71:G:C8	2.26	0.70
33:0:59:U:O2	33:0:59:U:H2'	1.91	0.70
38:f:76:ILE:HD13	38:f:91:LEU:HD12	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:j:116:LYS:CG	42:j:122:ALA:HB2	2.21	0.70
49:q:48:TRP:CE3	49:q:49:LEU:N	2.56	0.70
50:r:34:LYS:HE3	50:r:35:VAL:HG12	1.74	0.70
53:u:18:GLN:HA	53:u:21:LYS:HD3	1.73	0.70
1:w:64:A:H2'	1:w:65:C:H6	1.54	0.70
1:w:396:G:O2'	24:V:46:LEU:HA	1.90	0.70
1:w:402:A:C2'	1:w:403:U:H5'	2.22	0.70
1:w:454:A:C4'	1:w:455:C:OP2	2.40	0.70
1:w:615:G:H2'	1:w:615:G:N3	2.05	0.70
1:w:669:G:N2	1:w:670:A:C1'	2.54	0.70
1:w:698:C:H4'	1:w:734:A:H61	0.79	0.70
1:w:762:U:H4'	1:w:763:G:O5'	1.92	0.70
1:w:817:C:C3'	1:w:818:G:H5'	2.21	0.70
1:w:850:C:H5''	26:X:18:ASP:OD2	1.91	0.70
1:w:874:G:C2'	1:w:875:G:C8	2.75	0.70
1:w:1111:A:O3'	1:w:1112:G:H4'	1.90	0.70
1:w:1276:A:C4'	14:L:12:ARG:HH22	1.95	0.70
1:w:1370:C:C4	1:w:1371:G:C6	2.80	0.70
1:w:1755:A:H61	1:w:2695:C:H5''	1.57	0.70
1:w:1810:A:C8	1:w:1810:A:O5'	2.45	0.70
1:w:1820:U:C4	4:B:202:LYS:HA	2.27	0.70
1:w:2094:G:H4'	9:G:25:TYR:OH	1.90	0.70
1:w:2111:C:H4'	1:w:2118:U:O2	1.92	0.70
1:w:2307:G:H21	1:w:2308:G:H5'	1.56	0.70
1:w:2427:C:O5'	1:w:2428:G:OP1	2.09	0.70
1:w:2715:C:O5'	1:w:2715:C:C6	2.44	0.70
1:w:2776:A:H1'	1:w:2781:A:C4'	2.21	0.70
2:x:20:C:H3'	2:x:21:G:C8	2.26	0.70
2:x:35:U:C2'	2:x:36:C:H5'	2.21	0.70
5:C:152:LYS:HD2	5:C:153:GLY:H	1.56	0.70
6:D:12:ARG:N	6:D:12:ARG:HD2	2.05	0.70
7:E:35:GLU:HB2	7:E:160:VAL:HG12	1.72	0.70
9:G:109:ILE:HD13	9:G:109:ILE:N	2.06	0.70
10:H:86:THR:CG2	10:H:89:LYS:NZ	2.55	0.70
11:I:17:ARG:HE	11:I:47:ILE:CG1	2.05	0.70
12:J:85:LEU:HD21	12:J:118:GLY:N	2.05	0.70
13:K:7:MET:HB2	13:K:93:TYR:CE2	2.27	0.70
13:K:11:LYS:HB2	13:K:14:ARG:HH11	1.56	0.70
18:P:72:VAL:CA	18:P:90:PRO:HA	2.21	0.70
19:Q:65:LEU:HB3	19:Q:68:ARG:CZ	2.21	0.70
31:y:167:G:C4	31:y:168:G:C8	2.79	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:230:G:H1'	49:q:25:ARG:NH2	2.07	0.70
31:y:233:C:OP2	31:y:233:C:C6	2.44	0.70
31:y:538:G:O2'	31:y:539:A:H5'	1.91	0.70
31:y:585:G:N7	31:y:586:C:N4	2.40	0.70
31:y:666:G:C2'	31:y:667:G:H5'	2.13	0.70
31:y:725:G:N2	31:y:726:C:C5	2.59	0.70
31:y:768:A:H4'	31:y:1523:G:N2	2.07	0.70
31:y:910:C:C2	31:y:911:U:C5	2.78	0.70
31:y:913:A:O2'	31:y:914:A:C5'	2.38	0.70
31:y:1063:C:O5'	31:y:1063:C:H6	1.75	0.70
31:y:1129:C:H4'	31:y:1130:A:N7	2.07	0.70
31:y:1224:G:H4'	31:y:1224:G:OP2	1.90	0.70
31:y:1326:C:C4'	54:v:19:GLY:HA3	2.20	0.70
31:y:1476:G:H2'	31:y:1477:C:C6	2.26	0.70
31:y:1501:C:H3'	31:y:1504:G:N7	2.05	0.70
33:0:54:U:O2'	33:0:55:PSU:OP1	2.09	0.70
35:c:23:ARG:HG3	35:c:23:ARG:HH11	1.54	0.70
36:d:59:ARG:HH12	36:d:97:LYS:CG	2.03	0.70
37:e:9:CYS:CB	37:e:31:CYS:C	2.64	0.70
37:e:135:LEU:HB3	37:e:137:SER:OG	1.92	0.70
38:f:93:PRO:O	38:f:119:LEU:HD12	1.91	0.70
40:h:26:PHE:O	40:h:30:ILE:HG12	1.90	0.70
41:i:133:LEU:HD23	41:i:133:LEU:C	2.17	0.70
43:k:44:VAL:HG12	43:k:65:LEU:O	1.92	0.70
43:k:50:ILE:HG23	43:k:59:SER:CB	2.21	0.70
50:r:57:VAL:C	50:r:77:VAL:HG23	2.16	0.70
52:t:32:LYS:HA	52:t:50:ALA:H	1.56	0.70
53:u:45:GLN:HA	53:u:91:LEU:HD13	1.72	0.70
1:w:55:G:C2	1:w:116:C:C2	2.80	0.70
1:w:271(C):G:C1'	1:w:271(D):U:H5''	2.22	0.70
1:w:402:A:H2'	1:w:403:U:C5'	2.21	0.70
1:w:458:G:O2'	1:w:459:U:H5	1.75	0.70
1:w:578:A:H2'	1:w:2018:G:C5'	2.22	0.70
1:w:710:G:C2	1:w:711:G:C5	2.79	0.70
1:w:738:G:H2'	1:w:739:G:O4'	1.92	0.70
1:w:775:G:H5'	1:w:776:G:OP1	1.90	0.70
1:w:802:A:H2'	1:w:803:U:C1'	2.22	0.70
1:w:836:G:H2'	1:w:837:C:C5	2.26	0.70
1:w:1124:C:N4	1:w:1125:G:C2	2.60	0.70
1:w:1223:G:C6	1:w:1227:G:C6	2.79	0.70
1:w:1381:G:C5	1:w:1382:G:C8	2.80	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1447:G:O2'	1:w:1545:A:N3	2.24	0.70
1:w:1551:C:H2'	1:w:1552:G:O4'	1.91	0.70
1:w:1652:A:C2'	1:w:1653:G:C8	2.73	0.70
1:w:1677:A:H2'	1:w:1678:G:C8	2.27	0.70
1:w:1843:C:H42	1:w:1844:C:N4	1.89	0.70
1:w:1857:G:O2'	1:w:1885:A:N6	2.24	0.70
1:w:1958:C:C2	1:w:1959:G:C8	2.79	0.70
1:w:2158:A:C2'	1:w:2159:G:H5'	2.21	0.70
1:w:2163:C:H3'	1:w:2164:C:C6	2.26	0.70
1:w:2571:C:O2'	5:C:146:THR:HB	1.91	0.70
1:w:2602:A:N1	32:z:76:A:C8	2.56	0.70
1:w:2603:G:C5	1:w:2604:U:C6	2.79	0.70
1:w:2655:G:N3	1:w:2656:U:O4	2.25	0.70
1:w:2773:C:H5''	5:C:164:ARG:CG	2.21	0.70
4:B:242:ARG:H	4:B:242:ARG:NH1	1.90	0.70
4:B:248:SER:CB	4:B:249:PRO:CD	2.70	0.70
6:D:135:LEU:O	6:D:135:LEU:HD23	1.92	0.70
6:D:148:SER:N	6:D:167:TRP:CE2	2.59	0.70
7:E:43:LEU:HG	7:E:153:ARG:HD3	1.72	0.70
8:F:153:LYS:HA	8:F:162:ILE:O	1.92	0.70
9:G:124:GLY:CA	9:G:144:VAL:CB	2.68	0.70
10:H:48:ARG:HH11	10:H:48:ARG:CB	2.05	0.70
10:H:113:MET:C	10:H:115:ALA:N	2.49	0.70
11:I:2:ILE:CG1	11:I:34:THR:HA	2.20	0.70
11:I:60:ALA:HA	11:I:86:ILE:HA	1.72	0.70
12:J:13:ASN:O	12:J:14:LYS:HB2	1.91	0.70
12:J:47:ASP:OD1	12:J:49:ARG:CZ	2.40	0.70
13:K:42:ILE:CD1	13:K:43:THR:N	2.45	0.70
13:K:124:LYS:HZ3	13:K:125:LEU:HA	1.57	0.70
21:S:54:LYS:CG	21:S:55:TYR:H	2.04	0.70
31:y:186(A):C:H2'	31:y:186(B):C:C6	2.27	0.70
31:y:451:A:C8	31:y:481:G:C6	2.80	0.70
31:y:678:U:H1'	31:y:777:A:H4'	1.71	0.70
31:y:712:A:N6	31:y:713:G:O6	2.25	0.70
31:y:772:U:C2'	31:y:773:G:O5'	2.40	0.70
31:y:791:G:H22	31:y:1497:G:H4'	1.52	0.70
35:c:142:LEU:HA	35:c:145:LEU:CD1	2.22	0.70
35:c:180:LEU:C	35:c:182:ILE:H	1.99	0.70
36:d:14:ILE:HG12	36:d:178:LEU:HG	1.74	0.70
36:d:65:ALA:HA	36:d:100:ALA:O	1.92	0.70
37:e:110:PHE:O	37:e:111:ALA:HB2	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:76:ILE:H	38:f:94:ALA:HB2	1.54	0.70
41:i:14:ARG:O	41:i:17:THR:HG22	1.91	0.70
44:l:68:ALA:O	44:l:71:LYS:HB2	1.91	0.70
46:n:11:ARG:HA	46:n:45:VAL:HG11	1.74	0.70
50:r:21:VAL:HG11	50:r:59:ILE:HD11	1.71	0.70
51:s:47:THR:CG2	51:s:82:THR:OG1	2.39	0.70
53:u:14:LYS:HA	53:u:17:ARG:CB	2.21	0.70
53:u:54:LYS:HB3	53:u:54:LYS:NZ	2.03	0.70
1:w:309:G:C2'	1:w:330:A:N1	2.54	0.70
1:w:519:U:O4	1:w:520:G:C6	2.45	0.70
1:w:709:U:C2'	1:w:710:G:O4'	2.39	0.70
1:w:718:A:OP2	1:w:719:C:H6	1.74	0.70
1:w:740:U:H5''	1:w:1784:A:P	2.32	0.70
1:w:782:A:N1	4:B:226:MET:HE2	2.07	0.70
1:w:1014:U:H2'	1:w:1015:G:C1'	2.21	0.70
1:w:1133:U:H2'	1:w:1137:G:H5'	1.74	0.70
1:w:1806:C:H5'	1:w:1806:C:C6	2.27	0.70
1:w:1878:G:H2'	1:w:1879:C:H6	1.57	0.70
1:w:1922:G:H2'	1:w:1923:U:H5'	1.73	0.70
1:w:2466:C:H2'	1:w:2467:C:C5'	2.21	0.70
1:w:712(B):A:OP1	1:w:2713:A:C5'	2.40	0.70
1:w:2840:C:N3	1:w:2841:C:C4	2.60	0.70
1:w:2865:U:C6	1:w:2865:U:C5'	2.70	0.70
4:B:201:HIS:HB2	4:B:204:ILE:HG23	1.72	0.70
10:H:50:ALA:O	10:H:53:ILE:N	2.21	0.70
10:H:144:LYS:HE2	10:H:153:HIS:CE1	2.26	0.70
11:I:12:ASP:OD1	11:I:86:ILE:CD1	2.39	0.70
12:J:35:HIS:C	12:J:36:LYS:CD	2.65	0.70
15:M:9:ARG:O	15:M:11:LYS:N	2.24	0.70
22:T:146:ILE:HB	22:T:176:PRO:CD	2.22	0.70
24:V:15:ALA:O	24:V:46:LEU:CG	2.37	0.70
29:a:7:HIS:HE1	29:a:9:GLY:HA3	1.57	0.70
31:y:155:C:C2	31:y:156:G:C8	2.80	0.70
31:y:318:G:H8	31:y:318:G:O5'	1.75	0.70
31:y:674:G:C2	31:y:675:A:N7	2.60	0.70
31:y:1266:G:C6	31:y:1268:A:OP1	2.44	0.70
31:y:1276:G:C2	31:y:1282:C:O2	2.45	0.70
31:y:1323:G:C3'	31:y:1324:A:C8	2.73	0.70
31:y:1467:G:C8	31:y:1467:G:H3'	2.27	0.70
32:z:10:G:N2	32:z:25:C:O2	2.24	0.70
32:z:18:G:C8	32:z:18:G:OP2	2.44	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:0:29:A:H2	33:0:41:U:C2	2.09	0.70
33:0:50:U:O5'	33:0:50:U:H6	1.75	0.70
35:c:72:GLY:O	35:c:94:ASN:OD1	2.09	0.70
35:c:81:VAL:O	35:c:85:ALA:HB3	1.91	0.70
37:e:22:LYS:CB	37:e:26:CYS:H	2.05	0.70
37:e:80:GLU:O	37:e:81:GLU:C	2.35	0.70
39:g:6:VAL:HA	39:g:89:MET:O	1.92	0.70
40:h:117:ALA:O	40:h:121:ALA:CB	2.40	0.70
45:m:42:VAL:HG12	45:m:54:VAL:CG1	2.22	0.70
45:m:82:VAL:HA	45:m:104:TYR:HB3	1.74	0.70
51:s:51:LEU:HD21	51:s:55:ARG:CG	2.22	0.70
1:w:179:G:H2'	1:w:180:G:C8	2.27	0.70
1:w:265:A:C2'	1:w:428:A:H61	2.03	0.70
1:w:273(E):C:C3'	1:w:273(F):U:H5''	2.21	0.70
1:w:558:G:C3'	1:w:559:G:H5''	2.18	0.70
1:w:591:C:H3'	1:w:592:G:C8	2.27	0.70
1:w:668:G:H5''	1:w:669:G:OP2	1.91	0.70
1:w:706:A:H2'	1:w:707:G:O4'	1.92	0.70
1:w:969:U:H2'	1:w:970:C:N1	2.06	0.70
1:w:1173:G:H3'	1:w:1174:A:H5''	0.84	0.70
1:w:1201:C:H4'	6:D:40:ARG:NH1	2.07	0.70
1:w:1217:C:C2'	1:w:1218:C:H5'	2.22	0.70
1:w:1434:A:H3'	1:w:1435:G:H5'	1.72	0.70
1:w:1668:A:C2	1:w:1670:C:N3	2.60	0.70
1:w:1789:A:H3'	1:w:1790:C:H6	1.51	0.70
1:w:1792:G:O2'	1:w:1793:C:H5'	1.91	0.70
1:w:1912:A:C2	31:y:1494:G:N2	2.59	0.70
1:w:1920:C:H5''	31:y:1517:G:C5	2.27	0.70
1:w:2135:A:N1	1:w:2156:G:O2'	2.25	0.70
1:w:2320:A:C6	1:w:2333:A:H2'	2.27	0.70
1:w:2472:G:H22	1:w:2477:C:H5''	1.56	0.70
1:w:2485:G:C5'	13:K:46:GLN:CG	2.70	0.70
1:w:2824:C:C4	1:w:2825:G:O6	2.45	0.70
1:w:2877:G:H2'	1:w:2878:U:C6	2.27	0.70
1:w:2887:U:C4	1:w:2888:C:N4	2.58	0.70
4:B:21:PHE:HA	4:B:24:ILE:CG1	2.22	0.70
4:B:63:ARG:NH2	4:B:86:PRO:HD3	2.06	0.70
5:C:4:ILE:CD1	5:C:91:VAL:HG11	2.20	0.70
5:C:5:LEU:HB2	5:C:76:ARG:NH1	2.07	0.70
6:D:153:THR:C	6:D:172:ALA:HA	2.17	0.70
7:E:31:VAL:HG12	7:E:33:ARG:CD	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:13:HIS:HD2	14:L:16:HIS:CD2	2.06	0.70
15:M:94:TYR:O	15:M:99:LYS:HE3	1.91	0.70
21:S:27:VAL:C	21:S:28:LYS:HD3	2.17	0.70
22:T:28:MET:O	22:T:29:TYR:HB3	1.92	0.70
31:y:117:G:C8	31:y:117:G:O5'	2.45	0.70
31:y:229:U:C6	31:y:229:U:O5'	2.44	0.70
31:y:443:C:H2'	31:y:444:C:C5'	2.20	0.70
31:y:517:G:N1	31:y:532:A:H4'	2.06	0.70
31:y:577:G:C6	31:y:578:C:C5	2.79	0.70
31:y:741:G:C2	31:y:742:G:C8	2.80	0.70
31:y:1162:C:C4	31:y:1163:C:N4	2.59	0.70
31:y:1177:G:H2'	31:y:1178:G:O4'	1.92	0.70
31:y:1401:G:C2	31:y:1402:4OC:H1'	2.27	0.70
31:y:1515:C:O2'	31:y:1516:G:H5'	1.91	0.70
36:d:45:LYS:H	36:d:48:TYR:HB2	1.55	0.70
39:g:91:VAL:HG22	39:g:92:LYS:N	2.06	0.70
40:h:109:ASN:C	40:h:119:ARG:NH2	2.49	0.70
40:h:116:ALA:HA	40:h:120:ILE:CG1	2.21	0.70
40:h:120:ILE:HG23	40:h:124:LEU:CD2	2.19	0.70
41:i:104:ARG:NH1	41:i:104:ARG:CA	2.54	0.70
44:l:77:MET:CA	44:l:80:VAL:HG11	2.22	0.70
44:l:82:VAL:HG11	44:l:105:VAL:CA	2.21	0.70
44:l:108:ILE:HG22	51:s:88:LYS:HB3	1.74	0.70
45:m:57:VAL:HG21	45:m:67:ALA:HB2	1.72	0.70
45:m:84:ILE:N	45:m:84:ILE:CD1	2.41	0.70
46:n:109:THR:HG22	46:n:110:ARG:NE	2.05	0.70
48:p:18:PHE:CD2	48:p:21:ASP:CA	2.71	0.70
1:w:96:G:C1'	25:W:41:ILE:HG21	2.20	0.70
1:w:302:C:N4	1:w:314:A:N6	2.40	0.70
1:w:308:G:N7	1:w:309:G:C2	2.60	0.70
1:w:377:C:N3	1:w:397:G:N1	2.40	0.70
1:w:600:G:H8	1:w:600:G:O5'	1.74	0.70
1:w:983:A:C2	1:w:984:A:C4	2.79	0.70
1:w:1015:G:H4'	1:w:1015:G:OP1	1.90	0.70
1:w:1145:C:O2'	1:w:1146:C:H5'	1.92	0.70
1:w:1201:C:C4	1:w:1202:C:N4	2.60	0.70
1:w:1303:G:O2'	1:w:1304:C:H5'	1.90	0.70
1:w:1316:U:O4'	1:w:1392:A:C2	2.44	0.70
1:w:1349:A:N3	1:w:1349:A:C2'	2.55	0.70
1:w:1366:A:H2'	1:w:1366:A:N3	2.06	0.70
1:w:1651:G:H2'	1:w:1652:A:C8	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1663:C:O2'	1:w:1664:A:O5'	2.10	0.70
1:w:1811:G:H5''	1:w:1811:G:C8	2.25	0.70
1:w:1847:A:OP1	1:w:1847:A:N3	2.25	0.70
1:w:2266:A:N6	1:w:2273:A:C8	2.59	0.70
1:w:2355:C:O4'	23:U:36:ILE:HB	1.92	0.70
1:w:2447:G:C8	1:w:2500:U:H3'	2.27	0.70
1:w:2584:U:C2'	1:w:2585:U:H2'	2.20	0.70
2:x:114:G:H1'	15:M:50:SER:OG	1.92	0.70
3:A:40:GLU:CB	3:A:217:THR:HG21	2.20	0.70
3:A:191:ARG:HA	3:A:194:ILE:HD12	1.74	0.70
4:B:164:GLN:C	4:B:165:ILE:HD12	2.17	0.70
4:B:200:ASP:C	4:B:202:LYS:N	2.44	0.70
6:D:84:VAL:HG22	6:D:85:PHE:H	1.57	0.70
6:D:134:PHE:CE2	6:D:161:ALA:HB1	2.26	0.70
9:G:52:ARG:O	9:G:55:ALA:N	2.24	0.70
12:J:80:TYR:C	12:J:81:GLN:HE21	2.00	0.70
16:N:33:LYS:CD	16:N:41:ARG:HB3	2.21	0.70
17:O:8:VAL:CG1	17:O:11:ARG:HE	2.04	0.70
20:R:82:GLN:CG	20:R:83:VAL:H	1.93	0.70
21:S:31:LEU:HB2	21:S:32:PRO:CD	2.22	0.70
22:T:97:GLU:HB2	22:T:126:VAL:C	2.17	0.70
31:y:39:G:C6	31:y:404:U:C4	2.79	0.70
31:y:519:C:H5'	45:m:50:ALA:CB	2.10	0.70
31:y:719:C:C5	31:y:720:C:C2	2.80	0.70
31:y:992:U:N3	31:y:1043:C:C5	2.60	0.70
31:y:1007:C:O5'	31:y:1007:C:H6	1.74	0.70
31:y:1154:G:C2'	31:y:1155:G:C8	2.75	0.70
31:y:1269:A:C1'	31:y:1326:C:H1'	2.21	0.70
31:y:1307:U:H5''	46:n:109:THR:HG23	1.72	0.70
39:g:44:GLY:O	39:g:60:PHE:N	2.25	0.70
40:h:109:ASN:CA	40:h:119:ARG:HH21	2.04	0.70
41:i:78:GLN:OE1	41:i:79:VAL:HG22	1.91	0.70
42:j:48:GLU:HB2	42:j:49:PRO:CD	2.22	0.70
45:m:40:ARG:CZ	45:m:41:THR:O	2.40	0.70
46:n:49:THR:O	46:n:53:VAL:HG23	1.92	0.70
49:q:5:ARG:CD	49:q:22:THR:HG21	2.22	0.70
50:r:34:LYS:HD2	50:r:35:VAL:H	1.57	0.70
53:u:48:LYS:HB3	53:u:51:GLU:CD	2.17	0.70
53:u:84:LEU:HD23	53:u:84:LEU:C	2.17	0.70
1:w:257:A:H2'	1:w:258:G:O4'	1.91	0.69
1:w:577:G:C2'	1:w:578:A:C5'	2.69	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:593:G:C5	1:w:594:U:C5	2.80	0.69
1:w:775:G:C6	1:w:794:G:C8	2.80	0.69
1:w:918:A:C4'	2:x:97:G:N2	2.48	0.69
1:w:930:U:H4'	1:w:931:G:O5'	1.91	0.69
1:w:945:A:C4	1:w:2448:A:C2	2.79	0.69
1:w:1152:C:H1'	17:O:77:SER:HA	1.71	0.69
1:w:1189:A:H5''	12:J:32:THR:HG21	1.74	0.69
1:w:1327:C:N4	1:w:1328:G:C6	2.60	0.69
1:w:1346:G:C2	1:w:1347:G:H1'	2.27	0.69
1:w:1427:A:H1'	1:w:1428:C:C5	2.27	0.69
1:w:1548:C:N4	1:w:1549:C:N4	2.39	0.69
1:w:1683:C:O5'	1:w:1683:C:C6	2.42	0.69
1:w:1793:C:O5'	1:w:1793:C:H6	1.74	0.69
1:w:1794:U:H2'	1:w:1795:C:C6	2.27	0.69
1:w:1798:U:O2	1:w:1802:A:H2	1.75	0.69
1:w:1815:A:H5''	1:w:1816:G:H5'	1.74	0.69
1:w:2547:U:H5	1:w:2566:A:H2'	1.57	0.69
2:x:12:C:O2'	2:x:13:A:C8	2.45	0.69
2:x:71:C:C3'	2:x:72:G:C8	2.74	0.69
4:B:24:ILE:HD13	4:B:25:THR:HG22	1.73	0.69
4:B:27:THR:HG21	4:B:83:GLU:CG	2.22	0.69
4:B:208:LYS:HE3	4:B:210:GLY:CA	2.22	0.69
6:D:70:HIS:HE1	6:D:72:ASP:O	1.75	0.69
13:K:67:ARG:C	13:K:68:ILE:CG1	2.63	0.69
16:N:117:ASP:HB3	16:N:120:ARG:HE	1.57	0.69
17:O:94:ASN:N	17:O:94:ASN:HD22	1.86	0.69
19:Q:14:PRO:HG2	19:Q:78:GLU:HG2	1.72	0.69
20:R:57:LEU:CG	20:R:58:HIS:H	1.97	0.69
22:T:26:GLY:O	22:T:37:VAL:HG23	1.92	0.69
23:U:37:LEU:HD12	23:U:38:VAL:HG23	1.73	0.69
31:y:153:C:H2'	31:y:154:C:H5'	1.74	0.69
31:y:227:G:C5	31:y:228:A:C8	2.79	0.69
31:y:272:C:C2	31:y:273:A:N7	2.60	0.69
31:y:276:G:C2'	31:y:277:C:H5'	2.22	0.69
31:y:385:C:H2'	31:y:386:C:H6	1.56	0.69
31:y:509:A:C2'	31:y:510:A:C5'	2.70	0.69
31:y:523:A:N6	45:m:91:ASP:HB2	2.07	0.69
31:y:583:A:C6	31:y:584:G:C2	2.80	0.69
31:y:584:G:P	31:y:584:G:H8	2.15	0.69
31:y:622:A:OP2	31:y:623:C:C5	2.45	0.69
31:y:834:C:C2	31:y:853:G:C2	2.80	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1188:A:C5	31:y:1189:C:C6	2.79	0.69
31:y:1215:G:C2	31:y:1216:G:C5	2.79	0.69
31:y:1236:A:H2'	31:y:1237:C:C4'	2.22	0.69
31:y:1285:A:O2'	31:y:1286:A:OP2	2.08	0.69
31:y:1380:U:C5'	40:h:4:ARG:HG2	2.22	0.69
31:y:1496:C:O5'	31:y:1496:C:H6	1.75	0.69
31:y:1501:C:C5	31:y:1504:G:C2	2.80	0.69
33:0:26:G:H2'	33:0:27:C:C5'	2.22	0.69
33:0:41:U:H4'	40:h:143:ARG:CD	2.22	0.69
35:c:200:ILE:HD13	35:c:200:ILE:H	1.57	0.69
37:e:94:LEU:HA	37:e:97:LEU:HG	1.74	0.69
37:e:114:ARG:HA	37:e:117:ALA:HB3	1.74	0.69
40:h:16:LEU:HB2	42:j:44:VAL:CG1	2.21	0.69
40:h:62:PHE:O	40:h:65:ALA:HB3	1.92	0.69
41:i:45:ILE:HG12	41:i:46:LYS:N	2.02	0.69
44:l:26:ASN:O	44:l:55:LYS:HB2	1.92	0.69
46:n:3:ARG:NH1	46:n:7:VAL:HG12	2.07	0.69
46:n:13:LYS:HB2	46:n:17:VAL:HB	1.73	0.69
1:w:7:G:H2'	1:w:8:A:O4'	1.92	0.69
1:w:140:A:N3	1:w:1408:C:H4'	2.07	0.69
1:w:546:C:C3'	1:w:547:A:H8	2.04	0.69
1:w:685:A:H2	1:w:787:U:H1'	1.56	0.69
1:w:848:G:C2	1:w:933:A:O2'	2.44	0.69
1:w:1023:U:O4	1:w:1024:G:N2	2.25	0.69
1:w:1088:A:C4'	1:w:1089:G:H8	1.99	0.69
1:w:1484:G:H2'	1:w:1485:G:H5'	1.74	0.69
1:w:1636:C:O4'	1:w:1760:A:C2	2.45	0.69
1:w:1779:U:C4	1:w:1784:A:N7	2.60	0.69
1:w:1829:A:H3'	1:w:1830:C:C6	2.26	0.69
1:w:1843:C:C5'	1:w:1843:C:H6	2.05	0.69
1:w:2008:C:H2'	1:w:2009:G:C8	2.26	0.69
1:w:2105:C:H2'	1:w:2106:G:H8	1.55	0.69
1:w:2303:G:H2'	7:E:132:ASN:HB3	1.74	0.69
1:w:2353:G:N2	23:U:36:ILE:HD11	2.06	0.69
1:w:2359:C:O2'	29:a:49:VAL:HG13	1.92	0.69
1:w:2394:C:P	12:J:62:LEU:HB2	2.32	0.69
1:w:2397:G:C5	1:w:2398:U:C4	2.80	0.69
1:w:2472:G:C2	1:w:2477:C:H5'	2.25	0.69
1:w:2474:C:H2'	1:w:2475:C:H5'	1.74	0.69
1:w:2478:A:H5'	1:w:2528:U:C5'	2.22	0.69
1:w:2588:G:H3'	1:w:2588:G:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2858:C:C5	1:w:2859:G:N7	2.60	0.69
1:w:2865:U:C5'	1:w:2867:G:OP2	2.30	0.69
4:B:136:ILE:HG23	4:B:137:PRO:HD2	1.74	0.69
6:D:118:LEU:O	6:D:187:LEU:O	2.10	0.69
6:D:182:VAL:HB	12:J:6:LEU:CA	2.22	0.69
9:G:125:GLU:CA	9:G:143:SER:HA	2.22	0.69
13:K:73:PRO:HA	13:K:93:TYR:HA	1.73	0.69
15:M:28:VAL:HG22	15:M:37:ALA:HA	1.73	0.69
19:Q:72:LYS:CE	19:Q:107:LEU:O	2.40	0.69
26:X:8:LEU:HG	26:X:33:GLN:O	1.91	0.69
31:y:49:U:H3'	31:y:50:A:H5'	1.72	0.69
31:y:190:G:P	31:y:190:G:H8	2.15	0.69
31:y:346:G:H2'	31:y:347:G:C4'	2.21	0.69
31:y:516:PSU:H3'	31:y:517:G:C8	2.27	0.69
31:y:519:C:C5	31:y:520:A:C5	2.80	0.69
31:y:721:G:OP1	31:y:721:G:C8	2.45	0.69
31:y:877:C:O2'	31:y:878:G:H5'	1.92	0.69
31:y:889:A:H61	31:y:908:A:P	2.15	0.69
31:y:1131:G:H5'	42:j:3:GLN:NE2	2.05	0.69
31:y:1184:G:H2'	31:y:1185:G:C8	2.27	0.69
31:y:1247:U:O2	31:y:1247:U:H2'	1.90	0.69
37:e:118:ARG:CG	37:e:119:GLN:H	2.05	0.69
43:k:29:ARG:O	43:k:30:SER:HB3	1.91	0.69
48:p:5:LYS:O	48:p:9:GLN:HG2	1.92	0.69
48:p:84:LYS:HD2	48:p:85:LEU:N	2.07	0.69
49:q:21:VAL:CG2	49:q:33:ILE:O	2.40	0.69
50:r:74:LEU:O	50:r:75:ARG:O	2.09	0.69
1:w:36:G:C4'	1:w:451:C:C2	2.73	0.69
1:w:49:A:H4'	1:w:50:U:H5''	1.74	0.69
1:w:126:A:H5''	28:Z:18:PHE:CB	2.22	0.69
1:w:359:A:C2'	1:w:360:G:H8	2.04	0.69
1:w:543:C:OP2	1:w:543:C:C5	2.45	0.69
1:w:784:A:OP1	1:w:2589:A:OP1	2.10	0.69
1:w:889:C:H1'	1:w:890:A:N9	2.07	0.69
1:w:1120:G:C2'	1:w:1121:C:H6	2.06	0.69
1:w:122(A):C:N3	1:w:1229:G:C2	2.61	0.69
1:w:1224:C:O2'	18:P:88:ARG:C	2.35	0.69
1:w:1363:C:O2	1:w:1809:A:C2	2.45	0.69
1:w:1668:A:O2'	1:w:1669:A:OP2	2.11	0.69
1:w:1687:G:N2	1:w:1700:A:OP1	2.24	0.69
1:w:1801:G:H3'	1:w:1801:G:OP1	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1818:U:OP2	4:B:157:ARG:CZ	2.40	0.69
1:w:1907:G:N2	1:w:1924:C:C2	2.60	0.69
1:w:1940:U:OP1	1:w:1965:C:N4	2.25	0.69
1:w:2016:U:O2'	27:Y:8:LYS:HA	1.92	0.69
1:w:2111:C:H2'	1:w:2145:C:H41	1.56	0.69
1:w:2243:U:O2	1:w:2434:A:H2	1.74	0.69
1:w:2345:G:O2'	1:w:2382:G:H5'	1.91	0.69
1:w:2360:A:N1	1:w:2361:A:H1'	2.07	0.69
1:w:2520:C:C5	1:w:2567:G:C5	2.80	0.69
1:w:712(B):A:N3	1:w:712(B):A:C2'	2.55	0.69
3:A:29:LEU:CD2	3:A:33:LEU:HD21	2.21	0.69
5:C:145:LYS:HA	5:C:148:GLY:CA	2.22	0.69
6:D:95:THR:O	6:D:96:LEU:HD22	1.92	0.69
11:I:2:ILE:HG12	11:I:34:THR:CA	2.22	0.69
15:M:43:GLU:HG3	15:M:44:LYS:HD3	1.72	0.69
16:N:51:ARG:NH1	16:N:75:ILE:HG21	2.07	0.69
18:P:44:LYS:HG2	18:P:45:THR:N	2.01	0.69
19:Q:75:TYR:CA	19:Q:103:ILE:HG13	2.22	0.69
20:R:20:GLY:CA	20:R:25:LYS:CA	2.71	0.69
20:R:81:VAL:CG2	20:R:86:GLY:HA3	2.22	0.69
21:S:1:MET:CG	21:S:2:ARG:H	1.96	0.69
22:T:1:MET:O	22:T:1:MET:SD	2.50	0.69
23:U:67:VAL:HA	23:U:81:VAL:HG22	1.72	0.69
25:W:3:LEU:HD11	25:W:8:LYS:CD	2.22	0.69
31:y:12:U:O2'	31:y:526:C:H5'	1.90	0.69
31:y:475:G:C4	31:y:476:G:C8	2.81	0.69
31:y:656:C:O2'	31:y:657:G:C5'	2.40	0.69
31:y:664:G:H1'	31:y:726:C:O4'	1.91	0.69
31:y:682:G:C2'	31:y:683:G:C8	2.73	0.69
31:y:739:C:H2'	31:y:740:U:C5'	2.21	0.69
35:c:189:ASP:C	35:c:191:ASP:H	1.94	0.69
37:e:24:GLU:O	37:e:24:GLU:HG3	1.92	0.69
37:e:173:TRP:HB2	37:e:187:ARG:H	1.57	0.69
38:f:88:LYS:O	38:f:123:LEU:HB2	1.93	0.69
47:o:53:LEU:H	47:o:53:LEU:HD22	1.56	0.69
49:q:4:ILE:HG22	49:q:5:ARG:N	2.06	0.69
49:q:69:THR:O	49:q:73:LEU:HD13	1.91	0.69
50:r:21:VAL:O	50:r:41:LYS:HG3	1.92	0.69
1:w:142:G:O2'	20:R:36:LYS:HA	1.93	0.69
1:w:217:G:C2'	1:w:218:A:C8	2.71	0.69
1:w:246:C:O5'	1:w:246:C:C6	2.45	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:321:G:N2	1:w:341:G:H5''	2.07	0.69
1:w:635:C:OP2	12:J:80:TYR:OH	2.08	0.69
1:w:671:C:O2'	1:w:672:C:C5'	2.38	0.69
1:w:751:A:OP1	28:Z:3:ARG:NH2	2.24	0.69
1:w:818:G:O6	1:w:1187:G:C8	2.44	0.69
1:w:972:G:H8	1:w:972:G:O5'	1.75	0.69
1:w:1275:A:O2'	1:w:1276:A:OP2	2.11	0.69
1:w:1716:U:O3'	1:w:1717:G:C8	2.45	0.69
1:w:1729:A:N6	1:w:1731:G:C5	2.61	0.69
1:w:1805:U:P	4:B:252:TRP:CZ2	2.85	0.69
1:w:2037:G:N1	1:w:2038:G:C2	2.61	0.69
1:w:2111:C:N4	1:w:2144:U:O4'	2.25	0.69
1:w:2159:G:C2	1:w:2160:G:H1'	2.28	0.69
1:w:2170:A:O5'	1:w:2170:A:C8	2.43	0.69
1:w:2250:G:C8	1:w:2496:C:H5''	2.27	0.69
1:w:2367:G:C8	1:w:2367:G:OP2	2.45	0.69
1:w:2420:C:OP2	29:a:33:ASN:N	2.25	0.69
1:w:2537:U:O5'	1:w:2537:U:H6	1.75	0.69
1:w:2619:C:O4'	5:C:150:VAL:HG11	1.92	0.69
1:w:2730:C:N3	1:w:2731:G:C8	2.61	0.69
1:w:2747:G:N2	1:w:2756:U:O5'	2.25	0.69
1:w:2799:A:OP2	1:w:2799:A:C8	2.43	0.69
1:w:2888:C:H2'	1:w:2889:C:C1'	2.23	0.69
2:x:46:A:H2'	2:x:47:C:O4'	1.92	0.69
4:B:48:ARG:HD3	4:B:49:ILE:N	2.07	0.69
8:F:117:PRO:HA	8:F:121:ILE:CD1	2.16	0.69
9:G:2:LYS:HG3	9:G:20:ASP:N	2.07	0.69
9:G:88:ILE:CG2	9:G:121:LYS:CG	2.63	0.69
9:G:130:TYR:CD2	9:G:138:ILE:HG23	2.27	0.69
10:H:57:LEU:O	10:H:72:GLY:CA	2.39	0.69
11:I:73:ASP:O	11:I:74:GLY:C	2.35	0.69
12:J:61:ARG:C	12:J:61:ARG:NE	2.51	0.69
13:K:9:TYR:CG	13:K:10:ARG:N	2.60	0.69
13:K:37:LEU:N	13:K:127:ILE:HD12	2.06	0.69
14:L:12:ARG:CG	14:L:13:HIS:H	2.05	0.69
15:M:71:ARG:HG3	15:M:105:ALA:HA	1.72	0.69
16:N:4:GLY:O	16:N:7:ILE:HB	1.92	0.69
16:N:51:ARG:CB	16:N:62:THR:HG23	2.08	0.69
16:N:61:PHE:N	16:N:61:PHE:CD1	2.60	0.69
22:T:132:ASN:O	22:T:134:PRO:HD3	1.92	0.69
22:T:146:ILE:H	22:T:146:ILE:CD1	1.99	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:162:GLU:OE2	22:T:164:ALA:HB2	1.93	0.69
25:W:54:LYS:O	25:W:55:ARG:HG2	1.93	0.69
27:Y:30:LEU:HD23	27:Y:31:VAL:N	2.04	0.69
31:y:85:U:H2'	31:y:86:U:C5	2.28	0.69
31:y:132:C:H5''	53:u:74:LYS:NZ	2.08	0.69
31:y:268:C:H2'	31:y:269:C:C6	2.27	0.69
31:y:376:G:H5''	49:q:5:ARG:HB2	1.74	0.69
31:y:385:C:C2'	31:y:386:C:O4'	2.39	0.69
31:y:400:C:H2'	31:y:401:C:C5'	2.23	0.69
31:y:543:C:O2'	31:y:544:G:H5'	1.92	0.69
31:y:760:G:N2	50:r:105:ALA:OXT	2.25	0.69
31:y:809:G:H2'	31:y:810:C:H5'	1.74	0.69
31:y:855:G:C5	31:y:856:C:C4	2.81	0.69
31:y:885:G:N2	31:y:912:C:O2	2.20	0.69
31:y:992:U:O2'	31:y:993:G:P	2.50	0.69
31:y:1234:C:C2'	31:y:1235:U:O5'	2.39	0.69
31:y:1376:U:C2	31:y:1377:A:N7	2.60	0.69
35:c:159:PRO:C	35:c:161:ALA:H	2.00	0.69
37:e:13:ARG:HB2	37:e:33:MET:HB3	1.73	0.69
37:e:201:GLN:O	37:e:204:ILE:HG12	1.93	0.69
38:f:148:VAL:O	38:f:152:ARG:HG3	1.92	0.69
40:h:108:ALA:HB1	40:h:120:ILE:HA	1.75	0.69
44:l:92:GLU:OE2	44:l:92:GLU:HA	1.93	0.69
45:m:5:THR:OG1	45:m:8:GLN:HB2	1.92	0.69
48:p:74:ASP:HB3	48:p:77:ARG:CG	2.21	0.69
1:w:73:A:OP1	1:w:73:A:C8	2.45	0.69
1:w:244:A:H4'	12:J:74:GLU:CG	2.21	0.69
1:w:301:G:C5'	1:w:334:C:O2	2.41	0.69
1:w:312:G:H2'	1:w:313:C:C6	2.27	0.69
1:w:380:U:O2	1:w:394:A:H2	1.74	0.69
1:w:447:A:N6	1:w:454:A:H2'	2.06	0.69
1:w:511:U:O5'	1:w:511:U:H6	1.74	0.69
1:w:570:G:H2'	1:w:2030:A:C6	2.27	0.69
1:w:577:G:H2'	1:w:578:A:C5'	2.21	0.69
1:w:659:C:H2'	1:w:660:G:C8	2.27	0.69
1:w:670:A:H4'	1:w:671:C:H4'	1.73	0.69
1:w:729:G:C3'	1:w:730:C:H5''	2.15	0.69
1:w:765:G:C5	1:w:766:C:C5	2.80	0.69
1:w:1375:C:O2	1:w:1376:C:C5	2.45	0.69
1:w:1390:U:H3	1:w:1395:A:H62	1.39	0.69
1:w:1712:C:N3	1:w:1747:G:N2	2.39	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1944:U:HO2'	1:w:1945:G:H5''	1.55	0.69
1:w:2032:G:O6	1:w:2454:G:C4'	2.41	0.69
1:w:2166:G:H2'	1:w:2167:U:O4'	1.92	0.69
1:w:2269:A:H3'	1:w:2270:G:H8	1.57	0.69
1:w:2372:G:H2'	1:w:2373:G:N7	2.08	0.69
1:w:2374:C:C6	1:w:2374:C:O5'	2.45	0.69
1:w:2676:C:O2	1:w:2731:G:N2	2.18	0.69
2:x:27:C:H2'	2:x:28:C:C6	2.28	0.69
3:A:20:ILE:HA	3:A:224:ARG:HB3	1.73	0.69
3:A:47:LYS:HZ3	3:A:47:LYS:HB3	1.55	0.69
5:C:63:LEU:HD21	5:C:65:GLY:HA3	1.73	0.69
6:D:112:ARG:HH21	6:D:112:ARG:CB	2.04	0.69
7:E:122:PRO:HG3	7:E:180:PHE:CA	2.13	0.69
11:I:86:ILE:HD12	11:I:86:ILE:N	2.08	0.69
11:I:112:MET:O	11:I:113:LYS:C	2.35	0.69
13:K:51:ARG:N	13:K:51:ARG:CD	2.41	0.69
13:K:73:PRO:CA	13:K:92:GLY:O	2.39	0.69
15:M:68:GLN:O	15:M:70:GLY:N	2.25	0.69
15:M:96:GLY:HA2	15:M:99:LYS:CD	2.16	0.69
16:N:51:ARG:HH11	16:N:75:ILE:HD13	1.57	0.69
17:O:68:ALA:O	17:O:71:GLN:HB3	1.93	0.69
21:S:54:LYS:HD3	21:S:55:TYR:N	2.06	0.69
22:T:38:TYR:HD2	22:T:38:TYR:O	1.75	0.69
23:U:67:VAL:HG23	23:U:79:VAL:CB	2.22	0.69
25:W:29:LYS:HE3	25:W:30:ARG:N	2.07	0.69
25:W:47:ASN:N	25:W:47:ASN:HD22	1.89	0.69
27:Y:50:GLY:O	27:Y:51:TYR:HB2	1.90	0.69
31:y:272:C:N3	31:y:273:A:N7	2.40	0.69
31:y:362:G:O2'	31:y:364:A:N6	2.25	0.69
31:y:682:G:H2'	31:y:683:G:N7	2.07	0.69
31:y:782:A:O2'	31:y:1515:C:H5''	1.93	0.69
31:y:1047:G:C2'	31:y:1048:G:O4'	2.29	0.69
31:y:1119:C:H2'	31:y:1120:G:C8	2.27	0.69
31:y:1162:C:H2'	31:y:1163:C:C6	2.28	0.69
31:y:1196:U:H3'	31:y:1197:G:C5'	2.22	0.69
31:y:1251:A:H2	31:y:1369:C:H1'	1.55	0.69
31:y:1267:C:C2'	54:v:20:LYS:HE3	2.23	0.69
31:y:1359:C:OP2	47:o:33:VAL:HG23	1.93	0.69
31:y:1379:G:N3	31:y:1381:U:O4	2.25	0.69
31:y:1406:U:C4	31:y:1407:5MC:CM5	2.76	0.69
31:y:1429:C:H2'	31:y:1430:C:H5'	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1474:G:H2'	31:y:1475:G:O4'	1.92	0.69
35:c:20:GLU:HB3	35:c:190:THR:CG2	2.16	0.69
35:c:102:LEU:CB	35:c:176:GLU:HB3	2.22	0.69
36:d:105:GLU:HG2	36:d:106:VAL:H	1.55	0.69
37:e:128:VAL:HB	37:e:133:VAL:CG2	2.22	0.69
38:f:89:ILE:CA	38:f:123:LEU:HD23	2.22	0.69
40:h:26:PHE:CE2	40:h:30:ILE:HD11	2.28	0.69
41:i:40:ALA:HA	41:i:45:ILE:HG21	1.71	0.69
41:i:97:VAL:HG22	41:i:98:LYS:N	2.08	0.69
44:l:66:LEU:HD13	44:l:70:LYS:HE3	1.73	0.69
45:m:59:LEU:HD12	45:m:63:TYR:CG	2.28	0.69
52:t:21:GLU:C	52:t:25:LYS:HD2	2.16	0.69
52:t:31:ILE:HG22	52:t:32:LYS:N	2.07	0.69
1:w:298:G:C6	1:w:339:U:C5	2.80	0.69
1:w:518:G:O2'	1:w:519:U:H5'	1.91	0.69
1:w:686:G:N2	1:w:788:A:H61	1.91	0.69
1:w:768:G:H2'	1:w:769:G:O4'	1.93	0.69
1:w:874:G:H1'	22:T:170:THR:HG21	1.74	0.69
1:w:1148:A:H5'	1:w:1149:G:OP2	1.92	0.69
1:w:1343:G:C2	1:w:1405:U:C4	2.81	0.69
1:w:1699:G:H2'	1:w:1700:A:C5'	2.21	0.69
1:w:1746:G:C5	1:w:1747:G:C1'	2.73	0.69
1:w:1789:A:H5''	4:B:221:VAL:HA	1.75	0.69
1:w:1797:C:H2'	1:w:1798:U:C6	2.26	0.69
1:w:2051:A:H3'	1:w:2578:G:O5'	1.93	0.69
1:w:2419:U:H2'	1:w:2420:C:C6	2.27	0.69
1:w:2549:G:C2	1:w:2560:C:C4	2.81	0.69
1:w:2657:A:N6	1:w:2664:G:H1'	2.07	0.69
1:w:2823:A:OP2	5:C:112:GLY:HA3	1.93	0.69
5:C:33:VAL:CA	5:C:49:LEU:HD13	2.23	0.69
9:G:88:ILE:HG12	9:G:89:TYR:HD1	1.58	0.69
11:I:88:ASN:O	11:I:89:ASN:C	2.34	0.69
12:J:63:PRO:HB3	29:a:13:ARG:HD2	1.74	0.69
13:K:125:LEU:CD1	13:K:127:ILE:HG23	2.22	0.69
17:O:25:TRP:HE3	17:O:25:TRP:C	2.00	0.69
19:Q:47:VAL:O	19:Q:50:VAL:HB	1.93	0.69
24:V:82:LEU:O	24:V:86:SER:HA	1.91	0.69
31:y:226:G:C2'	31:y:227:G:C8	2.62	0.69
31:y:306:G:O2'	31:y:307:C:H5'	1.91	0.69
31:y:392:G:C8	31:y:393:A:N7	2.61	0.69
31:y:586:C:C1'	31:y:878:G:O2'	2.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:613:C:H5''	37:e:85:LYS:HD3	1.74	0.69
31:y:914:A:C2'	31:y:915:A:C5'	2.70	0.69
31:y:1057:G:H4'	36:d:196:LEU:HD12	1.75	0.69
31:y:1350:A:C6	31:y:1351:U:C5	2.80	0.69
31:y:1424:C:C2	31:y:1425:U:C5	2.80	0.69
35:c:194:PRO:O	35:c:196:LEU:N	2.26	0.69
35:c:197:VAL:HG23	35:c:200:ILE:CG2	2.23	0.69
36:d:156:ARG:HD3	36:d:193:TYR:HD2	1.58	0.69
37:e:76:ARG:NH1	37:e:79:PHE:HB3	2.08	0.69
41:i:10:LEU:HB3	41:i:14:ARG:NH2	2.08	0.69
42:j:19:LEU:HB3	42:j:59:PHE:HD2	1.57	0.69
50:r:10:VAL:HG21	50:r:55:ASP:C	2.17	0.69
53:u:44:ALA:HB1	53:u:88:VAL:HA	1.75	0.69
1:w:315:G:C2'	1:w:316:C:O4'	2.40	0.69
1:w:452:G:O2'	1:w:457:A:C2	2.44	0.69
1:w:476:G:C2'	1:w:477:A:H5''	2.22	0.69
1:w:527:C:H1'	1:w:528:A:C8	2.27	0.69
1:w:723:G:C4	1:w:724:U:C4	2.80	0.69
1:w:852:G:H8	1:w:852:G:O5'	1.75	0.69
1:w:878:A:H1'	1:w:899:A:H61	1.56	0.69
1:w:904:C:C2'	1:w:905:U:H5'	2.23	0.69
1:w:987:G:O2'	1:w:1000:A:H2	1.74	0.69
1:w:1479:G:C4	1:w:1480:G:C8	2.80	0.69
1:w:1560:G:C2'	1:w:1561:G:H5'	2.22	0.69
1:w:1842:G:C6	1:w:1898:U:O2	2.46	0.69
1:w:1848:A:H62	31:y:702:A:H61	1.36	0.69
1:w:1989:G:O2'	1:w:1990:C:H5'	1.93	0.69
1:w:2029:G:H2'	1:w:2031:A:OP1	1.93	0.69
1:w:2138:C:OP2	1:w:2138:C:H6	1.74	0.69
1:w:2175:C:C2'	1:w:2176:A:C5'	2.63	0.69
1:w:2394:C:P	12:J:63:PRO:HD2	2.31	0.69
1:w:2518:A:O2'	1:w:2519:U:OP1	2.10	0.69
1:w:2524:G:H2'	1:w:2741:A:C2	2.28	0.69
1:w:2540:C:H5''	1:w:2540:C:C6	2.28	0.69
1:w:2585:U:C4'	1:w:2586:C:H5'	2.23	0.69
1:w:2651:C:H2'	1:w:2652:C:C6	2.27	0.69
1:w:2734:A:O2'	1:w:2735:G:H5'	1.93	0.69
1:w:2793:G:H2'	1:w:2794:C:C6	2.28	0.69
1:w:2825:G:C8	1:w:2825:G:P	2.85	0.69
3:A:63:VAL:HG22	3:A:64:SER:N	2.07	0.69
3:A:172:ILE:HG12	3:A:173:HIS:H	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:263:ARG:HE	4:B:263:ARG:N	1.91	0.69
6:D:55:SER:C	6:D:57:ARG:H	1.99	0.69
7:E:19:LEU:HA	7:E:25:TYR:OH	1.93	0.69
8:F:124:GLU:OE1	8:F:132:ARG:HG3	1.93	0.69
10:H:39:ILE:O	10:H:77:VAL:HA	1.92	0.69
11:I:17:ARG:NH2	11:I:47:ILE:O	2.25	0.69
13:K:64:ILE:HG12	13:K:104:PHE:HB3	1.74	0.69
14:L:13:HIS:CD2	14:L:16:HIS:CG	2.80	0.69
16:N:45:PHE:CE1	16:N:67:SER:HB2	2.26	0.69
16:N:74:ARG:HB3	16:N:76:PHE:CZ	2.28	0.69
17:O:63:VAL:O	17:O:64:ARG:C	2.35	0.69
20:R:36:LYS:C	20:R:38:GLU:H	2.00	0.69
22:T:98:MET:CA	22:T:125:LEU:CD1	2.71	0.69
29:a:49:VAL:O	29:a:53:PRO:CG	2.34	0.69
31:y:36:C:O2'	31:y:37:U:H6	1.75	0.69
31:y:62:U:H2'	31:y:63:C:C5	2.26	0.69
31:y:467:G:C2'	31:y:468:A:H8	2.05	0.69
31:y:756:C:H2'	31:y:757:U:C5'	2.22	0.69
31:y:778:G:C6	31:y:779:C:C4	2.80	0.69
31:y:930:C:N3	31:y:931:C:C5	2.60	0.69
31:y:981:U:C4	31:y:982:U:C5	2.81	0.69
31:y:1077:G:C2	31:y:1079:G:H3'	2.28	0.69
31:y:1080:A:H3'	31:y:1080:A:H8	1.58	0.69
31:y:1348:U:O4	31:y:1374:A:H5''	1.92	0.69
31:y:1352:C:O5'	31:y:1352:C:H6	1.76	0.69
31:y:1437:C:H2'	31:y:1437:C:O2	1.91	0.69
32:z:17:C:H5'	32:z:18:G:C5'	2.22	0.69
32:z:54:5MU:H5'	32:z:54:5MU:H6	1.56	0.69
35:c:214:ILE:HG13	35:c:215:LEU:H	1.58	0.69
36:d:136:GLN:O	36:d:140:ARG:CG	2.35	0.69
37:e:28:SER:HB3	37:e:29:PRO:HD2	1.74	0.69
37:e:58:LEU:N	37:e:206:PHE:HE1	1.91	0.69
38:f:41:VAL:HG12	38:f:42:GLY:H	1.57	0.69
38:f:100:VAL:CA	38:f:118:ILE:H	1.95	0.69
41:i:16:ALA:O	41:i:65:TYR:HE2	1.74	0.69
41:i:104:ARG:NH1	41:i:104:ARG:N	2.40	0.69
48:p:64:ARG:HA	48:p:67:LEU:CD1	2.22	0.69
48:p:81:LEU:O	48:p:85:LEU:HB2	1.93	0.69
51:s:37:VAL:O	51:s:41:LYS:N	2.20	0.69
54:v:12:LYS:C	54:v:22:ARG:NH2	2.50	0.69
54:v:18:TYR:HA	54:v:22:ARG:CD	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:15:G:C2	1:w:16:G:C8	2.81	0.69
1:w:36:G:O2'	1:w:451:C:C6	2.45	0.69
1:w:265:A:H2'	1:w:428:A:H61	1.58	0.69
1:w:270(H):C:H2'	1:w:270(I):C:H6	1.57	0.69
1:w:458:G:O2'	1:w:459:U:C5	2.46	0.69
1:w:510:C:H2'	1:w:511:U:H6	1.55	0.69
1:w:510:C:H3'	1:w:511:U:H5	1.56	0.69
1:w:673:C:C2'	1:w:674:G:H5'	2.23	0.69
1:w:925:C:H2'	1:w:926:A:O4'	1.93	0.69
1:w:1023:U:C4	1:w:1024:G:N2	2.61	0.69
1:w:1069:A:H2'	1:w:1073:A:OP1	1.92	0.69
1:w:1170:G:C2'	1:w:1171:G:H8	1.97	0.69
1:w:1202:C:O5'	1:w:1202:C:H6	1.76	0.69
1:w:1280:G:H8	1:w:1280:G:OP2	1.75	0.69
1:w:1500:G:H21	4:B:100:GLY:HA3	1.55	0.69
1:w:1598:C:O5'	1:w:1598:C:C6	2.45	0.69
1:w:1667:G:N2	1:w:1992:G:OP2	2.22	0.69
1:w:1716:U:O3'	1:w:1717:G:H8	1.76	0.69
1:w:1858:G:N2	1:w:1883:G:C3'	2.55	0.69
1:w:2023:G:N2	1:w:2040:C:O2	2.17	0.69
1:w:2029:G:N2	1:w:2033:A:C4	2.61	0.69
1:w:2083:G:C2	1:w:2084:C:C5	2.81	0.69
1:w:2091:U:H5''	1:w:2092:U:OP2	1.93	0.69
1:w:2239:G:N1	1:w:2240:C:C4	2.61	0.69
1:w:2254:C:H2'	1:w:2255:G:O4'	1.91	0.69
1:w:2298:A:C8	1:w:2298:A:OP2	2.45	0.69
1:w:2335:A:OP1	1:w:2335:A:H2'	1.93	0.69
1:w:2406:U:H3	12:J:73:GLY:HA3	1.58	0.69
1:w:2468:G:C5	1:w:2481:G:N1	2.61	0.69
1:w:2488:A:C6	1:w:2489:G:C2	2.81	0.69
1:w:2588:G:O6	1:w:2589:A:C6	2.45	0.69
1:w:2594:C:H3'	1:w:2594:C:H6	1.58	0.69
1:w:2639:A:H1'	1:w:2778:A:H2	1.55	0.69
1:w:2641:G:C6	1:w:2642:G:C6	2.81	0.69
1:w:2657:A:C2'	1:w:2658:C:OP1	2.40	0.69
1:w:2676:C:N3	1:w:2677:G:N7	2.40	0.69
1:w:2709:G:H2'	1:w:2710:C:H6	1.53	0.69
1:w:2711:A:OP2	1:w:2714:G:OP2	2.11	0.69
1:w:2784:C:H2'	1:w:2785:C:O4'	1.92	0.69
1:w:2818:G:N1	1:w:2819:G:N7	2.40	0.69
2:x:14:U:C4'	2:x:107:U:O2	2.31	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:15:A:C2	2:x:109:G:N3	2.61	0.69
2:x:57:A:C2	2:x:58:A:C8	2.81	0.69
4:B:136:ILE:HG23	4:B:137:PRO:N	2.06	0.69
4:B:150:LYS:HD2	4:B:188:GLU:O	1.92	0.69
6:D:24:ASN:O	6:D:28:LEU:CG	2.41	0.69
6:D:98:LYS:CG	6:D:101:ARG:HD2	2.22	0.69
7:E:77:ILE:HG23	32:z:56:C:N3	2.06	0.69
8:F:88:LEU:HB3	8:F:129:THR:O	1.93	0.69
9:G:80:PRO:N	9:G:145:VAL:HB	2.08	0.69
10:H:58:ARG:CB	10:H:139:LEU:HD13	2.23	0.69
11:I:65:THR:O	11:I:79:PHE:HB2	1.93	0.69
11:I:69:VAL:HG11	11:I:77:ILE:HG22	1.74	0.69
12:J:92:GLU:OE2	12:J:123:LEU:HB3	1.93	0.69
15:M:70:GLY:HA3	15:M:101:LEU:HD21	1.68	0.69
18:P:19:LYS:HG2	18:P:96:ILE:C	2.17	0.69
21:S:14:LEU:HD21	21:S:39:VAL:HG11	1.72	0.69
22:T:110:GLY:CA	22:T:146:ILE:HD12	2.22	0.69
23:U:36:ILE:CD1	23:U:36:ILE:H	2.06	0.69
23:U:48:GLY:C	23:U:49:LYS:HG3	2.17	0.69
24:V:50:ARG:CG	24:V:51:VAL:H	1.97	0.69
26:X:4:LEU:HD13	26:X:58:VAL:HG23	1.75	0.69
26:X:44:ARG:H	26:X:44:ARG:CD	1.90	0.69
30:b:19:ARG:HG2	30:b:20:HIS:H	1.56	0.69
31:y:191(A):G:H8	31:y:191(A):G:P	2.15	0.69
31:y:245:C:O2'	31:y:246:A:H5''	1.93	0.69
31:y:264:U:O2	31:y:264:U:H2'	1.92	0.69
31:y:279:A:C8	50:r:95:TYR:HE1	2.11	0.69
31:y:412:A:C1'	31:y:413:G:C8	2.76	0.69
31:y:464:G:N2	31:y:467:G:C8	2.60	0.69
31:y:506:G:H2'	31:y:507:C:C6	2.27	0.69
31:y:556:C:H2'	31:y:557:G:C5'	2.23	0.69
31:y:584:G:C2	31:y:585:G:N9	2.61	0.69
31:y:623:C:C2'	31:y:624:C:C6	2.71	0.69
31:y:653:A:C2	41:i:56:LYS:CA	2.75	0.69
31:y:729:A:O2'	31:y:816:A:O2'	1.98	0.69
31:y:102(B):C:C3'	31:y:102(C):C:H5''	2.22	0.69
31:y:1086:U:H2'	31:y:1087:G:C8	2.28	0.69
31:y:1106:G:C2'	31:y:1107:C:H5'	2.23	0.69
31:y:1108:G:H2'	31:y:1109:C:C5'	2.22	0.69
31:y:1111:A:N1	36:d:176:HIS:HB2	2.07	0.69
31:y:1112:C:O2	36:d:178:LEU:HB2	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1112:C:O2	36:d:178:LEU:HD13	1.93	0.69
31:y:1349:A:OP1	42:j:118:LYS:HB2	1.91	0.69
31:y:1398:A:C8	31:y:1398:A:C3'	2.76	0.69
31:y:1503:A:HO2'	31:y:1504:G:C5'	2.06	0.69
31:y:1509:C:H3'	31:y:1510:U:C6	2.28	0.69
33:0:24:G:C5	33:0:25:C:C2	2.80	0.69
35:c:76:GLN:HG3	35:c:206:ASP:CB	2.22	0.69
35:c:142:LEU:HA	35:c:145:LEU:HD12	1.75	0.69
36:d:113:ALA:CB	36:d:183:ASP:O	2.41	0.69
36:d:145:GLY:O	36:d:146:ALA:CB	2.40	0.69
38:f:83:GLU:O	38:f:84:PHE:HB2	1.93	0.69
38:f:151:LEU:C	38:f:153:LYS:H	2.01	0.69
40:h:47:CYS:CB	40:h:58:PRO:CB	2.69	0.69
40:h:148:ASN:HB3	40:h:151:TYR:CE1	2.26	0.69
41:i:15:ASN:C	41:i:17:THR:H	2.00	0.69
41:i:67:PRO:O	41:i:76:PRO:HG2	1.93	0.69
41:i:69:ARG:CG	41:i:74:PRO:HA	2.23	0.69
42:j:10:ARG:NH1	42:j:105:ASP:HB3	2.08	0.69
43:k:56:HIS:O	43:k:58:ASP:N	2.26	0.69
45:m:46:LYS:CB	45:m:47:PRO:CD	2.71	0.69
47:o:55:GLY:O	47:o:56:VAL:HB	1.93	0.69
48:p:42:HIS:O	48:p:46:HIS:HB3	1.93	0.69
49:q:75:ARG:HA	49:q:80:PHE:HD2	1.56	0.69
50:r:29:HIS:CD2	50:r:29:HIS:C	2.70	0.69
1:w:321:G:N7	1:w:340:A:C2	2.60	0.69
1:w:396:G:H8	1:w:396:G:O5'	1.74	0.69
1:w:463:G:H1'	1:w:466:A:H62	1.58	0.69
1:w:886:C:H1'	1:w:887:A:C6	2.28	0.69
1:w:1139:G:O2'	1:w:1140:C:O5'	2.10	0.69
1:w:1139:G:O2'	1:w:1143:A:N1	2.18	0.69
1:w:1152:C:C1'	17:O:77:SER:HA	2.23	0.69
1:w:1197:G:C4	1:w:1250:G:C2	2.81	0.69
1:w:1260:G:C2	1:w:1261:C:N3	2.61	0.69
1:w:1388:G:O2'	1:w:1389:G:H5'	1.93	0.69
1:w:1471:A:H2	1:w:1472:A:O4'	1.76	0.69
1:w:1619:G:H1'	28:Z:1:MET:N	2.08	0.69
1:w:2113:U:O2'	1:w:2114:A:O4'	2.09	0.69
1:w:2345:G:O6	1:w:2371:G:N2	2.22	0.69
1:w:2439:A:C8	1:w:2586:C:H4'	2.27	0.69
1:w:2712:U:H5''	1:w:2714:G:C4'	2.22	0.69
1:w:2783:G:N2	5:C:37:ARG:NH2	2.29	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:46:A:O2'	2:x:47:C:H5'	1.93	0.69
5:C:33:VAL:HA	5:C:49:LEU:HD13	1.73	0.69
6:D:65:THR:C	6:D:67:ARG:H	2.00	0.69
7:E:98:ARG:O	7:E:102:PHE:HB3	1.93	0.69
9:G:77:LEU:HD13	9:G:78:THR:N	2.06	0.69
9:G:128:LEU:N	9:G:141:LYS:HG2	2.08	0.69
11:I:15:GLY:N	11:I:50:GLY:HA3	2.06	0.69
11:I:81:ASP:O	11:I:82:ASN:CG	2.36	0.69
15:M:26:LEU:CD1	15:M:39:ILE:HA	2.23	0.69
16:N:26:ASP:OD1	16:N:90:GLN:N	2.25	0.69
19:Q:23:LEU:HD13	27:Y:25:LEU:O	1.92	0.69
19:Q:46:PHE:C	19:Q:48:ALA:N	2.50	0.69
21:S:15:VAL:HG22	21:S:16:ALA:H	1.57	0.69
21:S:38:ILE:CG1	21:S:60:PHE:HZ	2.05	0.69
22:T:16:SER:O	22:T:20:ARG:HB3	1.92	0.69
22:T:98:MET:HA	22:T:125:LEU:HD11	1.75	0.69
22:T:99:TYR:C	22:T:123:ASP:HB2	2.18	0.69
28:Z:37:LYS:HE3	28:Z:39:ARG:NE	2.07	0.69
31:y:604:G:C5	31:y:605:U:C5	2.81	0.69
31:y:738:C:O5'	31:y:738:C:H6	1.75	0.69
31:y:781:A:N7	31:y:801:U:O4	2.26	0.69
31:y:956:U:O2'	31:y:960:U:O4	2.06	0.69
31:y:1051:C:O5'	31:y:1051:C:H6	1.75	0.69
31:y:1363:A:H1'	31:y:1365:G:C8	2.26	0.69
33:0:63:C:H2'	33:0:64:A:H8	1.54	0.69
35:c:84:GLU:CD	35:c:215:LEU:HD13	2.17	0.69
35:c:138:LEU:HD23	35:c:139:LYS:N	2.08	0.69
37:e:33:MET:CE	37:e:33:MET:N	2.39	0.69
37:e:178:VAL:C	37:e:180:GLY:H	2.01	0.69
38:f:35:GLY:N	38:f:112:LEU:HG	2.08	0.69
38:f:100:VAL:HG22	38:f:117:ASP:N	2.08	0.69
43:k:48:THR:HG22	43:k:48:THR:O	1.91	0.69
44:l:99:GLN:CB	44:l:105:VAL:HG21	2.23	0.69
45:m:57:VAL:CG1	45:m:65:VAL:HG23	2.22	0.69
46:n:34:LEU:HD22	46:n:41:PRO:HD3	1.74	0.69
50:r:60:ILE:HG21	50:r:73:VAL:O	1.93	0.69
51:s:78:LEU:N	51:s:78:LEU:CD1	2.55	0.69
1:w:360:G:N3	1:w:360:G:H2'	2.07	0.69
1:w:471:A:C2'	1:w:472:A:H5'	2.23	0.69
1:w:718:A:H2	50:r:104:LYS:HE2	1.57	0.69
1:w:727:A:OP1	1:w:1432:C:C5'	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:729:G:N3	1:w:729:G:C2'	2.56	0.69
1:w:765:G:C6	1:w:766:C:C4	2.80	0.69
1:w:849:A:H61	1:w:929:G:H1'	1.58	0.69
1:w:1007:C:P	1:w:1008:C:H5''	2.33	0.69
1:w:1058:G:O6	1:w:1080:C:N4	2.19	0.69
1:w:1217:C:H2'	1:w:1218:C:H5'	1.73	0.69
1:w:1341:U:O2'	1:w:1342:A:C5'	2.39	0.69
1:w:1423:G:H2'	1:w:1424:G:H8	1.56	0.69
1:w:1686:C:C3'	1:w:1687:G:H5'	2.23	0.69
1:w:1759:A:C5'	1:w:2715:C:H1'	2.22	0.69
1:w:1829:A:H3'	1:w:1830:C:C5	2.27	0.69
1:w:1837:C:O2	1:w:1927:A:H2	1.75	0.69
1:w:2015:A:C2	27:Y:6:VAL:HG13	2.28	0.69
1:w:2082:A:N6	1:w:2237:G:O2'	2.26	0.69
1:w:2262:U:H3'	1:w:2262:U:C6	2.28	0.69
1:w:2298:A:H1'	1:w:2321:G:H22	1.54	0.69
1:w:2302:G:C2'	1:w:2303:G:C8	2.73	0.69
1:w:2472:G:H2'	1:w:2478:A:N6	2.08	0.69
1:w:2808:U:O2	1:w:2892:A:N7	2.25	0.69
1:w:2841:C:C2'	1:w:2842:G:H5'	2.23	0.69
4:B:155:LEU:HD22	4:B:157:ARG:CG	2.16	0.69
5:C:11:MET:CB	5:C:23:VAL:O	2.34	0.69
6:D:29:TRP:O	6:D:33:ARG:HG3	1.93	0.69
6:D:61:PRO:O	6:D:62:GLN:NE2	2.26	0.69
7:E:106:LEU:O	7:E:110:ALA:HB3	1.93	0.69
8:F:65:HIS:HD2	8:F:68:THR:HB	1.57	0.69
8:F:72:ILE:HD13	8:F:72:ILE:N	1.98	0.69
11:I:87:ILE:HD13	11:I:93:PRO:HD3	1.74	0.69
13:K:5:ARG:HD2	13:K:7:MET:HE3	1.75	0.69
13:K:24:GLY:O	13:K:25:ASP:HB2	1.93	0.69
14:L:51:LEU:H	14:L:51:LEU:CD2	2.05	0.69
14:L:90:ARG:HH12	14:L:117:VAL:HG11	1.58	0.69
15:M:67:ARG:O	15:M:71:ARG:HD2	1.92	0.69
16:N:110:ILE:C	16:N:112:ARG:H	1.98	0.69
18:P:13:ARG:N	18:P:13:ARG:CD	2.55	0.69
22:T:69:THR:OG1	22:T:90:VAL:HA	1.93	0.69
28:Z:28:ARG:O	28:Z:31:LEU:HB2	1.93	0.69
30:b:3:VAL:HG22	30:b:4:ARG:H	1.56	0.69
31:y:102:G:C3'	31:y:103:C:C6	2.76	0.69
31:y:136:C:C4'	49:q:1:MET:HB2	2.23	0.69
31:y:306:G:H2'	31:y:307:C:C6	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:403:C:O2'	31:y:404:U:H5'	1.93	0.69
31:y:455:C:H2'	31:y:456:C:C6	2.27	0.69
31:y:491:G:C2	31:y:492:G:C8	2.81	0.69
31:y:520:A:H62	31:y:529:G:H21	0.75	0.69
31:y:545:C:H5''	37:e:72:GLU:CG	2.23	0.69
31:y:546:G:O5'	31:y:546:G:C8	2.44	0.69
31:y:756:C:C2'	31:y:757:U:C5'	2.71	0.69
31:y:889:A:H5''	31:y:891:U:C2	2.27	0.69
31:y:995:C:N4	31:y:1046:A:O2'	2.23	0.69
31:y:1080:A:H3'	31:y:1080:A:C8	2.28	0.69
31:y:1162:C:C4	31:y:1163:C:C4	2.81	0.69
31:y:1207:2MG:H3'	31:y:1208:C:C6	2.28	0.69
31:y:1304:G:H1'	31:y:1333:A:H61	1.58	0.69
31:y:1313:U:OP2	52:t:4:SER:CA	2.34	0.69
31:y:1347:G:H1'	31:y:1348:U:C6	2.28	0.69
31:y:1378:C:H5''	40:h:5:ARG:O	1.93	0.69
31:y:1379:G:C2	31:y:1381:U:O4	2.45	0.69
35:c:165:VAL:HG23	35:c:166:ASP:H	1.57	0.69
35:c:197:VAL:CG2	35:c:200:ILE:CG2	2.71	0.69
36:d:112:SER:HB2	36:d:115:LEU:HD23	1.72	0.69
37:e:27:TYR:CE1	37:e:112:VAL:O	2.46	0.69
38:f:115:VAL:CG1	38:f:118:ILE:HD11	2.20	0.69
40:h:40:ALA:HA	40:h:43:PHE:CD2	2.27	0.69
40:h:70:LYS:HD3	40:h:96:GLN:OE1	1.91	0.69
41:i:87:SER:HB2	41:i:93:VAL:HB	1.75	0.69
44:l:73:MET:HE2	44:l:103:LEU:CD2	2.23	0.69
45:m:59:LEU:HD22	45:m:60:THR:H	1.58	0.69
46:n:91:ARG:HA	46:n:96:LEU:HB2	1.75	0.69
48:p:36:ILE:HG13	48:p:63:ARG:HH22	1.57	0.69
52:t:31:ILE:HG22	52:t:32:LYS:HD2	1.74	0.69
1:w:137(A):C:C2	1:w:137(B):G:N7	2.61	0.68
1:w:287:C:H2'	1:w:288:C:C6	2.26	0.68
1:w:287:C:C4	1:w:288:C:C4	2.81	0.68
1:w:446:G:H21	1:w:454:A:H61	1.41	0.68
1:w:447:A:H2'	1:w:473:G:N7	2.07	0.68
1:w:449:A:H5'	6:D:79:VAL:O	1.93	0.68
1:w:518:G:H2'	1:w:519:U:C6	2.28	0.68
1:w:784:A:N3	1:w:785:G:N7	2.40	0.68
1:w:884:C:H2'	1:w:885:C:O5'	1.92	0.68
1:w:1085:A:H2'	1:w:1086:A:H5'	1.75	0.68
1:w:1124:C:C3'	1:w:1125:G:H8	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2109:U:H2'	1:w:2110:G:C8	2.28	0.68
1:w:2111:C:OP1	1:w:2120:G:O4'	2.11	0.68
1:w:2116:G:C8	1:w:2117:A:H1'	2.26	0.68
1:w:2159:G:H5''	1:w:2160:G:OP2	1.93	0.68
1:w:2162:G:H2'	1:w:2163:C:C5'	2.22	0.68
1:w:2355:C:H3'	1:w:2356:C:C5'	2.23	0.68
1:w:2373:G:C6	1:w:2374:C:N4	2.61	0.68
1:w:2619:C:H1'	5:C:156:MET:HG3	1.74	0.68
1:w:2653:U:P	1:w:2654:A:H2'	2.33	0.68
1:w:2758:A:C6	1:w:2759:G:H1'	2.28	0.68
1:w:2832:U:O2'	1:w:2833:G:H5'	1.92	0.68
2:x:40:U:O2	2:x:43:C:C5	2.46	0.68
2:x:102:G:O2'	22:T:73:GLN:NE2	2.26	0.68
3:A:29:LEU:HD23	3:A:33:LEU:HD21	1.74	0.68
4:B:24:ILE:CG1	4:B:91:ARG:HH11	2.05	0.68
4:B:92:ILE:HD12	4:B:92:ILE:C	2.18	0.68
4:B:140:THR:O	4:B:164:GLN:CA	2.35	0.68
7:E:10:LYS:HE2	7:E:14:GLU:HB2	1.75	0.68
7:E:83:ARG:O	7:E:84:LYS:O	2.10	0.68
7:E:139:LEU:HD22	7:E:140:ILE:N	2.07	0.68
10:H:34:PRO:CB	10:H:142:ARG:NH1	2.56	0.68
10:H:124:HIS:CA	10:H:127:LYS:HD2	2.22	0.68
13:K:134:ARG:C	13:K:134:ARG:HD3	2.16	0.68
15:M:12:PHE:HD1	15:M:13:ARG:H	1.41	0.68
15:M:39:ILE:HD13	15:M:39:ILE:N	2.06	0.68
15:M:71:ARG:O	15:M:74:ALA:HB3	1.93	0.68
15:M:103:GLU:O	15:M:106:ARG:HB3	1.92	0.68
17:O:64:ARG:O	17:O:67:ALA:HB3	1.92	0.68
21:S:37:VAL:H	21:S:62:GLU:HG3	1.56	0.68
22:T:3:TYR:O	22:T:57:ILE:HA	1.93	0.68
23:U:17:GLN:NE2	23:U:39:ARG:NH2	2.41	0.68
23:U:23:VAL:HA	23:U:38:VAL:CG1	2.22	0.68
27:Y:16:ARG:O	27:Y:20:ARG:HD2	1.93	0.68
31:y:96:G:C2	31:y:97:U:C2	2.81	0.68
31:y:226:G:C2'	31:y:227:G:H8	1.97	0.68
31:y:228:A:H2'	31:y:229:U:C6	2.29	0.68
31:y:279:A:N7	50:r:95:TYR:CE1	2.61	0.68
31:y:283:C:O5'	31:y:283:C:C6	2.45	0.68
31:y:385:C:O2'	31:y:386:C:C5'	2.38	0.68
31:y:484:G:O2'	31:y:485:G:P	2.51	0.68
31:y:807:A:H2'	31:y:808:C:C5	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:897:C:H5'	50:r:101:ARG:NH2	2.08	0.68
31:y:958:A:H3'	31:y:959:A:N7	2.07	0.68
31:y:960:U:C5	31:y:1225:A:N3	2.61	0.68
31:y:984:C:O2	31:y:984:C:H2'	1.92	0.68
31:y:1098:C:OP1	35:c:144:ARG:NH1	2.22	0.68
31:y:1165:C:C2'	31:y:1166:G:H8	2.05	0.68
31:y:1276:G:N3	31:y:1282:C:C2'	2.56	0.68
31:y:1450:U:O2	31:y:1453:G:O6	2.11	0.68
31:y:1513:A:N1	31:y:1514:C:C5	2.61	0.68
31:y:1526:G:C3'	31:y:1527:C:H6	1.98	0.68
35:c:44:LEU:O	35:c:46:LYS:N	2.27	0.68
35:c:187:LEU:HD13	35:c:188:ALA:N	2.07	0.68
36:d:31:HIS:O	36:d:34:LEU:HB2	1.92	0.68
36:d:118:GLN:CA	36:d:187:ALA:HB1	2.22	0.68
37:e:15:GLU:CB	37:e:63:LYS:HD3	2.22	0.68
46:n:69:GLU:O	46:n:72:ALA:HB3	1.92	0.68
1:w:125:G:H1'	28:Z:13:ALA:CB	2.22	0.68
1:w:194:G:H2'	1:w:195:A:O4'	1.92	0.68
1:w:212:G:C8	1:w:212:G:O5'	2.47	0.68
1:w:221:A:H1'	1:w:233:A:H1'	1.75	0.68
1:w:270(C):A:H2'	1:w:270(D):C:C5'	2.21	0.68
1:w:379:G:H4'	24:V:21:ARG:NE	2.08	0.68
1:w:446:G:H21	1:w:454:A:N6	1.90	0.68
1:w:601:C:O2	1:w:605:C:H4'	1.94	0.68
1:w:667:U:C2'	1:w:668:G:O4'	2.24	0.68
1:w:765:G:N7	1:w:766:C:C5	2.61	0.68
1:w:947:G:C2	1:w:948:G:C5	2.81	0.68
1:w:1024:G:C5	1:w:1025:G:C5	2.82	0.68
1:w:1056:G:N2	1:w:1103:A:C6	2.61	0.68
1:w:122(A):C:C2	1:w:1229:G:N2	2.61	0.68
1:w:1229:G:H5'	1:w:1230:C:OP2	1.93	0.68
1:w:1273:U:H4'	1:w:1275:A:OP1	1.94	0.68
1:w:1458:C:H2'	1:w:1458:C:O2	1.93	0.68
1:w:1647:G:H4'	1:w:1648:C:O5'	1.91	0.68
1:w:1716:U:C6	1:w:1716:U:OP2	2.47	0.68
1:w:1797:C:C4	1:w:1823:G:N1	2.61	0.68
1:w:1858:G:H3'	1:w:1883:G:H22	1.58	0.68
1:w:2077:A:C2'	1:w:2078:C:H6	2.01	0.68
1:w:2343:C:H4'	1:w:2373:G:O2'	1.94	0.68
1:w:2354:G:N1	1:w:2364:C:N4	2.41	0.68
1:w:2466:C:O3'	30:b:6:SER:CB	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2484:G:O2'	13:K:46:GLN:HA	1.93	0.68
1:w:2526:G:C6	1:w:2538:C:N3	2.62	0.68
1:w:2531:A:O2'	1:w:2532:G:H5'	1.92	0.68
4:B:21:PHE:CD2	4:B:24:ILE:HD12	2.29	0.68
4:B:56:GLY:CA	4:B:216:GLY:HA2	2.23	0.68
6:D:116:GLY:O	6:D:186:ARG:HG2	1.93	0.68
8:F:20:ALA:O	8:F:22:GLY:N	2.24	0.68
8:F:28:GLY:C	8:F:30:LYS:H	2.01	0.68
8:F:105:LEU:CD1	8:F:107:VAL:H	2.06	0.68
9:G:37:VAL:O	9:G:38:LEU:C	2.36	0.68
9:G:127:VAL:N	9:G:141:LYS:HE3	2.08	0.68
13:K:34:LEU:HD13	13:K:129:THR:OG1	1.93	0.68
13:K:35:VAL:CG2	13:K:130:LYS:HB2	2.23	0.68
14:L:7:GLY:O	14:L:8:ARG:HG2	1.94	0.68
14:L:90:ARG:NH2	14:L:118:GLU:OE1	2.26	0.68
15:M:61:ASN:O	15:M:62:LYS:CG	2.41	0.68
16:N:28:VAL:CG2	16:N:46:GLU:HA	2.24	0.68
19:Q:14:PRO:CG	19:Q:78:GLU:HG2	2.23	0.68
19:Q:75:TYR:HD1	19:Q:75:TYR:O	1.76	0.68
22:T:6:LYS:O	22:T:7:ALA:CB	2.41	0.68
31:y:5:U:H1'	31:y:6:G:N2	2.08	0.68
31:y:447:G:H1'	31:y:487:A:H61	1.54	0.68
31:y:575:G:C6	31:y:881:G:C6	2.81	0.68
31:y:899:C:C3'	31:y:900:A:H8	2.02	0.68
31:y:1001:G:C2'	31:y:1002:G:H5''	2.23	0.68
31:y:1060:C:C2'	31:y:1061:G:C5'	2.71	0.68
31:y:1177:G:C8	31:y:1177:G:OP2	2.46	0.68
31:y:1269:A:H2'	31:y:1270:C:O4'	1.91	0.68
31:y:1350:A:N6	31:y:1351:U:C5	2.61	0.68
31:y:1489:G:C2'	31:y:1490:C:C6	2.59	0.68
43:k:13:HIS:CD2	43:k:14:LYS:H	2.11	0.68
44:l:27:ASN:CA	44:l:55:LYS:HB3	2.22	0.68
45:m:103:VAL:O	45:m:104:TYR:O	2.11	0.68
45:m:118:LYS:O	45:m:119:TYR:CG	2.46	0.68
49:q:35:LYS:HD3	49:q:35:LYS:H	1.57	0.68
50:r:29:HIS:CD2	50:r:30:PRO:O	2.46	0.68
50:r:86:GLU:CA	50:r:89:LEU:HD13	2.21	0.68
1:w:270(U):G:C2'	1:w:270(V):C:C5	2.69	0.68
1:w:356:G:H2'	1:w:357:A:C4'	2.24	0.68
1:w:387:U:H5''	1:w:388:G:OP1	1.93	0.68
1:w:598:G:H1'	12:J:13:ASN:HD21	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:796:C:C2'	1:w:797:C:O4'	2.41	0.68
1:w:801:G:C8	6:D:50:GLY:CA	2.75	0.68
1:w:965:C:H2'	1:w:966:G:C4'	2.24	0.68
1:w:1029:A:H8	1:w:1029:A:O5'	1.77	0.68
1:w:1081:U:H2'	1:w:1082:U:H5	1.57	0.68
1:w:1251:C:H3'	17:O:10:ARG:NE	2.09	0.68
1:w:1793:C:O2	1:w:1970:A:C2	2.47	0.68
1:w:2045:C:O2'	27:Y:19:ARG:HA	1.94	0.68
1:w:2343:C:O2	1:w:2343:C:H2'	1.92	0.68
1:w:2436:G:N3	1:w:2598:A:C2	2.62	0.68
1:w:2436:G:C5	1:w:2437:U:C4	2.82	0.68
2:x:52:A:H4'	2:x:52:A:OP1	1.92	0.68
2:x:60:C:C2	2:x:61:G:C8	2.80	0.68
3:A:43:GLU:HA	3:A:175:PRO:HA	1.75	0.68
4:B:148:GLU:HG2	4:B:149:PRO:CD	2.22	0.68
5:C:63:LEU:O	5:C:65:GLY:N	2.26	0.68
5:C:91:VAL:CG1	5:C:95:ILE:HD11	2.23	0.68
6:D:165:LEU:HB3	6:D:170:THR:OG1	1.92	0.68
7:E:27:ASN:OD1	7:E:29:TRP:CE3	2.46	0.68
7:E:110:ALA:HA	7:E:113:ARG:HD2	1.75	0.68
8:F:30:LYS:HG3	8:F:31:GLY:N	2.06	0.68
11:I:2:ILE:HD13	11:I:33:ALA:O	1.94	0.68
11:I:71:ARG:C	11:I:73:ASP:H	2.00	0.68
14:L:18:LEU:HA	14:L:21:TYR:CE1	2.28	0.68
14:L:102:GLU:CG	14:L:103:ARG:H	2.03	0.68
15:M:39:ILE:O	15:M:48:LEU:HB2	1.92	0.68
15:M:86:ALA:HA	15:M:112:PHE:CE1	2.28	0.68
18:P:35:LEU:CB	18:P:60:GLU:O	2.42	0.68
19:Q:59:VAL:HG22	19:Q:64:MET:CB	2.19	0.68
19:Q:66:GLU:HG2	19:Q:67:ASP:N	2.09	0.68
22:T:3:TYR:C	22:T:57:ILE:HD12	2.18	0.68
23:U:45:PHE:HE2	23:U:70:GLN:O	1.76	0.68
28:Z:28:ARG:HA	28:Z:31:LEU:CD2	2.23	0.68
31:y:186(G):C:C5	31:y:187:C:C4	2.81	0.68
31:y:635:G:C2'	31:y:636:U:C5'	2.62	0.68
31:y:1104:G:OP2	31:y:1104:G:C8	2.40	0.68
31:y:1225:A:H3'	31:y:1226:C:C5	2.29	0.68
31:y:1300:G:H4'	31:y:1301:U:C5	2.28	0.68
31:y:1312:G:N7	52:t:2:PRO:HB2	2.08	0.68
35:c:69:LEU:HG	35:c:91:PRO:O	1.93	0.68
36:d:106:VAL:HG12	36:d:106:VAL:O	1.91	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:199:ASN:HD21	37:e:201:GLN:HB2	1.58	0.68
39:g:98:LEU:HG	51:s:30:ASP:HA	1.76	0.68
41:i:16:ALA:O	41:i:65:TYR:CE2	2.46	0.68
41:i:26:VAL:HG11	41:i:61:VAL:HG13	1.75	0.68
46:n:84:ILE:HD12	52:t:65:ASN:HD22	1.59	0.68
1:w:183:C:C3'	1:w:184:C:H5''	2.22	0.68
1:w:557:U:H2'	1:w:558:G:C8	2.28	0.68
1:w:685:A:OP1	1:w:686:G:N2	2.26	0.68
1:w:709:U:H2'	1:w:710:G:C1'	2.23	0.68
1:w:878:A:C2'	1:w:879:G:C8	2.77	0.68
1:w:980:A:N7	1:w:1136:G:H5'	2.07	0.68
1:w:993:G:H2'	1:w:994:C:H5'	1.73	0.68
1:w:1178:C:OP2	1:w:1178:C:H6	1.75	0.68
1:w:1184:G:H2'	1:w:1185:C:C5'	2.22	0.68
1:w:1365:A:C4	1:w:1366:A:C8	2.81	0.68
1:w:1763:G:H4'	1:w:1763:G:OP1	1.92	0.68
1:w:1987:G:H8	1:w:1987:G:C5'	1.99	0.68
1:w:2021:C:P	27:Y:15:ARG:HH22	2.16	0.68
1:w:2027:G:C2	1:w:2037:G:C5	2.80	0.68
1:w:2075:U:C4	1:w:2435:A:C2	2.81	0.68
1:w:2295:C:O2'	1:w:2296:U:C6	2.46	0.68
1:w:2333:A:H8	1:w:2333:A:O5'	1.75	0.68
1:w:2359:C:C5'	29:a:50:LEU:HB3	2.23	0.68
1:w:2548:G:H2'	1:w:2549:G:C5'	2.01	0.68
1:w:2572:A:O5'	1:w:2574:G:H4'	1.92	0.68
1:w:2654:A:N6	1:w:2666:C:N4	2.04	0.68
1:w:2696:U:O2'	1:w:2697:G:H5'	1.93	0.68
1:w:2747:G:C6	1:w:2754:U:C2	2.82	0.68
1:w:2801:A:P	1:w:2801:A:H8	2.17	0.68
2:x:14:U:C5	2:x:71:C:H1'	2.24	0.68
3:A:23:ILE:HD13	3:A:187:ALA:O	1.93	0.68
4:B:6:PHE:HE1	4:B:18:VAL:HG23	1.57	0.68
4:B:31:LYS:CB	4:B:104:TYR:CE1	2.76	0.68
4:B:136:ILE:HG23	4:B:137:PRO:CD	2.23	0.68
6:D:5:PRO:HG3	6:D:120:LEU:HD21	1.75	0.68
6:D:151:LEU:N	6:D:169:VAL:HG21	2.09	0.68
8:F:86:GLU:HA	8:F:132:ARG:CA	2.23	0.68
9:G:60:GLU:O	9:G:64:GLU:CB	2.41	0.68
10:H:157:ARG:O	10:H:157:ARG:CD	2.35	0.68
11:I:69:VAL:CG1	11:I:77:ILE:HG22	2.23	0.68
11:I:86:ILE:O	11:I:87:ILE:C	2.35	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:85:LEU:C	12:J:87:ASP:H	2.01	0.68
14:L:3:HIS:ND1	14:L:4:LEU:HG	2.08	0.68
15:M:40:ILE:CG2	15:M:46:VAL:O	2.28	0.68
16:N:51:ARG:HE	16:N:53:ARG:HB2	1.58	0.68
18:P:14:VAL:HG21	18:P:98:GLU:OE2	1.93	0.68
22:T:17:ALA:HB2	22:T:20:ARG:NH2	2.08	0.68
23:U:47:PRO:CB	23:U:51:VAL:HB	2.23	0.68
23:U:49:LYS:C	23:U:51:VAL:H	2.01	0.68
26:X:6:VAL:HA	26:X:55:ARG:O	1.93	0.68
30:b:9:ARG:NH2	30:b:15:LYS:HG2	2.08	0.68
31:y:118:U:C5	31:y:288:A:N6	2.60	0.68
31:y:249:U:O2'	31:y:252:U:H4'	1.93	0.68
31:y:307:C:C6	31:y:308:C:C5	2.76	0.68
31:y:360:A:H2'	31:y:361:G:O5'	1.93	0.68
31:y:833:U:H2'	31:y:834:C:C6	2.28	0.68
31:y:861:G:C2	31:y:874:G:H5'	2.29	0.68
31:y:914:A:C2'	31:y:915:A:O5'	2.41	0.68
31:y:1311:G:N7	52:t:2:PRO:HB3	2.08	0.68
31:y:1315:U:C4	31:y:1316:G:C5	2.82	0.68
35:c:35:GLU:HA	35:c:41:ILE:CD1	2.23	0.68
35:c:101:MET:HA	35:c:108:ILE:HD13	1.74	0.68
36:d:53:ALA:CB	36:d:106:VAL:HG22	2.24	0.68
36:d:87:LEU:HD12	36:d:87:LEU:C	2.18	0.68
36:d:151:VAL:HG12	36:d:168:ALA:H	1.58	0.68
37:e:141:ARG:HB2	37:e:144:ASP:OD2	1.94	0.68
38:f:14:ARG:HE	38:f:15:ARG:H	1.38	0.68
40:h:12:LEU:CD2	40:h:28:ASN:ND2	2.42	0.68
41:i:109:ILE:HD13	41:i:120:THR:HB	1.76	0.68
44:l:74:ALA:C	44:l:75:TYR:HD2	2.02	0.68
52:t:33:THR:CG2	52:t:51:VAL:HA	2.23	0.68
52:t:64:GLU:O	52:t:65:ASN:C	2.36	0.68
1:w:3:U:O2'	1:w:4:C:H5'	1.94	0.68
1:w:344:G:H2'	1:w:345:A:H5'	1.75	0.68
1:w:443:A:C2	1:w:1245:G:N2	2.49	0.68
1:w:819:A:N6	1:w:1188:U:H3	1.89	0.68
1:w:855:G:C8	1:w:856:C:C5	2.81	0.68
1:w:1374:G:H3'	1:w:1375:C:C6	2.29	0.68
1:w:1413:G:H2'	1:w:1414:G:H8	1.58	0.68
1:w:1612:C:C3'	1:w:1613:G:H5''	2.23	0.68
1:w:1912:A:N7	1:w:1918:A:H2	1.92	0.68
1:w:1913:A:C6	31:y:1494:G:H1'	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2017:U:H5''	27:Y:8:LYS:CG	2.23	0.68
1:w:2064:C:H5''	32:z:75:C:O2	1.92	0.68
1:w:2147:G:OP2	1:w:2148:G:N7	2.27	0.68
1:w:2159:G:H3'	1:w:2160:G:C5'	2.22	0.68
1:w:2281:C:C2'	1:w:2282:G:H5'	2.13	0.68
1:w:2368:C:H6	1:w:2368:C:H5'	1.59	0.68
1:w:2581:G:C6	1:w:2610:C:C2	2.81	0.68
1:w:2653:U:H5''	1:w:2654:A:C2'	2.18	0.68
1:w:2660:A:H2'	1:w:2661:G:H8	1.54	0.68
2:x:73:A:H3'	2:x:74:U:H5	1.56	0.68
5:C:156:MET:HA	5:C:156:MET:CE	2.23	0.68
6:D:151:LEU:HD12	6:D:152:VAL:H	1.58	0.68
7:E:172:LEU:O	7:E:175:LEU:HB2	1.93	0.68
8:F:122:THR:CG2	8:F:134:SER:OG	2.40	0.68
9:G:78:THR:HG22	9:G:143:SER:CB	2.20	0.68
10:H:84:ARG:HD3	10:H:86:THR:H	1.57	0.68
16:N:100:TYR:O	16:N:103:ARG:NH1	2.27	0.68
17:O:38:THR:C	17:O:40:PHE:H	2.00	0.68
17:O:112:ARG:NH2	18:P:50:PRO:HD2	2.09	0.68
20:R:25:LYS:HG3	20:R:26:TYR:H	1.57	0.68
22:T:77:ASP:CB	22:T:82:ARG:O	2.42	0.68
22:T:95:PRO:HB2	22:T:127:LYS:HE2	1.74	0.68
26:X:41:PRO:O	26:X:44:ARG:HB2	1.93	0.68
31:y:104:G:C2'	31:y:105:G:C5'	2.68	0.68
31:y:117:G:N7	31:y:118:U:C4	2.61	0.68
31:y:250:A:O2'	31:y:251:G:OP2	2.11	0.68
31:y:493:G:O2'	31:y:494:U:C5	2.47	0.68
31:y:529:G:C6	45:m:47:PRO:O	2.47	0.68
31:y:582:U:H5	31:y:758:G:H22	0.78	0.68
31:y:687:A:C5'	44:l:42:TRP:HZ2	2.06	0.68
31:y:826:C:O2'	41:i:12:ARG:CA	2.40	0.68
31:y:827:U:H3	31:y:872:A:H61	0.77	0.68
31:y:830:G:OP1	35:c:24:TRP:CZ2	2.46	0.68
31:y:890:G:O3'	31:y:891:U:C6	2.46	0.68
31:y:1029:G:H2'	31:y:103(A):A:N6	2.08	0.68
31:y:1412:C:C2'	31:y:1413:A:H8	1.91	0.68
31:y:1518:MA6:H8	31:y:1518:MA6:P	2.32	0.68
33:0:41:U:C2	33:0:42:G:C8	2.82	0.68
35:c:7:VAL:O	35:c:7:VAL:HG22	1.92	0.68
36:d:124:ILE:CD1	36:d:133:ALA:CB	2.70	0.68
37:e:9:CYS:C	37:e:33:MET:CE	2.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:28:SER:C	37:e:34:GLU:HG2	2.18	0.68
39:g:50:TYR:HB2	39:g:51:PRO:HD2	1.76	0.68
39:g:75:LEU:CD2	39:g:76:ALA:H	2.04	0.68
46:n:87:TYR:HD2	52:t:73:GLU:O	1.76	0.68
46:n:95:GLY:O	46:n:110:ARG:HB2	1.93	0.68
53:u:87:LYS:HA	53:u:90:GLN:HB3	1.74	0.68
1:w:385:C:O2'	1:w:388:G:N2	2.26	0.68
1:w:461:C:C2'	1:w:462:C:H6	2.05	0.68
1:w:582:G:H2'	1:w:583:G:O4'	1.93	0.68
1:w:589:C:O2'	1:w:590:A:C5'	2.41	0.68
1:w:803:U:C4	1:w:804:A:C6	2.81	0.68
1:w:948:G:H2'	1:w:949:C:C6	2.28	0.68
1:w:1000:A:N1	1:w:1001:A:C8	2.62	0.68
1:w:1251:C:H2'	17:O:10:ARG:CZ	2.22	0.68
1:w:1287:A:P	14:L:105:ARG:HD2	2.34	0.68
1:w:1299:G:N2	1:w:1640:C:C2	2.62	0.68
1:w:1443:G:C4	1:w:1444:G:N7	2.61	0.68
1:w:1675:C:C2'	1:w:1676:A:H5'	2.24	0.68
1:w:1794:U:C4	1:w:1795:C:N4	2.62	0.68
1:w:1796:U:C2'	1:w:1797:C:C5	2.75	0.68
1:w:1801:G:H5'	1:w:1815:A:H61	1.57	0.68
1:w:2279:G:O6	23:U:11:LYS:HG3	1.94	0.68
1:w:2357:U:H5'	1:w:2361:A:N6	2.09	0.68
1:w:2439:A:H5''	1:w:2441:C:C5'	2.24	0.68
1:w:2472:G:H2'	1:w:2478:A:H61	1.57	0.68
1:w:2478:A:H1'	1:w:2529:G:H2'	1.75	0.68
1:w:2576:G:C8	1:w:2580:U:O4	2.46	0.68
1:w:2743:C:C2	1:w:2762:G:N2	2.62	0.68
1:w:2818:G:O5'	1:w:2837:G:C4'	2.42	0.68
5:C:60:ASN:C	5:C:62:PRO:HD2	2.19	0.68
8:F:57:ASP:O	8:F:58:GLU:O	2.12	0.68
9:G:19:VAL:C	9:G:21:VAL:H	1.99	0.68
10:H:110:LEU:O	10:H:112:LYS:N	2.27	0.68
11:I:2:ILE:HD12	11:I:2:ILE:N	2.07	0.68
12:J:49:ARG:HG2	12:J:51:PHE:CZ	2.28	0.68
15:M:49:VAL:CG2	15:M:50:SER:N	2.56	0.68
16:N:108:ARG:NH1	31:y:1432:G:OP2	2.27	0.68
17:O:59:ARG:CG	17:O:62:ILE:HD12	2.23	0.68
24:V:19:GLN:H	24:V:44:PRO:HD2	1.59	0.68
24:V:37:ILE:HG23	24:V:38:SER:N	2.08	0.68
24:V:91:LYS:HE3	24:V:91:LYS:H	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:47:PRO:HB3	27:Y:57:VAL:HG21	1.76	0.68
31:y:117:G:C4	31:y:118:U:C5	2.81	0.68
31:y:124:G:H5''	31:y:291:C:H1'	1.73	0.68
31:y:519:C:C4'	45:m:50:ALA:HB2	2.24	0.68
31:y:529:G:H1	45:m:48:ASN:CG	1.99	0.68
31:y:550:G:C6	31:y:551:U:C5	2.81	0.68
31:y:758:G:H4'	31:y:880:C:O2'	1.94	0.68
31:y:1065:U:C5'	31:y:1190:G:H21	1.89	0.68
31:y:1212:U:O4'	31:y:1212:U:OP2	2.11	0.68
31:y:1229:A:O2'	32:z:30:G:H5''	1.94	0.68
31:y:1268:A:C4'	54:v:20:LYS:HA	2.23	0.68
31:y:1433:A:C6	31:y:1468:A:C5	2.81	0.68
32:z:27:G:O2'	32:z:28:G:H5'	1.94	0.68
35:c:127:ILE:HD12	35:c:127:ILE:C	2.19	0.68
39:g:10:LEU:HD21	39:g:19:LEU:CD1	2.23	0.68
48:p:2:PRO:O	48:p:3:ILE:HB	1.94	0.68
1:w:13:A:H2	1:w:14:A:C6	2.12	0.68
1:w:254:G:H4'	1:w:384:U:C4'	2.24	0.68
1:w:299:A:O2'	1:w:319:C:C1'	2.31	0.68
1:w:379:G:H5''	24:V:21:ARG:CZ	2.24	0.68
1:w:440:G:C2'	1:w:441:U:O4'	2.38	0.68
1:w:593:G:H3'	1:w:594:U:C6	2.28	0.68
1:w:604:G:C6	1:w:625:G:N1	2.62	0.68
1:w:832:G:O3'	12:J:52:GLU:HB3	1.94	0.68
1:w:952:G:N3	1:w:2267:A:C8	2.62	0.68
1:w:1033:U:H2'	30:b:18:ARG:HH12	1.53	0.68
1:w:1114:G:H2'	1:w:1115:G:O4'	1.94	0.68
1:w:1264:G:H2'	1:w:1265:A:C8	2.29	0.68
1:w:1418:G:N2	1:w:1580:A:OP2	2.26	0.68
1:w:1613:G:C6	1:w:1617:C:C2'	2.76	0.68
1:w:1650:G:C5	1:w:1651:G:C5	2.81	0.68
1:w:1666:G:H2'	1:w:1667:G:O4'	1.93	0.68
1:w:1707:G:C1'	1:w:1758:G:O6	2.41	0.68
1:w:1789:A:C5'	4:B:221:VAL:HG12	2.23	0.68
1:w:1792:G:OP1	4:B:206:LEU:CB	2.41	0.68
1:w:1889:A:C8	1:w:1889:A:OP2	2.47	0.68
1:w:2033:A:O2'	1:w:2034:U:C5'	2.39	0.68
1:w:2080:G:H22	1:w:2241:A:H1'	1.57	0.68
1:w:2134:A:N6	1:w:2157:G:C1'	2.55	0.68
1:w:2349:G:H2'	1:w:2350:C:C5'	2.22	0.68
1:w:2403:C:O2	1:w:2404:C:C5	2.47	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2584:U:O2'	1:w:2585:U:H5'	1.94	0.68
2:x:100:G:H2'	2:x:101:A:C5'	2.21	0.68
5:C:9:VAL:HG23	5:C:26:ILE:HD13	1.73	0.68
7:E:172:LEU:HA	7:E:175:LEU:CG	2.22	0.68
9:G:1:MET:C	9:G:3:VAL:H	1.98	0.68
9:G:129:THR:HA	9:G:139:GLN:HA	1.75	0.68
13:K:62:GLY:O	13:K:63:LYS:HB3	1.92	0.68
20:R:89:ILE:HD12	20:R:92:LEU:CB	2.24	0.68
24:V:60:PHE:CE1	24:V:87:PRO:HB3	2.25	0.68
24:V:83:GLU:O	24:V:88:LYS:HE2	1.94	0.68
25:W:27:GLU:OE1	25:W:30:ARG:HD2	1.94	0.68
29:a:58:ILE:C	29:a:60:LEU:H	2.01	0.68
31:y:192:U:O5'	31:y:192:U:H6	1.77	0.68
31:y:255:G:H2'	31:y:256:U:C6	2.28	0.68
31:y:457:C:H2'	31:y:458:C:H5'	1.76	0.68
31:y:674:G:N3	31:y:674:G:H2'	2.08	0.68
31:y:1130:A:N6	31:y:1144:G:C2	2.62	0.68
31:y:1237:C:OP1	31:y:1238:A:O4'	2.12	0.68
31:y:1276:G:H2'	31:y:1277:C:O4'	1.93	0.68
31:y:1312:G:N1	31:y:1326:C:N4	2.41	0.68
33:0:31:A:H2	33:0:39:U:O2	1.75	0.68
37:e:9:CYS:O	37:e:33:MET:SD	2.52	0.68
39:g:44:GLY:HA2	39:g:59:TYR:CE1	2.29	0.68
40:h:126:ASP:CA	40:h:131:LYS:HG3	2.10	0.68
41:i:53:VAL:HG12	41:i:54:ASP:OD1	1.94	0.68
41:i:97:VAL:HG13	41:i:98:LYS:HD2	1.75	0.68
45:m:25:ALA:O	45:m:26:LEU:HB2	1.93	0.68
48:p:71:GLN:HA	48:p:78:TYR:CE1	2.29	0.68
50:r:81:ARG:HH22	50:r:85:VAL:CG2	2.04	0.68
51:s:80:PRO:O	51:s:81:PHE:C	2.37	0.68
53:u:88:VAL:O	53:u:92:LEU:HG	1.93	0.68
1:w:137(A):C:O2	20:R:3:THR:HG23	1.92	0.68
1:w:182:A:H2	1:w:432:A:H2	1.41	0.68
1:w:299:A:H2'	1:w:300:A:C5	2.28	0.68
1:w:396:G:N2	1:w:2231:C:O2'	2.26	0.68
1:w:528:A:H2	1:w:2042:A:C3'	2.04	0.68
1:w:705:A:H2'	1:w:706:A:H5'	1.76	0.68
1:w:796:C:C4	1:w:797:C:C4	2.81	0.68
1:w:855:G:N2	23:U:27:GLU:H	1.91	0.68
1:w:885:C:H3'	1:w:886:C:C3'	2.23	0.68
1:w:892:G:H2'	1:w:893:C:O4'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1351:C:O2	1:w:1571:A:H2	1.76	0.68
1:w:1824:G:H2'	1:w:1825:A:C8	2.29	0.68
1:w:1939:U:OP2	1:w:1939:U:C6	2.47	0.68
1:w:2001:A:O4'	1:w:2689:U:N3	2.27	0.68
1:w:2303:G:O2'	7:E:124:SER:O	2.09	0.68
1:w:2306:C:H3'	1:w:2311:A:C6	2.29	0.68
1:w:2335:A:O3'	1:w:2336:A:C8	2.47	0.68
1:w:2404:C:H2'	1:w:2405:G:O4'	1.94	0.68
1:w:2482:G:C2'	1:w:2483:C:H5'	2.24	0.68
1:w:2693:A:C2	1:w:2717:G:C4	2.82	0.68
1:w:2755:C:C2'	1:w:2756:U:OP2	2.38	0.68
3:A:8:TYR:HB3	3:A:11:LEU:HD22	1.76	0.68
4:B:79:VAL:CB	4:B:111:LEU:HD11	2.18	0.68
4:B:118:VAL:HG12	4:B:126:GLN:HE21	1.57	0.68
5:C:34:VAL:HG23	5:C:78:LEU:CD2	2.22	0.68
6:D:69:ARG:CD	6:D:70:HIS:H	2.06	0.68
9:G:15:VAL:O	9:G:15:VAL:HG22	1.94	0.68
9:G:79:ILE:HG23	9:G:80:PRO:CD	2.24	0.68
10:H:36:TRP:O	10:H:37:VAL:CG2	2.42	0.68
10:H:95:TYR:CE1	10:H:109:PRO:O	2.46	0.68
13:K:23:GLY:C	13:K:98:LYS:HD3	2.17	0.68
13:K:37:LEU:HG	13:K:128:LYS:C	2.18	0.68
14:L:2:ARG:CG	14:L:3:HIS:N	2.57	0.68
15:M:69:VAL:HG13	15:M:73:LEU:HD11	1.76	0.68
15:M:93:LYS:HD2	15:M:93:LYS:N	2.09	0.68
20:R:63:LYS:HD3	20:R:64:LYS:O	1.94	0.68
23:U:23:VAL:HG13	23:U:38:VAL:HG11	1.76	0.68
23:U:68:GLU:O	23:U:79:VAL:HA	1.94	0.68
30:b:3:VAL:HG12	30:b:35:ARG:H	1.57	0.68
31:y:6:G:H5'	31:y:7:G:P	2.33	0.68
31:y:19:C:O2	31:y:572:A:C2	2.47	0.68
31:y:44:G:OP1	49:q:11:SER:HB3	1.93	0.68
31:y:249:U:O5'	31:y:249:U:H6	1.77	0.68
31:y:502:G:H4'	31:y:550:G:C4'	2.23	0.68
31:y:512:U:C2	31:y:540:G:N2	2.62	0.68
31:y:624:C:H2'	31:y:625:G:H5'	1.76	0.68
31:y:817:C:C2	31:y:1527:C:H4'	2.28	0.68
31:y:986:A:O2'	52:t:52:TYR:OH	2.08	0.68
31:y:1053:G:C5	31:y:1199:U:C6	2.81	0.68
31:y:1075:C:H5'	31:y:1101:A:N6	2.08	0.68
31:y:1178:G:OP2	31:y:1178:G:C8	2.47	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1223:C:H3'	31:y:1224:G:H5'	1.74	0.68
35:c:165:VAL:O	35:c:187:LEU:O	2.11	0.68
37:e:7:PRO:HA	37:e:22:LYS:HE3	1.75	0.68
42:j:93:ARG:NH1	42:j:97:LYS:HG3	2.08	0.68
43:k:67:THR:CG2	43:k:68:HIS:N	2.57	0.68
1:w:13:A:N6	1:w:525:U:O2	2.27	0.68
1:w:67:U:N3	1:w:74:A:N7	2.32	0.68
1:w:81:G:N2	1:w:105:C:O2	2.27	0.68
1:w:242:G:N9	29:a:5:LYS:HB3	2.09	0.68
1:w:281:G:H1'	1:w:359:A:N6	2.08	0.68
1:w:363(F):U:C2'	1:w:363(G):A:H8	2.06	0.68
1:w:426:C:H2'	1:w:427:U:H6	1.58	0.68
1:w:499:U:H3	1:w:503:A:H62	1.42	0.68
1:w:1344:G:H4'	1:w:1384:A:H2'	1.76	0.68
1:w:1471:A:N3	1:w:1471:A:C2'	2.56	0.68
1:w:1542:G:C4	1:w:1543:A:N6	2.62	0.68
1:w:1558:A:C2'	1:w:1560:G:O4'	2.42	0.68
1:w:1604:C:H2'	1:w:1605:C:C5'	2.24	0.68
1:w:1615:C:O2'	1:w:1617:C:C6	2.46	0.68
1:w:2194:G:H2'	1:w:2195:C:N1	2.09	0.68
1:w:2315:G:H3'	1:w:2315:G:C8	2.28	0.68
1:w:2428:G:H4'	1:w:2429:G:O5'	1.94	0.68
1:w:2598:A:H5'	4:B:234:GLY:O	1.93	0.68
1:w:2616:C:H2'	1:w:2617:C:C6	2.27	0.68
1:w:2658:C:O2'	1:w:2659:G:H5'	1.94	0.68
1:w:2756:U:O4'	1:w:2757:A:N7	2.26	0.68
1:w:2879:C:O2'	1:w:2880:C:C5	2.47	0.68
3:A:63:VAL:HG13	3:A:64:SER:H	1.58	0.68
3:A:213:VAL:O	3:A:224:ARG:NH2	2.26	0.68
3:A:224:ARG:CZ	3:A:225:ILE:H	2.06	0.68
4:B:4:LYS:CB	4:B:18:VAL:HB	2.23	0.68
8:F:8:PRO:HA	8:F:50:VAL:N	2.09	0.68
9:G:79:ILE:N	9:G:145:VAL:HG23	2.09	0.68
10:H:100:GLY:H	10:H:105:LEU:HD22	1.59	0.68
10:H:117:HIS:CE1	10:H:120:ARG:NH1	2.62	0.68
11:I:64:ARG:HA	11:I:79:PHE:CD2	2.29	0.68
13:K:33:GLY:H	13:K:132:VAL:CB	1.91	0.68
13:K:44:ALA:HA	13:K:47:ILE:HD12	1.75	0.68
14:L:18:LEU:N	14:L:21:TYR:HE1	1.91	0.68
15:M:30:ARG:HA	15:M:36:TYR:CE1	2.28	0.68
16:N:3:ARG:CB	16:N:7:ILE:CD1	2.72	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:82:GLY:O	17:O:113:ALA:HA	1.94	0.68
17:O:92:ARG:HB2	18:P:11:GLN:HG3	1.75	0.68
18:P:21:ARG:HB2	18:P:21:ARG:CZ	2.23	0.68
20:R:50:LYS:HE3	20:R:50:LYS:HA	1.75	0.68
20:R:82:GLN:HB3	20:R:85:PRO:HD2	1.76	0.68
21:S:26:LYS:HB2	21:S:37:VAL:HA	1.76	0.68
22:T:77:ASP:HB3	22:T:82:ARG:C	2.19	0.68
22:T:104:PHE:HA	22:T:139:VAL:HB	1.76	0.68
23:U:17:GLN:HE21	23:U:39:ARG:NH2	1.92	0.68
25:W:7:ARG:HB3	25:W:8:LYS:NZ	2.09	0.68
31:y:42:G:H2'	31:y:43:C:C5	2.27	0.68
31:y:125:U:H2'	31:y:126:G:C8	2.28	0.68
31:y:134:A:H2'	31:y:134:A:N3	2.09	0.68
31:y:160:A:C5	31:y:161:A:C6	2.82	0.68
31:y:195:A:OP1	53:u:65:LYS:HE3	1.93	0.68
31:y:303:A:H2'	31:y:304:U:H6	1.59	0.68
31:y:389:A:H3'	31:y:390:C:H6	1.55	0.68
31:y:396:G:H5''	31:y:397:A:OP2	1.94	0.68
31:y:528:C:H5'	31:y:535:A:C6	2.29	0.68
31:y:779:C:C6	31:y:779:C:OP2	2.47	0.68
31:y:933:G:N2	31:y:935:A:O4'	2.27	0.68
31:y:958:A:C8	31:y:959:A:N7	2.62	0.68
31:y:991:U:H3	31:y:1213:A:H8	1.41	0.68
31:y:1109:C:C2'	31:y:1110:A:O4'	2.42	0.68
31:y:1216:G:C2	31:y:1217:C:C5	2.82	0.68
31:y:1349:A:H61	31:y:1373:G:H2'	1.57	0.68
31:y:1381:U:H2'	31:y:1381:U:O2	1.94	0.68
31:y:1391:U:H2'	31:y:1392:G:C8	2.29	0.68
31:y:1492:A:O2'	31:y:1493:A:H5'	1.93	0.68
35:c:122:PHE:HA	35:c:127:ILE:HG12	1.74	0.68
35:c:191:ASP:O	35:c:192:SER:OG	2.10	0.68
36:d:107:GLN:O	36:d:107:GLN:OE1	2.12	0.68
37:e:13:ARG:HH21	37:e:32:ALA:C	2.02	0.68
38:f:100:VAL:CG1	38:f:110:LEU:HD11	2.23	0.68
40:h:5:ARG:HD2	40:h:5:ARG:N	2.09	0.68
43:k:19:SER:O	43:k:23:ILE:HG12	1.94	0.68
43:k:40:LEU:N	43:k:70:ARG:NH1	2.41	0.68
45:m:35:VAL:O	45:m:37:THR:N	2.27	0.68
47:o:32:SER:CB	47:o:41:ARG:HH11	2.07	0.68
49:q:6:LEU:HD21	49:q:28:ARG:HH11	1.59	0.68
49:q:72:ARG:HH11	49:q:73:LEU:HD11	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:268:C:H3'	1:w:269:U:H5''	1.75	0.68
1:w:270(J):G:H2'	1:w:270(J):G:N3	2.10	0.68
1:w:298:G:C6	1:w:339:U:H5	2.12	0.68
1:w:357:A:C2'	1:w:358:U:C6	2.77	0.68
1:w:463:G:H1'	1:w:466:A:N6	2.09	0.68
1:w:558:G:C6	1:w:559:G:N7	2.62	0.68
1:w:668:G:C2	1:w:670:A:C4	2.81	0.68
1:w:783:A:C8	1:w:784:A:C1'	2.77	0.68
1:w:919:G:C2	1:w:2268:A:N7	2.62	0.68
1:w:1114:G:C6	1:w:1115:G:C5	2.82	0.68
1:w:1295:C:H3'	1:w:1296:G:C8	2.29	0.68
1:w:1341:U:O2	20:R:55:ASN:ND2	2.27	0.68
1:w:1436:G:C2	1:w:1477:A:O2'	2.47	0.68
1:w:1488:G:OP2	1:w:1488:G:C8	2.41	0.68
1:w:1538:G:H2'	1:w:1539:G:C8	2.26	0.68
1:w:1669:A:H5'	1:w:1671:U:N3	2.07	0.68
1:w:1755:A:O2'	1:w:1756:G:H5'	1.93	0.68
1:w:1792:G:N1	1:w:1827:C:N3	2.36	0.68
1:w:1851:U:H2'	1:w:1852:C:H5'	1.76	0.68
1:w:2051:A:C5'	1:w:2578:G:O5'	2.42	0.68
1:w:2055:C:C4'	1:w:2056:G:H5''	2.18	0.68
1:w:2319:G:C8	15:M:7:TYR:CE2	2.82	0.68
1:w:2652:C:C6	1:w:2652:C:O5'	2.47	0.68
1:w:2654:A:H1'	1:w:2655:G:O4'	1.93	0.68
1:w:2754:U:OP2	1:w:2754:U:C5	2.47	0.68
2:x:20:C:C2'	2:x:21:G:C8	2.77	0.68
2:x:110:G:O6	2:x:111:U:C4	2.47	0.68
4:B:142:VAL:O	4:B:156:ALA:HB1	1.92	0.68
5:C:34:VAL:CG2	5:C:78:LEU:HD21	2.22	0.68
5:C:132:HIS:O	5:C:133:LYS:CB	2.41	0.68
5:C:177:PRO:O	5:C:179:GLU:N	2.26	0.68
7:E:41:GLN:NE2	7:E:42:GLY:O	2.26	0.68
8:F:94:TYR:O	8:F:95:ARG:HG3	1.94	0.68
9:G:113:ARG:HH12	9:G:133:HIS:HB3	1.56	0.68
10:H:155:ALA:O	10:H:156:GLN:CB	2.42	0.68
11:I:41:ALA:C	11:I:57:VAL:HG22	2.19	0.68
16:N:30:VAL:C	16:N:44:ASP:OD2	2.36	0.68
16:N:92:GLY:CA	16:N:114:LEU:HD22	2.24	0.68
20:R:4:ALA:O	20:R:5:TYR:HB2	1.94	0.68
20:R:20:GLY:HA3	20:R:25:LYS:C	2.19	0.68
22:T:171:ILE:HD13	22:T:171:ILE:H	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:51:VAL:HG12	24:V:52:ARG:H	1.41	0.68
31:y:36:C:C2'	31:y:37:U:H6	2.06	0.68
31:y:234:C:C1'	50:r:64:PRO:HG2	2.24	0.68
31:y:556:C:HO2'	31:y:557:G:H5'	1.56	0.68
31:y:564:C:H5	50:r:32:TYR:CE2	2.09	0.68
31:y:637:G:C2	31:y:638:G:C4	2.82	0.68
31:y:721:G:O4'	31:y:722:A:C2	2.47	0.68
31:y:741:G:C2	31:y:742:G:N7	2.62	0.68
31:y:1106:G:H5''	36:d:172:ARG:NE	2.08	0.68
31:y:1175:G:C2'	31:y:1176:A:H5'	2.23	0.68
31:y:1213:A:H2'	31:y:1215:G:C8	2.28	0.68
31:y:1296:C:H2'	31:y:1297:C:C5'	2.23	0.68
31:y:1300:G:C2'	31:y:1301:U:H5	2.06	0.68
31:y:1510:U:C2'	31:y:1511:G:C8	2.76	0.68
31:y:1512:U:C2'	31:y:1513:A:H8	2.02	0.68
35:c:187:LEU:HD21	35:c:203:GLY:N	2.09	0.68
36:d:115:LEU:O	36:d:118:GLN:OE1	2.12	0.68
37:e:112:VAL:O	37:e:113:SER:HB2	1.93	0.68
44:l:63:LEU:HD22	44:l:63:LEU:N	2.09	0.68
45:m:68:TYR:HB3	45:m:98:HIS:HA	1.76	0.68
51:s:26:LEU:HD21	51:s:29:PHE:HE2	1.58	0.68
53:u:80:ARG:C	53:u:84:LEU:HB3	2.18	0.68
1:w:44:A:C2'	1:w:45:G:O5'	2.42	0.67
1:w:147:U:C4	1:w:148:C:N4	2.62	0.67
1:w:242:G:O2'	1:w:243:U:OP2	2.09	0.67
1:w:270(K):G:N2	1:w:270(L):C:C1'	2.46	0.67
1:w:270(W):G:N2	1:w:270(X):G:C6	2.62	0.67
1:w:295:G:OP2	1:w:295:G:H8	1.77	0.67
1:w:317:G:H21	1:w:318:C:H1'	1.59	0.67
1:w:545:G:H8	1:w:545:G:O5'	1.77	0.67
1:w:553:U:C2'	1:w:554:U:H5'	2.24	0.67
1:w:682:G:H2'	1:w:683:C:H6	1.59	0.67
1:w:802:A:O5'	1:w:803:U:H5	1.77	0.67
1:w:802:A:P	1:w:803:U:H5	2.17	0.67
1:w:818:G:O6	1:w:1187:G:H3'	1.93	0.67
1:w:848:G:H5'	1:w:929:G:N1	2.07	0.67
1:w:901:A:N3	1:w:902:C:H5'	2.09	0.67
1:w:978:G:C8	1:w:979:G:N7	2.62	0.67
1:w:999:U:N3	1:w:1155:A:N6	2.32	0.67
1:w:1022:G:N2	1:w:1140:C:N3	2.42	0.67
1:w:1298:C:H2'	1:w:1299:G:H5'	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:144(B):A:H5'	1:w:1461:G:OP2	1.94	0.67
1:w:1602:U:H6	1:w:1602:U:O5'	1.76	0.67
1:w:1782:C:O2	1:w:2608:G:O2'	2.11	0.67
1:w:1818:U:C2'	4:B:155:LEU:CG	2.66	0.67
1:w:2024:G:C6	1:w:2025:C:N4	2.62	0.67
1:w:2243:U:O2	1:w:2434:A:C2	2.46	0.67
1:w:2442:C:H5'	1:w:2442:C:H6	1.58	0.67
1:w:2573:C:OP1	1:w:2575:C:OP1	2.11	0.67
1:w:2584:U:O3'	32:z:76:A:OP2	2.12	0.67
4:B:145:VAL:HG22	4:B:191:ALA:HB2	1.75	0.67
6:D:100:VAL:C	6:D:102:LYS:N	2.51	0.67
6:D:135:LEU:HD23	6:D:135:LEU:C	2.19	0.67
7:E:50:ALA:HA	7:E:53:LEU:HD11	1.74	0.67
7:E:82:LEU:HD12	7:E:84:LYS:HG2	1.75	0.67
10:H:119:GLU:HB3	10:H:146:TYR:HA	1.76	0.67
15:M:70:GLY:CA	15:M:101:LEU:HD22	2.08	0.67
17:O:64:ARG:CZ	17:O:64:ARG:HA	2.23	0.67
26:X:4:LEU:HA	26:X:58:VAL:HG22	1.75	0.67
31:y:127:G:O2'	31:y:128:G:H5'	1.94	0.67
31:y:185:A:N1	31:y:192:U:C4	2.62	0.67
31:y:227:G:C5	31:y:228:A:N7	2.62	0.67
31:y:405:U:C2	31:y:497:U:C4	2.81	0.67
31:y:770:C:C3'	31:y:771:G:C5'	2.71	0.67
31:y:1004:A:H2'	31:y:1005:A:C5'	2.25	0.67
31:y:1102:A:O2'	35:c:98:LEU:O	2.12	0.67
31:y:1433:A:OP2	31:y:1433:A:C8	2.46	0.67
32:z:3:C:C2	32:z:4:C:C5	2.82	0.67
32:z:18:G:O4'	32:z:60:U:O4	2.11	0.67
33:0:16:U:H2'	33:0:16:U:O2	1.94	0.67
33:0:64:A:C2'	33:0:65:G:C8	2.77	0.67
38:f:100:VAL:HG13	38:f:118:ILE:CG1	2.16	0.67
39:g:80:ARG:CD	39:g:80:ARG:H	2.07	0.67
43:k:49:VAL:HG12	43:k:50:ILE:N	2.08	0.67
45:m:57:VAL:CG2	45:m:67:ALA:HB3	2.25	0.67
45:m:114:LYS:O	45:m:115:SER:C	2.37	0.67
50:r:54:GLY:O	50:r:56:VAL:N	2.27	0.67
1:w:13:A:N3	1:w:526:A:N6	2.43	0.67
1:w:198:C:C4'	1:w:2243:U:O2'	2.37	0.67
1:w:464:U:C2	1:w:465:G:C5	2.81	0.67
1:w:566:U:C6	1:w:566:U:C3'	2.76	0.67
1:w:612:G:H1'	1:w:617:G:N2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:617:G:H5''	1:w:618(A):G:OP2	1.93	0.67
1:w:706:A:C6	1:w:707:G:C2	2.82	0.67
1:w:954:G:H2'	1:w:954:G:N3	2.07	0.67
1:w:1004:C:H5'	1:w:1010:A:H61	1.57	0.67
1:w:1043:C:H2'	1:w:1044:G:C8	2.28	0.67
1:w:1131:G:N2	1:w:1132:A:C4	2.63	0.67
1:w:1138:G:H1'	10:H:129:MET:CA	2.24	0.67
1:w:1270:C:OP2	1:w:1270:C:C6	2.47	0.67
1:w:1540:G:C3'	1:w:1541:U:C6	2.77	0.67
1:w:1668:A:C4	1:w:1674:G:N7	2.62	0.67
1:w:1699:G:O6	1:w:1763:G:C4	2.47	0.67
1:w:1779:U:C5	1:w:1784:A:N7	2.62	0.67
1:w:1932:A:H62	1:w:1968:G:N2	1.90	0.67
1:w:2061:G:C8	1:w:2501:C:C1'	2.72	0.67
1:w:2101:G:C2	1:w:2189:U:O2	2.48	0.67
1:w:2305:A:C2'	1:w:2306:C:H5'	2.23	0.67
1:w:2428:G:N2	12:J:60:MET:HE3	2.08	0.67
1:w:2641:G:O6	1:w:2642:G:C6	2.47	0.67
1:w:2705:A:H2'	1:w:2706:G:O4'	1.95	0.67
1:w:2736:G:H2'	1:w:2737:G:H8	1.59	0.67
1:w:2767:C:H4'	10:H:107:LYS:HZ3	1.60	0.67
1:w:2818:G:O4'	1:w:2837:G:C4'	2.42	0.67
2:x:8:U:H1'	15:M:40:ILE:HD13	1.76	0.67
2:x:9:G:H2'	2:x:10:C:O5'	1.94	0.67
2:x:57:A:C6	7:E:29:TRP:HB2	2.29	0.67
4:B:102:LYS:O	4:B:103:ARG:HG2	1.93	0.67
4:B:109:ASP:HB2	4:B:199:ALA:HB3	1.76	0.67
6:D:191:LEU:HD22	6:D:193:ALA:H	1.58	0.67
7:E:10:LYS:HD3	7:E:11:TYR:N	2.08	0.67
7:E:78:SER:HB2	32:z:19:G:N2	1.92	0.67
8:F:96:ALA:O	8:F:97:ARG:HB3	1.94	0.67
9:G:2:LYS:CA	9:G:20:ASP:HA	2.24	0.67
9:G:81:VAL:HG22	9:G:146:ALA:HA	1.75	0.67
9:G:88:ILE:CG1	9:G:89:TYR:CD1	2.77	0.67
9:G:99:GLU:O	9:G:103:ARG:HG3	1.93	0.67
13:K:119:ARG:HH22	13:K:131:ILE:CG2	2.07	0.67
20:R:51:VAL:HA	20:R:81:VAL:HA	1.75	0.67
20:R:57:LEU:CD2	20:R:76:ARG:HE	2.07	0.67
22:T:11:GLU:HG3	22:T:12:GLY:N	2.09	0.67
23:U:25:ARG:HH22	23:U:35:ASN:HB3	1.59	0.67
23:U:66:VAL:O	23:U:81:VAL:CA	2.36	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:82:LEU:HD23	24:V:82:LEU:C	2.19	0.67
27:Y:30:LEU:HD21	27:Y:39:MET:C	2.19	0.67
31:y:16:A:O2'	31:y:17:U:O4'	2.04	0.67
31:y:160:A:H2'	31:y:161:A:H8	1.54	0.67
31:y:416:G:H2'	31:y:417:C:O4'	1.93	0.67
31:y:761:G:O2'	50:r:105:ALA:N	2.26	0.67
31:y:918:A:C6	31:y:919:A:C6	2.81	0.67
31:y:1064:G:H1'	31:y:1190:G:H21	1.59	0.67
33:0:9:A:N7	33:0:12:U:O4	2.27	0.67
36:d:14:ILE:O	36:d:15:THR:OG1	2.12	0.67
36:d:125:GLU:CG	36:d:126:ARG:HD3	2.24	0.67
37:e:8:VAL:HG12	37:e:21:LEU:HD13	1.75	0.67
37:e:10:ARG:H	37:e:22:LYS:NZ	1.92	0.67
37:e:12:CYS:CA	37:e:19:LEU:HB2	2.25	0.67
44:l:17:GLY:HA3	44:l:80:VAL:CG1	2.24	0.67
45:m:36:CYS:SG	45:m:76:LEU:CD1	2.80	0.67
1:w:78:A:C2	1:w:348:G:O2'	2.46	0.67
1:w:127:A:O5'	1:w:127:A:H8	1.77	0.67
1:w:161:U:O2	1:w:165:U:O4	2.11	0.67
1:w:225:A:H2'	1:w:226:G:O4'	1.94	0.67
1:w:363(F):U:H2'	1:w:363(G):A:O4'	1.93	0.67
1:w:384:U:C2'	1:w:385:C:H5'	2.25	0.67
1:w:495:G:O2'	19:Q:57:ASN:ND2	2.26	0.67
1:w:535:C:H1'	17:O:49:HIS:HD2	1.57	0.67
1:w:777:A:C2'	1:w:778:G:H5'	2.24	0.67
1:w:848:G:C5'	1:w:929:G:H1	2.08	0.67
1:w:849:A:O5'	1:w:849:A:H8	1.76	0.67
1:w:1197:G:N3	1:w:1197:G:H2'	2.09	0.67
1:w:1429:G:O2'	1:w:1430:C:H5'	1.94	0.67
1:w:1516:U:O2'	1:w:1517:G:H8	1.75	0.67
1:w:1623:G:C6	1:w:1624:G:N7	2.63	0.67
1:w:1759:A:HO2'	1:w:2714:G:H1'	1.58	0.67
1:w:1796:U:C4'	4:B:256:GLY:N	2.40	0.67
1:w:2037:G:C3'	1:w:2038:G:H8	2.07	0.67
1:w:2114:A:C3'	1:w:2115:G:C8	2.76	0.67
1:w:2158:A:C2'	1:w:2159:G:C5'	2.72	0.67
1:w:2358:G:N3	1:w:2358:G:C2'	2.55	0.67
1:w:2657:A:H2'	1:w:2657:A:N3	2.09	0.67
1:w:2659:G:H2'	1:w:2660:A:H8	1.59	0.67
1:w:2835:A:H1'	1:w:2879:C:C6	2.29	0.67
1:w:2849:U:C6	1:w:2867:G:C2	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2889:C:O2	1:w:2889:C:C2'	2.39	0.67
2:x:87:G:H1'	2:x:89(B):A:N6	2.10	0.67
3:A:40:GLU:HB3	3:A:217:THR:HG23	1.77	0.67
4:B:155:LEU:CD2	4:B:157:ARG:CG	2.72	0.67
5:C:32:PRO:HG3	5:C:90:THR:OG1	1.94	0.67
6:D:131:THR:HA	6:D:134:PHE:CE2	2.29	0.67
6:D:148:SER:N	6:D:167:TRP:NE1	2.43	0.67
7:E:3:LEU:HB2	7:E:100:TRP:CZ3	2.29	0.67
7:E:73:ALA:H	7:E:87:PRO:CA	2.08	0.67
7:E:127:GLY:O	7:E:165:THR:HG22	1.95	0.67
9:G:33:ARG:HB2	9:G:33:ARG:HH21	1.58	0.67
10:H:62:ARG:O	10:H:65:TRP:CB	2.41	0.67
13:K:37:LEU:HD11	13:K:128:LYS:HB2	1.77	0.67
15:M:24:LEU:HB3	15:M:85:VAL:CG2	2.24	0.67
15:M:38:GLN:HG3	15:M:50:SER:OG	1.94	0.67
15:M:60:GLY:HA3	15:M:65:VAL:HG11	1.76	0.67
16:N:62:THR:CB	16:N:74:ARG:O	2.42	0.67
16:N:82:LEU:N	16:N:82:LEU:HD12	2.09	0.67
16:N:108:ARG:HH12	31:y:1431:C:C3'	2.06	0.67
20:R:60:ARG:HD3	20:R:74:PRO:HG3	1.76	0.67
21:S:61:ILE:CG2	21:S:62:GLU:H	1.95	0.67
22:T:16:SER:N	22:T:19:ARG:HD3	2.09	0.67
22:T:24:LEU:HD21	22:T:41:LEU:CA	2.24	0.67
22:T:24:LEU:CD1	22:T:44:PHE:HB3	2.24	0.67
31:y:227:G:N3	31:y:228:A:C8	2.63	0.67
31:y:483:C:C6	31:y:484:G:C8	2.82	0.67
31:y:533:A:O5'	31:y:533:A:H8	1.77	0.67
31:y:874:G:N2	41:i:11:THR:HG21	2.09	0.67
31:y:926:G:H22	34:1:1:U:P	2.17	0.67
31:y:931:C:C2	31:y:932:C:C5	2.82	0.67
31:y:943:U:C5	31:y:943:U:OP2	2.47	0.67
31:y:957:U:H4'	31:y:960:U:C4	2.29	0.67
31:y:1064:G:C4'	31:y:1065:U:O5'	2.42	0.67
31:y:1091:U:H1'	31:y:1095:U:N3	2.09	0.67
31:y:1158:C:C2'	31:y:1159:U:H4'	2.23	0.67
31:y:1207:2MG:H2'	31:y:1208:C:C6	2.29	0.67
31:y:1269:A:C5'	54:v:19:GLY:H	2.06	0.67
31:y:1347:G:H21	31:y:1349:A:H62	1.42	0.67
31:y:1373:G:H5''	40:h:36:LYS:CE	2.24	0.67
31:y:1379:G:C3'	31:y:1380:U:H5''	2.23	0.67
32:z:11:C:H2'	32:z:12:U:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:z:40:C:H2'	32:z:41:C:C6	2.28	0.67
36:d:145:GLY:O	36:d:146:ALA:HB2	1.94	0.67
36:d:157:ILE:HA	36:d:193:TYR:OH	1.94	0.67
37:e:34:GLU:O	37:e:34:GLU:HG3	1.93	0.67
40:h:47:CYS:O	40:h:58:PRO:HB3	1.93	0.67
41:i:11:THR:CA	41:i:14:ARG:HG2	2.14	0.67
45:m:13:GLY:O	45:m:14:ARG:C	2.36	0.67
46:n:48:LEU:CD1	46:n:53:VAL:HG22	2.21	0.67
49:q:37:GLY:CA	49:q:50:LYS:O	2.38	0.67
1:w:271(C):G:C5	1:w:271(D):U:H5	2.11	0.67
1:w:450:G:O6	1:w:453:C:P	2.53	0.67
1:w:665:C:C5'	12:J:48:PRO:HD2	2.24	0.67
1:w:669:G:N1	1:w:670:A:C5	2.62	0.67
1:w:751:A:O4'	19:Q:90:ARG:HG2	1.95	0.67
1:w:767:U:H2'	1:w:768:G:N7	2.10	0.67
1:w:783:A:H2'	1:w:784:A:O2'	1.93	0.67
1:w:789:A:C2	28:Z:3:ARG:HD3	2.29	0.67
1:w:802:A:N3	1:w:803:U:H1'	2.08	0.67
1:w:947:G:N3	1:w:984:A:H2	1.92	0.67
1:w:1307:A:N6	1:w:1606:G:O2'	2.27	0.67
1:w:1315:C:H2'	1:w:1392:A:C2	2.28	0.67
1:w:1364:G:C8	24:V:8:SER:HA	2.29	0.67
1:w:1394:U:O2'	1:w:1603:A:H5''	1.95	0.67
1:w:1490:A:H2'	1:w:1490:A:N3	2.10	0.67
1:w:1497:U:H6	1:w:1497:U:H3'	1.60	0.67
1:w:1510:A:C2'	1:w:1511:A:O4'	2.36	0.67
1:w:1794:U:O2	1:w:1795:C:C5	2.47	0.67
1:w:1819:A:H2'	4:B:179:SER:HB3	1.76	0.67
1:w:1863:G:H2'	1:w:1864:U:O4'	1.94	0.67
1:w:1897:G:C2'	1:w:1898:U:H5'	2.24	0.67
1:w:1999:C:H4'	1:w:2723:C:O2	1.94	0.67
1:w:2017:U:H5''	27:Y:8:LYS:HG3	1.73	0.67
1:w:2017:U:OP1	27:Y:8:LYS:CD	2.42	0.67
1:w:2219:G:OP2	1:w:2224:G:N7	2.28	0.67
1:w:2261:C:H42	23:U:11:LYS:CB	2.07	0.67
1:w:2320:A:N3	1:w:2333:A:N7	2.43	0.67
1:w:2727:G:O5'	1:w:2727:G:C8	2.48	0.67
1:w:2735:G:O5'	1:w:2735:G:C8	2.46	0.67
1:w:2807:G:H3'	1:w:2808:U:H5''	1.77	0.67
1:w:2865:U:OP2	1:w:2865:U:C5	2.48	0.67
2:x:11:C:OP1	23:U:72:ARG:HB3	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:20:C:C3'	2:x:21:G:H8	2.07	0.67
2:x:42:C:N1	7:E:92:VAL:CG2	2.58	0.67
2:x:107:U:H3'	2:x:108:C:H5	1.59	0.67
3:A:165:ARG:HH22	3:A:172:ILE:CB	2.06	0.67
4:B:34:VAL:HG22	4:B:35:LYS:CD	2.21	0.67
4:B:201:HIS:HB2	4:B:204:ILE:CG2	2.24	0.67
5:C:30:PRO:HG3	5:C:180:ASN:HD22	1.59	0.67
5:C:54:GLN:O	5:C:55:ASN:CB	2.43	0.67
6:D:48:THR:HA	6:D:52:VAL:CB	2.24	0.67
6:D:129:GLY:C	6:D:134:PHE:HZ	2.01	0.67
8:F:138:LYS:CB	8:F:141:VAL:HB	2.25	0.67
8:F:152:ARG:CA	8:F:152:ARG:NH2	2.34	0.67
8:F:171:LEU:HD12	8:F:171:LEU:N	2.10	0.67
10:H:124:HIS:O	10:H:125:ALA:C	2.36	0.67
14:L:44:LEU:HA	14:L:47:PHE:HD2	1.58	0.67
15:M:18:ILE:CG2	15:M:19:LYS:H	2.05	0.67
15:M:25:ARG:HG2	15:M:42:ASP:OD1	1.93	0.67
18:P:30:GLY:HA3	18:P:65:GLY:CA	2.24	0.67
22:T:60:GLU:O	22:T:62:PRO:HD3	1.95	0.67
23:U:22:GLY:HA3	23:U:24:LYS:HZ2	1.60	0.67
23:U:49:LYS:O	23:U:81:VAL:CB	2.42	0.67
30:b:11:CYS:SG	30:b:13:LYS:HB2	2.34	0.67
31:y:108:G:P	31:y:108:G:H21	2.17	0.67
31:y:131:C:OP1	31:y:263:A:O4'	2.12	0.67
31:y:141:A:H1'	31:y:182:U:O2	1.95	0.67
31:y:150:C:H42	31:y:171:A:H62	1.41	0.67
31:y:258:G:C6	31:y:259:G:N7	2.62	0.67
31:y:343:U:H1'	31:y:347:G:C2	2.30	0.67
31:y:489:C:H5''	37:e:132:ARG:HH22	1.59	0.67
31:y:673:G:C4	31:y:674:G:N7	2.62	0.67
31:y:719:C:O5'	31:y:720:C:C5	2.47	0.67
31:y:815:A:O4'	31:y:817:C:H5	1.76	0.67
31:y:876:G:O2'	41:i:7:ALA:CB	2.42	0.67
31:y:917:G:O2'	31:y:918:A:H5'	1.94	0.67
31:y:1061:G:C6	31:y:1197:G:C6	2.82	0.67
31:y:1154:G:C3'	31:y:1155:G:C8	2.75	0.67
31:y:1497:G:H8	31:y:1497:G:C5'	2.06	0.67
32:z:34:G:H2'	32:z:35:A:C8	2.29	0.67
33:0:6:U:H2'	33:0:7:U:C5'	2.19	0.67
33:0:54:U:OP2	33:0:54:U:H6	1.77	0.67
35:c:166:ASP:OD2	35:c:169:LYS:HE2	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:124:ILE:HD12	36:d:129:ALA:C	2.20	0.67
38:f:14:ARG:HE	38:f:14:ARG:CA	2.07	0.67
39:g:90:VAL:HG22	39:g:91:VAL:N	2.09	0.67
41:i:97:VAL:O	41:i:100:ILE:HG13	1.94	0.67
43:k:94:VAL:CG1	43:k:95:GLU:H	2.08	0.67
46:n:34:LEU:HA	46:n:38:GLY:CA	2.25	0.67
51:s:80:PRO:HG2	51:s:82:THR:O	1.94	0.67
1:w:222:A:H5''	1:w:421:U:OP1	1.95	0.67
1:w:229:A:H3'	1:w:230:U:C5'	2.23	0.67
1:w:374:A:H2'	1:w:375:C:C6	2.28	0.67
1:w:832:G:H4'	12:J:52:GLU:OE1	1.94	0.67
1:w:955:C:H2'	1:w:956:G:O4'	1.93	0.67
1:w:1025:G:C2	1:w:1135:C:O4'	2.47	0.67
1:w:1044:G:O2'	1:w:1047:G:H4'	1.93	0.67
1:w:1125:G:C8	1:w:1125:G:OP2	2.47	0.67
1:w:1130:U:H2'	1:w:1131:G:C5'	2.24	0.67
1:w:1173:G:O2'	1:w:1177:A:C6	2.47	0.67
1:w:1225:G:H5''	18:P:88:ARG:HG3	1.77	0.67
1:w:1309:G:O2'	1:w:1611:C:H4'	1.95	0.67
1:w:1375:C:O2	1:w:1376:C:H5	1.76	0.67
1:w:1683:C:H42	1:w:1705:G:H1	1.42	0.67
1:w:1821:A:N6	1:w:1822:G:C6	2.62	0.67
1:w:1916:A:H8	1:w:1916:A:OP2	1.78	0.67
1:w:1999:C:C4'	1:w:2723:C:H1'	2.18	0.67
1:w:2100:G:C4	1:w:2101:G:C8	2.83	0.67
1:w:2367:G:H8	1:w:2367:G:P	2.18	0.67
1:w:2505:G:H2'	1:w:2576:G:C6	2.28	0.67
1:w:2565:A:H5''	1:w:2566:A:OP2	1.95	0.67
1:w:2602:A:H62	32:z:76:A:C5'	2.03	0.67
1:w:2642:G:N1	1:w:2773:C:N4	2.43	0.67
1:w:2656:U:H2'	1:w:2657:A:C1'	2.24	0.67
1:w:2727:G:H8	1:w:2727:G:O5'	1.77	0.67
6:D:148:SER:CB	6:D:184:THR:HA	2.25	0.67
7:E:139:LEU:CB	7:E:146:TYR:N	2.54	0.67
7:E:169:ALA:O	7:E:172:LEU:HG	1.95	0.67
8:F:95:ARG:O	8:F:105:LEU:HD22	1.94	0.67
9:G:56:LYS:HG3	9:G:57:ARG:HD3	1.77	0.67
12:J:88:LEU:C	12:J:90:ARG:H	2.01	0.67
12:J:101:VAL:HG22	12:J:102:ARG:N	2.09	0.67
13:K:75:THR:HG22	13:K:76:LYS:N	2.09	0.67
14:L:117:VAL:HG13	14:L:118:GLU:N	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:35:LYS:HB3	16:N:35:LYS:HZ2	1.59	0.67
18:P:47:VAL:HG13	18:P:48:GLY:N	2.07	0.67
19:Q:46:PHE:C	19:Q:48:ALA:H	2.02	0.67
19:Q:86:LEU:N	19:Q:94:ASP:O	2.26	0.67
21:S:13:VAL:O	21:S:13:VAL:HG12	1.94	0.67
31:y:61:G:H21	31:y:379:C:H4'	1.60	0.67
31:y:119:A:O2'	31:y:120:A:OP2	2.12	0.67
31:y:148:G:H2'	31:y:149:A:O4'	1.95	0.67
31:y:300:A:H1'	31:y:565:U:H3	1.59	0.67
31:y:578:C:O2'	31:y:728:A:C2	2.46	0.67
31:y:586:C:O2'	31:y:587:G:H5'	1.94	0.67
31:y:657:G:N2	31:y:749:C:O2	2.20	0.67
31:y:765:G:N7	31:y:812:C:C4	2.62	0.67
31:y:965:A:C2	31:y:969:A:C2	2.82	0.67
31:y:1163:C:O2'	31:y:1164:G:H5'	1.94	0.67
31:y:1226:C:O5'	31:y:1226:C:H6	1.76	0.67
31:y:1324:A:H5''	31:y:136(B):C:H5''	1.77	0.67
31:y:1360:A:H2'	31:y:1361:G:N7	2.09	0.67
31:y:1435:G:N3	31:y:1436:U:C5	2.62	0.67
31:y:1511:G:H2'	31:y:1512:U:C6	2.30	0.67
37:e:9:CYS:SG	37:e:22:LYS:CG	2.82	0.67
37:e:172:PRO:HG2	37:e:173:TRP:HE3	1.58	0.67
38:f:94:ALA:O	38:f:96:PRO:HD3	1.95	0.67
41:i:118:VAL:C	41:i:119:LEU:HG	2.18	0.67
42:j:85:LEU:HB2	42:j:92:TYR:HB2	1.75	0.67
43:k:7:LYS:O	43:k:96:ILE:HG23	1.95	0.67
44:l:78:GLN:O	44:l:104:GLN:HB2	1.94	0.67
45:m:109:VAL:HB	45:m:112:ARG:CG	2.24	0.67
50:r:56:VAL:O	50:r:76:LEU:HD23	1.94	0.67
52:t:22:LEU:HA	52:t:25:LYS:CE	2.16	0.67
1:w:89:G:C3'	1:w:90:U:H6	2.08	0.67
1:w:291:C:C4	1:w:292:C:N4	2.62	0.67
1:w:454:A:H5''	1:w:455:C:OP2	1.95	0.67
1:w:494:G:C5'	19:Q:8:ARG:HH12	2.06	0.67
1:w:532:A:H4'	1:w:533:G:C8	2.29	0.67
1:w:534:U:H2'	1:w:535:C:C6	2.29	0.67
1:w:849:A:OP2	1:w:850:C:N4	2.27	0.67
1:w:882:G:N2	1:w:894:C:O2	2.25	0.67
1:w:1045:A:O4'	1:w:1047:G:O4'	2.12	0.67
1:w:1207:C:C6	1:w:1207:C:O5'	2.47	0.67
1:w:1361:G:H2'	1:w:1362:C:C5'	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1429:G:H2'	1:w:1430:C:C6	2.29	0.67
1:w:1439:A:N6	1:w:1552:G:N2	2.18	0.67
1:w:1567:A:H4'	1:w:1568:G:C4	2.30	0.67
1:w:1600:C:C4	1:w:1601:G:N7	2.62	0.67
1:w:1701:A:H2'	1:w:1702:G:C5'	2.23	0.67
1:w:1702:G:C6	1:w:1703:G:N7	2.62	0.67
1:w:1758:G:O2'	1:w:2695:C:H1'	1.94	0.67
1:w:1789:A:O2'	4:B:219:PRO:HB3	1.95	0.67
1:w:1993:U:H4'	5:C:129:HIS:CD2	2.30	0.67
1:w:2113:U:O5'	1:w:2113:U:H6	1.77	0.67
1:w:2562:U:O4	1:w:2563:U:C4	2.48	0.67
1:w:2679:A:C6	1:w:2680:C:N4	2.63	0.67
1:w:2730:C:N3	1:w:2731:G:N7	2.42	0.67
1:w:2757:A:O2'	1:w:2758:A:C5'	2.40	0.67
2:x:116:G:C2	2:x:117:G:H1'	2.29	0.67
4:B:84:TYR:CZ	4:B:85:ASP:O	2.46	0.67
4:B:183:ARG:HG3	4:B:270:ILE:N	2.09	0.67
4:B:263:ARG:H	4:B:263:ARG:NE	1.92	0.67
5:C:81:ILE:N	5:C:81:ILE:CD1	2.58	0.67
6:D:4:ILE:CD1	6:D:119:LEU:H	2.08	0.67
6:D:18:ASP:OD1	6:D:20:PRO:HG2	1.95	0.67
7:E:165:THR:C	7:E:167:GLU:H	2.01	0.67
8:F:16:SER:HB2	8:F:27:LYS:HB2	1.75	0.67
8:F:152:ARG:HH21	8:F:152:ARG:N	1.93	0.67
10:H:30:LYS:O	10:H:31:GLN:HB2	1.94	0.67
10:H:50:ALA:O	10:H:53:ILE:HB	1.95	0.67
11:I:28:SER:C	11:I:30:ALA:H	2.03	0.67
12:J:62:LEU:CD1	29:a:27:THR:HG22	2.23	0.67
12:J:98:GLU:HA	12:J:102:ARG:HB2	1.76	0.67
13:K:37:LEU:HD12	13:K:128:LYS:N	2.06	0.67
13:K:62:GLY:H	22:T:183:LEU:HD11	1.58	0.67
16:N:22:PHE:C	16:N:22:PHE:CD1	2.72	0.67
19:Q:88:ARG:HD2	19:Q:92:ARG:CA	2.24	0.67
20:R:78:LYS:HD2	20:R:79:ALA:N	2.09	0.67
29:a:16:ILE:HD11	29:a:18:ALA:O	1.94	0.67
29:a:29:LYS:H	29:a:44:LYS:HZ1	1.42	0.67
31:y:67:C:HO2'	31:y:172:A:H1'	1.59	0.67
31:y:117:G:C8	31:y:118:U:C4	2.83	0.67
31:y:322:C:O2	53:u:16:HIS:HE1	1.78	0.67
31:y:374:A:C2'	31:y:375:U:H5'	2.25	0.67
31:y:376:G:H5'	49:q:6:LEU:HD22	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:391:G:H5'	49:q:8:ARG:HH12	1.59	0.67
31:y:392:G:H3'	31:y:393:A:H8	1.58	0.67
31:y:832:C:O2'	31:y:833:U:H4'	1.95	0.67
31:y:1031:G:H3'	31:y:103(A):A:C8	2.30	0.67
31:y:1151:A:P	43:k:41:PRO:HA	2.34	0.67
31:y:1203:C:H2'	31:y:1204:A:H8	1.60	0.67
31:y:1251:A:C2	31:y:1369:C:H1'	2.29	0.67
31:y:1316:G:N2	31:y:1319:A:O4'	2.27	0.67
31:y:1358:U:H3'	47:o:35:ARG:HH21	1.60	0.67
31:y:1517:G:H3'	31:y:1517:G:C8	2.30	0.67
33:0:24:G:H2'	33:0:25:C:O4'	1.94	0.67
35:c:164:VAL:O	35:c:186:ALA:HB1	1.95	0.67
36:d:25:GLY:HA2	36:d:29:TYR:CZ	2.29	0.67
40:h:26:PHE:CD2	40:h:30:ILE:HD11	2.30	0.67
40:h:68:ASN:ND2	40:h:127:ALA:O	2.27	0.67
40:h:111:ARG:HB3	40:h:111:ARG:CZ	2.23	0.67
45:m:8:GLN:CA	45:m:11:ARG:HB3	2.23	0.67
46:n:9:ILE:HD12	46:n:9:ILE:H	1.60	0.67
46:n:84:ILE:CD1	52:t:74:PHE:HZ	2.05	0.67
49:q:4:ILE:CD1	49:q:21:VAL:HA	2.23	0.67
49:q:26:ARG:HB3	49:q:26:ARG:HH11	1.59	0.67
52:t:4:SER:O	52:t:5:LEU:HB2	1.94	0.67
1:w:38:A:C5	1:w:442:G:C2	2.83	0.67
1:w:311:A:N3	1:w:332:A:C8	2.63	0.67
1:w:393:C:C4	1:w:394:A:N6	2.63	0.67
1:w:685:A:C8	1:w:773:U:O4	2.48	0.67
1:w:783:A:H8	1:w:784:A:C1'	2.08	0.67
1:w:894:C:H2'	1:w:895:U:C6	2.30	0.67
1:w:1024:G:OP2	1:w:1024:G:H8	1.78	0.67
1:w:1188:U:O2'	1:w:1189:A:H5'	1.95	0.67
1:w:1202:C:C2'	1:w:1203:G:H5'	2.25	0.67
1:w:1266:G:O2'	1:w:1267:U:OP2	2.11	0.67
1:w:1332:G:O6	1:w:1609:A:N1	2.28	0.67
1:w:1484:G:H2'	1:w:1485:G:C5'	2.25	0.67
1:w:2286:A:OP2	1:w:2286:A:H2	1.77	0.67
1:w:2290:G:C6	1:w:2291:U:C2	2.82	0.67
1:w:2468:G:O6	1:w:2481:G:C5	2.47	0.67
1:w:2565:A:O5'	1:w:2565:A:C8	2.48	0.67
1:w:2573:C:H6	1:w:2573:C:C3'	2.03	0.67
1:w:2722:G:C4'	14:L:4:LEU:CD1	2.68	0.67
2:x:27:C:C4	2:x:28:C:N4	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:20:ASP:O	4:B:24:ILE:CB	2.42	0.67
4:B:60:ARG:NE	4:B:86:PRO:HB2	2.09	0.67
4:B:252:TRP:O	4:B:253:GLN:C	2.38	0.67
6:D:111:ASP:HA	6:D:114:ARG:CG	2.24	0.67
7:E:113:ARG:O	7:E:140:ILE:HD11	1.94	0.67
8:F:114:VAL:CG2	8:F:115:VAL:N	2.57	0.67
9:G:3:VAL:C	9:G:4:ILE:HD12	2.19	0.67
9:G:4:ILE:HG22	9:G:37:VAL:HG21	1.77	0.67
11:I:66:LYS:HA	11:I:79:PHE:O	1.93	0.67
11:I:77:ILE:HD13	11:I:78:ARG:O	1.94	0.67
14:L:42:LYS:C	14:L:44:LEU:H	2.02	0.67
18:P:37:VAL:CB	18:P:55:ALA:HB1	2.24	0.67
18:P:43:GLU:HA	18:P:47:VAL:HG13	1.75	0.67
19:Q:23:LEU:HD13	27:Y:25:LEU:HB3	1.76	0.67
19:Q:23:LEU:HD11	27:Y:27:PRO:HD3	1.76	0.67
22:T:44:PHE:HD2	22:T:45:ASP:H	1.35	0.67
29:a:6:THR:HG21	29:a:63:PRO:HB3	1.74	0.67
30:b:14:CYS:CA	30:b:27:CYS:HB3	2.25	0.67
31:y:61:G:N2	31:y:379:C:H4'	2.09	0.67
31:y:186(A):C:C1'	53:u:81:LYS:HE2	2.25	0.67
31:y:420:U:O2	31:y:422:C:C4	2.47	0.67
31:y:433:C:H2'	31:y:434:U:H6	1.58	0.67
31:y:556:C:OP1	31:y:556:C:H4'	1.93	0.67
31:y:563:A:H5'	31:y:566:G:C2	2.28	0.67
31:y:790:A:N7	32:z:38:A:O2'	2.27	0.67
31:y:811:C:H5''	31:y:897:C:O2'	1.94	0.67
31:y:817:C:H4'	31:y:818:G:O5'	1.93	0.67
31:y:1163:C:H2'	31:y:1164:G:H8	1.60	0.67
31:y:1221:G:H5''	52:t:36:ARG:HH21	1.58	0.67
31:y:1452:C:H6	31:y:1452:C:O5'	1.77	0.67
33:0:24:G:H2'	33:0:25:C:H6	1.58	0.67
36:d:156:ARG:HD3	36:d:193:TYR:CD2	2.30	0.67
37:e:110:PHE:O	37:e:111:ALA:CB	2.41	0.67
40:h:116:ALA:C	40:h:120:ILE:HB	2.18	0.67
41:i:10:LEU:HB3	41:i:14:ARG:HH22	1.60	0.67
41:i:45:ILE:CG1	41:i:46:LYS:H	2.02	0.67
41:i:62:TYR:C	41:i:63:LEU:HD12	2.20	0.67
44:l:80:VAL:O	44:l:80:VAL:HG23	1.92	0.67
45:m:39:VAL:HG21	45:m:76:LEU:CD1	2.25	0.67
51:s:82:THR:CG2	51:s:83:GLU:H	1.93	0.67
1:w:35:G:H1'	1:w:454:A:C1'	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:181:A:C2	1:w:434:U:C1'	2.78	0.67
1:w:191:A:H2'	1:w:192:C:O4'	1.93	0.67
1:w:302:C:N4	1:w:314:A:H61	1.93	0.67
1:w:390:A:OP2	1:w:390:A:C8	2.47	0.67
1:w:396:G:O3'	24:V:46:LEU:CB	2.43	0.67
1:w:443:A:C5	6:D:40:ARG:HD3	2.28	0.67
1:w:563:G:C6	1:w:2018:G:N1	2.62	0.67
1:w:628:G:H2'	1:w:629:G:O4'	1.95	0.67
1:w:720:C:C2	1:w:721:C:C6	2.83	0.67
1:w:922:U:H2'	1:w:923:C:C6	2.30	0.67
1:w:1059:G:O2'	1:w:1060:U:C6	2.48	0.67
1:w:1206:G:H8	1:w:1206:G:O5'	1.78	0.67
1:w:1228:G:C2	1:w:1229:G:C1'	2.74	0.67
1:w:1265:A:N1	1:w:2013:A:H5'	2.10	0.67
1:w:1298:C:C2	1:w:1299:G:H8	2.12	0.67
1:w:1612:C:C5'	28:Z:7:PRO:HG2	2.21	0.67
1:w:1732:A:C2'	1:w:1733:G:H5'	2.21	0.67
1:w:1751:C:O5'	1:w:1751:C:C6	2.48	0.67
1:w:2064:C:H2'	1:w:2065:C:H6	1.54	0.67
1:w:2065:C:H2'	1:w:2066:C:C4'	2.23	0.67
1:w:2080:G:C4	1:w:2081:C:C5	2.83	0.67
1:w:2082:A:H62	1:w:2237:G:H1'	1.57	0.67
1:w:2247:A:O2'	1:w:2248:C:H5'	1.93	0.67
1:w:2643:G:H8	1:w:2643:G:OP2	1.76	0.67
1:w:2794:C:H2'	1:w:2794:C:O2	1.94	0.67
1:w:2857:G:C2	1:w:2859:G:H5''	2.30	0.67
1:w:2900:A:H2'	1:w:2901:C:C4'	2.25	0.67
2:x:116:G:N3	2:x:117:G:H1'	2.08	0.67
3:A:225:ILE:CG2	3:A:226:ASN:H	2.08	0.67
4:B:78:LYS:O	4:B:95:LEU:CB	2.43	0.67
6:D:4:ILE:N	6:D:5:PRO:CD	2.58	0.67
7:E:11:TYR:HA	7:E:15:VAL:CG2	2.24	0.67
7:E:33:ARG:CB	7:E:33:ARG:NH2	2.44	0.67
7:E:56:ALA:HA	7:E:60:LEU:HD21	1.77	0.67
8:F:105:LEU:HD13	8:F:106:THR:N	2.09	0.67
12:J:47:ASP:HB2	12:J:51:PHE:CZ	2.30	0.67
14:L:31:HIS:HB2	14:L:34:ILE:CD1	2.24	0.67
16:N:29:ARG:HG3	16:N:86:ILE:H	1.60	0.67
16:N:83:ILE:HG13	16:N:84:GLN:H	1.59	0.67
17:O:25:TRP:C	17:O:25:TRP:CE3	2.73	0.67
22:T:146:ILE:CG2	22:T:176:PRO:HD3	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:29:GLY:CA	24:V:33:LYS:HA	2.21	0.67
31:y:36:C:O2'	31:y:37:U:C6	2.47	0.67
31:y:103:C:H6	31:y:103:C:P	2.18	0.67
31:y:136:C:C4	31:y:137:C:N4	2.63	0.67
31:y:186(E):C:H2'	31:y:186(F):C:H6	1.60	0.67
31:y:258:G:C6	31:y:259:G:C6	2.82	0.67
31:y:343:U:C2	31:y:347:G:N1	2.62	0.67
31:y:601:C:C3'	31:y:602:A:H8	2.08	0.67
31:y:778:G:O2'	44:l:119:CYS:HB3	1.95	0.67
31:y:959:A:N1	31:y:960:U:H6	1.90	0.67
31:y:1064:G:O2'	31:y:1065:U:P	2.52	0.67
31:y:1074:G:H5''	35:c:103:THR:O	1.94	0.67
31:y:1102:A:O4'	31:y:1102:A:OP2	2.13	0.67
31:y:1117:G:H4'	42:j:104:ARG:NH1	2.09	0.67
31:y:1398:A:H4'	31:y:1401:G:H1'	1.77	0.67
31:y:1402:4OC:H3'	31:y:1403:C:C6	2.30	0.67
33:0:44:A:C2'	33:0:45:G:H5'	2.25	0.67
35:c:68:ILE:CG2	35:c:69:LEU:N	2.57	0.67
35:c:124:SER:CB	35:c:125:PRO:HD2	2.05	0.67
36:d:112:SER:O	36:d:116:VAL:HG23	1.95	0.67
37:e:84:LYS:O	37:e:86:LYS:N	2.27	0.67
37:e:106:TYR:CD2	37:e:107:ARG:N	2.63	0.67
37:e:154:ASN:O	37:e:155:LEU:HD22	1.95	0.67
37:e:159:ARG:NH1	37:e:160:GLN:HG2	2.10	0.67
38:f:143:ARG:HB2	38:f:147:ASP:OD2	1.95	0.67
42:j:37:PHE:HA	42:j:40:LEU:HD12	1.75	0.67
46:n:34:LEU:HA	46:n:38:GLY:HA2	1.77	0.67
46:n:91:ARG:CA	46:n:96:LEU:HB2	2.24	0.67
50:r:28:PRO:CA	50:r:34:LYS:O	2.43	0.67
1:w:392:C:N3	1:w:393:C:C5	2.63	0.67
1:w:481:G:N2	1:w:506:G:H1'	2.08	0.67
1:w:485:C:N3	1:w:486:C:N4	2.42	0.67
1:w:571:A:N3	1:w:2030:A:C6	2.62	0.67
1:w:579:G:C4	1:w:580:C:C5	2.82	0.67
1:w:607:U:C4	1:w:620:G:N3	2.62	0.67
1:w:630:G:H4'	1:w:640:C:C4'	2.24	0.67
1:w:674:G:O2'	6:D:70:HIS:C	2.38	0.67
1:w:782:A:H1'	1:w:783:A:C6	2.29	0.67
1:w:851:U:C4'	26:X:45:GLY:HA3	2.23	0.67
1:w:1226:A:H3'	1:w:1227:G:O4'	1.95	0.67
1:w:1364:G:H3'	24:V:8:SER:CA	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1440:G:O2'	1:w:1441:G:H5'	1.95	0.67
1:w:1471:A:C6	1:w:1522:G:N1	2.63	0.67
1:w:1516:U:H2'	1:w:1517:G:C8	2.29	0.67
1:w:1541:U:N3	1:w:1542:G:N1	2.43	0.67
1:w:1544:C:O2'	1:w:1545:A:H8	1.78	0.67
1:w:1728:G:H21	1:w:1732:A:H62	0.68	0.67
1:w:1741:C:O5'	1:w:1741:C:H6	1.78	0.67
1:w:1746:G:H2'	1:w:1747:G:H4'	1.77	0.67
1:w:1805:U:C2	1:w:1813:G:N2	2.62	0.67
1:w:1945:G:C2'	1:w:1946:U:H5'	2.24	0.67
1:w:2323:G:H22	1:w:2335:A:H2	1.43	0.67
1:w:2362:G:C5	1:w:2363:C:C5	2.82	0.67
3:A:11:LEU:C	3:A:12:LEU:HD12	2.20	0.67
4:B:133:LEU:O	4:B:168:ARG:NH1	2.21	0.67
6:D:165:LEU:H	6:D:165:LEU:CD1	2.08	0.67
6:D:171:LEU:O	6:D:172:ALA:CB	2.43	0.67
8:F:41:MET:SD	8:F:55:PRO:HD3	2.34	0.67
9:G:6:LEU:O	9:G:14:ASP:CB	2.42	0.67
10:H:145:VAL:O	10:H:146:TYR:HB3	1.94	0.67
10:H:146:TYR:CG	10:H:147:ALA:N	2.55	0.67
11:I:59:LYS:CE	11:I:87:ILE:O	2.43	0.67
11:I:85:VAL:CG1	11:I:93:PRO:HB2	2.23	0.67
11:I:109:LYS:HE3	11:I:109:LYS:HA	1.76	0.67
13:K:14:ARG:N	13:K:14:ARG:CD	2.58	0.67
13:K:60:ARG:HD2	13:K:60:ARG:C	2.20	0.67
13:K:118:LEU:HB2	13:K:119:ARG:NH1	2.09	0.67
15:M:83:LYS:O	15:M:111:GLU:HB3	1.95	0.67
16:N:74:ARG:HB3	16:N:76:PHE:HE1	1.58	0.67
18:P:34:GLU:O	18:P:62:LEU:HB2	1.94	0.67
18:P:90:PRO:O	18:P:91:TYR:HB3	1.95	0.67
19:Q:70:TYR:O	19:Q:107:LEU:HB3	1.95	0.67
22:T:45:ASP:OD1	22:T:48:PHE:HE2	1.77	0.67
29:a:51:ALA:C	29:a:53:PRO:HD2	2.19	0.67
31:y:34:C:C2	31:y:35:G:C8	2.82	0.67
31:y:91:C:O5'	31:y:91:C:H6	1.77	0.67
31:y:297:G:C4'	31:y:557:G:O2'	2.43	0.67
31:y:435:C:C4	31:y:436:C:N4	2.63	0.67
31:y:502:G:C5	31:y:503:C:C5	2.83	0.67
31:y:510:A:O2'	31:y:542:G:H2'	1.95	0.67
31:y:676:A:C2	31:y:715:A:C2	2.83	0.67
31:y:739:C:O2'	48:p:42:HIS:CD2	2.47	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:817:C:C5'	31:y:819:A:C5'	2.62	0.67
31:y:1049:U:H5'	31:y:1201:A:O5'	1.95	0.67
31:y:1281:U:H5''	31:y:1282:C:H5	0.73	0.67
31:y:1439:C:C5	31:y:1440:C:C4	2.82	0.67
32:z:40:C:C2'	32:z:41:C:H5'	2.25	0.67
35:c:45:GLN:HB2	35:c:46:LYS:CE	2.25	0.67
36:d:66:VAL:H	36:d:101:LEU:HA	1.60	0.67
36:d:90:GLU:CA	36:d:93:LYS:HD2	2.25	0.67
36:d:172:ARG:NH1	36:d:174:PRO:HD3	2.09	0.67
43:k:80:LYS:HA	43:k:83:GLU:HG2	1.77	0.67
44:l:42:TRP:CH2	44:l:47:VAL:HG11	2.29	0.67
45:m:76:LEU:HD23	45:m:105:ASP:CB	2.24	0.67
46:n:84:ILE:HG21	52:t:65:ASN:CB	2.24	0.67
50:r:100:LYS:NZ	50:r:101:ARG:HD2	2.09	0.67
1:w:570:G:OP2	1:w:570:G:C8	2.48	0.67
1:w:611:C:N4	1:w:618(A):G:C2	2.63	0.67
1:w:699:A:H4'	1:w:1634:A:N7	2.10	0.67
1:w:816:C:N4	1:w:1192:G:C6	2.63	0.67
1:w:865:C:C2	1:w:868:U:O4	2.47	0.67
1:w:902:C:C4	1:w:903:C:C4	2.82	0.67
1:w:906:G:C6	1:w:907:U:C6	2.83	0.67
1:w:987:G:H1'	1:w:1001:A:C1'	2.25	0.67
1:w:1194:A:C2	1:w:1195:G:C4	2.82	0.67
1:w:1212:G:H1'	1:w:1237:A:H61	1.59	0.67
1:w:1344:G:OP1	1:w:1345:C:H5	1.78	0.67
1:w:1377:G:P	1:w:1377:G:H8	2.18	0.67
1:w:1394:U:C3'	1:w:1603:A:H4'	2.25	0.67
1:w:1527:G:O2'	1:w:1528:A:H8	1.74	0.67
1:w:1799:G:H5''	1:w:1819:A:H62	1.51	0.67
1:w:2006:C:H5''	1:w:2048:G:C5'	2.20	0.67
1:w:2431:U:H6	1:w:2431:U:O5'	1.78	0.67
1:w:2431:U:C2'	1:w:2433:A:OP2	2.43	0.67
1:w:2443:C:C2'	1:w:2444:G:C8	2.73	0.67
1:w:2485:G:O2'	13:K:126:PRO:N	2.28	0.67
1:w:2569:G:C2	1:w:2570:G:N7	2.63	0.67
4:B:98:VAL:C	4:B:100:GLY:H	2.02	0.67
4:B:140:THR:HG1	4:B:165:ILE:HD13	1.59	0.67
5:C:60:ASN:O	5:C:62:PRO:HD2	1.95	0.67
5:C:102:VAL:HB	5:C:200:GLU:HA	1.77	0.67
9:G:131:LYS:HE2	9:G:134:PRO:HA	1.77	0.67
11:I:96:THR:O	11:I:97:ARG:NE	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:75:ILE:CD1	12:J:77:ARG:NH1	2.58	0.67
17:O:92:ARG:NE	18:P:11:GLN:HG2	2.10	0.67
18:P:21:ARG:HG2	18:P:93:GLU:HG2	1.76	0.67
18:P:69:LYS:HB3	18:P:93:GLU:OE1	1.94	0.67
21:S:14:LEU:HD22	21:S:39:VAL:HG21	1.76	0.67
24:V:40:ARG:CG	24:V:41:ARG:H	2.08	0.67
26:X:40:THR:O	26:X:44:ARG:HD2	1.95	0.67
31:y:225:C:O2'	31:y:226:G:H5'	1.94	0.67
31:y:688:G:H4'	44:l:47:VAL:HG12	1.75	0.67
31:y:730:G:N7	31:y:731:G:H1'	2.10	0.67
31:y:888:G:C6	31:y:889:A:C5	2.83	0.67
31:y:965:A:HO2'	31:y:966:M2G:P	2.12	0.67
31:y:1423:G:H2'	31:y:1424:C:O4'	1.95	0.67
31:y:1442:G:H2'	31:y:1446:A:C2	2.27	0.67
33:O:35:A:C6	33:O:36:A:N6	2.63	0.67
36:d:137:ALA:HA	36:d:140:ARG:HB2	1.76	0.67
39:g:51:PRO:CA	39:g:56:PRO:HB3	2.24	0.67
39:g:75:LEU:HD22	39:g:76:ALA:N	2.08	0.67
41:i:52:ASP:CG	41:i:57:PRO:HA	2.20	0.67
42:j:2:GLU:O	42:j:3:GLN:HB2	1.94	0.67
46:n:81:LEU:HA	46:n:84:ILE:HD11	1.76	0.67
48:p:54:ARG:NH1	48:p:55:GLY:HA3	2.10	0.67
49:q:54:GLU:C	49:q:56:ALA:N	2.50	0.67
52:t:33:THR:HG22	52:t:50:ALA:C	2.20	0.67
53:u:79:ARG:C	53:u:81:LYS:H	2.01	0.67
1:w:132:G:H3'	1:w:133:C:H5	1.60	0.66
1:w:265:A:C1'	1:w:266:G:H4'	2.25	0.66
1:w:270(O):G:H3'	1:w:270(O):G:H8	1.59	0.66
1:w:359:A:C4	1:w:360:G:C8	2.83	0.66
1:w:440:G:C5	1:w:441:U:N3	2.63	0.66
1:w:691:C:H1'	4:B:43:ARG:CZ	2.25	0.66
1:w:812:C:H4'	17:O:13:LYS:HZ2	1.59	0.66
1:w:838:C:H42	1:w:941:A:N6	1.93	0.66
1:w:1025:G:C6	1:w:1135:C:C1'	2.78	0.66
1:w:1170:G:OP1	1:w:1170:G:H4'	1.94	0.66
1:w:1288:U:C5'	1:w:1289:C:OP2	2.43	0.66
1:w:1357:U:C4	1:w:1358:G:C6	2.82	0.66
1:w:1425:G:N2	1:w:1573:G:N7	2.43	0.66
1:w:1497:U:C4	1:w:1578:U:P	2.89	0.66
1:w:1592:C:O2'	1:w:1593:G:H5'	1.95	0.66
1:w:1670:C:H4'	1:w:1994:C:O2'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1911:U:H2'	1:w:1919:A:N1	2.09	0.66
1:w:2017:U:C5'	27:Y:8:LYS:CG	2.73	0.66
1:w:2054:A:OP2	1:w:2577:A:N6	2.26	0.66
1:w:2320:A:C1'	1:w:2333:A:N6	2.56	0.66
1:w:2360:A:N3	1:w:2360:A:H2'	2.08	0.66
1:w:2408:U:O2'	1:w:2409:G:H5'	1.94	0.66
1:w:2472:G:H3'	1:w:2475:C:N4	2.10	0.66
1:w:2488:A:C2'	1:w:2489:G:O4'	2.43	0.66
1:w:2549:G:C2'	1:w:2550:G:C5'	2.70	0.66
1:w:2650:U:C2'	1:w:2651:C:C6	2.61	0.66
1:w:2784:C:C6	1:w:2784:C:OP2	2.49	0.66
4:B:255:LYS:HD3	4:B:255:LYS:O	1.95	0.66
7:E:140:ILE:HD11	46:n:7:VAL:HG13	1.76	0.66
9:G:13:GLY:CA	9:G:17:GLN:CG	2.71	0.66
9:G:73:GLU:O	9:G:75:LEU:N	2.26	0.66
10:H:76:VAL:HA	10:H:144:LYS:O	1.95	0.66
10:H:117:HIS:O	10:H:121:VAL:HG23	1.95	0.66
11:I:65:THR:O	11:I:79:PHE:CB	2.43	0.66
11:I:88:ASN:HB3	11:I:90:GLN:NE2	2.09	0.66
13:K:89:ASN:C	13:K:91:GLU:H	2.04	0.66
16:N:47:GLY:CA	16:N:64:ARG:O	2.43	0.66
22:T:146:ILE:HB	22:T:176:PRO:HD3	1.77	0.66
26:X:5:LYS:CA	26:X:36:VAL:HG12	2.19	0.66
31:y:393:A:C2'	31:y:394:G:H8	2.04	0.66
31:y:493:G:O2'	31:y:494:U:C6	2.38	0.66
31:y:509:A:C8	31:y:509:A:H3'	2.31	0.66
31:y:565:U:C5	31:y:566:G:C4	2.83	0.66
31:y:919:A:C2	31:y:920:U:C4	2.83	0.66
31:y:1061:G:C2'	31:y:1062:U:C5	2.76	0.66
31:y:1093:A:H2	31:y:1109:C:HO2'	1.41	0.66
31:y:1307:U:H5''	46:n:109:THR:CG2	2.25	0.66
31:y:1316:G:H4'	31:y:1360:A:C2	2.30	0.66
31:y:1467:G:H3'	31:y:1467:G:H8	1.60	0.66
31:y:1501:C:C6	31:y:1504:G:C5	2.82	0.66
35:c:60:ASP:O	35:c:64:ARG:HB2	1.94	0.66
35:c:171:ALA:O	35:c:174:VAL:HB	1.95	0.66
36:d:126:ARG:HH11	36:d:126:ARG:CB	1.98	0.66
37:e:52:SER:OG	37:e:55:ALA:CB	2.43	0.66
37:e:126:ILE:HB	37:e:148:VAL:HA	1.77	0.66
39:g:69:GLU:O	39:g:72:VAL:HG23	1.95	0.66
41:i:51:VAL:HG11	41:i:60:ARG:NH2	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:103:LEU:CD1	44:l:104:GLN:H	2.08	0.66
45:m:59:LEU:HG	45:m:63:TYR:CD1	2.30	0.66
45:m:117:SER:C	45:m:119:TYR:N	2.51	0.66
46:n:11:ARG:O	46:n:12:ASN:CB	2.42	0.66
1:w:52:A:OP2	1:w:117:G:O6	2.13	0.66
1:w:126:A:H3'	1:w:127:A:C8	2.30	0.66
1:w:287:C:C2	1:w:288:C:C6	2.83	0.66
1:w:379:G:N2	1:w:396:G:C6	2.63	0.66
1:w:519:U:H5''	19:Q:25:ARG:NH1	2.04	0.66
1:w:994:C:C5'	1:w:995:C:OP1	2.43	0.66
1:w:1133:U:C2'	1:w:1137:G:H5'	2.24	0.66
1:w:1155:A:H5'	1:w:1155:A:C8	2.26	0.66
1:w:1336:A:OP1	20:R:64:LYS:CE	2.44	0.66
1:w:1409:C:H2'	1:w:1410:G:O4'	1.96	0.66
1:w:1457:A:H8	1:w:1457:A:O5'	1.78	0.66
1:w:1476:C:H2'	1:w:1477:A:H8	1.61	0.66
1:w:1750:G:O2'	1:w:2860:A:H2	1.78	0.66
1:w:1777:U:O2'	1:w:1778:U:H5'	1.94	0.66
1:w:2009:G:C4'	19:Q:41:LYS:HG2	2.09	0.66
1:w:2130:U:C5	1:w:2131:G:C2	2.82	0.66
1:w:2270:G:H21	23:U:19:LYS:CE	2.08	0.66
1:w:2298:A:H62	1:w:2318:G:N2	1.93	0.66
1:w:2311:A:OP1	1:w:2312:U:C5	2.48	0.66
1:w:2352:A:H62	1:w:2365:G:N2	1.93	0.66
1:w:2511:U:C2'	1:w:2512:C:H5'	2.13	0.66
1:w:2712:U:OP1	1:w:2714:G:H4'	1.96	0.66
1:w:2786:U:O2'	5:C:64:LYS:HG3	1.94	0.66
1:w:2794:C:H3'	1:w:2795:G:C8	2.30	0.66
1:w:2810:A:O2'	5:C:61:ARG:CD	2.35	0.66
1:w:2872:G:H5'	1:w:2873:A:OP1	1.94	0.66
2:x:42:C:C2	2:x:43:C:C6	2.83	0.66
3:A:18:ASN:C	3:A:18:ASN:HD22	2.01	0.66
3:A:45:HIS:CE1	3:A:216:THR:OG1	2.48	0.66
4:B:175:LEU:CD2	4:B:183:ARG:O	2.43	0.66
6:D:73:ILE:O	6:D:73:ILE:HG12	1.96	0.66
11:I:64:ARG:CD	11:I:102:VAL:HG11	2.24	0.66
11:I:71:ARG:C	11:I:73:ASP:N	2.50	0.66
13:K:65:PHE:O	13:K:104:PHE:CD2	2.49	0.66
13:K:66:ILE:HG22	13:K:104:PHE:HE2	1.60	0.66
15:M:74:ALA:O	15:M:78:LEU:HG	1.94	0.66
16:N:30:VAL:N	16:N:44:ASP:CG	2.53	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:47:GLY:HA3	16:N:64:ARG:O	1.95	0.66
20:R:29:TRP:HA	20:R:76:ARG:HG3	1.76	0.66
22:T:76:LEU:C	22:T:83:PRO:HA	2.19	0.66
22:T:181:GLU:O	22:T:182:LYS:HB2	1.94	0.66
24:V:10:LYS:CD	24:V:15:ALA:H	2.08	0.66
26:X:15:TYR:CB	26:X:16:PRO:CD	2.72	0.66
27:Y:44:THR:CG2	27:Y:45:VAL:N	2.57	0.66
28:Z:32:LYS:HE2	28:Z:36:GLN:OE1	1.95	0.66
31:y:36:C:O2	31:y:37:U:C5	2.49	0.66
31:y:152:A:N6	31:y:169:C:N4	2.28	0.66
31:y:256:U:O5'	31:y:256:U:H6	1.77	0.66
31:y:420:U:C2	31:y:422:C:N4	2.63	0.66
31:y:443:C:C4	31:y:444:C:C5	2.83	0.66
31:y:571:U:C3'	31:y:572:A:C5'	2.73	0.66
31:y:581:G:H5''	48:p:65:ARG:HH21	1.60	0.66
31:y:761:G:O2'	50:r:105:ALA:CB	2.43	0.66
31:y:774:G:C8	31:y:774:G:O5'	2.49	0.66
31:y:909:A:OP2	31:y:910:C:N4	2.27	0.66
31:y:911:U:C2	31:y:912:C:C5	2.84	0.66
31:y:102(C):C:C2	31:y:1029:G:N9	2.63	0.66
31:y:1054:C:O5'	31:y:1196:U:O2'	2.12	0.66
31:y:1267:C:O2	31:y:1267:C:H2'	1.94	0.66
31:y:1271:G:O2'	31:y:1272:G:C5'	2.38	0.66
31:y:1433:A:N1	31:y:1468:A:C4	2.62	0.66
31:y:1468:A:C2'	31:y:1469:G:C5'	2.69	0.66
35:c:59:GLU:HB3	35:c:221:LEU:HD21	1.77	0.66
35:c:171:ALA:HA	35:c:174:VAL:HG21	1.77	0.66
35:c:236:TYR:HA	35:c:239:VAL:HG12	1.77	0.66
37:e:61:LYS:HG2	37:e:206:PHE:CG	2.30	0.66
40:h:118:VAL:HG23	40:h:119:ARG:N	2.10	0.66
40:h:126:ASP:HB3	40:h:132:GLY:HA3	1.75	0.66
43:k:90:LEU:N	43:k:91:PRO:HD3	2.09	0.66
45:m:46:LYS:CB	45:m:47:PRO:HD3	2.23	0.66
50:r:10:VAL:HG13	50:r:57:VAL:CG2	2.24	0.66
1:w:39:C:C2'	1:w:40:C:C6	2.74	0.66
1:w:65:C:OP1	20:R:68:ARG:C	2.38	0.66
1:w:88:G:H2'	1:w:89:G:C8	2.30	0.66
1:w:115:C:C2	1:w:116:C:C6	2.83	0.66
1:w:173:G:H2'	1:w:174:C:H1'	1.77	0.66
1:w:247:G:C4'	1:w:386:G:C6	2.71	0.66
1:w:270(J):G:N1	1:w:270(K):G:C6	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:464:U:N3	1:w:465:G:C5	2.63	0.66
1:w:558:G:C2	1:w:559:G:C4	2.84	0.66
1:w:583:G:C8	1:w:583:G:OP2	2.48	0.66
1:w:710:G:C2'	1:w:711:G:H8	1.88	0.66
1:w:1139:G:OP1	10:H:125:ALA:HA	1.95	0.66
1:w:1213:A:N3	1:w:1238:G:O2'	2.28	0.66
1:w:1426:G:H3'	1:w:1427:A:C5'	2.19	0.66
1:w:1448:G:H2'	1:w:149(B):A:H8	1.59	0.66
1:w:1486:A:C2	1:w:1503:U:O2	2.46	0.66
1:w:1533:C:C2	1:w:1534:G:C1'	2.79	0.66
1:w:1578:U:C2'	1:w:1579:A:H5''	2.25	0.66
1:w:1692:U:O2	1:w:1695:G:C6	2.47	0.66
1:w:1712:C:H3'	1:w:1716:U:H6	1.59	0.66
1:w:1926:U:H1'	1:w:1929:G:C6	2.30	0.66
1:w:2285:C:H3'	1:w:2286:A:C2	2.30	0.66
1:w:2472:G:C2'	1:w:2478:A:N6	2.58	0.66
1:w:2549:G:N2	1:w:2560:C:C2	2.64	0.66
4:B:44:ASN:HB3	4:B:49:ILE:HG22	1.76	0.66
5:C:7:VAL:O	5:C:26:ILE:HG23	1.95	0.66
5:C:177:PRO:O	5:C:178:GLU:C	2.38	0.66
5:C:199:ARG:O	5:C:200:GLU:HG2	1.95	0.66
6:D:112:ARG:O	6:D:117:LYS:HE2	1.95	0.66
7:E:154:GLY:C	7:E:155:MET:SD	2.78	0.66
10:H:57:LEU:O	10:H:72:GLY:HA3	1.95	0.66
11:I:2:ILE:HB	11:I:33:ALA:C	2.21	0.66
17:O:76:TYR:O	17:O:79:PHE:CB	2.43	0.66
20:R:7:VAL:O	20:R:31:HIS:HB2	1.94	0.66
21:S:11:ASP:O	21:S:24:VAL:HA	1.94	0.66
21:S:53:PRO:O	21:S:54:LYS:HB2	1.95	0.66
22:T:4:ARG:HG3	22:T:58:VAL:CB	2.23	0.66
22:T:57:ILE:HG13	22:T:58:VAL:N	2.09	0.66
22:T:101:PRO:CB	22:T:136:PHE:HB3	2.25	0.66
29:a:51:ALA:H	29:a:53:PRO:HD2	1.59	0.66
31:y:334:C:O2	31:y:1434:A:O2'	2.09	0.66
31:y:491:G:C2	31:y:492:G:N7	2.63	0.66
31:y:503:C:H2'	31:y:504:C:H6	1.60	0.66
31:y:865:A:C2'	31:y:866:C:H5'	2.25	0.66
31:y:949:A:C5	31:y:950:U:C4	2.84	0.66
31:y:1346:A:OP1	42:j:120:ARG:NE	2.28	0.66
31:y:1371:G:O5'	31:y:1371:G:H8	1.78	0.66
31:y:1488:G:C2	31:y:1489:G:C5	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1497:G:H1'	31:y:1518:MA6:N1	2.10	0.66
31:y:1518:MA6:C8	31:y:1518:MA6:P	2.82	0.66
32:z:18:G:H22	32:z:55:PSU:HN3	0.78	0.66
33:0:18:G:C2	33:0:58:A:O4'	2.47	0.66
35:c:115:LEU:HA	35:c:142:LEU:HD11	1.76	0.66
36:d:95:THR:C	36:d:97:LYS:H	2.03	0.66
37:e:156:GLU:N	37:e:158:ILE:HD13	2.11	0.66
38:f:81:GLU:HB2	38:f:88:LYS:HE3	1.77	0.66
40:h:111:ARG:HB3	40:h:112:PRO:HD2	1.77	0.66
41:i:88:LYS:HB3	41:i:89:PRO:HD2	1.77	0.66
41:i:119:LEU:CB	41:i:124:ALA:CA	2.74	0.66
43:k:74:ILE:CG1	43:k:75:ILE:H	2.08	0.66
44:l:34:ASP:HB2	44:l:35:PRO:HD2	1.78	0.66
45:m:101:ARG:HB2	45:m:119:TYR:CE1	2.30	0.66
48:p:40:SER:OG	48:p:44:LYS:HE2	1.96	0.66
49:q:3:LYS:HB3	49:q:3:LYS:HZ3	1.59	0.66
52:t:6:LYS:N	52:t:6:LYS:HD3	2.11	0.66
53:u:57:ARG:HH22	53:u:102:GLY:HA3	1.59	0.66
1:w:206:U:O2'	1:w:207:A:H5'	1.95	0.66
1:w:227:A:N6	1:w:2407:G:C8	2.63	0.66
1:w:308:G:H2'	1:w:309:G:O4'	1.96	0.66
1:w:317:G:N2	1:w:318:C:H1'	2.10	0.66
1:w:614:U:H2'	1:w:615:G:H5'	1.77	0.66
1:w:691:C:H2'	1:w:692:C:C6	2.20	0.66
1:w:765:G:C8	1:w:766:C:C5	2.83	0.66
1:w:789:A:H3'	1:w:790:C:C5	2.29	0.66
1:w:874:G:H3'	1:w:875:G:N7	2.10	0.66
1:w:1279:G:C5'	14:L:34:ILE:HD12	2.25	0.66
1:w:1284:A:C2'	1:w:1285:G:H5'	2.25	0.66
1:w:1304:C:C3'	1:w:1305:C:H5''	2.23	0.66
1:w:1531:C:C6	1:w:1531:C:C3'	2.78	0.66
1:w:1615:C:C2	1:w:1617:C:C2	2.83	0.66
1:w:1759:A:C8	1:w:2696:U:O2	2.48	0.66
1:w:1844:C:H4'	4:B:258:LYS:HE3	1.78	0.66
1:w:2140:C:H2'	1:w:2141:G:H8	1.61	0.66
1:w:2250:G:C5	13:K:82:ARG:HD2	2.30	0.66
1:w:2305:A:C6	7:E:154:GLY:HA3	2.30	0.66
1:w:2306:C:OP2	1:w:2307:G:O4'	2.13	0.66
1:w:2322:A:N7	1:w:2323:G:C4	2.63	0.66
1:w:2336:A:N3	1:w:2385:C:H1'	2.09	0.66
1:w:2352:A:C5	1:w:2353:G:H1'	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2485:G:H4'	13:K:125:LEU:HD22	1.75	0.66
1:w:2681:C:C5'	1:w:2682:U:OP1	2.43	0.66
1:w:2713:A:H3'	1:w:2714:G:H5''	1.78	0.66
2:x:81:G:C6	2:x:82:G:C5	2.84	0.66
2:x:108:C:O2	2:x:108:C:H2'	1.96	0.66
3:A:63:VAL:HG22	3:A:64:SER:H	1.59	0.66
4:B:18:VAL:HG12	4:B:19:ALA:O	1.96	0.66
4:B:102:LYS:N	4:B:102:LYS:CE	2.57	0.66
7:E:3:LEU:HD22	7:E:101:ILE:HD12	1.74	0.66
7:E:107:LEU:CA	7:E:111:LEU:HD13	2.21	0.66
7:E:120:LEU:O	7:E:181:ARG:N	2.29	0.66
9:G:4:ILE:CB	9:G:37:VAL:HB	2.25	0.66
10:H:60:LYS:NZ	17:O:63:VAL:CG1	2.59	0.66
10:H:78:VAL:C	10:H:80:ALA:N	2.53	0.66
12:J:58:THR:HA	12:J:60:MET:SD	2.35	0.66
12:J:92:GLU:HG2	12:J:123:LEU:HD13	1.76	0.66
13:K:133:ARG:N	13:K:133:ARG:HD3	2.10	0.66
14:L:63:ARG:HA	14:L:66:VAL:HG22	1.77	0.66
14:L:78:LYS:HB3	14:L:82:GLU:CD	2.20	0.66
17:O:109:LEU:O	17:O:112:ARG:HB2	1.94	0.66
18:P:7:THR:O	18:P:7:THR:HG23	1.95	0.66
21:S:45:VAL:HG12	21:S:57:GLN:HG3	1.77	0.66
22:T:52:SER:HB2	22:T:53:ILE:HD13	1.77	0.66
23:U:30:VAL:C	23:U:31:VAL:HG12	2.20	0.66
24:V:10:LYS:HA	24:V:48:LYS:NZ	2.10	0.66
24:V:70:VAL:HG12	24:V:71:TYR:N	2.11	0.66
25:W:4:SER:H	25:W:7:ARG:CG	2.08	0.66
31:y:186(F):C:C2'	31:y:186(G):C:H6	1.95	0.66
31:y:419:C:C2	31:y:425:G:C2	2.84	0.66
31:y:517:G:C4	31:y:531:U:O4'	2.48	0.66
31:y:567:G:C2	31:y:568:G:H1'	2.30	0.66
31:y:798:G:N1	31:y:799:G:C5	2.64	0.66
31:y:833:U:C2'	31:y:834:C:C5	2.77	0.66
31:y:911:U:C2'	31:y:912:C:C5	2.77	0.66
31:y:1064:G:OP2	31:y:1386:G:C4'	2.32	0.66
31:y:1241:G:C2'	31:y:1242:C:H5'	2.25	0.66
31:y:1312:G:C2	31:y:1326:C:N3	2.63	0.66
31:y:1316:G:H22	31:y:1319:A:C5'	2.07	0.66
31:y:1402:4OC:H2'	31:y:1403:C:O4'	1.96	0.66
35:c:8:LYS:HD2	35:c:10:LEU:HG	1.77	0.66
35:c:105:PHE:O	35:c:108:ILE:HB	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:127:ILE:HA	35:c:131:PRO:CG	2.23	0.66
36:d:95:THR:HB	36:d:97:LYS:HE2	1.77	0.66
37:e:78:LEU:O	37:e:79:PHE:C	2.39	0.66
37:e:82:ALA:HB2	37:e:93:PHE:CD1	2.29	0.66
37:e:118:ARG:O	37:e:121:VAL:HB	1.95	0.66
39:g:82:ARG:HB2	39:g:85:VAL:HG22	1.77	0.66
40:h:137:LYS:HB3	40:h:137:LYS:HZ3	1.59	0.66
41:i:61:VAL:C	41:i:62:TYR:HD2	2.03	0.66
44:l:57:THR:HA	44:l:89:ALA:HB3	1.76	0.66
47:o:47:LEU:H	47:o:47:LEU:CD2	2.08	0.66
48:p:39:LEU:HD13	48:p:56:LEU:HD22	1.78	0.66
53:u:39:LYS:HB3	53:u:39:LYS:HZ2	1.59	0.66
1:w:55:G:N1	1:w:56:A:N6	2.44	0.66
1:w:84:A:N6	1:w:102:G:C2	2.64	0.66
1:w:126:A:C4	28:Z:18:PHE:CZ	2.84	0.66
1:w:479:A:OP1	1:w:480:A:OP1	2.13	0.66
1:w:533:G:C5	1:w:534:U:C5	2.84	0.66
1:w:564:C:H2'	1:w:565:C:H6	1.60	0.66
1:w:589:C:O4'	6:D:88:LYS:CE	2.43	0.66
1:w:589:C:OP2	1:w:589:C:H3'	1.95	0.66
1:w:1363:C:C4'	1:w:1810:A:H5'	2.26	0.66
1:w:1434:A:H2'	1:w:1435:G:H5'	1.78	0.66
1:w:1902:C:OP1	4:B:242:ARG:HG2	1.95	0.66
1:w:2009:G:H2'	1:w:2009:G:N3	2.11	0.66
1:w:2016:U:C5'	1:w:2058:A:H5'	2.18	0.66
1:w:2246:G:O2'	1:w:2247:A:C5'	2.39	0.66
1:w:2290:G:C6	1:w:2291:U:N3	2.64	0.66
1:w:2420:C:OP2	29:a:32:LEU:HB3	1.95	0.66
1:w:2426:A:H3'	1:w:2427:C:H5''	1.77	0.66
1:w:2584:U:H2'	1:w:2585:U:C2'	2.26	0.66
1:w:2686:G:C6	1:w:2687:U:C4	2.83	0.66
2:x:15:A:N3	2:x:109:G:C4	2.64	0.66
2:x:96:G:C2	2:x:97:G:C8	2.83	0.66
4:B:108:PRO:HA	4:B:197:GLY:HA2	1.77	0.66
4:B:176:ARG:CA	4:B:182:LEU:HD12	2.24	0.66
6:D:4:ILE:CA	6:D:12:ARG:HE	1.96	0.66
6:D:78:PHE:CE2	6:D:81:GLY:HA3	2.30	0.66
10:H:40:ASP:OD2	10:H:83:ILE:HG13	1.96	0.66
11:I:24:VAL:HG21	11:I:37:ASP:HB3	1.77	0.66
11:I:35:VAL:HA	11:I:62:VAL:HG11	1.75	0.66
13:K:82:ARG:O	13:K:82:ARG:NE	2.21	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:100:LEU:HG	14:L:112:ALA:CA	2.23	0.66
18:P:100:ARG:NH1	18:P:101:GLY:OXT	2.28	0.66
19:Q:57:ASN:O	19:Q:60:ASN:N	2.20	0.66
22:T:10:ARG:CD	22:T:36:LYS:HB3	2.26	0.66
23:U:10:THR:O	23:U:11:LYS:HG2	1.95	0.66
23:U:79:VAL:HG23	23:U:81:VAL:HG23	1.77	0.66
25:W:4:SER:O	25:W:5:GLU:C	2.39	0.66
31:y:147:G:H2'	31:y:148:G:O4'	1.96	0.66
31:y:761:G:C2'	50:r:105:ALA:HB2	2.26	0.66
31:y:832:C:O2'	31:y:833:U:C4'	2.43	0.66
31:y:935:A:H1'	31:y:1384:C:C2	2.30	0.66
31:y:980:C:C5	31:y:981:U:C2	2.84	0.66
31:y:1067:A:H4'	31:y:1387:G:HO2'	1.60	0.66
31:y:1130:A:C2	31:y:1131:G:N7	2.56	0.66
31:y:1273:G:H2'	31:y:1274:G:C8	2.31	0.66
31:y:1436:U:C6	31:y:1436:U:O5'	2.49	0.66
31:y:1508:G:C4	31:y:1509:C:C5	2.84	0.66
32:z:34:G:H2'	32:z:35:A:H8	1.60	0.66
33:0:19:G:C5'	33:0:20:G:OP1	2.40	0.66
33:0:44:A:H2'	33:0:45:G:O4'	1.95	0.66
35:c:184:VAL:HG23	35:c:198:ASP:N	2.02	0.66
36:d:53:ALA:HB2	36:d:106:VAL:HG22	1.76	0.66
36:d:122:GLU:HB3	36:d:126:ARG:NH2	2.10	0.66
39:g:1:MET:C	39:g:2:ARG:HD2	2.21	0.66
39:g:45:LEU:HG	39:g:46:ARG:H	1.58	0.66
40:h:23:VAL:HG22	40:h:62:PHE:CE2	2.25	0.66
41:i:46:LYS:HB2	41:i:62:TYR:C	2.21	0.66
41:i:106:GLY:O	41:i:107:LEU:HD23	1.95	0.66
46:n:20:THR:C	46:n:22:ILE:H	2.03	0.66
52:t:21:GLU:HB3	52:t:25:LYS:NZ	2.10	0.66
53:u:13:LEU:HD23	53:u:13:LEU:C	2.20	0.66
1:w:2:G:N2	1:w:2902:C:C2	2.64	0.66
1:w:137(B):G:H2'	1:w:138:G:O4'	1.95	0.66
1:w:270(D):C:C5	1:w:270(E):C:H1'	2.30	0.66
1:w:371:A:O4'	1:w:373:U:C1'	2.43	0.66
1:w:479:A:C2	1:w:506:G:C2	2.83	0.66
1:w:545:G:C1'	1:w:548:A:N6	2.57	0.66
1:w:579:G:N3	1:w:1262:A:C2	2.64	0.66
1:w:697:C:H42	1:w:698:C:N4	1.93	0.66
1:w:1266:G:H1'	1:w:1267:U:OP2	1.96	0.66
1:w:1302:A:C2	1:w:1643:G:N2	2.34	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1458:C:C6	1:w:1458:C:OP2	2.49	0.66
1:w:1570:A:H2'	1:w:1571:A:H8	1.56	0.66
1:w:1636:C:O2'	1:w:1760:A:N3	2.21	0.66
1:w:1684:C:O5'	1:w:1684:C:H6	1.78	0.66
1:w:1857:G:H1'	1:w:1885:A:H61	1.60	0.66
1:w:1907:G:N1	1:w:1924:C:C4	2.63	0.66
1:w:1910:G:C6	1:w:1921:G:C4	2.83	0.66
1:w:2023:G:C2	1:w:2024:G:C4	2.83	0.66
1:w:2396:G:H4'	24:V:32:LYS:H	1.61	0.66
1:w:2466:C:OP1	30:b:5:ALA:HB3	1.95	0.66
1:w:2566:A:N6	11:I:28:SER:CB	2.52	0.66
1:w:2652:C:H3'	1:w:2653:U:C6	2.29	0.66
1:w:2803:C:C2'	1:w:2804:C:C5'	2.73	0.66
4:B:133:LEU:HD23	4:B:189:CYS:O	1.95	0.66
5:C:11:MET:CE	5:C:12:THR:O	2.43	0.66
5:C:16:ARG:HB3	5:C:19:ARG:HD2	1.78	0.66
5:C:19:ARG:HH12	5:C:21:VAL:HG12	1.61	0.66
6:D:112:ARG:NH2	6:D:112:ARG:HB3	2.10	0.66
9:G:130:TYR:N	9:G:139:GLN:HA	2.09	0.66
10:H:57:LEU:O	10:H:59:GLY:N	2.28	0.66
11:I:1:MET:H2	11:I:67:LYS:HB2	1.60	0.66
11:I:88:ASN:H	11:I:93:PRO:CA	2.06	0.66
12:J:79:ARG:CB	12:J:109:GLY:HA2	2.26	0.66
14:L:9:LYS:O	14:L:10:LEU:CB	2.44	0.66
14:L:36:THR:OG1	14:L:40:LYS:HG2	1.94	0.66
17:O:76:TYR:CG	17:O:77:SER:N	2.58	0.66
19:Q:106:ILE:O	19:Q:107:LEU:HD23	1.95	0.66
20:R:7:VAL:O	20:R:30:VAL:HG13	1.95	0.66
21:S:67:LEU:O	21:S:68:HIS:CB	2.44	0.66
23:U:49:LYS:HD2	23:U:80:HIS:O	1.95	0.66
24:V:51:VAL:HB	24:V:60:PHE:O	1.94	0.66
29:a:9:GLY:N	29:a:12:LYS:HZ2	1.94	0.66
31:y:117:G:C5	31:y:118:U:O4	2.49	0.66
31:y:507:C:C6	31:y:508:C:C6	2.84	0.66
31:y:508:C:H1'	31:y:509:A:H62	1.60	0.66
31:y:518:C:H1'	31:y:519:C:OP2	1.95	0.66
31:y:529:G:C3'	31:y:530:G:C5'	2.72	0.66
31:y:539:A:OP2	45:m:114:LYS:CE	2.44	0.66
31:y:654:G:H2'	31:y:655:A:H8	1.61	0.66
31:y:683:G:H21	44:l:39:PRO:CG	2.03	0.66
31:y:725:G:OP1	31:y:854:G:H1'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:975:A:O2'	31:y:1358:U:C4'	2.44	0.66
31:y:1065:U:H4'	31:y:1066:C:H6	1.59	0.66
31:y:1067:A:H3'	31:y:1093:A:H4'	1.75	0.66
31:y:1074:G:C5'	35:c:103:THR:O	2.43	0.66
31:y:1125:U:H2'	31:y:1126:U:H5''	1.77	0.66
31:y:1267:C:O2	54:v:20:LYS:CD	2.44	0.66
31:y:1335:C:OP1	31:y:1336:C:H5'	1.96	0.66
31:y:1469:G:H2'	31:y:1470:G:C8	2.30	0.66
31:y:1516:G:H22	31:y:1518:MA6:H3'	1.59	0.66
35:c:13:ALA:HA	35:c:16:HIS:HE1	1.59	0.66
35:c:46:LYS:O	35:c:49:GLU:N	2.28	0.66
35:c:84:GLU:OE1	35:c:215:LEU:HD13	1.96	0.66
38:f:52:PRO:HB2	38:f:53:LEU:HD22	1.76	0.66
38:f:107:ARG:O	38:f:110:LEU:CD2	2.39	0.66
40:h:147:ALA:O	40:h:148:ASN:ND2	2.26	0.66
41:i:95:VAL:HG23	41:i:96:GLY:H	1.58	0.66
41:i:95:VAL:CG2	41:i:96:GLY:N	2.58	0.66
49:q:5:ARG:CD	49:q:28:ARG:HB3	2.11	0.66
50:r:29:HIS:HD2	50:r:30:PRO:CD	2.09	0.66
50:r:56:VAL:HG23	50:r:81:ARG:CZ	2.25	0.66
51:s:38:GLU:H	51:s:38:GLU:CD	2.04	0.66
51:s:58:LEU:HD12	51:s:58:LEU:H	1.58	0.66
53:u:40:ALA:HA	53:u:43:LEU:HD12	1.77	0.66
1:w:10:G:N1	1:w:2629:A:C5	2.64	0.66
1:w:71:A:O2'	1:w:72:U:OP2	2.12	0.66
1:w:155:C:O2	1:w:171:G:N2	2.24	0.66
1:w:457:A:C4'	28:Z:40:TRP:CZ2	2.79	0.66
1:w:485:C:H2'	1:w:486:C:C6	2.31	0.66
1:w:488:G:H2'	1:w:491:G:OP2	1.96	0.66
1:w:550:G:H3'	1:w:551:G:H5''	1.77	0.66
1:w:579:G:C5	1:w:580:C:C4	2.84	0.66
1:w:598:G:C2'	1:w:599:G:C5'	2.61	0.66
1:w:885:C:H3'	1:w:886:C:C4'	2.25	0.66
1:w:1152:C:O2'	17:O:77:SER:HA	1.95	0.66
1:w:1377:G:H8	1:w:1377:G:O5'	1.79	0.66
1:w:1535:U:C5	1:w:1536:A:H1'	2.30	0.66
1:w:1562:A:N3	1:w:1563:G:C8	2.64	0.66
1:w:1668:A:C5	1:w:1674:G:C5	2.84	0.66
1:w:1827:C:C5'	1:w:1971:A:O2'	2.41	0.66
1:w:1847:A:H3'	1:w:1847:A:P	2.35	0.66
1:w:1914:C:O2	1:w:1914:C:C3'	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2131:G:H5'	1:w:2132:U:C2	2.31	0.66
1:w:2359:C:H1'	29:a:52:LYS:HD3	1.78	0.66
1:w:2550:G:C3'	1:w:2551:C:H5'	2.26	0.66
1:w:2602:A:H4'	1:w:2603:G:C5'	2.26	0.66
1:w:2823:A:O5'	1:w:2823:A:C8	2.47	0.66
1:w:2877:G:H3'	1:w:2878:U:C6	2.30	0.66
2:x:10:C:O2'	2:x:11:C:C5'	2.43	0.66
2:x:30:C:H2'	2:x:31:C:H5'	1.78	0.66
2:x:107:U:H2'	2:x:108:C:O5'	1.95	0.66
4:B:243:GLY:O	4:B:244:ARG:HB3	1.94	0.66
6:D:30:GLU:HA	6:D:33:ARG:NE	2.10	0.66
7:E:148:MET:HB3	7:E:151:ALA:HB2	1.77	0.66
9:G:6:LEU:HD13	9:G:35:LEU:HD13	1.77	0.66
10:H:84:ARG:HH21	10:H:85:VAL:HG22	1.61	0.66
10:H:145:VAL:O	10:H:146:TYR:CB	2.44	0.66
11:I:59:LYS:HE2	11:I:87:ILE:CG2	2.25	0.66
14:L:44:LEU:CD2	14:L:47:PHE:HE2	2.08	0.66
14:L:45:ARG:O	14:L:48:VAL:HG13	1.96	0.66
17:O:49:HIS:HA	17:O:52:ARG:CG	2.25	0.66
18:P:24:LYS:CA	18:P:94:LEU:HG	2.25	0.66
18:P:73:SER:O	18:P:74:LYS:CB	2.43	0.66
20:R:42:ALA:O	20:R:46:ALA:HB3	1.95	0.66
20:R:81:VAL:CG2	20:R:86:GLY:CA	2.64	0.66
24:V:36:GLY:C	24:V:39:LYS:NZ	2.53	0.66
30:b:16:VAL:CG1	30:b:18:ARG:HE	2.09	0.66
31:y:8:A:H2	38:f:104:ALA:HA	1.61	0.66
31:y:17:U:H1'	31:y:1080:A:O4'	1.96	0.66
31:y:131:C:OP1	31:y:263:A:C1'	2.44	0.66
31:y:302:G:C2'	31:y:303:A:C8	2.73	0.66
31:y:439:A:C6	31:y:496:A:C2	2.84	0.66
31:y:517:G:C4'	31:y:519:C:C4	2.76	0.66
31:y:573:A:C2'	31:y:574:A:C8	2.73	0.66
31:y:739:C:O2'	31:y:740:U:H5'	1.95	0.66
31:y:1108:G:C3'	31:y:1109:C:C5'	2.66	0.66
31:y:1159:U:H5	31:y:1182:G:O2'	1.79	0.66
31:y:1184:G:H2'	31:y:1185:G:H8	1.61	0.66
31:y:1447:G:P	31:y:1447:G:H8	2.18	0.66
32:z:2:C:H2'	32:z:3:C:C6	2.30	0.66
33:0:24:G:C6	33:0:25:C:N3	2.63	0.66
36:d:89:GLU:O	36:d:91:LEU:N	2.28	0.66
36:d:160:ALA:HB2	36:d:164:ARG:HH11	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:54:THR:HG23	40:h:56:GLN:HB2	1.76	0.66
41:i:50:ARG:CB	41:i:59:LEU:HG	2.24	0.66
43:k:71:LEU:CD2	43:k:72:VAL:H	2.09	0.66
44:l:83:ILE:HD13	51:s:84:LYS:NZ	2.11	0.66
45:m:53:LYS:O	45:m:68:TYR:CE1	2.49	0.66
45:m:67:ALA:HB1	45:m:98:HIS:O	1.95	0.66
49:q:5:ARG:CG	49:q:22:THR:HG21	2.26	0.66
1:w:460:A:N3	1:w:461:C:H1'	2.11	0.66
1:w:568:U:C2	1:w:570:G:P	2.89	0.66
1:w:826:U:H3'	1:w:828:U:C6	2.31	0.66
1:w:851:U:H4'	26:X:45:GLY:CA	2.26	0.66
1:w:1001:A:OP2	1:w:1002:G:N7	2.29	0.66
1:w:1010:A:C2	1:w:1153:C:H1'	2.31	0.66
1:w:1264:G:C6	1:w:1265:A:N6	2.64	0.66
1:w:1268:A:C8	1:w:1269:A:N7	2.63	0.66
1:w:1381:G:H2'	1:w:1382:G:O4'	1.95	0.66
1:w:1567:A:H5'	4:B:58:HIS:CE1	2.31	0.66
1:w:1693:U:H5'	1:w:1694:C:C5	2.31	0.66
1:w:1815:A:C8	1:w:1817:G:C8	2.84	0.66
1:w:2238:G:N3	1:w:2238:G:C2'	2.57	0.66
1:w:2261:C:H41	23:U:11:LYS:HB3	1.61	0.66
1:w:2559:C:H2'	1:w:2560:C:H5'	1.77	0.66
1:w:2688:U:C5	1:w:2719:G:C6	2.84	0.66
1:w:2864:G:OP1	16:N:119:LYS:CE	2.43	0.66
1:w:2899:G:C2'	1:w:2900:A:H5'	2.26	0.66
2:x:2:C:N3	2:x:119:A:C2	2.64	0.66
6:D:162:ALA:HB1	6:D:170:THR:OG1	1.95	0.66
9:G:88:ILE:CG1	9:G:89:TYR:N	2.57	0.66
9:G:114:LEU:CA	9:G:130:TYR:CE1	2.77	0.66
10:H:33:GLU:C	10:H:35:ARG:NH2	2.53	0.66
10:H:113:MET:CA	10:H:116:THR:HG23	2.16	0.66
13:K:132:VAL:CG2	13:K:133:ARG:NH2	2.58	0.66
14:L:1:MET:O	14:L:2:ARG:C	2.38	0.66
14:L:20:LEU:HD23	14:L:21:TYR:N	2.10	0.66
14:L:104:ARG:HB2	14:L:109:ALA:HB3	1.78	0.66
22:T:17:ALA:CA	22:T:20:ARG:HE	1.93	0.66
22:T:94:GLU:O	22:T:95:PRO:O	2.13	0.66
26:X:44:ARG:C	26:X:48:GLU:HG2	2.20	0.66
28:Z:27:GLY:O	28:Z:31:LEU:HD23	1.96	0.66
31:y:38:G:C2'	31:y:397:A:N6	2.57	0.66
31:y:257:G:C6	31:y:258:G:C6	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:413:G:O2'	31:y:414:A:OP2	2.14	0.66
31:y:584:G:C2	31:y:585:G:C4	2.84	0.66
31:y:775:G:H21	31:y:776:G:H1'	1.60	0.66
31:y:937:A:H2	31:y:1378:C:H41	1.44	0.66
31:y:1138:G:H2'	31:y:1140:C:C6	2.30	0.66
31:y:1177:G:H3'	31:y:1178:G:H8	1.60	0.66
31:y:1316:G:C4	31:y:1318:A:N7	2.64	0.66
31:y:1501:C:OP2	31:y:1504:G:OP2	2.13	0.66
31:y:1508:G:H2'	31:y:1509:C:H6	1.58	0.66
35:c:214:ILE:HG13	35:c:215:LEU:N	2.11	0.66
37:e:38:TYR:CD1	37:e:38:TYR:O	2.49	0.66
38:f:78:HIS:HB2	41:i:104:ARG:HD2	1.76	0.66
42:j:93:ARG:O	42:j:97:LYS:HB2	1.96	0.66
43:k:66:ARG:HH22	47:o:57:ARG:H	1.42	0.66
45:m:112:ARG:CB	45:m:121:THR:OG1	2.43	0.66
46:n:56:LEU:HA	46:n:59:TYR:HB2	1.78	0.66
53:u:37:SER:O	53:u:41:VAL:HG23	1.94	0.66
1:w:95:G:C2'	25:W:41:ILE:HG12	2.26	0.66
1:w:270(E):C:C2	1:w:270(F):G:N7	2.63	0.66
1:w:414:C:H2'	1:w:415:A:O4'	1.95	0.66
1:w:603:A:H4'	1:w:604:G:H4'	1.78	0.66
1:w:612:G:C2	1:w:617:G:C5	2.84	0.66
1:w:625:G:C5	1:w:626:U:C4	2.84	0.66
1:w:775:G:C4	1:w:794:G:C8	2.83	0.66
1:w:921:G:H4'	1:w:2269:A:N7	2.10	0.66
1:w:980:A:C6	1:w:1136:G:O4'	2.48	0.66
1:w:1035:U:H5''	8:F:59:ARG:HH22	1.61	0.66
1:w:1085:A:C2'	1:w:1086:A:H5'	2.26	0.66
1:w:1154:G:C3'	1:w:1155:A:H5''	2.24	0.66
1:w:1217:C:C4	1:w:1218:C:C5	2.83	0.66
1:w:1352:U:O2'	1:w:1353:A:H5'	1.95	0.66
1:w:1423:G:C3'	1:w:1424:G:H8	2.09	0.66
1:w:1812:A:O2'	1:w:1813:G:H5'	1.96	0.66
1:w:2056:G:N2	27:Y:5:PRO:HB3	2.11	0.66
1:w:2269:A:C3'	1:w:2270:G:C8	2.77	0.66
1:w:2359:C:H4'	29:a:50:LEU:N	2.11	0.66
1:w:2393:A:C2'	1:w:2394:C:C6	2.70	0.66
1:w:2527:C:H5''	30:b:30:PRO:HB3	1.78	0.66
1:w:2535:G:H2'	1:w:2536:G:H8	1.61	0.66
1:w:2671:A:H2'	1:w:2672:G:H8	1.61	0.66
1:w:2723:C:C4	1:w:2724:C:C5	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2747:G:C6	1:w:2755:C:O3'	2.49	0.66
1:w:2793:G:H2'	1:w:2794:C:H6	1.61	0.66
1:w:2825:G:C5	1:w:2826:A:C8	2.84	0.66
2:x:27:C:H2'	2:x:28:C:C5	2.31	0.66
3:A:186:LEU:O	3:A:190:ILE:CG1	2.44	0.66
4:B:262:ARG:HD3	4:B:262:ARG:C	2.20	0.66
8:F:89:ILE:HG13	8:F:94:TYR:CD1	2.31	0.66
9:G:3:VAL:HB	9:G:21:VAL:HG23	1.78	0.66
9:G:64:GLU:HG3	9:G:67:ARG:CZ	2.26	0.66
10:H:29:PRO:O	10:H:30:LYS:HB2	1.95	0.66
10:H:32:VAL:HG11	10:H:35:ARG:HH12	1.60	0.66
10:H:80:ALA:N	10:H:147:ALA:HA	2.09	0.66
10:H:90:LEU:HA	10:H:110:LEU:CG	2.25	0.66
13:K:111:GLU:CA	13:K:115:MET:HG2	2.25	0.66
13:K:124:LYS:NZ	13:K:125:LEU:HA	2.10	0.66
14:L:37:THR:N	14:L:40:LYS:HE3	2.10	0.66
15:M:69:VAL:O	15:M:69:VAL:HG12	1.95	0.66
17:O:74:LEU:CD2	17:O:110:VAL:HG13	2.26	0.66
20:R:34:ALA:O	20:R:36:LYS:N	2.29	0.66
20:R:62:LYS:H	20:R:62:LYS:HE3	1.61	0.66
22:T:19:ARG:HD2	22:T:19:ARG:N	2.02	0.66
22:T:41:LEU:HD13	22:T:42:VAL:H	1.60	0.66
23:U:36:ILE:N	23:U:36:ILE:CD1	2.58	0.66
24:V:49:VAL:O	24:V:62:VAL:O	2.13	0.66
31:y:245:C:N4	31:y:284:G:N1	2.43	0.66
31:y:274:A:N3	31:y:275:G:H1'	2.11	0.66
31:y:341:C:H2'	31:y:342:C:C5	2.29	0.66
31:y:418:C:C4	31:y:426:G:C2	2.83	0.66
31:y:485:G:O2'	31:y:486:U:OP2	2.13	0.66
31:y:508:C:C1'	31:y:509:A:H62	2.09	0.66
31:y:567:G:O6	31:y:883:C:N4	2.26	0.66
31:y:695:A:H61	31:y:797:C:C4'	2.09	0.66
31:y:714:G:H8	31:y:714:G:P	2.18	0.66
31:y:780:A:O5'	31:y:780:A:H8	1.79	0.66
31:y:865:A:N3	31:y:918:A:O2'	2.29	0.66
31:y:1104:G:H4'	35:c:111:ARG:HH22	1.57	0.66
31:y:1252:A:C2	31:y:1355:G:H1'	2.30	0.66
31:y:1376:U:O5'	31:y:1376:U:H6	1.78	0.66
31:y:1435:G:H2'	31:y:1436:U:H6	1.60	0.66
35:c:44:LEU:H	35:c:44:LEU:HD22	1.60	0.66
35:c:97:TRP:CB	35:c:172:ILE:CD1	2.50	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:157:ILE:HG13	36:d:193:TYR:OH	1.95	0.66
37:e:28:SER:O	37:e:30:LYS:N	2.28	0.66
37:e:88:VAL:HG13	38:f:96:PRO:O	1.96	0.66
37:e:102:ASP:OD2	37:e:121:VAL:HG21	1.96	0.66
38:f:79:GLU:CG	38:f:93:PRO:CD	2.70	0.66
42:j:19:LEU:HB3	42:j:59:PHE:CD2	2.30	0.66
42:j:39:GLY:O	42:j:40:LEU:HD23	1.96	0.66
42:j:50:LEU:HD23	42:j:55:ALA:H	1.61	0.66
43:k:51:ARG:O	47:o:45:ARG:HD2	1.95	0.66
44:l:110:ASP:HB3	51:s:85:LEU:CD1	2.12	0.66
51:s:38:GLU:C	51:s:41:LYS:CD	2.68	0.66
1:w:142:G:C6	1:w:143:C:C4	2.84	0.66
1:w:241:A:H5'	1:w:243:U:O4'	1.95	0.66
1:w:270(B):A:H61	1:w:270(Z):G:H1'	1.58	0.66
1:w:271(C):G:C2'	1:w:271(D):U:H5''	2.25	0.66
1:w:457:A:O2'	1:w:458:G:H1'	1.95	0.66
1:w:463:G:N2	1:w:466:A:OP2	2.28	0.66
1:w:481:G:C4	1:w:507:A:N1	2.64	0.66
1:w:598:G:C1'	12:J:13:ASN:CG	2.67	0.66
1:w:630:G:N2	1:w:633:A:H62	1.93	0.66
1:w:777:A:O2'	1:w:778:G:H5'	1.96	0.66
1:w:923:C:O2'	23:U:26:TYR:CE2	2.45	0.66
1:w:1380:G:C5	1:w:1381:G:N7	2.64	0.66
1:w:1566:A:O2'	1:w:1567:A:C5'	2.43	0.66
1:w:1579:A:H2'	1:w:1580:A:C8	2.31	0.66
1:w:1843:C:C4	1:w:1844:C:H5	2.14	0.66
1:w:1851:U:C5'	33:0:4:G:H5'	2.26	0.66
1:w:1858:G:O2'	1:w:1859:A:C8	2.48	0.66
1:w:1915:U:C4	1:w:1916:A:C2	2.83	0.66
1:w:2011:U:C4	1:w:2012:G:C5	2.84	0.66
1:w:2124:G:N2	3:A:218:THR:HG23	2.11	0.66
1:w:2248:C:H2'	1:w:2249:U:H5'	1.77	0.66
1:w:2431:U:O2'	1:w:2432:A:H3'	1.96	0.66
1:w:2543:G:C6	1:w:2544:G:C5	2.83	0.66
1:w:2580:U:H5''	5:C:131:ALA:CB	2.26	0.66
1:w:2820:A:H4'	5:C:109:LYS:CE	2.26	0.66
1:w:2820:A:N1	5:C:194:GLY:HA3	2.11	0.66
2:x:58:A:C5	2:x:59:A:N7	2.64	0.66
3:A:57:GLN:HG3	3:A:202:PRO:HB3	1.75	0.66
4:B:57:GLY:H	4:B:216:GLY:CA	2.08	0.66
4:B:60:ARG:O	4:B:61:LEU:HD12	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:166:GLN:OE1	31:y:712:A:H4'	1.95	0.66
4:B:177:LEU:C	4:B:179:SER:H	2.03	0.66
7:E:68:PRO:HB3	7:E:92:VAL:HG11	1.78	0.66
7:E:68:PRO:HB3	7:E:92:VAL:HG12	1.75	0.66
11:I:59:LYS:CD	11:I:87:ILE:O	2.43	0.66
11:I:65:THR:HB	11:I:82:ASN:HD22	1.61	0.66
11:I:88:ASN:HA	11:I:94:ARG:NE	2.10	0.66
13:K:81:VAL:C	13:K:82:ARG:HD3	2.21	0.66
13:K:134:ARG:HH12	22:T:53:ILE:CD1	2.08	0.66
14:L:59:ASP:O	14:L:62:ALA:HB3	1.96	0.66
14:L:71:GLN:O	14:L:72:ASP:CB	2.44	0.66
15:M:66:ALA:O	15:M:101:LEU:HD11	1.96	0.66
15:M:94:TYR:HE2	15:M:99:LYS:CA	2.09	0.66
16:N:48:ILE:O	16:N:50:ILE:N	2.29	0.66
20:R:51:VAL:HB	20:R:79:ALA:CB	2.22	0.66
22:T:61:LEU:HD11	22:T:67:LEU:HB2	1.77	0.66
29:a:44:LYS:HB2	29:a:44:LYS:NZ	2.11	0.66
31:y:129(A):U:H1'	31:y:130:A:H62	1.58	0.66
31:y:376:G:C5'	49:q:6:LEU:CD2	2.66	0.66
31:y:398:C:O5'	31:y:398:C:C6	2.49	0.66
31:y:555:C:H6	31:y:555:C:O5'	1.79	0.66
31:y:562:C:C2'	45:m:14:ARG:HD3	2.24	0.66
31:y:599:C:C2'	31:y:600:C:H5'	2.25	0.66
31:y:617:G:H4'	49:q:44:THR:HG22	1.77	0.66
31:y:652:U:H5''	31:y:752:G:O6	1.96	0.66
31:y:686:U:H4'	44:l:42:TRP:HE1	1.60	0.66
31:y:742:G:N2	31:y:743:U:H1'	2.11	0.66
31:y:759:A:OP2	31:y:759:A:H8	1.79	0.66
31:y:1080:A:C8	31:y:1080:A:O5'	2.49	0.66
31:y:1187:G:C1'	47:o:61:TRP:OXT	2.30	0.66
31:y:1214:C:O5'	31:y:1214:C:H6	1.79	0.66
31:y:1325:C:C2	31:y:1326:C:C5	2.84	0.66
31:y:1431:C:O2'	31:y:1432:G:C5'	2.43	0.66
31:y:1446:A:O2'	31:y:1447:G:H5'	1.96	0.66
36:d:134:ILE:C	36:d:136:GLN:H	2.03	0.66
37:e:9:CYS:HG	37:e:31:CYS:HA	1.57	0.66
37:e:110:PHE:CD1	37:e:110:PHE:N	2.64	0.66
41:i:35:ILE:CA	41:i:38:ILE:HD12	2.24	0.66
42:j:107:ARG:HG2	42:j:107:ARG:HH11	1.61	0.66
50:r:5:VAL:HG22	50:r:6:LEU:H	1.60	0.66
50:r:23:VAL:O	50:r:40:LYS:O	2.14	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:55:ASP:HB3	50:r:76:LEU:HD11	1.77	0.66
51:s:54:ARG:HD2	51:s:54:ARG:N	2.10	0.66
52:t:19:VAL:HG13	52:t:20:LEU:N	2.11	0.66
54:v:7:ARG:HA	54:v:21:TYR:HE1	1.60	0.66
1:w:1:G:C6	1:w:2:G:C6	2.83	0.65
1:w:26:G:OP1	19:Q:80:PRO:HB3	1.96	0.65
1:w:26:G:N2	1:w:514:A:H62	1.94	0.65
1:w:247:G:O6	29:a:12:LYS:NZ	2.26	0.65
1:w:274:G:O2'	1:w:275:G:O4'	2.10	0.65
1:w:328:U:H4'	21:S:66:PRO:HG2	1.78	0.65
1:w:346:A:H1'	1:w:347:A:H8	1.59	0.65
1:w:587:C:O5'	1:w:587:C:C6	2.49	0.65
1:w:718:A:OP2	1:w:719:C:C6	2.49	0.65
1:w:882:G:C2'	1:w:883:G:H5''	2.26	0.65
1:w:930:U:H4'	1:w:931:G:C5'	2.26	0.65
1:w:957:A:OP1	13:K:76:LYS:HA	1.95	0.65
1:w:995:C:C4	10:H:24:VAL:HA	2.31	0.65
1:w:1163:G:H2'	1:w:1163:G:N3	2.11	0.65
1:w:1272:A:H2'	1:w:1646:C:H42	1.62	0.65
1:w:1313:U:C5'	1:w:1332:G:H4'	2.26	0.65
1:w:1464:C:H4'	1:w:1528:A:O2'	1.95	0.65
1:w:1532:C:C5	1:w:1533:C:C4	2.84	0.65
1:w:1670:C:H5	1:w:1671:U:C2	2.11	0.65
1:w:1728:G:N2	1:w:1732:A:N6	2.09	0.65
1:w:1845:G:C2'	1:w:1846:G:H8	2.07	0.65
1:w:2126:A:O2'	1:w:2127:G:P	2.55	0.65
1:w:2128:C:H1'	1:w:2173:A:H2'	1.78	0.65
1:w:2171:A:O2'	1:w:2172:U:O5'	2.14	0.65
1:w:2295:C:H3'	15:M:9:ARG:CD	2.25	0.65
1:w:2297:C:N4	1:w:2320:A:C8	2.64	0.65
1:w:2377:A:H8	1:w:2377:A:O5'	1.79	0.65
1:w:2379:G:C6	1:w:2380:C:C4	2.84	0.65
1:w:2521:C:O5'	1:w:2521:C:H6	1.78	0.65
1:w:2532:G:C8	1:w:2533:A:N7	2.63	0.65
1:w:2678:C:N3	1:w:2679:A:N7	2.44	0.65
1:w:2712:U:C4'	1:w:2714:G:H5'	2.26	0.65
1:w:2900:A:H2'	1:w:2901:C:C5'	2.26	0.65
2:x:7:G:H3'	2:x:8:U:H5	1.61	0.65
2:x:97:G:C6	2:x:98:G:C5	2.84	0.65
4:B:218:ARG:HG2	4:B:219:PRO:CD	2.20	0.65
4:B:228:PRO:O	4:B:229:VAL:C	2.38	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:144:ARG:C	5:C:146:THR:H	2.03	0.65
7:E:52:ILE:O	7:E:55:LYS:HB3	1.96	0.65
7:E:95:ARG:HD2	7:E:95:ARG:N	2.10	0.65
9:G:25:TYR:HB3	9:G:30:LEU:CD1	2.26	0.65
10:H:90:LEU:CA	10:H:110:LEU:HB2	2.26	0.65
11:I:90:GLN:C	11:I:92:GLU:H	2.03	0.65
13:K:3:MET:O	13:K:3:MET:HG2	1.95	0.65
13:K:121:ALA:O	13:K:124:LYS:HG2	1.95	0.65
17:O:28:ARG:HD3	17:O:38:THR:OG1	1.96	0.65
20:R:12:VAL:CG1	20:R:13:LEU:H	1.96	0.65
20:R:21:PHE:CE2	20:R:26:TYR:HE1	2.14	0.65
21:S:49:VAL:C	21:S:55:TYR:HA	2.21	0.65
21:S:65:ALA:HB3	21:S:66:PRO:CD	2.20	0.65
22:T:43:GLU:HA	22:T:46:LYS:HG2	1.77	0.65
30:b:9:ARG:HH22	30:b:15:LYS:HG2	1.59	0.65
30:b:11:CYS:O	30:b:14:CYS:HB2	1.96	0.65
31:y:154:C:C4	31:y:155:C:N4	2.64	0.65
31:y:267:C:C2	31:y:268:C:H5	2.14	0.65
31:y:498:A:O2'	31:y:500:G:OP2	2.15	0.65
31:y:501:C:O5'	31:y:501:C:H6	1.79	0.65
31:y:601:C:H3'	31:y:602:A:H8	1.60	0.65
31:y:778:G:N3	31:y:778:G:H2'	2.11	0.65
31:y:860:A:H2'	31:y:861:G:C4'	2.26	0.65
31:y:959:A:C3'	31:y:960:U:C4'	2.69	0.65
31:y:1179:A:H8	31:y:1179:A:OP1	1.79	0.65
31:y:1322:C:H4'	31:y:136(B):C:H42	1.62	0.65
31:y:1364:U:O2'	31:y:1365:G:P	2.53	0.65
35:c:97:TRP:CH2	35:c:99:GLY:O	2.48	0.65
39:g:76:ALA:O	39:g:79:LEU:CB	2.43	0.65
41:i:118:VAL:CG1	41:i:119:LEU:N	2.59	0.65
45:m:27:LYS:HE3	45:m:27:LYS:CA	2.14	0.65
46:n:29:ARG:CZ	46:n:64:TRP:CD1	2.79	0.65
46:n:114:ARG:NH2	46:n:116:THR:OG1	2.29	0.65
47:o:16:PHE:HB2	47:o:19:ARG:HD3	1.78	0.65
49:q:9:PHE:CE2	49:q:18:ARG:HD2	2.31	0.65
53:u:75:ASN:HB2	53:u:79:ARG:HH12	1.59	0.65
1:w:16:G:N2	1:w:524:U:O2	2.28	0.65
1:w:95:G:H2'	25:W:41:ILE:HG12	1.78	0.65
1:w:155:C:H3'	1:w:161:U:C6	2.32	0.65
1:w:322:A:O4'	1:w:340:A:C8	2.48	0.65
1:w:457:A:N6	1:w:471:A:OP2	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:534:U:O2'	17:O:45:TYR:C	2.39	0.65
1:w:581:C:H5''	17:O:32:PHE:CE2	2.31	0.65
1:w:592:G:C2	1:w:593:G:C8	2.84	0.65
1:w:602:G:C4'	1:w:605:C:H5'	2.25	0.65
1:w:712:G:O5'	1:w:712:G:H8	1.77	0.65
1:w:843:G:C6	1:w:844:C:N4	2.64	0.65
1:w:1048:A:C8	1:w:1048:A:O5'	2.50	0.65
1:w:1140:C:H6	1:w:1140:C:H5''	1.62	0.65
1:w:1196:C:O2'	1:w:1226:A:H2'	1.97	0.65
1:w:1209:G:C2	1:w:1238:G:C6	2.85	0.65
1:w:1277:G:N2	14:L:23:ASN:OD1	2.29	0.65
1:w:1381:G:O2'	1:w:1382:G:H5'	1.96	0.65
1:w:1434:A:C2'	1:w:1435:G:H5'	2.26	0.65
1:w:1443:G:C2	1:w:1444:G:C5	2.84	0.65
1:w:1456:G:C6	1:w:1457:A:C6	2.84	0.65
1:w:1669:A:H2	1:w:1670:C:C1'	2.09	0.65
1:w:1790:C:C3'	1:w:1791:A:C8	2.78	0.65
1:w:1821:A:C6	1:w:1822:G:C5	2.83	0.65
1:w:1913:A:N6	31:y:1494:G:C1'	2.53	0.65
1:w:2116:G:H5''	1:w:2117:A:C8	2.31	0.65
1:w:2124:G:O2'	3:A:43:GLU:HG2	1.94	0.65
1:w:2187:G:C2'	1:w:2188:C:H5''	2.26	0.65
1:w:2197:U:O2'	1:w:2198:A:H5''	1.95	0.65
1:w:2289:G:H2'	1:w:2290:G:H5''	1.78	0.65
1:w:2307:G:C1'	1:w:2311:A:C5	2.79	0.65
1:w:2341:G:H2'	1:w:2342:C:H6	1.59	0.65
1:w:2419:U:OP1	29:a:32:LEU:HD13	1.96	0.65
1:w:2468:G:C6	1:w:2481:G:C4	2.85	0.65
1:w:2563:U:O2	1:w:2565:A:C8	2.49	0.65
1:w:2683:C:H4'	16:N:53:ARG:HH22	1.60	0.65
1:w:2742:C:C2'	1:w:2743:C:H5'	2.26	0.65
1:w:2828:C:N3	1:w:2829:C:C4	2.64	0.65
2:x:83:G:OP2	2:x:83:G:H8	1.79	0.65
2:x:93:C:C2'	2:x:94:C:C6	2.79	0.65
4:B:242:ARG:H	4:B:242:ARG:CD	2.10	0.65
7:E:35:GLU:CB	7:E:160:VAL:HG12	2.26	0.65
8:F:95:ARG:CZ	8:F:107:VAL:HA	2.26	0.65
8:F:125:VAL:N	8:F:131:VAL:HB	2.10	0.65
9:G:62:LYS:HD3	9:G:133:HIS:HD2	1.62	0.65
9:G:82:ARG:HD2	9:G:89:TYR:CZ	2.32	0.65
9:G:124:GLY:C	9:G:144:VAL:N	2.50	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:51:LEU:HD23	14:L:51:LEU:N	2.07	0.65
16:N:45:PHE:CZ	16:N:65:LYS:O	2.49	0.65
16:N:106:SER:HA	16:N:110:ILE:HD13	1.78	0.65
16:N:107:ASP:HA	16:N:111:ARG:NE	2.11	0.65
18:P:16:PRO:CD	18:P:18:LEU:HD21	2.19	0.65
19:Q:29:LEU:O	19:Q:33:ARG:HG2	1.96	0.65
21:S:38:ILE:HG12	21:S:39:VAL:N	2.10	0.65
23:U:63:VAL:O	23:U:64:ASP:HB2	1.95	0.65
25:W:10:LEU:HA	25:W:14:ARG:NH1	2.11	0.65
25:W:45:SER:O	25:W:46:GLN:HB2	1.95	0.65
29:a:34:TRP:HZ3	29:a:41:ILE:HG13	1.57	0.65
30:b:17:ILE:H	30:b:25:VAL:HA	1.61	0.65
31:y:172:A:C8	31:y:172:A:H5'	2.31	0.65
31:y:191(A):G:C8	31:y:191(A):G:P	2.90	0.65
31:y:252:U:O2'	31:y:253:U:H5'	1.96	0.65
31:y:586:C:O2	31:y:755:G:N2	2.27	0.65
31:y:609:A:H5'	49:q:9:PHE:HE1	1.62	0.65
31:y:736:C:C2'	31:y:737:A:H8	2.03	0.65
31:y:741:G:H2'	31:y:741:G:N3	2.11	0.65
31:y:815:A:C4'	31:y:817:C:H5	2.09	0.65
31:y:955:U:C2'	31:y:956:U:H4'	2.26	0.65
31:y:1016:A:C8	31:y:1016:A:O5'	2.48	0.65
31:y:103(A):A:O5'	31:y:103(A):A:H8	1.79	0.65
31:y:1130:A:C5	31:y:1146:A:N6	2.64	0.65
31:y:1369:C:H5	42:j:112:LYS:HB2	1.62	0.65
31:y:1401:G:OP1	31:y:1402:4OC:OP2	2.13	0.65
31:y:1451:A:OP2	31:y:1452:C:N4	2.29	0.65
37:e:72:GLU:O	37:e:75:PHE:HB2	1.96	0.65
39:g:11:ASN:CB	39:g:86:ARG:HH21	2.09	0.65
40:h:120:ILE:HG22	40:h:124:LEU:HD11	1.77	0.65
41:i:35:ILE:C	41:i:39:LEU:HD23	2.21	0.65
41:i:90:GLY:C	50:r:34:LYS:HD3	2.21	0.65
45:m:52:ARG:N	45:m:52:ARG:CZ	2.59	0.65
50:r:11:VAL:O	50:r:12:SER:HB2	1.95	0.65
52:t:45:VAL:HG22	52:t:62:ILE:HG12	1.76	0.65
53:u:48:LYS:HB3	53:u:51:GLU:OE2	1.96	0.65
1:w:95:G:O2'	25:W:41:ILE:HG12	1.96	0.65
1:w:151:C:O2'	1:w:152:G:H5'	1.96	0.65
1:w:188:G:H8	1:w:188:G:OP2	1.80	0.65
1:w:356:G:O2'	1:w:357:A:H5'	1.97	0.65
1:w:564:C:H2'	1:w:565:C:C6	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:586:A:H2	1:w:809:G:N3	1.94	0.65
1:w:628:G:C6	1:w:636:G:N2	2.65	0.65
1:w:850:C:N3	1:w:851:U:C5	2.64	0.65
1:w:925:C:H3'	1:w:925:C:C6	2.32	0.65
1:w:1017:G:C2'	1:w:1018:C:H6	2.08	0.65
1:w:1381:G:C8	1:w:1382:G:C8	2.84	0.65
1:w:1413:G:P	1:w:1413:G:H8	2.19	0.65
1:w:1592:C:C2'	1:w:1593:G:H8	2.06	0.65
1:w:1614:A:C2	1:w:1614:A:OP1	2.49	0.65
1:w:1672:C:H5	1:w:1673:U:C6	2.13	0.65
1:w:1756:G:H3'	1:w:1756:G:H8	1.60	0.65
1:w:1772:G:N3	1:w:1774:C:OP1	2.28	0.65
1:w:2066:C:N4	1:w:2067:G:C6	2.63	0.65
1:w:2079:U:N3	1:w:2241:A:C2	2.64	0.65
1:w:2128:C:H5''	3:A:37:LYS:HE3	1.77	0.65
1:w:2312:U:O5'	1:w:2312:U:H6	1.80	0.65
1:w:2478:A:H5'	1:w:2528:U:C4'	2.27	0.65
1:w:2675:A:H61	1:w:2732:G:H1	1.44	0.65
1:w:2787:C:O2	1:w:2787:C:H2'	1.96	0.65
1:w:2818:G:C4'	1:w:2837:G:C4'	2.67	0.65
1:w:2818:G:O4'	1:w:2837:G:H4'	1.95	0.65
1:w:2837:G:O5'	1:w:2837:G:H8	1.79	0.65
1:w:2899:G:O5'	1:w:2899:G:C8	2.43	0.65
2:x:1:U:H2'	2:x:2:C:H6	1.60	0.65
2:x:35:U:H2'	2:x:36:C:O4'	1.96	0.65
2:x:52:A:OP1	2:x:52:A:C4'	2.44	0.65
2:x:81:G:C6	2:x:96:G:O6	2.49	0.65
3:A:29:LEU:O	3:A:33:LEU:HG	1.97	0.65
3:A:165:ARG:O	3:A:171:ALA:HB1	1.96	0.65
4:B:27:THR:CG2	4:B:83:GLU:CG	2.74	0.65
4:B:260:ARG:HH11	4:B:262:ARG:HA	1.60	0.65
5:C:38:THR:HG22	5:C:40:GLU:HG3	1.78	0.65
5:C:156:MET:HE2	5:C:156:MET:HA	1.77	0.65
7:E:71:THR:HG23	7:E:89:GLY:O	1.96	0.65
7:E:107:LEU:O	7:E:111:LEU:HB2	1.96	0.65
7:E:135:LEU:HD12	7:E:136:ARG:N	2.10	0.65
8:F:60:ARG:NH2	8:F:60:ARG:CB	2.42	0.65
10:H:24:VAL:O	10:H:24:VAL:HG13	1.96	0.65
10:H:79:ASN:HA	10:H:147:ALA:CA	2.27	0.65
15:M:71:ARG:HG3	15:M:105:ALA:CA	2.26	0.65
16:N:27:THR:O	16:N:28:VAL:CG2	2.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:70:VAL:HG13	16:N:71:GLY:H	1.62	0.65
20:R:17:ALA:CB	20:R:26:TYR:HB3	2.27	0.65
20:R:84:ALA:N	20:R:85:PRO:CD	2.60	0.65
23:U:40:GLN:CD	23:U:41:ARG:H	2.04	0.65
23:U:68:GLU:CB	23:U:80:HIS:H	2.03	0.65
24:V:12:PRO:HG3	24:V:62:VAL:C	2.21	0.65
25:W:14:ARG:HG3	25:W:54:LYS:HE2	1.77	0.65
31:y:118:U:C5	31:y:288:A:C6	2.85	0.65
31:y:366:C:N4	31:y:367:U:O4	2.29	0.65
31:y:425:G:C5	31:y:426:G:C8	2.83	0.65
31:y:479:C:C3'	31:y:480:U:C6	2.77	0.65
31:y:564:C:H42	50:r:31:LEU:HD21	1.60	0.65
31:y:776:G:H4'	31:y:777:A:N7	2.11	0.65
31:y:842:C:H4'	31:y:848:C:H41	1.59	0.65
31:y:954:G:O5'	31:y:954:G:H8	1.78	0.65
31:y:959:A:H2'	31:y:960:U:H4'	1.78	0.65
31:y:1013:G:N2	31:y:1016:A:C6	2.51	0.65
31:y:1068:G:O2'	31:y:1069:C:H5'	1.96	0.65
31:y:1109:C:OP1	31:y:1189:C:O2'	2.07	0.65
31:y:1114:C:O2	47:o:61:TRP:HA	1.96	0.65
31:y:1176:A:H2'	31:y:1177:G:C1'	2.25	0.65
31:y:1290:G:O2'	31:y:1291:G:H5''	1.97	0.65
31:y:1375:A:O2'	40:h:102:ARG:NH2	2.29	0.65
31:y:1498:UR3:C5	34:l:1:U:O2'	2.25	0.65
31:y:1516:G:O2'	31:y:1518:MA6:P	2.55	0.65
35:c:27:LYS:HE2	35:c:193:ASP:OD2	1.96	0.65
37:e:98:GLU:CD	37:e:103:ASN:ND2	2.54	0.65
37:e:110:PHE:N	37:e:110:PHE:HD1	1.94	0.65
38:f:99:GLY:O	38:f:100:VAL:C	2.38	0.65
39:g:100:ASN:CB	51:s:28:GLU:HA	2.26	0.65
41:i:44:PHE:CD1	41:i:79:VAL:HB	2.31	0.65
42:j:4:TYR:HB2	42:j:19:LEU:O	1.95	0.65
42:j:10:ARG:HH11	42:j:105:ASP:HB3	1.60	0.65
47:o:27:CYS:SG	47:o:29:ARG:NH2	2.67	0.65
52:t:51:VAL:O	52:t:51:VAL:HG12	1.96	0.65
53:u:30:LYS:O	53:u:33:ILE:HG12	1.96	0.65
1:w:56:A:N3	1:w:127:A:H2'	2.11	0.65
1:w:65:C:C2	1:w:66:C:C6	2.85	0.65
1:w:138:G:N2	1:w:140:A:OP2	2.30	0.65
1:w:308:G:N2	1:w:329:G:N2	2.33	0.65
1:w:992:C:O5'	18:P:75:PHE:HE1	1.80	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:993:G:N7	1:w:994:C:C5	2.64	0.65
1:w:1022:G:N1	1:w:1141:U:C5	2.64	0.65
1:w:1215:G:H2'	1:w:1216:G:C5'	2.26	0.65
1:w:1335:U:H2'	1:w:1336:A:C8	2.31	0.65
1:w:1423:G:C2'	1:w:1424:G:H8	2.10	0.65
1:w:1479:G:C6	1:w:1480:G:C8	2.85	0.65
1:w:1592:C:C2'	1:w:1593:G:C8	2.75	0.65
1:w:1696:G:H2'	1:w:1697:G:O4'	1.97	0.65
1:w:1717:G:C6	1:w:1743:G:N2	2.65	0.65
1:w:1827:C:OP1	1:w:1971:A:C1'	2.41	0.65
1:w:2028:U:H2'	1:w:2029:G:C8	2.31	0.65
1:w:2100:G:N3	1:w:2101:G:C8	2.64	0.65
1:w:2184:G:H2'	1:w:2185:C:C6	2.31	0.65
1:w:2270:G:H21	23:U:19:LYS:HE3	1.61	0.65
1:w:2354:G:C4'	23:U:35:ASN:HA	2.27	0.65
1:w:2362:G:C4	1:w:2363:C:C6	2.84	0.65
1:w:2603:G:C6	1:w:2604:U:C6	2.84	0.65
1:w:2654:A:C5	1:w:2666:C:N4	2.65	0.65
1:w:2697:G:C2	1:w:2711:A:C2	2.85	0.65
1:w:2853:C:H6	1:w:2853:C:O5'	1.79	0.65
1:w:2900:A:C6	1:w:2901:C:C4	2.85	0.65
4:B:88:ARG:HG2	4:B:88:ARG:NH1	2.09	0.65
4:B:97:TYR:O	4:B:98:VAL:CG2	2.44	0.65
7:E:74:LYS:HD2	7:E:86:MET:HB3	1.77	0.65
8:F:141:VAL:HG13	8:F:144:VAL:HG12	1.76	0.65
9:G:98:ALA:HB2	9:G:111:PRO:HG2	1.76	0.65
11:I:114:ILE:HG13	11:I:115:VAL:HG23	1.76	0.65
12:J:79:ARG:CG	12:J:81:GLN:NE2	2.58	0.65
12:J:147:LEU:HD11	12:J:149:GLU:CD	2.21	0.65
13:K:62:GLY:O	13:K:63:LYS:CB	2.44	0.65
14:L:1:MET:HE3	14:L:2:ARG:NH1	2.10	0.65
14:L:64:ARG:NH1	14:L:64:ARG:HB3	2.11	0.65
14:L:108:GLY:O	14:L:110:PRO:HD3	1.97	0.65
15:M:35:ILE:HD12	15:M:65:VAL:O	1.96	0.65
16:N:66:VAL:HG22	16:N:71:GLY:N	2.11	0.65
22:T:99:TYR:HE1	22:T:125:LEU:HD22	1.58	0.65
24:V:26:ARG:HG3	24:V:34:THR:CB	2.25	0.65
26:X:9:VAL:CG1	26:X:32:GLN:HA	2.26	0.65
29:a:34:TRP:CE3	29:a:41:ILE:HG13	2.31	0.65
29:a:61:LEU:O	29:a:64:TYR:HE1	1.78	0.65
31:y:104:G:O2'	31:y:105:G:C5'	2.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:329:A:C6	31:y:332:G:C4	2.85	0.65
31:y:362:G:O2'	31:y:364:A:N7	2.27	0.65
31:y:476:G:C4	31:y:477:G:N7	2.65	0.65
31:y:572:A:C5'	31:y:917:G:H5'	2.26	0.65
31:y:575:G:O2'	31:y:576:G:P	2.55	0.65
31:y:675:A:C2	31:y:676:A:O4'	2.49	0.65
31:y:713:G:C2'	31:y:714:G:C8	2.79	0.65
31:y:817:C:H5''	31:y:819:A:C5'	2.18	0.65
31:y:889:A:O3'	31:y:890:G:H4'	1.97	0.65
31:y:918:A:C2'	31:y:919:A:C8	2.80	0.65
31:y:1237:C:H5'	31:y:1238:A:O4'	1.95	0.65
31:y:1326:C:P	54:v:17:THR:HB	2.36	0.65
31:y:1331:G:OP2	31:y:1331:G:C5	2.48	0.65
32:z:66:U:H2'	32:z:67:C:O4'	1.95	0.65
33:o:41:U:H4'	40:h:143:ARG:HD2	1.79	0.65
35:c:97:TRP:CD2	35:c:172:ILE:HB	2.31	0.65
35:c:170:GLU:C	35:c:172:ILE:H	2.03	0.65
36:d:119:ARG:NH2	36:d:123:GLN:HG3	2.11	0.65
37:e:58:LEU:O	37:e:61:LYS:HG3	1.97	0.65
37:e:199:ASN:HD22	37:e:202:LEU:H	1.35	0.65
39:g:85:VAL:O	39:g:85:VAL:CG2	2.44	0.65
40:h:125:MET:C	40:h:127:ALA:N	2.49	0.65
41:i:52:ASP:CA	41:i:57:PRO:HA	2.27	0.65
44:l:62:GLN:CA	44:l:94:ALA:HB2	2.23	0.65
45:m:102:GLY:O	45:m:103:VAL:CG2	2.45	0.65
46:n:38:GLY:O	46:n:40:ASN:N	2.29	0.65
46:n:99:ARG:HB3	46:n:101:GLN:CD	2.21	0.65
48:p:53:HIS:O	48:p:54:ARG:C	2.38	0.65
48:p:71:GLN:C	48:p:73:GLU:N	2.52	0.65
53:u:15:ARG:HA	53:u:18:GLN:HE21	1.61	0.65
1:w:25:U:C4	1:w:26:G:N1	2.64	0.65
1:w:38:A:C6	1:w:442:G:C2	2.85	0.65
1:w:399:G:N7	1:w:400:G:C5	2.65	0.65
1:w:618(A):G:C4	1:w:618(B):C:C4	2.84	0.65
1:w:696:G:H21	1:w:767:U:H1'	1.56	0.65
1:w:764:A:N6	1:w:1789:A:C2	2.64	0.65
1:w:784:A:OP1	1:w:2588:G:O3'	2.14	0.65
1:w:968:G:H2'	1:w:969:U:O4'	1.97	0.65
1:w:969:U:H2'	1:w:970:C:C5	2.31	0.65
1:w:1264:G:N2	1:w:2015:A:H62	1.94	0.65
1:w:1692:U:O2'	1:w:1693:U:C6	2.49	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1764:G:O2'	1:w:1765:C:C5'	2.41	0.65
1:w:1779:U:OP2	1:w:1784:A:N6	2.29	0.65
1:w:1860:G:O2'	3:A:206:LYS:HD3	1.96	0.65
1:w:2085:C:C5'	4:B:263:ARG:HH12	2.05	0.65
1:w:2108:C:O2	1:w:2108:C:H2'	1.96	0.65
1:w:2133:G:H1'	1:w:2158:A:H61	1.61	0.65
1:w:2133:G:H1'	1:w:2158:A:N6	2.11	0.65
1:w:2307:G:N2	1:w:2308:G:H5'	2.11	0.65
1:w:2517:C:H6	1:w:2517:C:C5'	2.10	0.65
1:w:2776:A:N3	1:w:2781:A:H5'	2.11	0.65
4:B:8:PRO:HA	4:B:14:ARG:HA	1.79	0.65
4:B:34:VAL:C	4:B:35:LYS:HD3	2.22	0.65
4:B:143:HIS:HA	4:B:156:ALA:HB1	1.78	0.65
4:B:175:LEU:HD23	4:B:175:LEU:O	1.96	0.65
5:C:5:LEU:CD1	5:C:31:CYS:HB2	2.26	0.65
5:C:9:VAL:HG23	5:C:25:VAL:O	1.97	0.65
5:C:116:VAL:CG2	5:C:122:PHE:CD1	2.79	0.65
5:C:180:ASN:C	5:C:181:LEU:HD22	2.21	0.65
6:D:190:ASP:O	6:D:194:TRP:HB3	1.96	0.65
7:E:77:ILE:CG2	32:z:56:C:C2	2.79	0.65
8:F:146:ALA:C	8:F:148:ILE:N	2.53	0.65
13:K:71:ASP:OD2	13:K:96:VAL:HG23	1.96	0.65
13:K:132:VAL:HG13	13:K:133:ARG:N	2.12	0.65
13:K:136:ALA:O	13:K:137:TYR:CD1	2.48	0.65
14:L:54:LEU:HA	14:L:57:ARG:HG2	1.78	0.65
14:L:73:VAL:HG13	14:L:77:ARG:NH2	2.12	0.65
29:a:22:VAL:HG11	29:a:53:PRO:HA	1.78	0.65
30:b:24:TYR:HB2	30:b:34:GLN:O	1.95	0.65
31:y:36:C:H2'	31:y:37:U:H6	1.58	0.65
31:y:36:C:C2'	31:y:37:U:H5	2.01	0.65
31:y:62:U:O2'	31:y:379:C:H1'	1.97	0.65
31:y:123:C:C2'	31:y:124:G:H5'	2.27	0.65
31:y:130:A:H4'	31:y:130:A:OP2	1.97	0.65
31:y:376:G:C6	31:y:377:G:C5	2.84	0.65
31:y:404:U:H2'	31:y:405:U:H5'	1.78	0.65
31:y:503:C:C2	31:y:504:C:C5	2.85	0.65
31:y:565:U:C5	31:y:566:G:N9	2.65	0.65
31:y:571:U:H3'	31:y:572:A:H5''	1.73	0.65
31:y:659:U:N3	31:y:660:G:N7	2.45	0.65
31:y:715:A:H4'	31:y:777:A:N1	2.12	0.65
31:y:758:G:C8	31:y:758:G:O5'	2.49	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1067:A:O2'	31:y:1068:G:C5'	2.45	0.65
31:y:1106:G:H4'	36:d:172:ARG:HD2	1.79	0.65
31:y:1158:C:C2'	31:y:1158:C:O2	2.45	0.65
31:y:1321:C:C2	31:y:1322:C:N4	2.65	0.65
31:y:1419:G:O6	31:y:1482:G:C6	2.48	0.65
32:z:18:G:C4'	32:z:60:U:O4	2.44	0.65
32:z:70:G:H2'	32:z:71:G:O4'	1.96	0.65
33:0:64:A:C3'	33:0:65:G:C8	2.79	0.65
37:e:9:CYS:CB	37:e:22:LYS:HG3	2.27	0.65
37:e:100:ARG:CZ	37:e:137:SER:CA	2.74	0.65
39:g:14:LEU:HD12	39:g:14:LEU:N	2.11	0.65
39:g:98:LEU:HD23	51:s:29:PHE:O	1.97	0.65
40:h:72:ARG:HD3	40:h:138:LYS:CE	2.24	0.65
41:i:51:VAL:CG1	41:i:52:ASP:H	2.06	0.65
41:i:103:VAL:O	41:i:104:ARG:HB2	1.94	0.65
41:i:118:VAL:O	41:i:119:LEU:HG	1.97	0.65
43:k:79:ARG:HD2	43:k:79:ARG:H	1.61	0.65
49:q:6:LEU:HD21	49:q:28:ARG:NH1	2.11	0.65
50:r:5:VAL:O	50:r:6:LEU:HB3	1.96	0.65
51:s:59:SER:HB2	51:s:62:GLU:HB2	1.78	0.65
52:t:33:THR:HG22	52:t:50:ALA:O	1.96	0.65
1:w:35:G:O6	1:w:36:G:C6	2.50	0.65
1:w:146:G:H3'	1:w:147:U:C6	2.30	0.65
1:w:388:G:P	24:V:33:LYS:HB3	2.35	0.65
1:w:519:U:O3'	19:Q:25:ARG:NH2	2.30	0.65
1:w:569:U:O2	1:w:947:G:H1'	1.97	0.65
1:w:591:C:C4	1:w:592:G:N7	2.65	0.65
1:w:763:G:C6	1:w:765:G:C5	2.85	0.65
1:w:1182:A:OP2	1:w:1182:A:H8	1.80	0.65
1:w:1278:A:OP1	1:w:1278:A:C4'	2.39	0.65
1:w:1536:A:N7	1:w:1537:C:H5	1.95	0.65
1:w:1753:G:C2'	1:w:1754:C:O5'	2.44	0.65
1:w:1920:C:C2'	1:w:1921:G:H5'	2.27	0.65
1:w:2146:C:H2'	1:w:2147:G:O4'	1.97	0.65
1:w:2290:G:C2	1:w:2343:C:H1'	2.32	0.65
1:w:2294:C:H5'	1:w:2294:C:H6	1.60	0.65
1:w:2305:A:H2'	1:w:2306:C:H5'	1.79	0.65
1:w:2472:G:O6	1:w:2476:A:C4'	2.45	0.65
1:w:2576:G:H8	1:w:2580:U:O4	1.80	0.65
1:w:2653:U:C4	1:w:2654:A:N1	2.65	0.65
1:w:2667:C:H2'	1:w:2668:G:C1'	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2842:G:C4	1:w:2843:G:C8	2.84	0.65
2:x:44:G:N2	2:x:47:C:O2	2.29	0.65
2:x:63:G:C2'	2:x:64:C:C5'	2.57	0.65
2:x:66:A:N6	2:x:108:C:C6	2.59	0.65
4:B:9:TYR:HD1	4:B:9:TYR:H	1.41	0.65
4:B:64:ILE:CD1	4:B:67:PHE:HZ	2.09	0.65
4:B:84:TYR:CG	4:B:85:ASP:N	2.62	0.65
4:B:92:ILE:HA	4:B:105:ILE:O	1.97	0.65
5:C:137:HIS:HD1	5:C:138:PRO:HD2	1.60	0.65
7:E:6:ALA:O	7:E:10:LYS:HB2	1.96	0.65
8:F:97:ARG:N	8:F:125:VAL:HG11	2.11	0.65
9:G:15:VAL:HG13	9:G:17:GLN:HE21	1.61	0.65
9:G:26:ALA:HB1	9:G:31:LEU:HB2	1.78	0.65
9:G:127:VAL:HA	9:G:141:LYS:HG2	1.79	0.65
10:H:95:TYR:HE1	10:H:109:PRO:O	1.80	0.65
12:J:45:LEU:O	12:J:47:ASP:N	2.29	0.65
13:K:37:LEU:HG	13:K:128:LYS:N	2.12	0.65
13:K:66:ILE:HG22	13:K:104:PHE:CD2	2.32	0.65
14:L:2:ARG:HG3	14:L:3:HIS:N	2.10	0.65
19:Q:48:ALA:O	19:Q:51:LEU:HD13	1.97	0.65
20:R:12:VAL:HB	20:R:27:THR:HB	1.79	0.65
23:U:37:LEU:HG	23:U:38:VAL:H	1.61	0.65
23:U:75:LEU:HD13	23:U:75:LEU:O	1.97	0.65
25:W:22:GLU:CA	25:W:25:VAL:HG13	2.25	0.65
27:Y:8:LYS:NZ	27:Y:8:LYS:HB2	2.12	0.65
31:y:5:U:O2	31:y:5:U:C2'	2.45	0.65
31:y:243:A:C2'	31:y:244:U:OP2	2.44	0.65
31:y:265:G:O2'	31:y:267:C:OP1	2.13	0.65
31:y:361:G:C2'	31:y:362:G:C8	2.80	0.65
31:y:404:U:C4	31:y:405:U:C5	2.85	0.65
31:y:491:G:N3	31:y:492:G:C8	2.65	0.65
31:y:798:G:C4	31:y:799:G:C8	2.84	0.65
31:y:890:G:O2'	31:y:891:U:OP2	2.15	0.65
31:y:896:C:O3'	50:r:101:ARG:CZ	2.45	0.65
31:y:1014:A:H2'	31:y:1015:A:C5'	2.27	0.65
31:y:1074:G:C4	31:y:1075:C:C5	2.84	0.65
31:y:1188:A:H1'	47:o:60:SER:CB	2.26	0.65
31:y:1439:C:N3	31:y:1440:C:C2	2.64	0.65
35:c:28:PHE:CD1	35:c:29:ALA:N	2.65	0.65
38:f:116:THR:O	38:f:117:ASP:C	2.39	0.65
40:h:120:ILE:O	40:h:124:LEU:CG	2.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:35:ILE:HG22	41:i:39:LEU:HD22	1.78	0.65
41:i:119:LEU:HB2	41:i:124:ALA:CB	2.26	0.65
42:j:12:GLU:N	42:j:12:GLU:OE2	2.30	0.65
47:o:25:VAL:N	47:o:39:LEU:HD23	2.10	0.65
50:r:8:GLY:HA3	50:r:59:ILE:CG1	2.16	0.65
50:r:103:GLY:C	50:r:104:LYS:HD2	2.22	0.65
53:u:56:MET:HE3	53:u:84:LEU:CD2	2.26	0.65
1:w:8:A:H5'	10:H:74:PHE:CZ	2.31	0.65
1:w:372:G:H8	24:V:68:PRO:HD3	1.59	0.65
1:w:488:G:O2'	1:w:492:A:N6	2.25	0.65
1:w:497:A:O2'	1:w:498:G:H5'	1.97	0.65
1:w:610:C:C6	1:w:610:C:O5'	2.50	0.65
1:w:612:G:H2'	1:w:616:A:N6	2.12	0.65
1:w:669:G:N7	1:w:801:G:O6	2.29	0.65
1:w:690:G:H4'	1:w:780:G:OP1	1.97	0.65
1:w:706:A:N6	1:w:725:G:C1'	2.55	0.65
1:w:712:G:C2	1:w:720:C:N3	2.65	0.65
1:w:817:C:H5'	1:w:932:G:O6	1.95	0.65
1:w:834:C:H2'	1:w:835:A:O4'	1.97	0.65
1:w:850:C:H4'	26:X:18:ASP:O	1.97	0.65
1:w:1349:A:N3	1:w:1349:A:H3'	2.12	0.65
1:w:1751:C:C3'	1:w:1752:C:H6	2.09	0.65
1:w:1801:G:N3	1:w:1801:G:H2'	2.12	0.65
1:w:2357:U:H5'	1:w:2361:A:H61	1.62	0.65
1:w:2450:A:H2	32:z:76:A:H2'	1.61	0.65
1:w:2772:C:O5'	1:w:2772:C:C6	2.48	0.65
1:w:2795:G:C2'	1:w:2798:C:OP2	2.42	0.65
1:w:2887:U:N3	1:w:2888:C:C5	2.64	0.65
2:x:38:C:H2'	2:x:39:A:O4'	1.96	0.65
2:x:42:C:C2'	2:x:43:C:C6	2.77	0.65
2:x:63:G:H2'	2:x:64:C:C4'	2.26	0.65
2:x:94:C:H2'	2:x:95:U:H6	1.61	0.65
4:B:113:VAL:O	4:B:114:GLY:C	2.40	0.65
4:B:118:VAL:CG1	4:B:129:ASN:HD21	2.10	0.65
4:B:130:ALA:C	4:B:190:TYR:CE1	2.75	0.65
5:C:3:GLY:CA	5:C:198:VAL:HB	2.26	0.65
5:C:5:LEU:HD13	5:C:31:CYS:CB	2.27	0.65
5:C:55:ASN:ND2	5:C:75:VAL:CG2	2.55	0.65
7:E:148:MET:HA	7:E:148:MET:HE3	1.78	0.65
9:G:147:GLN:HG3	9:G:148:GLU:H	1.62	0.65
14:L:73:VAL:HG13	14:L:77:ARG:HH21	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:17:ARG:NH1	15:M:89:ARG:CD	2.60	0.65
15:M:38:GLN:HA	15:M:50:SER:HA	1.79	0.65
21:S:44:ILE:O	21:S:44:ILE:HG13	1.95	0.65
22:T:28:MET:HE2	22:T:29:TYR:CA	2.22	0.65
25:W:12:GLU:O	25:W:14:ARG:N	2.29	0.65
25:W:12:GLU:C	25:W:14:ARG:N	2.53	0.65
25:W:54:LYS:C	25:W:55:ARG:HD2	2.22	0.65
26:X:5:LYS:CB	26:X:57:GLU:O	2.44	0.65
26:X:15:TYR:CB	26:X:16:PRO:HD2	2.25	0.65
31:y:116:A:H3'	31:y:117:G:C8	2.31	0.65
31:y:322:C:C2'	31:y:323:U:O4'	2.42	0.65
31:y:373:A:C2'	31:y:374:A:H5'	2.26	0.65
31:y:375:U:O2'	49:q:28:ARG:NH1	2.28	0.65
31:y:571:U:H2'	31:y:917:G:C4'	2.17	0.65
31:y:613:C:O2'	31:y:614:A:H5'	1.97	0.65
31:y:758:G:H8	31:y:758:G:O5'	1.79	0.65
31:y:767:A:O2'	31:y:768:A:H5'	1.97	0.65
31:y:102(C):C:N1	31:y:1029:G:C8	2.65	0.65
31:y:1045:C:H2'	31:y:1046:A:H5'	1.77	0.65
31:y:1078:U:H6	31:y:1078:U:H3'	1.60	0.65
31:y:1365:G:N2	31:y:1366:C:O2	2.30	0.65
31:y:1402:4OC:C3'	31:y:1403:C:H6	2.09	0.65
31:y:1477:C:H2'	31:y:1478:C:H6	1.62	0.65
32:z:61:C:O2'	32:z:62:C:H5'	1.96	0.65
35:c:23:ARG:HH22	35:c:40:HIS:CE1	2.11	0.65
35:c:55:PHE:CD1	35:c:55:PHE:C	2.75	0.65
35:c:211:ILE:HG23	35:c:214:ILE:HD11	1.79	0.65
36:d:184:TYR:CE2	36:d:201:TYR:CD2	2.85	0.65
37:e:8:VAL:HB	37:e:22:LYS:HG2	1.79	0.65
37:e:155:LEU:CB	37:e:158:ILE:HG12	2.27	0.65
37:e:205:GLU:O	37:e:206:PHE:C	2.39	0.65
39:g:89:MET:CE	39:g:90:VAL:H	2.09	0.65
41:i:69:ARG:H	41:i:74:PRO:HB2	1.62	0.65
42:j:48:GLU:HB2	42:j:49:PRO:HD3	1.79	0.65
45:m:7:ASN:O	45:m:8:GLN:C	2.39	0.65
46:n:53:VAL:O	46:n:57:ARG:HG3	1.96	0.65
48:p:4:THR:HB	48:p:6:GLU:HG2	1.78	0.65
50:r:29:HIS:O	50:r:33:GLY:HA2	1.96	0.65
1:w:270(W):G:C2	1:w:270(X):G:N7	2.65	0.65
1:w:349:G:H3'	1:w:350:U:C6	2.31	0.65
1:w:414:C:O2	1:w:1869:G:O5'	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:457:A:O3'	1:w:458:G:H4'	1.96	0.65
1:w:533:G:O2'	17:O:42:ALA:HA	1.97	0.65
1:w:655:A:C5'	1:w:656:G:OP1	2.43	0.65
1:w:1030:G:OP1	13:K:126:PRO:O	2.15	0.65
1:w:1133:U:O4	1:w:2026:C:O2	2.14	0.65
1:w:1196:C:O4'	1:w:1226:A:C2	2.50	0.65
1:w:1363:C:H1'	1:w:1809:A:N3	2.11	0.65
1:w:1364:G:H2'	1:w:1367:A:N6	2.11	0.65
1:w:1502:C:H2'	1:w:1503:U:H5'	1.79	0.65
1:w:1526:G:O2'	1:w:1527:G:H5'	1.97	0.65
1:w:1560:G:C4	1:w:1561:G:C8	2.84	0.65
1:w:1759:A:O4'	1:w:2714:G:N2	2.30	0.65
1:w:1759:A:H5''	1:w:2715:C:H1'	1.77	0.65
1:w:1774:C:O2'	1:w:1979:C:H1'	1.95	0.65
1:w:1798:U:OP2	1:w:1798:U:H6	1.79	0.65
1:w:1805:U:C2	1:w:1813:G:C2	2.85	0.65
1:w:2006:C:C5'	1:w:2048:G:H5''	2.20	0.65
1:w:2088:G:C2	1:w:2232:U:N3	2.64	0.65
1:w:2094:G:H3'	1:w:2095:C:C6	2.31	0.65
1:w:2187:G:H3'	1:w:2188:C:C5'	2.24	0.65
1:w:2558:C:O5'	1:w:2558:C:H6	1.79	0.65
1:w:2567:G:H2'	1:w:2568:C:O4'	1.97	0.65
1:w:2584:U:H2'	1:w:2585:U:H2'	1.79	0.65
2:x:39:A:H1'	2:x:44:G:N2	2.11	0.65
5:C:5:LEU:HD13	5:C:31:CYS:SG	2.37	0.65
5:C:11:MET:O	5:C:12:THR:CG2	2.40	0.65
5:C:96:PHE:HA	5:C:100:GLU:OE1	1.96	0.65
12:J:6:LEU:O	12:J:8:PRO:HD3	1.96	0.65
12:J:82:GLY:O	12:J:83:VAL:HB	1.94	0.65
12:J:95:VAL:HB	12:J:125:VAL:HB	1.79	0.65
13:K:82:ARG:HD3	13:K:82:ARG:N	2.12	0.65
13:K:121:ALA:O	13:K:124:LYS:HG3	1.96	0.65
14:L:66:VAL:HG12	14:L:70:LEU:HD12	1.79	0.65
22:T:45:ASP:O	22:T:49:ARG:HG3	1.97	0.65
24:V:12:PRO:O	24:V:13:ILE:HD12	1.97	0.65
28:Z:14:LYS:HA	28:Z:20:ALA:CB	2.27	0.65
31:y:59:A:H2'	31:y:59:A:N3	2.11	0.65
31:y:420:U:OP1	31:y:513:C:H5''	1.97	0.65
31:y:560:U:H4'	31:y:562:C:H5'	1.79	0.65
31:y:667:G:H4'	48:p:51:HIS:HB2	1.79	0.65
31:y:1007:C:H2'	31:y:1008:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1040:U:H2'	31:y:1041:A:H8	1.60	0.65
31:y:1101:A:N3	31:y:1102:A:H1'	2.12	0.65
31:y:1276:G:H2'	31:y:1282:C:H1'	1.78	0.65
32:z:5:G:N3	32:z:5:G:H2'	2.10	0.65
38:f:79:GLU:CB	41:i:104:ARG:NH1	2.56	0.65
40:h:149:ARG:HB2	44:l:59:TYR:HB2	1.78	0.65
41:i:19:VAL:HG13	41:i:20:TYR:N	2.12	0.65
41:i:119:LEU:HD21	41:i:127:LEU:HD11	1.78	0.65
42:j:14:VAL:HG12	42:j:15:ALA:N	2.11	0.65
42:j:85:LEU:HD23	42:j:92:TYR:CB	2.19	0.65
48:p:54:ARG:HH11	48:p:55:GLY:CA	2.10	0.65
49:q:2:VAL:O	49:q:3:LYS:O	2.15	0.65
51:s:76:LEU:HB2	51:s:78:LEU:HD13	1.79	0.65
1:w:47:C:N4	1:w:179:G:C6	2.65	0.65
1:w:50:U:O5'	1:w:50:U:H6	1.80	0.65
1:w:79:G:N3	1:w:347:A:C2	2.64	0.65
1:w:127:A:H4'	1:w:128:C:C5	2.31	0.65
1:w:287:C:H6	1:w:287:C:O5'	1.80	0.65
1:w:392:C:C2	1:w:393:C:C5	2.84	0.65
1:w:459:U:H2'	1:w:460:A:H8	1.61	0.65
1:w:695:G:C6	1:w:768:G:C6	2.85	0.65
1:w:993:G:H2'	1:w:994:C:C5'	2.26	0.65
1:w:1079:C:O2'	1:w:1080:C:C5	2.49	0.65
1:w:1215:G:H2'	1:w:1216:G:O4'	1.95	0.65
1:w:1313:U:H5''	1:w:1332:G:O3'	1.96	0.65
1:w:1332:G:C6	1:w:1609:A:C2	2.85	0.65
1:w:1623:G:C6	1:w:1624:G:C5	2.85	0.65
1:w:1664:A:O4'	1:w:2686:G:C5'	2.44	0.65
1:w:1669:A:C2	1:w:1670:C:O4'	2.50	0.65
1:w:1793:C:H3'	1:w:1793:C:C6	2.31	0.65
1:w:2120:G:C2	1:w:2121:G:H8	2.15	0.65
1:w:2472:G:O6	1:w:2476:A:H4'	1.97	0.65
1:w:2563:U:C4'	11:I:27:GLY:O	2.45	0.65
1:w:2619:C:O4'	5:C:150:VAL:CG1	2.45	0.65
2:x:109:G:O2'	2:x:110:G:O5'	2.14	0.65
4:B:32:SER:OG	4:B:33:LEU:N	2.29	0.65
4:B:114:GLY:O	4:B:115:GLN:C	2.40	0.65
4:B:228:PRO:HD3	4:B:236:GLY:HA2	1.78	0.65
5:C:7:VAL:O	5:C:9:VAL:HG22	1.97	0.65
5:C:63:LEU:C	5:C:65:GLY:H	2.05	0.65
9:G:62:LYS:HD3	9:G:133:HIS:CD2	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:69:LYS:HD2	9:G:137:PRO:O	1.96	0.65
12:J:99:LEU:O	12:J:103:ALA:HB3	1.97	0.65
17:O:44:ASN:ND2	18:P:78:LYS:CB	2.57	0.65
20:R:8:ILE:H	25:W:26:ARG:HH12	1.45	0.65
21:S:38:ILE:CG1	21:S:60:PHE:CZ	2.80	0.65
22:T:48:PHE:C	22:T:50:GLN:H	2.05	0.65
24:V:90:ILE:HB	24:V:91:LYS:HZ1	1.62	0.65
26:X:8:LEU:CD1	26:X:33:GLN:H	2.09	0.65
31:y:49:U:C3'	31:y:50:A:C5'	2.74	0.65
31:y:117:G:C2	31:y:118:U:C2	2.85	0.65
31:y:119:A:N7	31:y:287:U:C2	2.64	0.65
31:y:141:A:H1'	31:y:182:U:C2	2.32	0.65
31:y:252:U:H1'	31:y:275:G:N2	2.11	0.65
31:y:674:G:H2'	31:y:675:A:C8	2.31	0.65
31:y:679:C:OP2	31:y:679:C:H5	1.78	0.65
31:y:909:A:C2'	31:y:1413:A:O2'	2.45	0.65
31:y:1350:A:H8	31:y:1350:A:O5'	1.79	0.65
31:y:1365:G:N2	31:y:1366:C:C2	2.64	0.65
31:y:1371:G:O5'	31:y:1371:G:C8	2.49	0.65
32:z:31:A:O5'	32:z:31:A:H8	1.78	0.65
32:z:64:A:H2'	32:z:65:G:C8	2.32	0.65
35:c:43:ASP:O	35:c:47:THR:HG22	1.96	0.65
37:e:101:LEU:CD1	37:e:138:TYR:O	2.45	0.65
37:e:143:GLY:O	37:e:184:LYS:HD2	1.97	0.65
40:h:100:ALA:O	40:h:103:TRP:HB2	1.97	0.65
41:i:50:ARG:HA	41:i:59:LEU:HA	1.79	0.65
41:i:56:LYS:HB2	41:i:58:TYR:CZ	2.32	0.65
44:l:109:VAL:HG13	51:s:85:LEU:O	1.97	0.65
47:o:8:GLU:HG2	47:o:9:LYS:N	2.12	0.65
49:q:5:ARG:HG2	49:q:22:THR:HG21	1.79	0.65
1:w:455:C:C5'	1:w:456:C:OP2	2.40	0.65
1:w:458:G:H2'	28:Z:39:ARG:HD2	1.78	0.65
1:w:459:U:H4'	28:Z:40:TRP:CZ3	2.32	0.65
1:w:515:A:N1	1:w:1260:G:O2'	2.24	0.65
1:w:590:A:C6	1:w:668:G:C2	2.85	0.65
1:w:694:U:C2	1:w:695:G:N7	2.64	0.65
1:w:887:A:H8	1:w:889:C:O2'	1.80	0.65
1:w:932:G:C5'	1:w:933:A:OP1	2.36	0.65
1:w:937:U:H2'	1:w:938:G:C1'	2.27	0.65
1:w:942:G:H5''	12:J:35:HIS:N	2.12	0.65
1:w:1189:A:O5'	1:w:1189:A:C8	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1208:C:C2	1:w:1209:G:C8	2.84	0.65
1:w:1312:U:H5'	1:w:1313:U:C5	2.31	0.65
1:w:1343:G:C2'	1:w:1344:G:C5'	2.58	0.65
1:w:1477:A:C2	1:w:1517:G:C2	2.86	0.65
1:w:1540:G:H3'	1:w:1541:U:C5	2.32	0.65
1:w:1718:G:N3	1:w:1718:G:H2'	2.12	0.65
1:w:1742:C:C4	1:w:1743:G:C5	2.85	0.65
1:w:1799:G:O6	4:B:179:SER:CA	2.45	0.65
1:w:1882:C:H6	1:w:1882:C:O5'	1.79	0.65
1:w:2019:A:H5''	17:O:27:LEU:HD11	1.79	0.65
1:w:2029:G:O6	1:w:2033:A:OP1	2.15	0.65
1:w:2169:A:H2'	1:w:2169:A:N3	2.12	0.65
1:w:2190:G:H2'	1:w:2191:G:H8	1.62	0.65
1:w:2461:C:O5'	1:w:2461:C:C6	2.45	0.65
1:w:2545:G:N2	1:w:2565:A:C2	2.64	0.65
1:w:2795:G:OP2	1:w:2795:G:C8	2.49	0.65
2:x:26:A:C3'	2:x:27:C:C5	2.76	0.65
4:B:20:ASP:O	4:B:91:ARG:NH1	2.29	0.65
4:B:158:ALA:O	4:B:159:ALA:HB3	1.96	0.65
4:B:212:SER:HA	4:B:217:ARG:HD2	1.79	0.65
5:C:20:ALA:HB3	11:I:72:PRO:O	1.97	0.65
7:E:19:LEU:CD2	7:E:25:TYR:CE2	2.80	0.65
7:E:83:ARG:O	7:E:84:LYS:C	2.40	0.65
7:E:99:MET:HE3	7:E:99:MET:C	2.22	0.65
7:E:170:ARG:O	7:E:173:LEU:HB3	1.97	0.65
9:G:1:MET:C	9:G:3:VAL:N	2.54	0.65
9:G:125:GLU:HA	9:G:143:SER:HA	1.77	0.65
10:H:75:VAL:CG1	10:H:76:VAL:N	2.60	0.65
11:I:71:ARG:O	11:I:73:ASP:N	2.30	0.65
12:J:35:HIS:CG	12:J:36:LYS:N	2.52	0.65
12:J:71:VAL:HG22	12:J:72:PRO:CD	2.28	0.65
14:L:53:HIS:O	14:L:57:ARG:HG2	1.97	0.65
16:N:98:LYS:O	16:N:100:TYR:HD1	1.80	0.65
18:P:21:ARG:HD2	18:P:93:GLU:HG3	1.78	0.65
18:P:38:LEU:HD21	18:P:58:VAL:HG12	1.79	0.65
21:S:11:ASP:HA	21:S:24:VAL:HG23	1.79	0.65
21:S:23:ARG:HD3	21:S:38:ILE:CG2	2.27	0.65
21:S:45:VAL:HA	21:S:58:GLY:N	2.12	0.65
23:U:49:LYS:O	23:U:81:VAL:CG2	2.45	0.65
26:X:5:LYS:CE	26:X:7:LYS:CE	2.72	0.65
31:y:89:U:C2'	31:y:90:C:C6	2.73	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:173:U:C5	31:y:198:G:O2'	2.50	0.65
31:y:253:U:C2'	31:y:254:G:O4'	2.44	0.65
31:y:281:G:O3'	31:y:282:A:H8	1.78	0.65
31:y:330:C:C2'	31:y:331:G:C5'	2.75	0.65
31:y:383:A:H8	31:y:383:A:O5'	1.79	0.65
31:y:504:C:C2	31:y:542:G:N2	2.65	0.65
31:y:507:C:C6	31:y:508:C:H6	2.15	0.65
31:y:607:A:H2'	31:y:607:A:N3	2.11	0.65
31:y:651:C:N4	31:y:652:U:O4	2.30	0.65
31:y:936:C:H2'	31:y:1382:C:H42	1.62	0.65
31:y:1142:G:H2'	31:y:1143:G:O4'	1.96	0.65
31:y:1146:A:C4	31:y:1147:C:C6	2.85	0.65
31:y:1225:A:H3'	31:y:1226:C:H5	1.61	0.65
31:y:1349:A:C5'	42:j:121:ARG:HB3	2.24	0.65
31:y:1373:G:O2'	40:h:31:MET:HE1	1.97	0.65
31:y:1500:A:OP1	31:y:1504:G:O3'	2.15	0.65
35:c:23:ARG:HE	35:c:24:TRP:N	1.93	0.65
35:c:133:LYS:O	35:c:136:VAL:CG1	2.45	0.65
36:d:88:ARG:O	36:d:92:ALA:N	2.28	0.65
36:d:89:GLU:HA	36:d:92:ALA:HB3	1.79	0.65
37:e:61:LYS:HG2	37:e:206:PHE:CD2	2.32	0.65
38:f:76:ILE:HG21	38:f:92:LYS:C	2.21	0.65
38:f:89:ILE:HD11	38:f:134:ALA:HB1	1.78	0.65
40:h:111:ARG:CD	40:h:119:ARG:O	2.44	0.65
44:l:48:ILE:HD11	44:l:64:ALA:HA	1.78	0.65
45:m:72:GLU:O	45:m:73:GLY:C	2.39	0.65
46:n:97:PRO:CA	46:n:110:ARG:HD2	2.27	0.65
49:q:4:ILE:HD11	49:q:21:VAL:HG13	1.78	0.65
50:r:21:VAL:CG1	50:r:22:LEU:N	2.59	0.65
50:r:60:ILE:HG23	50:r:72:ARG:O	1.96	0.65
50:r:77:VAL:HG12	50:r:78:GLU:HG3	1.79	0.65
52:t:40:ILE:HD11	52:t:70:LYS:O	1.97	0.65
1:w:145:G:C3'	1:w:146:G:C5'	2.72	0.64
1:w:205:G:C2'	1:w:206:U:OP2	2.45	0.64
1:w:322:A:OP1	6:D:163:ARG:CB	2.34	0.64
1:w:441:U:C2'	1:w:442:G:H8	2.10	0.64
1:w:534:U:HO2'	17:O:45:TYR:C	2.05	0.64
1:w:546:C:H3'	1:w:547:A:C8	2.31	0.64
1:w:705:A:P	1:w:726:G:N2	2.69	0.64
1:w:842:G:H2'	1:w:843:G:O4'	1.97	0.64
1:w:987:G:C5	1:w:988:A:C5	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1018:C:H2'	1:w:1018:C:O2	1.97	0.64
1:w:1033:U:C3'	30:b:18:ARG:NH1	2.52	0.64
1:w:1066:U:O2	1:w:1069:A:OP2	2.14	0.64
1:w:1072:C:C2	1:w:1093:G:O6	2.50	0.64
1:w:1208:C:OP2	1:w:1208:C:C5	2.50	0.64
1:w:1303:G:H8	1:w:1303:G:O5'	1.80	0.64
1:w:1313:U:C4'	1:w:1332:G:H4'	2.27	0.64
1:w:1383:C:O2'	1:w:1384:A:C5'	2.35	0.64
1:w:1434:A:C2	1:w:1435:G:C8	2.85	0.64
1:w:1604:C:O2	1:w:1610:A:N1	2.30	0.64
1:w:1652:A:C8	1:w:1653:G:N7	2.65	0.64
1:w:1712:C:N4	1:w:1747:G:C2	2.65	0.64
1:w:1848:A:H3'	1:w:1849:G:H8	1.60	0.64
1:w:1916:A:C8	1:w:1916:A:OP2	2.51	0.64
1:w:1970:A:H5'	1:w:1972:A:O2'	1.97	0.64
1:w:1992:G:H4'	1:w:1994:C:H41	1.60	0.64
1:w:2040:C:O5'	1:w:2040:C:H6	1.79	0.64
1:w:2073:C:C2'	1:w:2074:U:O4'	2.45	0.64
1:w:2080:G:H5'	24:V:23:LYS:HE2	1.79	0.64
1:w:2271:G:H5'	23:U:19:LYS:C	2.21	0.64
1:w:2283:C:N4	1:w:2389:G:C4	2.66	0.64
1:w:2290:G:N7	1:w:2291:U:C5	2.65	0.64
1:w:2305:A:C5	1:w:2306:C:C6	2.85	0.64
1:w:2459:A:H2'	1:w:2460:U:O4'	1.96	0.64
1:w:2803:C:O2'	1:w:2804:C:H5''	1.97	0.64
1:w:2850:A:O2'	1:w:2851:A:H5'	1.97	0.64
2:x:71:C:H2'	2:x:72:G:N9	2.13	0.64
4:B:36:PRO:HG3	4:B:61:LEU:HD23	1.78	0.64
4:B:77:ALA:O	4:B:117:VAL:HG23	1.97	0.64
4:B:121:PRO:HB3	4:B:132:PRO:HD2	1.78	0.64
4:B:164:GLN:HG3	4:B:176:ARG:CB	2.26	0.64
4:B:223:GLY:O	4:B:225:ALA:N	2.24	0.64
6:D:109:VAL:HA	6:D:112:ARG:HB2	1.79	0.64
6:D:112:ARG:CB	6:D:117:LYS:HE2	2.27	0.64
7:E:135:LEU:CD1	7:E:135:LEU:C	2.67	0.64
8:F:15:VAL:O	8:F:15:VAL:HG23	1.95	0.64
11:I:32:TYR:O	11:I:33:ALA:HB2	1.95	0.64
13:K:8:LYS:O	13:K:9:TYR:C	2.40	0.64
13:K:73:PRO:O	13:K:74:TYR:HB2	1.95	0.64
19:Q:17:VAL:CG2	19:Q:18:ARG:H	2.08	0.64
19:Q:17:VAL:O	19:Q:20:VAL:N	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:10:ARG:HG3	22:T:36:LYS:C	2.22	0.64
22:T:119:GLU:OE1	22:T:119:GLU:N	2.28	0.64
23:U:49:LYS:NZ	23:U:80:HIS:HB3	2.12	0.64
31:y:376:G:C2	31:y:377:G:C4	2.84	0.64
31:y:565:U:OP2	31:y:566:G:H5''	1.97	0.64
31:y:584:G:H21	31:y:585:G:H1'	1.62	0.64
31:y:605:U:C4	31:y:606:G:C5	2.85	0.64
31:y:613:C:C5'	37:e:85:LYS:HD3	2.26	0.64
31:y:668:G:C8	31:y:669:U:C5	2.85	0.64
31:y:782:A:H4'	31:y:1515:C:O4'	1.98	0.64
31:y:832:C:C2'	31:y:833:U:O5'	2.45	0.64
31:y:946:A:H2'	31:y:947:G:O4'	1.97	0.64
31:y:980:C:C2'	31:y:981:U:H5'	2.25	0.64
31:y:1062:U:H2'	31:y:1063:C:C6	2.31	0.64
31:y:1073:U:O2'	31:y:1074:G:C5'	2.44	0.64
31:y:1207:2MG:H3'	31:y:1208:C:H5	1.61	0.64
31:y:1266:G:O2'	31:y:1269:A:N6	2.30	0.64
31:y:1268:A:C1'	54:v:20:LYS:HB2	2.22	0.64
31:y:1379:G:H3'	40:h:4:ARG:HB2	1.78	0.64
31:y:1516:G:H2'	31:y:1517:G:O3'	1.96	0.64
32:z:5:G:C2	32:z:6:G:C8	2.85	0.64
33:0:24:G:C5	33:0:25:C:N3	2.65	0.64
33:0:27:C:C2	33:0:28:C:C4	2.85	0.64
35:c:172:ILE:HG13	35:c:173:ALA:H	1.61	0.64
36:d:109:PRO:C	36:d:111:LEU:H	2.05	0.64
45:m:57:VAL:CG2	45:m:67:ALA:CB	2.75	0.64
46:n:14:ARG:HB2	46:n:44:ARG:HD2	1.79	0.64
46:n:58:GLU:HA	46:n:61:GLU:HB3	1.78	0.64
46:n:81:LEU:HA	46:n:84:ILE:CD1	2.28	0.64
46:n:92:HIS:ND1	46:n:93:ARG:N	2.44	0.64
48:p:84:LYS:HD2	48:p:85:LEU:HG	1.77	0.64
50:r:27:PHE:O	50:r:36:ILE:HG13	1.97	0.64
53:u:62:LEU:HD12	53:u:62:LEU:C	2.22	0.64
53:u:100:ILE:HG22	53:u:101:GLY:N	2.12	0.64
1:w:38:A:H5'	6:D:45:SER:OG	1.97	0.64
1:w:46:C:OP2	1:w:46:C:H6	1.80	0.64
1:w:84:A:H2	1:w:98:G:H2'	1.62	0.64
1:w:463:G:N3	1:w:467:G:C6	2.65	0.64
1:w:515:A:C8	1:w:516:C:C5	2.85	0.64
1:w:565:C:H4'	18:P:81:TYR:OH	1.97	0.64
1:w:831:G:H5''	12:J:39:LYS:H	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:935:C:N3	1:w:936:C:N4	2.45	0.64
1:w:941:A:N1	1:w:942:G:C5	2.65	0.64
1:w:1133:U:H2'	1:w:1137:G:C5'	2.26	0.64
1:w:1263:U:H2'	1:w:1264:G:N9	2.11	0.64
1:w:1332:G:C6	1:w:1609:A:N1	2.65	0.64
1:w:1476:C:C2	1:w:1477:A:C8	2.85	0.64
1:w:2087:G:N2	1:w:2233:U:H1'	2.13	0.64
1:w:2165:G:C2'	1:w:2166:G:H5'	2.27	0.64
1:w:2459:A:C3'	1:w:2460:U:H6	2.09	0.64
1:w:2618:G:C2	5:C:150:VAL:HG21	2.32	0.64
1:w:2683:C:N3	1:w:2727:G:O2'	2.30	0.64
2:x:46:A:H2'	2:x:47:C:H5'	1.79	0.64
4:B:111:LEU:HD13	4:B:112:GLN:N	2.12	0.64
4:B:133:LEU:HB2	4:B:187:GLY:O	1.97	0.64
8:F:70:THR:O	8:F:74:ASN:ND2	2.30	0.64
9:G:101:LEU:CG	9:G:109:ILE:HD12	2.27	0.64
10:H:58:ARG:HA	10:H:139:LEU:HD13	1.80	0.64
10:H:132:LYS:HE2	10:H:132:LYS:N	2.12	0.64
11:I:69:VAL:O	11:I:70:LYS:HB3	1.97	0.64
12:J:71:VAL:HG22	12:J:72:PRO:HD3	1.78	0.64
13:K:75:THR:O	13:K:88:GLY:HA3	1.97	0.64
16:N:45:PHE:CD2	16:N:63:VAL:HG23	2.31	0.64
16:N:53:ARG:C	16:N:53:ARG:HD2	2.22	0.64
17:O:63:VAL:O	17:O:66:ASN:N	2.30	0.64
17:O:79:PHE:HD2	17:O:79:PHE:C	2.05	0.64
19:Q:72:LYS:CD	19:Q:106:ILE:HB	2.27	0.64
22:T:45:ASP:CG	22:T:49:ARG:HE	2.05	0.64
23:U:40:GLN:CG	23:U:41:ARG:H	2.11	0.64
25:W:46:GLN:C	25:W:48:HIS:H	2.04	0.64
30:b:11:CYS:HG	30:b:14:CYS:HG	0.68	0.64
31:y:66:G:C2	31:y:67:C:C2	2.84	0.64
31:y:96:G:C4	31:y:97:U:C5	2.85	0.64
31:y:159:G:N3	31:y:161:A:OP2	2.30	0.64
31:y:402:G:H5'	31:y:621:A:N3	2.12	0.64
31:y:609:A:H5'	49:q:9:PHE:CE1	2.32	0.64
31:y:626:U:C2'	31:y:627:G:O4'	2.43	0.64
31:y:662:G:O2'	31:y:836:G:H4'	1.97	0.64
31:y:754:C:C1'	48:p:69:TYR:HD1	2.07	0.64
31:y:818:G:H2'	31:y:819:A:C5'	2.24	0.64
31:y:861:G:N7	31:y:862:C:C5	2.65	0.64
31:y:1057:G:H5''	36:d:154:SER:CB	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1147:C:C4	31:y:1148:U:O2	2.50	0.64
31:y:1235:U:H5'	54:v:3:LYS:CG	2.13	0.64
31:y:1266:G:C3'	31:y:1268:A:OP2	2.45	0.64
31:y:1281:U:P	31:y:1282:C:H41	2.19	0.64
31:y:1408:A:O5'	31:y:1408:A:H8	1.80	0.64
36:d:123:GLN:OE1	36:d:124:ILE:N	2.28	0.64
37:e:108:LEU:HD11	37:e:174:LEU:HD21	1.79	0.64
37:e:170:VAL:HG11	37:e:176:LEU:HB3	1.77	0.64
38:f:67:VAL:HG21	38:f:140:ARG:HH22	1.62	0.64
38:f:127:ASN:HB3	38:f:130:ASN:OD1	1.97	0.64
40:h:14:PRO:HA	40:h:21:VAL:HB	1.80	0.64
40:h:88:PRO:CG	40:h:148:ASN:HB2	2.27	0.64
42:j:48:GLU:CB	42:j:49:PRO:CD	2.75	0.64
43:k:27:ALA:HA	43:k:32:ALA:O	1.97	0.64
44:l:77:MET:C	44:l:80:VAL:CG1	2.70	0.64
44:l:85:ARG:HG2	44:l:111:ASP:HB3	1.79	0.64
44:l:121:PRO:O	44:l:122:LYS:HE2	1.97	0.64
45:m:10:VAL:HG11	50:r:29:HIS:CE1	2.32	0.64
50:r:54:GLY:CA	50:r:85:VAL:HG11	2.28	0.64
53:u:81:LYS:HA	53:u:85:MET:HB2	1.79	0.64
1:w:270(G):U:C2'	1:w:270(H):C:C6	2.76	0.64
1:w:520:G:C2	1:w:521:G:C8	2.85	0.64
1:w:520:G:C2	1:w:521:G:N7	2.65	0.64
1:w:614:U:N3	1:w:615:G:H1'	2.11	0.64
1:w:671:C:C2'	1:w:672:C:H5''	2.21	0.64
1:w:683:C:C4'	28:Z:21:ARG:HH12	1.97	0.64
1:w:685:A:C2	1:w:787:U:H1'	2.32	0.64
1:w:809:G:H5'	1:w:1254:A:H1'	1.78	0.64
1:w:867:C:C4	1:w:912:C:H1'	2.29	0.64
1:w:879:G:H2'	1:w:880:G:H8	1.62	0.64
1:w:995:C:H1'	17:O:61:TRP:HZ2	1.61	0.64
1:w:998:C:O5'	1:w:998:C:C6	2.51	0.64
1:w:1014:U:C2	1:w:1015:G:C8	2.85	0.64
1:w:1033:U:C2'	30:b:18:ARG:NH1	2.54	0.64
1:w:1140:C:H5'	10:H:89:LYS:NZ	2.11	0.64
1:w:1171:G:H2'	1:w:1173:G:H5'	1.79	0.64
1:w:1369:G:C1'	1:w:1809:A:H62	2.09	0.64
1:w:1451:C:OP2	1:w:1451:C:H6	1.80	0.64
1:w:1636:C:H1'	1:w:1760:A:N1	2.12	0.64
1:w:1649:G:C2'	14:L:107:ASP:OD2	2.46	0.64
1:w:1805:U:C1'	4:B:50:THR:O	2.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1858:G:H2'	1:w:1883:G:N2	2.13	0.64
1:w:1992:G:O2'	1:w:1993:U:OP2	2.16	0.64
1:w:2029:G:N1	1:w:2033:A:N7	2.45	0.64
1:w:2049:G:N2	5:C:156:MET:SD	2.71	0.64
1:w:2135:A:C6	1:w:2156:G:O2'	2.49	0.64
1:w:2351:G:C2'	1:w:2366:A:N6	2.60	0.64
1:w:2540:C:H5''	1:w:2540:C:H6	1.61	0.64
1:w:2588:G:H8	1:w:2588:G:C5'	2.09	0.64
1:w:2784:C:H2'	1:w:2785:C:C4'	2.27	0.64
1:w:2851:A:C8	1:w:2852:G:C8	2.84	0.64
4:B:65:ILE:HG21	4:B:105:ILE:CA	2.25	0.64
4:B:236:GLY:O	4:B:237:GLU:C	2.40	0.64
5:C:15:PHE:HA	5:C:20:ALA:HA	1.79	0.64
6:D:127:VAL:O	6:D:129:GLY:N	2.30	0.64
7:E:97:ASP:HA	7:E:100:TRP:CB	2.22	0.64
9:G:53:ALA:O	9:G:57:ARG:HD3	1.97	0.64
10:H:39:ILE:O	10:H:40:ASP:CB	2.45	0.64
10:H:49:LEU:CA	10:H:52:LYS:HE3	2.24	0.64
13:K:35:VAL:CA	13:K:103:MET:HE1	2.27	0.64
13:K:59:ARG:HD2	13:K:59:ARG:H	1.60	0.64
14:L:53:HIS:HA	14:L:56:LYS:HE2	1.80	0.64
19:Q:51:LEU:HD22	19:Q:52:GLU:N	2.12	0.64
20:R:55:ASN:H	20:R:77:LYS:CD	2.09	0.64
20:R:57:LEU:O	20:R:58:HIS:CB	2.45	0.64
21:S:32:PRO:O	21:S:33:LYS:HB2	1.97	0.64
22:T:77:ASP:HB3	22:T:82:ARG:O	1.97	0.64
28:Z:14:LYS:C	28:Z:20:ALA:HB1	2.23	0.64
28:Z:21:ARG:C	28:Z:23:ARG:N	2.54	0.64
29:a:62:LEU:N	29:a:63:PRO:CD	2.60	0.64
31:y:106:C:H2'	31:y:107:G:C8	2.31	0.64
31:y:191(F):U:C2'	31:y:191(G):G:C8	2.77	0.64
31:y:523:A:N3	31:y:523:A:C2'	2.59	0.64
31:y:577:G:C4	31:y:816:A:C2	2.85	0.64
31:y:583:A:H2'	31:y:584:G:C1'	2.28	0.64
31:y:651:C:C2	31:y:652:U:C4	2.85	0.64
31:y:1048:G:OP1	47:o:3:ARG:N	2.24	0.64
31:y:1100:C:O2'	31:y:1102:A:O5'	2.09	0.64
35:c:85:ALA:O	35:c:92:TYR:CD2	2.50	0.64
36:d:42:LEU:HD23	36:d:46:GLU:HB3	1.78	0.64
37:e:14:ARG:HB3	37:e:15:GLU:OE1	1.97	0.64
41:i:45:ILE:O	41:i:46:LYS:HG3	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:11:PHE:O	43:k:16:LEU:HD21	1.98	0.64
43:k:67:THR:CG2	43:k:68:HIS:H	2.08	0.64
45:m:59:LEU:HD11	45:m:61:SER:CB	2.26	0.64
45:m:78:GLU:CG	45:m:79:HIS:H	2.07	0.64
45:m:117:SER:C	45:m:119:TYR:H	2.05	0.64
48:p:12:ILE:HD12	48:p:12:ILE:H	1.62	0.64
50:r:10:VAL:HG21	50:r:55:ASP:N	2.13	0.64
1:w:72:U:H4'	25:W:51:ARG:NH2	2.12	0.64
1:w:189:G:H2'	1:w:205:G:H22	1.63	0.64
1:w:245:G:C3'	12:J:71:VAL:HA	2.25	0.64
1:w:328:U:H3	1:w:332:A:N6	1.94	0.64
1:w:338:G:C2'	1:w:339:U:C6	2.80	0.64
1:w:346:A:O2'	1:w:348:G:N7	2.30	0.64
1:w:478:A:N6	1:w:502:A:H61	1.96	0.64
1:w:551:G:OP1	1:w:1220:A:C2	2.51	0.64
1:w:691:C:C2	1:w:692:C:C5	2.86	0.64
1:w:846:C:H1'	1:w:847:U:C6	2.33	0.64
1:w:936:C:H2'	1:w:937:U:O4'	1.97	0.64
1:w:938:G:H2'	1:w:938:G:N3	2.10	0.64
1:w:1072:C:O2	1:w:1093:G:O6	2.15	0.64
1:w:1319:G:C6	1:w:1320:C:N4	2.66	0.64
1:w:1540:G:C3'	1:w:1541:U:H6	2.11	0.64
1:w:1567:A:H4'	1:w:1568:G:C2	2.32	0.64
1:w:1612:C:C2'	1:w:1613:G:H5''	2.27	0.64
1:w:1782:C:O2'	1:w:1783:A:H5'	1.96	0.64
1:w:1833:U:C2	1:w:1834:U:C6	2.86	0.64
1:w:2019:A:N1	1:w:2035:G:N2	2.38	0.64
1:w:2027:G:C6	1:w:2037:G:O6	2.50	0.64
1:w:2076:U:OP1	1:w:2076:U:C3'	2.45	0.64
1:w:2236:C:C2'	1:w:2237:G:H5'	2.27	0.64
1:w:2290:G:C6	1:w:2343:C:C2	2.86	0.64
1:w:2298:A:OP2	1:w:2299:G:C8	2.50	0.64
1:w:2305:A:N7	1:w:2306:C:C5	2.65	0.64
1:w:2309:A:C8	1:w:2310:A:C4	2.85	0.64
1:w:2360:A:H2'	1:w:2361:A:OP1	1.97	0.64
1:w:2394:C:H5	29:a:30:ARG:NH1	1.94	0.64
1:w:2432:A:H8	1:w:2432:A:OP1	1.80	0.64
1:w:2512:C:H3'	1:w:2512:C:H6	1.60	0.64
1:w:2536:G:H3'	1:w:2537:U:H5	1.61	0.64
1:w:2572:A:H4'	1:w:2573:C:H5'	1.80	0.64
1:w:2574:G:H1'	5:C:143:ASN:CG	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2636:U:H2'	1:w:2637:U:C5	2.31	0.64
1:w:2692:C:H1'	1:w:2847:U:H1'	1.78	0.64
1:w:2714:G:O5'	1:w:2714:G:H8	1.78	0.64
1:w:2818:G:C1'	1:w:2837:G:H5'	2.27	0.64
1:w:2820:A:O3'	14:L:3:HIS:HA	1.98	0.64
1:w:2824:C:C5	1:w:2824:C:OP2	2.50	0.64
2:x:83:G:H2'	2:x:84:C:O4'	1.98	0.64
4:B:72:LYS:C	4:B:74:GLY:N	2.51	0.64
4:B:115:GLN:NE2	4:B:127:VAL:HB	2.11	0.64
5:C:28:ALA:HB3	5:C:180:ASN:CA	2.27	0.64
8:F:19:VAL:HA	8:F:24:VAL:HA	1.78	0.64
8:F:144:VAL:HG13	8:F:145:ALA:N	2.13	0.64
11:I:80:ASP:OD1	16:N:71:GLY:HA3	1.96	0.64
12:J:78:PRO:CB	12:J:110:TYR:CD2	2.80	0.64
12:J:96:THR:O	12:J:100:LEU:HD23	1.96	0.64
13:K:27:VAL:HG23	13:K:28:ALA:N	2.00	0.64
13:K:37:LEU:HG	13:K:128:LYS:H	1.63	0.64
14:L:12:ARG:HG2	14:L:13:HIS:N	2.11	0.64
16:N:38:ASN:N	16:N:38:ASN:HD22	1.95	0.64
17:O:8:VAL:O	17:O:11:ARG:HG2	1.97	0.64
17:O:50:ARG:HG2	17:O:50:ARG:HH21	1.63	0.64
19:Q:5:ALA:HB2	19:Q:54:ALA:HB2	1.78	0.64
20:R:32:PRO:HB3	20:R:73:ARG:O	1.97	0.64
22:T:72:ARG:O	22:T:73:GLN:CB	2.38	0.64
24:V:13:ILE:HG23	24:V:14:VAL:N	2.11	0.64
24:V:40:ARG:CD	24:V:41:ARG:H	2.10	0.64
24:V:66:HIS:O	24:V:70:VAL:HG23	1.98	0.64
31:y:36:C:N3	31:y:37:U:O4	2.31	0.64
31:y:515:G:C2	31:y:516:PSU:H1'	2.32	0.64
31:y:558:G:C4	31:y:559:A:C2	2.85	0.64
31:y:576:G:N2	31:y:759:A:H5''	2.08	0.64
31:y:714:G:H4'	31:y:775:G:HO2'	1.62	0.64
31:y:867:G:C2	31:y:868:C:N4	2.66	0.64
31:y:1310:G:H2'	31:y:1311:G:H8	1.63	0.64
31:y:1361:G:C8	31:y:1361:G:P	2.91	0.64
31:y:1364:U:O2'	31:y:1365:G:H5'	1.98	0.64
31:y:1509:C:H3'	31:y:1510:U:H6	1.62	0.64
35:c:71:VAL:HG13	35:c:164:VAL:HG23	1.78	0.64
35:c:129:GLU:O	35:c:131:PRO:CD	2.46	0.64
36:d:45:LYS:N	36:d:48:TYR:HB2	2.12	0.64
36:d:69:HIS:HD2	36:d:107:GLN:HE21	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:121:LYS:O	38:f:123:LEU:CD2	2.45	0.64
39:g:5:GLU:O	39:g:90:VAL:HA	1.98	0.64
39:g:11:ASN:HB2	39:g:86:ARG:HH21	1.61	0.64
41:i:80:ILE:C	41:i:82:HIS:N	2.53	0.64
43:k:34:VAL:HG22	43:k:35:SER:N	2.12	0.64
44:l:96:ARG:H	44:l:98:LEU:HG	1.62	0.64
46:n:116:THR:CG2	46:n:117:VAL:N	2.61	0.64
53:u:33:ILE:HG22	53:u:62:LEU:CD1	2.27	0.64
1:w:20:C:O2'	1:w:21:A:C5'	2.45	0.64
1:w:116:C:H4'	1:w:127:A:C1'	2.28	0.64
1:w:183:C:O2'	1:w:432:A:C1'	2.34	0.64
1:w:261:G:H4'	1:w:609(A):A:N1	2.12	0.64
1:w:399:G:H3'	1:w:400:G:H8	1.61	0.64
1:w:466:A:C8	1:w:466:A:P	2.90	0.64
1:w:515:A:H8	1:w:516:C:C5	2.16	0.64
1:w:682:G:H2'	1:w:683:C:C6	2.32	0.64
1:w:775:G:C5	1:w:794:G:N7	2.66	0.64
1:w:821:A:H5''	1:w:822:U:O5'	1.96	0.64
1:w:824:A:O5'	1:w:824:A:C8	2.46	0.64
1:w:842:G:C5	1:w:843:G:N7	2.66	0.64
1:w:991:C:H2'	1:w:992:C:C5'	2.28	0.64
1:w:1035:U:P	8:F:59:ARG:HH12	2.21	0.64
1:w:1092:C:H5''	8:F:170:ARG:CZ	2.28	0.64
1:w:1131:G:C8	1:w:2025:C:H4'	2.32	0.64
1:w:1225:G:C1'	18:P:86:GLY:O	2.43	0.64
1:w:1309:G:OP1	28:Z:9:ARG:CG	2.45	0.64
1:w:1369:G:N9	1:w:1809:A:N6	2.39	0.64
1:w:1445:C:H2'	1:w:1446:C:H6	1.61	0.64
1:w:1800:C:H41	1:w:1819:A:H8	1.44	0.64
1:w:1823:G:H2'	1:w:1824:G:O4'	1.98	0.64
1:w:2095:C:O2	1:w:2194:G:N2	2.22	0.64
1:w:2354:G:C6	1:w:2364:C:N4	2.65	0.64
1:w:2362:G:C6	1:w:2363:C:C4	2.86	0.64
1:w:2549:G:C2	1:w:2560:C:N3	2.65	0.64
1:w:2552:U:H6	1:w:2552:U:C5'	2.09	0.64
1:w:2588:G:C8	1:w:2588:G:C3'	2.80	0.64
1:w:2677:G:C8	1:w:2678:C:C5	2.85	0.64
1:w:2835:A:O2'	1:w:2836:U:H5	1.79	0.64
3:A:217:THR:HB	3:A:220:GLY:N	2.13	0.64
4:B:198:ASN:HB3	4:B:201:HIS:CD2	2.32	0.64
4:B:208:LYS:HE3	4:B:211:ARG:N	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:39:PRO:HD3	5:C:44:TYR:HA	1.80	0.64
6:D:26:HIS:CG	6:D:27:LEU:HD13	2.33	0.64
6:D:178:VAL:O	6:D:181:ILE:CG2	2.43	0.64
9:G:81:VAL:CG1	9:G:144:VAL:HG13	2.25	0.64
11:I:70:LYS:HA	11:I:76:ALA:HA	1.80	0.64
15:M:35:ILE:HD13	15:M:69:VAL:CB	2.13	0.64
18:P:54:GLY:C	18:P:56:SER:H	2.04	0.64
21:S:28:LYS:HA	21:S:35:TYR:CB	2.27	0.64
22:T:4:ARG:CG	22:T:58:VAL:HB	2.26	0.64
22:T:130:PRO:CA	22:T:133:ILE:HG12	2.26	0.64
23:U:49:LYS:O	23:U:51:VAL:N	2.30	0.64
23:U:80:HIS:O	23:U:81:VAL:C	2.40	0.64
24:V:27:GLU:HG3	33:O:74:C:H5''	1.80	0.64
24:V:65:SER:O	24:V:67:ILE:N	2.30	0.64
25:W:35:LEU:HD23	25:W:35:LEU:H	1.62	0.64
31:y:104:G:O2'	31:y:105:G:H5''	1.98	0.64
31:y:111:G:H21	31:y:389:A:H4'	1.62	0.64
31:y:117:G:O5'	31:y:117:G:H8	1.80	0.64
31:y:267:C:N3	31:y:268:C:H5	1.92	0.64
31:y:294:U:O2	31:y:303:A:C2	2.50	0.64
31:y:303:A:C2'	31:y:304:U:C5'	2.69	0.64
31:y:546:G:H4'	31:y:548:G:C3'	2.26	0.64
31:y:609:A:C5'	49:q:9:PHE:HE1	2.10	0.64
31:y:621:A:O2'	31:y:622:A:H5'	1.98	0.64
31:y:653:A:N3	41:i:56:LYS:HG3	2.12	0.64
31:y:789:U:O2	31:y:792:A:C8	2.51	0.64
31:y:892:A:H61	31:y:906:G:H1'	1.60	0.64
31:y:1012:U:H2'	31:y:1013:G:C5'	2.18	0.64
31:y:1106:G:C5'	36:d:172:ARG:CD	2.76	0.64
31:y:1268:A:O2'	54:v:19:GLY:C	2.40	0.64
31:y:1403:C:H1'	31:y:1500:A:N1	2.13	0.64
31:y:1509:C:C5	31:y:1510:U:C4	2.86	0.64
33:O:24:G:C4	33:O:25:C:C6	2.86	0.64
35:c:97:TRP:HB2	35:c:172:ILE:CG1	2.25	0.64
35:c:163:PHE:CB	35:c:185:ILE:HD11	2.22	0.64
36:d:110:ASN:O	36:d:111:LEU:HD23	1.97	0.64
37:e:28:SER:C	37:e:30:LYS:H	2.05	0.64
37:e:62:GLN:HG2	37:e:63:LYS:N	2.11	0.64
39:g:42:GLU:HG3	39:g:61:LEU:HB3	1.80	0.64
39:g:72:VAL:O	39:g:75:LEU:CD2	2.45	0.64
40:h:118:VAL:O	40:h:120:ILE:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:121:ALA:HA	40:h:124:LEU:HD12	1.80	0.64
40:h:147:ALA:HB1	44:l:59:TYR:OH	1.97	0.64
41:i:80:ILE:HG23	41:i:83:ILE:HG13	1.79	0.64
45:m:78:GLU:HG3	45:m:79:HIS:N	2.13	0.64
46:n:70:LEU:O	46:n:74:VAL:HG23	1.98	0.64
47:o:6:LEU:HA	47:o:23:ARG:CZ	2.28	0.64
47:o:34:TYR:HH	47:o:36:PHE:HD2	1.40	0.64
48:p:27:VAL:O	48:p:29:VAL:N	2.30	0.64
49:q:2:VAL:O	49:q:23:ASP:CA	2.41	0.64
1:w:13:A:HO2'	1:w:14:A:H8	0.73	0.64
1:w:14:A:C4	1:w:15:G:C1'	2.80	0.64
1:w:237:C:O2'	1:w:238:C:H5'	1.98	0.64
1:w:418:G:N3	1:w:419:C:C5	2.65	0.64
1:w:458:G:H2'	1:w:469:G:O6	1.97	0.64
1:w:480:A:H3'	1:w:481:G:C5'	2.23	0.64
1:w:531:C:H1'	17:O:28:ARG:NH2	2.13	0.64
1:w:569:U:C3'	1:w:570:G:H5'	2.27	0.64
1:w:669:G:N1	1:w:670:A:C4	2.66	0.64
1:w:765:G:C6	1:w:766:C:N3	2.66	0.64
1:w:781:A:C2	1:w:1776:G:C2	2.85	0.64
1:w:878:A:H8	1:w:878:A:O5'	1.81	0.64
1:w:917:A:C2	2:x:79:C:O2	2.50	0.64
1:w:982:C:O5'	1:w:982:C:H6	1.81	0.64
1:w:996:A:N6	1:w:1160:G:C6	2.66	0.64
1:w:1158:C:H5'	26:X:31:LEU:HB2	1.79	0.64
1:w:1342:A:C5	1:w:1397:U:H6	2.15	0.64
1:w:1364:G:H5''	24:V:8:SER:HB2	1.76	0.64
1:w:1369:G:C1'	1:w:1809:A:H61	2.01	0.64
1:w:1500:G:N2	4:B:100:GLY:HA3	2.12	0.64
1:w:1566:A:H8	1:w:1566:A:OP1	1.79	0.64
1:w:2396:G:N1	1:w:2397:G:C5	2.66	0.64
1:w:2450:A:N3	32:z:76:A:N3	2.45	0.64
1:w:2592:G:C8	1:w:2593:U:C5	2.86	0.64
1:w:2770:G:OP2	1:w:2770:G:C8	2.50	0.64
1:w:2896:C:H2'	1:w:2897:U:H6	1.61	0.64
5:C:77:ILE:CG2	5:C:79:ARG:HH21	2.10	0.64
6:D:96:LEU:HB3	6:D:97:PRO:HD2	1.77	0.64
8:F:54:ARG:HH11	8:F:61:HIS:HB2	1.62	0.64
8:F:87:LEU:HD21	8:F:133:VAL:CG1	2.27	0.64
8:F:124:GLU:OE1	8:F:134:SER:HB2	1.98	0.64
9:G:40:THR:CG2	9:G:43:ASN:CB	2.72	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:75:LEU:HD23	9:G:75:LEU:C	2.23	0.64
9:G:130:TYR:HD2	9:G:138:ILE:HG21	1.63	0.64
10:H:89:LYS:HD3	10:H:89:LYS:N	2.13	0.64
11:I:81:ASP:O	11:I:82:ASN:ND2	2.31	0.64
13:K:57:HIS:O	13:K:58:PHE:HD2	1.79	0.64
14:L:25:ALA:O	14:L:29:LEU:HB2	1.96	0.64
15:M:28:VAL:HG13	15:M:29:PHE:H	1.63	0.64
19:Q:4:LYS:C	19:Q:4:LYS:HD2	2.23	0.64
19:Q:101:SER:O	19:Q:102:HIS:ND1	2.31	0.64
30:b:26:ILE:HG12	30:b:33:LYS:CA	2.27	0.64
31:y:27:G:C2	31:y:557:G:C2	2.86	0.64
31:y:311:C:H2'	31:y:312:C:C6	2.33	0.64
31:y:667:G:C5'	48:p:51:HIS:CD2	2.76	0.64
31:y:695:A:H61	31:y:797:C:H4'	1.61	0.64
31:y:705:U:H3'	31:y:706:A:C8	2.32	0.64
31:y:738:C:C4	31:y:739:C:C4	2.85	0.64
31:y:745:C:OP1	31:y:851:G:O2'	2.14	0.64
31:y:826:C:O4'	41:i:12:ARG:HB2	1.98	0.64
31:y:976:G:H8	31:y:1358:U:C2'	2.08	0.64
31:y:103(B):G:O2'	31:y:103(C):G:H5'	1.98	0.64
31:y:1360:A:C2'	31:y:1361:G:N7	2.61	0.64
31:y:1365:G:C2	31:y:1366:C:N3	2.65	0.64
31:y:1446:A:N3	31:y:1446:A:H5''	2.12	0.64
32:z:65:G:C2	32:z:66:U:C5	2.85	0.64
35:c:21:ARG:HB2	35:c:23:ARG:HH12	1.63	0.64
35:c:161:ALA:HA	35:c:182:ILE:HG23	1.79	0.64
36:d:35:GLU:O	36:d:39:ILE:HD13	1.96	0.64
36:d:104:GLN:CG	36:d:105:GLU:H	2.08	0.64
36:d:110:ASN:HB3	36:d:141:VAL:HA	1.77	0.64
36:d:110:ASN:ND2	36:d:141:VAL:HA	2.10	0.64
38:f:74:GLY:HA2	38:f:115:VAL:HA	1.77	0.64
38:f:89:ILE:HD12	38:f:89:ILE:H	1.61	0.64
38:f:100:VAL:HG12	38:f:110:LEU:HD11	1.77	0.64
41:i:46:LYS:HG3	41:i:64:LYS:N	2.13	0.64
44:l:22:HIS:HB3	44:l:29:ILE:HD13	1.79	0.64
44:l:108:ILE:O	51:s:87:ARG:O	2.15	0.64
45:m:87:GLY:H	45:m:97:TYR:CB	2.11	0.64
45:m:115:SER:HB3	45:m:118:LYS:HG2	1.79	0.64
47:o:7:ILE:O	47:o:8:GLU:HB3	1.96	0.64
47:o:30:ALA:CA	47:o:33:VAL:HG13	2.27	0.64
51:s:61:LYS:HA	51:s:64:ARG:CG	2.26	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:t:80:TYR:CG	52:t:81:ARG:N	2.66	0.64
1:w:388:G:N9	1:w:390:A:N7	2.46	0.64
1:w:397:G:C8	1:w:397:G:OP2	2.51	0.64
1:w:450:G:C2	1:w:451:C:C5	2.83	0.64
1:w:480:A:H4'	21:S:44:ILE:CG2	2.26	0.64
1:w:616:A:H2'	1:w:617:G:H5'	1.80	0.64
1:w:697:C:N4	1:w:698:C:N4	2.42	0.64
1:w:802:A:C2'	1:w:803:U:O4'	2.46	0.64
1:w:873:G:H2'	1:w:874:G:C8	2.32	0.64
1:w:1000:A:OP2	1:w:1154:G:N1	2.31	0.64
1:w:1130:U:H2'	1:w:1131:G:H5''	1.79	0.64
1:w:1669:A:C2	1:w:1670:C:C1'	2.80	0.64
1:w:1696:G:O2'	1:w:1978:A:H4'	1.98	0.64
1:w:2301:C:O2'	1:w:2302:G:H5'	1.98	0.64
1:w:2335:A:O2'	1:w:2336:A:OP2	2.15	0.64
1:w:2340:G:H8	1:w:2340:G:O5'	1.81	0.64
1:w:2355:C:C2'	23:U:17:GLN:CD	2.70	0.64
1:w:2432:A:H2'	1:w:2433:A:H5'	1.79	0.64
1:w:2598:A:H5'	4:B:234:GLY:CA	2.28	0.64
1:w:2865:U:OP2	1:w:2865:U:H5	1.80	0.64
2:x:22:U:C2'	2:x:23:G:H8	2.06	0.64
2:x:82:G:H2'	2:x:83:G:N9	2.13	0.64
4:B:20:ASP:O	4:B:24:ILE:CA	2.46	0.64
4:B:117:VAL:CG1	4:B:118:VAL:H	2.10	0.64
5:C:28:ALA:O	5:C:30:PRO:HD3	1.96	0.64
5:C:35:GLN:HB2	5:C:48:GLN:OE1	1.96	0.64
5:C:102:VAL:CB	5:C:200:GLU:HA	2.27	0.64
7:E:13:GLU:O	7:E:17:PRO:HG3	1.97	0.64
7:E:93:THR:HG22	7:E:94:LEU:N	2.13	0.64
7:E:120:LEU:O	7:E:181:ARG:HB2	1.98	0.64
10:H:112:LYS:O	10:H:115:ALA:HB3	1.98	0.64
11:I:71:ARG:HB3	11:I:72:PRO:CD	2.26	0.64
14:L:31:HIS:CB	14:L:34:ILE:HD11	2.27	0.64
16:N:64:ARG:HD2	16:N:73:GLU:OE1	1.97	0.64
16:N:108:ARG:HG2	16:N:108:ARG:NH1	2.10	0.64
17:O:92:ARG:HG2	17:O:94:ASN:ND2	2.13	0.64
17:O:94:ASN:ND2	17:O:94:ASN:H	1.95	0.64
22:T:41:LEU:O	22:T:42:VAL:C	2.40	0.64
22:T:80:ARG:CG	22:T:81:ARG:N	2.57	0.64
23:U:50:ASN:CA	23:U:63:VAL:HB	2.19	0.64
24:V:55:GLY:O	24:V:56:GLN:HB2	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:85:LEU:O	24:V:86:SER:CB	2.44	0.64
26:X:43:ILE:H	26:X:43:ILE:HD12	1.53	0.64
28:Z:16:HIS:HA	28:Z:21:ARG:CG	2.11	0.64
31:y:130:A:O4'	31:y:130:A:P	2.56	0.64
31:y:139:G:OP2	31:y:139:G:C8	2.51	0.64
31:y:226:G:C6	31:y:227:G:O6	2.51	0.64
31:y:265:G:N2	31:y:267:C:C5'	2.58	0.64
31:y:434:U:C2	31:y:435:C:C5	2.86	0.64
31:y:645:C:H2'	31:y:646:U:C6	2.33	0.64
31:y:666:G:H22	48:p:52:SER:HB2	1.61	0.64
31:y:727:G:H8	31:y:727:G:O5'	1.81	0.64
31:y:837:G:N2	31:y:849:C:O2	2.30	0.64
31:y:1179:A:OP1	31:y:1179:A:C8	2.51	0.64
31:y:1337:G:H5''	31:y:1338:G:OP1	1.97	0.64
31:y:1471:G:C5	31:y:1472:U:C4	2.86	0.64
35:c:100:GLY:CA	35:c:104:ASN:HB2	2.28	0.64
35:c:211:ILE:C	35:c:214:ILE:HG12	2.22	0.64
37:e:122:ARG:O	37:e:123:HIS:C	2.40	0.64
38:f:79:GLU:HA	38:f:91:LEU:O	1.97	0.64
39:g:60:PHE:C	39:g:61:LEU:CD2	2.70	0.64
39:g:100:ASN:HB3	51:s:28:GLU:HA	1.79	0.64
40:h:25:ALA:HA	40:h:28:ASN:HD22	1.61	0.64
46:n:87:TYR:CD2	52:t:73:GLU:O	2.49	0.64
47:o:25:VAL:HG12	47:o:39:LEU:HD21	1.80	0.64
49:q:17:TYR:C	49:q:39:TYR:HB3	2.23	0.64
50:r:95:TYR:O	50:r:98:LEU:HD12	1.97	0.64
51:s:52:PRO:C	51:s:54:ARG:H	2.06	0.64
53:u:75:ASN:CB	53:u:79:ARG:HH12	2.10	0.64
53:u:75:ASN:CG	53:u:79:ARG:HH12	2.06	0.64
1:w:84:A:H2'	1:w:98:G:N2	2.13	0.64
1:w:127:A:H5''	1:w:128:C:C6	2.32	0.64
1:w:189:G:OP1	24:V:41:ARG:NH2	2.31	0.64
1:w:363(B):A:H2'	1:w:363(C):G:H8	1.61	0.64
1:w:817:C:OP2	1:w:817:C:H5	1.81	0.64
1:w:1109:C:C4	1:w:1110:G:N7	2.66	0.64
1:w:1187:G:H5''	18:P:82:ARG:NH2	2.13	0.64
1:w:1313:U:O2'	1:w:1314:C:H5'	1.97	0.64
1:w:1601:G:C2'	1:w:1602:U:H5'	2.27	0.64
1:w:1709:U:O2'	1:w:2859:G:N2	2.31	0.64
1:w:1800:C:H1'	1:w:1802:A:O4'	1.98	0.64
1:w:1805:U:N3	1:w:1813:G:C2	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1849:G:H2'	1:w:1849:G:N3	2.13	0.64
1:w:2043:C:H1'	1:w:2779:U:H3	1.63	0.64
1:w:2053:G:H4'	5:C:145:LYS:HG3	1.75	0.64
1:w:2216:G:H2'	1:w:2217:G:H8	1.62	0.64
1:w:2549:G:N1	1:w:2560:C:C4	2.66	0.64
1:w:2677:G:C6	1:w:2731:G:N1	2.65	0.64
1:w:2680:C:N3	1:w:2727:G:N1	2.39	0.64
1:w:2795:G:H1'	1:w:2801:A:H61	1.57	0.64
2:x:57:A:N7	7:E:27:ASN:CG	2.55	0.64
4:B:166:GLN:CG	31:y:712:A:H5''	2.28	0.64
5:C:4:ILE:CD1	5:C:91:VAL:HG12	2.24	0.64
6:D:117:LYS:HE3	6:D:185:GLU:O	1.97	0.64
6:D:183:ARG:NH2	12:J:7:ARG:HB3	2.11	0.64
9:G:44:LEU:HA	9:G:47:LEU:CD2	2.28	0.64
10:H:37:VAL:CG1	10:H:159:GLU:HA	2.28	0.64
13:K:34:LEU:HD22	13:K:118:LEU:CG	2.26	0.64
15:M:67:ARG:HA	15:M:101:LEU:HD23	1.80	0.64
16:N:48:ILE:HG22	16:N:49:VAL:N	2.11	0.64
16:N:127:ALA:O	16:N:128:GLU:C	2.39	0.64
17:O:89:GLU:O	17:O:90:VAL:HG23	1.98	0.64
17:O:106:PHE:HA	17:O:109:LEU:HD11	1.80	0.64
18:P:38:LEU:O	18:P:55:ALA:HB2	1.97	0.64
18:P:86:GLY:O	18:P:87:HIS:HD2	1.80	0.64
24:V:10:LYS:HA	24:V:48:LYS:HZ1	1.63	0.64
26:X:8:LEU:HD12	26:X:9:VAL:N	2.12	0.64
26:X:27:GLY:HA2	26:X:29:ARG:HH12	1.63	0.64
31:y:130:A:O2'	31:y:263:A:H1'	1.96	0.64
31:y:161:A:H2'	31:y:162:A:O4'	1.98	0.64
31:y:512:U:O2	31:y:513:C:C5	2.51	0.64
31:y:586:C:O4'	31:y:879:C:H5'	1.97	0.64
31:y:674:G:C2	31:y:675:A:N6	2.66	0.64
31:y:738:C:H2'	31:y:739:C:H6	1.57	0.64
31:y:777:A:C4	31:y:778:G:C8	2.86	0.64
31:y:979:C:C6	31:y:979:C:O5'	2.51	0.64
31:y:988:G:N2	31:y:989:C:H1'	2.12	0.64
31:y:1015:A:H2'	31:y:1016:A:C4'	2.28	0.64
31:y:103(C):G:H2'	31:y:1033:G:C8	2.32	0.64
31:y:1164:G:C5	31:y:1173:G:C2	2.85	0.64
35:c:130:ARG:HB3	35:c:131:PRO:CD	2.27	0.64
35:c:132:LYS:HA	35:c:135:GLN:CG	2.27	0.64
35:c:168:THR:HG23	35:c:191:ASP:O	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:151:VAL:O	36:d:199:LYS:O	2.16	0.64
37:e:66:ARG:O	37:e:68:TYR:N	2.31	0.64
38:f:43:LEU:HD13	38:f:43:LEU:N	2.12	0.64
38:f:89:ILE:HD11	38:f:134:ALA:HB3	1.78	0.64
40:h:16:LEU:HB2	42:j:44:VAL:HG11	1.80	0.64
41:i:13:ILE:HD12	41:i:13:ILE:N	2.13	0.64
43:k:24:VAL:O	43:k:28:ARG:CG	2.32	0.64
45:m:36:CYS:HB2	45:m:81:VAL:CA	2.27	0.64
50:r:56:VAL:HG23	50:r:81:ARG:NH1	2.13	0.64
1:w:26:G:C8	1:w:26:G:O5'	2.51	0.64
1:w:58:G:O2'	1:w:59:U:O5'	2.16	0.64
1:w:131:G:C2	1:w:132:G:N7	2.66	0.64
1:w:293:U:H3'	1:w:293:U:C6	2.33	0.64
1:w:371:A:H1'	1:w:373:U:N1	2.09	0.64
1:w:384:U:H2'	1:w:385:C:H5'	1.80	0.64
1:w:416:C:C6	1:w:416:C:H5''	2.33	0.64
1:w:479:A:O2'	1:w:481:G:H5'	1.97	0.64
1:w:515:A:C2'	1:w:516:C:H6	2.11	0.64
1:w:534:U:O2	17:O:49:HIS:NE2	2.31	0.64
1:w:563:G:C2	1:w:2018:G:N2	2.65	0.64
1:w:598:G:C1'	12:J:13:ASN:ND2	2.59	0.64
1:w:848:G:O6	1:w:931:G:N3	2.31	0.64
1:w:954:G:N2	1:w:955:C:O4'	2.31	0.64
1:w:1229:G:C3'	1:w:1230:C:H6	2.07	0.64
1:w:1257:C:O4'	6:D:77:ILE:CG1	2.46	0.64
1:w:1259:G:C5	1:w:1260:G:C5	2.85	0.64
1:w:1291:C:H3'	1:w:1291:C:C6	2.32	0.64
1:w:1384:A:H4'	1:w:1405:U:H1'	1.79	0.64
1:w:1663:C:C2'	1:w:1664:A:OP2	2.46	0.64
1:w:1828:G:P	4:B:222:ARG:HH22	2.20	0.64
1:w:2058:A:C5	1:w:2059:A:C8	2.86	0.64
1:w:2100:G:H2'	1:w:2101:G:H8	1.62	0.64
1:w:2122:U:O5'	1:w:2122:U:H6	1.81	0.64
1:w:2527:C:C2'	1:w:2528:U:C6	2.73	0.64
1:w:2532:G:H22	1:w:2663:G:H2'	1.62	0.64
1:w:2652:C:C3'	1:w:2653:U:H6	2.10	0.64
1:w:2691:C:N4	1:w:2719:G:C2	2.66	0.64
1:w:2819:G:C6	1:w:2828:C:C4	2.85	0.64
2:x:73:A:N7	2:x:103:U:C2	2.66	0.64
3:A:16:ASP:CB	3:A:19:LYS:HD2	2.26	0.64
3:A:53:ARG:N	3:A:53:ARG:NE	2.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:119:ARG:HE	5:C:157:ALA:CA	2.07	0.64
6:D:150:LEU:CB	6:D:169:VAL:HB	2.27	0.64
7:E:75:LYS:CB	7:E:77:ILE:HD13	2.25	0.64
8:F:12:PRO:C	8:F:14:GLY:N	2.56	0.64
10:H:127:LYS:CA	10:H:130:LEU:HD11	2.14	0.64
12:J:61:ARG:O	12:J:62:LEU:HB3	1.98	0.64
13:K:8:LYS:HE3	13:K:70:PRO:CG	2.28	0.64
13:K:27:VAL:HG12	13:K:135:ASP:CG	2.22	0.64
15:M:71:ARG:HA	15:M:108:GLY:O	1.97	0.64
18:P:5:VAL:CG2	18:P:6:LYS:H	2.01	0.64
18:P:85:LYS:HG2	18:P:86:GLY:N	2.13	0.64
19:Q:23:LEU:HB2	27:Y:25:LEU:HB2	1.80	0.64
22:T:99:TYR:CE1	22:T:125:LEU:HD13	2.32	0.64
25:W:26:ARG:HG3	25:W:29:LYS:HD3	1.78	0.64
26:X:40:THR:O	26:X:43:ILE:CB	2.40	0.64
31:y:15:G:P	31:y:1396:A:O2'	2.56	0.64
31:y:136:C:C2'	49:q:63:GLY:HA2	2.27	0.64
31:y:152:A:N6	31:y:169:C:C4	2.66	0.64
31:y:180:U:C2'	31:y:181:G:H5'	2.27	0.64
31:y:186(B):C:H5''	53:u:86:ARG:NH1	2.13	0.64
31:y:227:G:C2	31:y:228:A:N9	2.66	0.64
31:y:309:G:C6	31:y:310:G:N7	2.66	0.64
31:y:329:A:N1	31:y:332:G:C4	2.66	0.64
31:y:346:G:H2'	31:y:347:G:H4'	1.80	0.64
31:y:358:U:H3'	31:y:359:U:C5	2.33	0.64
31:y:375:U:H2'	31:y:376:G:C8	2.33	0.64
31:y:390:C:O2'	31:y:391:G:H5'	1.97	0.64
31:y:498:A:H61	31:y:546:G:H2'	1.63	0.64
31:y:573:A:O2'	31:y:574:A:H5'	1.98	0.64
31:y:765:G:C8	31:y:812:C:C4	2.85	0.64
31:y:872:A:N3	31:y:872:A:H2'	2.12	0.64
31:y:904:C:H2'	31:y:905:U:O4'	1.98	0.64
31:y:1195:C:C4	31:y:1197:G:C8	2.85	0.64
31:y:1228:C:O5'	46:n:114:ARG:HB2	1.98	0.64
31:y:1349:A:H8	31:y:1349:A:O5'	1.81	0.64
31:y:1410:G:H2'	31:y:1411:C:C6	2.33	0.64
31:y:1451:A:H5''	31:y:1452:C:H5	1.63	0.64
31:y:1526:G:C8	31:y:1527:C:C5	2.86	0.64
33:0:69:U:O5'	33:0:69:U:H6	1.80	0.64
35:c:110:GLN:N	35:c:110:GLN:CD	2.56	0.64
35:c:162:ILE:O	35:c:185:ILE:CD1	2.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:127:ARG:O	36:d:128:PHE:O	2.16	0.64
37:e:184:LYS:HG2	37:e:185:PHE:N	2.13	0.64
38:f:7:GLU:O	38:f:112:LEU:HD21	1.98	0.64
39:g:71:ARG:O	39:g:75:LEU:CD1	2.45	0.64
40:h:151:TYR:HA	40:h:153:HIS:CD2	2.32	0.64
44:l:58:PRO:O	44:l:90:GLY:HA2	1.98	0.64
46:n:73:GLU:OE2	46:n:76:ALA:HB3	1.97	0.64
47:o:13:THR:O	47:o:13:THR:HG22	1.97	0.64
47:o:40:CYS:C	47:o:42:ILE:N	2.54	0.64
48:p:54:ARG:HD2	48:p:55:GLY:CA	2.27	0.64
48:p:82:ILE:HD12	48:p:82:ILE:N	2.13	0.64
49:q:4:ILE:HB	49:q:66:PRO:CA	2.27	0.64
50:r:21:VAL:HG12	50:r:22:LEU:N	2.13	0.64
53:u:14:LYS:O	53:u:17:ARG:HB3	1.98	0.64
1:w:36:G:O2'	1:w:451:C:N1	2.31	0.64
1:w:227:A:HO2'	1:w:228:A:H5''	1.61	0.64
1:w:319:C:C4	1:w:320:A:C8	2.86	0.64
1:w:346:A:C5'	1:w:347:A:OP1	2.45	0.64
1:w:464:U:N3	1:w:465:G:C6	2.66	0.64
1:w:492:A:C3'	1:w:493:G:H8	2.02	0.64
1:w:508:G:H2'	1:w:508:G:N3	2.13	0.64
1:w:514:A:N6	1:w:515:A:N6	2.46	0.64
1:w:532:A:N3	1:w:2021:C:N4	2.45	0.64
1:w:613:U:H2'	1:w:615:G:O5'	1.98	0.64
1:w:615:G:C2	1:w:616:A:H1'	2.33	0.64
1:w:667:U:C4	1:w:668:G:C5	2.86	0.64
1:w:732:C:C2	1:w:733:G:H1'	2.32	0.64
1:w:834:C:H4'	29:a:51:ALA:CB	2.28	0.64
1:w:954:G:N2	1:w:2274:A:H2	1.95	0.64
1:w:1050:A:H1'	1:w:2751:G:C2	2.32	0.64
1:w:1175:U:H3'	1:w:1176:G:C8	2.32	0.64
1:w:1264:G:C5	1:w:1265:A:N6	2.66	0.64
1:w:1510:A:C6	1:w:1511:A:C2	2.86	0.64
1:w:1558:A:H2'	1:w:1560:G:O4'	1.98	0.64
1:w:1612:C:H2'	1:w:1613:G:H5''	1.78	0.64
1:w:1702:G:C6	1:w:1703:G:C5	2.86	0.64
1:w:1822:G:C2	1:w:1823:G:C8	2.86	0.64
1:w:2096:U:C3'	1:w:2097:C:H6	2.09	0.64
1:w:2333:A:O4'	1:w:2335:A:C5	2.50	0.64
1:w:2736:G:H2'	1:w:2737:G:C8	2.33	0.64
1:w:2808:U:N3	1:w:2892:A:N7	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2861:G:H2'	1:w:2862:G:C8	2.33	0.64
2:x:7:G:N3	15:M:38:GLN:NE2	2.46	0.64
3:A:21:TYR:CB	3:A:26:ALA:HB2	2.25	0.64
3:A:23:ILE:O	3:A:27:ALA:CB	2.46	0.64
4:B:106:ILE:CD1	4:B:197:GLY:H	2.09	0.64
5:C:81:ILE:CD1	5:C:81:ILE:H	2.11	0.64
5:C:176:ILE:HG22	5:C:181:LEU:HD23	1.80	0.64
6:D:112:ARG:O	6:D:117:LYS:CE	2.46	0.64
6:D:165:LEU:CG	6:D:170:THR:HB	2.26	0.64
6:D:177:ASN:HA	6:D:179:TYR:CE2	2.33	0.64
8:F:127:GLU:N	8:F:128:PRO:HA	2.13	0.64
11:I:66:LYS:O	11:I:67:LYS:O	2.16	0.64
13:K:5:ARG:O	13:K:6:ARG:HB3	1.96	0.64
13:K:98:LYS:HD2	13:K:101:ARG:HE	1.61	0.64
17:O:104:GLN:O	17:O:107:ALA:HB3	1.97	0.64
18:P:25:LEU:H	18:P:94:LEU:HD11	1.62	0.64
19:Q:85:VAL:HG22	19:Q:95:ILE:HG12	1.79	0.64
21:S:40:GLU:OE1	21:S:42:VAL:HG23	1.98	0.64
22:T:98:MET:C	22:T:125:LEU:CD1	2.64	0.64
22:T:150:LEU:CD2	22:T:154:ASP:HB2	2.27	0.64
26:X:18:ASP:O	26:X:19:GLN:C	2.41	0.64
31:y:117:G:C3'	31:y:118:U:C5	2.81	0.64
31:y:230:G:H5'	49:q:26:ARG:CD	2.27	0.64
31:y:259:G:C6	31:y:260:G:C6	2.86	0.64
31:y:314:C:C2'	31:y:315:A:C5'	2.56	0.64
31:y:326:G:C2'	31:y:327:A:C5'	2.75	0.64
31:y:451:A:H5'	31:y:452:A:C2	2.33	0.64
31:y:544:G:H2'	31:y:545:C:C6	2.33	0.64
31:y:559:A:C5'	31:y:561:U:OP1	2.43	0.64
31:y:577:G:H2'	31:y:578:C:H5'	1.80	0.64
31:y:1014:A:O4'	52:t:34:TRP:CE2	2.51	0.64
31:y:1058:G:H5''	36:d:199:LYS:NZ	2.13	0.64
31:y:1073:U:C2'	31:y:1074:G:O5'	2.46	0.64
31:y:1141:C:H2'	31:y:1142:G:C5'	2.11	0.64
31:y:1156:G:O5'	31:y:1156:G:C8	2.49	0.64
31:y:1206:G:C8	31:y:1207:2MG:H1'	2.33	0.64
31:y:1221:G:OP1	52:t:36:ARG:NH2	2.31	0.64
31:y:1234:C:H5'	31:y:1364:U:O2	1.97	0.64
31:y:1236:A:H2'	31:y:1237:C:O5'	1.98	0.64
32:z:8:4SU:C5'	32:z:8:4SU:H6	2.28	0.64
32:z:18:G:C1'	32:z:60:U:O4	2.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:25:ARG:HB3	37:e:30:LYS:O	1.98	0.64
38:f:36:ASP:O	38:f:37:ARG:HB2	1.97	0.64
45:m:22:LYS:O	45:m:24:PRO:CD	2.44	0.64
45:m:121:THR:CG2	45:m:122:LYS:N	2.61	0.64
46:n:48:LEU:O	46:n:53:VAL:HG23	1.98	0.64
47:o:34:TYR:CG	47:o:35:ARG:N	2.65	0.64
50:r:51:TYR:HD2	50:r:57:VAL:HG11	1.63	0.64
51:s:66:LEU:O	51:s:70:ILE:HD13	1.97	0.64
1:w:54:G:N2	1:w:126:A:H61	1.93	0.63
1:w:106:C:O2'	1:w:293:U:H5'	1.99	0.63
1:w:245:G:C4'	12:J:71:VAL:HA	2.27	0.63
1:w:281:G:C2'	1:w:359:A:N6	2.61	0.63
1:w:284:U:H2'	1:w:285:C:H6	1.63	0.63
1:w:363(F):U:N1	1:w:363(G):A:C8	2.66	0.63
1:w:557:U:C2	1:w:558:G:N7	2.66	0.63
1:w:612:G:C2'	1:w:616:A:N6	2.61	0.63
1:w:612:G:HO2'	1:w:616:A:H61	1.46	0.63
1:w:999:U:C2	1:w:1155:A:N6	2.66	0.63
1:w:1138:G:O2'	10:H:129:MET:N	2.31	0.63
1:w:1344:G:OP1	1:w:1345:C:C5	2.51	0.63
1:w:1381:G:C2'	1:w:1382:G:H5'	2.28	0.63
1:w:1475:G:C6	1:w:1519:G:C6	2.86	0.63
1:w:1577:C:H5'	1:w:1577:C:H6	1.62	0.63
1:w:1788:C:O5'	1:w:1788:C:H6	1.80	0.63
1:w:1806:C:OP1	4:B:250:TRP:HZ2	1.81	0.63
1:w:1897:G:N7	1:w:1898:U:C6	2.64	0.63
1:w:1913:A:H5''	1:w:1915:U:OP1	1.97	0.63
1:w:2029:G:C2	1:w:2033:A:C5	2.85	0.63
1:w:2056:G:H21	27:Y:6:VAL:N	1.86	0.63
1:w:2244:U:H6	1:w:2244:U:O5'	1.82	0.63
1:w:2317:C:H2'	1:w:2318:G:O4'	1.99	0.63
1:w:2535:G:H2'	1:w:2536:G:O4'	1.98	0.63
1:w:2572:A:N7	5:C:146:THR:HG23	2.13	0.63
1:w:2654:A:O4'	1:w:2656:U:C5	2.44	0.63
1:w:2659:G:N2	1:w:2661:G:H3'	2.13	0.63
1:w:2819:G:O6	1:w:2828:C:N4	2.31	0.63
1:w:2825:G:C6	1:w:2826:A:C4	2.86	0.63
4:B:123:ALA:CB	4:B:124:PRO:HD2	2.20	0.63
5:C:59:VAL:HG13	5:C:60:ASN:N	2.13	0.63
5:C:91:VAL:O	5:C:92:THR:HG23	1.97	0.63
5:C:152:LYS:HD2	5:C:153:GLY:N	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:22:ARG:O	7:E:23:PHE:CB	2.46	0.63
7:E:93:THR:CG2	7:E:94:LEU:N	2.61	0.63
7:E:137:GLU:O	7:E:138:GLN:CG	2.43	0.63
9:G:47:LEU:HD12	9:G:48:GLU:N	2.13	0.63
9:G:131:LYS:HE2	9:G:134:PRO:CA	2.28	0.63
10:H:65:TRP:CE3	10:H:71:MET:CE	2.81	0.63
10:H:83:ILE:HG22	10:H:84:ARG:N	2.12	0.63
12:J:88:LEU:HD21	12:J:90:ARG:NH2	2.13	0.63
13:K:14:ARG:HD2	13:K:14:ARG:N	2.12	0.63
13:K:26:TYR:CG	13:K:27:VAL:N	2.64	0.63
13:K:31:ASP:HB3	13:K:106:VAL:O	1.98	0.63
14:L:64:ARG:HH11	14:L:64:ARG:CG	2.11	0.63
17:O:66:ASN:O	17:O:70:ARG:HG3	1.98	0.63
18:P:85:LYS:NZ	18:P:86:GLY:H	1.96	0.63
19:Q:29:LEU:HG	19:Q:30:GLU:N	2.12	0.63
20:R:55:ASN:H	20:R:77:LYS:HD3	1.62	0.63
21:S:42:VAL:HB	21:S:61:ILE:HG21	1.79	0.63
23:U:47:PRO:HB3	23:U:51:VAL:HB	1.77	0.63
23:U:71:ASP:HB2	23:U:76:GLY:O	1.98	0.63
31:y:8:A:HO2'	31:y:9:G:P	2.20	0.63
31:y:427:U:C4	31:y:428:G:C6	2.87	0.63
31:y:553:A:H4'	45:m:30:PRO:CG	2.25	0.63
31:y:617:G:O6	31:y:623:C:N4	2.26	0.63
31:y:667:G:N1	31:y:668:G:C6	2.66	0.63
31:y:671:G:O2'	31:y:672:U:H5'	1.98	0.63
31:y:946:A:H8	31:y:946:A:P	2.21	0.63
31:y:1053:G:OP1	31:y:1054:C:C6	2.48	0.63
31:y:1061:G:C5	31:y:1062:U:C4	2.86	0.63
31:y:1306:A:H3'	31:y:1307:U:H6	1.63	0.63
35:c:108:ILE:HG22	35:c:109:SER:N	2.13	0.63
36:d:160:ALA:HB2	36:d:164:ARG:NH1	2.12	0.63
36:d:170:GLN:CG	36:d:171:GLY:H	2.10	0.63
37:e:15:GLU:HG3	37:e:59:ARG:HH22	1.63	0.63
37:e:41:GLY:O	37:e:45:GLN:HG2	1.99	0.63
37:e:128:VAL:HA	37:e:146:ILE:HD12	1.78	0.63
37:e:155:LEU:HB2	37:e:158:ILE:HG12	1.80	0.63
38:f:72:GLN:O	38:f:73:ASN:HB3	1.98	0.63
40:h:120:ILE:C	40:h:124:LEU:HD21	2.23	0.63
41:i:91:ARG:HD3	41:i:91:ARG:O	1.98	0.63
44:l:82:VAL:CG1	44:l:105:VAL:CA	2.76	0.63
49:q:59:TRP:CE3	49:q:59:TRP:HA	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:51:TYR:OH	50:r:75:ARG:N	2.31	0.63
1:w:44:A:H2'	1:w:45:G:O5'	1.99	0.63
1:w:270(O):G:H3'	1:w:270(O):G:C8	2.33	0.63
1:w:363(F):U:C6	1:w:363(G):A:C8	2.86	0.63
1:w:388:G:OP2	24:V:34:THR:N	2.31	0.63
1:w:593:G:C4	1:w:594:U:C5	2.86	0.63
1:w:600:G:C2'	1:w:601:C:C6	2.73	0.63
1:w:666:G:H5'	12:J:49:ARG:HB3	1.78	0.63
1:w:765:G:C4	1:w:766:C:C6	2.87	0.63
1:w:785:G:OP2	1:w:792:G:C8	2.50	0.63
1:w:800:A:O2'	1:w:802:A:H5'	1.98	0.63
1:w:968:G:O2'	1:w:969:U:H5'	1.96	0.63
1:w:979:G:H5''	1:w:980:A:C5'	2.28	0.63
1:w:1531:C:C2	1:w:1532:C:C5	2.86	0.63
1:w:1780:A:OP2	1:w:1781:C:C2'	2.46	0.63
1:w:1794:U:H2'	1:w:1795:C:C5	2.34	0.63
1:w:1838:C:HO2'	1:w:1839:G:P	2.21	0.63
1:w:1870:C:H2'	1:w:1870:C:O2	1.97	0.63
1:w:2061:G:O2'	1:w:2064:C:N4	2.31	0.63
1:w:2342:C:C4	1:w:2343:C:C6	2.86	0.63
1:w:2358:G:H22	12:J:55:ARG:CZ	2.10	0.63
1:w:2444:G:H5'	6:D:69:ARG:NH1	2.13	0.63
1:w:2491:U:H4'	1:w:2570:G:P	2.38	0.63
1:w:2528:U:H3'	1:w:2530:A:C8	2.33	0.63
1:w:2788:C:O2'	1:w:2809:A:H1'	1.98	0.63
2:x:17:C:H2'	2:x:18:G:C4'	2.28	0.63
2:x:48:A:H5'	15:M:95:HIS:ND1	2.13	0.63
2:x:57:A:C4	7:E:30:GLU:HB2	2.32	0.63
4:B:96:HIS:HA	4:B:102:LYS:HG3	1.80	0.63
5:C:51:PHE:CA	5:C:76:ARG:HB3	2.27	0.63
5:C:101:ARG:NE	5:C:169:ASN:HB3	2.14	0.63
5:C:203:LYS:NZ	5:C:203:LYS:HB2	2.12	0.63
6:D:38:LYS:HD3	6:D:38:LYS:C	2.21	0.63
6:D:60:TRP:CB	6:D:61:PRO:HD2	2.28	0.63
8:F:40:GLU:HG3	8:F:55:PRO:HB3	1.80	0.63
9:G:4:ILE:HG13	9:G:18:VAL:HG22	1.79	0.63
13:K:8:LYS:HE3	13:K:70:PRO:HB2	1.80	0.63
13:K:61:GLY:HA3	22:T:183:LEU:HG	1.79	0.63
13:K:134:ARG:CZ	13:K:137:TYR:H	2.10	0.63
16:N:38:ASN:HD22	16:N:38:ASN:H	1.46	0.63
16:N:85:LYS:HB3	16:N:85:LYS:HZ2	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:5:LYS:HG3	17:O:6:THR:H	1.63	0.63
17:O:17:ILE:CG2	17:O:35:ALA:HB3	2.28	0.63
17:O:63:VAL:C	17:O:65:ILE:H	2.05	0.63
18:P:50:PRO:HG2	18:P:51:VAL:H	1.64	0.63
23:U:67:VAL:HG23	23:U:79:VAL:HG11	1.80	0.63
26:X:8:LEU:CD2	26:X:33:GLN:O	2.46	0.63
27:Y:38:ALA:HB2	27:Y:49:CYS:H	1.58	0.63
31:y:16:A:H2'	31:y:17:U:C5	2.30	0.63
31:y:33:A:C6	31:y:34:C:C5	2.86	0.63
31:y:293:G:N3	31:y:293:G:H2'	2.13	0.63
31:y:520:A:P	45:m:50:ALA:HB1	2.37	0.63
31:y:560:U:O2	31:y:566:G:O4'	2.16	0.63
31:y:585:G:O6	31:y:755:G:C6	2.51	0.63
31:y:705:U:C6	31:y:706:A:N7	2.66	0.63
31:y:781:A:C5'	31:y:1523:G:H5'	2.28	0.63
31:y:872:A:O2'	31:y:873:A:H2'	1.98	0.63
31:y:931:C:O2	31:y:932:C:C6	2.50	0.63
31:y:1074:G:O3'	35:c:103:THR:HB	1.97	0.63
31:y:1293:G:H2'	31:y:1294:G:H8	1.40	0.63
31:y:1421:G:O2'	31:y:1422:G:H5'	1.97	0.63
32:z:24:G:N3	32:z:25:C:H1'	2.13	0.63
37:e:22:LYS:H	37:e:113:SER:HB2	1.63	0.63
37:e:195:ALA:O	37:e:196:LEU:HG	1.98	0.63
38:f:82:VAL:HG21	38:f:138:ALA:HB2	1.81	0.63
38:f:120:THR:OG1	38:f:121:LYS:N	2.31	0.63
39:g:8:ILE:HG23	39:g:88:VAL:HG12	1.80	0.63
42:j:37:PHE:CG	42:j:40:LEU:HD12	2.33	0.63
44:l:82:VAL:CG1	44:l:105:VAL:HA	2.28	0.63
44:l:103:LEU:HD13	44:l:104:GLN:H	1.62	0.63
47:o:26:ARG:HH21	47:o:43:CYS:N	1.95	0.63
1:w:483:A:H3'	1:w:484:C:C6	2.34	0.63
1:w:588:U:C5	1:w:589:C:C5	2.87	0.63
1:w:614:U:C5	1:w:615:G:H1'	2.33	0.63
1:w:668:G:N3	1:w:670:A:C6	2.67	0.63
1:w:705:A:HO2'	4:B:9:TYR:HE2	1.43	0.63
1:w:706:A:H62	1:w:725:G:H1'	1.60	0.63
1:w:847:U:H2'	1:w:848:G:H5''	1.79	0.63
1:w:850:C:C4'	26:X:21:ALA:HB3	2.28	0.63
1:w:926:A:OP2	1:w:926:A:C8	2.47	0.63
1:w:953:A:C2'	1:w:954:G:H8	2.09	0.63
1:w:1015:G:C3'	1:w:1016:G:C8	2.75	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1413:G:C5	1:w:1414:G:N7	2.66	0.63
1:w:1533:C:C6	1:w:1534:G:C8	2.86	0.63
1:w:1687:G:C2'	1:w:1701:A:N6	2.34	0.63
1:w:1775:U:O5'	1:w:1775:U:H6	1.80	0.63
1:w:1800:C:O2'	1:w:1801:G:H5''	1.98	0.63
1:w:1828:G:O5'	4:B:222:ARG:NH2	2.31	0.63
1:w:1897:G:C8	1:w:1898:U:C5	2.86	0.63
1:w:2019:A:H4'	17:O:27:LEU:CD1	2.28	0.63
1:w:2065:C:N3	1:w:2066:C:C6	2.66	0.63
1:w:2075:U:C5	1:w:2435:A:C2	2.86	0.63
1:w:2418:A:C5	1:w:2419:U:C4	2.86	0.63
1:w:2485:G:H4'	13:K:46:GLN:NE2	2.06	0.63
1:w:2657:A:H8	1:w:2657:A:P	2.21	0.63
1:w:2787:C:O2'	5:C:61:ARG:HD2	1.99	0.63
1:w:2888:C:C2	1:w:2889:C:C6	2.87	0.63
5:C:7:VAL:HG12	5:C:76:ARG:NH2	2.13	0.63
6:D:4:ILE:HG12	6:D:12:ARG:CG	2.28	0.63
6:D:165:LEU:C	6:D:168:VAL:HG22	2.23	0.63
6:D:169:VAL:HG13	6:D:170:THR:N	2.08	0.63
9:G:124:GLY:HA2	9:G:144:VAL:CA	2.28	0.63
10:H:122:LEU:H	10:H:122:LEU:CD1	2.11	0.63
11:I:4:PRO:HB3	11:I:23:ARG:HA	1.79	0.63
11:I:4:PRO:HA	11:I:21:CYS:SG	2.38	0.63
12:J:98:GLU:C	12:J:102:ARG:HB3	2.21	0.63
14:L:76:VAL:HG12	14:L:80:PHE:CZ	2.34	0.63
17:O:78:THR:O	17:O:81:HIS:CB	2.44	0.63
19:Q:6:ILE:HD13	19:Q:6:ILE:N	2.13	0.63
19:Q:58:ALA:CA	19:Q:62:HIS:HB2	2.27	0.63
20:R:89:ILE:N	20:R:92:LEU:HD12	2.13	0.63
24:V:16:ASN:C	24:V:46:LEU:HD21	2.24	0.63
25:W:3:LEU:HG	25:W:7:ARG:CG	2.27	0.63
31:y:27:G:C6	31:y:557:G:C6	2.86	0.63
31:y:36:C:H5'	45:m:120:GLY:HA2	1.73	0.63
31:y:65:U:H1'	31:y:199:G:O2'	1.97	0.63
31:y:91:C:H2'	31:y:92:G:O4'	1.98	0.63
31:y:160:A:C1'	31:y:344:A:C2	2.78	0.63
31:y:635:G:C6	31:y:636:U:C5	2.85	0.63
31:y:672:U:H2'	31:y:673:G:C8	2.33	0.63
31:y:770:C:H3'	31:y:771:G:C5'	2.28	0.63
31:y:896:C:H5''	50:r:100:LYS:HZ2	1.39	0.63
31:y:1037:C:C4	31:y:1038:C:N4	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1108:G:H2'	31:y:1109:C:C4'	2.28	0.63
31:y:1138:G:H2'	31:y:1140:C:H6	1.64	0.63
31:y:1139:G:O5'	31:y:1140:C:H5	1.81	0.63
31:y:1304:G:H22	31:y:1332:A:P	2.22	0.63
32:z:9:A:O2'	32:z:10:G:C8	2.51	0.63
33:0:15:G:OP2	33:0:15:G:C8	2.48	0.63
36:d:22:TRP:HZ3	36:d:24:ALA:HB3	1.62	0.63
36:d:112:SER:HB2	36:d:115:LEU:CD2	2.27	0.63
38:f:81:GLU:HB3	38:f:89:ILE:O	1.98	0.63
38:f:90:VAL:HG12	38:f:123:LEU:HD21	1.79	0.63
38:f:142:LEU:HD23	38:f:143:ARG:N	2.13	0.63
40:h:75:VAL:HG12	40:h:88:PRO:HB3	1.79	0.63
40:h:136:LYS:NZ	40:h:137:LYS:HA	2.13	0.63
43:k:40:LEU:N	43:k:70:ARG:HH11	1.95	0.63
45:m:76:LEU:HD23	45:m:105:ASP:HB3	1.78	0.63
45:m:123:LYS:HA	45:m:123:LYS:CE	2.18	0.63
50:r:34:LYS:CD	50:r:35:VAL:H	2.11	0.63
50:r:51:TYR:HD2	50:r:57:VAL:CG1	2.12	0.63
1:w:15:G:N1	1:w:16:G:C5	2.67	0.63
1:w:44:A:H8	1:w:44:A:O5'	1.81	0.63
1:w:188:G:H5''	1:w:189:G:OP2	1.99	0.63
1:w:389:G:N7	1:w:2413:G:H4'	2.11	0.63
1:w:690:G:O2'	4:B:43:ARG:NH2	2.31	0.63
1:w:818:G:N7	1:w:1187:G:C4	2.66	0.63
1:w:859:G:H1'	1:w:2268:A:H1'	1.78	0.63
1:w:886:C:H4'	1:w:887:A:C4	2.34	0.63
1:w:1179:C:H5'	1:w:1180:C:P	2.38	0.63
1:w:1484:G:C2'	1:w:1485:G:H5''	2.28	0.63
1:w:1538:G:C2'	1:w:1539:G:C8	2.81	0.63
1:w:1657:C:C2'	1:w:1658:C:H5'	2.28	0.63
1:w:1658:C:OP1	5:C:133:LYS:N	2.30	0.63
1:w:1662:C:O2	1:w:2687:U:H4'	1.97	0.63
1:w:1725:G:C4	1:w:1726:G:N7	2.66	0.63
1:w:1753:G:H2'	1:w:1754:C:O5'	1.98	0.63
1:w:1912:A:N3	31:y:1494:G:N2	2.45	0.63
1:w:2192:G:N3	1:w:2193:G:C8	2.66	0.63
1:w:2298:A:H1'	1:w:2321:G:H21	1.57	0.63
1:w:2359:C:C4	1:w:2360:A:C8	2.86	0.63
1:w:2414:G:C2	1:w:2415:G:C8	2.87	0.63
1:w:2466:C:C2'	1:w:2467:C:C5'	2.74	0.63
1:w:2563:U:H4'	11:I:27:GLY:O	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2588:G:N1	1:w:2606:C:N3	2.46	0.63
1:w:2667:C:H2'	1:w:2668:G:O4'	1.98	0.63
1:w:2692:C:O2'	1:w:2693:A:H5'	1.98	0.63
1:w:2807:G:H8	1:w:2807:G:OP2	1.81	0.63
2:x:7:G:N2	15:M:47:THR:CB	2.61	0.63
2:x:20:C:N4	2:x:21:G:O6	2.32	0.63
2:x:79:C:O2'	2:x:80:U:C5'	2.35	0.63
2:x:83:G:C6	2:x:84:C:C4	2.86	0.63
4:B:27:THR:CG2	4:B:83:GLU:HG3	2.28	0.63
4:B:130:ALA:HB1	4:B:190:TYR:CE1	2.34	0.63
5:C:11:MET:CG	5:C:12:THR:N	2.58	0.63
6:D:26:HIS:CD2	6:D:27:LEU:HD13	2.33	0.63
6:D:148:SER:N	6:D:167:TRP:CZ2	2.66	0.63
6:D:172:ALA:CB	6:D:173:PRO:CD	2.75	0.63
9:G:6:LEU:CD1	9:G:35:LEU:HA	2.28	0.63
9:G:81:VAL:CG2	9:G:146:ALA:HA	2.27	0.63
9:G:130:TYR:HB3	9:G:138:ILE:HG23	1.79	0.63
11:I:66:LYS:HD2	11:I:78:ARG:HH21	1.63	0.63
12:J:39:LYS:NZ	12:J:40:SER:H	1.97	0.63
13:K:2:LEU:HD12	22:T:182:LYS:NZ	2.13	0.63
14:L:78:LYS:O	14:L:82:GLU:HG2	1.96	0.63
15:M:17:ARG:CZ	15:M:89:ARG:CD	2.76	0.63
15:M:94:TYR:CD2	15:M:99:LYS:HG2	2.32	0.63
16:N:93:ARG:HH22	16:N:118:ARG:CG	2.03	0.63
17:O:24:TYR:CE1	17:O:38:THR:HG21	2.33	0.63
17:O:50:ARG:O	17:O:53:ARG:HG2	1.98	0.63
22:T:44:PHE:O	22:T:48:PHE:HD2	1.81	0.63
25:W:4:SER:CB	25:W:6:VAL:HG22	2.28	0.63
26:X:58:VAL:HG12	26:X:59:VAL:N	2.13	0.63
31:y:67:C:H2'	31:y:68:G:O5'	1.98	0.63
31:y:160:A:C6	31:y:161:A:C6	2.87	0.63
31:y:248:C:C4'	31:y:282:A:C2	2.71	0.63
31:y:296:U:C4	31:y:297:G:C6	2.87	0.63
31:y:556:C:C2'	31:y:557:G:C5'	2.76	0.63
31:y:612:C:N4	31:y:629:G:N2	2.47	0.63
31:y:671:G:C6	31:y:672:U:C4	2.87	0.63
31:y:675:A:N3	31:y:675:A:H2'	2.13	0.63
31:y:729:A:H2'	31:y:729:A:N3	2.14	0.63
31:y:780:A:O2'	31:y:1523:G:H4'	1.98	0.63
31:y:876:G:H2'	41:i:7:ALA:HB1	1.79	0.63
31:y:948:C:O2	31:y:948:C:H2'	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1034:G:C6	31:y:1035:A:N6	2.67	0.63
31:y:1157:A:H2'	31:y:1180:A:C2	2.34	0.63
31:y:1173:G:H2'	31:y:1174:G:C8	2.34	0.63
31:y:1312:G:C6	31:y:1326:C:N4	2.67	0.63
35:c:67:THR:C	35:c:68:ILE:HD12	2.23	0.63
35:c:97:TRP:HH2	35:c:176:GLU:CG	1.94	0.63
36:d:23:TYR:HB3	43:k:94:VAL:N	2.14	0.63
36:d:173:VAL:N	36:d:174:PRO:CD	2.61	0.63
37:e:111:ALA:HB1	37:e:116:GLN:HG3	1.80	0.63
39:g:14:LEU:CB	39:g:18:GLN:CG	2.73	0.63
44:l:21:ILE:O	44:l:85:ARG:HB2	1.98	0.63
46:n:23:TYR:N	46:n:25:ILE:HD11	2.13	0.63
46:n:60:VAL:HA	46:n:64:TRP:HE3	1.62	0.63
48:p:33:THR:CA	48:p:63:ARG:HH21	2.12	0.63
49:q:27:LYS:HD2	49:q:30:GLY:HA3	1.79	0.63
52:t:22:LEU:HD23	52:t:25:LYS:HE2	1.79	0.63
52:t:36:ARG:HB2	52:t:71:LEU:HD21	1.79	0.63
53:u:80:ARG:NE	53:u:80:ARG:CA	2.61	0.63
1:w:65:C:C4	1:w:66:C:C4	2.86	0.63
1:w:374:A:H3'	1:w:375:C:H5	1.63	0.63
1:w:396:G:O5'	1:w:396:G:C8	2.51	0.63
1:w:436:C:H2'	1:w:438:G:H5'	1.79	0.63
1:w:515:A:C2	1:w:1261:C:H1'	2.33	0.63
1:w:578:A:C6	1:w:2018:G:C8	2.85	0.63
1:w:723:G:H2'	1:w:723:G:N3	2.13	0.63
1:w:819:A:O2'	1:w:837:C:O2	2.11	0.63
1:w:986:C:H2'	1:w:987:G:C8	2.28	0.63
1:w:1092:C:H5''	8:F:170:ARG:NH1	2.13	0.63
1:w:1216:G:H8	1:w:1216:G:OP2	1.80	0.63
1:w:1232:G:H3'	1:w:1233:C:C5	2.32	0.63
1:w:1268:A:H2'	1:w:1269:A:H8	1.62	0.63
1:w:1275:A:N7	14:L:16:HIS:CG	2.66	0.63
1:w:1767:C:C5	1:w:1768:U:C5	2.87	0.63
1:w:1811:G:H8	1:w:1811:G:C5'	2.12	0.63
1:w:2077:A:P	1:w:2238:G:O6	2.56	0.63
1:w:2133:G:O2'	1:w:2134:A:C8	2.51	0.63
1:w:2218:G:H1'	4:B:148:GLU:CG	2.29	0.63
1:w:2230:G:C5	1:w:2231:C:C5	2.87	0.63
1:w:2355:C:HO2'	23:U:39:ARG:HH21	1.47	0.63
1:w:2682:U:O4'	5:C:12:THR:HG22	1.99	0.63
1:w:2849:U:C6	1:w:2867:G:N2	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:110:G:C5	2:x:111:U:C5	2.86	0.63
3:A:63:VAL:HG13	3:A:64:SER:N	2.14	0.63
4:B:132:PRO:HB3	4:B:188:GLU:HG2	1.80	0.63
4:B:165:ILE:HA	4:B:175:LEU:HA	1.81	0.63
4:B:185:VAL:HG13	4:B:186:HIS:H	1.60	0.63
4:B:200:ASP:O	4:B:202:LYS:N	2.31	0.63
5:C:175:VAL:CB	5:C:182:LEU:CD1	2.73	0.63
5:C:199:ARG:C	5:C:200:GLU:HG2	2.23	0.63
6:D:48:THR:HA	6:D:52:VAL:HG11	1.79	0.63
7:E:111:LEU:CB	7:E:112:PRO:CD	2.76	0.63
7:E:137:GLU:OE2	7:E:140:ILE:CG1	2.46	0.63
11:I:17:ARG:HB2	11:I:45:GLU:HG3	1.81	0.63
11:I:78:ARG:H	16:N:73:GLU:HB2	1.64	0.63
12:J:70:GLN:CD	12:J:71:VAL:HG12	2.23	0.63
12:J:122:PRO:CB	12:J:142:GLY:HA3	2.29	0.63
12:J:148:LEU:HD13	12:J:148:LEU:N	2.04	0.63
13:K:81:VAL:HG23	13:K:82:ARG:H	1.63	0.63
14:L:73:VAL:O	14:L:77:ARG:HB3	1.98	0.63
14:L:116:LEU:HD12	14:L:116:LEU:N	2.11	0.63
16:N:53:ARG:HE	16:N:59:THR:HA	1.64	0.63
18:P:89:GLN:HG2	18:P:90:PRO:HD2	1.79	0.63
31:y:32:A:C5'	31:y:398:C:O2'	2.47	0.63
31:y:77:C:O2'	31:y:78:G:H5'	1.96	0.63
31:y:117:G:C5	31:y:118:U:N3	2.67	0.63
31:y:157:G:O2'	31:y:158:G:H5'	1.99	0.63
31:y:186(B):C:H1'	53:u:89:ARG:HH11	1.63	0.63
31:y:246:A:OP2	31:y:246:A:H8	1.81	0.63
31:y:332:G:N2	53:u:16:HIS:CE1	2.66	0.63
31:y:440:A:C2'	31:y:442:C:H5'	2.28	0.63
31:y:478:A:H2'	31:y:479:C:H5	1.62	0.63
31:y:628:G:H3'	31:y:629:G:H8	1.62	0.63
31:y:772:U:C4	31:y:773:G:C5	2.86	0.63
31:y:817:C:O2	31:y:1527:C:O3'	2.16	0.63
31:y:951:G:C4	31:y:1231:G:C2	2.87	0.63
31:y:979:C:H6	31:y:979:C:H3'	1.62	0.63
31:y:1118:C:H6	31:y:1118:C:H5'	1.64	0.63
31:y:1151:A:O2'	31:y:1152:A:O4'	2.15	0.63
31:y:1260:C:OP1	31:y:1284:C:H4'	1.97	0.63
32:z:4:C:C2'	32:z:5:G:H8	2.10	0.63
35:c:16:HIS:CD2	35:c:210:SER:CB	2.80	0.63
35:c:184:VAL:HG22	35:c:198:ASP:OD1	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:14:ILE:O	36:d:15:THR:CB	2.46	0.63
37:e:7:PRO:C	37:e:22:LYS:HE3	2.23	0.63
37:e:17:VAL:HB	37:e:19:LEU:CG	2.20	0.63
37:e:126:ILE:HD13	37:e:146:ILE:CG2	2.27	0.63
39:g:10:LEU:CD2	39:g:59:TYR:HB3	2.25	0.63
39:g:94:GLN:NE2	51:s:32:ARG:O	2.32	0.63
40:h:147:ALA:C	40:h:148:ASN:ND2	2.57	0.63
41:i:118:VAL:HG12	41:i:119:LEU:H	1.62	0.63
45:m:71:GLY:O	45:m:72:GLU:CG	2.43	0.63
45:m:125:LYS:HD2	45:m:125:LYS:N	2.13	0.63
49:q:19:ILE:CD1	49:q:37:GLY:O	2.46	0.63
51:s:38:GLU:O	51:s:41:LYS:CD	2.46	0.63
1:w:80:G:H2'	1:w:81:G:H5'	1.80	0.63
1:w:564:C:O2'	1:w:565:C:H5'	1.98	0.63
1:w:779:U:OP1	4:B:49:ILE:HD11	1.99	0.63
1:w:848:G:H3'	1:w:929:G:H22	1.63	0.63
1:w:942:G:H5''	12:J:34:GLY:C	2.23	0.63
1:w:1024:G:C2	1:w:1025:G:O6	2.51	0.63
1:w:1155:A:C2	1:w:1157:G:H1'	2.33	0.63
1:w:1190:G:O5'	1:w:1190:G:H8	1.82	0.63
1:w:1208:C:O5'	1:w:1208:C:H6	1.79	0.63
1:w:1284:A:C2	19:Q:45:TYR:OH	2.47	0.63
1:w:1296:G:H5''	1:w:2710:C:H5'	1.80	0.63
1:w:1435:G:C2'	1:w:1436:G:C8	2.80	0.63
1:w:1529:A:N6	1:w:1542:G:H21	1.89	0.63
1:w:1624:G:C2'	1:w:1625:C:H6	2.05	0.63
1:w:1791:A:P	1:w:1828:G:N2	2.71	0.63
1:w:1922:G:C2'	1:w:1923:U:H5'	2.28	0.63
1:w:2051:A:H2'	1:w:2614:A:N1	2.13	0.63
1:w:2061:G:N7	1:w:2501:C:C1'	2.56	0.63
1:w:2098:U:C2'	1:w:2099:U:C6	2.82	0.63
1:w:2101:G:C6	1:w:2102:U:C5	2.86	0.63
1:w:2321:G:N2	1:w:2322:A:C1'	2.62	0.63
1:w:2476:A:C2	1:w:2477:C:N3	2.66	0.63
1:w:2542:A:H5''	1:w:2542:A:H8	1.63	0.63
1:w:2606:C:N4	1:w:2607:G:O6	2.32	0.63
1:w:2644:G:C8	1:w:2645:G:N7	2.67	0.63
1:w:2725:A:HO2'	1:w:2726:U:P	2.21	0.63
1:w:2875:C:H6	1:w:2875:C:O5'	1.81	0.63
2:x:91:C:H2'	2:x:92:G:H8	1.63	0.63
2:x:114:G:O4'	15:M:48:LEU:O	2.17	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:16:MET:HE2	4:B:207:GLY:CA	2.29	0.63
5:C:84:PHE:CE1	5:C:86:PRO:HG3	2.33	0.63
5:C:108:SER:CA	5:C:189:PRO:HG3	2.20	0.63
6:D:111:ASP:O	6:D:114:ARG:HG2	1.98	0.63
6:D:127:VAL:C	6:D:129:GLY:H	2.07	0.63
7:E:170:ARG:HA	7:E:173:LEU:HB2	1.80	0.63
8:F:60:ARG:HB3	8:F:60:ARG:CZ	2.27	0.63
9:G:130:TYR:CD2	9:G:132:PRO:HG3	2.32	0.63
11:I:108:GLU:HB2	11:I:109:LYS:NZ	2.13	0.63
11:I:114:ILE:CG1	11:I:115:VAL:H	2.03	0.63
12:J:59:LEU:HG	12:J:59:LEU:O	1.99	0.63
12:J:80:TYR:C	12:J:81:GLN:NE2	2.57	0.63
13:K:16:ARG:HG3	13:K:17:LEU:H	1.64	0.63
14:L:32:GLY:HA3	14:L:116:LEU:HD11	1.81	0.63
17:O:69:CYS:O	17:O:74:LEU:HD12	1.98	0.63
18:P:26:ASP:O	18:P:27:ALA:CB	2.46	0.63
22:T:18:LEU:HB3	22:T:23:LYS:HG3	1.81	0.63
25:W:17:SER:O	25:W:21:LEU:CB	2.46	0.63
26:X:40:THR:HB	26:X:41:PRO:HD2	1.79	0.63
31:y:99:C:O3'	31:y:101:A:H8	1.82	0.63
31:y:186(E):C:H2'	31:y:186(F):C:C6	2.34	0.63
31:y:186(G):C:N3	31:y:191(B):G:C2	2.66	0.63
31:y:491:G:H2'	31:y:492:G:H8	1.63	0.63
31:y:745:C:H1'	31:y:836:G:C2'	2.29	0.63
31:y:815:A:N3	31:y:1527:C:O2'	2.25	0.63
31:y:886:G:H2'	31:y:887:G:C5'	2.28	0.63
31:y:992:U:O4	31:y:1043:C:C6	2.52	0.63
31:y:1111:A:C2'	31:y:1112:C:C6	2.80	0.63
31:y:1152:A:C2'	31:y:1153:C:H5'	2.29	0.63
31:y:1228:C:O2'	46:n:116:THR:CG2	2.47	0.63
31:y:1237:C:H5'	31:y:1238:A:H4'	1.81	0.63
31:y:1269:A:H5'	54:v:19:GLY:HA2	1.81	0.63
31:y:1285:A:OP1	31:y:1286:A:C2	2.51	0.63
31:y:1441:G:H4'	31:y:1442:G:N9	2.14	0.63
32:z:59:U:O5'	32:z:59:U:C6	2.52	0.63
37:e:9:CYS:N	37:e:22:LYS:CG	2.18	0.63
37:e:88:VAL:HB	37:e:92:VAL:CG1	2.29	0.63
40:h:108:ALA:CB	40:h:120:ILE:HG13	2.29	0.63
41:i:73:ASP:CG	41:i:75:ARG:HG2	2.22	0.63
42:j:69:GLY:O	42:j:73:GLN:CG	2.46	0.63
43:k:16:LEU:O	43:k:18:ALA:N	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:73:MET:HE3	44:l:73:MET:CA	2.28	0.63
53:u:14:LYS:HA	53:u:17:ARG:HB3	1.78	0.63
1:w:84:A:C2'	1:w:98:G:H21	2.12	0.63
1:w:457:A:H1'	1:w:459:U:C6	2.34	0.63
1:w:483:A:H3'	1:w:484:C:C5	2.34	0.63
1:w:499:U:H3'	1:w:500:G:H8	1.62	0.63
1:w:520:G:C8	1:w:520:G:OP2	2.52	0.63
1:w:601:C:C2'	1:w:605:C:H5''	2.28	0.63
1:w:681:G:C2	1:w:682:G:C8	2.87	0.63
1:w:751:A:C8	1:w:751:A:C3'	2.79	0.63
1:w:752:A:C6	1:w:1781:C:C1'	2.82	0.63
1:w:789:A:OP1	1:w:790:C:C5	2.51	0.63
1:w:981:A:C2	1:w:2027:G:N2	2.56	0.63
1:w:1025:G:C4	1:w:1135:C:C4'	2.81	0.63
1:w:1053:C:C2	1:w:1054:A:H1'	2.33	0.63
1:w:1169:G:H3'	1:w:1170:G:C4'	2.29	0.63
1:w:1313:U:H4'	1:w:1332:G:C1'	2.28	0.63
1:w:1807:G:N3	1:w:1809:A:H5''	2.14	0.63
1:w:1911:U:C2'	1:w:1919:A:N1	2.62	0.63
1:w:2017:U:H5'	27:Y:8:LYS:HA	1.81	0.63
1:w:2077:A:OP2	1:w:2238:G:C6	2.52	0.63
1:w:2267:A:OP1	1:w:2268:A:H5''	1.98	0.63
1:w:2295:C:O2'	1:w:2296:U:H6	1.81	0.63
1:w:2302:G:C2'	1:w:2303:G:H8	2.10	0.63
1:w:2311:A:O5'	1:w:2312:U:C5	2.52	0.63
1:w:2355:C:O2'	23:U:17:GLN:CG	2.47	0.63
1:w:2517:C:H2'	1:w:2519:U:C6	2.34	0.63
1:w:2580:U:H2'	1:w:2581:G:O5'	1.98	0.63
1:w:2588:G:H2'	1:w:2589:A:C1'	2.26	0.63
1:w:2770:G:H5'	1:w:2771:C:OP2	1.99	0.63
3:A:27:ALA:O	3:A:30:VAL:HG23	1.98	0.63
4:B:31:LYS:HE2	4:B:32:SER:O	1.98	0.63
4:B:157:ARG:O	4:B:158:ALA:CB	2.47	0.63
5:C:27:LEU:CD2	5:C:28:ALA:O	2.46	0.63
5:C:90:THR:HG22	5:C:91:VAL:H	1.63	0.63
6:D:100:VAL:O	6:D:102:LYS:N	2.32	0.63
9:G:3:VAL:HG12	9:G:4:ILE:N	2.13	0.63
10:H:63:PRO:C	10:H:65:TRP:H	2.06	0.63
10:H:119:GLU:HG3	10:H:120:ARG:H	1.63	0.63
11:I:64:ARG:O	11:I:82:ASN:HA	1.98	0.63
11:I:65:THR:HB	11:I:82:ASN:HD21	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:85:VAL:HG12	11:I:86:ILE:N	2.14	0.63
12:J:101:VAL:C	12:J:103:ALA:H	2.04	0.63
13:K:103:MET:C	13:K:104:PHE:CG	2.77	0.63
14:L:11:ASN:O	14:L:12:ARG:CB	2.47	0.63
14:L:45:ARG:HH11	14:L:46:GLY:H	1.44	0.63
17:O:49:HIS:HA	17:O:52:ARG:HB2	1.80	0.63
18:P:44:LYS:CG	18:P:45:THR:H	2.01	0.63
19:Q:22:ASP:OD2	19:Q:25:ARG:HD2	1.98	0.63
24:V:76:ARG:NH2	24:V:94:LEU:HD11	2.12	0.63
26:X:43:ILE:H	26:X:43:ILE:HD13	1.62	0.63
27:Y:40:LYS:HE2	27:Y:46:CYS:HB2	1.81	0.63
28:Z:2:LYS:HB2	28:Z:6:GLN:HE22	1.60	0.63
31:y:114:U:H6	31:y:114:U:O5'	1.80	0.63
31:y:115:G:C1'	31:y:116:A:N7	2.60	0.63
31:y:119:A:O2'	31:y:120:A:P	2.57	0.63
31:y:172:A:H5''	31:y:172:A:H8	1.64	0.63
31:y:183:G:O2'	31:y:224:C:H4'	1.98	0.63
31:y:248:C:C5'	31:y:282:A:H2	2.11	0.63
31:y:398:C:O5'	31:y:398:C:H6	1.81	0.63
31:y:505:G:O2'	31:y:506:G:H5'	1.98	0.63
31:y:573:A:C2'	31:y:574:A:O4'	2.47	0.63
31:y:1097:C:O2'	31:y:1098:C:H5'	1.99	0.63
31:y:1184:G:H2'	31:y:1185:G:O4'	1.98	0.63
31:y:1306:A:C2	31:y:1332:A:C8	2.86	0.63
31:y:1395:C:C2'	31:y:1396:A:C5'	2.72	0.63
33:0:8:U:C2'	33:0:9:A:H5''	2.28	0.63
33:0:41:U:O2'	33:0:42:G:H5'	1.97	0.63
35:c:135:GLN:O	35:c:138:LEU:HB3	1.98	0.63
36:d:40:ARG:HA	36:d:43:LEU:HD21	1.79	0.63
36:d:131:ARG:HD3	36:d:166:GLU:OE1	1.98	0.63
40:h:8:GLU:CD	40:h:9:VAL:H	2.07	0.63
40:h:43:PHE:CG	40:h:44:TYR:N	2.67	0.63
45:m:84:ILE:HG22	45:m:99:ILE:CD1	2.28	0.63
48:p:30:ALA:O	48:p:33:THR:HB	1.99	0.63
49:q:16:HIS:HA	49:q:41:PRO:HD2	1.80	0.63
50:r:10:VAL:CG1	50:r:57:VAL:HG23	2.29	0.63
1:w:610:C:H2'	1:w:611:C:H6	1.64	0.63
1:w:811:U:N3	12:J:24:GLY:O	2.32	0.63
1:w:850:C:O4'	26:X:21:ALA:CB	2.45	0.63
1:w:1135:C:H5''	1:w:1137:G:OP1	1.98	0.63
1:w:1298:C:H1'	1:w:1302:A:C5	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1536:A:C8	1:w:1536:A:OP2	2.51	0.63
1:w:1668:A:H62	1:w:1991:U:H3	1.47	0.63
1:w:1801:G:O6	1:w:2207:C:H4'	1.99	0.63
1:w:2336:A:O2'	1:w:2385:C:O4'	2.09	0.63
1:w:2404:C:O2'	1:w:2405:G:H5'	1.99	0.63
1:w:2653:U:OP2	1:w:2654:A:C2'	2.47	0.63
1:w:2761:G:H2'	1:w:2761:G:N3	2.13	0.63
1:w:2828:C:H2'	1:w:2829:C:H6	1.61	0.63
2:x:73:A:H2'	2:x:74:U:H6	1.58	0.63
4:B:4:LYS:HB3	4:B:18:VAL:HB	1.81	0.63
5:C:55:ASN:O	5:C:57:LYS:N	2.31	0.63
6:D:36:LEU:HA	6:D:39:ARG:NH2	2.14	0.63
8:F:53:GLU:HG3	8:F:54:ARG:N	2.14	0.63
8:F:118:PRO:HD2	8:F:121:ILE:CG1	2.28	0.63
13:K:35:VAL:CG2	13:K:130:LYS:H	2.10	0.63
13:K:60:ARG:C	13:K:60:ARG:CD	2.72	0.63
13:K:131:ILE:HG13	13:K:132:VAL:N	2.12	0.63
14:L:59:ASP:O	14:L:60:LEU:O	2.17	0.63
15:M:69:VAL:O	15:M:69:VAL:CG1	2.47	0.63
22:T:61:LEU:CD1	22:T:67:LEU:HB2	2.29	0.63
24:V:85:LEU:HD11	24:V:88:LYS:CA	2.29	0.63
24:V:86:SER:N	24:V:87:PRO:HD2	2.14	0.63
26:X:8:LEU:C	26:X:9:VAL:HG13	2.24	0.63
31:y:161:A:C5	31:y:162:A:C4	2.87	0.63
31:y:192:U:O5'	31:y:192:U:C6	2.51	0.63
31:y:362:G:O5'	31:y:362:G:H8	1.81	0.63
31:y:363:A:C4	45:m:31:PHE:CE2	2.87	0.63
31:y:623:C:C2'	31:y:624:C:O4'	2.46	0.63
31:y:690:G:H8	31:y:690:G:O5'	1.82	0.63
31:y:744:C:H2'	31:y:745:C:H6	1.64	0.63
31:y:784:C:N3	31:y:785:G:N7	2.47	0.63
31:y:801:U:C4	31:y:802:A:N7	2.66	0.63
31:y:1016:A:O2'	31:y:1017:G:O4'	2.11	0.63
31:y:1074:G:C4	31:y:1075:C:H5	2.17	0.63
31:y:1188:A:N6	31:y:1189:C:C2	2.67	0.63
31:y:1254:C:H2'	31:y:1255:G:H5'	1.80	0.63
31:y:1256:A:O2'	31:y:1258:G:C8	2.51	0.63
31:y:1312:G:C2	31:y:1313:U:H1'	2.34	0.63
31:y:1370:G:H2'	31:y:1371:G:N7	2.14	0.63
31:y:1387:G:C3'	31:y:1388:C:H5''	2.29	0.63
36:d:152:ILE:HG22	36:d:199:LYS:N	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:171:GLY:N	37:e:174:LEU:HB2	2.13	0.63
39:g:19:LEU:HD11	39:g:59:TYR:CG	2.34	0.63
40:h:21:VAL:HA	40:h:24:THR:OG1	1.99	0.63
41:i:91:ARG:N	50:r:34:LYS:HD3	2.14	0.63
45:m:37:THR:HG21	45:m:56:LYS:HB3	1.80	0.63
48:p:71:GLN:O	48:p:73:GLU:N	2.32	0.63
54:v:22:ARG:N	54:v:23:PRO:HD2	2.13	0.63
1:w:14:A:O5'	1:w:15:G:C8	2.52	0.63
1:w:120:U:P	1:w:124:G:H1	2.22	0.63
1:w:242:G:C2'	1:w:243:U:OP2	2.46	0.63
1:w:376:C:N3	1:w:399:G:C2	2.67	0.63
1:w:479:A:C5'	1:w:480:A:H8	2.03	0.63
1:w:514:A:O2'	1:w:581:C:O2'	2.17	0.63
1:w:551:G:OP1	1:w:1220:A:N3	2.32	0.63
1:w:670:A:H5''	1:w:671:C:OP1	1.97	0.63
1:w:685:A:H1'	1:w:688:U:O4	1.99	0.63
1:w:717:G:H2'	1:w:718:A:H5'	1.79	0.63
1:w:826:U:H2'	1:w:828:U:O4'	1.99	0.63
1:w:1252:G:C2'	1:w:1253:A:C8	2.82	0.63
1:w:1380:G:C6	1:w:1381:G:C6	2.86	0.63
1:w:1436:G:N2	1:w:1437:C:H1'	2.12	0.63
1:w:1448:G:N2	1:w:1528:A:C2	2.66	0.63
1:w:1531:C:O5'	1:w:1531:C:C6	2.49	0.63
1:w:1567:A:O5'	1:w:1567:A:C8	2.52	0.63
1:w:1790:C:C2'	1:w:1791:A:C8	2.82	0.63
1:w:1799:G:H4'	1:w:1799:G:OP1	1.99	0.63
1:w:1814:G:C8	1:w:1815:A:C2'	2.81	0.63
1:w:2055:C:P	1:w:2056:G:H4'	2.38	0.63
1:w:2090:G:O5'	1:w:2090:G:H8	1.82	0.63
1:w:2195:C:C2'	1:w:2196:C:H5'	2.28	0.63
1:w:2354:G:C2	1:w:2364:C:C4	2.86	0.63
1:w:2416:C:OP2	12:J:64:LYS:O	2.17	0.63
1:w:2448:A:OP1	1:w:2499:C:OP1	2.17	0.63
1:w:2792:G:H2'	1:w:2793:G:N7	2.14	0.63
4:B:165:ILE:HG12	4:B:173:VAL:HG22	1.80	0.63
5:C:48:GLN:HA	5:C:79:ARG:O	1.98	0.63
5:C:184:VAL:CG2	5:C:185:LYS:H	2.01	0.63
7:E:46:ALA:CB	7:E:84:LYS:HB3	2.25	0.63
7:E:123:ASN:HA	7:E:125:PHE:CD2	2.33	0.63
9:G:92:VAL:O	9:G:93:THR:CG2	2.38	0.63
10:H:34:PRO:CB	10:H:142:ARG:HH12	2.10	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:40:ASP:OD1	10:H:83:ILE:HD11	1.98	0.63
13:K:51:ARG:NH1	13:K:51:ARG:CB	2.41	0.63
13:K:124:LYS:NZ	13:K:125:LEU:CA	2.62	0.63
13:K:133:ARG:HG3	22:T:81:ARG:NE	2.14	0.63
14:L:12:ARG:CG	14:L:13:HIS:N	2.62	0.63
14:L:50:HIS:HD2	14:L:53:HIS:CE1	2.03	0.63
16:N:29:ARG:HG2	16:N:86:ILE:HB	1.80	0.63
16:N:92:GLY:O	16:N:93:ARG:HB3	1.97	0.63
19:Q:61:ASN:O	19:Q:62:HIS:HD2	1.82	0.63
20:R:62:LYS:HB2	20:R:69:TYR:H	1.62	0.63
21:S:84:ARG:HD3	21:S:91:GLU:C	2.24	0.63
24:V:26:ARG:CB	24:V:35:THR:N	2.62	0.63
25:W:35:LEU:HA	25:W:37:PHE:CD2	2.33	0.63
31:y:116:A:C6	31:y:117:G:N3	2.67	0.63
31:y:336:C:N4	31:y:337:C:H41	1.97	0.63
31:y:404:U:C4	37:e:2:GLY:HA2	2.34	0.63
31:y:439:A:OP2	31:y:493:G:C2	2.52	0.63
31:y:512:U:O2	31:y:540:G:N2	2.32	0.63
31:y:704:A:O2'	31:y:705:U:H5'	1.99	0.63
31:y:935:A:H8	31:y:935:A:O5'	1.82	0.63
31:y:947:G:O2'	31:y:1306:A:H5'	1.99	0.63
31:y:1228:C:O2'	46:n:116:THR:HG23	1.98	0.63
31:y:1259:C:H2'	31:y:1283:G:H1'	1.81	0.63
31:y:1367:C:OP1	42:j:114:TYR:CB	2.35	0.63
31:y:1392:G:O2'	31:y:1393:U:H5'	1.98	0.63
31:y:1402:4OC:C3'	31:y:1403:C:C6	2.82	0.63
35:c:124:SER:C	35:c:126:GLU:H	2.07	0.63
36:d:119:ARG:HH22	36:d:123:GLN:HG3	1.63	0.63
36:d:147:LYS:HB2	36:d:147:LYS:HZ2	1.64	0.63
37:e:124:GLY:HA3	37:e:134:ASP:O	1.98	0.63
37:e:201:GLN:HA	37:e:204:ILE:HG12	1.81	0.63
38:f:34:VAL:HA	38:f:112:LEU:HD21	1.81	0.63
38:f:142:LEU:HA	38:f:143:ARG:HH21	1.62	0.63
40:h:50:ILE:O	40:h:54:THR:HG22	1.98	0.63
44:l:17:GLY:CA	44:l:80:VAL:HG12	2.26	0.63
44:l:95:ILE:HA	44:l:98:LEU:CG	2.27	0.63
46:n:26:GLY:O	46:n:28:ALA:N	2.31	0.63
46:n:92:HIS:HB3	46:n:98:VAL:HG11	1.81	0.63
47:o:53:LEU:HD22	47:o:53:LEU:N	2.14	0.63
51:s:31:LEU:C	51:s:33:ASP:H	2.06	0.63
1:w:92:G:C4	1:w:93:C:C5	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:205:G:O2'	1:w:206:U:P	2.53	0.62
1:w:273(D):C:C2'	1:w:273(E):C:H5'	2.29	0.62
1:w:298:G:O6	1:w:339:U:H5	1.81	0.62
1:w:509:C:C3'	1:w:510:C:H5''	2.28	0.62
1:w:531:C:N3	1:w:2019:A:C2	2.66	0.62
1:w:537:C:C4	1:w:539:G:N7	2.66	0.62
1:w:539:G:C2'	1:w:540:G:C8	2.73	0.62
1:w:568:U:C2	1:w:570:G:OP1	2.52	0.62
1:w:739:G:H5''	1:w:740:U:OP1	1.98	0.62
1:w:748:G:H8	1:w:750:A:OP2	1.80	0.62
1:w:943:U:OP1	12:J:36:LYS:O	2.16	0.62
1:w:1221:C:O2	1:w:122(A):C:C6	2.51	0.62
1:w:1228:G:C4	1:w:1229:G:C1'	2.82	0.62
1:w:1252:G:OP2	17:O:10:ARG:HD3	1.99	0.62
1:w:1319:G:C5	1:w:1334:G:O6	2.52	0.62
1:w:1394:U:O3'	1:w:1603:A:H4'	1.98	0.62
1:w:1429:G:C1'	1:w:1568:G:N3	2.61	0.62
1:w:1534:G:N3	1:w:1534:G:H2'	2.14	0.62
1:w:1803:A:H2	1:w:1822:G:N3	1.97	0.62
1:w:1827:C:H5'	1:w:1971:A:H4'	1.80	0.62
1:w:1844:C:OP1	4:B:258:LYS:HG2	1.99	0.62
1:w:1881:C:C4	1:w:1882:C:N4	2.67	0.62
1:w:2001:A:O4'	1:w:2689:U:C4	2.52	0.62
1:w:2356:C:O2'	1:w:2357:U:H5'	1.99	0.62
1:w:2377:A:C8	1:w:2378:A:C6	2.87	0.62
1:w:2437:U:C2	1:w:2438:U:H5	2.15	0.62
1:w:2594:C:H3'	1:w:2594:C:C6	2.33	0.62
1:w:2620:C:C5'	5:C:156:MET:HB2	2.29	0.62
1:w:2656:U:H2'	1:w:2657:A:H1'	1.80	0.62
1:w:2701:C:H3'	1:w:2702:U:C5'	2.29	0.62
1:w:2782:G:C2	1:w:2783:G:C8	2.86	0.62
1:w:2795:G:C2	1:w:2802:G:N1	2.67	0.62
1:w:2799:A:P	1:w:2799:A:C8	2.91	0.62
1:w:2877:G:H2'	1:w:2878:U:C1'	2.29	0.62
2:x:80:U:C2	2:x:81:G:N7	2.67	0.62
3:A:29:LEU:O	3:A:32:GLU:HG2	1.98	0.62
3:A:57:GLN:HG2	3:A:202:PRO:CB	2.29	0.62
4:B:39:LYS:HG3	4:B:40:THR:H	1.64	0.62
4:B:60:ARG:HE	4:B:60:ARG:HA	1.64	0.62
4:B:65:ILE:HD12	4:B:105:ILE:CB	2.29	0.62
8:F:105:LEU:O	8:F:113:VAL:CB	2.42	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:156:ALA:C	8:F:171:LEU:HA	2.23	0.62
10:H:25:LYS:HE3	18:P:13:ARG:NH2	2.13	0.62
11:I:65:THR:O	11:I:79:PHE:O	2.17	0.62
12:J:78:PRO:HB2	12:J:110:TYR:CG	2.33	0.62
16:N:66:VAL:HG22	16:N:71:GLY:HA2	1.81	0.62
20:R:8:ILE:HB	25:W:26:ARG:NH2	2.14	0.62
21:S:80:GLY:N	21:S:97:ARG:HE	1.96	0.62
23:U:27:GLU:HA	23:U:69:PHE:HD2	1.62	0.62
29:a:52:LYS:H	29:a:53:PRO:CD	2.03	0.62
30:b:3:VAL:HG11	30:b:34:GLN:HB3	1.78	0.62
31:y:129(A):U:H2'	31:y:131:C:C5	2.33	0.62
31:y:234:C:C2'	31:y:235:C:C6	2.74	0.62
31:y:247:G:N1	31:y:278:G:N2	2.47	0.62
31:y:301:G:H2'	31:y:302:G:H5'	1.81	0.62
31:y:425:G:C4	31:y:426:G:C8	2.87	0.62
31:y:484:G:HO2'	31:y:485:G:P	2.20	0.62
31:y:498:A:O2'	31:y:500:G:C8	2.50	0.62
31:y:502:G:C6	31:y:503:C:C4	2.87	0.62
31:y:518:C:OP1	31:y:518:C:C4'	2.45	0.62
31:y:575:G:C6	31:y:881:G:N1	2.67	0.62
31:y:582:U:C5'	48:p:68:ARG:NH1	2.54	0.62
31:y:817:C:O4'	31:y:818:G:C3'	2.41	0.62
31:y:901:A:H3'	31:y:901:A:C8	2.33	0.62
31:y:907:A:N6	31:y:908:A:C6	2.66	0.62
31:y:995:C:H6	31:y:995:C:O5'	1.82	0.62
31:y:1056:U:OP1	36:d:162:GLN:NE2	2.32	0.62
31:y:1199:U:C4'	43:k:54:PHE:CZ	2.77	0.62
31:y:1223:C:H3'	31:y:1224:G:C5'	2.28	0.62
31:y:1312:G:O2'	31:y:1313:U:H5'	1.98	0.62
31:y:1508:G:C6	31:y:1509:C:N4	2.66	0.62
35:c:63:MET:HG3	35:c:225:ALA:O	2.00	0.62
36:d:110:ASN:HB3	36:d:141:VAL:HG23	1.81	0.62
37:e:8:VAL:CG1	37:e:21:LEU:HD12	2.27	0.62
40:h:136:LYS:HD2	40:h:136:LYS:C	2.24	0.62
41:i:30:ARG:O	41:i:34:GLU:HG2	1.99	0.62
41:i:119:LEU:HD11	41:i:127:LEU:HD12	1.81	0.62
44:l:58:PRO:HA	44:l:90:GLY:H	1.63	0.62
45:m:30:PRO:C	45:m:31:PHE:HD1	2.06	0.62
46:n:71:ARG:C	46:n:74:VAL:HG23	2.24	0.62
48:p:29:VAL:CG1	48:p:30:ALA:N	2.61	0.62
52:t:12:ASP:C	52:t:15:LEU:HD11	2.24	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:35:G:H1'	1:w:454:A:N9	2.14	0.62
1:w:65:C:C4	1:w:66:C:C5	2.87	0.62
1:w:266:G:H2'	1:w:267:C:O5'	1.98	0.62
1:w:387:U:C4'	1:w:388:G:O4'	2.46	0.62
1:w:463:G:C2	1:w:467:G:C6	2.87	0.62
1:w:668:G:C4	1:w:670:A:C5	2.86	0.62
1:w:940:G:C6	1:w:941:A:N7	2.67	0.62
1:w:1048:A:O5'	1:w:1048:A:H8	1.82	0.62
1:w:1160:G:H21	18:P:9:GLY:HA3	1.61	0.62
1:w:1298:C:C5	1:w:1299:G:N7	2.67	0.62
1:w:1451:C:C4	1:w:1458:C:C4	2.86	0.62
1:w:1519:G:H2'	1:w:1520:U:C5'	2.28	0.62
1:w:1566:A:HO2'	1:w:1567:A:C5'	2.09	0.62
1:w:1674:G:H21	1:w:1677:A:H2	1.45	0.62
1:w:1777:U:O5'	1:w:1777:U:H6	1.81	0.62
1:w:1789:A:OP1	4:B:221:VAL:HA	1.99	0.62
1:w:1833:U:H2'	1:w:1834:U:H6	1.64	0.62
1:w:1843:C:OP2	1:w:1843:C:C5	2.52	0.62
1:w:1920:C:H5''	31:y:1517:G:C8	2.34	0.62
1:w:1921:G:H2'	1:w:1922:G:H8	1.62	0.62
1:w:1958:C:HO2'	1:w:1959:G:H5'	1.64	0.62
1:w:2125:G:H4'	3:A:41:THR:HG21	1.81	0.62
1:w:2269:A:C3'	1:w:2270:G:H8	2.11	0.62
1:w:2341:G:H2'	1:w:2342:C:C5	2.34	0.62
1:w:2367:G:O2'	1:w:2368:C:H5''	1.98	0.62
1:w:2521:C:C2	1:w:2545:G:N2	2.67	0.62
1:w:2670:A:H2'	1:w:2670:A:N3	2.14	0.62
1:w:2710:C:C2	1:w:2711:A:C8	2.86	0.62
1:w:2740:A:N6	1:w:2764:A:C8	2.67	0.62
1:w:2759:G:C2'	1:w:2760:C:C6	2.67	0.62
1:w:2776:A:H1'	1:w:2781:A:H4'	1.81	0.62
1:w:2808:U:C2	1:w:2892:A:N7	2.67	0.62
2:x:92:G:O2'	2:x:93:C:H5'	1.98	0.62
4:B:249:PRO:HB3	4:B:250:TRP:HZ3	1.59	0.62
11:I:78:ARG:CB	16:N:73:GLU:HG3	2.27	0.62
13:K:8:LYS:HD3	13:K:8:LYS:H	1.63	0.62
13:K:129:THR:OG1	13:K:130:LYS:N	2.31	0.62
16:N:32:TYR:HB2	16:N:81:PRO:O	1.99	0.62
16:N:64:ARG:NH1	16:N:103:ARG:HA	2.14	0.62
16:N:109:GLU:HA	16:N:112:ARG:HE	1.64	0.62
18:P:82:ARG:HG2	18:P:82:ARG:HH11	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:44:ALA:C	19:Q:46:PHE:H	2.06	0.62
20:R:30:VAL:CG1	20:R:31:HIS:N	2.62	0.62
21:S:9:LYS:HG3	21:S:10:GLY:H	1.64	0.62
22:T:38:TYR:HD2	22:T:38:TYR:C	2.07	0.62
22:T:69:THR:HG21	22:T:88:PHE:CZ	2.33	0.62
26:X:41:PRO:HA	26:X:44:ARG:CD	2.29	0.62
27:Y:34:PRO:HG2	27:Y:49:CYS:SG	2.39	0.62
31:y:9:G:H3'	38:f:126:ARG:HD3	1.81	0.62
31:y:24:U:C2'	31:y:25:C:C5'	2.78	0.62
31:y:200:G:O2'	31:y:201:C:O4'	2.17	0.62
31:y:650:G:H8	31:y:650:G:O5'	1.81	0.62
31:y:1175:G:N2	31:y:1176:A:C4	2.67	0.62
31:y:1209:C:H2'	31:y:1210:C:C5'	2.29	0.62
31:y:1237:C:H3'	31:y:1238:A:H5'	0.74	0.62
31:y:1336:C:H4'	31:y:1337:G:C2	2.34	0.62
31:y:1443:G:O4'	31:y:1446:A:O3'	2.17	0.62
35:c:68:ILE:HG23	35:c:161:ALA:C	2.24	0.62
35:c:180:LEU:O	35:c:182:ILE:N	2.32	0.62
35:c:200:ILE:HD13	35:c:200:ILE:N	2.14	0.62
37:e:26:CYS:CA	37:e:31:CYS:CB	2.66	0.62
37:e:98:GLU:HG3	37:e:98:GLU:O	1.97	0.62
37:e:101:LEU:O	37:e:105:VAL:CG2	2.46	0.62
37:e:117:ALA:O	37:e:120:LEU:HD13	1.98	0.62
37:e:121:VAL:CA	37:e:136:PRO:HG2	2.28	0.62
38:f:103:GLY:O	38:f:107:ARG:HB2	1.98	0.62
38:f:141:GLN:O	38:f:143:ARG:NE	2.32	0.62
40:h:5:ARG:HG2	40:h:5:ARG:HH11	1.63	0.62
40:h:136:LYS:HZ1	40:h:137:LYS:HA	1.62	0.62
41:i:40:ALA:CA	41:i:45:ILE:HG21	2.29	0.62
43:k:27:ALA:CA	43:k:32:ALA:O	2.47	0.62
44:l:94:ALA:O	44:l:98:LEU:CG	2.45	0.62
45:m:76:LEU:HD13	45:m:80:SER:OG	1.99	0.62
46:n:49:THR:HB	46:n:52:GLU:HG3	1.81	0.62
48:p:54:ARG:CD	48:p:55:GLY:N	2.60	0.62
51:s:68:LYS:HE3	51:s:68:LYS:O	1.98	0.62
1:w:107:C:C4	1:w:108:U:O4	2.52	0.62
1:w:231:C:C2'	1:w:232:G:C5'	2.67	0.62
1:w:532:A:H4'	1:w:533:G:C1'	2.29	0.62
1:w:755:C:N3	1:w:756:C:N4	2.47	0.62
1:w:813:U:H4'	1:w:1226:A:H5'	1.80	0.62
1:w:1145:C:N4	1:w:1146:C:N4	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1203:G:OP2	1:w:1204:A:H3'	1.99	0.62
1:w:1309:G:OP1	28:Z:9:ARG:HB2	1.98	0.62
1:w:149(B):A:N3	1:w:1529:A:N3	2.46	0.62
1:w:1614:A:P	28:Z:3:ARG:NE	2.72	0.62
1:w:1945:G:N3	1:w:1946:U:C6	2.66	0.62
1:w:2015:A:H2'	1:w:2016:U:H6	1.64	0.62
1:w:2077:A:H2	1:w:2434:A:N3	1.95	0.62
1:w:2096:U:H5'	1:w:2097:C:OP1	1.99	0.62
1:w:2308:G:OP2	1:w:2310:A:N6	2.32	0.62
1:w:2335:A:O3'	1:w:2336:A:H8	1.82	0.62
1:w:712(B):A:OP1	1:w:2713:A:H5'	1.98	0.62
1:w:2877:G:C3'	1:w:2878:U:H6	2.12	0.62
2:x:113:C:H2'	2:x:113:C:O2	1.97	0.62
3:A:8:TYR:CB	3:A:12:LEU:CD1	2.71	0.62
3:A:22:THR:O	3:A:225:ILE:HG23	2.00	0.62
3:A:40:GLU:C	3:A:178:LYS:HD2	2.24	0.62
4:B:201:HIS:O	4:B:204:ILE:HG23	1.99	0.62
7:E:47:LYS:HG3	7:E:50:ALA:HB2	1.81	0.62
8:F:11:VAL:HG12	8:F:11:VAL:O	1.97	0.62
9:G:26:ALA:HA	9:G:30:LEU:HB2	1.79	0.62
11:I:52:VAL:HG12	11:I:52:VAL:O	2.00	0.62
12:J:88:LEU:C	12:J:90:ARG:N	2.53	0.62
18:P:38:LEU:H	18:P:55:ALA:CB	2.12	0.62
23:U:31:VAL:HG23	23:U:62:LEU:N	2.13	0.62
23:U:37:LEU:HD23	23:U:60:PHE:N	2.14	0.62
31:y:26:A:N6	31:y:557:G:C2	2.67	0.62
31:y:63:C:P	31:y:384:G:H21	2.23	0.62
31:y:291:C:P	31:y:305:G:N1	2.72	0.62
31:y:331:G:C5'	31:y:332:G:H5'	2.20	0.62
31:y:412:A:H4'	31:y:413:G:C8	2.33	0.62
31:y:451:A:OP1	31:y:481:G:N1	2.32	0.62
31:y:479:C:H2'	31:y:480:U:O4'	1.99	0.62
31:y:500:G:H2'	31:y:501:C:H6	1.63	0.62
31:y:502:G:H4'	31:y:550:G:C2'	2.29	0.62
31:y:591:U:O2'	31:y:592:G:H5'	1.99	0.62
31:y:593:G:C5	31:y:594:G:N7	2.67	0.62
31:y:628:G:C6	31:y:629:G:C2	2.87	0.62
31:y:708:C:H6	31:y:708:C:O5'	1.82	0.62
31:y:728:A:H2'	31:y:729:A:N7	2.14	0.62
31:y:894:G:N3	31:y:894:G:C2'	2.61	0.62
31:y:1003:G:C2	31:y:1004:A:C1'	2.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1075:C:H2'	31:y:1076:C:H5'	1.81	0.62
31:y:1178:G:O2'	31:y:1180:A:N7	2.27	0.62
31:y:1212:U:C2'	31:y:1213:A:C5'	2.64	0.62
31:y:1423:G:H2'	31:y:1424:C:H6	1.62	0.62
31:y:1468:A:H2'	31:y:1469:G:H5'	1.80	0.62
33:0:33:U:N3	33:0:36:A:P	2.70	0.62
35:c:132:LYS:HA	35:c:135:GLN:HE21	1.63	0.62
36:d:23:TYR:HB2	43:k:11:PHE:CE1	2.35	0.62
36:d:92:ALA:HA	36:d:99:VAL:H	1.64	0.62
36:d:148:GLY:O	36:d:203:PHE:N	2.32	0.62
40:h:5:ARG:HD2	40:h:5:ARG:H	1.63	0.62
40:h:43:PHE:CD1	40:h:43:PHE:C	2.77	0.62
41:i:13:ILE:C	41:i:15:ASN:N	2.53	0.62
41:i:49:GLU:C	41:i:51:VAL:H	2.05	0.62
47:o:23:ARG:HG3	47:o:23:ARG:HH11	1.64	0.62
48:p:29:VAL:HG12	48:p:30:ALA:H	1.63	0.62
49:q:35:LYS:C	49:q:37:GLY:H	2.06	0.62
1:w:8:A:H2'	1:w:9:U:C5'	2.30	0.62
1:w:36:G:C4'	1:w:451:C:N3	2.62	0.62
1:w:37:C:H2'	1:w:38:A:N7	2.14	0.62
1:w:64:A:C8	1:w:65:C:C5	2.88	0.62
1:w:77:C:H4'	25:W:53:LEU:HA	1.80	0.62
1:w:84:A:O2'	1:w:98:G:N2	2.32	0.62
1:w:270(J):G:OP2	1:w:270(J):G:H8	1.81	0.62
1:w:308:G:C5	1:w:309:G:N3	2.68	0.62
1:w:527:C:H5''	1:w:528:A:OP1	2.00	0.62
1:w:766:C:H2'	1:w:767:U:O4'	1.99	0.62
1:w:848:G:H5'	1:w:929:G:N2	2.13	0.62
1:w:852:G:H1'	26:X:41:PRO:CB	2.26	0.62
1:w:1025:G:N3	1:w:1135:C:O4'	2.31	0.62
1:w:1053:C:C4	1:w:1054:A:C8	2.88	0.62
1:w:1284:A:H2'	1:w:1285:G:H5'	1.80	0.62
1:w:1305:C:C2	1:w:1624:G:C2	2.87	0.62
1:w:1315:C:H2'	1:w:1392:A:N3	2.15	0.62
1:w:1431:U:H2'	1:w:1432:C:O5'	1.98	0.62
1:w:1653:G:C2'	14:L:9:LYS:CE	2.78	0.62
1:w:1656:C:OP1	5:C:115:GLY:HA3	2.00	0.62
1:w:1686:C:H2'	1:w:1687:G:C4'	2.28	0.62
1:w:1701:A:H8	1:w:1701:A:O5'	1.82	0.62
1:w:1797:C:C5	1:w:1797:C:OP2	2.52	0.62
1:w:1813:G:C5'	4:B:40:THR:HG21	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2085:C:H2'	1:w:2086:U:C6	2.34	0.62
1:w:2297:C:C3'	1:w:2298:A:H8	2.11	0.62
1:w:2358:G:N2	1:w:2359:C:C5	2.68	0.62
1:w:2660:A:C8	1:w:2661:G:C8	2.88	0.62
1:w:2794:C:H3'	1:w:2795:G:N7	2.14	0.62
2:x:18:G:N3	2:x:19:G:N7	2.48	0.62
2:x:42:C:C2'	2:x:43:C:H6	2.12	0.62
2:x:73:A:C2	22:T:34:ASN:ND2	2.62	0.62
3:A:21:TYR:CD1	3:A:26:ALA:CB	2.74	0.62
4:B:133:LEU:H	4:B:189:CYS:H	1.47	0.62
5:C:11:MET:SD	5:C:23:VAL:O	2.58	0.62
5:C:61:ARG:HG3	5:C:62:PRO:HD2	1.79	0.62
6:D:4:ILE:HD13	6:D:119:LEU:H	1.64	0.62
6:D:146:SER:N	6:D:167:TRP:CE2	2.58	0.62
6:D:195:GLU:CG	6:D:196:VAL:N	2.62	0.62
7:E:43:LEU:CG	7:E:153:ARG:HD3	2.28	0.62
9:G:90:GLY:O	9:G:121:LYS:NZ	2.31	0.62
9:G:121:LYS:O	9:G:122:GLU:CB	2.46	0.62
9:G:125:GLU:N	9:G:125:GLU:OE2	2.31	0.62
11:I:17:ARG:CG	11:I:47:ILE:HG12	2.26	0.62
11:I:78:ARG:HD3	16:N:73:GLU:OE2	1.98	0.62
13:K:35:VAL:O	13:K:129:THR:HA	1.99	0.62
13:K:115:MET:O	13:K:119:ARG:HD3	2.00	0.62
13:K:124:LYS:HZ1	13:K:125:LEU:HD23	1.62	0.62
13:K:134:ARG:HG2	13:K:134:ARG:HH21	1.64	0.62
16:N:11:GLU:HB2	16:N:57:PHE:HZ	1.63	0.62
16:N:45:PHE:CE1	16:N:72:VAL:HB	2.34	0.62
16:N:50:ILE:CG1	16:N:99:LEU:HB2	2.30	0.62
17:O:83:LEU:CD1	17:O:89:GLU:HA	2.27	0.62
18:P:36:PRO:HD2	18:P:62:LEU:CD1	2.29	0.62
18:P:89:GLN:HG2	18:P:90:PRO:CD	2.29	0.62
22:T:10:ARG:HD2	22:T:36:LYS:HB3	1.80	0.62
22:T:102:LEU:CD2	22:T:123:ASP:O	2.47	0.62
26:X:16:PRO:O	26:X:20:LYS:HG3	1.98	0.62
26:X:33:GLN:HE22	26:X:35:ARG:HD3	1.64	0.62
31:y:6:G:N2	38:f:95:ALA:HB2	2.07	0.62
31:y:37:U:C4	31:y:397:A:N1	2.68	0.62
31:y:158:G:H3'	31:y:159:G:C8	2.33	0.62
31:y:176:C:H2'	31:y:177:C:C6	2.35	0.62
31:y:276:G:O2'	50:r:68:ARG:NH1	2.32	0.62
31:y:361:G:C3'	31:y:362:G:C8	2.83	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:363:A:C2'	31:y:364:A:O4'	2.44	0.62
31:y:489:C:C4'	37:e:132:ARG:HH22	2.13	0.62
31:y:668:G:H2'	31:y:669:U:O4'	2.00	0.62
31:y:692:U:H3'	31:y:692:U:C6	2.33	0.62
31:y:782:A:C5	31:y:783:C:C6	2.87	0.62
31:y:894:G:C6	31:y:895:G:N7	2.68	0.62
31:y:1034:G:C2	31:y:1035:A:C6	2.87	0.62
31:y:1197:G:C8	31:y:1197:G:P	2.92	0.62
31:y:1350:A:N6	31:y:1351:U:O4	2.32	0.62
31:y:1471:G:C2'	31:y:1472:U:C6	2.81	0.62
35:c:118:LEU:O	35:c:122:PHE:HB3	2.00	0.62
36:d:29:TYR:O	36:d:30:ARG:C	2.42	0.62
36:d:131:ARG:HH12	38:f:52:PRO:CD	2.12	0.62
37:e:65:ARG:CZ	37:e:75:PHE:HE2	2.12	0.62
38:f:100:VAL:HG22	38:f:116:THR:C	2.24	0.62
41:i:79:VAL:HG23	41:i:80:ILE:HD13	1.81	0.62
42:j:82:ALA:O	42:j:85:LEU:HD12	2.00	0.62
49:q:6:LEU:HD12	49:q:17:TYR:CE1	2.35	0.62
50:r:26:GLN:O	50:r:27:PHE:HB3	2.00	0.62
51:s:34:TYR:HA	51:s:40:LEU:HD11	1.81	0.62
53:u:45:GLN:CA	53:u:91:LEU:HD13	2.29	0.62
1:w:8:A:C2	1:w:2896:C:N4	2.68	0.62
1:w:36:G:N1	1:w:445:C:N4	2.47	0.62
1:w:107:C:O2'	1:w:292:C:O2	2.16	0.62
1:w:270(N):U:C5	1:w:270(O):G:C2	2.87	0.62
1:w:282:A:H2'	1:w:283:A:O4'	1.99	0.62
1:w:364:C:H2'	1:w:365(A):C:C6	2.30	0.62
1:w:567:A:H2'	1:w:568:U:O4'	2.00	0.62
1:w:570:G:H4'	1:w:983:A:N6	2.13	0.62
1:w:682:G:C2	1:w:683:C:C2	2.87	0.62
1:w:811:U:OP2	1:w:811:U:N1	2.32	0.62
1:w:904:C:C2	1:w:905:U:C6	2.87	0.62
1:w:980:A:O2'	1:w:981:A:H5'	2.00	0.62
1:w:1031:G:H4'	30:b:6:SER:N	2.12	0.62
1:w:1114:G:O2'	1:w:1115:G:H5'	1.99	0.62
1:w:1150:C:H2'	1:w:1151:G:C8	2.34	0.62
1:w:1251:C:H5''	17:O:10:ARG:HH21	1.65	0.62
1:w:1416:G:HO2'	1:w:1417:C:H6	1.40	0.62
1:w:1422:G:C4	1:w:1423:G:C8	2.87	0.62
1:w:1531:C:C4	1:w:1532:C:C5	2.88	0.62
1:w:1532:C:N4	1:w:1538:G:C6	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1691:C:O2	1:w:1977:A:O2'	2.18	0.62
1:w:1772:G:C2'	1:w:1773:A:C5'	2.77	0.62
1:w:1782:C:O2	1:w:2608:G:C2'	2.47	0.62
1:w:1802:A:H8	1:w:1802:A:O5'	1.81	0.62
1:w:1878:G:H2'	1:w:1879:C:C6	2.35	0.62
1:w:2081:C:H4'	24:V:40:ARG:HG3	1.81	0.62
1:w:2164:C:C2	1:w:2165:G:N7	2.67	0.62
1:w:2184:G:H2'	1:w:2185:C:H6	1.63	0.62
1:w:2263:C:C6	1:w:2263:C:C3'	2.82	0.62
1:w:2291:U:H5''	1:w:2380:C:O2'	1.99	0.62
1:w:2300:G:H2'	1:w:2301:C:C5'	2.29	0.62
1:w:2420:C:OP1	29:a:35:GLN:N	2.33	0.62
1:w:2578:G:H1'	5:C:139:GLY:C	2.24	0.62
1:w:2598:A:O5'	1:w:2598:A:C8	2.43	0.62
1:w:2652:C:H3'	1:w:2653:U:H6	1.64	0.62
1:w:2795:G:O2'	1:w:2799:A:N7	2.24	0.62
1:w:2844:G:N2	1:w:2845:G:C2	2.68	0.62
1:w:2877:G:C3'	1:w:2878:U:C6	2.83	0.62
1:w:2879:C:N4	1:w:2883:A:N6	2.48	0.62
2:x:23:G:C6	2:x:61:G:N1	2.68	0.62
2:x:46:A:H2'	2:x:47:C:C5'	2.29	0.62
4:B:76:PRO:CB	4:B:117:VAL:HG12	2.27	0.62
5:C:133:LYS:O	5:C:134:ILE:HG13	1.99	0.62
6:D:135:LEU:O	6:D:138:ALA:HB3	2.00	0.62
6:D:187:LEU:HD23	6:D:188:VAL:N	2.14	0.62
7:E:33:ARG:NH2	7:E:33:ARG:HA	2.12	0.62
7:E:144:ILE:O	7:E:144:ILE:CG2	2.44	0.62
8:F:147:ASN:C	8:F:150:ALA:HB3	2.25	0.62
10:H:112:LYS:HD3	10:H:112:LYS:C	2.25	0.62
11:I:35:VAL:HG22	11:I:62:VAL:HG12	1.81	0.62
11:I:85:VAL:HG11	11:I:93:PRO:CB	2.29	0.62
13:K:37:LEU:HB2	13:K:127:ILE:HB	1.81	0.62
14:L:8:ARG:HB3	14:L:43:GLU:OE2	1.98	0.62
16:N:61:PHE:CE1	16:N:77:PRO:O	2.53	0.62
17:O:79:PHE:C	17:O:79:PHE:CD2	2.78	0.62
24:V:27:GLU:HG3	33:O:74:C:C4'	2.29	0.62
26:X:40:THR:C	26:X:44:ARG:CD	2.73	0.62
29:a:32:LEU:HG	29:a:35:GLN:N	2.11	0.62
29:a:36:LYS:N	29:a:36:LYS:HD2	2.15	0.62
30:b:24:TYR:HB3	30:b:35:ARG:CA	2.28	0.62
31:y:96:G:C5	31:y:97:U:C4	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:143:A:O4'	31:y:196:A:H2	1.81	0.62
31:y:186(E):C:C2	31:y:186(F):C:C5	2.87	0.62
31:y:283:C:O2'	31:y:284:G:H5'	1.99	0.62
31:y:365:U:O2	31:y:365:U:C3'	2.48	0.62
31:y:514:C:H2'	31:y:515:G:H8	1.63	0.62
31:y:675:A:C3'	31:y:676:A:C5'	2.74	0.62
31:y:687:A:C5'	44:l:42:TRP:CZ2	2.80	0.62
31:y:705:U:C6	31:y:706:A:C8	2.87	0.62
31:y:937:A:N7	31:y:938:A:N7	2.48	0.62
31:y:939:G:O4'	31:y:939:G:OP1	2.17	0.62
31:y:1054:C:OP2	31:y:1197:G:O5'	2.16	0.62
31:y:1064:G:O2'	31:y:1065:U:OP2	2.17	0.62
31:y:1139:G:C5'	31:y:1140:C:OP1	2.43	0.62
31:y:1231:G:H2'	31:y:1232:U:C6	2.35	0.62
31:y:1364:U:O4'	54:v:14:TRP:HZ3	1.82	0.62
31:y:1373:G:C5'	40:h:36:LYS:HE3	2.29	0.62
31:y:1375:A:H2'	31:y:1376:U:C6	2.33	0.62
31:y:1416:G:H2'	31:y:1417:G:C5'	2.29	0.62
36:d:134:ILE:HB	36:d:151:VAL:HG21	1.80	0.62
37:e:35:ARG:HG3	37:e:35:ARG:HH11	1.64	0.62
37:e:57:ARG:HB3	37:e:206:PHE:CE1	2.33	0.62
38:f:12:LEU:HD23	38:f:13:ILE:O	2.00	0.62
38:f:51:VAL:HA	38:f:54:ALA:HB3	1.82	0.62
39:g:14:LEU:HB2	39:g:18:GLN:HG2	1.81	0.62
39:g:72:VAL:HA	39:g:75:LEU:HD11	1.80	0.62
44:l:51:LYS:HA	44:l:55:LYS:HG3	1.80	0.62
45:m:92:LEU:O	45:m:94:GLY:N	2.30	0.62
49:q:58:TYR:CD2	49:q:58:TYR:C	2.77	0.62
51:s:36:ASN:HB3	51:s:39:VAL:HB	1.80	0.62
51:s:53:ARG:HA	51:s:58:LEU:HD13	1.80	0.62
52:t:22:LEU:HD23	52:t:25:LYS:CE	2.29	0.62
54:v:7:ARG:HA	54:v:21:TYR:CE1	2.33	0.62
1:w:115:C:N3	1:w:116:C:C6	2.67	0.62
1:w:227:A:C5	1:w:2407:G:O4'	2.52	0.62
1:w:293:U:H3	1:w:346:A:H61	1.47	0.62
1:w:557:U:H2'	1:w:558:G:O4'	1.99	0.62
1:w:589:C:O2'	1:w:590:A:H8	1.82	0.62
1:w:740:U:H5''	1:w:1784:A:OP1	1.99	0.62
1:w:745:G:H1'	1:w:750:A:H61	1.64	0.62
1:w:788:A:H4'	1:w:789:A:C5'	2.29	0.62
1:w:814:C:H5'	18:P:86:GLY:HA3	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:848:G:OP2	1:w:929:G:C6	2.52	0.62
1:w:1154:G:H2'	1:w:1155:A:C5'	2.29	0.62
1:w:1248:G:N7	17:O:3:ARG:HA	2.15	0.62
1:w:1434:A:C5	1:w:1435:G:H1'	2.34	0.62
1:w:1459:G:N2	1:w:1461:G:C5	2.68	0.62
1:w:1494:A:H2'	1:w:1495:A:O4'	1.99	0.62
1:w:1530:G:H3'	1:w:1531:C:C6	2.35	0.62
1:w:1665:A:C5'	11:I:78:ARG:HH22	2.04	0.62
1:w:1777:U:C2'	1:w:1778:U:H5'	2.30	0.62
1:w:1839:G:C2'	1:w:1840:G:H8	2.12	0.62
1:w:2024:G:C4	1:w:2025:C:C5	2.88	0.62
1:w:2241:A:H2'	1:w:2241:A:N3	2.14	0.62
1:w:2296:U:C4	1:w:2337:G:N2	2.67	0.62
1:w:2336:A:H5''	1:w:2337:G:C8	2.34	0.62
1:w:2362:G:O2'	1:w:2363:C:H5'	1.99	0.62
1:w:2401:U:O2'	1:w:2402:C:H6	1.83	0.62
1:w:2417:C:C2'	1:w:2418:A:H5'	2.29	0.62
1:w:2686:G:C5	1:w:2687:U:C5	2.87	0.62
1:w:2840:C:C2	1:w:2841:C:C5	2.88	0.62
2:x:8:U:C4'	2:x:9:G:OP1	2.39	0.62
3:A:43:GLU:HB2	3:A:45:HIS:HE2	1.64	0.62
3:A:197:LEU:CG	3:A:198:GLU:H	2.12	0.62
4:B:181:GLU:HG2	4:B:182:LEU:N	2.14	0.62
5:C:59:VAL:CG1	5:C:63:LEU:HD12	2.28	0.62
8:F:172:LYS:CE	8:F:173:PRO:HD2	2.30	0.62
9:G:4:ILE:HG12	9:G:18:VAL:HG22	1.81	0.62
9:G:81:VAL:HG23	9:G:82:ARG:H	1.65	0.62
10:H:37:VAL:CG1	10:H:38:LEU:N	2.61	0.62
10:H:62:ARG:CZ	10:H:63:PRO:HD2	2.30	0.62
12:J:128:HIS:HA	12:J:147:LEU:HB3	1.81	0.62
13:K:11:LYS:CD	13:K:12:GLN:N	2.60	0.62
13:K:56:ARG:C	13:K:58:PHE:N	2.55	0.62
16:N:3:ARG:CB	16:N:7:ILE:HD11	2.26	0.62
16:N:107:ASP:CG	31:y:1431:C:O5'	2.43	0.62
18:P:7:THR:CG2	18:P:22:VAL:HG21	2.30	0.62
20:R:21:PHE:HE2	20:R:26:TYR:HE1	1.47	0.62
21:S:14:LEU:HB3	21:S:23:ARG:H	1.64	0.62
24:V:85:LEU:HD12	24:V:86:SER:N	2.15	0.62
27:Y:16:ARG:O	27:Y:20:ARG:CD	2.47	0.62
31:y:413:G:H1'	31:y:428:G:N2	2.14	0.62
31:y:485:G:O3'	31:y:486:U:C6	2.50	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:519:C:H5''	31:y:529:G:N2	2.14	0.62
31:y:529:G:N1	45:m:48:ASN:ND2	2.46	0.62
31:y:569:C:N4	31:y:575:G:O6	2.33	0.62
31:y:575:G:C5'	31:y:576:G:H5'	2.29	0.62
31:y:584:G:H8	31:y:584:G:O5'	1.82	0.62
31:y:593:G:C4	31:y:594:G:C8	2.88	0.62
31:y:907:A:C6	31:y:908:A:C5	2.87	0.62
31:y:910:C:C5'	45:m:96:ARG:NH2	2.34	0.62
31:y:1060:C:C2	31:y:1061:G:C8	2.88	0.62
31:y:1250:A:C4	31:y:1370:G:O2'	2.52	0.62
31:y:1271:G:C2'	31:y:1272:G:H5'	2.30	0.62
31:y:1300:G:O3'	31:y:1301:U:C5	2.53	0.62
32:z:18:G:O2'	32:z:60:U:O4	2.18	0.62
35:c:81:VAL:O	35:c:85:ALA:CB	2.48	0.62
37:e:151:LYS:O	37:e:152:SER:HB3	2.00	0.62
38:f:70:PRO:O	38:f:71:LEU:CB	2.48	0.62
40:h:62:PHE:O	40:h:65:ALA:CB	2.47	0.62
42:j:122:ALA:HB1	42:j:123:PRO:HD2	1.81	0.62
43:k:66:ARG:NH2	47:o:57:ARG:H	1.98	0.62
44:l:21:ILE:HD13	44:l:95:ILE:HG12	1.80	0.62
46:n:97:PRO:HB3	46:n:109:THR:HB	1.78	0.62
47:o:41:ARG:O	47:o:44:LEU:HB2	1.99	0.62
48:p:3:ILE:HB	48:p:38:ARG:HH12	1.65	0.62
48:p:8:LYS:O	48:p:11:VAL:HG22	1.98	0.62
48:p:31:LEU:O	48:p:35:ARG:HB2	1.99	0.62
48:p:81:LEU:C	48:p:82:ILE:HD12	2.24	0.62
50:r:61:GLU:HG2	50:r:71:PHE:CE1	2.32	0.62
53:u:27:LYS:HE3	53:u:27:LYS:CA	2.28	0.62
53:u:47:GLY:O	53:u:48:LYS:C	2.43	0.62
1:w:13:A:C2	1:w:526:A:C6	2.87	0.62
1:w:13:A:N7	1:w:525:U:N3	2.48	0.62
1:w:207:A:O2'	1:w:799:G:H4'	1.99	0.62
1:w:270(X):G:H3'	1:w:270(Y):G:H8	1.64	0.62
1:w:363(G):A:N3	1:w:364:C:C5	2.68	0.62
1:w:440:G:N7	1:w:441:U:C4	2.67	0.62
1:w:465:G:O3'	28:Z:21:ARG:NH2	2.32	0.62
1:w:468:G:C5'	1:w:797:C:OP1	2.48	0.62
1:w:514:A:N1	1:w:515:A:C6	2.67	0.62
1:w:585:G:C3'	1:w:1251:C:N4	2.34	0.62
1:w:588:U:O4	1:w:670:A:H1'	2.00	0.62
1:w:589:C:H1'	6:D:88:LYS:NZ	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:650:C:O2'	29:a:17:THR:CB	2.47	0.62
1:w:723:G:C5	1:w:724:U:O4	2.53	0.62
1:w:769:G:H2'	1:w:770:G:C8	2.27	0.62
1:w:801:G:H5'	6:D:50:GLY:O	2.00	0.62
1:w:842:G:O6	1:w:843:G:C6	2.52	0.62
1:w:997:G:N2	1:w:1159:U:C2	2.68	0.62
1:w:1108:U:H2'	1:w:1109:C:O4'	1.99	0.62
1:w:1264:G:C5'	27:Y:11:THR:HG21	2.24	0.62
1:w:1515:C:H2'	1:w:1516:U:C5'	2.27	0.62
1:w:1660:C:C2'	1:w:1661:G:H5'	2.29	0.62
1:w:1712:C:C4	1:w:1747:G:N2	2.68	0.62
1:w:1796:U:H4'	4:B:256:GLY:CA	2.30	0.62
1:w:1796:U:C2'	1:w:1797:C:H5	1.95	0.62
1:w:1811:G:C8	1:w:1811:G:C5'	2.82	0.62
1:w:2052:G:N3	5:C:149:ARG:HA	2.15	0.62
1:w:2131:G:H5'	1:w:2132:U:C4	2.33	0.62
1:w:2188:C:H2'	1:w:2189:U:O4'	1.98	0.62
1:w:2567:G:H5'	1:w:2567:G:C8	2.30	0.62
1:w:2717:G:C6	1:w:2718:G:C5	2.87	0.62
1:w:2744:G:N7	1:w:2755:C:O2	2.33	0.62
1:w:2747:G:H21	1:w:2756:U:H5'	1.62	0.62
1:w:2759:G:C4	1:w:2760:C:C5	2.86	0.62
1:w:2875:C:O2'	16:N:5:ALA:HB3	2.00	0.62
2:x:4:C:H2'	2:x:5:C:H6	1.64	0.62
2:x:9:G:C2'	2:x:10:C:O5'	2.48	0.62
2:x:110:G:H2'	2:x:111:U:O4'	1.99	0.62
4:B:3:VAL:C	4:B:17:THR:HG23	2.24	0.62
5:C:37:ARG:CG	5:C:46:ALA:HB3	2.29	0.62
5:C:63:LEU:CD2	5:C:65:GLY:CA	2.78	0.62
6:D:16:ALA:O	6:D:17:ALA:C	2.42	0.62
7:E:25:TYR:N	7:E:25:TYR:CD1	2.68	0.62
11:I:16:ALA:O	11:I:17:ARG:HD3	2.00	0.62
11:I:48:PRO:HA	11:I:53:LYS:HE2	1.80	0.62
11:I:64:ARG:HB3	11:I:102:VAL:CG1	2.23	0.62
15:M:72:ALA:C	15:M:74:ALA:N	2.56	0.62
17:O:81:HIS:CE1	17:O:85:LYS:HB2	2.35	0.62
18:P:81:TYR:H	18:P:83:ARG:CZ	2.12	0.62
19:Q:72:LYS:NZ	19:Q:107:LEU:O	2.32	0.62
22:T:77:ASP:O	22:T:79:ARG:N	2.33	0.62
23:U:36:ILE:N	23:U:36:ILE:HD12	2.13	0.62
31:y:116:A:C5	31:y:117:G:C4	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:132:C:H5''	53:u:74:LYS:HZ1	1.63	0.62
31:y:152:A:H2'	31:y:153:C:O4'	2.00	0.62
31:y:186(A):C:O4'	53:u:81:LYS:CB	2.47	0.62
31:y:482:A:C2	31:y:483:C:H1'	2.35	0.62
31:y:556:C:N3	31:y:557:G:C5	2.67	0.62
31:y:660:G:C5	31:y:661:G:C8	2.87	0.62
31:y:779:C:H6	31:y:779:C:OP2	1.81	0.62
31:y:953:G:H2'	31:y:954:G:C8	2.34	0.62
31:y:978:A:N6	31:y:1318:A:N6	2.46	0.62
31:y:1221:G:H3'	31:y:1222:G:C8	2.35	0.62
31:y:1261:A:H3'	31:y:1262:C:H6	1.63	0.62
31:y:1316:G:C1'	31:y:1318:A:H62	2.12	0.62
31:y:1494:G:C4	31:y:1495:U:C5	2.88	0.62
32:z:9:A:C4	32:z:46:7MG:N2	2.67	0.62
40:h:94:ARG:O	40:h:98:SER:OG	2.16	0.62
40:h:108:ALA:HB1	40:h:120:ILE:CG1	2.30	0.62
43:k:82:ILE:HD13	43:k:82:ILE:O	1.99	0.62
44:l:48:ILE:CD1	44:l:64:ALA:HA	2.30	0.62
45:m:32:ARG:O	45:m:84:ILE:CD1	2.48	0.62
46:n:97:PRO:O	46:n:99:ARG:N	2.32	0.62
51:s:47:THR:HG23	51:s:84:LYS:N	2.12	0.62
52:t:46:GLY:N	52:t:62:ILE:HG23	2.13	0.62
1:w:48:G:H2'	1:w:49:A:C2	2.33	0.62
1:w:67:U:C4	1:w:68:G:N7	2.68	0.62
1:w:120:U:C4	1:w:149:A:N6	2.67	0.62
1:w:182:A:C4	1:w:433:C:O2'	2.46	0.62
1:w:270(J):G:C6	1:w:270(K):G:O6	2.53	0.62
1:w:297:C:C2'	1:w:298:G:H5''	2.30	0.62
1:w:370:G:H5''	1:w:371:A:OP2	2.00	0.62
1:w:388:G:P	24:V:34:THR:HB	2.39	0.62
1:w:441:U:H2'	1:w:442:G:O4'	1.99	0.62
1:w:466:A:H1'	1:w:683:C:O2'	1.99	0.62
1:w:558:G:C4	1:w:559:G:C8	2.87	0.62
1:w:612:G:N2	1:w:617:G:C5	2.67	0.62
1:w:1004:C:C5'	1:w:1010:A:N6	2.50	0.62
1:w:1042:G:N2	1:w:1113:U:O2	2.31	0.62
1:w:1424:G:C6	1:w:1425:G:C5	2.87	0.62
1:w:1563:G:C2	1:w:1564:C:C2	2.88	0.62
1:w:2252:G:H1	32:z:74:C:H42	1.46	0.62
1:w:2271:G:H1'	23:U:19:LYS:HE3	1.80	0.62
1:w:2359:C:N1	29:a:52:LYS:HE2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2435:A:H8	1:w:2435:A:H5'	1.63	0.62
1:w:2531:A:H2'	1:w:2532:G:H8	1.65	0.62
1:w:2631:G:H2'	1:w:2810:A:C2	2.34	0.62
1:w:2820:A:H4'	5:C:109:LYS:HZ2	1.63	0.62
2:x:45:A:N3	2:x:45:A:C2'	2.62	0.62
5:C:12:THR:O	5:C:13:ARG:CB	2.46	0.62
7:E:43:LEU:HD22	7:E:45:GLU:N	2.14	0.62
7:E:122:PRO:CB	7:E:173:LEU:HD11	2.23	0.62
8:F:123:PHE:HB2	8:F:131:VAL:HG21	1.82	0.62
8:F:124:GLU:OE2	8:F:134:SER:HB2	2.00	0.62
8:F:149:ARG:CD	8:F:153:LYS:HE2	2.29	0.62
9:G:54:GLN:O	9:G:58:LEU:HB2	2.00	0.62
9:G:76:THR:CG2	9:G:142:VAL:HA	2.30	0.62
10:H:65:TRP:CZ3	10:H:71:MET:SD	2.92	0.62
10:H:76:VAL:CG1	10:H:77:VAL:H	2.11	0.62
11:I:71:ARG:HB2	11:I:75:SER:HB2	1.80	0.62
13:K:124:LYS:HE2	13:K:124:LYS:O	2.00	0.62
14:L:40:LYS:O	14:L:44:LEU:CG	2.47	0.62
14:L:44:LEU:HA	14:L:47:PHE:CE2	2.34	0.62
14:L:44:LEU:HD13	14:L:47:PHE:CZ	2.35	0.62
16:N:56:GLY:H	16:N:59:THR:HG23	1.65	0.62
18:P:22:VAL:O	18:P:22:VAL:HG13	1.99	0.62
18:P:89:GLN:HG2	18:P:90:PRO:N	2.15	0.62
24:V:40:ARG:HD3	24:V:41:ARG:H	1.62	0.62
31:y:38:G:H1	31:y:397:A:C5'	2.12	0.62
31:y:150:C:O5'	31:y:150:C:H6	1.83	0.62
31:y:267:C:N4	31:y:268:C:H41	1.98	0.62
31:y:300:A:O3'	50:r:31:LEU:CD2	2.48	0.62
31:y:515:G:C8	31:y:515:G:O5'	2.52	0.62
31:y:518:C:H6	31:y:530:G:H5'	1.64	0.62
31:y:719:C:H3'	31:y:720:C:C6	2.35	0.62
31:y:739:C:C2'	48:p:42:HIS:HD2	2.12	0.62
31:y:754:C:H3'	31:y:754:C:O2	2.00	0.62
31:y:786:G:C4	31:y:787:A:C8	2.88	0.62
31:y:968:A:H8	31:y:968:A:O5'	1.83	0.62
31:y:1092:A:O4'	31:y:1183:A:N6	2.33	0.62
31:y:1119:C:C2	31:y:1120:G:N7	2.68	0.62
31:y:1195:C:O5'	31:y:1195:C:H6	1.83	0.62
31:y:1250:A:C2	31:y:1370:G:O2'	2.51	0.62
31:y:1302:U:H2'	31:y:1302:U:O2	1.99	0.62
31:y:1349:A:C5'	42:j:121:ARG:HG2	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1441:G:H4'	31:y:1442:G:C4	2.35	0.62
31:y:1525:G:C2	31:y:1526:G:N7	2.68	0.62
32:z:15:G:H2'	32:z:16:H2U:OP1	2.00	0.62
32:z:19:G:C2	32:z:57:G:C4	2.87	0.62
35:c:23:ARG:HG3	35:c:23:ARG:NH1	2.13	0.62
35:c:109:SER:OG	35:c:110:GLN:NE2	2.32	0.62
37:e:33:MET:HB2	37:e:37:PRO:HG3	1.81	0.62
38:f:15:ARG:O	38:f:15:ARG:HG3	1.99	0.62
40:h:38:LEU:HD12	40:h:38:LEU:H	1.64	0.62
41:i:93:VAL:CG1	41:i:133:LEU:HB3	2.30	0.62
41:i:118:VAL:CG1	41:i:119:LEU:H	2.13	0.62
46:n:59:TYR:HD2	46:n:60:VAL:CG1	2.12	0.62
48:p:50:HIS:H	48:p:53:HIS:CD2	2.16	0.62
48:p:71:GLN:HA	48:p:78:TYR:HE1	1.65	0.62
49:q:73:LEU:N	49:q:73:LEU:CD1	2.61	0.62
50:r:26:GLN:O	50:r:27:PHE:HD1	1.82	0.62
52:t:45:VAL:CG1	52:t:46:GLY:N	2.62	0.62
1:w:25:U:O5'	1:w:25:U:H6	1.81	0.62
1:w:109:G:C8	1:w:109:G:O5'	2.51	0.62
1:w:145:G:H2'	1:w:146:G:C4'	2.29	0.62
1:w:270(N):U:H5	1:w:270(O):G:H21	1.46	0.62
1:w:322:A:C5'	1:w:340:A:O4'	2.48	0.62
1:w:439:G:O2'	1:w:440:G:C5'	2.47	0.62
1:w:500:G:H1'	1:w:505:A:N6	2.15	0.62
1:w:531:C:H1'	17:O:28:ARG:HH21	1.65	0.62
1:w:532:A:H4'	1:w:533:G:N9	2.14	0.62
1:w:686:G:N7	28:Z:5:TRP:CH2	2.67	0.62
1:w:706:A:N6	1:w:725:G:O2'	2.32	0.62
1:w:731:C:C2	1:w:732:C:C5	2.87	0.62
1:w:937:U:C3'	1:w:938:G:H8	2.09	0.62
1:w:954:G:O3'	13:K:17:LEU:HD12	1.99	0.62
1:w:1128:A:H62	1:w:2518:A:H61	1.40	0.62
1:w:1194:A:N1	1:w:1195:G:C5	2.67	0.62
1:w:1264:G:C2	1:w:2014:A:N7	2.68	0.62
1:w:1287:A:H3'	1:w:1288:U:H6	1.64	0.62
1:w:1305:C:N3	1:w:1624:G:C2	2.68	0.62
1:w:1366:A:C2	1:w:1367:A:O4'	2.53	0.62
1:w:1413:G:C2'	1:w:1414:G:O4'	2.46	0.62
1:w:1435:G:C6	1:w:1436:G:O6	2.53	0.62
1:w:1439:A:H2'	1:w:1440:G:H5'	1.82	0.62
1:w:1794:U:C2	1:w:1795:C:H5	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1860:G:H2'	1:w:1861:G:H8	1.54	0.62
1:w:1958:C:O2'	1:w:1959:G:C5'	2.44	0.62
1:w:2060:A:HO2'	1:w:2061:G:P	2.17	0.62
1:w:2096:U:O3'	1:w:2097:C:H6	1.83	0.62
1:w:2145:C:H2'	1:w:2146:C:C6	2.35	0.62
1:w:2218:G:C2	1:w:2219:G:C8	2.88	0.62
1:w:2251:G:C2	32:z:76:A:C2	2.88	0.62
1:w:2307:G:N3	1:w:2307:G:C2'	2.63	0.62
1:w:2516:G:C2	1:w:2569:G:C2	2.88	0.62
1:w:2558:C:O5'	1:w:2558:C:C6	2.53	0.62
1:w:2712:U:H1'	1:w:712(B):A:C5'	2.30	0.62
1:w:2842:G:C6	1:w:2843:G:C6	2.88	0.62
2:x:94:C:C2	2:x:95:U:C5	2.88	0.62
4:B:21:PHE:HA	4:B:24:ILE:HD12	1.81	0.62
5:C:7:VAL:HG22	5:C:27:LEU:O	1.98	0.62
5:C:37:ARG:HB2	5:C:46:ALA:N	2.14	0.62
6:D:171:LEU:O	6:D:172:ALA:HB2	2.00	0.62
6:D:181:ILE:HD13	6:D:184:THR:HG1	1.64	0.62
7:E:8:LYS:C	7:E:10:LYS:H	2.08	0.62
7:E:59:GLU:CG	7:E:60:LEU:H	2.04	0.62
7:E:72:ARG:O	7:E:73:ALA:HB3	1.98	0.62
9:G:4:ILE:HG23	9:G:17:GLN:N	2.15	0.62
10:H:65:TRP:CB	17:O:64:ARG:HD2	2.28	0.62
10:H:113:MET:HE1	10:H:120:ARG:HD3	1.80	0.62
14:L:63:ARG:O	14:L:67:LEU:HD23	1.99	0.62
16:N:29:ARG:HH21	16:N:84:GLN:CD	2.08	0.62
17:O:114:LYS:HG3	17:O:115:ALA:H	1.64	0.62
18:P:28:GLU:HB2	18:P:29:PRO:HD2	1.81	0.62
18:P:89:GLN:HG3	18:P:90:PRO:HD2	1.81	0.62
20:R:57:LEU:HD21	20:R:76:ARG:HH21	1.64	0.62
20:R:88:LYS:O	20:R:89:ILE:CB	2.40	0.62
21:S:73:ARG:CD	21:S:78:ALA:HB2	2.29	0.62
22:T:8:TYR:HD1	22:T:39:VAL:HA	1.63	0.62
22:T:45:ASP:HA	22:T:48:PHE:HE2	1.65	0.62
22:T:45:ASP:HB3	22:T:49:ARG:HH21	1.64	0.62
22:T:135:GLU:HG2	22:T:136:PHE:H	1.65	0.62
22:T:161:VAL:HG12	22:T:162:GLU:N	2.15	0.62
24:V:91:LYS:H	24:V:91:LYS:CE	2.12	0.62
29:a:56:GLU:O	29:a:58:ILE:N	2.33	0.62
31:y:120:A:C6	31:y:122:G:C2	2.88	0.62
31:y:324:G:N2	31:y:327:A:C5'	2.60	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:433:C:H2'	31:y:434:U:C6	2.34	0.62
31:y:597:G:OP2	31:y:597:G:C3'	2.31	0.62
31:y:636:U:N3	31:y:637:G:N7	2.47	0.62
31:y:668:G:O2'	31:y:669:U:H5'	2.00	0.62
31:y:765:G:N7	31:y:812:C:C5	2.68	0.62
31:y:958:A:H8	31:y:958:A:O5'	1.82	0.62
31:y:1203:C:P	47:o:3:ARG:NH2	2.73	0.62
31:y:1210:C:C4'	31:y:1214:C:C2	2.80	0.62
31:y:1300:G:C2	31:y:1334:G:H2'	2.35	0.62
31:y:1304:G:O2'	31:y:1333:A:N6	2.33	0.62
31:y:1319:A:H4'	52:t:37:ARG:NH2	2.15	0.62
31:y:1377:A:C2'	40:h:5:ARG:NH2	2.62	0.62
31:y:1402:4OC:H3'	31:y:1403:C:H6	1.64	0.62
31:y:1526:G:H2'	31:y:1527:C:O4'	1.99	0.62
35:c:28:PHE:HE1	35:c:31:TYR:CA	2.13	0.62
35:c:55:PHE:N	35:c:58:ILE:HG12	2.15	0.62
36:d:135:LYS:HA	36:d:138:VAL:HG23	1.81	0.62
37:e:101:LEU:HD12	37:e:101:LEU:H	1.65	0.62
38:f:18:ARG:NH2	38:f:27:ARG:N	2.48	0.62
38:f:18:ARG:HH21	38:f:26:PHE:C	2.07	0.62
39:g:37:VAL:HG22	39:g:65:VAL:HG22	1.82	0.62
40:h:9:VAL:O	40:h:9:VAL:HG22	1.99	0.62
41:i:46:LYS:HG3	41:i:63:LEU:C	2.25	0.62
41:i:73:ASP:OD2	41:i:75:ARG:CG	2.42	0.62
43:k:22:LYS:O	43:k:22:LYS:HG2	1.99	0.62
46:n:89:GLY:HA2	46:n:92:HIS:NE2	2.14	0.62
49:q:21:VAL:CG1	49:q:26:ARG:NH2	2.56	0.62
49:q:59:TRP:HB3	49:q:64:ALA:HB2	1.81	0.62
51:s:61:LYS:HA	51:s:64:ARG:CB	2.30	0.62
1:w:331:A:OP2	1:w:1210:A:N1	2.33	0.62
1:w:394:A:H8	1:w:394:A:P	2.22	0.62
1:w:521:G:C5	1:w:522:G:N7	2.67	0.62
1:w:636:G:O5'	1:w:636:G:C8	2.52	0.62
1:w:842:G:C4	1:w:843:G:C8	2.87	0.62
1:w:1078:U:O5'	1:w:1078:U:H6	1.83	0.62
1:w:1195:G:C6	1:w:1196:C:C4	2.87	0.62
1:w:1195:G:N2	1:w:1196:C:H1'	2.15	0.62
1:w:1305:C:H2'	1:w:1306:C:H5'	1.81	0.62
1:w:1374:G:C8	1:w:1374:G:OP2	2.53	0.62
1:w:1438:U:H4'	1:w:1518:C:O3'	2.00	0.62
1:w:1652:A:H3'	1:w:1653:G:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1967:C:C5	1:w:1968:G:C8	2.88	0.62
1:w:2134:A:C2	1:w:2158:A:N3	2.67	0.62
1:w:2332:U:H4'	1:w:2336:A:H62	1.62	0.62
1:w:2367:G:OP2	1:w:2367:G:N7	2.33	0.62
1:w:2468:G:C4	1:w:2481:G:N2	2.68	0.62
1:w:2483:C:C6	1:w:2483:C:C3'	2.83	0.62
1:w:2513:G:H4'	1:w:2513:G:OP1	2.00	0.62
1:w:2544:G:C4	1:w:2545:G:C8	2.87	0.62
1:w:2793:G:C2'	1:w:2794:C:C6	2.82	0.62
2:x:30:C:H2'	2:x:31:C:C5'	2.30	0.62
2:x:81:G:O6	2:x:96:G:O6	2.18	0.62
4:B:6:PHE:CE2	4:B:16:MET:HB2	2.34	0.62
4:B:65:ILE:HD12	4:B:105:ILE:CG1	2.29	0.62
6:D:150:LEU:HB2	6:D:187:LEU:HD12	1.80	0.62
6:D:197:PHE:CG	6:D:197:PHE:O	2.52	0.62
7:E:23:PHE:HB3	7:E:25:TYR:CE1	2.35	0.62
7:E:122:PRO:C	7:E:123:ASN:HD22	2.08	0.62
7:E:173:LEU:HA	7:E:178:PHE:HB2	1.81	0.62
8:F:54:ARG:CB	8:F:55:PRO:HD2	2.20	0.62
8:F:111:HIS:HB3	8:F:112:PRO:HD3	1.81	0.62
11:I:22:ILE:CG1	11:I:23:ARG:H	2.13	0.62
11:I:50:GLY:O	11:I:51:ALA:CB	2.47	0.62
14:L:60:LEU:CD1	14:L:61:HIS:H	2.13	0.62
14:L:103:ARG:HB2	19:Q:40:ASN:CB	2.29	0.62
16:N:23:ARG:CB	16:N:24:PRO:CD	2.78	0.62
16:N:118:ARG:HG3	16:N:118:ARG:HH11	1.65	0.62
19:Q:59:VAL:O	19:Q:59:VAL:CG1	2.48	0.62
21:S:32:PRO:HB2	21:S:34:LYS:HE3	1.81	0.62
24:V:11:ARG:HH22	24:V:60:PHE:HB3	1.65	0.62
24:V:19:GLN:HB2	24:V:44:PRO:HG3	1.82	0.62
31:y:5:U:C4	37:e:86:LYS:O	2.53	0.62
31:y:59:A:H5'	31:y:60:A:C5'	2.29	0.62
31:y:127:G:N2	31:y:235:C:C2	2.67	0.62
31:y:160:A:N3	31:y:344:A:C5	2.67	0.62
31:y:243:A:C2	31:y:245:C:C4	2.88	0.62
31:y:561:U:H4'	31:y:563:A:N7	2.15	0.62
31:y:583:A:H2'	31:y:584:G:O4'	2.00	0.62
31:y:865:A:O2'	31:y:866:C:H5'	2.00	0.62
31:y:1159:U:O2'	31:y:1160:G:P	2.58	0.62
31:y:1244:C:N3	31:y:1245:A:N6	2.48	0.62
32:z:66:U:C4	32:z:67:C:C5	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:132:LYS:HD2	35:c:133:LYS:H	1.63	0.62
35:c:139:LYS:HD3	35:c:139:LYS:O	2.00	0.62
36:d:179:ARG:HD2	36:d:206:GLU:CG	2.27	0.62
41:i:1:MET:HG2	41:i:2:LEU:N	2.14	0.62
42:j:99:LEU:C	42:j:101:PHE:H	2.07	0.62
43:k:71:LEU:O	43:k:72:VAL:HB	1.98	0.62
43:k:78:ASN:H	43:k:78:ASN:HD22	1.48	0.62
44:l:110:ASP:HB2	51:s:88:LYS:HD3	1.82	0.62
45:m:51:LEU:C	45:m:52:ARG:NE	2.56	0.62
49:q:5:ARG:HG2	49:q:22:THR:CG2	2.30	0.62
50:r:39:SER:O	50:r:40:LYS:CB	2.45	0.62
51:s:30:ASP:O	51:s:33:ASP:HB3	2.00	0.62
1:w:23:G:N2	1:w:24:G:H1'	2.15	0.61
1:w:54:G:C2	1:w:55:G:H1'	2.36	0.61
1:w:85:G:C1'	1:w:103:A:H2	2.06	0.61
1:w:132:G:C8	1:w:133:C:C5	2.88	0.61
1:w:669:G:C8	1:w:801:G:C5	2.88	0.61
1:w:728:G:H2'	1:w:730:C:C6	2.35	0.61
1:w:818:G:N7	1:w:1187:G:C8	2.68	0.61
1:w:941:A:C2	1:w:942:G:N7	2.68	0.61
1:w:971:C:H5''	1:w:974(A):G:O2'	2.00	0.61
1:w:1619:G:H2'	1:w:1620:G:O5'	1.99	0.61
1:w:1795:C:C4	1:w:1796:U:C4	2.88	0.61
1:w:1834:U:O2	1:w:1972:A:C2	2.52	0.61
1:w:2013:A:C2'	1:w:2014:A:O5'	2.48	0.61
1:w:2080:G:O5'	24:V:38:SER:HB3	1.99	0.61
1:w:2085:C:C2	1:w:2235:G:C2	2.88	0.61
1:w:2085:C:H3'	1:w:2086:U:C5	2.35	0.61
1:w:2227:A:C8	1:w:2228:G:C8	2.88	0.61
1:w:2585:U:P	32:z:76:A:OP2	2.58	0.61
1:w:2618:G:C5	1:w:2619:C:N4	2.67	0.61
1:w:2813:A:N6	1:w:2888:C:N4	2.47	0.61
1:w:2901:C:N4	1:w:2902:C:N4	2.48	0.61
2:x:7:G:N2	15:M:38:GLN:OE1	2.33	0.61
2:x:107:U:C2'	2:x:108:C:O5'	2.47	0.61
3:A:34:ALA:HA	3:A:40:GLU:CD	2.24	0.61
4:B:208:LYS:HG2	4:B:209:ALA:N	2.15	0.61
6:D:119:LEU:C	6:D:121:VAL:H	2.06	0.61
7:E:73:ALA:N	7:E:87:PRO:HA	2.14	0.61
7:E:111:LEU:HB2	7:E:112:PRO:CD	2.27	0.61
7:E:163:ALA:O	7:E:165:THR:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:17:VAL:CG2	8:F:45:VAL:HG12	2.24	0.61
8:F:146:ALA:HA	8:F:149:ARG:HG3	1.82	0.61
9:G:6:LEU:CD2	9:G:7:GLU:HB3	2.30	0.61
9:G:142:VAL:CG1	9:G:143:SER:N	2.63	0.61
11:I:49:ARG:HD3	11:I:49:ARG:H	1.64	0.61
11:I:85:VAL:CA	11:I:86:ILE:HD12	2.29	0.61
11:I:86:ILE:HG22	11:I:94:ARG:NH1	2.13	0.61
12:J:128:HIS:HA	12:J:147:LEU:CB	2.29	0.61
15:M:72:ALA:O	15:M:73:LEU:C	2.43	0.61
16:N:26:ASP:HA	16:N:48:ILE:CG1	2.22	0.61
16:N:52:ILE:O	16:N:52:ILE:CG2	2.47	0.61
16:N:66:VAL:HA	16:N:70:VAL:C	2.26	0.61
20:R:15:GLU:HA	20:R:18:TYR:CD2	2.35	0.61
22:T:150:LEU:CD1	22:T:171:ILE:HD11	2.29	0.61
24:V:12:PRO:O	24:V:13:ILE:CD1	2.48	0.61
26:X:8:LEU:CD1	26:X:9:VAL:H	2.12	0.61
27:Y:16:ARG:HA	27:Y:20:ARG:NH1	2.14	0.61
27:Y:38:ALA:CB	27:Y:48:GLU:HB3	2.30	0.61
29:a:59:LYS:C	29:a:60:LEU:HD23	2.24	0.61
31:y:26:A:C2'	31:y:27:G:H5'	2.29	0.61
31:y:39:G:N7	31:y:547:A:H8	1.97	0.61
31:y:102:G:H3'	31:y:103:C:C5	2.35	0.61
31:y:225:C:H2'	31:y:226:G:O4'	1.99	0.61
31:y:375:U:HO2'	49:q:28:ARG:HH12	1.48	0.61
31:y:405:U:OP2	37:e:3:ARG:HG2	2.00	0.61
31:y:594:G:N2	31:y:596:C:C4	2.68	0.61
31:y:596:C:N3	31:y:597:G:N7	2.48	0.61
31:y:793:U:OP2	31:y:794:A:C8	2.52	0.61
31:y:933:G:H5''	31:y:934:C:OP2	2.00	0.61
31:y:980:C:H5	31:y:981:U:C2	2.17	0.61
31:y:1074:G:C6	31:y:1075:C:N4	2.69	0.61
31:y:1202:G:C8	31:y:1203:C:C5	2.88	0.61
31:y:1245:A:C2'	31:y:1246:C:O4'	2.41	0.61
31:y:1306:A:H62	31:y:1331:G:H21	1.46	0.61
31:y:1311:G:C6	31:y:1312:G:C5	2.88	0.61
31:y:1325:C:N3	31:y:1326:C:N4	2.47	0.61
31:y:1416:G:O2'	31:y:1417:G:H5'	2.00	0.61
35:c:236:TYR:O	35:c:239:VAL:HG12	2.00	0.61
37:e:28:SER:HB3	37:e:29:PRO:CD	2.30	0.61
38:f:31:LEU:HD13	38:f:44:GLY:O	2.00	0.61
38:f:69:VAL:CG1	38:f:139:LEU:HB3	2.23	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:119:ARG:HG3	40:h:120:ILE:H	1.64	0.61
41:i:45:ILE:O	41:i:64:LYS:CB	2.47	0.61
41:i:53:VAL:H	41:i:58:TYR:HB2	1.64	0.61
42:j:11:LYS:CB	42:j:72:GLY:HA3	2.29	0.61
42:j:13:ALA:HB2	42:j:69:GLY:N	2.15	0.61
43:k:82:ILE:HA	43:k:85:LEU:HD23	1.82	0.61
46:n:76:ALA:O	46:n:80:ARG:HB3	2.00	0.61
50:r:53:LEU:HD23	50:r:53:LEU:C	2.25	0.61
50:r:61:GLU:CA	50:r:71:PHE:HD1	2.11	0.61
50:r:94:ASN:O	50:r:95:TYR:CG	2.53	0.61
50:r:96:GLN:CG	50:r:97:SER:H	2.09	0.61
53:u:87:LYS:HB3	53:u:91:LEU:HG	1.82	0.61
1:w:72:U:C4	1:w:112:U:H4'	2.35	0.61
1:w:110:G:H2'	1:w:110:G:N3	2.14	0.61
1:w:215:G:C4'	1:w:216:A:H4'	2.29	0.61
1:w:242:G:C8	29:a:5:LYS:CB	2.72	0.61
1:w:265:A:H1'	1:w:266:G:C4'	2.29	0.61
1:w:465:G:C1'	28:Z:16:HIS:CE1	2.83	0.61
1:w:558:G:C2	1:w:559:G:C5	2.88	0.61
1:w:611:C:C4	1:w:618(A):G:N2	2.68	0.61
1:w:616:A:H2'	1:w:617:G:C5'	2.30	0.61
1:w:618(A):G:C6	1:w:618(B):C:N4	2.68	0.61
1:w:677:A:C2	1:w:678:C:C5	2.87	0.61
1:w:781:A:N1	1:w:1776:G:C2'	2.61	0.61
1:w:812:C:H1'	1:w:1250:G:H21	1.64	0.61
1:w:847:U:C3'	1:w:848:G:H5''	2.30	0.61
1:w:853:G:O2'	1:w:854:G:H5'	2.00	0.61
1:w:882:G:C3'	1:w:883:G:H5''	2.30	0.61
1:w:901:A:H2'	1:w:902:C:C5'	2.31	0.61
1:w:1193:G:H2'	1:w:1194:A:C1'	2.29	0.61
1:w:1530:G:H3'	1:w:1531:C:C5	2.34	0.61
1:w:1531:C:C2	1:w:1532:C:C6	2.88	0.61
1:w:1773:A:N7	1:w:1774:C:H5	1.98	0.61
1:w:1843:C:C5'	1:w:1843:C:C6	2.83	0.61
1:w:2053:G:C2'	1:w:2054:A:H5'	2.30	0.61
1:w:2057:A:C4'	27:Y:8:LYS:HZ1	2.13	0.61
1:w:2290:G:N7	1:w:2291:U:C4	2.68	0.61
1:w:2305:A:C5'	7:E:134:GLY:HA3	2.22	0.61
1:w:2540:C:H5'	1:w:2541:A:OP2	2.00	0.61
1:w:2643:G:C6	1:w:2644:G:C6	2.88	0.61
1:w:2704:C:H2'	1:w:2705:A:O5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2728:U:O2'	1:w:2729:G:H5'	2.01	0.61
2:x:21:G:H2'	2:x:22:U:C5	2.33	0.61
2:x:27:C:H6	2:x:27:C:O5'	1.83	0.61
3:A:172:ILE:HG12	3:A:173:HIS:N	2.14	0.61
4:B:183:ARG:NE	4:B:270:ILE:CG2	2.62	0.61
4:B:209:ALA:O	4:B:212:SER:CB	2.46	0.61
5:C:26:ILE:HG22	5:C:27:LEU:N	2.15	0.61
6:D:179:TYR:HA	6:D:182:VAL:HG13	1.83	0.61
7:E:20:ILE:O	7:E:23:PHE:O	2.17	0.61
8:F:92:ILE:HG12	8:F:92:ILE:O	2.00	0.61
9:G:7:GLU:HG2	9:G:35:LEU:HD11	1.82	0.61
9:G:64:GLU:O	9:G:67:ARG:HB3	2.00	0.61
9:G:124:GLY:CA	9:G:144:VAL:HB	2.30	0.61
10:H:77:VAL:HB	10:H:145:VAL:HG12	1.81	0.61
10:H:89:LYS:O	10:H:110:LEU:CG	2.47	0.61
10:H:119:GLU:HG3	10:H:120:ARG:N	2.15	0.61
13:K:8:LYS:HE3	13:K:70:PRO:CB	2.31	0.61
14:L:85:PRO:HA	14:L:88:ARG:HB2	1.82	0.61
22:T:38:TYR:C	22:T:38:TYR:CD2	2.78	0.61
22:T:76:LEU:HD23	22:T:78:LYS:N	2.15	0.61
25:W:4:SER:HB2	25:W:6:VAL:HG22	1.82	0.61
31:y:33:A:O4'	31:y:363:A:H2	1.82	0.61
31:y:37:U:C4'	45:m:116:ARG:NH2	2.63	0.61
31:y:51:A:P	31:y:52:G:H5''	2.40	0.61
31:y:504:C:N3	31:y:542:G:C2	2.69	0.61
31:y:624:C:C4'	49:q:10:GLY:HA2	2.21	0.61
31:y:691:G:O2'	31:y:692:U:H5'	1.99	0.61
31:y:866:C:O5'	31:y:866:C:C6	2.51	0.61
31:y:918:A:C4	31:y:919:A:C8	2.88	0.61
31:y:934:C:H5	31:y:1345:U:H5''	1.63	0.61
31:y:940:C:H2'	31:y:941:G:H8	1.66	0.61
31:y:957:U:C4'	31:y:960:U:C4	2.83	0.61
31:y:1011:G:O2'	31:y:1012:U:H5'	1.99	0.61
31:y:1158:C:O2	31:y:1158:C:H3'	2.00	0.61
31:y:1300:G:O3'	31:y:1301:U:H6	1.84	0.61
31:y:1306:A:N6	31:y:1331:G:N2	2.48	0.61
31:y:1517:G:C2'	31:y:1518:MA6:O5'	2.45	0.61
33:0:64:A:C3'	33:0:65:G:H8	2.12	0.61
35:c:55:PHE:O	35:c:58:ILE:CB	2.46	0.61
36:d:16:ARG:CD	36:d:17:ASP:N	2.48	0.61
39:g:29:ALA:O	39:g:32:ASN:HB3	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:75:VAL:HG12	40:h:88:PRO:CA	2.30	0.61
41:i:97:VAL:HG13	41:i:98:LYS:CD	2.29	0.61
45:m:42:VAL:CA	45:m:52:ARG:NH2	2.63	0.61
49:q:21:VAL:O	49:q:22:THR:HG23	2.00	0.61
52:t:4:SER:O	52:t:5:LEU:CB	2.48	0.61
1:w:14:A:OP2	1:w:15:G:N7	2.33	0.61
1:w:141(A):A:O5'	1:w:141(A):A:H8	1.81	0.61
1:w:319:C:C4	1:w:320:A:N7	2.69	0.61
1:w:439:G:C5	1:w:440:G:N7	2.68	0.61
1:w:661:C:O2'	12:J:18:ARG:CA	2.44	0.61
1:w:735:A:H2'	1:w:736:C:H5'	1.82	0.61
1:w:812:C:H2'	1:w:813:U:C5'	2.30	0.61
1:w:856:C:O3'	23:U:69:PHE:CE1	2.53	0.61
1:w:879:G:H2'	1:w:880:G:C8	2.35	0.61
1:w:1021:A:N6	1:w:1141:U:N3	2.28	0.61
1:w:1047:G:O4'	1:w:1111:A:N6	2.34	0.61
1:w:1259:G:C6	1:w:1260:G:C6	2.88	0.61
1:w:1294:U:H1'	14:L:23:ASN:HB2	1.82	0.61
1:w:1531:C:C2'	1:w:1532:C:H5'	2.30	0.61
1:w:1593:G:H2'	1:w:1594:G:O4'	2.00	0.61
1:w:1830:C:C2'	1:w:1831:G:H5'	2.30	0.61
1:w:1837:C:O5'	1:w:1837:C:C6	2.53	0.61
1:w:1869:G:H22	1:w:1871:A:C3'	2.05	0.61
1:w:1948:G:C2'	1:w:1949:G:H5'	2.30	0.61
1:w:2309:A:H5'	1:w:2310:A:N7	2.15	0.61
1:w:2747:G:H4'	8:F:67:LEU:HD11	1.82	0.61
2:x:79:C:N4	2:x:98:G:C2	2.68	0.61
3:A:36:ALA:CB	3:A:219:MET:HG2	2.31	0.61
4:B:3:VAL:HA	4:B:17:THR:CG2	2.30	0.61
5:C:6:GLY:HA3	5:C:196:VAL:HG23	1.82	0.61
5:C:72:VAL:O	5:C:72:VAL:HG12	2.00	0.61
6:D:121:VAL:O	6:D:122:GLU:HB2	2.01	0.61
6:D:151:LEU:O	6:D:171:LEU:HB2	2.01	0.61
8:F:10:PRO:O	8:F:12:PRO:HD2	1.99	0.61
8:F:25:LYS:HA	8:F:34:GLU:HA	1.80	0.61
8:F:147:ASN:O	8:F:148:ILE:HD12	2.00	0.61
9:G:8:PRO:O	9:G:9:LEU:CB	2.47	0.61
10:H:50:ALA:O	10:H:51:THR:C	2.43	0.61
10:H:84:ARG:C	10:H:86:THR:H	2.08	0.61
11:I:79:PHE:CD1	11:I:79:PHE:N	2.66	0.61
11:I:111:PHE:O	11:I:115:VAL:HG23	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:75:ILE:CG1	12:J:77:ARG:HH12	2.13	0.61
12:J:122:PRO:CB	12:J:142:GLY:CA	2.72	0.61
13:K:116:GLU:HB3	13:K:120:ILE:CD1	2.30	0.61
13:K:124:LYS:HZ2	13:K:125:LEU:CB	2.12	0.61
15:M:39:ILE:HG12	15:M:49:VAL:HG13	1.76	0.61
16:N:30:VAL:N	16:N:44:ASP:OD2	2.33	0.61
16:N:64:ARG:HA	16:N:72:VAL:O	1.99	0.61
19:Q:22:ASP:HA	19:Q:25:ARG:HD2	1.81	0.61
20:R:25:LYS:HE3	20:R:26:TYR:CZ	2.35	0.61
22:T:15:PRO:C	22:T:17:ALA:H	2.08	0.61
25:W:26:ARG:CG	25:W:29:LYS:HD3	2.30	0.61
25:W:45:SER:O	25:W:46:GLN:CB	2.47	0.61
26:X:13:ILE:H	26:X:13:ILE:CD1	2.13	0.61
31:y:253:U:H2'	31:y:254:G:C8	2.35	0.61
31:y:266:G:O5'	31:y:267:C:C5	2.54	0.61
31:y:295:C:OP2	31:y:295:C:C6	2.51	0.61
31:y:303:A:C5	31:y:304:U:C6	2.84	0.61
31:y:476:G:N1	31:y:477:G:C6	2.69	0.61
31:y:682:G:C2'	31:y:683:G:H8	2.10	0.61
31:y:787:A:H3'	31:y:788:U:C6	2.34	0.61
31:y:883:C:OP2	31:y:883:C:C5	2.52	0.61
31:y:1498:UR3:H6	31:y:1498:UR3:H5''	1.81	0.61
36:d:160:ALA:O	36:d:161:GLU:C	2.43	0.61
37:e:36:ARG:N	37:e:37:PRO:HD3	2.16	0.61
37:e:49:ARG:HD3	37:e:49:ARG:N	2.15	0.61
37:e:59:ARG:HH22	37:e:63:LYS:HB2	1.62	0.61
41:i:21:LYS:CD	41:i:24:THR:H	2.14	0.61
41:i:104:ARG:C	41:i:106:GLY:H	2.08	0.61
42:j:50:LEU:HA	42:j:54:ASP:CA	2.28	0.61
45:m:36:CYS:O	45:m:79:HIS:HA	2.00	0.61
48:p:54:ARG:HH11	48:p:55:GLY:HA3	1.65	0.61
48:p:81:LEU:HD23	48:p:84:LYS:HZ1	1.65	0.61
51:s:37:VAL:O	51:s:41:LYS:CB	2.47	0.61
1:w:35:G:O4'	1:w:454:A:H1'	1.98	0.61
1:w:270(N):U:C5	1:w:270(O):G:N2	2.69	0.61
1:w:361:G:OP2	1:w:361:G:C8	2.46	0.61
1:w:363(B):A:O2'	1:w:363(C):G:O4'	2.16	0.61
1:w:418:G:C2	1:w:419:C:C5	2.89	0.61
1:w:463:G:C2'	1:w:464:U:O5'	2.46	0.61
1:w:631:A:H4'	12:J:65:ARG:HG3	1.83	0.61
1:w:637:A:H4'	1:w:638:G:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:724:U:C4	1:w:725:G:C5	2.88	0.61
1:w:818:G:C6	1:w:1187:G:H3'	2.34	0.61
1:w:843:G:C5	1:w:844:C:N4	2.69	0.61
1:w:855:G:C3'	1:w:856:C:C6	2.73	0.61
1:w:996:A:C4'	17:O:92:ARG:HD3	2.28	0.61
1:w:1047:G:N2	1:w:1110:G:H2'	2.15	0.61
1:w:1136:G:O2'	1:w:1137:G:H8	1.83	0.61
1:w:1202:C:N4	1:w:1203:G:C6	2.69	0.61
1:w:1382:G:H3'	1:w:1383:C:C5	2.36	0.61
1:w:1413:G:C4	1:w:1414:G:C8	2.88	0.61
1:w:1429:G:C4	1:w:1568:G:C2	2.88	0.61
1:w:1500:G:N2	4:B:100:GLY:CA	2.57	0.61
1:w:1567:A:OP2	4:B:84:TYR:HE2	1.82	0.61
1:w:1615:C:N3	1:w:1617:C:C2	2.69	0.61
1:w:1659:U:P	5:C:132:HIS:HE2	2.23	0.61
1:w:1799:G:O4'	1:w:1800:C:C6	2.53	0.61
1:w:1859:A:OP2	1:w:1860:G:N7	2.33	0.61
1:w:2298:A:N6	1:w:2318:G:H21	1.99	0.61
1:w:2307:G:H1'	1:w:2311:A:C4	2.34	0.61
1:w:2491:U:H4'	1:w:2570:G:OP1	2.01	0.61
1:w:2556:C:H6	1:w:2556:C:H5''	1.65	0.61
1:w:2747:G:C1'	1:w:2757:A:H61	2.11	0.61
1:w:2900:A:C2	1:w:2901:C:C2	2.89	0.61
2:x:1:U:H2'	2:x:2:C:C6	2.35	0.61
2:x:43:C:H2'	2:x:43:C:O2	1.98	0.61
3:A:35:THR:CG2	3:A:36:ALA:H	2.10	0.61
4:B:116:GLN:O	4:B:117:VAL:CG2	2.48	0.61
4:B:222:ARG:O	4:B:223:GLY:C	2.43	0.61
5:C:33:VAL:HG22	5:C:34:VAL:N	2.15	0.61
7:E:59:GLU:OE2	7:E:151:ALA:HB1	1.99	0.61
8:F:41:MET:HG3	8:F:54:ARG:CB	2.30	0.61
8:F:122:THR:C	8:F:123:PHE:CD1	2.78	0.61
10:H:34:PRO:HA	10:H:35:ARG:CZ	2.30	0.61
11:I:17:ARG:HB2	11:I:45:GLU:HG2	1.82	0.61
12:J:17:LYS:HB3	12:J:19:VAL:CG2	2.27	0.61
12:J:95:VAL:CG2	12:J:125:VAL:HB	2.30	0.61
13:K:7:MET:O	13:K:8:LYS:C	2.44	0.61
13:K:119:ARG:HD2	13:K:119:ARG:H	1.65	0.61
14:L:12:ARG:HG2	14:L:13:HIS:H	1.63	0.61
14:L:49:ASP:HA	14:L:94:TYR:CE1	2.24	0.61
15:M:49:VAL:HG23	15:M:50:SER:N	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:102:ILE:O	16:N:106:SER:CB	2.48	0.61
17:O:59:ARG:HA	17:O:62:ILE:HG13	1.81	0.61
17:O:60:LEU:HD23	17:O:60:LEU:C	2.25	0.61
17:O:114:LYS:HG3	17:O:115:ALA:N	2.15	0.61
21:S:71:LYS:HZ2	21:S:78:ALA:HB1	1.61	0.61
21:S:97:ARG:HD2	21:S:97:ARG:O	1.99	0.61
21:S:97:ARG:HD3	21:S:99:CYS:N	2.15	0.61
22:T:19:ARG:HA	22:T:23:LYS:N	2.14	0.61
25:W:14:ARG:CB	25:W:54:LYS:HZ3	2.14	0.61
31:y:247:G:P	50:r:99:SER:HB3	2.38	0.61
31:y:292:G:P	31:y:293:G:H8	2.23	0.61
31:y:362:G:O2'	31:y:364:A:C6	2.51	0.61
31:y:398:C:H2'	31:y:399:G:H5'	1.80	0.61
31:y:562:C:H1'	31:y:563:A:C2	2.35	0.61
31:y:601:C:C2	31:y:638:G:N2	2.68	0.61
31:y:663:A:H2'	31:y:664:G:C5'	2.27	0.61
31:y:717:C:O2'	31:y:734:G:O4'	2.15	0.61
31:y:782:A:C6	31:y:783:C:C6	2.88	0.61
31:y:1019:C:H2'	31:y:1020:U:O4'	2.00	0.61
31:y:1047:G:O2'	31:y:1048:G:H5'	2.00	0.61
31:y:1138:G:O2'	31:y:1140:C:C5'	2.47	0.61
31:y:1371:G:OP1	42:j:12:GLU:HB2	2.00	0.61
31:y:1507:A:C2'	31:y:1508:G:C5'	2.78	0.61
33:0:30:G:H21	40:h:144:MET:HE1	1.55	0.61
35:c:11:LEU:C	35:c:13:ALA:N	2.59	0.61
36:d:87:LEU:HD12	36:d:88:ARG:H	1.60	0.61
38:f:51:VAL:O	38:f:55:VAL:HG13	2.00	0.61
38:f:94:ALA:CB	38:f:118:ILE:HA	2.30	0.61
39:g:88:VAL:HG23	39:g:89:MET:H	1.64	0.61
40:h:121:ALA:HA	40:h:124:LEU:HD11	1.80	0.61
45:m:82:VAL:HA	45:m:104:TYR:CB	2.29	0.61
46:n:73:GLU:O	46:n:74:VAL:C	2.43	0.61
48:p:36:ILE:HG12	48:p:63:ARG:HH22	1.64	0.61
50:r:96:GLN:HG3	50:r:97:SER:N	2.13	0.61
1:w:120:U:H1'	1:w:149:A:C8	2.35	0.61
1:w:123:G:H2'	1:w:124:G:C8	2.35	0.61
1:w:180:G:H2'	1:w:180:G:N3	2.14	0.61
1:w:182:A:C2	1:w:183:C:C2	2.88	0.61
1:w:182:A:H2	1:w:432:A:C2	2.18	0.61
1:w:254:G:N7	29:a:5:LYS:CD	2.61	0.61
1:w:338:G:O2'	1:w:339:U:C6	2.52	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:450:G:N2	1:w:451:C:H5	1.98	0.61
1:w:569:U:H3	1:w:984:A:H61	1.49	0.61
1:w:801:G:C6	6:D:49:ARG:CA	2.80	0.61
1:w:833:U:O5'	1:w:833:U:H6	1.83	0.61
1:w:851:U:H2'	1:w:852:G:C8	2.35	0.61
1:w:1008:C:O2'	1:w:1009:A:O5'	2.18	0.61
1:w:1152:C:O2'	17:O:76:TYR:CE2	2.53	0.61
1:w:1222:C:C2	1:w:1223:G:C8	2.88	0.61
1:w:1319:G:H3'	1:w:1320:C:C5	2.36	0.61
1:w:1361:G:H2'	1:w:1362:C:O4'	2.00	0.61
1:w:1447:G:H2'	1:w:1448:G:C8	2.35	0.61
1:w:1612:C:H3'	1:w:1613:G:H5''	1.82	0.61
1:w:1663:C:O2'	1:w:1664:A:C5'	2.49	0.61
1:w:1725:G:C2	1:w:1741:C:C2	2.89	0.61
1:w:2096:U:O2	1:w:2096:U:C2'	2.48	0.61
1:w:2120:G:N2	1:w:2121:G:C1'	2.64	0.61
1:w:2462:U:C2'	1:w:2463:C:H5'	2.12	0.61
1:w:2734:A:N6	1:w:2770:G:H21	1.96	0.61
1:w:2784:C:C6	1:w:2784:C:P	2.93	0.61
1:w:2842:G:C2'	1:w:2843:G:C8	2.76	0.61
3:A:40:GLU:O	3:A:178:LYS:HD2	2.01	0.61
4:B:98:VAL:O	4:B:100:GLY:N	2.33	0.61
4:B:141:VAL:HA	4:B:163:ALA:O	2.00	0.61
5:C:78:LEU:O	5:C:79:ARG:NE	2.34	0.61
9:G:94:ALA:C	9:G:97:ILE:HG23	2.26	0.61
9:G:127:VAL:HA	9:G:141:LYS:CG	2.30	0.61
10:H:130:LEU:HB3	10:H:131:PRO:HD2	1.83	0.61
12:J:112:LEU:HB3	12:J:128:HIS:H	1.65	0.61
12:J:113:LYS:NZ	12:J:131:SER:HB2	2.16	0.61
14:L:18:LEU:O	14:L:21:TYR:HD1	1.84	0.61
15:M:94:TYR:O	15:M:99:LYS:CE	2.48	0.61
16:N:32:TYR:CG	16:N:33:LYS:N	2.67	0.61
16:N:101:PHE:HD2	16:N:101:PHE:H	0.75	0.61
23:U:40:GLN:NE2	23:U:41:ARG:N	2.48	0.61
24:V:12:PRO:HG3	24:V:63:ALA:CA	2.29	0.61
25:W:4:SER:H	25:W:7:ARG:HG3	1.64	0.61
31:y:114:U:C6	31:y:114:U:O5'	2.54	0.61
31:y:233:C:OP2	31:y:233:C:C5	2.54	0.61
31:y:262:A:C6	31:y:263:A:N6	2.67	0.61
31:y:296:U:O4	31:y:297:G:O6	2.17	0.61
31:y:507:C:C2'	31:y:508:C:C5	2.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:572:A:H5''	31:y:917:G:H5'	1.82	0.61
31:y:575:G:O2'	31:y:576:G:O5'	2.15	0.61
31:y:770:C:O2'	31:y:899:C:N4	2.32	0.61
31:y:883:C:H2'	31:y:884:U:C5'	2.18	0.61
31:y:910:C:C2	31:y:911:U:C6	2.88	0.61
31:y:914:A:H2'	31:y:915:A:C5'	2.29	0.61
31:y:958:A:H3'	31:y:959:A:C8	2.35	0.61
31:y:959:A:C2	31:y:960:U:C1'	2.83	0.61
31:y:1081:G:OP1	38:f:18:ARG:CD	2.46	0.61
31:y:1182:G:H8	31:y:1182:G:P	2.23	0.61
31:y:1188:A:C8	47:o:60:SER:OG	2.53	0.61
31:y:1221:G:O4'	52:t:54:GLY:HA3	2.00	0.61
31:y:1342:C:O2'	42:j:124:GLN:HA	2.00	0.61
31:y:1422:G:C4	31:y:1423:G:C8	2.88	0.61
31:y:1433:A:C2	31:y:1468:A:C2	2.88	0.61
31:y:1522:U:C2	31:y:1523:G:N7	2.68	0.61
33:0:29:A:C2	33:0:41:U:C2	2.88	0.61
36:d:89:GLU:C	36:d:91:LEU:H	2.08	0.61
36:d:151:VAL:CG1	36:d:168:ALA:H	2.13	0.61
38:f:8:GLU:HA	38:f:34:VAL:HG12	1.83	0.61
41:i:91:ARG:C	41:i:91:ARG:NH1	2.58	0.61
43:k:71:LEU:HD22	43:k:72:VAL:H	1.66	0.61
43:k:76:ASN:N	43:k:77:PRO:HD3	2.15	0.61
44:l:27:ASN:CB	44:l:55:LYS:HB3	2.30	0.61
44:l:30:VAL:HB	44:l:43:SER:O	2.00	0.61
44:l:44:SER:O	44:l:47:VAL:HG22	2.01	0.61
48:p:8:LYS:O	48:p:11:VAL:CG2	2.49	0.61
48:p:10:LYS:O	48:p:13:GLN:HB3	2.00	0.61
52:t:22:LEU:HA	52:t:26:GLY:O	1.99	0.61
52:t:22:LEU:HD13	52:t:47:HIS:NE2	2.15	0.61
1:w:89:G:C8	1:w:90:U:C6	2.88	0.61
1:w:139:G:C4	1:w:140:A:N7	2.68	0.61
1:w:214:G:H2'	1:w:215:G:O4'	2.01	0.61
1:w:270(R):C:H2'	1:w:270(S):G:C1'	2.30	0.61
1:w:669:G:C8	1:w:669:G:P	2.93	0.61
1:w:1041:C:N3	1:w:1115:G:C2	2.69	0.61
1:w:1223:G:C5	1:w:1225:G:OP1	2.52	0.61
1:w:1318:C:O5'	1:w:1318:C:H6	1.84	0.61
1:w:1442:G:N1	1:w:1549:C:N3	2.37	0.61
1:w:1628:G:H2'	1:w:1629:U:H6	1.61	0.61
1:w:1641:A:N7	1:w:1642:G:N7	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1706:U:O2'	1:w:1707:G:OP1	2.15	0.61
1:w:1764:G:H2'	1:w:1765:C:O5'	2.01	0.61
1:w:1848:A:N7	31:y:702:A:N1	2.47	0.61
1:w:1884:A:C5	1:w:1885:A:C8	2.89	0.61
1:w:2057:A:H4'	27:Y:8:LYS:HZ1	1.64	0.61
1:w:2088:G:C2	1:w:2232:U:C2	2.88	0.61
1:w:2380:C:C4	1:w:2381:C:C4	2.89	0.61
1:w:2396:G:O2'	24:V:31:GLY:CA	2.48	0.61
1:w:2399:G:C6	1:w:2400:G:C5	2.88	0.61
1:w:2589:A:C5'	4:B:237:GLU:OE1	2.44	0.61
1:w:2651:C:N4	1:w:2670:A:N6	2.48	0.61
1:w:2711:A:H3'	1:w:2714:G:O4'	2.00	0.61
1:w:2799:A:H3'	1:w:2801:A:C8	2.36	0.61
2:x:17:C:O5'	2:x:17:C:C6	2.49	0.61
2:x:78:A:N3	2:x:78:A:H2'	2.15	0.61
2:x:115:G:N3	2:x:116:G:C8	2.69	0.61
3:A:21:TYR:HB2	3:A:26:ALA:CB	2.26	0.61
6:D:25:PRO:HA	6:D:28:LEU:HD12	1.81	0.61
8:F:144:VAL:C	8:F:146:ALA:N	2.55	0.61
8:F:146:ALA:HA	8:F:149:ARG:HG2	1.83	0.61
12:J:85:LEU:O	12:J:87:ASP:N	2.33	0.61
14:L:17:ARG:O	14:L:20:LEU:N	2.30	0.61
14:L:18:LEU:N	14:L:21:TYR:CE1	2.68	0.61
14:L:103:ARG:HB2	19:Q:40:ASN:HB3	1.82	0.61
15:M:29:PHE:O	15:M:36:TYR:HB2	2.00	0.61
16:N:3:ARG:HD2	16:N:6:LEU:HD22	1.82	0.61
16:N:62:THR:OG1	16:N:74:ARG:O	2.19	0.61
24:V:12:PRO:CB	24:V:63:ALA:H	2.13	0.61
24:V:74:VAL:O	24:V:76:ARG:N	2.25	0.61
31:y:123:C:H5''	31:y:311:C:C2'	2.30	0.61
31:y:217:C:H2'	31:y:218:C:C6	2.35	0.61
31:y:391:G:C6	31:y:392:G:N7	2.69	0.61
31:y:411:A:C6	31:y:429:U:C5	2.88	0.61
31:y:414:A:O2'	31:y:415:A:H5'	1.99	0.61
31:y:453:A:H2'	31:y:454:C:O4'	2.00	0.61
31:y:546:G:O3'	31:y:547:A:C4'	2.47	0.61
31:y:602:A:N6	31:y:637:G:O6	2.33	0.61
31:y:618:C:O2	31:y:618:C:C2'	2.43	0.61
31:y:710:G:H2'	31:y:710:G:N3	2.14	0.61
31:y:781:A:H2'	31:y:782:A:O4'	1.99	0.61
31:y:911:U:O3'	31:y:912:C:H6	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:943:U:C6	31:y:943:U:OP2	2.54	0.61
31:y:1013:G:C2	31:y:1016:A:C6	2.83	0.61
31:y:1057:G:C4'	36:d:196:LEU:HD12	2.31	0.61
31:y:1182:G:C8	31:y:1182:G:OP2	2.54	0.61
31:y:1238:A:OP2	31:y:1301:U:C4	2.54	0.61
31:y:1268:A:H1'	54:v:20:LYS:CB	2.24	0.61
31:y:1435:G:H2'	31:y:1436:U:H5	1.62	0.61
31:y:1496:C:H1'	31:y:1517:G:H22	1.64	0.61
31:y:1501:C:C4	31:y:1504:G:C2	2.88	0.61
31:y:1506:U:O4	31:y:1521:G:C5'	2.35	0.61
33:0:24:G:C2'	33:0:25:C:C6	2.83	0.61
36:d:115:LEU:HD12	36:d:116:VAL:N	2.16	0.61
37:e:10:ARG:H	37:e:22:LYS:HZ1	1.49	0.61
37:e:100:ARG:CZ	37:e:137:SER:HB3	2.31	0.61
37:e:140:VAL:O	37:e:140:VAL:CG2	2.47	0.61
39:g:11:ASN:O	39:g:14:LEU:HD11	2.01	0.61
39:g:23:LYS:HB2	39:g:23:LYS:HZ2	1.63	0.61
42:j:84:ALA:HA	42:j:87:GLN:CG	2.30	0.61
45:m:52:ARG:CZ	45:m:52:ARG:H	2.14	0.61
1:w:14:A:P	1:w:15:G:N7	2.74	0.61
1:w:35:G:H2'	1:w:36:G:O4'	1.99	0.61
1:w:94:G:H2'	1:w:95:G:O4'	2.00	0.61
1:w:273(F):U:H3	1:w:363(B):A:H2	1.46	0.61
1:w:326:G:O5'	1:w:326:G:C8	2.53	0.61
1:w:331:A:C1'	1:w:1209:G:N2	2.60	0.61
1:w:379:G:N3	24:V:19:GLN:OE1	2.33	0.61
1:w:603:A:H4'	1:w:604:G:O4'	1.99	0.61
1:w:701:G:O2'	1:w:702:G:O4'	2.14	0.61
1:w:936:C:C2'	1:w:937:U:H5'	2.29	0.61
1:w:1031:G:H4'	30:b:6:SER:CA	2.29	0.61
1:w:1040:C:H2'	1:w:1041:C:C5	2.33	0.61
1:w:1226:A:C8	1:w:1227:G:H1'	2.35	0.61
1:w:1257:C:O2'	1:w:1258:C:H5'	2.00	0.61
1:w:1343:G:C3'	1:w:1344:G:H5''	2.31	0.61
1:w:1436:G:C2	1:w:1437:C:H1'	2.36	0.61
1:w:1574:C:C2	1:w:1575:C:C5	2.89	0.61
1:w:1586:A:H2'	1:w:1587:A:H5'	1.81	0.61
1:w:1591:G:H2'	1:w:1592:C:C6	2.35	0.61
1:w:1892:C:H2'	1:w:1893:C:C5'	2.30	0.61
1:w:2319:G:N7	15:M:8:GLU:CG	2.62	0.61
1:w:2324:C:H1'	1:w:2337:G:C4'	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2364:C:H4'	23:U:58:THR:HG21	1.83	0.61
1:w:2652:C:C2	1:w:2669:G:N1	2.69	0.61
1:w:2693:A:C2	1:w:2717:G:C5	2.88	0.61
1:w:2789:C:O2	1:w:2892:A:C2	2.54	0.61
2:x:20:C:C3'	2:x:21:G:C8	2.83	0.61
3:A:22:THR:H	3:A:25:GLU:CG	2.14	0.61
3:A:36:ALA:HB3	3:A:219:MET:HG2	1.82	0.61
5:C:33:VAL:CG2	5:C:34:VAL:N	2.64	0.61
6:D:155:ASN:OD1	6:D:157:LEU:HB2	2.01	0.61
7:E:127:GLY:O	7:E:165:THR:HA	2.01	0.61
10:H:65:TRP:CZ3	10:H:71:MET:HE1	2.35	0.61
11:I:43:VAL:HB	11:I:54:GLU:HA	1.81	0.61
11:I:45:GLU:C	11:I:45:GLU:OE1	2.43	0.61
16:N:91:ARG:HB2	16:N:115:ARG:O	2.01	0.61
17:O:83:LEU:HD23	17:O:84:LYS:HZ1	1.65	0.61
18:P:23:GLU:OE2	18:P:25:LEU:HD11	2.00	0.61
19:Q:70:TYR:CE1	19:Q:108:GLY:CA	2.83	0.61
22:T:45:ASP:C	22:T:47:VAL:H	2.05	0.61
23:U:28:GLY:HA2	23:U:67:VAL:CG1	2.27	0.61
24:V:85:LEU:O	24:V:86:SER:HB2	2.00	0.61
25:W:37:PHE:HD2	25:W:37:PHE:H	1.46	0.61
29:a:40:GLU:O	29:a:41:ILE:C	2.41	0.61
31:y:39:G:O6	31:y:547:A:H5''	2.00	0.61
31:y:333:G:O2'	31:y:334:C:H5'	2.01	0.61
31:y:371:G:H21	31:y:373:A:N6	1.95	0.61
31:y:418:C:N4	31:y:426:G:C2	2.68	0.61
31:y:564:C:H2'	31:y:565:U:O5'	2.00	0.61
31:y:573:A:H2'	31:y:574:A:O4'	1.99	0.61
31:y:584:G:N3	31:y:585:G:C8	2.67	0.61
31:y:585:G:C5	31:y:586:C:C4	2.89	0.61
31:y:740:U:H2'	31:y:741:G:C8	2.35	0.61
31:y:936:C:O2'	31:y:1383:C:C4	2.53	0.61
31:y:1074:G:O2'	31:y:1101:A:N1	2.29	0.61
31:y:1203:C:OP1	47:o:3:ARG:NH2	2.34	0.61
31:y:1265:G:H3'	31:y:1266:G:C8	2.33	0.61
31:y:1321:C:OP1	31:y:1323:G:OP2	2.17	0.61
31:y:1442:G:C8	31:y:1446:A:N1	2.69	0.61
36:d:60:ALA:O	36:d:61:ALA:HB2	2.00	0.61
37:e:4:TYR:O	37:e:5:ILE:HB	2.00	0.61
37:e:88:VAL:HB	37:e:92:VAL:HG11	1.81	0.61
39:g:3:ARG:O	39:g:4:TYR:CG	2.54	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:119:ARG:HG3	40:h:120:ILE:N	2.16	0.61
42:j:13:ALA:HB2	42:j:68:GLY:C	2.26	0.61
42:j:78:LYS:HG2	42:j:101:PHE:HA	1.82	0.61
42:j:99:LEU:HB2	42:j:101:PHE:HE1	1.66	0.61
42:j:99:LEU:H	42:j:99:LEU:HD22	1.66	0.61
46:n:13:LYS:CB	46:n:17:VAL:HB	2.30	0.61
47:o:24:CYS:HB3	47:o:29:ARG:H	1.65	0.61
49:q:11:SER:H	49:q:14:ASN:HB2	1.65	0.61
50:r:56:VAL:HG12	50:r:77:VAL:HB	1.82	0.61
53:u:49:ALA:HB1	53:u:100:ILE:HG12	1.83	0.61
53:u:53:LEU:HD22	53:u:53:LEU:N	2.15	0.61
1:w:8:A:C2'	1:w:9:U:C5'	2.76	0.61
1:w:154:G:C6	1:w:173:G:N1	2.69	0.61
1:w:270(K):G:N1	1:w:270(L):C:C2	2.69	0.61
1:w:274:G:O2'	1:w:275:G:O5'	2.17	0.61
1:w:469:G:C5	28:Z:39:ARG:CZ	2.84	0.61
1:w:503:A:C2	1:w:506:G:C8	2.89	0.61
1:w:568:U:H5'	1:w:945:A:N1	2.16	0.61
1:w:589:C:O2'	1:w:590:A:O4'	2.16	0.61
1:w:665:C:H5'	12:J:48:PRO:CD	2.29	0.61
1:w:666:G:O4'	29:a:4:MET:HE3	2.00	0.61
1:w:855:G:H5''	1:w:856:C:H5	1.64	0.61
1:w:892:G:O5'	1:w:892:G:C8	2.48	0.61
1:w:919:G:C2	1:w:2268:A:C5	2.89	0.61
1:w:958:U:O5'	1:w:959:A:OP1	2.18	0.61
1:w:1003:G:N2	1:w:1153:C:N1	2.49	0.61
1:w:1181:C:H5''	1:w:1182:A:OP1	2.01	0.61
1:w:1202:C:H2'	1:w:1203:G:C5'	2.31	0.61
1:w:1268:A:C2'	1:w:1269:A:H8	2.14	0.61
1:w:1364:G:H1'	1:w:1368:G:H22	1.64	0.61
1:w:1476:C:H2'	1:w:1477:A:C8	2.35	0.61
1:w:1479:G:N3	1:w:1558:A:OP1	2.34	0.61
1:w:1486:A:C2'	1:w:1487:G:C5'	2.66	0.61
1:w:1568:G:H8	1:w:1568:G:H3'	1.64	0.61
1:w:1632:A:H2'	1:w:1633:G:C8	2.34	0.61
1:w:1728:G:N2	1:w:1732:A:C5	2.67	0.61
1:w:1794:U:O2	1:w:1795:C:C6	2.53	0.61
1:w:1815:A:H4'	1:w:1816:G:O4'	2.00	0.61
1:w:2041:U:H2'	1:w:2041:U:O2	2.00	0.61
1:w:2096:U:C3'	1:w:2097:C:C6	2.84	0.61
1:w:2376:A:N7	15:M:94:TYR:HE1	1.97	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2428:G:N2	12:J:60:MET:CE	2.64	0.61
1:w:2669:G:H2'	1:w:2670:A:O4'	2.01	0.61
1:w:2711:A:C5'	1:w:2712:U:C5'	2.77	0.61
1:w:2744:G:N2	8:F:143:GLN:CD	2.58	0.61
1:w:2754:U:C6	1:w:2754:U:H3'	2.36	0.61
1:w:2857:G:O2'	1:w:2858:C:H5	1.82	0.61
1:w:2872:G:H2'	1:w:2873:A:C5	2.36	0.61
1:w:2872:G:H2'	1:w:2873:A:N7	2.16	0.61
2:x:7:G:H21	15:M:47:THR:CB	2.13	0.61
4:B:22:SER:C	4:B:24:ILE:H	2.08	0.61
4:B:35:LYS:HB2	4:B:62:TYR:O	1.99	0.61
4:B:99:ASP:OD1	4:B:101:GLU:HB2	2.00	0.61
5:C:16:ARG:O	5:C:17:ASP:HB3	2.01	0.61
5:C:102:VAL:O	5:C:170:LEU:HD13	2.01	0.61
5:C:148:GLY:O	5:C:149:ARG:O	2.18	0.61
6:D:111:ASP:CA	6:D:114:ARG:HG2	2.29	0.61
9:G:4:ILE:C	9:G:5:LEU:HD22	2.26	0.61
10:H:41:ALA:C	10:H:43:GLY:H	2.09	0.61
10:H:71:MET:HG2	10:H:72:GLY:N	2.15	0.61
11:I:17:ARG:NH2	11:I:47:ILE:HB	2.15	0.61
11:I:43:VAL:CG1	11:I:54:GLU:HA	2.30	0.61
12:J:75:ILE:HG12	12:J:77:ARG:NH1	2.16	0.61
12:J:113:LYS:HZ2	12:J:131:SER:HB2	1.64	0.61
13:K:116:GLU:O	13:K:117:ALA:C	2.42	0.61
14:L:28:LEU:CD1	14:L:114:VAL:HG12	2.31	0.61
16:N:95:ARG:HD2	16:N:96:ARG:HH12	1.63	0.61
17:O:92:ARG:C	17:O:94:ASN:N	2.56	0.61
17:O:92:ARG:CZ	18:P:11:GLN:HG2	2.30	0.61
22:T:53:ILE:N	22:T:53:ILE:CD1	2.59	0.61
23:U:37:LEU:HD23	23:U:60:PHE:CA	2.30	0.61
28:Z:1:MET:O	28:Z:3:ARG:N	2.33	0.61
31:y:228:A:C1'	49:q:62:VAL:HB	2.20	0.61
31:y:358:U:H3'	31:y:359:U:C6	2.34	0.61
31:y:563:A:OP1	31:y:566:G:N2	2.34	0.61
31:y:715:A:H2'	31:y:716:A:C8	2.36	0.61
31:y:874:G:N2	41:i:11:THR:HG22	2.16	0.61
31:y:967:5MC:H2'	31:y:968:A:N7	2.14	0.61
31:y:1092:A:N9	31:y:1183:A:N6	2.48	0.61
31:y:1468:A:O2'	31:y:1469:G:C5'	2.43	0.61
31:y:1488:G:C2	31:y:1489:G:N7	2.68	0.61
31:y:1509:C:C5	31:y:1510:U:C5	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:z:75:C:O5'	32:z:75:C:C6	2.47	0.61
35:c:45:GLN:HB2	35:c:46:LYS:HE3	1.83	0.61
37:e:57:ARG:NH2	38:f:107:ARG:CG	2.62	0.61
38:f:51:VAL:HB	38:f:52:PRO:HD3	1.82	0.61
39:g:71:ARG:HE	39:g:71:ARG:HA	1.65	0.61
41:i:47:GLY:O	41:i:48:TYR:HB3	1.99	0.61
41:i:98:LYS:N	41:i:98:LYS:HD3	2.16	0.61
43:k:94:VAL:CG1	43:k:95:GLU:N	2.63	0.61
44:l:46:GLY:CA	44:l:50:TYR:O	2.41	0.61
46:n:4:ILE:HD12	46:n:4:ILE:N	2.15	0.61
46:n:92:HIS:HB3	46:n:98:VAL:HG13	1.81	0.61
46:n:125:ARG:HB3	46:n:125:ARG:HH11	1.65	0.61
47:o:42:ILE:O	47:o:46:GLU:OE1	2.18	0.61
50:r:84:LEU:O	50:r:85:VAL:C	2.43	0.61
51:s:45:SER:HB3	51:s:50:ILE:N	2.15	0.61
52:t:45:VAL:HA	52:t:62:ILE:HG12	1.82	0.61
1:w:57:C:H4'	20:R:73:ARG:CZ	2.31	0.61
1:w:279:C:C2'	1:w:280:C:H5'	2.29	0.61
1:w:353:G:C6	1:w:354:G:C6	2.88	0.61
1:w:446:G:P	17:O:3:ARG:HD3	2.41	0.61
1:w:446:G:O2'	1:w:449:A:C2	2.52	0.61
1:w:491:G:H3'	1:w:492:A:C8	2.36	0.61
1:w:520:G:H8	1:w:520:G:OP2	1.84	0.61
1:w:610:C:O5'	1:w:610:C:H6	1.84	0.61
1:w:615:G:C2	1:w:616:A:C1'	2.84	0.61
1:w:720:C:H2'	1:w:721:C:O4'	2.00	0.61
1:w:751:A:C4'	19:Q:90:ARG:HG2	2.30	0.61
1:w:806:C:H2'	1:w:807:U:C6	2.35	0.61
1:w:869:G:C2	1:w:909:A:C5	2.89	0.61
1:w:1014:U:N3	1:w:1015:G:N7	2.49	0.61
1:w:1265:A:H61	1:w:2013:A:H3'	1.66	0.61
1:w:1786:A:O2'	1:w:1787:A:OP1	2.17	0.61
1:w:2033:A:N6	1:w:2036:C:C1'	2.64	0.61
1:w:2129:C:H2'	1:w:2130:U:O5'	2.01	0.61
1:w:2236:C:H2'	1:w:2237:G:C5'	2.31	0.61
1:w:2521:C:O4'	1:w:2565:A:H1'	2.00	0.61
1:w:2582:G:H2'	1:w:2582:G:N3	2.14	0.61
1:w:2634:G:C5	1:w:2635:C:N4	2.69	0.61
1:w:2636:U:H4'	5:C:80:GLU:CD	2.26	0.61
1:w:2650:U:H6	1:w:2650:U:O5'	1.83	0.61
1:w:2655:G:N2	1:w:2664:G:H2'	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2658:C:H6	1:w:2658:C:O5'	1.84	0.61
1:w:2842:G:C5	1:w:2843:G:N7	2.69	0.61
4:B:78:LYS:CB	4:B:116:GLN:NE2	2.64	0.61
4:B:94:LEU:CD2	4:B:94:LEU:O	2.49	0.61
5:C:38:THR:HG23	5:C:39:PRO:HD2	1.82	0.61
5:C:52:LEU:HB2	5:C:75:VAL:HB	1.82	0.61
6:D:152:VAL:O	6:D:190:ASP:HB2	2.01	0.61
7:E:11:TYR:CD1	7:E:11:TYR:C	2.77	0.61
7:E:131:TYR:HB3	7:E:159:VAL:CG2	2.29	0.61
8:F:124:GLU:CD	8:F:134:SER:HB2	2.26	0.61
9:G:19:VAL:C	9:G:21:VAL:N	2.59	0.61
10:H:61:HIS:CE1	10:H:73:ASP:OD2	2.48	0.61
10:H:65:TRP:CB	17:O:64:ARG:HE	2.14	0.61
12:J:9:ASN:OD1	12:J:9:ASN:O	2.19	0.61
12:J:101:VAL:C	12:J:103:ALA:N	2.57	0.61
12:J:138:LEU:HB3	12:J:144:GLU:HG3	1.83	0.61
13:K:132:VAL:CG2	13:K:133:ARG:H	1.93	0.61
15:M:66:ALA:O	15:M:101:LEU:HD21	2.00	0.61
16:N:64:ARG:HB3	16:N:102:ILE:HD11	1.82	0.61
19:Q:59:VAL:HG23	19:Q:64:MET:HB2	1.82	0.61
20:R:27:THR:HG22	20:R:28:PHE:H	1.64	0.61
20:R:63:LYS:HD3	20:R:63:LYS:C	2.25	0.61
24:V:11:ARG:HG3	24:V:61:ARG:CB	2.15	0.61
26:X:36:VAL:HG23	26:X:36:VAL:O	2.00	0.61
31:y:9:G:OP1	38:f:122:GLU:HB2	2.00	0.61
31:y:130:A:N3	31:y:130:A:C2'	2.64	0.61
31:y:159:G:N2	31:y:163:C:C4	2.69	0.61
31:y:160:A:N6	31:y:347:G:C1'	2.58	0.61
31:y:253:U:H5''	50:r:68:ARG:HH12	1.62	0.61
31:y:259:G:N1	31:y:268:C:C4	2.69	0.61
31:y:564:C:C5	50:r:32:TYR:CD2	2.89	0.61
31:y:712:A:H8	31:y:712:A:O5'	1.83	0.61
31:y:875:C:O2	41:i:11:THR:HG21	2.01	0.61
31:y:1061:G:N7	31:y:1062:U:O4	2.34	0.61
31:y:1261:A:OP2	31:y:1261:A:H8	1.84	0.61
31:y:1441:G:C2'	31:y:1460:A:H61	2.14	0.61
31:y:1501:C:C6	31:y:1504:G:C6	2.89	0.61
35:c:94:ASN:O	35:c:94:ASN:CG	2.43	0.61
35:c:115:LEU:HD12	35:c:142:LEU:CD1	2.31	0.61
36:d:5:ILE:HG21	36:d:175:LEU:HD21	1.82	0.61
36:d:55:VAL:HG12	36:d:68:VAL:HG13	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:82:ALA:CA	37:e:87:GLY:HA3	2.30	0.61
39:g:73:ASN:O	39:g:77:ARG:HG2	1.99	0.61
40:h:66:VAL:CG1	40:h:70:LYS:HE3	2.30	0.61
41:i:68:ARG:HG3	41:i:74:PRO:HG2	1.82	0.61
43:k:13:HIS:HA	43:k:17:ASP:OD1	2.00	0.61
43:k:84:GLN:NE2	43:k:87:THR:CG2	2.64	0.61
44:l:57:THR:HA	44:l:89:ALA:HB1	1.81	0.61
46:n:50:GLU:HA	46:n:53:VAL:CG2	2.31	0.61
46:n:54:VAL:CG2	46:n:55:ARG:H	2.13	0.61
50:r:10:VAL:CG2	50:r:55:ASP:C	2.74	0.61
52:t:19:VAL:HG13	52:t:20:LEU:H	1.65	0.61
1:w:78:A:C6	1:w:109:G:C6	2.88	0.61
1:w:254:G:H4'	1:w:384:U:H4'	1.82	0.61
1:w:321:G:O3'	6:D:163:ARG:HB3	2.01	0.61
1:w:418:G:H2'	1:w:419:C:C6	2.36	0.61
1:w:458:G:C5'	28:Z:38:GLY:O	2.37	0.61
1:w:519:U:C3'	19:Q:25:ARG:HH22	2.14	0.61
1:w:546:C:H2'	1:w:547:A:C8	2.36	0.61
1:w:613:U:C4'	1:w:616:A:C6	2.83	0.61
1:w:669:G:C6	1:w:670:A:C5	2.89	0.61
1:w:669:G:C2	1:w:670:A:C8	2.89	0.61
1:w:837:C:H6	1:w:837:C:O5'	1.83	0.61
1:w:867:C:C2'	1:w:868:U:H5'	2.29	0.61
1:w:1000:A:N7	1:w:1155:A:C6	2.69	0.61
1:w:1123:C:C2	1:w:1124:C:C5	2.88	0.61
1:w:1279:G:H5''	14:L:34:ILE:HD12	1.82	0.61
1:w:1282:U:N3	1:w:1283:G:H1'	2.16	0.61
1:w:1286:A:C6	1:w:1329:U:O2	2.54	0.61
1:w:1405:U:C4	1:w:1406:U:C5	2.89	0.61
1:w:1539:G:H3'	1:w:1540:G:C4'	2.31	0.61
1:w:1659:U:OP2	5:C:132:HIS:CE1	2.54	0.61
1:w:1672:C:O2	1:w:2553:G:C5'	2.49	0.61
1:w:1797:C:H5''	4:B:256:GLY:C	2.17	0.61
1:w:1798:U:H4'	1:w:1803:A:C5'	2.30	0.61
1:w:1851:U:C2'	1:w:1852:C:H5'	2.31	0.61
1:w:1885:A:C4	1:w:1886:C:C6	2.89	0.61
1:w:2145:C:H2'	1:w:2146:C:N1	2.15	0.61
1:w:2342:C:N4	1:w:2343:C:C5	2.69	0.61
1:w:2461:C:C1'	1:w:2491:U:O4	2.48	0.61
1:w:2482:G:H2'	1:w:2483:C:H5'	1.82	0.61
1:w:2543:G:O6	1:w:2544:G:C6	2.54	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2553:G:H3'	1:w:2554:U:H5''	1.83	0.61
1:w:2560:C:H2'	1:w:2561:A:H8	1.66	0.61
1:w:2563:U:N1	1:w:2565:A:OP2	2.34	0.61
1:w:2635:C:H2'	5:C:80:GLU:OE2	2.01	0.61
1:w:2691:C:H2'	1:w:2692:C:C6	2.35	0.61
1:w:2863:C:C3'	1:w:2864:G:H5''	2.30	0.61
2:x:83:G:H4'	26:X:52:HIS:CB	2.31	0.61
2:x:97:G:C5	2:x:98:G:C5	2.89	0.61
4:B:25:THR:CB	4:B:83:GLU:HA	2.30	0.61
4:B:101:GLU:C	4:B:102:LYS:CE	2.74	0.61
4:B:172:TYR:CE1	4:B:186:HIS:ND1	2.69	0.61
4:B:208:LYS:HE3	4:B:210:GLY:C	2.26	0.61
5:C:176:ILE:O	5:C:181:LEU:CD2	2.49	0.61
6:D:26:HIS:HB3	12:J:13:ASN:HB2	1.82	0.61
7:E:59:GLU:O	7:E:62:LEU:HG	2.01	0.61
8:F:19:VAL:HA	8:F:24:VAL:HG22	1.83	0.61
8:F:161:GLY:O	8:F:162:ILE:HB	2.01	0.61
9:G:15:VAL:CG1	9:G:17:GLN:HE21	2.13	0.61
9:G:55:ALA:O	9:G:58:LEU:HB3	2.01	0.61
9:G:88:ILE:HG13	9:G:89:TYR:HD1	1.65	0.61
9:G:101:LEU:HD23	9:G:109:ILE:HD12	1.83	0.61
11:I:10:VAL:HG13	11:I:18:LYS:HA	1.83	0.61
12:J:92:GLU:C	12:J:94:GLU:N	2.49	0.61
13:K:23:GLY:C	13:K:98:LYS:HB3	2.25	0.61
15:M:10:ARG:NH2	15:M:11:LYS:HZ1	1.97	0.61
16:N:33:LYS:HD2	16:N:43:GLN:H	1.66	0.61
23:U:15:ASP:HB3	23:U:20:ARG:HD3	1.81	0.61
31:y:116:A:N3	31:y:117:G:C1'	2.63	0.61
31:y:117:G:C8	31:y:118:U:C5	2.89	0.61
31:y:223:U:H2'	31:y:224:C:O4'	2.01	0.61
31:y:377:G:H5''	31:y:378:G:OP2	2.01	0.61
31:y:385:C:H2'	31:y:386:C:C6	2.36	0.61
31:y:397:A:C2	31:y:548:G:N1	2.69	0.61
31:y:423:G:H3'	31:y:423:G:N3	2.15	0.61
31:y:529:G:O6	45:m:47:PRO:C	2.44	0.61
31:y:691:G:C5'	31:y:798:G:OP1	2.49	0.61
31:y:843:U:C5'	31:y:848:C:C5	2.82	0.61
31:y:880:C:C2	31:y:881:G:C8	2.89	0.61
31:y:984:C:N4	31:y:1222:G:H21	1.98	0.61
31:y:1010:G:N2	31:y:1019:C:O2	2.18	0.61
31:y:1013:G:H1'	31:y:1016:A:H2	1.59	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1093:A:H2	31:y:1109:C:O2'	1.84	0.61
31:y:1104:G:N3	31:y:1105:A:C8	2.69	0.61
31:y:1166:G:C2	31:y:1169:A:OP2	2.54	0.61
31:y:1315:U:O4	31:y:1316:G:O6	2.18	0.61
31:y:1348:U:C4'	42:j:120:ARG:HD3	2.31	0.61
31:y:1460:A:H2'	31:y:1461:G:O4'	1.99	0.61
31:y:1469:G:H2'	31:y:1470:G:H8	1.65	0.61
32:z:7:A:C4'	32:z:8:4SU:OP2	2.49	0.61
33:0:65:G:H8	33:0:65:G:P	2.24	0.61
33:0:73:A:O2'	33:0:74:C:H5'	2.01	0.61
35:c:97:TRP:CB	35:c:172:ILE:HB	2.31	0.61
35:c:171:ALA:HA	35:c:174:VAL:CG2	2.31	0.61
36:d:11:ARG:HE	36:d:11:ARG:HA	1.66	0.61
38:f:37:ARG:HG2	38:f:111:GLU:O	2.01	0.61
38:f:70:PRO:O	38:f:71:LEU:HG	2.01	0.61
38:f:143:ARG:O	38:f:144:THR:CB	2.49	0.61
49:q:4:ILE:CG2	49:q:20:VAL:O	2.48	0.61
51:s:49:LYS:HG2	51:s:50:ILE:HG12	1.83	0.61
1:w:162:U:H2'	1:w:163:U:H5'	1.83	0.60
1:w:214:G:H1'	1:w:216:A:O2'	2.01	0.60
1:w:321:G:N2	1:w:341:G:H4'	2.15	0.60
1:w:463:G:C4	1:w:467:G:C6	2.89	0.60
1:w:591:C:N3	1:w:592:G:N7	2.48	0.60
1:w:680:G:H2'	1:w:681:G:H8	1.66	0.60
1:w:705:A:C2'	1:w:706:A:H5'	2.31	0.60
1:w:723:G:C4	1:w:724:U:C5	2.88	0.60
1:w:763:G:C8	1:w:763:G:H3'	2.36	0.60
1:w:799:G:H8	1:w:799:G:O5'	1.83	0.60
1:w:962:G:C3'	1:w:963:U:C5'	2.79	0.60
1:w:1074:G:H2'	1:w:1075:C:C6	2.37	0.60
1:w:1222:C:C2	1:w:1228:G:C2	2.89	0.60
1:w:1229:G:C2	1:w:1230:C:H1'	2.36	0.60
1:w:1257:C:H2'	1:w:1258:C:O4'	2.01	0.60
1:w:1516:U:C2'	1:w:1517:G:H8	2.13	0.60
1:w:1636:C:C2	1:w:1637:A:N7	2.69	0.60
1:w:2017:U:H4'	27:Y:9:LYS:N	2.16	0.60
1:w:2037:G:C2	1:w:2038:G:C2	2.89	0.60
1:w:2146:C:C6	1:w:2146:C:C3'	2.83	0.60
1:w:2353:G:N3	23:U:34:GLY:CA	2.63	0.60
1:w:2442:C:O2'	1:w:2443:C:H5'	2.01	0.60
1:w:2527:C:H5''	30:b:30:PRO:CB	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2531:A:H8	1:w:2531:A:O5'	1.83	0.60
1:w:2550:G:H2'	1:w:2551:C:C5'	2.23	0.60
1:w:2647:U:H3	1:w:2673:G:H1	1.47	0.60
1:w:2730:C:C2'	1:w:2731:G:H5'	2.31	0.60
2:x:15:A:C2	2:x:109:G:C2	2.89	0.60
4:B:27:THR:HG23	4:B:83:GLU:HG2	1.83	0.60
5:C:61:ARG:CG	5:C:62:PRO:HD3	2.30	0.60
6:D:30:GLU:OE1	12:J:13:ASN:CG	2.44	0.60
6:D:30:GLU:OE1	12:J:13:ASN:OD1	2.19	0.60
6:D:111:ASP:C	6:D:114:ARG:HG2	2.26	0.60
6:D:135:LEU:C	6:D:138:ALA:H	2.08	0.60
6:D:195:GLU:O	6:D:196:VAL:HB	2.01	0.60
16:N:51:ARG:NH2	16:N:60:THR:CB	2.63	0.60
17:O:84:LYS:HD2	17:O:89:GLU:HG2	1.83	0.60
22:T:99:TYR:HD2	22:T:124:ILE:CA	2.05	0.60
23:U:31:VAL:CG2	23:U:62:LEU:H	2.14	0.60
23:U:45:PHE:CD2	23:U:78:TYR:N	2.69	0.60
24:V:8:SER:OG	24:V:9:GLY:N	2.34	0.60
27:Y:38:ALA:HB2	27:Y:48:GLU:HB3	1.82	0.60
31:y:36:C:H1'	31:y:501:C:H5'	1.83	0.60
31:y:89:U:C2	31:y:90:C:C5	2.89	0.60
31:y:426:G:C4	31:y:427:U:C5	2.88	0.60
31:y:538:G:OP2	45:m:114:LYS:HG3	2.01	0.60
31:y:601:C:C2'	31:y:602:A:C8	2.82	0.60
31:y:718:G:N3	31:y:718:G:H2'	2.15	0.60
31:y:741:G:OP1	48:p:39:LEU:CD2	2.49	0.60
31:y:858:G:N1	31:y:869:G:H2'	2.16	0.60
31:y:864:A:OP1	31:y:864:A:C8	2.51	0.60
31:y:1076:C:C5'	35:c:175:ARG:NH1	2.64	0.60
31:y:1269:A:C5'	54:v:19:GLY:N	2.64	0.60
31:y:1276:G:N2	31:y:1282:C:O2	2.32	0.60
31:y:1419:G:O6	31:y:1482:G:C5	2.54	0.60
31:y:1516:G:N2	31:y:1518:MA6:C3'	2.58	0.60
32:z:71:G:C3'	32:z:72:C:C5'	2.63	0.60
35:c:152:PHE:CD1	35:c:152:PHE:O	2.54	0.60
36:d:133:ALA:O	36:d:140:ARG:NH2	2.33	0.60
37:e:86:LYS:O	37:e:87:GLY:C	2.43	0.60
39:g:75:LEU:CD2	39:g:76:ALA:N	2.64	0.60
40:h:3:ARG:C	40:h:4:ARG:HG3	2.25	0.60
40:h:40:ALA:HA	40:h:43:PHE:CE2	2.36	0.60
40:h:44:TYR:HA	40:h:47:CYS:SG	2.41	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:34:ASP:CG	44:l:38:ASN:HB2	2.26	0.60
48:p:74:ASP:CB	48:p:77:ARG:HG2	2.31	0.60
49:q:63:GLY:O	49:q:64:ALA:O	2.19	0.60
1:w:41:C:H2'	1:w:41:C:O2	2.01	0.60
1:w:182:A:C2	1:w:432:A:H2	2.18	0.60
1:w:183:C:O2	1:w:432:A:C2	2.54	0.60
1:w:284:U:H2'	1:w:285:C:C6	2.34	0.60
1:w:444:C:OP1	6:D:42:GLY:HA2	2.01	0.60
1:w:537:C:H5'	17:O:57:PHE:CZ	2.35	0.60
1:w:609(B):G:N2	1:w:610:C:C2	2.69	0.60
1:w:760:G:C5	1:w:761:A:N7	2.69	0.60
1:w:811:U:C5	1:w:1251:C:C1'	2.79	0.60
1:w:855:G:C2	1:w:856:C:H1'	2.36	0.60
1:w:859:G:H21	1:w:2268:A:H2	1.49	0.60
1:w:1023:U:C4	1:w:1024:G:C2	2.88	0.60
1:w:1186:G:H2'	1:w:1187:G:C5'	2.30	0.60
1:w:1203:G:C6	1:w:1204:A:C2	2.90	0.60
1:w:1213:A:C2'	1:w:1214:A:H5'	2.31	0.60
1:w:1255:U:OP1	1:w:1256:G:C5'	2.39	0.60
1:w:1300:U:C6	1:w:1626:G:O2'	2.49	0.60
1:w:1327:C:C4	1:w:1328:G:C5	2.89	0.60
1:w:1353:A:H2'	1:w:1354:A:C8	2.35	0.60
1:w:1576:U:O2'	1:w:1577:C:C5'	2.49	0.60
1:w:1658:C:C2'	1:w:1659:U:C6	2.77	0.60
1:w:1782:C:H1'	1:w:2609:U:H5'	1.79	0.60
1:w:1817:G:N1	1:w:1818:U:O2	2.35	0.60
1:w:1822:G:O2'	1:w:1823:G:O5'	2.18	0.60
1:w:1827:C:C5'	1:w:1971:A:C4'	2.76	0.60
1:w:1837:C:O5'	1:w:1837:C:H6	1.83	0.60
1:w:1945:G:C4	1:w:1946:U:C5	2.88	0.60
1:w:2118:U:O5'	1:w:2118:U:C6	2.54	0.60
1:w:2283:C:O4'	1:w:2283:C:OP1	2.17	0.60
1:w:2285:C:O4'	1:w:2288:A:N6	2.33	0.60
1:w:2298:A:O2'	1:w:2322:A:O2'	2.13	0.60
1:w:2354:G:N1	1:w:2364:C:C4	2.69	0.60
1:w:2459:A:C2	1:w:2460:U:H1'	2.37	0.60
1:w:2588:G:C6	1:w:2589:A:C4	2.89	0.60
1:w:2588:G:N1	1:w:2589:A:C2	2.69	0.60
1:w:2598:A:H5'	4:B:234:GLY:C	2.26	0.60
1:w:2696:U:O5'	1:w:2696:U:H6	1.84	0.60
1:w:2820:A:O4'	5:C:109:LYS:HE3	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:110:G:H2'	2:x:111:U:C4'	2.31	0.60
2:x:118:G:H2'	2:x:119:A:H5'	1.82	0.60
3:A:198:GLU:O	3:A:198:GLU:OE2	2.18	0.60
5:C:12:THR:OG1	5:C:13:ARG:N	2.30	0.60
6:D:98:LYS:C	6:D:100:VAL:H	2.08	0.60
8:F:98:LEU:CB	8:F:102:ALA:O	2.37	0.60
9:G:31:LEU:O	9:G:34:GLY:N	2.35	0.60
9:G:94:ALA:O	9:G:97:ILE:HD12	2.01	0.60
10:H:106:LYS:HG3	10:H:107:LYS:N	2.14	0.60
11:I:17:ARG:HH21	11:I:47:ILE:HG22	1.64	0.60
13:K:110:THR:C	13:K:112:GLU:H	2.08	0.60
15:M:35:ILE:HD12	15:M:66:ALA:HA	1.82	0.60
15:M:67:ARG:HA	15:M:101:LEU:CD2	2.31	0.60
17:O:36:ARG:C	17:O:39:LEU:HG	2.26	0.60
17:O:103:PRO:C	17:O:105:VAL:N	2.57	0.60
18:P:24:LYS:HG2	18:P:94:LEU:HD11	1.83	0.60
18:P:60:GLU:O	18:P:62:LEU:HG	2.00	0.60
19:Q:11:ARG:CA	19:Q:100:THR:HG22	2.30	0.60
22:T:15:PRO:C	22:T:17:ALA:N	2.57	0.60
24:V:10:LYS:HB3	24:V:13:ILE:O	2.00	0.60
24:V:54:ALA:C	24:V:56:GLN:N	2.59	0.60
25:W:41:ILE:HA	25:W:44:LEU:HD12	1.83	0.60
27:Y:16:ARG:HA	27:Y:20:ARG:NH2	2.16	0.60
29:a:34:TRP:O	29:a:35:GLN:HB2	2.00	0.60
29:a:44:LYS:HB2	29:a:44:LYS:HZ3	1.66	0.60
31:y:120:A:H2'	31:y:122:G:C8	2.36	0.60
31:y:160:A:C1'	31:y:344:A:N3	2.59	0.60
31:y:251:G:N1	31:y:266:G:N1	2.49	0.60
31:y:253:U:C2	31:y:254:G:C8	2.89	0.60
31:y:283:C:C4	31:y:284:G:N7	2.69	0.60
31:y:376:G:H4'	49:q:5:ARG:HD3	1.83	0.60
31:y:401:C:H2'	31:y:402:G:O5'	2.01	0.60
31:y:516:PSU:O2	31:y:533:A:N7	2.35	0.60
31:y:556:C:N3	31:y:557:G:C8	2.68	0.60
31:y:653:A:C2	41:i:56:LYS:CG	2.81	0.60
31:y:671:G:C2	31:y:736:C:C2	2.89	0.60
31:y:832:C:O2'	31:y:833:U:O5'	2.19	0.60
31:y:862:C:H2'	31:y:863:U:C5'	2.29	0.60
31:y:955:U:C2	31:y:956:U:H1'	2.36	0.60
31:y:1037:C:N4	31:y:1038:C:N4	2.49	0.60
31:y:1077:G:C4	31:y:1079:G:OP2	2.54	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1197:G:H2'	31:y:1198:G:C8	2.35	0.60
31:y:1198:G:N1	31:y:1199:U:C4	2.69	0.60
31:y:1346:A:C4'	31:y:1348:U:H5'	2.31	0.60
31:y:1347:G:H5''	42:j:107:ARG:HA	1.82	0.60
31:y:1371:G:C5'	42:j:69:GLY:N	2.63	0.60
31:y:1442:G:N2	31:y:1447:G:OP1	2.33	0.60
33:0:32:C:O2'	33:0:33:U:H5'	2.01	0.60
33:0:34:G:C3'	33:0:35:A:H5''	2.29	0.60
35:c:82:ARG:NH1	35:c:93:VAL:HA	2.13	0.60
35:c:100:GLY:O	35:c:104:ASN:CB	2.48	0.60
35:c:121:LEU:C	35:c:126:GLU:HB3	2.25	0.60
36:d:40:ARG:CA	36:d:43:LEU:CD2	2.77	0.60
36:d:175:LEU:HA	36:d:180:ALA:HA	1.83	0.60
37:e:187:ARG:HH11	37:e:187:ARG:HG3	1.67	0.60
38:f:132:ALA:O	38:f:136:MET:HE3	2.01	0.60
39:g:11:ASN:ND2	39:g:13:ASN:CG	2.59	0.60
44:l:22:HIS:CD2	44:l:22:HIS:C	2.77	0.60
44:l:109:VAL:HG12	51:s:84:LYS:HE2	1.83	0.60
45:m:101:ARG:HB2	45:m:119:TYR:CD1	2.35	0.60
49:q:1:MET:HG3	49:q:65:GLN:CD	2.26	0.60
50:r:47:PRO:HB2	50:r:48:GLU:OE1	2.01	0.60
1:w:39:C:C2'	1:w:40:C:H6	2.06	0.60
1:w:65:C:C6	1:w:65:C:H3'	2.36	0.60
1:w:99:U:C4'	1:w:101:G:H5''	2.30	0.60
1:w:281:G:H22	1:w:358:U:C5'	2.13	0.60
1:w:319:C:N3	1:w:320:A:C8	2.69	0.60
1:w:463:G:H2'	1:w:464:U:H3'	1.82	0.60
1:w:477:A:C3'	1:w:478:A:C8	2.83	0.60
1:w:482:A:H5''	1:w:483:A:OP1	2.00	0.60
1:w:532:A:OP2	17:O:45:TYR:CE1	2.54	0.60
1:w:581:C:OP1	17:O:33:ARG:NH1	2.34	0.60
1:w:616:A:H2'	1:w:617:G:O4'	2.00	0.60
1:w:791:C:H4'	1:w:792:G:OP1	2.02	0.60
1:w:801:G:C5	6:D:49:ARG:C	2.79	0.60
1:w:856:C:H2'	1:w:856:C:O2	2.01	0.60
1:w:961:C:H5	1:w:2456:C:H4'	1.65	0.60
1:w:1131:G:C2	1:w:1132:A:C6	2.89	0.60
1:w:1161:C:C1'	18:P:8:GLY:HA3	2.32	0.60
1:w:1203:G:H3'	1:w:1204:A:C5'	2.31	0.60
1:w:1223:G:C6	1:w:1225:G:OP1	2.54	0.60
1:w:1361:G:C2	1:w:1362:C:C6	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1545:A:C2'	1:w:1546:A:O4'	2.40	0.60
1:w:1625:C:C4	1:w:1626:G:C5	2.89	0.60
1:w:1910:G:O6	1:w:1921:G:C6	2.54	0.60
1:w:2062:A:N6	1:w:2503:A:N7	2.49	0.60
1:w:2218:G:C2'	1:w:2219:G:O5'	2.48	0.60
1:w:2359:C:N4	12:J:55:ARG:NH1	2.44	0.60
1:w:2581:G:C6	1:w:2610:C:N3	2.69	0.60
1:w:2588:G:O6	1:w:2606:C:N3	2.35	0.60
1:w:2739:U:O2'	1:w:2740:A:H5'	2.01	0.60
1:w:2809:A:C4	1:w:2810:A:C8	2.89	0.60
2:x:35:U:C2'	2:x:36:C:C5'	2.80	0.60
3:A:29:LEU:CG	3:A:33:LEU:HD21	2.31	0.60
3:A:59:VAL:O	3:A:165:ARG:CA	2.48	0.60
3:A:197:LEU:CG	3:A:198:GLU:N	2.64	0.60
4:B:233:HIS:CD2	4:B:234:GLY:N	2.70	0.60
4:B:241:PRO:HB2	4:B:242:ARG:CZ	2.32	0.60
5:C:52:LEU:N	5:C:76:ARG:HB2	2.15	0.60
5:C:92:THR:O	5:C:95:ILE:CG1	2.49	0.60
5:C:192:ASN:HD22	5:C:192:ASN:C	2.08	0.60
6:D:29:TRP:HE3	6:D:33:ARG:NH1	1.99	0.60
7:E:53:LEU:H	7:E:53:LEU:HD23	1.65	0.60
7:E:117:PHE:CG	7:E:118:ARG:N	2.69	0.60
9:G:81:VAL:O	9:G:148:GLU:CG	2.47	0.60
10:H:78:VAL:CA	10:H:146:TYR:HE2	2.15	0.60
11:I:22:ILE:CG1	11:I:23:ARG:N	2.63	0.60
11:I:71:ARG:CB	11:I:72:PRO:HD2	2.28	0.60
13:K:55:VAL:O	13:K:58:PHE:CB	2.49	0.60
13:K:68:ILE:HD12	13:K:68:ILE:N	2.16	0.60
13:K:79:LEU:HD12	13:K:80:GLU:H	1.66	0.60
13:K:106:VAL:HG22	13:K:107:ALA:N	2.14	0.60
21:S:37:VAL:O	21:S:37:VAL:HG23	2.00	0.60
22:T:51:ALA:HB1	22:T:55:HIS:C	2.26	0.60
22:T:61:LEU:HB2	22:T:65:GLN:O	2.01	0.60
24:V:19:GLN:CB	24:V:44:PRO:HG3	2.31	0.60
24:V:85:LEU:CD1	24:V:86:SER:N	2.65	0.60
30:b:14:CYS:HA	30:b:27:CYS:CA	2.31	0.60
31:y:6:G:H22	38:f:119:LEU:HD11	1.65	0.60
31:y:6:G:C2	38:f:119:LEU:HD11	2.37	0.60
31:y:26:A:C6	31:y:557:G:N2	2.68	0.60
31:y:38:G:HO2'	31:y:397:A:N6	1.92	0.60
31:y:157:G:C2	31:y:158:G:C8	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:189:U:H6	31:y:189:U:C5'	2.14	0.60
31:y:232:G:H2'	31:y:233:C:O4'	2.01	0.60
31:y:295:C:O2'	31:y:296:U:C5'	2.47	0.60
31:y:361:G:C6	31:y:362:G:C2	2.89	0.60
31:y:402:G:O4'	31:y:621:A:H2	1.84	0.60
31:y:564:C:C5	31:y:565:U:C4	2.86	0.60
31:y:564:C:C2'	31:y:565:U:O5'	2.49	0.60
31:y:574:A:H1'	31:y:883:C:O4'	2.01	0.60
31:y:651:C:O5'	31:y:651:C:H6	1.85	0.60
31:y:741:G:H5'	48:p:35:ARG:NH2	2.16	0.60
31:y:833:U:O2	31:y:833:U:C2'	2.49	0.60
31:y:923:A:H8	31:y:923:A:O5'	1.84	0.60
31:y:102(B):C:O2'	31:y:102(C):C:OP1	2.16	0.60
31:y:1488:G:N3	31:y:1489:G:C8	2.69	0.60
35:c:32:ILE:HG22	35:c:41:ILE:O	2.01	0.60
35:c:102:LEU:HB2	35:c:176:GLU:HB3	1.84	0.60
36:d:149:ALA:CA	36:d:201:TYR:O	2.48	0.60
36:d:181:ASN:CB	36:d:205:GLY:HA3	2.32	0.60
37:e:12:CYS:SG	37:e:21:LEU:CD1	2.89	0.60
37:e:61:LYS:HD3	37:e:207:TYR:CE1	2.30	0.60
37:e:173:TRP:HB2	37:e:187:ARG:N	2.16	0.60
38:f:7:GLU:HB3	38:f:35:GLY:O	2.00	0.60
40:h:8:GLU:CG	40:h:9:VAL:H	2.14	0.60
40:h:25:ALA:HA	40:h:28:ASN:ND2	2.16	0.60
41:i:24:THR:HG21	41:i:63:LEU:CD1	2.30	0.60
43:k:49:VAL:CG1	43:k:50:ILE:H	2.13	0.60
47:o:24:CYS:CB	47:o:40:CYS:H	2.14	0.60
50:r:9:VAL:HG13	50:r:85:VAL:HG22	1.81	0.60
50:r:73:VAL:O	50:r:74:LEU:HB2	2.00	0.60
1:w:12:U:O2	1:w:12:U:C2'	2.49	0.60
1:w:76:C:N3	1:w:110:G:N2	2.44	0.60
1:w:155:C:O2	1:w:155:C:H2'	1.99	0.60
1:w:182:A:H2'	1:w:433:C:H4'	1.83	0.60
1:w:254:G:O6	29:a:5:LYS:CB	2.43	0.60
1:w:452:G:O2'	1:w:457:A:N1	2.34	0.60
1:w:476:G:H2'	1:w:477:A:C5'	2.32	0.60
1:w:521:G:H2'	1:w:522:G:H8	1.67	0.60
1:w:655:A:C4'	1:w:656:G:O4'	2.36	0.60
1:w:675:A:N7	1:w:804:A:C2	2.69	0.60
1:w:718:A:H8	1:w:718:A:O5'	1.85	0.60
1:w:804:A:H2'	1:w:806:C:C5	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:811:U:O2	1:w:811:U:H2'	2.01	0.60
1:w:838:C:N4	1:w:941:A:N6	2.50	0.60
1:w:902:C:N4	1:w:903:C:N4	2.49	0.60
1:w:1009:A:H2'	1:w:1010:A:C8	2.36	0.60
1:w:1301:A:O2'	1:w:1302:A:H3'	2.01	0.60
1:w:1349:A:P	1:w:1350:C:H5''	2.42	0.60
1:w:1583:A:C4'	1:w:1585:C:OP2	2.35	0.60
1:w:1915:U:C5	1:w:1916:A:C5	2.89	0.60
1:w:1945:G:C2	1:w:1946:U:C6	2.90	0.60
1:w:2038:G:C2	1:w:2039:C:C2	2.90	0.60
1:w:2057:A:O2'	27:Y:6:VAL:HG11	2.02	0.60
1:w:2104:G:C6	1:w:2186:G:C6	2.90	0.60
1:w:2303:G:H4'	7:E:125:PHE:C	2.26	0.60
1:w:2320:A:C6	1:w:2333:A:C2'	2.84	0.60
1:w:2398:U:H3'	1:w:2399:G:H8	1.66	0.60
1:w:2549:G:N1	1:w:2560:C:N4	2.49	0.60
1:w:2550:G:O2'	1:w:2551:C:H5'	2.01	0.60
1:w:2563:U:C2	1:w:2566:A:N7	2.69	0.60
1:w:2579:C:C2'	1:w:2580:U:C5'	2.61	0.60
1:w:2758:A:C3'	1:w:2759:G:C5'	2.57	0.60
1:w:2785:C:C2'	1:w:2786:U:H6	2.13	0.60
2:x:35:U:H2'	2:x:36:C:C5'	2.31	0.60
2:x:89(A):G:C2'	2:x:89(B):A:H5'	2.32	0.60
2:x:99:A:C5	2:x:100:G:C6	2.88	0.60
3:A:162:ILE:O	3:A:163:GLU:HB2	2.01	0.60
4:B:84:TYR:CE2	4:B:85:ASP:O	2.55	0.60
6:D:118:LEU:O	6:D:119:LEU:HB3	2.02	0.60
7:E:77:ILE:HG12	32:z:56:C:C5	2.37	0.60
7:E:114:ILE:CG1	7:E:115:ARG:N	2.64	0.60
7:E:153:ARG:HG3	7:E:154:GLY:H	1.65	0.60
7:E:163:ALA:O	7:E:164:GLU:C	2.44	0.60
8:F:55:PRO:HG2	8:F:56:SER:H	1.66	0.60
8:F:95:ARG:HH11	8:F:107:VAL:HB	1.67	0.60
9:G:90:GLY:O	9:G:91:SER:CB	2.49	0.60
9:G:122:GLU:OE2	9:G:126:TYR:CB	2.50	0.60
10:H:82:LYS:O	10:H:83:ILE:C	2.44	0.60
10:H:88:LYS:O	10:H:92:GLN:HB2	2.01	0.60
11:I:20:MET:C	11:I:20:MET:SD	2.84	0.60
11:I:35:VAL:HA	11:I:62:VAL:CB	2.31	0.60
11:I:35:VAL:CG1	11:I:106:LEU:HD11	2.31	0.60
11:I:59:LYS:HZ3	11:I:88:ASN:C	2.08	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:17:ARG:HG2	15:M:88:ASP:OD1	2.01	0.60
15:M:67:ARG:HB3	15:M:100:ALA:O	2.01	0.60
25:W:7:ARG:CB	25:W:8:LYS:HZ2	2.15	0.60
25:W:22:GLU:OE2	25:W:25:VAL:HG22	2.01	0.60
27:Y:34:PRO:HB3	27:Y:52:TYR:CE2	2.37	0.60
31:y:67:C:C2'	31:y:68:G:O5'	2.49	0.60
31:y:116:A:N6	31:y:117:G:C2	2.69	0.60
31:y:147:G:H3'	31:y:148:G:H8	1.64	0.60
31:y:237:C:H5''	50:r:25:ARG:NH1	2.16	0.60
31:y:321:A:C1'	31:y:1435:G:HO2'	2.14	0.60
31:y:511:C:O2'	31:y:512:U:P	2.58	0.60
31:y:552:U:O4'	45:m:85:ARG:NH1	2.35	0.60
31:y:758:G:H8	31:y:758:G:OP2	1.83	0.60
31:y:816:A:OP2	31:y:1526:G:O2'	2.18	0.60
31:y:832:C:H5'	31:y:832:C:C6	2.33	0.60
31:y:859:A:C2'	31:y:860:A:C5'	2.75	0.60
31:y:868:C:H2'	31:y:869:G:C5'	2.29	0.60
31:y:929:G:C2	31:y:930:C:C6	2.89	0.60
31:y:954:G:N2	31:y:1227:A:N6	2.26	0.60
31:y:1487:G:O2'	31:y:1488:G:H5'	2.01	0.60
31:y:1500:A:C2'	31:y:1501:C:C5'	2.64	0.60
36:d:138:VAL:O	36:d:141:VAL:HG12	2.01	0.60
36:d:151:VAL:CG1	36:d:152:ILE:H	2.08	0.60
37:e:17:VAL:O	37:e:19:LEU:N	2.34	0.60
38:f:89:ILE:HD12	38:f:89:ILE:N	2.15	0.60
39:g:8:ILE:HG22	39:g:9:VAL:N	2.16	0.60
39:g:11:ASN:CB	39:g:86:ARG:NH2	2.65	0.60
39:g:98:LEU:O	39:g:99:ALA:HB2	2.01	0.60
40:h:88:PRO:HD3	40:h:151:TYR:CE1	2.35	0.60
40:h:115:ARG:H	40:h:119:ARG:HD2	1.67	0.60
40:h:126:ASP:HB3	40:h:132:GLY:HA2	1.80	0.60
40:h:149:ARG:HD3	44:l:59:TYR:CE1	2.37	0.60
41:i:15:ASN:C	41:i:17:THR:N	2.58	0.60
41:i:40:ALA:CA	41:i:45:ILE:CG2	2.75	0.60
41:i:77:GLU:CD	41:i:81:HIS:CE1	2.79	0.60
41:i:82:HIS:HB3	41:i:138:TRP:CZ2	2.36	0.60
41:i:100:ILE:CG2	41:i:125:ARG:NH2	2.64	0.60
43:k:43:ARG:HD2	43:k:69:ASN:HB3	1.84	0.60
49:q:15:PRO:O	49:q:16:HIS:C	2.44	0.60
50:r:19:VAL:O	50:r:43:LEU:HB2	2.00	0.60
50:r:36:ILE:C	50:r:36:ILE:CD1	2.63	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:54:G:C6	1:w:55:G:C8	2.89	0.60
1:w:376:C:H2'	1:w:377:C:O4'	2.01	0.60
1:w:416:C:H5''	1:w:416:C:H6	1.65	0.60
1:w:488:G:H4'	19:Q:49:LYS:CE	2.19	0.60
1:w:515:A:H3'	1:w:516:C:C6	2.35	0.60
1:w:579:G:C2'	1:w:580:C:C6	2.72	0.60
1:w:621:A:N3	1:w:622:G:C8	2.69	0.60
1:w:669:G:OP1	6:D:49:ARG:NH1	2.33	0.60
1:w:954:G:N2	1:w:2274:A:C2	2.69	0.60
1:w:957:A:H5''	13:K:74:TYR:CZ	2.34	0.60
1:w:957:A:H61	1:w:2458:G:H4'	1.65	0.60
1:w:971:C:H1'	1:w:984:A:H1'	1.83	0.60
1:w:1186:G:C5	1:w:1187:G:C1'	2.67	0.60
1:w:1225:G:O2'	18:P:86:GLY:HA2	2.02	0.60
1:w:1255:U:C2	6:D:67:ARG:HB3	2.31	0.60
1:w:1313:U:H4'	1:w:1332:G:H1'	1.83	0.60
1:w:1335:U:C3'	1:w:1336:A:H8	2.15	0.60
1:w:1364:G:C5'	1:w:1365:A:OP2	2.50	0.60
1:w:1650:G:C6	1:w:1651:G:C5	2.89	0.60
1:w:1670:C:C2'	1:w:1671:U:H5'	2.31	0.60
1:w:1939:U:OP2	1:w:1939:U:C5	2.55	0.60
1:w:1970:A:C4'	1:w:1971:A:OP1	2.50	0.60
1:w:2403:C:H2'	1:w:2404:C:C5	2.37	0.60
1:w:2470:G:C3'	1:w:2471:C:H5''	2.30	0.60
1:w:2654:A:H1'	1:w:2655:G:C1'	2.32	0.60
1:w:2657:A:OP2	1:w:2657:A:H8	1.85	0.60
1:w:2659:G:C5	1:w:2661:G:OP2	2.54	0.60
1:w:2767:C:H4'	10:H:107:LYS:NZ	2.16	0.60
1:w:2840:C:N4	1:w:2841:C:N4	2.50	0.60
2:x:13:A:N1	2:x:70:C:H5'	2.13	0.60
3:A:29:LEU:HG	3:A:33:LEU:HD21	1.84	0.60
3:A:51:ASP:CG	3:A:53:ARG:HD2	2.25	0.60
6:D:90:ARG:C	6:D:92:TYR:H	2.08	0.60
6:D:150:LEU:HD12	6:D:169:VAL:CA	2.27	0.60
7:E:92:VAL:HG22	7:E:93:THR:N	2.16	0.60
9:G:56:LYS:HG3	9:G:57:ARG:CD	2.31	0.60
10:H:50:ALA:HB1	10:H:126:VAL:HG22	1.81	0.60
10:H:77:VAL:HG12	10:H:77:VAL:O	1.99	0.60
12:J:84:ASN:HA	12:J:115:LEU:O	2.01	0.60
12:J:121:LYS:O	12:J:123:LEU:N	2.35	0.60
13:K:66:ILE:HA	13:K:104:PHE:CE2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:23:ASN:CA	14:L:26:LYS:HB2	2.31	0.60
15:M:24:LEU:CB	15:M:85:VAL:HA	2.32	0.60
17:O:82:GLY:CA	17:O:113:ALA:HB1	2.30	0.60
19:Q:62:HIS:O	19:Q:64:MET:HE2	2.01	0.60
21:S:97:ARG:C	21:S:97:ARG:CD	2.71	0.60
22:T:46:LYS:HA	22:T:49:ARG:CD	2.22	0.60
22:T:146:ILE:HD13	22:T:146:ILE:N	2.08	0.60
23:U:27:GLU:HA	23:U:69:PHE:CG	2.36	0.60
24:V:68:PRO:HG2	24:V:69:LYS:H	1.65	0.60
30:b:26:ILE:HG12	30:b:34:GLN:N	2.15	0.60
31:y:24:U:H2'	31:y:25:C:C5'	2.30	0.60
31:y:237:C:C2	31:y:238:G:N7	2.69	0.60
31:y:671:G:C2	31:y:736:C:N3	2.69	0.60
31:y:774:G:C2	31:y:775:G:C8	2.89	0.60
31:y:858:G:C8	31:y:858:G:O5'	2.55	0.60
31:y:918:A:C2'	31:y:919:A:H8	2.14	0.60
31:y:962:C:H2'	31:y:963:G:C8	2.36	0.60
31:y:966:M2G:HO2'	31:y:967:5MC:P	2.24	0.60
31:y:102(B):C:H2'	31:y:102(C):C:C4'	2.29	0.60
31:y:1123:A:O3'	31:y:1124:G:H8	1.84	0.60
31:y:1231:G:H2'	31:y:1232:U:H6	1.66	0.60
31:y:1388:C:C4	31:y:1389:C:C5	2.88	0.60
31:y:1500:A:H4'	31:y:1509:C:OP1	2.02	0.60
31:y:1508:G:C2	31:y:1509:C:C4	2.90	0.60
32:z:25:C:C2'	32:z:26:A:H5'	2.32	0.60
33:0:23:A:O2'	33:0:24:G:H5'	2.00	0.60
33:0:24:G:C2'	33:0:25:C:H6	2.14	0.60
35:c:74:LYS:NZ	35:c:76:GLN:HG2	2.17	0.60
35:c:134:GLU:HA	35:c:137:ARG:NE	2.16	0.60
35:c:168:THR:HG21	35:c:191:ASP:CB	2.32	0.60
36:d:14:ILE:HG22	47:o:57:ARG:HH22	1.65	0.60
36:d:72:LYS:HG3	36:d:75:VAL:HG22	1.82	0.60
36:d:173:VAL:N	36:d:174:PRO:HD3	2.17	0.60
37:e:126:ILE:CB	37:e:148:VAL:HA	2.31	0.60
41:i:93:VAL:HG11	41:i:133:LEU:HB3	1.82	0.60
42:j:10:ARG:HG3	42:j:104:ARG:HE	1.63	0.60
45:m:37:THR:CG2	45:m:58:ARG:NH2	2.64	0.60
47:o:34:TYR:O	47:o:35:ARG:HD3	2.01	0.60
49:q:16:HIS:HA	49:q:41:PRO:HD3	1.83	0.60
50:r:34:LYS:HG3	50:r:35:VAL:N	2.16	0.60
1:w:123:G:H3'	1:w:124:G:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:125:G:N2	28:Z:14:LYS:HZ3	2.00	0.60
1:w:141(B):C:C5	1:w:142:G:N7	2.70	0.60
1:w:162:U:H6	1:w:162:U:H3'	1.65	0.60
1:w:273(C):C:O2'	1:w:273(D):C:H5'	2.02	0.60
1:w:585:G:C2'	1:w:1251:C:H42	2.15	0.60
1:w:634:C:C2	1:w:635:C:C4	2.89	0.60
1:w:661:C:C4'	12:J:18:ARG:HD2	2.26	0.60
1:w:675:A:H4'	6:D:62:GLN:CD	2.26	0.60
1:w:936:C:H2'	1:w:937:U:C6	2.34	0.60
1:w:976:C:OP1	1:w:1156:A:N1	2.34	0.60
1:w:1202:C:C4	1:w:1203:G:C5	2.90	0.60
1:w:1228:G:H2'	1:w:1229:G:C4'	2.30	0.60
1:w:1264:G:H2'	1:w:1265:A:N7	2.17	0.60
1:w:1348:G:C5	1:w:1349:A:N6	2.69	0.60
1:w:1356:G:O2'	1:w:1357:U:C5'	2.49	0.60
1:w:1669:A:H5''	1:w:1670:C:C5	2.37	0.60
1:w:1685:C:C2	1:w:1686:C:C5	2.89	0.60
1:w:1801:G:H5'	1:w:1815:A:C6	2.37	0.60
1:w:2290:G:N1	1:w:2343:C:C2	2.69	0.60
1:w:2471:C:C2'	1:w:2472:G:O4'	2.47	0.60
1:w:2572:A:OP1	1:w:2574:G:C2'	2.49	0.60
1:w:2693:A:N3	1:w:2717:G:C2	2.69	0.60
1:w:2830:G:H2'	1:w:2830:G:N3	2.14	0.60
2:x:99:A:N1	2:x:100:G:C2	2.69	0.60
4:B:76:PRO:HB2	4:B:117:VAL:CB	2.30	0.60
4:B:166:GLN:O	4:B:174:ILE:HD12	2.02	0.60
7:E:139:LEU:HD21	46:n:3:ARG:HH22	1.65	0.60
7:E:164:GLU:N	7:E:168:GLU:OE2	2.35	0.60
7:E:173:LEU:O	7:E:177:GLY:O	2.19	0.60
13:K:133:ARG:CG	13:K:134:ARG:N	2.63	0.60
16:N:27:THR:C	16:N:28:VAL:HG23	2.25	0.60
20:R:20:GLY:HA3	20:R:25:LYS:CA	2.28	0.60
21:S:23:ARG:CG	21:S:24:VAL:N	2.64	0.60
21:S:93:GLY:O	21:S:94:LYS:HB2	2.01	0.60
25:W:27:GLU:HA	25:W:30:ARG:HG2	1.83	0.60
27:Y:34:PRO:CB	27:Y:52:TYR:HE2	2.14	0.60
29:a:14:VAL:HG22	29:a:24:ALA:HB2	1.83	0.60
29:a:44:LYS:HG3	29:a:45:GLY:N	2.17	0.60
31:y:12:U:O2'	31:y:526:C:C5'	2.49	0.60
31:y:147:G:H3'	31:y:148:G:C8	2.37	0.60
31:y:159:G:C2'	31:y:162:A:N6	2.64	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:180:U:O5'	31:y:180:U:C6	2.55	0.60
31:y:232:G:C5	31:y:233:C:C5	2.89	0.60
31:y:399:G:O2'	31:y:400:C:H5'	2.01	0.60
31:y:404:U:C2	31:y:405:U:C6	2.88	0.60
31:y:521:G:C5	45:m:48:ASN:ND2	2.69	0.60
31:y:572:A:H5''	31:y:917:G:C5'	2.31	0.60
31:y:859:A:H2'	31:y:860:A:O5'	2.02	0.60
31:y:964:A:C2'	31:y:965:A:H5'	2.30	0.60
31:y:1053:G:C4	31:y:1199:U:C5	2.89	0.60
31:y:1120:G:O6	31:y:1154:G:C6	2.55	0.60
31:y:1489:G:C4	31:y:1490:C:C4	2.90	0.60
31:y:1516:G:N2	31:y:1518:MA6:H5''	2.16	0.60
35:c:105:PHE:CD1	35:c:105:PHE:C	2.78	0.60
35:c:213:LEU:O	35:c:216:SER:HB2	2.01	0.60
37:e:7:PRO:CA	37:e:22:LYS:HE3	2.31	0.60
37:e:26:CYS:CB	37:e:31:CYS:SG	2.89	0.60
37:e:173:TRP:HB2	37:e:187:ARG:CA	2.32	0.60
38:f:137:GLU:C	38:f:141:GLN:HG2	2.26	0.60
39:g:7:ASN:O	39:g:8:ILE:CG1	2.49	0.60
39:g:45:LEU:CG	39:g:46:ARG:N	2.65	0.60
41:i:86:ILE:CG2	41:i:133:LEU:HD22	2.31	0.60
41:i:112:LEU:HD11	41:i:124:ALA:HB1	1.84	0.60
42:j:89:ASN:HB3	42:j:92:TYR:CZ	2.36	0.60
42:j:93:ARG:HE	42:j:102:LEU:CD2	2.12	0.60
43:k:25:GLU:O	43:k:29:ARG:HG2	2.01	0.60
44:l:58:PRO:HA	44:l:90:GLY:N	2.16	0.60
45:m:51:LEU:CA	45:m:52:ARG:HE	2.13	0.60
46:n:34:LEU:HD12	46:n:38:GLY:HA2	1.83	0.60
50:r:5:VAL:C	50:r:6:LEU:HD22	2.27	0.60
52:t:19:VAL:CG2	52:t:23:ASN:HD22	2.14	0.60
52:t:46:GLY:O	52:t:48:THR:N	2.34	0.60
52:t:53:ASN:HB3	52:t:58:VAL:HG22	1.82	0.60
1:w:9:U:OP1	1:w:10:G:OP1	2.20	0.60
1:w:65:C:H2'	1:w:66:C:H6	1.65	0.60
1:w:82:G:N1	1:w:103:A:OP2	2.34	0.60
1:w:124:G:H2'	28:Z:19:ARG:NE	2.17	0.60
1:w:138:G:H3'	1:w:139:G:H5''	1.82	0.60
1:w:172:C:N4	1:w:173:G:O6	2.35	0.60
1:w:214:G:N2	1:w:216:A:C2	2.70	0.60
1:w:297:C:H3'	1:w:298:G:C5'	2.24	0.60
1:w:519:U:H2'	1:w:520:G:C1'	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:534:U:O2	17:O:49:HIS:CD2	2.54	0.60
1:w:576:U:O2'	1:w:577:G:C5'	2.36	0.60
1:w:842:G:H2'	1:w:843:G:C8	2.36	0.60
1:w:1111:A:H1'	1:w:1112:G:O2'	2.01	0.60
1:w:1221:C:OP2	1:w:1221:C:C6	2.54	0.60
1:w:1356:G:H2'	1:w:1357:U:O4'	2.02	0.60
1:w:1362:C:C6	1:w:1362:C:H5'	2.36	0.60
1:w:1441:G:H2'	1:w:1442:G:O4'	2.02	0.60
1:w:1753:G:H2'	1:w:1755:A:OP2	2.02	0.60
1:w:1818:U:O2'	4:B:155:LEU:HG	2.01	0.60
1:w:1927:A:H8	1:w:1927:A:OP1	1.83	0.60
1:w:1978:A:O2'	1:w:1979:C:H5'	2.02	0.60
1:w:2038:G:C5	1:w:2039:C:C4	2.90	0.60
1:w:2076:U:H5''	1:w:2238:G:N1	2.16	0.60
1:w:2345:G:O4'	1:w:2347:C:O4'	2.18	0.60
1:w:2555:U:C5	1:w:2556:C:N3	2.70	0.60
1:w:2610:C:OP2	1:w:2610:C:C6	2.55	0.60
1:w:2623:G:C5'	1:w:2826:A:O2'	2.41	0.60
1:w:2652:C:N4	1:w:2653:U:O4	2.35	0.60
1:w:712(B):A:H4'	1:w:712(B):A:OP1	2.01	0.60
1:w:2784:C:H2'	1:w:2785:C:H5''	1.83	0.60
1:w:2843:G:H3'	1:w:2844:G:C8	2.34	0.60
2:x:14:U:H4'	2:x:107:U:C2	2.29	0.60
2:x:117:G:C2	2:x:118:G:C5	2.90	0.60
3:A:44:VAL:HB	3:A:174:ALA:O	2.02	0.60
5:C:27:LEU:HD12	5:C:181:LEU:HD13	1.84	0.60
5:C:145:LYS:HA	5:C:148:GLY:HA2	1.84	0.60
6:D:130:LYS:C	6:D:134:PHE:CZ	2.79	0.60
8:F:23:ARG:HG2	8:F:36:PRO:HA	1.83	0.60
9:G:130:TYR:HB3	9:G:138:ILE:O	2.02	0.60
9:G:147:GLN:HG3	9:G:148:GLU:N	2.17	0.60
10:H:33:GLU:O	10:H:34:PRO:O	2.19	0.60
10:H:81:ASP:O	10:H:82:LYS:HB3	2.01	0.60
10:H:112:LYS:HZ1	10:H:115:ALA:HB3	1.63	0.60
11:I:52:VAL:HG13	11:I:56:ASP:HB2	1.84	0.60
13:K:83:MET:HG3	13:K:83:MET:O	2.02	0.60
15:M:17:ARG:CZ	15:M:89:ARG:HD3	2.31	0.60
18:P:25:LEU:HD12	18:P:25:LEU:N	2.16	0.60
18:P:40:LEU:O	18:P:40:LEU:HD22	2.02	0.60
22:T:76:LEU:HA	22:T:83:PRO:CB	2.31	0.60
25:W:12:GLU:C	25:W:14:ARG:H	2.08	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:50:GLY:O	27:Y:51:TYR:CB	2.49	0.60
31:y:15:G:OP1	31:y:1396:A:C2'	2.50	0.60
31:y:131:C:OP1	31:y:263:A:H1'	2.02	0.60
31:y:256:U:O2	31:y:270:A:H2	1.84	0.60
31:y:317:G:C6	31:y:318:G:C6	2.89	0.60
31:y:374:A:O2'	31:y:375:U:H5'	2.00	0.60
31:y:409:G:O6	31:y:410:G:C2	2.55	0.60
31:y:412:A:C4'	31:y:413:G:N7	2.65	0.60
31:y:563:A:H5'	31:y:566:G:N2	2.16	0.60
31:y:581:G:H5''	48:p:65:ARG:HE	1.66	0.60
31:y:621:A:O2'	31:y:622:A:C5'	2.49	0.60
31:y:858:G:H1	31:y:869:G:C2'	2.14	0.60
31:y:875:C:O2'	41:i:14:ARG:HD2	2.01	0.60
31:y:985:C:C2'	31:y:986:A:C5'	2.79	0.60
31:y:1107:C:OP1	36:d:173:VAL:HG22	2.01	0.60
31:y:1238:A:N7	31:y:1301:U:N3	2.49	0.60
31:y:1296:C:O4'	31:y:1302:U:O4	2.19	0.60
31:y:1310:G:O2'	31:y:1311:G:C5'	2.49	0.60
31:y:1436:U:H2'	31:y:1437:C:O4'	2.01	0.60
31:y:1439:C:C2	31:y:1440:C:C6	2.89	0.60
33:0:37:A:C8	33:0:38:A:C8	2.89	0.60
35:c:71:VAL:HB	35:c:93:VAL:HG13	1.84	0.60
36:d:40:ARG:CA	36:d:43:LEU:HD21	2.32	0.60
36:d:59:ARG:HH21	36:d:99:VAL:HG11	1.65	0.60
36:d:76:VAL:C	36:d:78:GLY:H	2.09	0.60
37:e:15:GLU:HG2	37:e:63:LYS:HB2	1.83	0.60
37:e:18:LYS:O	37:e:19:LEU:C	2.43	0.60
37:e:22:LYS:HB3	37:e:26:CYS:H	1.66	0.60
37:e:129:ASN:N	37:e:129:ASN:ND2	2.46	0.60
38:f:15:ARG:HA	38:f:28:PHE:CD2	2.37	0.60
39:g:14:LEU:HB2	39:g:18:GLN:HB3	1.83	0.60
42:j:42:ARG:HB3	42:j:74:ILE:HG13	1.84	0.60
42:j:83:ARG:HB2	42:j:83:ARG:HH11	1.66	0.60
44:l:22:HIS:HD2	44:l:23:ALA:N	2.00	0.60
46:n:5:ALA:HA	46:n:61:GLU:OE1	2.01	0.60
46:n:29:ARG:HH12	46:n:64:TRP:CD1	2.17	0.60
46:n:121:LYS:HA	46:n:121:LYS:CE	2.32	0.60
48:p:54:ARG:HD2	48:p:54:ARG:C	2.26	0.60
52:t:5:LEU:HD12	52:t:9:VAL:CA	2.30	0.60
53:u:80:ARG:N	53:u:80:ARG:HE	2.00	0.60
1:w:153:C:C2	1:w:154:G:C8	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:186:G:O2'	1:w:187:G:H5'	2.01	0.60
1:w:353:G:O2'	1:w:354:G:C5'	2.50	0.60
1:w:375:C:C2	1:w:376:C:C5	2.90	0.60
1:w:422:A:H2'	1:w:423:A:C8	2.37	0.60
1:w:478:A:O2'	21:S:63:LYS:HD3	2.01	0.60
1:w:519:U:C2'	1:w:520:G:O4'	2.45	0.60
1:w:683:C:C4'	28:Z:21:ARG:NH1	2.61	0.60
1:w:691:C:C1'	4:B:43:ARG:NH1	2.60	0.60
1:w:779:U:H2'	1:w:780:G:C8	2.36	0.60
1:w:921:G:H5''	1:w:2269:A:N7	2.17	0.60
1:w:941:A:C2	1:w:942:G:C8	2.90	0.60
1:w:1014:U:C2'	1:w:1015:G:O4'	2.44	0.60
1:w:1016:G:C6	1:w:1017:G:C6	2.89	0.60
1:w:1084:A:H2'	1:w:1085:A:C8	2.37	0.60
1:w:1101:U:C4	1:w:1102:C:C5	2.90	0.60
1:w:1181:C:C3'	1:w:1182:A:C8	2.85	0.60
1:w:1294:U:C6	1:w:1294:U:O5'	2.55	0.60
1:w:1303:G:N1	1:w:1625:C:N3	2.45	0.60
1:w:1306:C:H2'	1:w:1307:A:C8	2.34	0.60
1:w:1348:G:C6	1:w:1349:A:N6	2.70	0.60
1:w:1545:A:C3'	1:w:1546:A:C8	2.80	0.60
1:w:1614:A:N6	19:Q:91:GLY:N	2.46	0.60
1:w:1623:G:C5	1:w:1624:G:C8	2.90	0.60
1:w:1718:G:C2	1:w:1725:G:C5	2.90	0.60
1:w:1832:C:OP1	31:y:899:C:C2'	2.44	0.60
1:w:1843:C:C6	1:w:1843:C:H5''	2.37	0.60
1:w:1987:G:C8	1:w:1987:G:C5'	2.80	0.60
1:w:2061:G:H8	1:w:2501:C:H1'	1.63	0.60
1:w:2077:A:OP2	1:w:2238:G:O6	2.18	0.60
1:w:2112:G:H3'	1:w:2113:U:H5	1.65	0.60
1:w:2158:A:H2	1:w:2159:G:H1'	1.61	0.60
1:w:2212:A:N3	1:w:2212:A:H2'	2.15	0.60
1:w:2356:C:O3'	23:U:18:ALA:HB2	2.02	0.60
1:w:2419:U:C4	29:a:31:HIS:CB	2.80	0.60
1:w:2443:C:N4	1:w:2444:G:O6	2.35	0.60
1:w:2466:C:C5'	30:b:5:ALA:CB	2.78	0.60
1:w:2580:U:C2'	1:w:2581:G:O5'	2.49	0.60
1:w:2728:U:C2'	1:w:2729:G:H5'	2.31	0.60
1:w:2756:U:O4'	1:w:2757:A:C8	2.54	0.60
2:x:11:C:OP1	23:U:72:ARG:CB	2.50	0.60
3:A:48:LEU:HB2	3:A:209:PHE:O	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:24:ILE:HG23	4:B:25:THR:O	2.01	0.60
6:D:87:PRO:O	6:D:88:LYS:CB	2.49	0.60
6:D:196:VAL:O	6:D:197:PHE:C	2.44	0.60
8:F:11:VAL:N	8:F:12:PRO:CD	2.65	0.60
10:H:25:LYS:CG	18:P:13:ARG:HH21	2.12	0.60
10:H:80:ALA:CB	10:H:146:TYR:O	2.47	0.60
13:K:45:GLN:O	13:K:47:ILE:N	2.34	0.60
14:L:79:LEU:C	14:L:80:PHE:CD2	2.78	0.60
15:M:10:ARG:O	15:M:12:PHE:CD1	2.55	0.60
15:M:13:ARG:HG3	15:M:91:PRO:N	2.17	0.60
16:N:29:ARG:HG2	16:N:86:ILE:H	1.62	0.60
17:O:40:PHE:CA	18:P:78:LYS:CG	2.77	0.60
17:O:88:ILE:CG1	18:P:53:GLU:H	2.11	0.60
18:P:75:PHE:O	18:P:85:LYS:HG3	2.02	0.60
21:S:75:ILE:HG23	21:S:76:CYS:N	2.14	0.60
22:T:33:LEU:HD12	22:T:33:LEU:C	2.26	0.60
22:T:89:PHE:HD2	22:T:90:VAL:O	1.84	0.60
22:T:150:LEU:HD22	22:T:154:ASP:HB2	1.82	0.60
26:X:13:ILE:HD13	26:X:13:ILE:N	2.13	0.60
26:X:16:PRO:HD2	26:X:19:GLN:OE1	2.02	0.60
26:X:31:LEU:O	26:X:32:GLN:HB2	2.01	0.60
29:a:7:HIS:CE1	29:a:9:GLY:HA3	2.35	0.60
29:a:44:LYS:CG	29:a:45:GLY:N	2.64	0.60
31:y:118:U:C4	31:y:288:A:C6	2.88	0.60
31:y:135:C:O2'	31:y:136:C:H5''	2.00	0.60
31:y:355:C:C4	31:y:356:A:N7	2.70	0.60
31:y:385:C:O5'	31:y:385:C:H6	1.84	0.60
31:y:404:U:C6	37:e:2:GLY:HA3	2.37	0.60
31:y:454:C:C5	31:y:455:C:C6	2.89	0.60
31:y:545:C:H5''	37:e:72:GLU:CD	2.27	0.60
31:y:815:A:C1'	31:y:817:C:C5	2.84	0.60
31:y:828:A:H2'	31:y:829:G:O4'	2.02	0.60
31:y:848:C:H2'	31:y:849:C:H6	1.67	0.60
31:y:853:G:C2	31:y:854:G:C8	2.90	0.60
31:y:855:G:C6	31:y:856:C:N4	2.70	0.60
31:y:950:U:O2'	31:y:951:G:H5'	2.00	0.60
31:y:993:G:N3	31:y:993:G:C2'	2.54	0.60
31:y:1035:A:H8	31:y:1035:A:O5'	1.84	0.60
31:y:1053:G:C4'	31:y:1054:C:H5''	2.31	0.60
31:y:1078:U:H3'	31:y:1078:U:C6	2.37	0.60
31:y:1084:G:H8	31:y:1084:G:O5'	1.85	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1252:A:C2'	31:y:1253:G:C4'	2.75	0.60
31:y:1270:C:H2'	31:y:1271:G:H5'	1.84	0.60
31:y:1276:G:N3	31:y:1282:C:H2'	2.16	0.60
31:y:1276:G:C1'	31:y:1282:C:H1'	2.31	0.60
31:y:1281:U:OP1	31:y:1282:C:C4	2.54	0.60
31:y:1374:A:H4'	31:y:1374:A:OP1	2.02	0.60
31:y:1394:A:N7	31:y:1501:C:O3'	2.35	0.60
31:y:1504:G:OP1	31:y:1507:A:C3'	2.49	0.60
35:c:74:LYS:HG3	35:c:76:GLN:H	1.66	0.60
35:c:114:ARG:HG2	35:c:118:LEU:HD21	1.82	0.60
36:d:93:LYS:HD3	36:d:93:LYS:C	2.26	0.60
36:d:126:ARG:O	36:d:127:ARG:HB2	2.02	0.60
36:d:175:LEU:HD22	36:d:175:LEU:C	2.27	0.60
36:d:186:PHE:CE2	36:d:199:LYS:HD2	2.35	0.60
37:e:11:LEU:O	37:e:12:CYS:C	2.45	0.60
37:e:26:CYS:CA	37:e:31:CYS:HB2	2.31	0.60
37:e:76:ARG:HD2	37:e:79:PHE:HB2	1.83	0.60
37:e:187:ARG:NH1	37:e:187:ARG:HG3	2.17	0.60
41:i:51:VAL:O	41:i:58:TYR:N	2.35	0.60
49:q:17:TYR:HB2	49:q:39:TYR:HD2	1.67	0.60
50:r:100:LYS:HD2	50:r:101:ARG:CG	2.32	0.60
1:w:19:C:O2	1:w:20:C:H5'	2.02	0.60
1:w:90:U:C4	1:w:91:A:N7	2.69	0.60
1:w:181:A:C3'	1:w:182:A:H8	2.15	0.60
1:w:190:A:C6	1:w:191:A:C6	2.89	0.60
1:w:533:G:C5	1:w:561:G:N2	2.69	0.60
1:w:726:G:O2'	1:w:727:A:C8	2.52	0.60
1:w:768:G:C2	1:w:769:G:C4	2.90	0.60
1:w:800:A:C2	1:w:802:A:C8	2.83	0.60
1:w:802:A:O5'	1:w:803:U:C5	2.55	0.60
1:w:1132:A:H2'	1:w:1133:U:H6	1.63	0.60
1:w:1213:A:H2'	1:w:1214:A:C4'	2.30	0.60
1:w:1217:C:O2'	1:w:1218:C:H5'	2.02	0.60
1:w:1272:A:H5'	1:w:1646:C:C2	2.37	0.60
1:w:1756:G:O2'	1:w:1758:G:C4	2.52	0.60
1:w:1818:U:H3'	4:B:155:LEU:HD11	1.84	0.60
1:w:1845:G:C3'	1:w:1846:G:H8	2.15	0.60
1:w:1994:C:P	5:C:127:ASP:HB2	2.42	0.60
1:w:2056:G:H22	27:Y:5:PRO:HA	1.66	0.60
1:w:2355:C:H1'	23:U:39:ARG:HH21	1.67	0.60
1:w:2452:C:O5'	1:w:2452:C:H6	1.85	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2465:C:H4'	30:b:4:ARG:NH2	2.16	0.60
1:w:2488:A:N6	1:w:2489:G:C6	2.69	0.60
1:w:2639:A:H1'	1:w:2778:A:N1	2.16	0.60
1:w:2744:G:H21	8:F:143:GLN:HB3	1.67	0.60
3:A:28:HIS:C	3:A:30:VAL:N	2.58	0.60
4:B:79:VAL:HG23	4:B:95:LEU:HD13	1.81	0.60
5:C:20:ALA:HB3	11:I:73:ASP:HB3	1.78	0.60
5:C:47:VAL:HG12	5:C:48:GLN:H	1.67	0.60
5:C:110:GLY:HA2	5:C:161:GLY:CA	2.31	0.60
5:C:186:GLY:O	5:C:187:ALA:CB	2.49	0.60
6:D:26:HIS:O	6:D:30:GLU:HG3	2.01	0.60
6:D:60:TRP:HB3	6:D:61:PRO:CD	2.32	0.60
7:E:19:LEU:HB3	7:E:25:TYR:CE2	2.37	0.60
7:E:139:LEU:CD2	46:n:3:ARG:HH22	2.15	0.60
12:J:105:LEU:C	12:J:106:LEU:HG	2.26	0.60
13:K:24:GLY:O	13:K:25:ASP:CB	2.49	0.60
14:L:1:MET:O	14:L:3:HIS:N	2.35	0.60
15:M:49:VAL:HG23	15:M:50:SER:H	1.67	0.60
15:M:64:GLU:O	15:M:67:ARG:CG	2.42	0.60
16:N:107:ASP:C	16:N:111:ARG:HG2	2.27	0.60
16:N:113:LYS:HE3	16:N:113:LYS:CA	2.29	0.60
17:O:44:ASN:OD1	18:P:78:LYS:HD2	2.02	0.60
18:P:24:LYS:HD3	18:P:24:LYS:C	2.26	0.60
18:P:38:LEU:HD12	18:P:55:ALA:HA	1.84	0.60
18:P:39:LEU:HD12	18:P:39:LEU:N	2.16	0.60
19:Q:14:PRO:O	19:Q:17:VAL:HG22	2.01	0.60
19:Q:72:LYS:HE3	19:Q:107:LEU:O	2.01	0.60
22:T:16:SER:C	22:T:19:ARG:HD3	2.26	0.60
22:T:115:GLY:HA2	22:T:176:PRO:HB3	1.82	0.60
23:U:50:ASN:ND2	23:U:65:GLY:HA3	2.16	0.60
24:V:69:LYS:O	24:V:70:VAL:O	2.20	0.60
31:y:41:G:C6	31:y:402:G:O6	2.55	0.60
31:y:59:A:H1'	31:y:354:G:H21	1.66	0.60
31:y:267:C:C2	31:y:268:C:C6	2.89	0.60
31:y:426:G:N1	31:y:427:U:C4	2.70	0.60
31:y:542:G:N1	31:y:543:C:C4	2.70	0.60
31:y:667:G:OP2	31:y:732:C:H4'	2.02	0.60
31:y:667:G:C6	31:y:668:G:C6	2.90	0.60
31:y:718:G:H8	31:y:718:G:OP2	1.85	0.60
31:y:739:C:O2'	48:p:42:HIS:HD2	1.84	0.60
31:y:809:G:O2'	31:y:810:C:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:976:G:OP2	47:o:31:ARG:O	2.20	0.60
31:y:1058:G:H5''	36:d:199:LYS:HZ2	1.67	0.60
31:y:1092:A:C1'	31:y:1183:A:H62	2.13	0.60
31:y:1159:U:C5	31:y:1182:G:O2'	2.54	0.60
31:y:1188:A:C8	31:y:1189:C:C5	2.90	0.60
31:y:1250:A:H4'	42:j:67:GLY:O	2.02	0.60
31:y:1312:G:C2	31:y:1313:U:C1'	2.84	0.60
31:y:1315:U:C4	31:y:1316:G:C6	2.90	0.60
31:y:1346:A:P	42:j:120:ARG:HE	2.23	0.60
31:y:1507:A:H2'	31:y:1508:G:O4'	2.02	0.60
32:z:54:5MU:C2'	32:z:55:PSU:H5'	2.32	0.60
32:z:66:U:C5	32:z:67:C:C5	2.89	0.60
33:0:8:U:H2'	33:0:9:A:H5''	1.84	0.60
33:0:29:A:H2'	33:0:30:G:C8	2.37	0.60
35:c:108:ILE:O	35:c:110:GLN:N	2.35	0.60
35:c:235:SER:O	35:c:239:VAL:HB	2.01	0.60
37:e:30:LYS:C	37:e:32:ALA:H	2.10	0.60
37:e:59:ARG:O	37:e:62:GLN:HG2	2.02	0.60
37:e:61:LYS:HZ2	37:e:62:GLN:HA	1.64	0.60
39:g:37:VAL:HG12	39:g:38:GLU:N	2.16	0.60
40:h:79:ARG:O	40:h:80:VAL:CG2	2.47	0.60
40:h:121:ALA:O	40:h:124:LEU:HG	2.02	0.60
40:h:148:ASN:HB3	40:h:151:TYR:OH	2.02	0.60
44:l:34:ASP:HB2	44:l:35:PRO:CD	2.32	0.60
48:p:56:LEU:O	48:p:59:MET:HB2	2.00	0.60
50:r:31:LEU:O	50:r:32:TYR:CB	2.47	0.60
53:u:36:LEU:HD12	53:u:55:ILE:HD11	1.83	0.60
53:u:81:LYS:HA	53:u:85:MET:CB	2.32	0.60
53:u:98:PRO:O	53:u:99:LEU:HB2	2.02	0.60
1:w:14:A:N3	1:w:14:A:C2'	2.65	0.60
1:w:84:A:C2'	1:w:98:G:N2	2.65	0.60
1:w:126:A:N9	28:Z:18:PHE:CE2	2.70	0.60
1:w:154:G:C4	1:w:155:C:C6	2.89	0.60
1:w:213:A:O5'	1:w:213:A:C8	2.53	0.60
1:w:270(H):C:C2	1:w:270(I):C:C5	2.90	0.60
1:w:290:G:N2	1:w:350:U:O2'	2.33	0.60
1:w:385:C:O2	1:w:390:A:C2	2.54	0.60
1:w:536:A:C2	1:w:558:G:C2	2.90	0.60
1:w:812:C:C5	12:J:27:HIS:HD2	2.20	0.60
1:w:855:G:C4	1:w:856:C:C6	2.90	0.60
1:w:981:A:H2	1:w:2027:G:N2	1.97	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:144(B):A:H5'	1:w:1461:G:P	2.42	0.60
1:w:1624:G:C4	1:w:1625:C:C5	2.89	0.60
1:w:1753:G:C4	1:w:1755:A:P	2.95	0.60
1:w:1837:C:C1'	1:w:1928:A:C1'	2.77	0.60
1:w:1989:G:C2'	1:w:1990:C:C5'	2.69	0.60
1:w:1992:G:C8	1:w:1992:G:O5'	2.55	0.60
1:w:2041:U:C6	1:w:2041:U:OP2	2.55	0.60
1:w:2095:C:H2'	1:w:2096:U:H1'	1.84	0.60
1:w:2179:C:H2'	1:w:2180:U:C6	2.37	0.60
1:w:2304:G:O2'	7:E:132:ASN:OD1	2.16	0.60
1:w:2528:U:O2'	1:w:2529:G:H2'	2.02	0.60
1:w:2556:C:N1	1:w:2557:G:C8	2.69	0.60
1:w:2597:G:H2'	1:w:2598:A:C8	2.36	0.60
1:w:2736:G:C8	1:w:2736:G:C4'	2.85	0.60
1:w:2764:A:N6	1:w:2766:G:C2	2.70	0.60
1:w:2824:C:OP2	1:w:2824:C:H5	1.83	0.60
2:x:57:A:C2	2:x:58:A:N9	2.70	0.60
4:B:4:LYS:CE	4:B:20:ASP:HA	2.30	0.60
4:B:167:GLY:O	4:B:174:ILE:HG13	2.02	0.60
6:D:27:LEU:CD2	6:D:28:LEU:HD23	2.31	0.60
6:D:35:GLN:HE22	6:D:39:ARG:NH2	1.99	0.60
6:D:120:LEU:O	6:D:120:LEU:HD23	2.01	0.60
7:E:21:ARG:C	7:E:23:PHE:H	2.09	0.60
7:E:75:LYS:O	7:E:86:MET:HE3	2.00	0.60
8:F:141:VAL:CA	8:F:144:VAL:HG12	2.32	0.60
9:G:109:ILE:C	9:G:111:PRO:HD3	2.26	0.60
9:G:131:LYS:O	9:G:131:LYS:CG	2.50	0.60
10:H:78:VAL:CG1	10:H:146:TYR:HE2	2.11	0.60
10:H:107:LYS:O	10:H:108:ILE:HG12	2.01	0.60
11:I:26:LYS:HB3	11:I:30:ALA:HB2	1.84	0.60
12:J:84:ASN:OD1	12:J:116:GLY:HA3	2.02	0.60
15:M:13:ARG:NE	15:M:90:GLY:O	2.34	0.60
17:O:93:LYS:CD	17:O:93:LYS:N	2.46	0.60
21:S:19:LYS:HE2	21:S:40:GLU:HA	1.83	0.60
23:U:46:LYS:O	23:U:48:GLY:N	2.35	0.60
24:V:12:PRO:HD3	24:V:62:VAL:HA	1.83	0.60
25:W:4:SER:O	25:W:7:ARG:HG2	2.02	0.60
26:X:21:ALA:HA	26:X:24:LYS:HE2	1.83	0.60
29:a:61:LEU:O	29:a:64:TYR:CE1	2.55	0.60
30:b:25:VAL:O	30:b:26:ILE:HG13	2.02	0.60
31:y:38:G:N2	31:y:397:A:C4	2.70	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:238:G:H3'	31:y:239:U:C6	2.37	0.60
31:y:360:A:C2'	31:y:361:G:O5'	2.50	0.60
31:y:511:C:O2'	31:y:512:U:H6	1.85	0.60
31:y:518:C:C6	31:y:530:G:H5'	2.37	0.60
31:y:571:U:O2	31:y:917:G:O2'	2.20	0.60
31:y:750:G:N2	48:p:23:GLY:O	2.34	0.60
31:y:857:C:C2'	31:y:858:G:C8	2.84	0.60
31:y:930:C:C2	31:y:931:C:C6	2.90	0.60
31:y:1165:C:O5'	31:y:1165:C:C6	2.54	0.60
31:y:1176:A:C6	31:y:1177:G:C2	2.90	0.60
31:y:1291:G:C6	31:y:1292:U:N3	2.70	0.60
31:y:1436:U:H3'	31:y:1437:C:C6	2.37	0.60
35:c:8:LYS:HE3	35:c:10:LEU:CG	2.31	0.60
35:c:145:LEU:O	35:c:146:GLN:C	2.44	0.60
36:d:118:GLN:O	36:d:122:GLU:HG3	2.01	0.60
36:d:146:ALA:HA	36:d:204:LEU:HD21	1.83	0.60
41:i:52:ASP:HA	41:i:57:PRO:CA	2.32	0.60
44:l:73:MET:HE2	44:l:103:LEU:HD23	1.84	0.60
46:n:47:ASP:O	46:n:48:LEU:C	2.45	0.60
49:q:54:GLU:O	49:q:56:ALA:N	2.34	0.60
50:r:9:VAL:N	50:r:21:VAL:HG13	2.13	0.60
50:r:57:VAL:HG13	50:r:58:GLU:H	1.67	0.60
52:t:41:VAL:HG22	52:t:44:MET:SD	2.42	0.60
1:w:65:C:OP2	20:R:69:TYR:O	2.19	0.59
1:w:106:C:C1'	1:w:293:U:H4'	2.30	0.59
1:w:215:G:N2	1:w:432:A:C2	2.69	0.59
1:w:216:A:O2'	1:w:217:G:H5'	2.01	0.59
1:w:270(Z):G:C8	1:w:270(Z):G:OP2	2.54	0.59
1:w:528:A:C2	1:w:2043:C:O5'	2.55	0.59
1:w:803:U:H3'	1:w:804:A:H8	1.61	0.59
1:w:919:G:N2	1:w:2268:A:N7	2.50	0.59
1:w:974(B):C:H2'	1:w:974(B):C:O2	2.02	0.59
1:w:1041:C:C4	1:w:1115:G:N2	2.70	0.59
1:w:1174:A:C8	1:w:1176:G:C6	2.90	0.59
1:w:1252:G:OP2	17:O:10:ARG:CD	2.50	0.59
1:w:1332:G:N1	1:w:1609:A:C2	2.70	0.59
1:w:1344:G:C4'	1:w:1384:A:H2'	2.31	0.59
1:w:1542:G:C2	1:w:1543:A:N6	2.70	0.59
1:w:1567:A:OP1	4:B:60:ARG:NH1	2.34	0.59
1:w:1568:G:C8	1:w:1568:G:O5'	2.55	0.59
1:w:1653:G:N1	14:L:10:LEU:HA	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1712:C:N4	1:w:1747:G:N1	2.49	0.59
1:w:1902:C:H3'	1:w:1903:G:H5''	1.84	0.59
1:w:2488:A:C6	1:w:2489:G:N1	2.69	0.59
1:w:2563:U:C5'	11:I:27:GLY:O	2.49	0.59
1:w:2566:A:C6	11:I:28:SER:HB2	2.35	0.59
1:w:2601:C:O2'	1:w:2602:A:H5'	2.02	0.59
1:w:2610:C:O2'	1:w:2611:U:P	2.60	0.59
1:w:2668:G:N1	1:w:2669:G:C5	2.70	0.59
1:w:2731:G:C2	1:w:2732:G:N1	2.70	0.59
1:w:2822:G:O2'	1:w:2823:A:C3'	2.50	0.59
1:w:2832:U:O2'	1:w:2833:G:C5'	2.50	0.59
3:A:48:LEU:HD12	3:A:209:PHE:HD1	1.66	0.59
4:B:97:TYR:H	4:B:102:LYS:HA	1.66	0.59
5:C:51:PHE:O	5:C:52:LEU:C	2.45	0.59
6:D:52:VAL:O	6:D:53:ALA:HB3	2.02	0.59
6:D:105:LEU:HD11	6:D:109:VAL:CG2	2.32	0.59
6:D:147:GLU:N	6:D:167:TRP:HZ2	1.99	0.59
7:E:73:ALA:H	7:E:87:PRO:HA	1.66	0.59
7:E:166:ASP:HA	7:E:169:ALA:CB	2.32	0.59
8:F:154:PRO:O	8:F:155:SER:HB2	2.01	0.59
9:G:81:VAL:HG23	9:G:82:ARG:N	2.17	0.59
9:G:131:LYS:HE2	9:G:134:PRO:N	2.16	0.59
13:K:36:ALA:N	13:K:103:MET:HE1	2.16	0.59
16:N:72:VAL:HG12	16:N:74:ARG:HG2	1.83	0.59
17:O:97:ASP:O	17:O:100:VAL:N	2.28	0.59
19:Q:48:ALA:HA	19:Q:51:LEU:HD11	1.84	0.59
19:Q:85:VAL:HG13	19:Q:95:ILE:CG1	2.31	0.59
21:S:23:ARG:HG2	21:S:24:VAL:H	1.65	0.59
21:S:23:ARG:CG	21:S:24:VAL:H	2.15	0.59
21:S:75:ILE:CG2	21:S:76:CYS:H	2.09	0.59
21:S:96:ILE:HD13	21:S:96:ILE:C	2.27	0.59
22:T:146:ILE:CB	22:T:176:PRO:HD3	2.32	0.59
25:W:26:ARG:O	25:W:29:LYS:HG3	2.02	0.59
25:W:46:GLN:O	25:W:48:HIS:N	2.35	0.59
31:y:279:A:C8	50:r:95:TYR:CE1	2.90	0.59
31:y:283:C:H2'	31:y:284:G:C5'	2.30	0.59
31:y:335:C:H2'	31:y:336:C:C5	2.37	0.59
31:y:436:C:C6	31:y:436:C:C5'	2.78	0.59
31:y:517:G:H22	31:y:532:A:C3'	2.14	0.59
31:y:569:C:N3	31:y:575:G:N7	2.50	0.59
31:y:571:U:H3'	31:y:572:A:H5'	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:815:A:C1'	31:y:817:C:N4	2.65	0.59
31:y:880:C:C4	31:y:881:G:N7	2.69	0.59
31:y:880:C:OP2	45:m:5:THR:OG1	2.09	0.59
31:y:903:G:O2'	31:y:904:C:H5'	2.02	0.59
31:y:1061:G:C2'	31:y:1062:U:C6	2.77	0.59
31:y:1109:C:C2	31:y:1110:A:H1'	2.37	0.59
31:y:1207:2MG:C3'	31:y:1208:C:H5	2.13	0.59
31:y:1224:G:H22	31:y:136(B):C:N4	1.99	0.59
33:0:10:G:C6	33:0:26:G:C6	2.90	0.59
33:0:14:A:H2'	33:0:14:A:N3	2.16	0.59
33:0:27:C:H2'	33:0:28:C:C5	2.35	0.59
35:c:71:VAL:O	35:c:164:VAL:HG23	2.01	0.59
35:c:74:LYS:HZ1	35:c:76:GLN:HG2	1.67	0.59
36:d:172:ARG:NH1	36:d:172:ARG:HB3	2.16	0.59
37:e:126:ILE:HD12	37:e:126:ILE:C	2.27	0.59
38:f:53:LEU:HA	38:f:56:GLN:CG	2.32	0.59
39:g:11:ASN:HB3	39:g:86:ARG:NH2	2.17	0.59
39:g:20:ALA:O	39:g:23:LYS:HB3	2.02	0.59
40:h:88:PRO:HD3	40:h:151:TYR:HD1	1.68	0.59
41:i:17:THR:CG2	41:i:18:ARG:N	2.65	0.59
42:j:27:THR:HA	42:j:31:GLN:O	2.02	0.59
43:k:12:ASP:O	43:k:15:THR:HB	2.02	0.59
46:n:52:GLU:CA	46:n:55:ARG:HE	2.10	0.59
53:u:39:LYS:HD2	53:u:42:GLN:NE2	2.17	0.59
1:w:12:U:O4	1:w:2627:G:H5''	2.02	0.59
1:w:161:U:H2'	1:w:165:U:H3	1.67	0.59
1:w:270(B):A:N6	1:w:270(Z):G:C1'	2.55	0.59
1:w:591:C:H2'	29:a:2:PRO:HB3	1.84	0.59
1:w:1049:C:H2'	1:w:1049:C:O2	2.02	0.59
1:w:1093:G:O5'	1:w:1093:G:H8	1.85	0.59
1:w:1158:C:H6	1:w:1158:C:O5'	1.85	0.59
1:w:1293:C:O2'	1:w:1294:U:H5'	2.02	0.59
1:w:1435:G:H5''	1:w:1436:G:OP2	2.02	0.59
1:w:1527:G:C2	1:w:1543:A:C6	2.90	0.59
1:w:1580:A:C8	1:w:1580:A:O5'	2.55	0.59
1:w:1613:G:H1	1:w:1617:C:HO2'	1.33	0.59
1:w:1655:A:H8	1:w:1655:A:OP2	1.83	0.59
1:w:1764:G:C6	1:w:1989:G:N2	2.70	0.59
1:w:1886:C:C2	1:w:1887:C:C6	2.90	0.59
1:w:1937:A:O2'	1:w:1938:A:OP1	2.20	0.59
1:w:2008:C:H2'	1:w:2009:G:H8	1.64	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2079:U:O5'	1:w:2079:U:C6	2.54	0.59
1:w:2361:A:OP1	1:w:2361:A:C4'	2.49	0.59
1:w:2678:C:C2	1:w:2679:A:N7	2.70	0.59
1:w:2809:A:H8	1:w:2809:A:O5'	1.84	0.59
2:x:88:C:C3'	2:x:89(A):G:C8	2.84	0.59
3:A:224:ARG:HH21	3:A:225:ILE:H	1.49	0.59
6:D:48:THR:HA	6:D:52:VAL:HB	1.83	0.59
6:D:119:LEU:CA	6:D:188:VAL:HA	2.30	0.59
7:E:131:TYR:CD2	7:E:132:ASN:N	2.66	0.59
8:F:89:ILE:H	8:F:129:THR:HG22	1.66	0.59
10:H:63:PRO:C	10:H:65:TRP:N	2.59	0.59
10:H:110:LEU:C	10:H:112:LYS:N	2.60	0.59
12:J:53:GLY:O	12:J:55:ARG:HG2	2.00	0.59
13:K:124:LYS:HE2	13:K:124:LYS:C	2.26	0.59
14:L:18:LEU:CA	14:L:21:TYR:CE1	2.85	0.59
15:M:38:GLN:O	15:M:38:GLN:HG2	2.02	0.59
15:M:94:TYR:CE2	15:M:99:LYS:HA	2.34	0.59
16:N:47:GLY:C	16:N:63:VAL:HB	2.27	0.59
16:N:50:ILE:HG13	16:N:99:LEU:CB	2.32	0.59
16:N:92:GLY:HA3	16:N:114:LEU:CG	2.31	0.59
19:Q:86:LEU:O	19:Q:94:ASP:HB2	2.02	0.59
21:S:2:ARG:NH2	21:S:4:LYS:HE2	2.16	0.59
22:T:4:ARG:CA	22:T:58:VAL:HB	2.28	0.59
23:U:51:VAL:HG22	23:U:81:VAL:CG2	2.32	0.59
24:V:27:GLU:CG	33:0:74:C:H4'	2.31	0.59
25:W:54:LYS:C	25:W:55:ARG:CG	2.74	0.59
29:a:9:GLY:HA2	29:a:12:LYS:CD	2.32	0.59
30:b:33:LYS:NZ	30:b:35:ARG:HH21	1.99	0.59
31:y:56:U:H2'	31:y:57:G:C8	2.37	0.59
31:y:96:G:C6	31:y:97:U:C4	2.90	0.59
31:y:129(A):U:H2'	31:y:131:C:H5	1.67	0.59
31:y:173:U:C6	31:y:198:G:O2'	2.55	0.59
31:y:186(G):C:C2	31:y:191(B):G:N2	2.70	0.59
31:y:258:G:O6	31:y:259:G:C6	2.55	0.59
31:y:438:G:H4'	37:e:123:HIS:CE1	2.37	0.59
31:y:507:C:OP2	31:y:508:C:C2'	2.50	0.59
31:y:552:U:C4'	45:m:85:ARG:NH1	2.65	0.59
31:y:574:A:N3	31:y:882:C:O2	2.35	0.59
31:y:580:U:C2	31:y:581:G:N7	2.70	0.59
31:y:597:G:O2'	41:i:94:TYR:HD1	1.85	0.59
31:y:667:G:C6	31:y:668:G:O6	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:930:C:C4	31:y:931:C:C5	2.89	0.59
31:y:937:A:C5	31:y:938:A:C8	2.90	0.59
31:y:1125:U:N3	31:y:1127:G:C8	2.71	0.59
31:y:1237:C:OP1	31:y:1238:A:C1'	2.50	0.59
31:y:1264:C:H2'	31:y:1265:G:H8	1.68	0.59
31:y:1528:U:H6	31:y:1528:U:H5''	1.67	0.59
35:c:51:LEU:O	35:c:51:LEU:HD22	2.02	0.59
36:d:104:GLN:HG2	36:d:105:GLU:N	2.09	0.59
36:d:124:ILE:HD12	36:d:128:PHE:O	2.02	0.59
37:e:22:LYS:CB	37:e:26:CYS:SG	2.84	0.59
38:f:7:GLU:HB3	38:f:112:LEU:HD11	1.83	0.59
38:f:143:ARG:CG	38:f:147:ASP:CG	2.75	0.59
42:j:74:ILE:HA	42:j:77:ILE:HD12	1.84	0.59
43:k:33:GLN:CD	43:k:33:GLN:H	2.11	0.59
45:m:8:GLN:N	45:m:11:ARG:HB3	2.17	0.59
46:n:12:ASN:C	46:n:13:LYS:HG3	2.27	0.59
46:n:16:ASP:OD2	46:n:41:PRO:HB3	2.02	0.59
46:n:56:LEU:CA	46:n:59:TYR:HB2	2.32	0.59
46:n:62:ASN:O	46:n:63:THR:CG2	2.49	0.59
47:o:24:CYS:HB3	47:o:29:ARG:N	2.17	0.59
53:u:17:ARG:O	53:u:20:LEU:HG	2.02	0.59
1:w:10:G:C2	1:w:2629:A:C6	2.90	0.59
1:w:123:G:C5	1:w:124:G:C4	2.89	0.59
1:w:137(A):C:C2	1:w:137(B):G:C8	2.91	0.59
1:w:274:G:H2'	1:w:274:G:N3	2.16	0.59
1:w:584:C:C4	1:w:585:G:O6	2.55	0.59
1:w:625:G:C5	1:w:626:U:C5	2.89	0.59
1:w:682:G:C2	1:w:796:C:C2	2.90	0.59
1:w:694:U:H2'	1:w:695:G:H8	1.67	0.59
1:w:752:A:C8	1:w:1781:C:C5	2.90	0.59
1:w:890:A:C6	1:w:892:G:C4	2.90	0.59
1:w:1140:C:C5'	10:H:48:ARG:HD3	2.33	0.59
1:w:1751:C:C2'	1:w:1752:C:C6	2.86	0.59
1:w:1773:A:C5	1:w:1774:C:C5	2.90	0.59
1:w:1818:U:H2'	4:B:155:LEU:HD21	1.83	0.59
1:w:1910:G:N1	1:w:1911:U:O2	2.35	0.59
1:w:1932:A:N6	1:w:1968:G:H21	1.96	0.59
1:w:2050:C:H5''	5:C:137:HIS:HE1	1.62	0.59
1:w:2077:A:H1'	1:w:2435:A:H5''	1.85	0.59
1:w:2079:U:C2	1:w:2241:A:H2	2.20	0.59
1:w:2239:G:C5	1:w:2240:C:N4	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2309:A:H8	1:w:2310:A:C8	2.20	0.59
1:w:2333:A:H3'	1:w:2333:A:OP1	2.01	0.59
1:w:2485:G:O2'	13:K:126:PRO:CB	2.50	0.59
1:w:2603:G:C2'	1:w:2604:U:H5'	2.32	0.59
1:w:2803:C:C2'	1:w:2804:C:H5''	2.32	0.59
2:x:104:A:OP1	22:T:72:ARG:NH2	2.35	0.59
2:x:113:C:O2	15:M:47:THR:CG2	2.51	0.59
4:B:57:GLY:H	4:B:216:GLY:HA2	1.67	0.59
5:C:44:TYR:N	5:C:44:TYR:CD1	2.70	0.59
5:C:63:LEU:HD23	5:C:65:GLY:CA	2.33	0.59
8:F:17:VAL:HG21	8:F:44:VAL:HG22	1.82	0.59
10:H:35:ARG:HD2	10:H:72:GLY:O	2.02	0.59
10:H:149:PRO:O	10:H:150:ASP:HB2	2.02	0.59
11:I:35:VAL:HA	11:I:62:VAL:HB	1.84	0.59
12:J:90:ARG:HE	12:J:91:PHE:H	1.51	0.59
14:L:60:LEU:HD13	14:L:61:HIS:H	1.66	0.59
15:M:71:ARG:CG	15:M:104:GLY:C	2.76	0.59
16:N:16:ARG:O	16:N:79:HIS:NE2	2.34	0.59
20:R:54:VAL:CG2	20:R:77:LYS:HD3	2.21	0.59
22:T:98:MET:CG	22:T:99:TYR:H	2.13	0.59
23:U:20:ARG:HG2	23:U:20:ARG:HH11	1.67	0.59
23:U:34:GLY:CA	23:U:60:PHE:CE2	2.77	0.59
23:U:62:LEU:CD1	23:U:63:VAL:HG23	2.31	0.59
23:U:79:VAL:HG23	23:U:79:VAL:O	2.00	0.59
24:V:10:LYS:HD2	24:V:14:VAL:HA	1.83	0.59
29:a:39:LYS:HG2	29:a:40:GLU:N	2.17	0.59
29:a:50:LEU:O	29:a:51:ALA:HB2	2.02	0.59
31:y:102:G:O2'	31:y:151:A:N3	2.36	0.59
31:y:147:G:C2'	31:y:148:G:C8	2.85	0.59
31:y:186(A):C:H2'	31:y:186(B):C:H6	1.67	0.59
31:y:248:C:C5'	31:y:282:A:C2	2.85	0.59
31:y:423:G:H2'	31:y:424:G:C5'	2.20	0.59
31:y:495:A:C4	31:y:496:A:C6	2.91	0.59
31:y:579:G:H5'	31:y:728:A:N3	2.17	0.59
31:y:631:G:H2'	31:y:632:A:C8	2.37	0.59
31:y:767:A:O2'	31:y:1524:C:O2'	1.92	0.59
31:y:881:G:C6	31:y:882:C:C4	2.90	0.59
31:y:960:U:C6	31:y:1225:A:C4	2.89	0.59
31:y:986:A:C5	31:y:1220:G:N2	2.70	0.59
31:y:1048:G:P	47:o:4:LYS:HG2	2.42	0.59
31:y:1122:U:H2'	31:y:1123:A:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1348:U:H4'	42:j:120:ARG:CB	2.32	0.59
31:y:1475:G:C6	31:y:1476:G:C5	2.90	0.59
31:y:1499:A:H4'	31:y:1521:G:OP1	2.02	0.59
35:c:142:LEU:O	35:c:145:LEU:HB2	2.02	0.59
36:d:136:GLN:C	36:d:138:VAL:H	2.09	0.59
36:d:160:ALA:O	36:d:162:GLN:N	2.36	0.59
37:e:8:VAL:HG11	37:e:21:LEU:HB2	1.83	0.59
37:e:33:MET:O	37:e:37:PRO:CD	2.49	0.59
38:f:148:VAL:HG12	38:f:152:ARG:CD	2.31	0.59
40:h:125:MET:HA	40:h:128:ALA:HB3	1.83	0.59
42:j:27:THR:HG23	42:j:31:GLN:O	2.02	0.59
42:j:127:LYS:O	42:j:128:ARG:HB2	2.01	0.59
45:m:14:ARG:O	45:m:14:ARG:NH2	2.35	0.59
45:m:62:GLY:O	45:m:63:TYR:HD2	1.85	0.59
47:o:47:LEU:H	47:o:47:LEU:HD22	1.66	0.59
1:w:39:C:C4	1:w:40:C:N4	2.71	0.59
1:w:49:A:H4'	1:w:50:U:C5'	2.32	0.59
1:w:116:C:O3'	1:w:126:A:C1'	2.50	0.59
1:w:274:G:H4'	1:w:275:G:C4'	2.32	0.59
1:w:396:G:H4'	24:V:46:LEU:HB3	1.84	0.59
1:w:522:G:C2	1:w:523:C:C4	2.91	0.59
1:w:604:G:C8	12:J:105:LEU:HD23	2.36	0.59
1:w:608:A:N7	1:w:609(A):A:N7	2.50	0.59
1:w:886:C:C4'	1:w:887:A:C8	2.83	0.59
1:w:1035:U:H5''	8:F:59:ARG:NH2	2.17	0.59
1:w:1141:U:O5'	1:w:1141:U:H6	1.84	0.59
1:w:1267:U:O5'	1:w:1267:U:H6	1.85	0.59
1:w:1268:A:H2'	1:w:1269:A:C8	2.37	0.59
1:w:1326:U:O5'	1:w:1326:U:C6	2.48	0.59
1:w:1341:U:OP1	1:w:1602:U:O2'	2.08	0.59
1:w:1580:A:O5'	1:w:1580:A:H8	1.85	0.59
1:w:1797:C:C4	1:w:1823:G:C6	2.90	0.59
1:w:1863:G:H2'	1:w:1864:U:C4'	2.32	0.59
1:w:1914:C:C2	1:w:1915:U:C6	2.91	0.59
1:w:1966:A:H8	1:w:1966:A:P	2.24	0.59
1:w:2017:U:OP1	27:Y:8:LYS:HE3	2.02	0.59
1:w:2094:G:C5	1:w:2095:C:C4	2.90	0.59
1:w:2359:C:C1'	29:a:52:LYS:HE2	2.31	0.59
1:w:2428:G:H21	12:J:60:MET:CE	2.16	0.59
1:w:2548:G:N1	1:w:2561:A:C6	2.70	0.59
1:w:2699:C:H2'	1:w:2700:C:O5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2736:G:C2'	1:w:2737:G:H8	2.14	0.59
1:w:2773:C:OP1	5:C:164:ARG:HG2	2.02	0.59
1:w:2858:C:C4	1:w:2859:G:C5	2.90	0.59
1:w:2877:G:C2'	1:w:2878:U:C6	2.86	0.59
1:w:2887:U:O2	1:w:2888:C:C5	2.56	0.59
2:x:95:U:C6	2:x:95:U:O5'	2.55	0.59
3:A:44:VAL:HG23	3:A:175:PRO:O	2.02	0.59
4:B:145:VAL:HG22	4:B:191:ALA:CB	2.32	0.59
4:B:227:ASN:ND2	4:B:237:GLU:HG2	2.16	0.59
5:C:36:ARG:HH21	5:C:88:GLY:HA2	1.68	0.59
6:D:101:ARG:HG2	6:D:101:ARG:O	2.01	0.59
6:D:132:LYS:HB2	6:D:132:LYS:HZ2	1.68	0.59
7:E:21:ARG:O	7:E:23:PHE:N	2.31	0.59
7:E:106:LEU:CD1	7:E:107:LEU:HG	2.32	0.59
7:E:163:ALA:C	7:E:165:THR:N	2.60	0.59
9:G:2:LYS:HA	9:G:20:ASP:C	2.26	0.59
10:H:101:TYR:H	10:H:102:PRO:HD2	1.68	0.59
12:J:7:ARG:HH11	12:J:10:PRO:CG	2.03	0.59
12:J:25:SER:CB	12:J:30:THR:HG21	2.32	0.59
13:K:20:ALA:O	13:K:22:LYS:N	2.34	0.59
14:L:44:LEU:O	14:L:45:ARG:C	2.45	0.59
15:M:15:ARG:O	15:M:18:ILE:HG22	2.03	0.59
18:P:77:ALA:HB3	18:P:83:ARG:C	2.28	0.59
18:P:89:GLN:CG	18:P:90:PRO:CD	2.80	0.59
19:Q:34:ASN:ND2	19:Q:35:ILE:H	2.01	0.59
20:R:59:VAL:O	20:R:60:ARG:HB2	2.01	0.59
21:S:2:ARG:HH22	21:S:4:LYS:HE2	1.67	0.59
22:T:130:PRO:O	22:T:133:ILE:CG1	2.50	0.59
24:V:84:GLY:C	24:V:86:SER:N	2.60	0.59
26:X:5:LYS:HE3	26:X:7:LYS:CE	2.27	0.59
26:X:8:LEU:HD11	26:X:33:GLN:N	2.11	0.59
31:y:32:A:H2'	31:y:33:A:H8	1.65	0.59
31:y:191(A):G:O5'	31:y:191(A):G:C8	2.48	0.59
31:y:193:C:O5'	31:y:193:C:H6	1.85	0.59
31:y:375:U:O2'	49:q:6:LEU:CD2	2.49	0.59
31:y:507:C:H3'	31:y:508:C:C6	2.37	0.59
31:y:508:C:C1'	31:y:509:A:N7	2.65	0.59
31:y:517:G:C3'	31:y:531:U:C5	2.85	0.59
31:y:541:G:C2	31:y:542:G:C1'	2.86	0.59
31:y:564:C:C6	31:y:565:U:C5	2.90	0.59
31:y:790:A:C2	31:y:791:G:O6	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:890:G:O3'	31:y:891:U:H5	1.83	0.59
31:y:969:A:H3'	31:y:970:C:C5	2.36	0.59
31:y:1135:U:O2	31:y:1138:G:C2	2.56	0.59
31:y:1305:G:C5'	54:v:5:ASP:OD1	2.41	0.59
31:y:1308:U:C6	46:n:99:ARG:NH1	2.70	0.59
31:y:1335:C:OP1	31:y:1337:G:N2	2.35	0.59
31:y:1346:A:H4'	42:j:120:ARG:CZ	2.32	0.59
31:y:1375:A:H2'	31:y:1376:U:C4'	2.32	0.59
31:y:1426:C:C2	31:y:1475:G:N2	2.71	0.59
31:y:1518:MA6:H102	31:y:1519:MA6:H103	1.83	0.59
33:0:1:G:C2	33:0:73:A:C2	2.90	0.59
35:c:100:GLY:O	35:c:104:ASN:HB3	2.02	0.59
36:d:22:TRP:CZ2	47:o:54:PRO:HG3	2.38	0.59
37:e:9:CYS:HG	37:e:30:LYS:C	2.09	0.59
38:f:72:GLN:O	38:f:73:ASN:CB	2.50	0.59
40:h:47:CYS:HA	40:h:50:ILE:HG12	1.85	0.59
41:i:12:ARG:HG2	41:i:13:ILE:HD12	1.84	0.59
41:i:52:ASP:CB	41:i:57:PRO:HA	2.33	0.59
42:j:97:LYS:CB	42:j:98:PRO:HD3	2.28	0.59
50:r:34:LYS:CG	50:r:35:VAL:H	2.16	0.59
1:w:103:A:C4	1:w:104:U:C6	2.91	0.59
1:w:271(D):U:H2'	1:w:271:G:H5'	1.84	0.59
1:w:315:G:C6	1:w:316:C:C4	2.91	0.59
1:w:461:C:C3'	1:w:462:C:C6	2.84	0.59
1:w:723:G:C2	1:w:724:U:C2	2.90	0.59
1:w:885:C:H2'	1:w:886:C:C5'	2.28	0.59
1:w:1224:C:C2'	1:w:1224:C:O2	2.49	0.59
1:w:1275:A:H61	1:w:1296:G:C1'	2.15	0.59
1:w:1469:A:N6	1:w:1470:G:C2	2.70	0.59
1:w:1576:U:O2'	1:w:1577:C:H5'	2.03	0.59
1:w:1662:C:H3'	1:w:1662:C:C6	2.37	0.59
1:w:1668:A:C5	1:w:1674:G:C6	2.90	0.59
1:w:1687:G:H5''	1:w:1688:U:P	2.43	0.59
1:w:1799:G:C4'	1:w:1800:C:C6	2.83	0.59
1:w:1830:C:H2'	1:w:1831:G:O4'	2.02	0.59
1:w:2000:G:HO2'	1:w:2689:U:H5	1.49	0.59
1:w:2443:C:C4	1:w:2444:G:O6	2.56	0.59
1:w:2484:G:H1'	13:K:49:ALA:HB1	1.84	0.59
1:w:2485:G:O2'	13:K:126:PRO:HB3	2.03	0.59
1:w:2572:A:OP1	1:w:2574:G:O2'	2.19	0.59
1:w:2682:U:OP2	1:w:2721:A:OP1	2.21	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2721:A:C2'	1:w:2722:G:H8	2.14	0.59
1:w:2730:C:O2'	5:C:168:MET:O	2.13	0.59
1:w:2821:A:C2'	1:w:2822:G:H5'	2.31	0.59
2:x:23:G:O3'	2:x:24:G:H8	1.85	0.59
2:x:69:G:C3'	2:x:70:C:H5'	2.33	0.59
3:A:51:ASP:OD1	3:A:53:ARG:CD	2.51	0.59
4:B:63:ARG:HH21	4:B:86:PRO:HD3	1.66	0.59
5:C:5:LEU:CB	5:C:76:ARG:HD3	2.25	0.59
5:C:50:GLY:HA2	5:C:76:ARG:O	2.02	0.59
5:C:51:PHE:CG	5:C:76:ARG:CZ	2.86	0.59
6:D:26:HIS:CD2	6:D:26:HIS:N	2.70	0.59
7:E:115:ARG:O	7:E:116:ASP:CB	2.49	0.59
8:F:88:LEU:HA	8:F:129:THR:O	2.01	0.59
8:F:141:VAL:CG1	8:F:144:VAL:HG12	2.33	0.59
9:G:3:VAL:O	9:G:21:VAL:CG2	2.50	0.59
9:G:44:LEU:HD13	9:G:44:LEU:C	2.26	0.59
9:G:54:GLN:O	9:G:58:LEU:CB	2.51	0.59
9:G:88:ILE:HG12	9:G:89:TYR:CD1	2.37	0.59
10:H:45:THR:N	10:H:49:LEU:HD21	2.18	0.59
10:H:50:ALA:O	10:H:53:ILE:CB	2.50	0.59
10:H:84:ARG:HE	10:H:85:VAL:N	1.99	0.59
10:H:124:HIS:HA	10:H:127:LYS:HB2	1.83	0.59
11:I:35:VAL:HG11	11:I:106:LEU:HD11	1.84	0.59
12:J:92:GLU:CG	12:J:95:VAL:HG13	2.18	0.59
13:K:20:ALA:O	13:K:21:THR:C	2.46	0.59
13:K:66:ILE:O	13:K:66:ILE:CD1	2.48	0.59
14:L:71:GLN:O	14:L:72:ASP:HB2	2.03	0.59
14:L:82:GLU:O	14:L:86:ARG:HG2	2.01	0.59
15:M:40:ILE:CG2	15:M:41:ASP:N	2.66	0.59
15:M:67:ARG:NH1	15:M:68:GLN:NE2	2.50	0.59
16:N:45:PHE:CE2	16:N:64:ARG:HA	2.34	0.59
17:O:25:TRP:O	17:O:26:GLY:O	2.20	0.59
17:O:83:LEU:HG	17:O:84:LYS:HZ3	1.67	0.59
17:O:92:ARG:CB	18:P:11:GLN:OE1	2.48	0.59
23:U:47:PRO:O	23:U:48:GLY:C	2.43	0.59
24:V:12:PRO:CG	24:V:63:ALA:HB2	2.33	0.59
25:W:32:LEU:O	25:W:34:GLU:N	2.36	0.59
26:X:9:VAL:HA	26:X:32:GLN:HA	1.83	0.59
26:X:56:VAL:O	26:X:57:GLU:CB	2.51	0.59
27:Y:34:PRO:HG3	27:Y:52:TYR:CE2	2.37	0.59
30:b:8:LYS:O	30:b:9:ARG:CB	2.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:97:U:N3	31:y:99:C:C4	2.70	0.59
31:y:136:C:C4'	49:q:1:MET:H3	2.13	0.59
31:y:248:C:H5'	31:y:282:A:C2	2.37	0.59
31:y:347:G:H8	31:y:347:G:H5'	1.66	0.59
31:y:361:G:C8	31:y:362:G:C5	2.91	0.59
31:y:382:A:H2'	31:y:383:A:C5'	2.32	0.59
31:y:457:C:HO2'	31:y:458:C:H5'	1.68	0.59
31:y:489:C:H4'	37:e:132:ARG:HH22	1.67	0.59
31:y:741:G:P	48:p:39:LEU:HD22	2.43	0.59
31:y:745:C:C5'	31:y:851:G:O2'	2.50	0.59
31:y:838:G:C6	31:y:842:C:C5'	2.69	0.59
31:y:936:C:C3'	31:y:937:A:H8	2.13	0.59
31:y:983:A:N3	31:y:983:A:H2'	2.17	0.59
31:y:1103:C:C2'	31:y:1104:G:H1'	2.31	0.59
31:y:1203:C:P	47:o:3:ARG:HH21	2.24	0.59
31:y:1499:A:C2'	31:y:1500:A:H5'	2.32	0.59
31:y:1528:U:H1'	31:y:1529:G:O2'	2.00	0.59
35:c:159:PRO:O	35:c:161:ALA:O	2.21	0.59
36:d:44:GLU:OE2	36:d:48:TYR:HD1	1.85	0.59
36:d:45:LYS:C	36:d:47:LEU:H	2.08	0.59
36:d:52:LEU:H	36:d:52:LEU:HD23	1.68	0.59
36:d:59:ARG:HB2	36:d:64:VAL:HG13	1.84	0.59
36:d:198:VAL:C	36:d:199:LYS:HD3	2.27	0.59
37:e:89:THR:CA	37:e:93:PHE:HD2	2.02	0.59
41:i:34:GLU:O	41:i:38:ILE:HG13	2.03	0.59
41:i:50:ARG:HA	41:i:59:LEU:CB	2.31	0.59
42:j:50:LEU:HD23	42:j:55:ALA:N	2.15	0.59
49:q:35:LYS:C	49:q:37:GLY:N	2.59	0.59
1:w:245:G:H5'	12:J:69:GLY:C	2.26	0.59
1:w:324:A:N6	1:w:338:G:C2'	2.65	0.59
1:w:359:A:C3'	1:w:360:G:H8	2.15	0.59
1:w:363(G):A:C2	1:w:364:C:N4	2.69	0.59
1:w:445:C:O3'	17:O:3:ARG:HD3	2.03	0.59
1:w:453:C:OP2	1:w:453:C:H6	1.84	0.59
1:w:507:A:H5''	1:w:508:G:OP1	2.02	0.59
1:w:530:G:O3'	1:w:532:A:C8	2.55	0.59
1:w:604:G:C6	1:w:625:G:C6	2.91	0.59
1:w:671:C:C5'	12:J:41:ARG:HH12	2.14	0.59
1:w:705:A:P	1:w:726:G:H22	2.26	0.59
1:w:1022:G:O2'	1:w:1023:U:OP2	2.19	0.59
1:w:1252:G:H2'	1:w:1253:A:C5	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1378:A:H2'	1:w:1380:G:C5	2.36	0.59
1:w:1542:G:H2'	1:w:1543:A:C5	2.37	0.59
1:w:1685:C:O5'	1:w:1685:C:C6	2.52	0.59
1:w:1696:G:H3'	1:w:1697:G:C8	2.36	0.59
1:w:1754:C:C5'	16:N:101:PHE:CE1	2.75	0.59
1:w:1784:A:C4'	1:w:1785:A:O5'	2.36	0.59
1:w:1802:A:H2'	1:w:1803:A:H5'	1.84	0.59
1:w:1803:A:H4'	4:B:259:THR:O	2.02	0.59
1:w:1917:U:H2'	1:w:1918:A:H1'	1.84	0.59
1:w:2080:G:C5'	24:V:23:LYS:HE2	2.33	0.59
1:w:2094:G:C5	1:w:2095:C:N3	2.71	0.59
1:w:2192:G:O2'	1:w:2193:G:H5'	2.01	0.59
1:w:2284:C:H2'	1:w:2288:A:N1	2.17	0.59
1:w:2354:G:H4'	23:U:35:ASN:HA	1.83	0.59
1:w:2552:U:H3'	1:w:2552:U:C6	2.38	0.59
1:w:2694:G:OP2	1:w:2694:G:H8	1.85	0.59
1:w:2820:A:C2	5:C:194:GLY:HA3	2.37	0.59
1:w:2840:C:OP1	14:L:50:HIS:CA	2.51	0.59
1:w:2850:A:N3	1:w:2851:A:H1'	2.17	0.59
3:A:224:ARG:C	3:A:225:ILE:HG13	2.27	0.59
4:B:157:ARG:HG3	4:B:158:ALA:N	2.18	0.59
5:C:28:ALA:N	5:C:180:ASN:O	2.36	0.59
5:C:38:THR:HG22	5:C:40:GLU:H	1.68	0.59
5:C:145:LYS:C	5:C:148:GLY:N	2.61	0.59
6:D:25:PRO:HD3	6:D:107:MET:HE1	1.85	0.59
6:D:48:THR:HA	6:D:52:VAL:CG1	2.32	0.59
6:D:56:GLY:H	6:D:73:ILE:CD1	2.11	0.59
7:E:70:VAL:HA	7:E:90:LEU:CG	2.32	0.59
8:F:64:LEU:HD12	8:F:64:LEU:C	2.27	0.59
9:G:25:TYR:O	9:G:29:TYR:HB3	2.02	0.59
10:H:57:LEU:C	10:H:57:LEU:HD13	2.27	0.59
11:I:93:PRO:O	11:I:95:GLY:N	2.34	0.59
12:J:34:GLY:O	12:J:35:HIS:HB3	2.01	0.59
12:J:115:LEU:HG	12:J:116:GLY:H	1.68	0.59
13:K:48:GLU:O	13:K:52:VAL:HG13	2.03	0.59
14:L:31:HIS:ND1	14:L:34:ILE:HD11	2.17	0.59
14:L:66:VAL:O	14:L:68:ARG:N	2.36	0.59
16:N:54:ARG:C	16:N:59:THR:HG22	2.28	0.59
16:N:135:VAL:HG22	16:N:136:GLN:N	2.18	0.59
17:O:75:ASN:O	17:O:76:TYR:O	2.21	0.59
19:Q:83:LYS:O	19:Q:84:ARG:HG3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:93:GLY:O	21:S:94:LYS:CB	2.49	0.59
22:T:11:GLU:HG3	22:T:12:GLY:H	1.65	0.59
24:V:26:ARG:CD	24:V:34:THR:HG23	2.32	0.59
24:V:85:LEU:CD1	24:V:88:LYS:HB3	2.27	0.59
27:Y:54:GLY:O	27:Y:55:ARG:CB	2.51	0.59
29:a:32:LEU:HD12	29:a:41:ILE:HG23	1.84	0.59
31:y:38:G:C1'	31:y:397:A:N6	2.63	0.59
31:y:126:G:H2'	31:y:127:G:C8	2.37	0.59
31:y:227:G:C6	31:y:228:A:C8	2.91	0.59
31:y:282:A:OP2	31:y:283:C:N4	2.36	0.59
31:y:420:U:OP1	31:y:513:C:C5'	2.51	0.59
31:y:677:U:H2'	31:y:678:U:N1	2.16	0.59
31:y:1006:C:OP2	31:y:1006:C:C5	2.54	0.59
31:y:1203:C:H2'	31:y:1204:A:C8	2.38	0.59
31:y:1320:C:O4'	52:t:72:GLY:HA3	2.03	0.59
35:c:152:PHE:CE2	35:c:157:ARG:O	2.56	0.59
35:c:223:ILE:HG23	35:c:227:GLY:HA2	1.84	0.59
36:d:147:LYS:NZ	36:d:203:PHE:CD2	2.71	0.59
37:e:101:LEU:HG	37:e:140:VAL:HG11	1.80	0.59
37:e:139:ARG:HG2	37:e:139:ARG:O	2.01	0.59
37:e:170:VAL:CG1	37:e:176:LEU:HB3	2.31	0.59
39:g:94:GLN:O	39:g:95:GLU:O	2.20	0.59
41:i:104:ARG:HB3	41:i:107:LEU:H	1.67	0.59
46:n:78:ILE:O	46:n:81:LEU:HB2	2.03	0.59
48:p:27:VAL:O	48:p:28:GLN:C	2.44	0.59
49:q:3:LYS:NZ	49:q:3:LYS:CB	2.63	0.59
1:w:54:G:N2	1:w:126:A:N6	2.50	0.59
1:w:125:G:N2	28:Z:14:LYS:NZ	2.51	0.59
1:w:128:C:H6	1:w:128:C:C5'	2.12	0.59
1:w:155:C:H3'	1:w:161:U:H6	1.64	0.59
1:w:186:G:H2'	1:w:187:G:H8	1.67	0.59
1:w:244:A:H4'	12:J:74:GLU:HG2	1.84	0.59
1:w:270(C):A:H2'	1:w:270(D):C:H5'	1.83	0.59
1:w:286:C:C2'	1:w:287:C:C6	2.82	0.59
1:w:426:C:H2'	1:w:427:U:C6	2.38	0.59
1:w:528:A:H2'	1:w:2042:A:H2	1.66	0.59
1:w:546:C:C2'	1:w:547:A:H8	2.15	0.59
1:w:599:G:O2'	6:D:27:LEU:HG	2.03	0.59
1:w:600:G:C5	1:w:601:C:C4	2.90	0.59
1:w:755:C:C2	1:w:756:C:C5	2.90	0.59
1:w:824:A:H2'	1:w:825:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:870:A:H8	1:w:870:A:P	2.24	0.59
1:w:974(A):G:C1'	1:w:989:G:H22	2.10	0.59
1:w:1027:A:H2	1:w:2488:A:H5''	1.67	0.59
1:w:1081:U:O2'	1:w:1082:U:C5	2.48	0.59
1:w:1197:G:C6	1:w:1198:U:N3	2.71	0.59
1:w:1362:C:H5'	1:w:1362:C:H6	1.68	0.59
1:w:1403:C:H4'	1:w:1471:A:C1'	2.33	0.59
1:w:1412:A:C2	1:w:1590:U:O2	2.44	0.59
1:w:1818:U:C2'	4:B:155:LEU:CD2	2.75	0.59
1:w:1823:G:C2	4:B:254:THR:OG1	2.56	0.59
1:w:1833:U:O2	1:w:1834:U:C6	2.56	0.59
1:w:1920:C:H2'	1:w:1921:G:H5'	1.85	0.59
1:w:1945:G:P	1:w:1945:G:H8	2.24	0.59
1:w:1999:C:H4'	1:w:2723:C:C1'	2.22	0.59
1:w:2001:A:O5'	1:w:2001:A:H8	1.86	0.59
1:w:2033:A:N6	1:w:2036:C:H1'	2.17	0.59
1:w:2060:A:OP1	6:D:64:HIS:N	2.36	0.59
1:w:2076:U:O5'	1:w:2238:G:N1	2.36	0.59
1:w:2169:A:H5''	1:w:2170:A:N7	2.18	0.59
1:w:2206:C:N4	1:w:2207:C:N4	2.50	0.59
1:w:2239:G:O5'	4:B:232:PRO:CB	2.51	0.59
1:w:2248:C:C2'	1:w:2249:U:H5'	2.33	0.59
1:w:2308:G:N3	1:w:2308:G:C2'	2.66	0.59
1:w:2396:G:O2'	24:V:32:LYS:HG3	2.03	0.59
1:w:2577:A:H5''	1:w:2578:G:H5'	1.85	0.59
1:w:2710:C:C2'	1:w:2711:A:O4'	2.40	0.59
1:w:2731:G:N2	1:w:2732:G:N1	2.50	0.59
1:w:2757:A:OP1	30:b:19:ARG:HA	2.03	0.59
2:x:46:A:C8	2:x:47:C:C6	2.90	0.59
2:x:57:A:C2	2:x:58:A:C4	2.90	0.59
2:x:96:G:N3	2:x:97:G:C8	2.71	0.59
4:B:19:ALA:HB3	4:B:21:PHE:CE2	2.36	0.59
4:B:82:ILE:HG21	4:B:91:ARG:CZ	2.33	0.59
4:B:131:LEU:CD2	4:B:135:PHE:HB2	2.31	0.59
4:B:133:LEU:HD13	4:B:136:ILE:HG22	1.84	0.59
4:B:155:LEU:O	4:B:156:ALA:CB	2.50	0.59
5:C:5:LEU:HD22	5:C:31:CYS:SG	2.43	0.59
5:C:103:ASP:O	5:C:199:ARG:HB2	2.03	0.59
6:D:5:PRO:CG	6:D:9:PRO:HG2	2.33	0.59
6:D:15:LEU:CD1	6:D:19:LEU:HD21	2.33	0.59
6:D:178:VAL:HG23	6:D:179:TYR:CD2	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:196:VAL:O	6:D:196:VAL:HG13	2.02	0.59
8:F:133:VAL:HG23	8:F:133:VAL:O	2.03	0.59
9:G:112:LYS:C	9:G:114:LEU:N	2.59	0.59
10:H:27:TYR:O	10:H:29:PRO:HD3	2.03	0.59
10:H:45:THR:CG2	10:H:48:ARG:HG3	2.33	0.59
10:H:120:ARG:HG2	10:H:124:HIS:HE2	1.66	0.59
11:I:16:ALA:C	11:I:17:ARG:HD3	2.27	0.59
14:L:28:LEU:HA	14:L:34:ILE:CG1	2.33	0.59
14:L:60:LEU:CD1	14:L:61:HIS:N	2.65	0.59
14:L:64:ARG:HB3	14:L:64:ARG:CZ	2.32	0.59
14:L:73:VAL:O	14:L:77:ARG:N	2.34	0.59
15:M:13:ARG:HG3	15:M:91:PRO:CA	2.33	0.59
16:N:95:ARG:HD2	16:N:96:ARG:CZ	2.31	0.59
16:N:100:TYR:CB	16:N:103:ARG:HH22	2.16	0.59
18:P:68:LYS:CB	18:P:94:LEU:HD23	2.29	0.59
22:T:42:VAL:HG12	22:T:46:LYS:CD	2.32	0.59
22:T:102:LEU:CD1	22:T:123:ASP:C	2.73	0.59
29:a:13:ARG:N	29:a:13:ARG:HD3	2.18	0.59
31:y:6:G:H22	38:f:95:ALA:CB	2.10	0.59
31:y:197:A:H4'	31:y:198:G:OP1	2.02	0.59
31:y:320:C:C5	31:y:320:C:OP2	2.55	0.59
31:y:392:G:N7	31:y:393:A:N7	2.51	0.59
31:y:401:C:H6	31:y:401:C:O5'	1.85	0.59
31:y:451:A:N1	31:y:480:U:C2'	2.64	0.59
31:y:457:C:H2'	31:y:458:C:C5'	2.31	0.59
31:y:650:G:C2'	31:y:651:C:C5'	2.77	0.59
31:y:755:G:H3'	31:y:756:C:H5	1.67	0.59
31:y:1086:U:O2	31:y:1099:G:N2	2.35	0.59
31:y:1096:C:C4	31:y:1097:C:C5	2.91	0.59
31:y:1325:C:O3'	54:v:17:THR:CG2	2.50	0.59
31:y:1378:C:H5''	40:h:7:ALA:H	1.67	0.59
31:y:1494:G:C6	31:y:1495:U:N3	2.70	0.59
33:0:64:A:O3'	33:0:65:G:H8	1.85	0.59
36:d:119:ARG:C	36:d:119:ARG:CD	2.73	0.59
37:e:15:GLU:HG2	37:e:63:LYS:CD	2.28	0.59
41:i:80:ILE:HD12	41:i:80:ILE:N	2.17	0.59
42:j:95:LYS:HB2	42:j:96:LEU:HD12	1.85	0.59
45:m:54:VAL:O	45:m:55:ALA:HB2	2.03	0.59
45:m:115:SER:HB3	45:m:118:LYS:CG	2.33	0.59
46:n:9:ILE:N	46:n:9:ILE:HD12	2.17	0.59
48:p:80:ALA:O	48:p:83:GLU:HG2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:19:C:C2'	1:w:20:C:C5'	2.62	0.59
1:w:77:C:H42	1:w:78:A:N6	1.98	0.59
1:w:106:C:O2	1:w:293:U:C1'	2.49	0.59
1:w:286:C:H3'	1:w:287:C:C5	2.38	0.59
1:w:289:A:H8	1:w:351:G:N2	1.86	0.59
1:w:399:G:H3'	1:w:400:G:C8	2.37	0.59
1:w:440:G:H3'	1:w:441:U:C6	2.37	0.59
1:w:527:C:H1'	1:w:528:A:C4	2.38	0.59
1:w:563:G:C6	1:w:564:C:C5	2.91	0.59
1:w:577:G:C3'	1:w:578:A:H5'	2.32	0.59
1:w:600:G:C6	1:w:601:C:N4	2.70	0.59
1:w:752:A:C6	1:w:1781:C:H1'	2.38	0.59
1:w:869:G:H2'	1:w:870:A:N9	2.18	0.59
1:w:949:C:N3	1:w:950:G:N7	2.51	0.59
1:w:1327:C:C4	1:w:1328:G:O6	2.56	0.59
1:w:1491:G:H1'	4:B:99:ASP:OD1	2.02	0.59
1:w:1613:G:N1	1:w:1617:C:C2'	2.66	0.59
1:w:1675:C:N4	1:w:1676:A:C8	2.71	0.59
1:w:1690:A:N6	1:w:1697:G:O2'	2.34	0.59
1:w:1815:A:O4'	1:w:1817:G:H8	1.86	0.59
1:w:1894:C:H2'	1:w:1895:C:C5	2.38	0.59
1:w:1959:G:N3	1:w:1960:A:H1'	2.17	0.59
1:w:2027:G:C2	1:w:2037:G:C6	2.91	0.59
1:w:2134:A:C6	1:w:2157:G:O2'	2.55	0.59
1:w:2176:A:C1'	3:A:216:THR:HG21	2.32	0.59
1:w:2226:C:H3'	1:w:2227:A:H8	1.66	0.59
1:w:2239:G:O5'	4:B:232:PRO:HB3	2.03	0.59
1:w:2319:G:C5'	15:M:7:TYR:HH	2.15	0.59
1:w:2458:G:H1'	1:w:2490:G:N1	2.17	0.59
1:w:2478:A:C4'	1:w:2528:U:H4'	2.33	0.59
1:w:2572:A:N6	5:C:145:LYS:HB2	2.17	0.59
1:w:2641:G:C5	1:w:2642:G:N7	2.70	0.59
1:w:2656:U:C6	1:w:2656:U:O5'	2.56	0.59
1:w:2668:G:N1	1:w:2669:G:C6	2.71	0.59
1:w:2680:C:O5'	5:C:189:PRO:N	2.35	0.59
1:w:2707:G:H2'	1:w:2708:G:C8	2.38	0.59
1:w:2712:U:O2'	1:w:712(B):A:P	2.60	0.59
1:w:2746:U:HO2'	8:F:139:GLN:CD	2.09	0.59
1:w:2776:A:O2'	1:w:2781:A:H1'	2.02	0.59
1:w:2786:U:HO2'	5:C:64:LYS:H	1.46	0.59
1:w:2892:A:N6	1:w:2893:G:C2	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:88:C:O3'	2:x:89(A):G:H8	1.86	0.59
2:x:94:C:C2'	2:x:95:U:C5	2.81	0.59
4:B:5:LYS:HD2	4:B:5:LYS:H	1.67	0.59
4:B:105:ILE:HG23	4:B:106:ILE:H	1.67	0.59
4:B:242:ARG:HH11	4:B:242:ARG:HG3	1.67	0.59
4:B:266:SER:C	4:B:269:PHE:CE1	2.78	0.59
5:C:102:VAL:HA	5:C:201:THR:CA	2.33	0.59
8:F:23:ARG:HA	8:F:35:VAL:O	2.03	0.59
8:F:124:GLU:CD	8:F:124:GLU:N	2.60	0.59
10:H:37:VAL:CG1	10:H:38:LEU:H	2.16	0.59
10:H:113:MET:C	10:H:115:ALA:H	2.10	0.59
11:I:12:ASP:CG	11:I:86:ILE:HD11	2.28	0.59
13:K:17:LEU:HD22	13:K:17:LEU:N	2.17	0.59
13:K:35:VAL:O	13:K:129:THR:HB	2.02	0.59
14:L:29:LEU:CD2	14:L:75:LEU:HD13	2.32	0.59
14:L:86:ARG:HG3	14:L:87:TYR:CE1	2.34	0.59
15:M:44:LYS:HB3	15:M:46:VAL:CG2	2.32	0.59
15:M:84:GLN:NE2	15:M:86:ALA:H	2.01	0.59
16:N:90:GLN:C	16:N:90:GLN:HE21	2.11	0.59
17:O:11:ARG:HG3	17:O:12:ARG:N	2.18	0.59
18:P:16:PRO:HG2	18:P:17:GLY:H	1.68	0.59
19:Q:86:LEU:CD1	19:Q:87:PRO:O	2.49	0.59
23:U:37:LEU:CD1	23:U:38:VAL:HB	2.31	0.59
24:V:11:ARG:HH22	24:V:61:ARG:N	1.93	0.59
24:V:51:VAL:CG2	24:V:60:PHE:HB2	2.25	0.59
29:a:62:LEU:H	29:a:63:PRO:CD	2.16	0.59
31:y:9:G:H3'	38:f:126:ARG:NH1	2.17	0.59
31:y:175:C:N4	31:y:176:C:C5	2.70	0.59
31:y:227:G:C2'	31:y:228:A:H5'	2.33	0.59
31:y:273:A:H2'	31:y:274:A:H5'	1.84	0.59
31:y:291:C:C4	31:y:310:G:N1	2.70	0.59
31:y:539:A:OP2	45:m:114:LYS:HE2	2.02	0.59
31:y:686:U:H1'	31:y:687:A:C5'	2.16	0.59
31:y:783:C:H2'	31:y:784:C:O5'	2.02	0.59
31:y:1080:A:C8	31:y:1080:A:C3'	2.86	0.59
31:y:1231:G:C5	31:y:1232:U:C4	2.90	0.59
31:y:1269:A:H8	31:y:1269:A:P	2.26	0.59
31:y:1275:A:H2'	31:y:1276:G:H5'	1.81	0.59
31:y:1287:A:H2'	31:y:1288:A:H5'	1.84	0.59
31:y:1312:G:N7	52:t:2:PRO:HB3	2.17	0.59
31:y:1431:C:H2'	31:y:1432:G:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1470:G:H2'	31:y:1471:G:C5'	2.33	0.59
31:y:1510:U:O3'	31:y:1511:G:H8	1.85	0.59
33:0:9:A:C2	33:0:46:G:C2	2.91	0.59
36:d:44:GLU:CD	36:d:48:TYR:HD1	2.09	0.59
36:d:62:ASP:O	36:d:64:VAL:N	2.32	0.59
36:d:147:LYS:HB2	36:d:203:PHE:O	2.02	0.59
38:f:12:LEU:HD13	38:f:12:LEU:N	2.18	0.59
40:h:127:ALA:C	40:h:129:GLU:H	2.09	0.59
41:i:20:TYR:HE1	41:i:65:TYR:HB2	1.67	0.59
42:j:99:LEU:O	42:j:101:PHE:N	2.35	0.59
43:k:40:LEU:HG	43:k:41:PRO:N	2.17	0.59
49:q:3:LYS:O	49:q:22:THR:O	2.21	0.59
50:r:57:VAL:HG12	50:r:58:GLU:N	2.17	0.59
51:s:72:ARG:O	51:s:76:LEU:HG	2.03	0.59
1:w:1:G:C6	1:w:2:G:C5	2.91	0.59
1:w:15:G:N3	1:w:15:G:C2'	2.57	0.59
1:w:125:G:H21	28:Z:14:LYS:NZ	2.01	0.59
1:w:270(N):U:H2'	1:w:270(O):G:C5'	2.33	0.59
1:w:270(V):C:H2'	1:w:270(W):G:C8	2.38	0.59
1:w:288:C:OP2	1:w:289:A:N1	2.36	0.59
1:w:463:G:C2	1:w:467:G:O6	2.56	0.59
1:w:562:U:O2'	1:w:563:G:H5''	2.03	0.59
1:w:730:C:H2'	1:w:731:C:O4'	2.03	0.59
1:w:874:G:H1'	22:T:170:THR:CG2	2.33	0.59
1:w:1197:G:C5	1:w:1198:U:C4	2.91	0.59
1:w:1319:G:H3'	1:w:1320:C:H6	1.64	0.59
1:w:1380:G:O6	1:w:1381:G:C6	2.56	0.59
1:w:1538:G:C2	1:w:1539:G:C6	2.91	0.59
1:w:1707:G:C2	1:w:1708:C:C2	2.90	0.59
1:w:1753:G:H21	1:w:1755:A:H8	1.49	0.59
1:w:1794:U:N3	1:w:1795:C:C4	2.71	0.59
1:w:1948:G:C6	1:w:1949:G:N7	2.71	0.59
1:w:2019:A:N6	1:w:2035:G:H1	1.90	0.59
1:w:2035:G:O5'	1:w:2036:C:C5	2.55	0.59
1:w:2037:G:C3'	1:w:2038:G:C8	2.83	0.59
1:w:2119:A:C2	1:w:2171:A:C1'	2.85	0.59
1:w:2289:G:C2	1:w:2290:G:C8	2.90	0.59
1:w:2321:G:N2	1:w:2322:A:H1'	2.18	0.59
1:w:2364:C:C2	23:U:36:ILE:HD11	2.37	0.59
1:w:2450:A:C2	32:z:76:A:N3	2.70	0.59
1:w:2488:A:C6	1:w:2489:G:C6	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2563:U:C2	1:w:2565:A:OP2	2.55	0.59
1:w:2790:A:H5'	1:w:2892:A:N1	2.17	0.59
1:w:2820:A:O2'	1:w:2821:A:P	2.61	0.59
2:x:26:A:C3'	2:x:27:C:C6	2.85	0.59
2:x:73:A:C2'	2:x:74:U:C6	2.86	0.59
3:A:49:GLY:H	3:A:211:ARG:HH12	1.51	0.59
7:E:30:GLU:O	7:E:30:GLU:HG3	2.02	0.59
10:H:36:TRP:CB	10:H:156:GLN:HG2	2.32	0.59
10:H:53:ILE:HA	10:H:56:LEU:HD22	1.84	0.59
12:J:19:VAL:O	12:J:19:VAL:HG12	2.03	0.59
14:L:20:LEU:O	14:L:24:GLN:HG2	2.02	0.59
15:M:17:ARG:NE	15:M:89:ARG:HD3	2.18	0.59
15:M:69:VAL:HG13	15:M:73:LEU:CD1	2.31	0.59
16:N:70:VAL:HG13	16:N:71:GLY:N	2.17	0.59
16:N:70:VAL:HG12	16:N:71:GLY:N	2.16	0.59
16:N:93:ARG:HH11	16:N:119:LYS:HE2	1.68	0.59
16:N:108:ARG:HH11	16:N:108:ARG:CG	2.10	0.59
17:O:90:VAL:CG1	18:P:11:GLN:NE2	2.64	0.59
17:O:92:ARG:NE	18:P:11:GLN:OE1	2.36	0.59
18:P:34:GLU:CB	18:P:64:HIS:CE1	2.76	0.59
20:R:20:GLY:C	20:R:25:LYS:HA	2.27	0.59
20:R:68:ARG:O	20:R:69:TYR:CB	2.49	0.59
22:T:84:GLU:HG3	22:T:85:HIS:H	1.68	0.59
24:V:18:ILE:CG1	24:V:43:TYR:HE1	2.12	0.59
24:V:48:LYS:HG3	24:V:63:ALA:HA	1.84	0.59
29:a:18:ALA:C	29:a:20:GLY:H	2.11	0.59
31:y:10:A:O2'	31:y:507:C:H4'	2.03	0.59
31:y:158:G:C5	31:y:159:G:C5	2.91	0.59
31:y:266:G:O2'	31:y:267:C:OP2	2.21	0.59
31:y:275:G:H2'	31:y:276:G:C8	2.38	0.59
31:y:501:C:H1'	31:y:549:C:H1'	1.84	0.59
31:y:502:G:H4'	31:y:550:G:C1'	2.33	0.59
31:y:560:U:H5'	31:y:566:G:H22	1.64	0.59
31:y:714:G:C1'	31:y:777:A:N7	2.65	0.59
31:y:770:C:H3'	31:y:771:G:H5''	1.82	0.59
31:y:796:C:C4	31:y:797:C:C5	2.91	0.59
31:y:865:A:H5'	31:y:1078:U:O4	2.03	0.59
31:y:992:U:C4	31:y:1043:C:C6	2.90	0.59
31:y:1023:G:N7	31:y:1024:G:C8	2.71	0.59
31:y:1029:G:H2'	31:y:1031:G:OP2	2.01	0.59
31:y:1221:G:C5'	52:t:36:ARG:HH21	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1275:A:H2	31:y:1282:C:HO2'	1.49	0.59
31:y:1528:U:O3'	31:y:1529:G:H3'	2.03	0.59
35:c:68:ILE:HG13	35:c:161:ALA:HB3	1.83	0.59
35:c:100:GLY:O	35:c:104:ASN:CA	2.51	0.59
35:c:189:ASP:CG	35:c:204:ASN:HA	2.27	0.59
36:d:72:LYS:HG3	36:d:75:VAL:CG2	2.33	0.59
36:d:102:ASN:O	36:d:103:VAL:CG1	2.50	0.59
37:e:67:ILE:CG2	37:e:68:TYR:CD1	2.79	0.59
40:h:16:LEU:N	40:h:16:LEU:HD23	2.16	0.59
40:h:107:ALA:HB2	40:h:134:ALA:N	2.17	0.59
43:k:16:LEU:H	43:k:16:LEU:CD2	2.13	0.59
44:l:14:VAL:HB	44:l:77:MET:HE1	1.82	0.59
46:n:87:TYR:C	46:n:89:GLY:N	2.58	0.59
46:n:121:LYS:O	46:n:122:LYS:HB3	2.02	0.59
46:n:121:LYS:O	46:n:122:LYS:CB	2.50	0.59
49:q:3:LYS:N	49:q:65:GLN:HB3	2.18	0.59
49:q:39:TYR:CE2	49:q:41:PRO:HA	2.38	0.59
52:t:49:ILE:O	52:t:59:PRO:HB2	2.02	0.59
1:w:65:C:OP1	20:R:69:TYR:N	2.36	0.59
1:w:101:G:C4'	1:w:102:G:C8	2.79	0.59
1:w:119:A:H5'	1:w:120:U:OP1	2.03	0.59
1:w:187:G:N2	1:w:188:G:H1'	2.18	0.59
1:w:297:C:OP2	1:w:297:C:H6	1.85	0.59
1:w:340:A:O5'	1:w:340:A:C8	2.55	0.59
1:w:379:G:H4'	24:V:21:ARG:HD3	1.85	0.59
1:w:531:C:C2'	17:O:28:ARG:HH22	2.15	0.59
1:w:593:G:H1'	29:a:4:MET:SD	2.43	0.59
1:w:623:G:C4	1:w:624:C:C5	2.91	0.59
1:w:800:A:O3'	6:D:51:GLU:HG2	2.03	0.59
1:w:922:U:C4	1:w:923:C:N4	2.71	0.59
1:w:947:G:N3	1:w:948:G:N7	2.51	0.59
1:w:1010:A:O2'	17:O:77:SER:HB3	2.02	0.59
1:w:1229:G:C3'	1:w:1230:C:C6	2.76	0.59
1:w:1298:C:C5	1:w:1643:G:N2	2.71	0.59
1:w:1338:G:C6	1:w:1339:G:C5	2.91	0.59
1:w:1692:U:C1'	1:w:1695:G:O6	2.41	0.59
1:w:1701:A:O2'	1:w:1702:G:H5'	2.02	0.59
1:w:1796:U:O2'	1:w:1797:C:O5'	2.19	0.59
1:w:1823:G:C8	1:w:1824:G:C8	2.90	0.59
1:w:1885:A:C5	1:w:1886:C:C5	2.91	0.59
1:w:1897:G:O2'	1:w:1898:U:H5'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1917:U:O5'	1:w:1917:U:C6	2.55	0.59
1:w:1919:A:O5'	1:w:1919:A:C8	2.48	0.59
1:w:2787:C:O2'	5:C:61:ARG:CB	2.37	0.59
1:w:2856:C:O5'	1:w:2856:C:H6	1.85	0.59
2:x:12:C:O2'	2:x:13:A:H8	1.86	0.59
4:B:17:THR:OG1	4:B:205:VAL:N	2.32	0.59
4:B:184:LYS:H	4:B:269:PHE:HB2	1.67	0.59
5:C:36:ARG:NH2	5:C:88:GLY:HA2	2.17	0.59
5:C:81:ILE:O	5:C:82:ARG:C	2.46	0.59
6:D:130:LYS:N	6:D:134:PHE:HZ	1.97	0.59
6:D:159:ARG:C	6:D:161:ALA:N	2.56	0.59
10:H:27:TYR:CD2	17:O:100:VAL:HG13	2.37	0.59
12:J:18:ARG:O	12:J:19:VAL:C	2.46	0.59
14:L:55:ALA:HB1	14:L:80:PHE:CE2	2.38	0.59
18:P:61:VAL:HG23	18:P:101:GLY:OXT	2.02	0.59
19:Q:17:VAL:O	19:Q:18:ARG:C	2.45	0.59
22:T:41:LEU:HD13	22:T:42:VAL:N	2.18	0.59
22:T:53:ILE:HA	22:T:98:MET:SD	2.43	0.59
22:T:76:LEU:HA	22:T:83:PRO:HB3	1.85	0.59
22:T:151:HIS:HA	22:T:170:THR:HA	1.83	0.59
30:b:27:CYS:HG	30:b:32:HIS:CB	2.04	0.59
31:y:97:U:C6	31:y:99:C:C5	2.91	0.59
31:y:102:G:C2	31:y:103:C:C4	2.91	0.59
31:y:157:G:H2'	31:y:158:G:C5'	2.32	0.59
31:y:237:C:C2	31:y:238:G:C8	2.90	0.59
31:y:266:G:N1	31:y:270:A:N6	2.51	0.59
31:y:425:G:C2'	31:y:426:G:H5'	2.33	0.59
31:y:593:G:N3	31:y:594:G:C8	2.71	0.59
31:y:730:G:C5	31:y:731:G:H1'	2.38	0.59
31:y:871:U:H3'	31:y:872:A:H5''	1.84	0.59
31:y:889:A:O4'	31:y:891:U:C5	2.56	0.59
31:y:951:G:N1	31:y:1231:G:C4	2.71	0.59
31:y:1053:G:C3'	31:y:1054:C:H5''	2.32	0.59
31:y:1139:G:H4'	31:y:1140:C:C6	2.37	0.59
31:y:1311:G:C5	52:t:2:PRO:HB3	2.38	0.59
31:y:1398:A:P	31:y:1401:G:H4'	2.43	0.59
32:z:71:G:C5	32:z:72:C:C6	2.91	0.59
33:0:69:U:C2	33:0:70:C:C5	2.90	0.59
36:d:147:LYS:HB2	36:d:147:LYS:NZ	2.18	0.59
37:e:51:PRO:O	37:e:52:SER:O	2.21	0.59
40:h:115:ARG:O	40:h:119:ARG:HG2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:j:82:ALA:C	42:j:85:LEU:HD12	2.28	0.59
42:j:85:LEU:HB2	42:j:92:TYR:CB	2.31	0.59
44:l:62:GLN:HG2	44:l:94:ALA:HA	1.84	0.59
46:n:15:VAL:HG13	46:n:41:PRO:O	2.03	0.59
49:q:23:ASP:OD2	49:q:24:ALA:N	2.36	0.59
51:s:73:ALA:HA	51:s:78:LEU:HD22	1.85	0.59
52:t:7:LYS:C	52:t:9:VAL:H	2.09	0.59
52:t:13:ASP:OD2	52:t:13:ASP:N	2.36	0.59
52:t:34:TRP:H	52:t:34:TRP:CD1	2.20	0.59
53:u:84:LEU:HD23	53:u:88:VAL:HG23	1.85	0.59
1:w:220:G:O6	1:w:427:U:H3'	2.03	0.58
1:w:288:C:H3'	1:w:289:A:N3	2.18	0.58
1:w:316:C:H2'	1:w:316:C:O2	2.03	0.58
1:w:322:A:P	6:D:163:ARG:CB	2.91	0.58
1:w:494:G:OP1	19:Q:8:ARG:NH2	2.36	0.58
1:w:560:C:H4'	17:O:52:ARG:HH12	1.63	0.58
1:w:604:G:H2'	1:w:605:C:C6	2.38	0.58
1:w:616:A:C2'	1:w:617:G:H5'	2.33	0.58
1:w:670:A:H4'	1:w:671:C:C4'	2.33	0.58
1:w:681:G:N1	1:w:682:G:C5	2.71	0.58
1:w:765:G:H2'	1:w:766:C:C1'	2.29	0.58
1:w:776:G:H5'	1:w:777:A:O5'	2.02	0.58
1:w:877:U:O5'	1:w:877:U:C6	2.49	0.58
1:w:926:A:H3'	1:w:928:G:P	2.42	0.58
1:w:1024:G:C6	1:w:1025:G:N1	2.71	0.58
1:w:1135:C:H3'	1:w:1137:G:P	2.42	0.58
1:w:1223:G:C4	1:w:1227:G:C2	2.91	0.58
1:w:1303:G:H4'	1:w:1642:G:H2'	1.83	0.58
1:w:1414:G:H2'	1:w:1415:U:C6	2.37	0.58
1:w:1497:U:H3'	1:w:1497:U:C6	2.38	0.58
1:w:1934:C:H3'	1:w:1934:C:C6	2.38	0.58
1:w:2038:G:C6	1:w:2039:C:C4	2.91	0.58
1:w:2041:U:O2	1:w:2042:A:C8	2.56	0.58
1:w:2057:A:C5	1:w:2058:A:C2	2.91	0.58
1:w:2099:U:H2'	1:w:2100:G:C8	2.38	0.58
1:w:2120:G:N2	1:w:2121:G:N9	2.51	0.58
1:w:2124:G:H21	3:A:218:THR:HA	0.74	0.58
1:w:2146:C:N3	1:w:2147:G:C5	2.71	0.58
1:w:2320:A:N6	1:w:2333:A:C2'	2.66	0.58
1:w:2398:U:C6	1:w:2398:U:OP2	2.56	0.58
1:w:2494:G:C4	1:w:2495:G:C8	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2572:A:OP2	1:w:2572:A:C8	2.56	0.58
1:w:2690:C:O2'	1:w:2691:C:H5'	2.00	0.58
1:w:2736:G:C4	1:w:2737:G:C8	2.90	0.58
1:w:2886:G:O5'	1:w:2886:G:C8	2.50	0.58
2:x:13:A:C2	2:x:70:C:C5'	2.86	0.58
2:x:41:U:C5	7:E:69:ALA:CB	2.82	0.58
2:x:54:G:H2'	2:x:55:U:O4'	2.03	0.58
4:B:31:LYS:HB2	4:B:104:TYR:CZ	2.38	0.58
4:B:65:ILE:HD12	4:B:105:ILE:HA	1.82	0.58
4:B:174:ILE:HG22	4:B:175:LEU:H	1.66	0.58
5:C:195:LEU:HD12	5:C:196:VAL:H	1.68	0.58
6:D:162:ALA:HB3	6:D:170:THR:HG23	1.85	0.58
7:E:31:VAL:CG2	7:E:32:PRO:CD	2.75	0.58
7:E:140:ILE:HD11	46:n:7:VAL:HG12	1.85	0.58
9:G:44:LEU:C	9:G:47:LEU:HG	2.27	0.58
10:H:36:TRP:HA	10:H:74:PHE:O	2.01	0.58
10:H:79:ASN:O	10:H:83:ILE:CD1	2.50	0.58
11:I:121:VAL:O	11:I:122:LEU:HD23	2.04	0.58
12:J:41:ARG:NH1	12:J:42:SER:O	2.33	0.58
12:J:97:PRO:HD2	12:J:126:VAL:HG21	1.85	0.58
12:J:104:GLY:C	12:J:105:LEU:HG	2.28	0.58
16:N:24:PRO:CG	16:N:49:VAL:HG21	2.32	0.58
17:O:12:ARG:HA	17:O:15:LYS:CG	2.33	0.58
18:P:74:LYS:C	18:P:75:PHE:CD2	2.77	0.58
20:R:20:GLY:CA	20:R:25:LYS:C	2.76	0.58
23:U:35:ASN:H	23:U:61:ALA:HB3	1.67	0.58
28:Z:13:ALA:HA	28:Z:17:GLY:CA	2.30	0.58
30:b:19:ARG:HG2	30:b:20:HIS:N	2.18	0.58
31:y:396:G:H5''	31:y:397:A:P	2.43	0.58
31:y:674:G:H21	44:l:116:HIS:CE1	2.21	0.58
31:y:817:C:H5'	31:y:819:A:H5'	1.77	0.58
31:y:872:A:O2'	31:y:873:A:C2'	2.49	0.58
31:y:991:U:C2	31:y:1213:A:N7	2.71	0.58
31:y:1092:A:C6	31:y:1093:A:C6	2.89	0.58
31:y:1119:C:C2	31:y:1120:G:C8	2.90	0.58
31:y:1151:A:O5'	43:k:41:PRO:HA	2.03	0.58
31:y:1202:G:N2	47:o:26:ARG:NH1	2.42	0.58
31:y:1229:A:O3'	32:z:30:G:H5'	2.03	0.58
31:y:1346:A:H4'	31:y:1348:U:H5'	1.85	0.58
31:y:1380:U:H5''	40:h:4:ARG:CB	2.29	0.58
31:y:1421:G:H2'	31:y:1422:G:C5'	2.30	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1501:C:C4	31:y:1504:G:N1	2.71	0.58
31:y:1525:G:N1	31:y:1526:G:C5	2.71	0.58
32:z:59:U:OP1	32:z:59:U:C5	2.56	0.58
33:0:59:U:N3	33:0:60:C:C5	2.69	0.58
35:c:68:ILE:HG23	35:c:161:ALA:O	2.03	0.58
35:c:97:TRP:CB	35:c:172:ILE:CB	2.81	0.58
35:c:114:ARG:CG	35:c:118:LEU:HD21	2.33	0.58
35:c:144:ARG:HA	35:c:147:LYS:HD2	1.85	0.58
36:d:72:LYS:HG3	36:d:72:LYS:O	2.02	0.58
36:d:89:GLU:C	36:d:91:LEU:N	2.59	0.58
37:e:8:VAL:HG12	37:e:21:LEU:HB2	1.84	0.58
37:e:9:CYS:C	37:e:12:CYS:SG	2.86	0.58
37:e:12:CYS:SG	37:e:33:MET:SD	3.01	0.58
37:e:38:TYR:O	37:e:39:PRO:C	2.44	0.58
37:e:89:THR:HG22	37:e:93:PHE:CD2	2.37	0.58
37:e:199:ASN:CG	37:e:202:LEU:HG	2.28	0.58
39:g:75:LEU:HD13	39:g:75:LEU:H	1.67	0.58
41:i:68:ARG:HA	41:i:76:PRO:CD	2.32	0.58
45:m:52:ARG:N	45:m:52:ARG:HE	1.99	0.58
49:q:72:ARG:HB3	49:q:73:LEU:HD12	1.85	0.58
50:r:10:VAL:HG23	50:r:54:GLY:C	2.27	0.58
53:u:73:HIS:O	53:u:74:LYS:HB2	2.01	0.58
1:w:60:G:H2'	1:w:63:U:O4	2.02	0.58
1:w:135:G:C6	1:w:145:G:N1	2.71	0.58
1:w:289:A:C8	1:w:351:G:N2	2.65	0.58
1:w:509:C:H2'	1:w:510:C:C5'	2.31	0.58
1:w:515:A:C2	1:w:1261:C:C1'	2.86	0.58
1:w:578:A:O5'	1:w:579:G:OP2	2.20	0.58
1:w:598:G:C1'	12:J:13:ASN:OD1	2.46	0.58
1:w:616:A:H2'	1:w:617:G:C4'	2.32	0.58
1:w:634:C:O2	1:w:635:C:C5	2.55	0.58
1:w:781:A:C2	1:w:1776:G:H2'	2.38	0.58
1:w:866:A:H2'	1:w:866:A:N3	2.17	0.58
1:w:937:U:H5''	1:w:938:G:OP2	2.03	0.58
1:w:1131:G:N7	1:w:2025:C:C1'	2.66	0.58
1:w:1259:G:C4	1:w:1260:G:C8	2.90	0.58
1:w:1291:C:N4	1:w:1292:U:O4	2.36	0.58
1:w:1334:G:H2'	1:w:1335:U:C1'	2.31	0.58
1:w:1411:C:H2'	1:w:1412:A:H8	1.65	0.58
1:w:1562:A:C4	1:w:1563:G:C8	2.91	0.58
1:w:1669:A:C2	1:w:1670:C:N1	2.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1690:A:C6	1:w:1697:G:O2'	2.55	0.58
1:w:1692:U:O2'	1:w:1693:U:H6	1.84	0.58
1:w:2206:C:C4	1:w:2207:C:C5	2.90	0.58
1:w:2572:A:P	5:C:144:ARG:HD3	2.43	0.58
1:w:2651:C:C4	1:w:2652:C:N4	2.71	0.58
1:w:2679:A:C6	1:w:2680:C:C4	2.91	0.58
1:w:2734:A:H62	1:w:2770:G:N2	1.98	0.58
1:w:2873:A:N3	1:w:2873:A:C2'	2.66	0.58
3:A:22:THR:H	3:A:25:GLU:HG3	1.68	0.58
4:B:131:LEU:HD23	4:B:132:PRO:HD2	1.83	0.58
4:B:150:LYS:CD	4:B:188:GLU:O	2.50	0.58
5:C:78:LEU:O	5:C:79:ARG:CZ	2.50	0.58
5:C:116:VAL:CG2	5:C:117:MET:H	2.02	0.58
8:F:177:GLY:O	8:F:178:ALA:C	2.46	0.58
10:H:134:PRO:HA	10:H:137:ARG:HD2	1.85	0.58
10:H:151:HIS:O	10:H:154:GLN:HB3	2.04	0.58
11:I:37:ASP:O	11:I:39:ILE:HD13	2.03	0.58
12:J:39:LYS:NZ	12:J:40:SER:N	2.51	0.58
13:K:98:LYS:CB	13:K:101:ARG:HG3	2.23	0.58
14:L:38:VAL:H	14:L:110:PRO:HG2	1.68	0.58
14:L:46:GLY:HA2	14:L:49:ASP:OD1	2.03	0.58
14:L:76:VAL:CG1	14:L:80:PHE:CZ	2.86	0.58
15:M:13:ARG:HG3	15:M:91:PRO:HA	1.85	0.58
16:N:49:VAL:CA	16:N:63:VAL:HG12	2.33	0.58
19:Q:82:LEU:HD13	19:Q:83:LYS:N	2.18	0.58
22:T:58:VAL:HG12	22:T:59:LEU:H	1.68	0.58
22:T:102:LEU:HD21	22:T:124:ILE:CB	2.24	0.58
22:T:126:VAL:HB	22:T:162:GLU:O	2.03	0.58
23:U:28:GLY:HA2	23:U:67:VAL:C	2.28	0.58
24:V:43:TYR:O	24:V:45:ASN:N	2.35	0.58
29:a:17:THR:O	29:a:18:ALA:C	2.46	0.58
31:y:256:U:C2	31:y:270:A:H2	2.21	0.58
31:y:300:A:N3	31:y:566:G:O6	2.35	0.58
31:y:450:G:H4'	49:q:42:ARG:CZ	2.30	0.58
31:y:498:A:N1	31:y:546:G:C2'	2.66	0.58
31:y:651:C:N3	31:y:652:U:O4	2.34	0.58
31:y:657:G:H4'	48:p:28:GLN:HG2	1.85	0.58
31:y:671:G:H4'	39:g:77:ARG:HH11	1.65	0.58
31:y:686:U:O4	31:y:703:G:H1'	2.03	0.58
31:y:745:C:H4'	31:y:851:G:H1'	1.85	0.58
31:y:891:U:OP2	31:y:906:G:C2	2.55	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:929:G:C2'	31:y:930:C:H5'	2.33	0.58
31:y:976:G:OP2	47:o:32:SER:HA	2.03	0.58
31:y:1074:G:C2	31:y:1102:A:C5	2.90	0.58
31:y:1157:A:N6	31:y:1178:G:O2'	2.35	0.58
31:y:1179:A:O2'	31:y:1180:A:H5'	2.03	0.58
31:y:1266:G:H1'	31:y:1269:A:N6	2.17	0.58
31:y:1272:G:N7	31:y:1273:G:N7	2.50	0.58
31:y:1375:A:O2'	31:y:1376:U:H5'	2.03	0.58
31:y:1519:MA6:H3'	31:y:1520:G:O4'	2.03	0.58
32:z:45:U:O5'	32:z:46:7MG:OP2	2.20	0.58
33:0:12:U:H3	33:0:23:A:N6	2.00	0.58
35:c:93:VAL:HG22	35:c:94:ASN:N	2.17	0.58
36:d:134:ILE:C	36:d:136:GLN:N	2.60	0.58
37:e:156:GLU:O	37:e:159:ARG:HG3	2.03	0.58
37:e:201:GLN:O	37:e:202:LEU:C	2.45	0.58
39:g:11:ASN:OD1	39:g:84:ASN:HA	2.03	0.58
39:g:44:GLY:O	39:g:60:PHE:HB2	2.03	0.58
41:i:80:ILE:HG23	41:i:138:TRP:O	2.03	0.58
44:l:69:ALA:O	44:l:70:LYS:C	2.46	0.58
44:l:108:ILE:CB	51:s:87:ARG:O	2.35	0.58
45:m:51:LEU:O	45:m:52:ARG:HG3	2.03	0.58
46:n:99:ARG:HG2	46:n:101:GLN:NE2	2.18	0.58
49:q:22:THR:HG22	49:q:27:LYS:O	2.02	0.58
51:s:61:LYS:CD	51:s:64:ARG:HD2	2.34	0.58
53:u:8:ARG:O	53:u:9:ASN:CB	2.50	0.58
1:w:76:C:N4	1:w:110:G:H1	1.98	0.58
1:w:82:G:C2	1:w:103:A:OP2	2.56	0.58
1:w:134:C:H2'	1:w:135:G:C8	2.38	0.58
1:w:270(J):G:C2	1:w:270(K):G:C6	2.91	0.58
1:w:294:A:H3'	1:w:295:G:H8	1.68	0.58
1:w:325:G:C2'	1:w:326:G:H5'	2.32	0.58
1:w:477:A:H3'	1:w:478:A:H8	1.66	0.58
1:w:503:A:N3	1:w:505:A:H2'	2.17	0.58
1:w:507:A:C5'	1:w:509:C:O4'	2.42	0.58
1:w:527:C:H4'	1:w:528:A:C5'	2.33	0.58
1:w:557:U:C2'	1:w:558:G:H5'	2.33	0.58
1:w:578:A:C4	1:w:2018:G:O4'	2.56	0.58
1:w:588:U:O5'	1:w:588:U:H6	1.87	0.58
1:w:646:A:N3	1:w:646:A:H2'	2.18	0.58
1:w:1056:G:H21	1:w:1103:A:N6	1.89	0.58
1:w:1066:U:H2'	1:w:1068:G:OP2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1080:C:C2'	1:w:1081:U:H5'	2.32	0.58
1:w:1173:G:H1'	1:w:1177:A:H61	1.65	0.58
1:w:1352:U:O5'	1:w:1352:U:H6	1.87	0.58
1:w:1417:C:C5	1:w:1418:G:N7	2.71	0.58
1:w:1478:G:N2	1:w:1479:G:C5	2.71	0.58
1:w:1614:A:OP1	1:w:1615:C:N4	2.31	0.58
1:w:1676:A:H3'	1:w:1677:A:C8	2.39	0.58
1:w:1692:U:HO2'	1:w:1693:U:H6	1.50	0.58
1:w:1756:G:H3'	1:w:1756:G:C8	2.36	0.58
1:w:1769:G:C2'	1:w:1770:G:H5'	2.33	0.58
1:w:1776:G:N3	1:w:1776:G:H2'	2.17	0.58
1:w:1793:C:H1'	1:w:1970:A:N1	2.18	0.58
1:w:1801:G:C5'	1:w:1815:A:N6	2.58	0.58
1:w:1816:G:H4'	1:w:1817:G:O5'	2.02	0.58
1:w:1844:C:C5'	4:B:258:LYS:HE3	2.33	0.58
1:w:1849:G:C8	1:w:1849:G:OP2	2.55	0.58
1:w:1869:G:N1	1:w:1871:A:O5'	2.35	0.58
1:w:1902:C:H4'	4:B:244:ARG:N	2.17	0.58
1:w:2037:G:N2	1:w:2038:G:N3	2.52	0.58
1:w:2057:A:N7	1:w:2058:A:C6	2.71	0.58
1:w:2065:C:C2'	1:w:2066:C:C5'	2.51	0.58
1:w:2122:U:C2'	1:w:2123:G:H5'	2.33	0.58
1:w:2187:G:C6	1:w:2188:C:C6	2.92	0.58
1:w:2271:G:C5	1:w:2272:U:C5	2.91	0.58
1:w:2576:G:O2'	1:w:2579:C:OP2	2.19	0.58
1:w:2598:A:OP1	4:B:234:GLY:HA3	2.03	0.58
1:w:2606:C:N4	1:w:2607:G:C6	2.71	0.58
2:x:23:G:C3'	2:x:24:G:C8	2.86	0.58
2:x:41:U:H5	7:E:69:ALA:CB	2.14	0.58
2:x:99:A:H3'	2:x:100:G:C8	2.37	0.58
4:B:37:LEU:H	4:B:62:TYR:H	1.52	0.58
4:B:249:PRO:HB2	4:B:250:TRP:HE3	1.68	0.58
6:D:189:MET:HG2	6:D:190:ASP:N	2.19	0.58
8:F:111:HIS:HB3	8:F:112:PRO:CD	2.32	0.58
9:G:73:GLU:C	9:G:75:LEU:H	2.10	0.58
10:H:33:GLU:O	10:H:35:ARG:NH2	2.36	0.58
10:H:81:ASP:CG	10:H:147:ALA:CB	2.76	0.58
10:H:112:LYS:HD3	10:H:116:THR:HG22	1.85	0.58
11:I:4:PRO:CB	11:I:22:ILE:O	2.41	0.58
12:J:7:ARG:O	12:J:7:ARG:HG3	2.04	0.58
12:J:55:ARG:HH21	29:a:52:LYS:NZ	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:112:LEU:N	12:J:128:HIS:HB2	2.00	0.58
12:J:147:LEU:HD11	12:J:149:GLU:OE2	2.03	0.58
13:K:64:ILE:HG13	13:K:106:VAL:N	2.18	0.58
16:N:19:LEU:CD1	16:N:79:HIS:HA	2.33	0.58
16:N:100:TYR:CB	16:N:101:PHE:HD2	2.13	0.58
17:O:92:ARG:C	17:O:94:ASN:ND2	2.61	0.58
17:O:106:PHE:O	17:O:109:LEU:CG	2.48	0.58
18:P:21:ARG:CG	18:P:93:GLU:HG2	2.32	0.58
18:P:76:LYS:C	18:P:76:LYS:HD2	2.28	0.58
19:Q:5:ALA:HB3	19:Q:105:VAL:HB	1.83	0.58
19:Q:21:VAL:C	19:Q:25:ARG:HG3	2.28	0.58
20:R:47:PHE:O	20:R:48:LYS:HB2	2.03	0.58
21:S:33:LYS:HE3	21:S:66:PRO:HA	1.84	0.58
21:S:76:CYS:HB3	21:S:77:PRO:CD	2.33	0.58
23:U:30:VAL:O	23:U:31:VAL:HG12	2.04	0.58
23:U:31:VAL:O	23:U:64:ASP:HA	2.03	0.58
24:V:54:ALA:HB1	24:V:57:GLU:HA	1.85	0.58
28:Z:9:ARG:O	28:Z:10:ARG:C	2.46	0.58
29:a:9:GLY:N	29:a:12:LYS:NZ	2.51	0.58
29:a:32:LEU:CG	29:a:35:GLN:H	2.11	0.58
30:b:26:ILE:CD1	30:b:33:LYS:HB2	2.31	0.58
31:y:50:A:N6	31:y:361:G:C5'	2.66	0.58
31:y:186(A):C:C1'	53:u:81:LYS:HB3	2.32	0.58
31:y:230:G:OP1	49:q:31:LYS:NZ	2.33	0.58
31:y:300:A:C1'	31:y:565:U:H3	2.16	0.58
31:y:363:A:N3	45:m:31:PHE:HE2	1.99	0.58
31:y:489:C:C5'	37:e:132:ARG:HH22	2.14	0.58
31:y:583:A:N1	31:y:584:G:C2	2.71	0.58
31:y:596:C:C2	31:y:597:G:C8	2.91	0.58
31:y:695:A:OP1	44:l:53:SER:CB	2.50	0.58
31:y:948:C:OP2	46:n:106:ASN:CG	2.46	0.58
31:y:1084:G:H5'	31:y:1102:A:OP1	2.02	0.58
31:y:1243:C:P	54:v:10:ARG:NH1	2.76	0.58
31:y:1276:G:N3	31:y:1282:C:O2'	2.37	0.58
31:y:1280:A:H4'	31:y:1280:A:OP2	2.02	0.58
31:y:1316:G:N2	31:y:1319:A:C8	2.71	0.58
31:y:1347:G:N3	31:y:1348:U:C5	2.71	0.58
31:y:1453:G:C5	31:y:1454:G:H1'	2.38	0.58
35:c:155:LEU:CD2	35:c:158:LEU:O	2.51	0.58
36:d:134:ILE:HD12	36:d:168:ALA:HB2	1.85	0.58
37:e:9:CYS:SG	37:e:30:LYS:O	2.59	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:11:LEU:O	37:e:14:ARG:N	2.35	0.58
37:e:78:LEU:H	37:e:78:LEU:CD1	2.16	0.58
37:e:199:ASN:HD22	37:e:202:LEU:CD2	2.16	0.58
37:e:200:GLU:HG2	37:e:201:GLN:N	2.17	0.58
41:i:5:PRO:O	41:i:9:MET:SD	2.61	0.58
42:j:84:ALA:O	42:j:87:GLN:HB2	2.02	0.58
43:k:39:PRO:C	43:k:70:ARG:HH11	2.10	0.58
45:m:52:ARG:NE	45:m:52:ARG:H	1.98	0.58
46:n:5:ALA:HA	46:n:61:GLU:CD	2.28	0.58
46:n:71:ARG:O	46:n:74:VAL:HB	2.03	0.58
47:o:24:CYS:CB	47:o:29:ARG:H	2.17	0.58
47:o:34:TYR:HB2	47:o:44:LEU:HD11	1.85	0.58
49:q:48:TRP:CE3	49:q:48:TRP:N	2.71	0.58
50:r:5:VAL:HG13	50:r:6:LEU:N	2.18	0.58
53:u:20:LEU:CD1	53:u:21:LYS:N	2.56	0.58
1:w:126:A:O4'	28:Z:18:PHE:CD2	2.57	0.58
1:w:216:A:N6	1:w:217:G:N1	2.50	0.58
1:w:238:C:H5'	1:w:609(A):A:C4'	2.33	0.58
1:w:245:G:H4'	12:J:71:VAL:C	2.27	0.58
1:w:281:G:C2	1:w:358:U:C6	2.91	0.58
1:w:299:A:C6	1:w:322:A:C2'	2.84	0.58
1:w:305:U:H2'	1:w:306:U:C6	2.38	0.58
1:w:327:G:C2	1:w:336:C:C4	2.91	0.58
1:w:399:G:C8	1:w:400:G:N7	2.70	0.58
1:w:468:G:H5''	1:w:797:C:OP1	2.03	0.58
1:w:551:G:C2'	1:w:552:G:C8	2.83	0.58
1:w:586:A:OP2	1:w:1251:C:N4	2.35	0.58
1:w:718:A:O2'	1:w:719:C:C4'	2.50	0.58
1:w:764:A:C4'	4:B:213:ARG:CD	2.67	0.58
1:w:766:C:C2	1:w:767:U:C6	2.91	0.58
1:w:768:G:C5	1:w:769:G:N7	2.72	0.58
1:w:1122:G:H2'	1:w:1123:C:C5'	2.34	0.58
1:w:1155:A:H8	1:w:1155:A:C5'	2.14	0.58
1:w:1201:C:H2'	1:w:1202:C:C6	2.38	0.58
1:w:1305:C:C2	1:w:1624:G:N2	2.72	0.58
1:w:1365:A:C4	1:w:1366:A:H8	2.21	0.58
1:w:1440:G:H2'	1:w:1441:G:C5'	2.34	0.58
1:w:1442:G:H2'	1:w:1443:G:H8	1.68	0.58
1:w:2032:G:C6	1:w:2572:A:C2	2.90	0.58
1:w:2080:G:N2	1:w:2081:C:N3	2.50	0.58
1:w:2169:A:H3'	1:w:2170:A:C8	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2286:A:H1'	1:w:2287:A:C6	2.39	0.58
1:w:2367:G:C2'	1:w:2368:C:C5'	2.56	0.58
1:w:2396:G:HO2'	24:V:32:LYS:HE2	1.69	0.58
1:w:2532:G:H3'	1:w:2533:A:C8	2.36	0.58
1:w:2567:G:C4	1:w:2568:C:C6	2.92	0.58
1:w:2667:C:H2'	1:w:2668:G:H1'	1.86	0.58
1:w:2787:C:O2'	5:C:61:ARG:CD	2.52	0.58
1:w:2794:C:C4	1:w:2795:G:O6	2.56	0.58
1:w:2875:C:C1'	16:N:5:ALA:HB2	2.33	0.58
2:x:62:C:C2'	2:x:63:G:C8	2.78	0.58
2:x:96:G:N2	2:x:97:G:C4	2.71	0.58
5:C:93:VAL:HB	5:C:175:VAL:HG21	1.84	0.58
6:D:27:LEU:HD22	6:D:28:LEU:H	1.69	0.58
7:E:68:PRO:HB3	7:E:92:VAL:CB	2.33	0.58
8:F:126:PRO:HD2	8:F:130:ARG:H	1.69	0.58
8:F:149:ARG:C	8:F:151:ILE:N	2.61	0.58
9:G:26:ALA:HA	9:G:31:LEU:H	1.69	0.58
9:G:118:LYS:HD3	9:G:118:LYS:N	2.18	0.58
9:G:128:LEU:H	9:G:141:LYS:HG2	1.68	0.58
11:I:22:ILE:HD11	11:I:40:VAL:HG23	1.84	0.58
11:I:50:GLY:O	11:I:51:ALA:HB3	2.02	0.58
11:I:65:THR:O	11:I:79:PHE:CG	2.56	0.58
11:I:106:LEU:O	11:I:111:PHE:HD2	1.86	0.58
12:J:83:VAL:HG12	12:J:114:ILE:CA	2.28	0.58
12:J:97:PRO:HD2	12:J:126:VAL:HB	1.85	0.58
18:P:19:LYS:C	18:P:20:LEU:HD12	2.28	0.58
19:Q:23:LEU:CD2	19:Q:36:LEU:HD21	2.33	0.58
20:R:17:ALA:C	20:R:19:ALA:H	2.11	0.58
21:S:13:VAL:HB	21:S:70:SER:O	2.03	0.58
24:V:62:VAL:HG22	24:V:63:ALA:N	2.18	0.58
28:Z:11:LYS:CE	28:Z:15:THR:OG1	2.51	0.58
29:a:12:LYS:HB2	29:a:13:ARG:HH11	1.67	0.58
30:b:3:VAL:HG13	30:b:4:ARG:N	2.17	0.58
31:y:129(B):G:N1	31:y:188:U:H4'	2.17	0.58
31:y:249:U:O2'	31:y:252:U:C4'	2.51	0.58
31:y:263:A:O2'	31:y:264:U:H5'	2.03	0.58
31:y:286:G:C2'	31:y:287:U:C6	2.85	0.58
31:y:310:G:N1	31:y:311:C:C5	2.72	0.58
31:y:324:G:O5'	53:u:70:SER:HB2	2.03	0.58
31:y:344:A:C3'	31:y:346:G:O6	2.51	0.58
31:y:563:A:C5'	31:y:566:G:N3	2.64	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:582:U:H5'	48:p:68:ARG:HH22	1.67	0.58
31:y:608:A:O2'	31:y:609:A:H5'	2.04	0.58
31:y:616:G:O2'	49:q:45:THR:HG21	2.03	0.58
31:y:699:C:C2	31:y:700:G:N7	2.71	0.58
31:y:951:G:C5	31:y:1231:G:N1	2.71	0.58
31:y:959:A:C8	31:y:959:A:O5'	2.56	0.58
31:y:965:A:C2	31:y:969:A:N1	2.72	0.58
31:y:1064:G:H1'	31:y:1190:G:N2	2.19	0.58
31:y:1093:A:C2	31:y:1109:C:H1'	2.38	0.58
31:y:1197:G:C4	31:y:1198:G:C8	2.92	0.58
31:y:1214:C:O5'	31:y:1214:C:C6	2.56	0.58
31:y:1261:A:P	31:y:1262:C:H5	2.27	0.58
31:y:1319:A:C2'	31:y:1323:G:N7	2.67	0.58
31:y:1412:C:C2	31:y:1413:A:N7	2.71	0.58
31:y:1489:G:C2'	31:y:1490:C:H6	2.01	0.58
33:0:15:G:OP2	33:0:15:G:H3'	2.03	0.58
35:c:54:THR:CG2	35:c:58:ILE:HD11	2.26	0.58
35:c:118:LEU:N	35:c:118:LEU:HD22	2.18	0.58
35:c:223:ILE:C	35:c:225:ALA:H	2.11	0.58
37:e:127:THR:CG2	37:e:147:ALA:HB3	2.32	0.58
39:g:98:LEU:HD12	39:g:98:LEU:N	2.17	0.58
40:h:51:GLN:HG2	40:h:58:PRO:HD3	1.83	0.58
44:l:75:TYR:CD2	44:l:75:TYR:N	2.71	0.58
45:m:8:GLN:O	45:m:9:LEU:C	2.45	0.58
45:m:10:VAL:HG22	45:m:10:VAL:O	2.02	0.58
45:m:24:PRO:CD	45:m:97:TYR:CZ	2.79	0.58
45:m:24:PRO:O	45:m:26:LEU:HD12	2.04	0.58
45:m:38:VAL:O	45:m:56:LYS:N	2.34	0.58
45:m:59:LEU:HD13	45:m:62:GLY:N	2.17	0.58
47:o:26:ARG:HH21	47:o:43:CYS:H	1.50	0.58
49:q:72:ARG:NH1	49:q:73:LEU:HD11	2.17	0.58
50:r:17:LYS:HB3	50:r:17:LYS:NZ	2.18	0.58
51:s:58:LEU:CD1	51:s:58:LEU:H	2.16	0.58
52:t:21:GLU:CB	52:t:25:LYS:HZ3	2.16	0.58
1:w:13:A:C2	1:w:15:G:C2	2.91	0.58
1:w:35:G:C6	1:w:446:G:N2	2.72	0.58
1:w:256:A:O2'	1:w:257:A:H5'	2.03	0.58
1:w:300:A:H2'	1:w:334:C:H1'	1.84	0.58
1:w:321:G:C8	1:w:340:A:C2	2.91	0.58
1:w:376:C:C5	1:w:377:C:C5	2.90	0.58
1:w:557:U:H5''	10:H:134:PRO:CG	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:578:A:OP1	1:w:1255:U:H1'	2.03	0.58
1:w:611:C:C4	1:w:612:G:N7	2.71	0.58
1:w:796:C:C2'	1:w:797:C:C6	2.80	0.58
1:w:855:G:C6	1:w:856:C:C2	2.92	0.58
1:w:887:A:N3	1:w:887:A:C3'	2.61	0.58
1:w:945:A:N3	1:w:2448:A:C2	2.71	0.58
1:w:1047:G:C4'	1:w:1111:A:H61	2.16	0.58
1:w:1052:C:H2'	1:w:1053:C:H6	1.64	0.58
1:w:1115:G:H2'	1:w:1116:C:C5	2.38	0.58
1:w:1363:C:O4'	1:w:1810:A:H5'	2.03	0.58
1:w:1803:A:H62	1:w:1814:G:N2	2.01	0.58
1:w:1884:A:C6	1:w:1885:A:C8	2.91	0.58
1:w:2067:G:N1	1:w:2444:G:N1	2.51	0.58
1:w:2097:C:C2	1:w:2193:G:C2	2.90	0.58
1:w:2119:A:C5	1:w:2171:A:C2	2.91	0.58
1:w:2270:G:N3	23:U:19:LYS:HE2	2.18	0.58
1:w:2355:C:H5'	23:U:36:ILE:O	2.03	0.58
1:w:2485:G:C5'	13:K:46:GLN:NE2	2.66	0.58
1:w:2531:A:C4	1:w:2532:G:C8	2.92	0.58
1:w:2675:A:OP1	11:I:31:LYS:CG	2.46	0.58
1:w:2680:C:C5'	5:C:189:PRO:HA	2.31	0.58
1:w:2744:G:C2	1:w:2761:G:C2	2.91	0.58
1:w:2749:A:N6	1:w:2753:A:H2	1.99	0.58
1:w:2885:C:C6	1:w:2885:C:C3'	2.86	0.58
2:x:42:C:O5'	7:E:68:PRO:O	2.22	0.58
2:x:71:C:C5	2:x:72:G:C6	2.92	0.58
3:A:195:ARG:HG3	3:A:196:ALA:N	2.18	0.58
4:B:241:PRO:HB2	4:B:242:ARG:NE	2.19	0.58
5:C:5:LEU:CB	5:C:76:ARG:HH11	2.16	0.58
8:F:41:MET:CA	8:F:54:ARG:HA	2.34	0.58
8:F:140:LYS:HD2	8:F:140:LYS:C	2.28	0.58
8:F:148:ILE:O	8:F:151:ILE:HB	2.02	0.58
9:G:27:ARG:NH2	9:G:28:ASN:ND2	2.51	0.58
10:H:35:ARG:O	10:H:74:PHE:HB2	2.04	0.58
10:H:62:ARG:HH21	10:H:63:PRO:CD	2.15	0.58
11:I:85:VAL:HG12	11:I:93:PRO:HB2	1.85	0.58
12:J:123:LEU:HD23	12:J:123:LEU:C	2.29	0.58
14:L:37:THR:OG1	14:L:39:PRO:CD	2.43	0.58
14:L:104:ARG:CG	14:L:105:ARG:N	2.64	0.58
17:O:93:LYS:O	17:O:96:ALA:HB3	2.03	0.58
22:T:90:VAL:CG2	22:T:91:LEU:H	2.09	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:66:VAL:CG2	23:U:82:ARG:HB2	2.33	0.58
24:V:91:LYS:H	24:V:91:LYS:CD	2.17	0.58
27:Y:33:CYS:HG	27:Y:34:PRO:HD2	1.63	0.58
30:b:9:ARG:HG3	30:b:14:CYS:O	2.03	0.58
31:y:15:G:C5	31:y:16:A:C5	2.92	0.58
31:y:68:G:H3'	31:y:69:G:H5''	1.85	0.58
31:y:241:C:H2'	31:y:242:C:C5'	2.34	0.58
31:y:276:G:O2'	50:r:68:ARG:CZ	2.52	0.58
31:y:475:G:C2'	31:y:476:G:O5'	2.50	0.58
31:y:634:C:H6	31:y:634:C:O5'	1.85	0.58
31:y:783:C:N3	31:y:784:C:C5	2.72	0.58
31:y:885:G:N1	31:y:912:C:N3	2.39	0.58
31:y:959:A:H1'	31:y:1221:G:N2	2.18	0.58
31:y:1076:C:H5'	35:c:175:ARG:NH1	2.18	0.58
31:y:1223:C:H3'	31:y:1223:C:C6	2.39	0.58
31:y:1249:C:O2'	42:j:68:GLY:CA	2.52	0.58
31:y:1316:G:C2	31:y:1319:A:C8	2.92	0.58
31:y:1344:C:H4'	42:j:120:ARG:CA	2.34	0.58
31:y:1347:G:C4	31:y:1348:U:C5	2.90	0.58
31:y:1498:UR3:OP1	34:l:1:U:H4'	2.03	0.58
33:0:74:C:H2'	33:0:75:C:H1'	1.83	0.58
35:c:25:ASN:C	35:c:27:LYS:H	2.10	0.58
37:e:26:CYS:C	37:e:31:CYS:HB2	2.28	0.58
37:e:64:LEU:HD12	37:e:203:VAL:HG23	1.85	0.58
38:f:106:PRO:CB	38:f:109:ILE:HD12	2.33	0.58
38:f:147:ASP:HA	38:f:150:ARG:HD3	1.85	0.58
44:l:81:ASP:HA	44:l:106:LYS:O	2.03	0.58
48:p:4:THR:C	48:p:6:GLU:N	2.60	0.58
48:p:53:HIS:HA	48:p:56:LEU:HG	1.85	0.58
52:t:5:LEU:O	52:t:6:LYS:C	2.46	0.58
1:w:49:A:OP1	1:w:51:G:O5'	2.21	0.58
1:w:64:A:H4'	20:R:63:LYS:CD	2.30	0.58
1:w:101:G:H4'	1:w:102:G:N7	2.16	0.58
1:w:531:C:H5'	1:w:532:A:N9	2.17	0.58
1:w:568:U:N3	1:w:570:G:OP1	2.37	0.58
1:w:795:C:H2'	1:w:795:C:O2	2.03	0.58
1:w:1019:U:O2'	1:w:1021:A:N1	2.29	0.58
1:w:1095:A:H2'	1:w:1096:A:C8	2.39	0.58
1:w:1313:U:H4'	1:w:1332:G:C4'	2.33	0.58
1:w:1804:C:O5'	1:w:1804:C:H6	1.87	0.58
1:w:1897:G:OP2	1:w:1898:U:H5	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1923:U:H2'	1:w:1924:C:C6	2.39	0.58
1:w:1934:C:H6	1:w:1934:C:H5''	1.69	0.58
1:w:2320:A:C4	1:w:2333:A:N7	2.71	0.58
1:w:2466:C:H5''	30:b:5:ALA:HB1	1.81	0.58
1:w:2521:C:H4'	1:w:2564:A:O2'	2.03	0.58
1:w:2549:G:H2'	1:w:2550:G:C5'	2.34	0.58
1:w:2565:A:H2'	1:w:2566:A:O4'	2.03	0.58
1:w:2588:G:C5	1:w:2589:A:C5	2.91	0.58
1:w:2690:C:O2	1:w:2690:C:H2'	2.04	0.58
1:w:2820:A:N3	5:C:191:PRO:HD2	2.18	0.58
1:w:2851:A:H62	1:w:2866:U:H3	1.52	0.58
2:x:1:U:C2	2:x:2:C:C5	2.92	0.58
2:x:11:C:OP1	23:U:72:ARG:CD	2.44	0.58
2:x:19:G:O2'	2:x:20:C:H5'	2.04	0.58
2:x:87:G:N2	2:x:90:C:C6	2.72	0.58
2:x:114:G:H1'	15:M:50:SER:HG	1.68	0.58
3:A:47:LYS:HB3	3:A:212:SER:HB3	1.86	0.58
5:C:92:THR:H	5:C:95:ILE:HD11	1.68	0.58
6:D:4:ILE:HG23	6:D:118:LEU:HD22	1.85	0.58
6:D:70:HIS:CE1	6:D:72:ASP:C	2.77	0.58
7:E:70:VAL:HA	7:E:90:LEU:HG	1.84	0.58
7:E:96:ARG:CD	7:E:97:ASP:H	2.16	0.58
8:F:20:ALA:HB3	8:F:23:ARG:HB2	1.86	0.58
8:F:88:LEU:O	8:F:162:ILE:HG12	2.03	0.58
8:F:105:LEU:CD1	8:F:107:VAL:HG22	2.28	0.58
8:F:123:PHE:HD2	8:F:125:VAL:CG2	2.16	0.58
9:G:44:LEU:HD13	9:G:45:LYS:N	2.18	0.58
10:H:37:VAL:HG13	10:H:159:GLU:CA	2.32	0.58
10:H:71:MET:CE	10:H:71:MET:H	2.16	0.58
11:I:59:LYS:CB	11:I:94:ARG:HH12	2.14	0.58
12:J:79:ARG:HB3	12:J:110:TYR:N	2.18	0.58
13:K:37:LEU:CG	13:K:128:LYS:O	2.47	0.58
15:M:17:ARG:NH1	15:M:89:ARG:NE	2.51	0.58
15:M:24:LEU:HB2	15:M:85:VAL:HA	1.86	0.58
17:O:112:ARG:HG2	17:O:112:ARG:NH1	2.18	0.58
19:Q:5:ALA:HB3	19:Q:105:VAL:CB	2.33	0.58
21:S:31:LEU:CB	21:S:32:PRO:CD	2.80	0.58
25:W:55:ARG:N	25:W:55:ARG:CD	2.65	0.58
31:y:50:A:N3	31:y:52:G:O4'	2.36	0.58
31:y:126:G:C6	31:y:127:G:C6	2.91	0.58
31:y:129(B):G:N1	31:y:188:U:C4'	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:173:U:O2'	31:y:174:C:OP1	2.22	0.58
31:y:200:G:H2'	31:y:201:C:C5	2.37	0.58
31:y:254:G:O6	31:y:266:G:O6	2.22	0.58
31:y:321:A:N3	31:y:322:C:C6	2.71	0.58
31:y:334:C:O2'	31:y:1434:A:C4'	2.47	0.58
31:y:423:G:C3'	31:y:424:G:H5'	2.34	0.58
31:y:454:C:H41	31:y:478:A:H2	1.50	0.58
31:y:738:C:C2	31:y:739:C:C4	2.91	0.58
31:y:760:G:H22	50:r:105:ALA:C	2.11	0.58
31:y:798:G:C5	31:y:799:G:N7	2.72	0.58
31:y:1068:G:H4'	31:y:1388:C:OP1	2.04	0.58
31:y:1195:C:N4	31:y:1197:G:N7	2.51	0.58
31:y:1206:G:H5'	36:d:194:GLY:CA	2.34	0.58
31:y:1245:A:H61	31:y:1292:U:H3	1.51	0.58
31:y:1264:C:H2'	31:y:1265:G:C8	2.39	0.58
31:y:1267:C:C1'	54:v:20:LYS:HE3	2.34	0.58
31:y:1300:G:C4'	31:y:1301:U:C5	2.87	0.58
31:y:1489:G:C5	31:y:1490:C:C4	2.92	0.58
32:z:2:C:H2'	32:z:3:C:O4'	2.04	0.58
33:0:33:U:O4	33:0:36:A:OP1	2.21	0.58
36:d:117:ALA:HB2	36:d:200:ALA:HB3	1.84	0.58
37:e:35:ARG:HB3	37:e:36:ARG:HH21	1.69	0.58
38:f:14:ARG:HA	38:f:14:ARG:NE	2.18	0.58
38:f:40:ARG:HA	38:f:68:GLU:OE2	2.03	0.58
41:i:46:LYS:HD2	41:i:63:LEU:O	2.04	0.58
41:i:80:ILE:C	41:i:82:HIS:H	2.10	0.58
41:i:90:GLY:HA2	50:r:34:LYS:CE	2.22	0.58
41:i:96:GLY:N	41:i:99:GLU:OE1	2.37	0.58
41:i:111:ILE:HD11	41:i:136:GLU:O	2.03	0.58
44:l:110:ASP:HB2	51:s:88:LYS:NZ	2.19	0.58
45:m:99:ILE:HG13	45:m:100:VAL:N	2.11	0.58
46:n:91:ARG:C	46:n:96:LEU:HB2	2.29	0.58
48:p:57:LEU:C	48:p:57:LEU:CD1	2.68	0.58
1:w:64:A:H2'	1:w:65:C:C5	2.36	0.58
1:w:140:A:C2	1:w:1408:C:C4'	2.86	0.58
1:w:204:A:C1'	1:w:206:U:C6	2.85	0.58
1:w:338:G:O2'	1:w:339:U:H6	1.87	0.58
1:w:371:A:H1'	1:w:373:U:C5	2.31	0.58
1:w:396:G:H4'	24:V:46:LEU:HD13	1.85	0.58
1:w:515:A:H2	1:w:1260:G:N3	2.02	0.58
1:w:591:C:H2'	29:a:2:PRO:CB	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:598:G:O5'	1:w:598:G:C8	2.47	0.58
1:w:765:G:O5'	1:w:765:G:C8	2.50	0.58
1:w:789:A:OP1	1:w:790:C:C4	2.56	0.58
1:w:890:A:C8	1:w:890:A:H3'	2.38	0.58
1:w:938:G:H3'	1:w:939:G:H8	1.69	0.58
1:w:1194:A:C5'	1:w:1195:G:OP2	2.40	0.58
1:w:1205:U:H5''	1:w:1206:G:OP2	2.04	0.58
1:w:1261:C:OP2	1:w:1261:C:C5	2.57	0.58
1:w:1666:G:O2'	11:I:3:GLN:NE2	2.36	0.58
1:w:1799:G:O6	4:B:179:SER:C	2.46	0.58
1:w:2080:G:H5'	24:V:23:LYS:CE	2.34	0.58
1:w:2083:G:C4	1:w:2084:C:C5	2.91	0.58
1:w:2101:G:C2	1:w:2102:U:C6	2.92	0.58
1:w:2296:U:C6	15:M:9:ARG:NH1	2.72	0.58
1:w:2352:A:C6	1:w:2353:G:H1'	2.38	0.58
1:w:2364:C:O2	23:U:36:ILE:CD1	2.52	0.58
1:w:2415:G:H5''	12:J:66:GLY:C	2.29	0.58
1:w:2823:A:O2'	1:w:2824:C:H5'	2.03	0.58
2:x:18:G:O2'	2:x:19:G:H8	1.74	0.58
2:x:20:C:H2'	2:x:21:G:N9	2.19	0.58
2:x:87:G:N2	2:x:90:C:C5	2.71	0.58
4:B:56:GLY:C	4:B:216:GLY:HA2	2.28	0.58
4:B:76:PRO:HB2	4:B:117:VAL:HG11	1.81	0.58
4:B:184:LYS:HG2	4:B:185:VAL:N	2.16	0.58
5:C:98:PRO:HA	5:C:172:VAL:HG12	1.85	0.58
6:D:19:LEU:HD22	6:D:19:LEU:H	1.67	0.58
6:D:52:VAL:O	6:D:52:VAL:CG1	2.52	0.58
7:E:35:GLU:OE1	7:E:162:THR:HA	2.03	0.58
8:F:27:LYS:HB3	8:F:31:GLY:HA2	1.86	0.58
8:F:81:GLU:HG3	8:F:82:GLY:H	1.68	0.58
9:G:6:LEU:CB	9:G:35:LEU:HD13	2.30	0.58
9:G:133:HIS:O	9:G:136:VAL:O	2.20	0.58
10:H:80:ALA:HB3	10:H:146:TYR:C	2.28	0.58
10:H:112:LYS:C	10:H:112:LYS:CD	2.77	0.58
11:I:86:ILE:O	11:I:94:ARG:HD2	2.04	0.58
12:J:148:LEU:CD2	12:J:149:GLU:N	2.65	0.58
16:N:35:LYS:HB3	16:N:35:LYS:HZ3	1.67	0.58
16:N:90:GLN:HB2	16:N:120:ARG:CZ	2.34	0.58
16:N:92:GLY:O	16:N:114:LEU:HD22	2.04	0.58
18:P:77:ALA:O	18:P:78:LYS:HB3	2.02	0.58
19:Q:75:TYR:O	19:Q:103:ILE:HG13	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:73:GLN:HB3	22:T:87:ASP:CB	2.33	0.58
25:W:13:ALA:C	25:W:14:ARG:CD	2.74	0.58
27:Y:47:PRO:CB	27:Y:57:VAL:HG21	2.33	0.58
30:b:13:LYS:HB2	30:b:27:CYS:CB	2.31	0.58
31:y:93:U:H6	31:y:93:U:C5'	2.00	0.58
31:y:140:A:C2	31:y:223:U:N3	2.69	0.58
31:y:297:G:C6	31:y:299:G:OP2	2.55	0.58
31:y:320:C:OP2	31:y:320:C:C6	2.57	0.58
31:y:376:G:C5	31:y:377:G:N7	2.71	0.58
31:y:423:G:N2	31:y:424:G:N9	2.51	0.58
31:y:492:G:H2'	31:y:493:G:O5'	2.03	0.58
31:y:654:G:OP2	31:y:654:G:C8	2.47	0.58
31:y:725:G:C2	31:y:726:C:C5	2.91	0.58
31:y:735:C:O2	31:y:735:C:H2'	2.04	0.58
31:y:749:C:O3'	31:y:750:G:O4'	2.20	0.58
31:y:777:A:C2'	31:y:778:G:H8	2.16	0.58
31:y:971:G:H5''	31:y:972:C:H5''	1.84	0.58
31:y:972:C:O5'	43:k:57:LYS:HD3	2.04	0.58
31:y:979:C:C5	31:y:980:C:C6	2.92	0.58
31:y:1077:G:C6	31:y:1081:G:N1	2.72	0.58
31:y:1167:A:C8	31:y:1167:A:OP1	2.56	0.58
31:y:1252:A:H2	31:y:1355:G:H1'	1.69	0.58
31:y:1263:C:O5'	31:y:1263:C:H6	1.86	0.58
31:y:1305:G:C6	31:y:1331:G:C4	2.92	0.58
31:y:1318:A:H2'	52:t:37:ARG:NH2	2.19	0.58
31:y:1359:C:C2'	31:y:1360:A:O5'	2.52	0.58
31:y:1477:C:H2'	31:y:1478:C:C6	2.39	0.58
35:c:97:TRP:NE1	35:c:101:MET:SD	2.76	0.58
35:c:98:LEU:O	35:c:98:LEU:HD23	2.03	0.58
36:d:141:VAL:HG13	36:d:142:MET:N	2.19	0.58
38:f:9:LYS:HZ3	38:f:11:ILE:HG12	1.69	0.58
38:f:10:MET:HA	38:f:32:VAL:HB	1.86	0.58
39:g:7:ASN:OD1	39:g:62:TRP:HB2	2.03	0.58
39:g:45:LEU:O	39:g:46:ARG:HB2	2.02	0.58
40:h:52:GLU:OE2	40:h:52:GLU:HA	2.03	0.58
40:h:108:ALA:O	40:h:119:ARG:CZ	2.51	0.58
40:h:113:GLU:O	40:h:114:ARG:HG3	2.04	0.58
41:i:21:LYS:HD3	41:i:22:GLU:N	2.18	0.58
41:i:46:LYS:HB2	41:i:62:TYR:O	2.03	0.58
41:i:120:THR:O	41:i:121:ASP:C	2.46	0.58
43:k:85:LEU:HD12	43:k:85:LEU:C	2.29	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:39:VAL:HG12	45:m:40:ARG:N	2.19	0.58
45:m:116:ARG:CD	45:m:121:THR:CG2	2.77	0.58
47:o:8:GLU:HG2	47:o:9:LYS:H	1.68	0.58
47:o:29:ARG:CA	47:o:29:ARG:HH11	2.17	0.58
50:r:23:VAL:H	50:r:41:LYS:CB	2.16	0.58
51:s:26:LEU:HD21	51:s:29:PHE:CE2	2.37	0.58
52:t:19:VAL:CG2	52:t:23:ASN:ND2	2.67	0.58
53:u:30:LYS:O	53:u:34:LYS:HG3	2.03	0.58
1:w:89:G:N7	1:w:90:U:C4	2.72	0.58
1:w:172:C:N4	1:w:173:G:C6	2.72	0.58
1:w:439:G:C2	1:w:440:G:C4	2.91	0.58
1:w:443:A:O2'	17:O:2:PRO:HG3	2.03	0.58
1:w:458:G:H3'	28:Z:39:ARG:CA	2.30	0.58
1:w:463:G:N2	28:Z:34:ARG:HH12	2.02	0.58
1:w:464:U:H2'	1:w:465:G:H8	1.64	0.58
1:w:465:G:H4'	28:Z:16:HIS:CG	2.38	0.58
1:w:515:A:H2'	1:w:516:C:C6	2.38	0.58
1:w:568:U:H5'	1:w:945:A:C2	2.38	0.58
1:w:736:C:H2'	1:w:737:C:H6	1.69	0.58
1:w:792:G:N3	1:w:792:G:H2'	2.19	0.58
1:w:814:C:N3	1:w:815:C:C5	2.71	0.58
1:w:945:A:C2	1:w:2448:A:N1	2.71	0.58
1:w:947:G:C2'	1:w:948:G:H8	2.14	0.58
1:w:1186:G:C6	1:w:1187:G:H1'	2.34	0.58
1:w:1500:G:C2'	4:B:100:GLY:O	2.52	0.58
1:w:1670:C:H2'	1:w:1671:U:H5'	1.86	0.58
1:w:1746:G:H3'	1:w:1747:G:C5'	2.34	0.58
1:w:1751:C:C3'	1:w:1752:C:C6	2.87	0.58
1:w:1786:A:H1'	1:w:1787:A:OP1	2.04	0.58
1:w:1819:A:C2'	4:B:179:SER:HB3	2.34	0.58
1:w:2018:G:C2'	1:w:2019:A:H5'	2.34	0.58
1:w:2087:G:C6	1:w:2233:U:C2	2.92	0.58
1:w:2239:G:N3	1:w:2239:G:C2'	2.65	0.58
1:w:2340:G:H8	1:w:2340:G:P	2.27	0.58
1:w:2343:C:HO2'	1:w:2373:G:HO2'	1.31	0.58
1:w:2441:C:H4'	1:w:2441:C:OP1	2.04	0.58
1:w:2562:U:N3	1:w:2563:U:C6	2.71	0.58
1:w:2790:A:H4'	1:w:2893:G:C2	2.38	0.58
1:w:2852:G:H2'	1:w:2852:G:N3	2.19	0.58
2:x:14:U:O3'	2:x:108:C:H5'	2.03	0.58
2:x:115:G:C2'	2:x:116:G:H8	2.07	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:65:ILE:CG2	4:B:105:ILE:HA	2.32	0.58
4:B:157:ARG:CG	4:B:158:ALA:H	2.13	0.58
4:B:242:ARG:N	4:B:242:ARG:CD	2.59	0.58
4:B:247:ALA:HB1	4:B:251:GLY:HA2	1.85	0.58
5:C:48:GLN:NE2	5:C:78:LEU:HD13	2.18	0.58
6:D:55:SER:C	6:D:57:ARG:N	2.61	0.58
7:E:23:PHE:HB3	7:E:25:TYR:CZ	2.38	0.58
8:F:29:PRO:HD3	8:F:79:VAL:HB	1.86	0.58
8:F:95:ARG:HB2	8:F:107:VAL:CG1	2.33	0.58
8:F:125:VAL:HG13	8:F:131:VAL:CG1	2.33	0.58
8:F:148:ILE:C	8:F:151:ILE:H	2.10	0.58
9:G:113:ARG:CD	9:G:132:PRO:HB3	2.32	0.58
10:H:112:LYS:NZ	10:H:116:THR:HG22	2.19	0.58
12:J:79:ARG:HB3	12:J:109:GLY:CA	2.34	0.58
12:J:123:LEU:HD23	12:J:124:LYS:N	2.18	0.58
14:L:36:THR:O	14:L:111:LEU:HB3	2.04	0.58
16:N:45:PHE:HE2	16:N:64:ARG:CA	2.17	0.58
16:N:93:ARG:HB2	16:N:116:ALA:O	2.03	0.58
19:Q:14:PRO:O	19:Q:18:ARG:HD3	2.04	0.58
20:R:84:ALA:H	20:R:85:PRO:CD	2.16	0.58
21:S:37:VAL:H	21:S:62:GLU:CG	2.16	0.58
21:S:38:ILE:HG12	21:S:60:PHE:HZ	1.68	0.58
21:S:55:TYR:CB	21:S:56:PRO:CD	2.37	0.58
22:T:69:THR:HG23	22:T:70:LEU:H	1.68	0.58
23:U:31:VAL:CG2	23:U:62:LEU:N	2.67	0.58
23:U:35:ASN:N	23:U:35:ASN:ND2	2.51	0.58
24:V:55:GLY:O	24:V:56:GLN:CB	2.51	0.58
26:X:31:LEU:HD22	26:X:31:LEU:H	1.69	0.58
27:Y:30:LEU:CD2	27:Y:31:VAL:N	2.63	0.58
29:a:22:VAL:HG21	29:a:53:PRO:HB2	1.85	0.58
31:y:38:G:C2	31:y:397:A:C4	2.92	0.58
31:y:147:G:C2	31:y:148:G:C4	2.91	0.58
31:y:162:A:H3'	31:y:163:C:C6	2.38	0.58
31:y:355:C:H2'	31:y:356:A:O4'	2.04	0.58
31:y:604:G:C5	31:y:605:U:C4	2.92	0.58
31:y:617:G:N1	31:y:618:C:H5	2.01	0.58
31:y:717:C:O2'	31:y:734:G:C5'	2.50	0.58
31:y:721:G:H8	31:y:721:G:OP1	1.84	0.58
31:y:874:G:P	31:y:874:G:C8	2.96	0.58
31:y:1078:U:C5	31:y:1079:G:N7	2.72	0.58
31:y:1078:U:C6	31:y:1078:U:C3'	2.87	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1083:U:C4	31:y:1084:G:C6	2.92	0.58
31:y:1160:G:C2	31:y:1161:C:C1'	2.86	0.58
31:y:1316:G:O2'	31:y:1318:A:N6	2.36	0.58
31:y:1416:G:H2'	31:y:1417:G:H5'	1.85	0.58
31:y:1489:G:C5	31:y:1490:C:N4	2.71	0.58
32:z:15:G:C2'	32:z:16:H2U:OP1	2.51	0.58
32:z:69:G:O2'	32:z:70:G:H5'	2.04	0.58
32:z:70:G:C6	32:z:71:G:C6	2.92	0.58
35:c:27:LYS:HG3	35:c:194:PRO:CG	2.33	0.58
36:d:44:GLU:HA	36:d:44:GLU:OE1	2.03	0.58
37:e:18:LYS:C	37:e:33:MET:HG3	2.28	0.58
41:i:13:ILE:C	41:i:15:ASN:H	2.12	0.58
41:i:27:PRO:HA	41:i:58:TYR:CD2	2.38	0.58
42:j:10:ARG:HG2	42:j:11:LYS:N	2.16	0.58
44:l:59:TYR:O	44:l:60:ALA:C	2.47	0.58
45:m:76:LEU:HD23	45:m:105:ASP:OD2	2.04	0.58
45:m:81:VAL:O	45:m:105:ASP:HB2	2.04	0.58
47:o:26:ARG:NH2	47:o:43:CYS:SG	2.76	0.58
49:q:4:ILE:CG2	49:q:5:ARG:N	2.66	0.58
53:u:23:ARG:HG2	53:u:23:ARG:HH11	1.67	0.58
1:w:36:G:N1	1:w:445:C:C4	2.72	0.58
1:w:64:A:C2'	1:w:65:C:C6	2.79	0.58
1:w:108:U:O2'	1:w:349:G:H1'	2.03	0.58
1:w:126:A:O5'	28:Z:18:PHE:HB3	2.03	0.58
1:w:346:A:N3	1:w:347:A:N7	2.52	0.58
1:w:347:A:O2'	1:w:348:G:H5'	2.04	0.58
1:w:363(G):A:C2'	1:w:364:C:C5	2.74	0.58
1:w:440:G:C8	1:w:441:U:C5	2.92	0.58
1:w:447:A:H61	1:w:454:A:H2'	1.66	0.58
1:w:471:A:H2'	1:w:472:A:H5'	1.84	0.58
1:w:575:A:C2	1:w:576:U:C6	2.92	0.58
1:w:663:G:C5	1:w:664:C:C6	2.91	0.58
1:w:727:A:H8	1:w:727:A:O5'	1.87	0.58
1:w:789:A:N1	28:Z:3:ARG:CD	2.43	0.58
1:w:857:C:O2'	1:w:858:U:H5'	2.03	0.58
1:w:890:A:C8	1:w:890:A:C4'	2.86	0.58
1:w:1000:A:C6	1:w:1155:A:C2	2.92	0.58
1:w:1039:G:C8	1:w:1117:G:C2	2.92	0.58
1:w:1055:G:C5	1:w:1056:G:C6	2.91	0.58
1:w:1064:C:H5	1:w:1064:C:OP2	1.86	0.58
1:w:1200:C:C2'	1:w:1201:C:C5'	2.73	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1222:C:N3	1:w:1223:G:C8	2.72	0.58
1:w:1500:G:HO2'	4:B:101:GLU:HA	1.67	0.58
1:w:1516:U:H5'	1:w:1516:U:C6	2.35	0.58
1:w:1539:G:N7	1:w:1540:G:C8	2.72	0.58
1:w:1563:G:N2	1:w:1564:C:H1'	2.19	0.58
1:w:1668:A:N3	1:w:1674:G:C8	2.72	0.58
1:w:1767:C:H2'	1:w:1768:U:O4'	2.03	0.58
1:w:1843:C:C4	1:w:1844:C:C5	2.91	0.58
1:w:2080:G:N2	1:w:2241:A:C1'	2.43	0.58
1:w:2197:U:O2	1:w:2225:A:N7	2.36	0.58
1:w:2303:G:C2	7:E:132:ASN:ND2	2.71	0.58
1:w:2399:G:H3'	1:w:2400:G:H8	1.68	0.58
1:w:2461:C:C2'	1:w:2491:U:O4	2.52	0.58
1:w:2745:C:O2'	8:F:142:GLY:HA3	2.04	0.58
2:x:4:C:N3	2:x:117:G:C2	2.72	0.58
2:x:8:U:C5'	15:M:17:ARG:HH12	2.16	0.58
2:x:79:C:H2'	2:x:80:U:C4'	2.33	0.58
2:x:83:G:C6	2:x:84:C:C5	2.92	0.58
2:x:99:A:H2'	2:x:100:G:C8	2.39	0.58
4:B:94:LEU:CG	4:B:104:TYR:HE2	2.16	0.58
4:B:109:ASP:HB2	4:B:199:ALA:CB	2.33	0.58
5:C:104:VAL:HG12	5:C:105:THR:N	2.19	0.58
5:C:117:MET:HG2	5:C:122:PHE:C	2.29	0.58
5:C:154:LYS:HE2	5:C:155:LYS:H	1.69	0.58
8:F:152:ARG:HD2	8:F:152:ARG:H	1.64	0.58
9:G:141:LYS:O	9:G:142:VAL:HG23	2.03	0.58
11:I:66:LYS:HD2	11:I:78:ARG:NH2	2.19	0.58
11:I:85:VAL:CG1	11:I:93:PRO:CB	2.82	0.58
12:J:13:ASN:O	12:J:14:LYS:CB	2.51	0.58
13:K:41:TRP:CD1	13:K:41:TRP:N	2.72	0.58
13:K:61:GLY:HA2	22:T:183:LEU:HG	1.84	0.58
13:K:68:ILE:O	13:K:69:PHE:HB3	2.01	0.58
14:L:27:SER:C	14:L:29:LEU:N	2.62	0.58
14:L:56:LYS:CE	14:L:88:ARG:HA	2.34	0.58
15:M:71:ARG:CB	15:M:108:GLY:H	2.15	0.58
16:N:54:ARG:O	16:N:55:ASN:CB	2.52	0.58
18:P:77:ALA:HB3	18:P:83:ARG:HA	1.86	0.58
21:S:38:ILE:CG2	21:S:39:VAL:H	1.94	0.58
22:T:8:TYR:H	22:T:39:VAL:HG22	1.68	0.58
22:T:16:SER:HA	22:T:19:ARG:HD3	1.84	0.58
22:T:99:TYR:CE2	22:T:125:LEU:HB2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:70:GLN:O	23:U:78:TYR:O	2.22	0.58
24:V:68:PRO:C	24:V:70:VAL:N	2.59	0.58
25:W:3:LEU:HD23	25:W:4:SER:C	2.29	0.58
30:b:9:ARG:O	30:b:10:ILE:C	2.46	0.58
31:y:161:A:C2'	31:y:162:A:H5'	2.34	0.58
31:y:180:U:O5'	31:y:180:U:H6	1.86	0.58
31:y:275:G:C6	31:y:276:G:O6	2.57	0.58
31:y:282:A:H3'	31:y:283:C:C5	2.38	0.58
31:y:301:G:P	50:r:31:LEU:HD22	2.44	0.58
31:y:404:U:O2'	31:y:405:U:H5'	2.02	0.58
31:y:519:C:C5	31:y:520:A:C6	2.91	0.58
31:y:697:U:O5'	31:y:697:U:H6	1.86	0.58
31:y:719:C:H1'	51:s:49:LYS:CD	2.30	0.58
31:y:781:A:H3'	31:y:782:A:C8	2.37	0.58
31:y:786:G:C5	31:y:787:A:C8	2.92	0.58
31:y:790:A:C8	31:y:790:A:P	2.97	0.58
31:y:918:A:C2'	31:y:919:A:O4'	2.50	0.58
31:y:939:G:H5'	40:h:102:ARG:NH1	2.17	0.58
31:y:974:A:P	47:o:41:ARG:NH2	2.77	0.58
31:y:1075:C:O4'	31:y:1101:A:N6	2.36	0.58
31:y:1251:A:HO2'	31:y:1370:G:P	2.27	0.58
31:y:1252:A:H2'	31:y:1253:G:C5'	2.33	0.58
31:y:1312:G:C3'	31:y:1313:U:H5'	2.34	0.58
31:y:1498:UR3:H5	34:l:1:U:HO2'	1.64	0.58
35:c:25:ASN:O	35:c:27:LYS:N	2.37	0.58
35:c:152:PHE:CZ	35:c:157:ARG:O	2.56	0.58
36:d:150:LYS:HZ1	36:d:167:TRP:HB3	1.68	0.58
36:d:151:VAL:O	36:d:152:ILE:HB	2.02	0.58
37:e:128:VAL:HG12	37:e:132:ARG:H	1.69	0.58
37:e:206:PHE:HD2	37:e:207:TYR:HD1	1.50	0.58
39:g:100:ASN:HD22	51:s:29:PHE:H	1.52	0.58
40:h:75:VAL:CG1	40:h:88:PRO:HB3	2.34	0.58
40:h:120:ILE:HG22	40:h:124:LEU:HD21	1.81	0.58
40:h:149:ARG:HD3	44:l:59:TYR:CD1	2.38	0.58
41:i:23:SER:O	41:i:24:THR:C	2.47	0.58
41:i:33:GLU:O	41:i:36:LEU:HB2	2.03	0.58
48:p:45:VAL:O	48:p:46:HIS:HB2	2.02	0.58
51:s:18:ARG:HE	51:s:54:ARG:HB3	1.69	0.58
52:t:36:ARG:O	52:t:37:ARG:CB	2.47	0.58
1:w:59:U:H5'	1:w:73:A:N6	2.19	0.58
1:w:139:G:C4	1:w:140:A:C8	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:245:G:H4'	12:J:71:VAL:O	2.04	0.58
1:w:300:A:C5	1:w:334:C:H4'	2.38	0.58
1:w:578:A:C5'	1:w:579:G:OP2	2.52	0.58
1:w:843:G:C5	1:w:844:C:C4	2.92	0.58
1:w:846:C:H4'	1:w:847:U:C5'	2.34	0.58
1:w:936:C:O5'	1:w:936:C:C6	2.49	0.58
1:w:945:A:OP2	1:w:946:G:P	2.62	0.58
1:w:1194:A:OP1	12:J:17:LYS:NZ	2.31	0.58
1:w:1329:U:H5'	1:w:1330:C:H5	1.69	0.58
1:w:1480:G:H2'	1:w:1480:G:N3	2.19	0.58
1:w:1878:G:O2'	1:w:1879:C:O4'	2.19	0.58
1:w:1889:A:H3'	1:w:1890:A:C8	2.38	0.58
1:w:1918:A:H8	1:w:1918:A:P	2.24	0.58
1:w:2046:G:H3'	1:w:2047:U:C6	2.39	0.58
1:w:2080:G:C2	1:w:2081:C:C6	2.92	0.58
1:w:2116:G:C5	1:w:2117:A:H1'	2.38	0.58
1:w:2239:G:H3'	1:w:2240:C:H5	1.69	0.58
1:w:2420:C:OP1	29:a:35:GLN:HG2	2.04	0.58
1:w:2613:U:O5'	1:w:2613:U:H6	1.86	0.58
1:w:2680:C:O5'	5:C:189:PRO:CA	2.51	0.58
1:w:2704:C:C2'	1:w:2705:A:O5'	2.52	0.58
1:w:2747:G:H4'	8:F:67:LEU:HD13	1.86	0.58
1:w:2795:G:C1'	1:w:2801:A:N6	2.57	0.58
2:x:109:G:H2'	2:x:110:G:C5'	2.34	0.58
4:B:172:TYR:CD1	4:B:186:HIS:HA	2.39	0.58
5:C:103:ASP:C	5:C:104:VAL:HG23	2.29	0.58
6:D:129:GLY:HA2	6:D:161:ALA:HB2	1.84	0.58
7:E:31:VAL:HG13	7:E:32:PRO:N	2.17	0.58
7:E:180:PHE:O	7:E:182:LYS:HG2	2.02	0.58
8:F:7:LEU:HD22	8:F:52:VAL:CG1	2.33	0.58
9:G:13:GLY:O	9:G:15:VAL:N	2.36	0.58
9:G:24:GLY:O	9:G:25:TYR:C	2.46	0.58
9:G:44:LEU:CD2	9:G:47:LEU:HD11	2.34	0.58
10:H:35:ARG:O	10:H:36:TRP:CD1	2.57	0.58
10:H:94:ILE:HG22	10:H:96:THR:CG2	2.33	0.58
11:I:69:VAL:HG22	11:I:70:LYS:N	2.17	0.58
14:L:113:LEU:CD1	14:L:115:GLU:HG2	2.31	0.58
16:N:7:ILE:O	16:N:10:VAL:N	2.29	0.58
16:N:35:LYS:O	16:N:38:ASN:ND2	2.36	0.58
16:N:51:ARG:HD3	16:N:62:THR:HG22	1.85	0.58
16:N:66:VAL:HG13	16:N:70:VAL:CA	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:83:ILE:HG13	16:N:84:GLN:N	2.18	0.58
16:N:108:ARG:HG2	31:y:1431:C:OP1	2.04	0.58
16:N:108:ARG:NH1	31:y:1431:C:O5'	2.37	0.58
19:Q:80:PRO:HD2	19:Q:100:THR:OG1	2.03	0.58
21:S:45:VAL:CA	21:S:57:GLN:HA	2.33	0.58
23:U:36:ILE:HD13	23:U:36:ILE:H	1.67	0.58
25:W:6:VAL:HG23	25:W:7:ARG:N	2.18	0.58
25:W:17:SER:HB3	25:W:21:LEU:HD13	1.84	0.58
29:a:49:VAL:HG12	29:a:53:PRO:HD3	1.84	0.58
31:y:66:G:H4'	31:y:173:U:N3	2.17	0.58
31:y:103:C:H3'	31:y:104:G:H5''	1.84	0.58
31:y:159:G:H1'	31:y:162:A:H61	1.68	0.58
31:y:186(A):C:O4'	53:u:81:LYS:HB2	2.04	0.58
31:y:228:A:H3'	31:y:229:U:C5	2.36	0.58
31:y:276:G:C2	31:y:277:C:C1'	2.87	0.58
31:y:301:G:C5'	50:r:31:LEU:HD22	2.30	0.58
31:y:327:A:H1'	31:y:329:A:O4'	2.04	0.58
31:y:363:A:N6	31:y:364:A:C2	2.72	0.58
31:y:419:C:C2	31:y:420:U:C6	2.92	0.58
31:y:424:G:H2'	31:y:425:G:O5'	2.04	0.58
31:y:426:G:C5	31:y:427:U:C5	2.92	0.58
31:y:427:U:O4	31:y:428:G:C6	2.57	0.58
31:y:563:A:H61	31:y:884:U:H3	1.52	0.58
31:y:809:G:C8	31:y:809:G:O5'	2.57	0.58
31:y:888:G:C8	31:y:889:A:C2'	2.78	0.58
31:y:910:C:H6	31:y:910:C:O5'	1.86	0.58
31:y:1088:G:C8	31:y:1088:G:O5'	2.57	0.58
31:y:1126:U:H1'	31:y:1281:U:H1'	1.85	0.58
31:y:1167:A:N7	31:y:1169:A:C5	2.72	0.58
31:y:1269:A:C1'	31:y:1326:C:C1'	2.82	0.58
31:y:1308:U:C5	46:n:99:ARG:CZ	2.87	0.58
31:y:1422:G:C2	31:y:1423:G:C4	2.92	0.58
35:c:127:ILE:HD12	35:c:128:GLU:N	2.19	0.58
35:c:206:ASP:O	35:c:207:ALA:HB2	2.04	0.58
36:d:14:ILE:O	36:d:14:ILE:HG23	2.04	0.58
36:d:17:ASP:O	36:d:18:TRP:HB2	2.04	0.58
38:f:115:VAL:HB	38:f:118:ILE:CG1	2.34	0.58
40:h:5:ARG:CD	40:h:5:ARG:H	2.15	0.58
41:i:42:GLU:HB3	41:i:44:PHE:CD2	2.37	0.58
42:j:79:LEU:HD13	42:j:79:LEU:C	2.29	0.58
42:j:114:TYR:CE2	43:k:60:ARG:HG2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:43:ARG:HD2	43:k:69:ASN:CB	2.34	0.58
45:m:6:ILE:HD12	45:m:6:ILE:H	1.68	0.58
46:n:54:VAL:CG2	46:n:55:ARG:N	2.67	0.58
47:o:22:THR:HG23	47:o:38:GLY:HA2	1.84	0.58
50:r:10:VAL:HA	50:r:21:VAL:CG2	2.31	0.58
51:s:45:SER:CB	51:s:50:ILE:O	2.52	0.58
1:w:18:C:O2'	17:O:23:GLY:HA2	2.04	0.57
1:w:19:C:C2'	1:w:20:C:H5'	2.09	0.57
1:w:37:C:O2	1:w:38:A:N7	2.37	0.57
1:w:52:A:H2'	1:w:53:A:C8	2.39	0.57
1:w:143:C:C4'	20:R:36:LYS:HG2	2.17	0.57
1:w:215:G:O2'	1:w:432:A:N6	2.37	0.57
1:w:217:G:C4	1:w:218:A:N7	2.72	0.57
1:w:288:C:C5	1:w:289:A:C2	2.92	0.57
1:w:383:U:H3'	1:w:385:C:OP2	2.03	0.57
1:w:483:A:C3'	1:w:484:C:C6	2.87	0.57
1:w:527:C:H4'	1:w:528:A:O4'	2.04	0.57
1:w:722:A:H2'	1:w:723:G:C1'	2.32	0.57
1:w:804:A:H8	1:w:804:A:OP2	1.87	0.57
1:w:997:G:C6	1:w:998:C:N4	2.72	0.57
1:w:1283:G:C2'	1:w:1285:G:N7	2.65	0.57
1:w:1286:A:N1	1:w:1329:U:H2'	2.19	0.57
1:w:1356:G:C5	1:w:1357:U:C4	2.92	0.57
1:w:1377:G:OP2	1:w:1377:G:H8	1.85	0.57
1:w:1533:C:O2	1:w:1534:G:H1'	2.04	0.57
1:w:1568:G:H3'	1:w:1568:G:C8	2.38	0.57
1:w:1924:C:HO2'	32:z:13:C:H4'	1.67	0.57
1:w:2100:G:C2	1:w:2101:G:C4	2.92	0.57
1:w:2231:C:N4	1:w:2232:U:O4	2.37	0.57
1:w:2245:U:O2	1:w:2436:G:OP2	2.21	0.57
1:w:2314:C:H5'	7:E:38:VAL:HG11	1.86	0.57
1:w:2348:U:C5	1:w:2382:G:C2	2.91	0.57
1:w:2355:C:H2'	23:U:17:GLN:OE1	2.04	0.57
1:w:2426:A:H3'	1:w:2427:C:H5'	1.86	0.57
1:w:2505:G:H2'	1:w:2576:G:N1	2.18	0.57
1:w:2529:G:OP2	1:w:2530:A:C5'	2.37	0.57
1:w:2536:G:H2'	1:w:2537:U:H6	1.69	0.57
1:w:2610:C:OP2	1:w:2610:C:H6	1.87	0.57
1:w:2654:A:OP1	1:w:2656:U:C6	2.57	0.57
1:w:2727:G:O2'	1:w:2728:U:H5'	2.03	0.57
1:w:2802:G:H2'	1:w:2803:C:H5'	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2817:G:C6	1:w:2818:G:O6	2.57	0.57
1:w:2843:G:C2	1:w:2844:G:H1'	2.39	0.57
1:w:2887:U:H3	1:w:2888:C:N4	2.02	0.57
2:x:4:C:C2	2:x:117:G:N2	2.72	0.57
2:x:43:C:C6	2:x:43:C:OP2	2.56	0.57
2:x:76:G:H2'	2:x:77:U:O4'	2.03	0.57
3:A:194:ILE:HA	3:A:197:LEU:HD23	1.85	0.57
4:B:117:VAL:CG1	4:B:118:VAL:N	2.67	0.57
5:C:101:ARG:CZ	5:C:169:ASN:HB3	2.34	0.57
6:D:48:THR:O	6:D:52:VAL:HB	2.04	0.57
6:D:58:LYS:C	6:D:59:ILE:CD1	2.77	0.57
6:D:126:GLY:HA3	6:D:133:GLU:OE2	2.04	0.57
6:D:148:SER:OG	6:D:167:TRP:CD1	2.52	0.57
6:D:151:LEU:HD13	6:D:188:VAL:HB	1.85	0.57
7:E:170:ARG:O	7:E:173:LEU:HB2	2.03	0.57
9:G:3:VAL:CG1	9:G:4:ILE:N	2.67	0.57
9:G:4:ILE:CG2	9:G:37:VAL:HG21	2.33	0.57
10:H:36:TRP:HB2	10:H:156:GLN:HG2	1.86	0.57
10:H:75:VAL:CG1	10:H:76:VAL:H	2.15	0.57
12:J:95:VAL:CG2	12:J:123:LEU:HD22	2.30	0.57
12:J:138:LEU:HD23	12:J:143:GLY:O	2.03	0.57
15:M:66:ALA:C	15:M:68:GLN:N	2.61	0.57
15:M:71:ARG:HG3	15:M:104:GLY:C	2.29	0.57
16:N:122:ASP:OD1	31:y:1447:G:C5'	2.52	0.57
19:Q:65:LEU:HD23	19:Q:68:ARG:HH11	1.69	0.57
20:R:25:LYS:HG3	20:R:26:TYR:N	2.19	0.57
20:R:60:ARG:CD	20:R:74:PRO:HG3	2.34	0.57
23:U:17:GLN:HE21	23:U:39:ARG:CZ	2.17	0.57
25:W:41:ILE:HD13	25:W:44:LEU:HD12	1.86	0.57
26:X:5:LYS:O	26:X:56:VAL:HA	2.03	0.57
30:b:25:VAL:C	30:b:26:ILE:HG13	2.29	0.57
31:y:49:U:C5	31:y:364:A:N1	2.71	0.57
31:y:75:C:O5'	31:y:75:C:H6	1.86	0.57
31:y:97:U:C2	31:y:99:C:C5	2.91	0.57
31:y:160:A:C2'	31:y:161:A:C8	2.67	0.57
31:y:179:A:C4	31:y:180:U:C5	2.91	0.57
31:y:186(G):C:H3'	31:y:187:C:C6	2.39	0.57
31:y:226:G:N1	31:y:227:G:C6	2.72	0.57
31:y:514:C:C2	31:y:515:G:N7	2.72	0.57
31:y:563:A:H5'	31:y:566:G:H21	1.69	0.57
31:y:714:G:C2	31:y:777:A:H1'	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1076:C:O2'	31:y:1077:G:H5'	2.03	0.57
31:y:1120:G:C2	31:y:1154:G:C2	2.92	0.57
31:y:1123:A:H4'	43:k:37:PRO:HG2	1.84	0.57
31:y:1261:A:H3'	31:y:1262:C:C6	2.39	0.57
31:y:1297:C:C2'	31:y:1297:C:O2	2.51	0.57
31:y:1468:A:H2'	31:y:1469:G:C5'	2.32	0.57
31:y:1504:G:H4'	31:y:1505:G:H5'	1.85	0.57
32:z:2:C:H2'	32:z:3:C:H6	1.68	0.57
32:z:11:C:C2	32:z:12:U:C5	2.93	0.57
35:c:163:PHE:HD1	35:c:185:ILE:O	1.87	0.57
37:e:94:LEU:HD21	37:e:200:GLU:HG3	1.82	0.57
37:e:163:GLU:C	37:e:165:MET:N	2.60	0.57
39:g:92:LYS:N	39:g:92:LYS:CD	2.65	0.57
40:h:12:LEU:HG	40:h:13:GLN:H	0.61	0.57
40:h:80:VAL:CG1	40:h:81:GLY:N	2.66	0.57
40:h:107:ALA:HB1	40:h:123:GLU:OE1	2.03	0.57
40:h:122:HIS:C	40:h:126:ASP:OD2	2.47	0.57
42:j:29:ASN:HB2	42:j:36:TYR:CD2	2.38	0.57
43:k:51:ARG:HB3	43:k:59:SER:CB	2.33	0.57
44:l:51:LYS:CA	44:l:55:LYS:HG3	2.33	0.57
46:n:71:ARG:CA	46:n:74:VAL:HG23	2.34	0.57
47:o:53:LEU:H	47:o:53:LEU:CD2	2.17	0.57
49:q:11:SER:N	49:q:14:ASN:HB2	2.19	0.57
50:r:21:VAL:HG11	50:r:59:ILE:CD1	2.33	0.57
52:t:15:LEU:HD12	52:t:16:LEU:N	2.18	0.57
1:w:108:U:C6	1:w:348:G:N2	2.72	0.57
1:w:374:A:H3'	1:w:375:C:C6	2.39	0.57
1:w:469:G:O6	28:Z:39:ARG:CZ	2.51	0.57
1:w:626:U:OP1	1:w:627:A:H4'	2.03	0.57
1:w:874:G:C8	1:w:874:G:O5'	2.56	0.57
1:w:883:G:C6	1:w:884:C:N4	2.72	0.57
1:w:890:A:C8	1:w:890:A:C3'	2.87	0.57
1:w:937:U:H2'	1:w:938:G:C8	2.39	0.57
1:w:952:G:C6	1:w:953:A:C5	2.92	0.57
1:w:1025:G:H1	1:w:1139:G:H1	1.51	0.57
1:w:1133:U:O2	1:w:1137:G:C4'	2.52	0.57
1:w:1178:C:OP2	1:w:1178:C:C6	2.57	0.57
1:w:1275:A:C6	1:w:1296:G:H1'	2.38	0.57
1:w:1543:A:C3'	1:w:1544:C:O4'	2.48	0.57
1:w:1600:C:H2'	1:w:1601:G:O4'	2.04	0.57
1:w:1758:G:C2'	1:w:2695:C:O2'	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1797:C:N4	1:w:1823:G:C6	2.71	0.57
1:w:1858:G:C2'	1:w:1859:A:C8	2.87	0.57
1:w:2060:A:OP1	6:D:63:LYS:C	2.46	0.57
1:w:2116:G:C8	1:w:2117:A:C1'	2.87	0.57
1:w:2292:C:H2'	1:w:2293:C:C6	2.39	0.57
1:w:2398:U:C5'	1:w:2399:G:OP2	2.52	0.57
1:w:2552:U:C6	1:w:2552:U:C3'	2.87	0.57
1:w:2559:C:C2'	1:w:2560:C:C5'	2.82	0.57
1:w:2636:U:H2'	1:w:2636:U:O2	2.03	0.57
1:w:2652:C:C3'	1:w:2653:U:C6	2.87	0.57
1:w:2657:A:C3'	1:w:2658:C:H5	2.10	0.57
1:w:2676:C:H3'	1:w:2676:C:C6	2.39	0.57
1:w:2689:U:C5'	1:w:2690:C:H6	2.15	0.57
1:w:2751:G:O2'	1:w:2752:C:O4'	2.22	0.57
1:w:2776:A:O2'	1:w:2781:A:O4'	2.23	0.57
2:x:40:U:H2'	2:x:43:C:C5	2.38	0.57
2:x:42:C:C1'	7:E:92:VAL:HG23	2.33	0.57
5:C:28:ALA:CB	5:C:180:ASN:HB3	2.32	0.57
5:C:35:GLN:HB3	5:C:48:GLN:OE1	2.02	0.57
5:C:90:THR:CG2	5:C:91:VAL:H	2.17	0.57
6:D:78:PHE:HE2	6:D:81:GLY:HA3	1.67	0.57
6:D:165:LEU:O	6:D:168:VAL:HG22	2.04	0.57
7:E:50:ALA:HA	7:E:53:LEU:CD1	2.34	0.57
7:E:128:ARG:CG	7:E:129:GLY:H	2.14	0.57
8:F:84:SER:C	8:F:85:LYS:HG3	2.30	0.57
9:G:27:ARG:HH22	9:G:28:ASN:HD22	1.52	0.57
10:H:52:LYS:O	10:H:56:LEU:CD1	2.48	0.57
12:J:7:ARG:N	12:J:8:PRO:HD3	2.17	0.57
13:K:74:TYR:CG	13:K:75:THR:N	2.68	0.57
13:K:88:GLY:O	13:K:91:GLU:OE2	2.23	0.57
15:M:71:ARG:CB	15:M:108:GLY:CA	2.82	0.57
16:N:7:ILE:O	16:N:10:VAL:HB	2.04	0.57
19:Q:87:PRO:HA	19:Q:88:ARG:CZ	2.34	0.57
19:Q:95:ILE:CG2	19:Q:96:ILE:N	2.67	0.57
20:R:8:ILE:HG23	20:R:30:VAL:HG21	1.84	0.57
20:R:64:LYS:HD3	20:R:64:LYS:N	2.08	0.57
22:T:52:SER:HB2	22:T:53:ILE:CD1	2.34	0.57
24:V:66:HIS:HB3	24:V:69:LYS:HD2	1.86	0.57
31:y:22:G:C5	31:y:23:C:C4	2.92	0.57
31:y:81:G:C2'	31:y:82:U:H5''	2.34	0.57
31:y:102:G:O3'	31:y:103:C:H6	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:111:G:N2	31:y:389:A:C4'	2.65	0.57
31:y:227:G:H21	49:q:62:VAL:HG12	1.68	0.57
31:y:375:U:HO2'	49:q:6:LEU:HD11	1.69	0.57
31:y:423:G:O2'	31:y:424:G:H5'	2.03	0.57
31:y:476:G:C2	31:y:477:G:C6	2.92	0.57
31:y:644:G:C2'	31:y:645:C:H5'	2.29	0.57
31:y:673:G:H3'	31:y:674:G:H8	1.69	0.57
31:y:676:A:H4'	44:l:115:PRO:HB3	1.86	0.57
31:y:728:A:C2'	31:y:729:A:C8	2.80	0.57
31:y:760:G:N1	50:r:105:ALA:HA	2.19	0.57
31:y:969:A:H3'	31:y:970:C:C6	2.40	0.57
31:y:1006:C:OP2	31:y:1006:C:H5	1.87	0.57
31:y:1077:G:C5	31:y:1079:G:OP2	2.57	0.57
31:y:1244:C:C2'	31:y:1245:A:H8	2.16	0.57
31:y:1253:G:C2	31:y:1355:G:H4'	2.40	0.57
31:y:1277:C:C5'	31:y:1281:U:H5	2.18	0.57
31:y:1311:G:O6	31:y:1312:G:C6	2.57	0.57
31:y:1406:U:C4	31:y:1407:5MC:C5	2.92	0.57
31:y:1469:G:H8	31:y:1469:G:P	2.27	0.57
31:y:1470:G:H2'	31:y:1471:G:O4'	2.03	0.57
33:0:24:G:N7	33:0:25:C:C5	2.71	0.57
35:c:121:LEU:C	35:c:127:ILE:HG23	2.28	0.57
36:d:60:ALA:O	36:d:61:ALA:CB	2.51	0.57
36:d:120:VAL:HG13	36:d:133:ALA:CB	2.34	0.57
36:d:124:ILE:O	36:d:127:ARG:C	2.47	0.57
37:e:88:VAL:O	37:e:92:VAL:HG12	2.04	0.57
40:h:100:ALA:O	40:h:104:LEU:HD22	2.03	0.57
41:i:37:ARG:O	41:i:40:ALA:HB3	2.04	0.57
42:j:42:ARG:NH2	42:j:71:SER:OG	2.36	0.57
46:n:44:ARG:O	46:n:45:VAL:C	2.47	0.57
47:o:3:ARG:C	47:o:5:ALA:H	2.12	0.57
50:r:87:LYS:C	50:r:87:LYS:CD	2.67	0.57
52:t:17:GLU:O	52:t:21:GLU:HG3	2.03	0.57
53:u:57:ARG:HG2	53:u:57:ARG:HH11	1.68	0.57
1:w:187:G:C6	1:w:188:G:C5	2.92	0.57
1:w:203:C:C5'	1:w:204:A:H5''	2.34	0.57
1:w:203:C:P	1:w:204:A:H3'	2.44	0.57
1:w:270(Y):G:H5''	1:w:270(Z):G:OP1	2.04	0.57
1:w:327:G:N2	1:w:336:C:C4	2.72	0.57
1:w:458:G:C3'	28:Z:39:ARG:HA	2.29	0.57
1:w:460:A:C6	1:w:461:C:C2	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:676:A:O5'	1:w:676:A:N3	2.38	0.57
1:w:779:U:H2'	1:w:780:G:H8	1.70	0.57
1:w:924:C:N4	1:w:925:C:N4	2.51	0.57
1:w:938:G:C3'	1:w:939:G:H8	2.17	0.57
1:w:960:A:H5'	1:w:2457:U:H4'	1.85	0.57
1:w:994:C:OP2	17:O:54:LYS:CE	2.52	0.57
1:w:1148:A:C3'	1:w:1149:G:H8	2.06	0.57
1:w:1412:A:H2	1:w:1590:U:C2	2.21	0.57
1:w:1512:G:H2'	1:w:1513:C:H5'	1.86	0.57
1:w:1658:C:OP2	5:C:135:HIS:CD2	2.56	0.57
1:w:1665:A:H5''	11:I:78:ARG:NH2	2.03	0.57
1:w:1675:C:C5	1:w:1676:A:C8	2.93	0.57
1:w:1701:A:OP1	1:w:1763:G:N1	2.26	0.57
1:w:1704:G:N3	1:w:1704:G:H2'	2.19	0.57
1:w:1772:G:H2'	1:w:1773:A:C5'	2.34	0.57
1:w:1820:U:O2	4:B:204:ILE:HG12	2.04	0.57
1:w:1927:A:OP1	1:w:1927:A:C8	2.58	0.57
1:w:1993:U:C2'	1:w:1994:C:H6	2.04	0.57
1:w:2080:G:N3	1:w:2081:C:C6	2.71	0.57
1:w:2080:G:OP1	24:V:25:LYS:HE2	2.04	0.57
1:w:2141:G:C6	1:w:2142:C:C4	2.92	0.57
1:w:2562:U:H2'	1:w:2563:U:O5'	2.02	0.57
1:w:2654:A:C1'	1:w:2655:G:O4'	2.52	0.57
2:x:13:A:OP1	2:x:71:C:H5'	2.05	0.57
3:A:224:ARG:CZ	3:A:224:ARG:HA	2.34	0.57
4:B:31:LYS:CD	4:B:32:SER:N	2.59	0.57
4:B:143:HIS:HA	4:B:156:ALA:HB3	1.86	0.57
4:B:185:VAL:HG12	4:B:186:HIS:H	1.53	0.57
4:B:242:ARG:NH1	4:B:242:ARG:HG3	2.17	0.57
4:B:249:PRO:HB2	4:B:250:TRP:CE3	2.40	0.57
4:B:253:GLN:HB3	4:B:255:LYS:HD2	1.86	0.57
6:D:24:ASN:C	6:D:26:HIS:HD2	2.12	0.57
6:D:146:SER:N	6:D:167:TRP:CZ2	2.69	0.57
6:D:169:VAL:HG22	6:D:170:THR:N	2.19	0.57
6:D:196:VAL:HG22	6:D:197:PHE:CE1	2.39	0.57
7:E:27:ASN:OD1	7:E:29:TRP:HE3	1.86	0.57
7:E:46:ALA:HB1	7:E:72:ARG:HH12	1.69	0.57
9:G:31:LEU:O	9:G:32:PRO:C	2.47	0.57
10:H:58:ARG:CA	10:H:139:LEU:HD13	2.35	0.57
17:O:17:ILE:CG2	17:O:35:ALA:CB	2.81	0.57
22:T:15:PRO:C	22:T:19:ARG:NE	2.62	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:85:LEU:C	24:V:87:PRO:CD	2.74	0.57
25:W:46:GLN:C	25:W:48:HIS:N	2.61	0.57
25:W:52:ASP:OD2	25:W:52:ASP:N	2.36	0.57
25:W:61:LEU:O	25:W:62:THR:CB	2.52	0.57
26:X:5:LYS:HB3	26:X:57:GLU:C	2.29	0.57
29:a:39:LYS:O	29:a:40:GLU:CB	2.51	0.57
31:y:210:U:O4'	31:y:216:G:C5	2.57	0.57
31:y:408:A:OP1	37:e:116:GLN:OE1	2.22	0.57
31:y:517:G:C4'	31:y:519:C:N4	2.67	0.57
31:y:546:G:O2'	31:y:547:A:C1'	2.43	0.57
31:y:722:A:H2'	31:y:724:G:C8	2.39	0.57
31:y:728:A:N3	31:y:729:A:C8	2.71	0.57
31:y:738:C:C2	31:y:739:C:C5	2.92	0.57
31:y:803:G:O2'	31:y:804:U:H5'	2.04	0.57
31:y:895:G:H3'	31:y:896:C:C5	2.40	0.57
31:y:1176:A:C3'	31:y:1177:G:C8	2.79	0.57
31:y:1277:C:H2'	31:y:1279:A:H8	1.66	0.57
31:y:1436:U:C3'	31:y:1437:C:C6	2.86	0.57
31:y:1442:G:N2	31:y:1447:G:P	2.76	0.57
35:c:11:LEU:C	35:c:13:ALA:H	2.06	0.57
36:d:39:ILE:C	36:d:41:GLY:N	2.58	0.57
36:d:182:ILE:HG12	36:d:203:PHE:CB	2.34	0.57
37:e:82:ALA:HB2	37:e:93:PHE:CG	2.39	0.57
40:h:119:ARG:HB3	40:h:119:ARG:HH11	1.68	0.57
41:i:68:ARG:NE	41:i:74:PRO:HG3	2.20	0.57
45:m:23:VAL:O	45:m:26:LEU:HD12	2.04	0.57
45:m:23:VAL:HG21	45:m:30:PRO:HG3	1.85	0.57
46:n:81:LEU:C	46:n:84:ILE:HG12	2.30	0.57
46:n:84:ILE:HG13	46:n:85:GLY:N	2.20	0.57
47:o:26:ARG:CZ	47:o:43:CYS:SG	2.92	0.57
49:q:75:ARG:HA	49:q:80:PHE:CD2	2.38	0.57
1:w:106:C:H2'	1:w:107:C:O5'	2.04	0.57
1:w:314:A:H2'	1:w:315:G:C8	2.39	0.57
1:w:583:G:N3	1:w:583:G:H2'	2.19	0.57
1:w:599:G:H2'	1:w:600:G:H8	1.62	0.57
1:w:694:U:C2	1:w:695:G:C8	2.91	0.57
1:w:846:C:H4'	1:w:847:U:O4'	2.05	0.57
1:w:854:G:N2	1:w:923:C:O2	2.37	0.57
1:w:886:C:OP1	1:w:890:A:N6	2.38	0.57
1:w:901:A:H2	1:w:902:C:O4'	1.85	0.57
1:w:1000:A:C2	1:w:1001:A:C8	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1017:G:C5	1:w:1018:C:C5	2.92	0.57
1:w:1021:A:C3'	1:w:1022:G:H5''	2.35	0.57
1:w:1060:U:H5''	1:w:1061:U:OP1	2.03	0.57
1:w:1148:A:H5'	1:w:1149:G:P	2.45	0.57
1:w:1164:G:H3'	1:w:1165:U:H5	1.69	0.57
1:w:1190:G:OP1	12:J:32:THR:HB	2.03	0.57
1:w:1203:G:C6	1:w:1241:A:OP2	2.58	0.57
1:w:1271:G:N7	1:w:1325:G:N7	2.52	0.57
1:w:1535:U:H2'	1:w:1536:A:C4'	2.35	0.57
1:w:1617:C:H6	1:w:1617:C:H5'	1.69	0.57
1:w:1650:G:C6	1:w:1651:G:C6	2.92	0.57
1:w:2007:C:H6	1:w:2007:C:O5'	1.86	0.57
1:w:2082:A:H3'	1:w:2083:G:N7	2.16	0.57
1:w:2094:G:N7	1:w:2095:C:C4	2.73	0.57
1:w:2097:C:H2'	1:w:2098:U:C6	2.40	0.57
1:w:2352:A:C2	23:U:33:ALA:HB3	2.35	0.57
1:w:2451:A:C8	1:w:2451:A:C4'	2.87	0.57
1:w:2459:A:H3'	1:w:2460:U:C5	2.39	0.57
1:w:2485:G:C5'	13:K:46:GLN:HE21	2.17	0.57
1:w:2486:G:N2	1:w:2487:G:H1'	2.18	0.57
1:w:2556:C:C2'	1:w:2557:G:C8	2.77	0.57
1:w:2607:G:O2'	1:w:2608:G:H5'	2.04	0.57
1:w:2693:A:H1'	1:w:2717:G:N2	2.18	0.57
1:w:712(B):A:O2'	14:L:13:HIS:ND1	2.37	0.57
1:w:2839:G:H5'	14:L:45:ARG:NH1	2.19	0.57
1:w:2840:C:H4'	14:L:91:GLN:OE1	2.03	0.57
2:x:2:C:C4	2:x:119:A:C2	2.93	0.57
4:B:67:PHE:O	4:B:153:ALA:HB3	2.04	0.57
4:B:266:SER:O	4:B:270:ILE:CG2	2.52	0.57
5:C:156:MET:HE2	5:C:157:ALA:N	2.18	0.57
7:E:53:LEU:HD23	7:E:53:LEU:N	2.19	0.57
7:E:176:LEU:HG	7:E:178:PHE:CE1	2.40	0.57
8:F:105:LEU:CD1	8:F:105:LEU:C	2.77	0.57
9:G:25:TYR:CB	9:G:30:LEU:HD12	2.30	0.57
10:H:90:LEU:C	10:H:92:GLN:H	2.11	0.57
10:H:113:MET:HE1	10:H:116:THR:OG1	2.04	0.57
11:I:87:ILE:HG23	11:I:91:LEU:CA	2.18	0.57
13:K:27:VAL:O	13:K:28:ALA:HB2	2.04	0.57
13:K:109:VAL:CG2	13:K:113:GLN:HB2	2.33	0.57
13:K:135:ASP:OD1	22:T:76:LEU:CD1	2.53	0.57
15:M:66:ALA:C	15:M:101:LEU:HG	2.28	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:72:ALA:O	15:M:75:GLU:HG3	2.05	0.57
16:N:50:ILE:HG22	16:N:63:VAL:N	2.14	0.57
16:N:92:GLY:HA3	16:N:114:LEU:HD22	1.85	0.57
18:P:78:LYS:O	18:P:79:VAL:CG2	2.53	0.57
19:Q:33:ARG:HG3	19:Q:33:ARG:NH1	2.18	0.57
20:R:63:LYS:HE2	20:R:64:LYS:NZ	2.16	0.57
22:T:67:LEU:HD13	22:T:67:LEU:C	2.30	0.57
22:T:107:THR:N	22:T:108:PRO:CD	2.67	0.57
26:X:4:LEU:HD12	26:X:58:VAL:N	2.20	0.57
31:y:28:G:O2'	31:y:296:U:OP1	2.23	0.57
31:y:136:C:O2'	49:q:63:GLY:CA	2.41	0.57
31:y:155:C:H2'	31:y:156:G:O4'	2.04	0.57
31:y:249:U:O2'	31:y:252:U:C5'	2.53	0.57
31:y:336:C:C6	31:y:336:C:O5'	2.54	0.57
31:y:366:C:C4	31:y:367:U:C5	2.92	0.57
31:y:644:G:C6	31:y:645:C:C6	2.92	0.57
31:y:656:C:H2'	31:y:657:G:O4'	2.04	0.57
31:y:714:G:H21	31:y:777:A:H1'	1.69	0.57
31:y:715:A:C4'	31:y:777:A:C6	2.87	0.57
31:y:901:A:C8	31:y:901:A:C3'	2.87	0.57
31:y:960:U:O2'	31:y:961:U:P	2.62	0.57
31:y:1016:A:C2'	31:y:1017:G:C8	2.83	0.57
31:y:1067:A:H8	31:y:1067:A:P	2.27	0.57
31:y:1125:U:O4	31:y:1127:G:O4'	2.22	0.57
31:y:1204:A:C6	31:y:1205:U:C2	2.93	0.57
31:y:1229:A:O2'	32:z:30:G:C5'	2.52	0.57
31:y:1326:C:H2'	31:y:1327:C:O4'	2.04	0.57
35:c:24:TRP:CB	35:c:40:HIS:NE2	2.58	0.57
35:c:127:ILE:C	35:c:131:PRO:HG2	2.29	0.57
35:c:137:ARG:HH11	35:c:137:ARG:H	1.51	0.57
36:d:45:LYS:N	36:d:48:TYR:CB	2.65	0.57
37:e:8:VAL:HG21	37:e:113:SER:OG	2.04	0.57
37:e:121:VAL:HG13	37:e:136:PRO:HB2	1.86	0.57
37:e:199:ASN:ND2	37:e:202:LEU:N	2.36	0.57
41:i:50:ARG:HD3	41:i:50:ARG:O	2.04	0.57
43:k:93:GLY:O	43:k:94:VAL:CB	2.52	0.57
45:m:41:THR:CA	45:m:54:VAL:HG22	2.34	0.57
45:m:59:LEU:HB3	45:m:63:TYR:H	1.70	0.57
47:o:29:ARG:CB	47:o:29:ARG:HH11	2.17	0.57
49:q:2:VAL:O	49:q:2:VAL:HG12	2.05	0.57
50:r:78:GLU:HB3	50:r:81:ARG:HD2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:u:10:LEU:N	53:u:10:LEU:HD22	2.20	0.57
1:w:20:C:H2'	1:w:21:A:C8	2.36	0.57
1:w:116:C:C3'	1:w:117:G:C5'	2.69	0.57
1:w:227:A:H61	1:w:410:G:H1'	1.67	0.57
1:w:398:G:C6	1:w:399:G:C5	2.93	0.57
1:w:459:U:C4'	28:Z:40:TRP:CZ3	2.87	0.57
1:w:533:G:H21	17:O:45:TYR:HD1	1.51	0.57
1:w:624:C:C2	1:w:625:G:C8	2.93	0.57
1:w:901:A:H2'	1:w:901:A:N3	2.19	0.57
1:w:940:G:C5	1:w:941:A:N7	2.73	0.57
1:w:1084:A:H2	1:w:1105:U:HO2'	1.49	0.57
1:w:1133:U:O2	1:w:1137:G:C5'	2.52	0.57
1:w:1275:A:H1'	14:L:12:ARG:HH12	1.68	0.57
1:w:1287:A:OP1	14:L:105:ARG:HD2	2.05	0.57
1:w:1355:G:C6	1:w:1356:G:C4	2.93	0.57
1:w:1439:A:N6	1:w:1552:G:C2	2.67	0.57
1:w:1531:C:HO2'	1:w:1532:C:H5'	1.69	0.57
1:w:1725:G:C2	1:w:1726:G:C5	2.93	0.57
1:w:2075:U:O4	1:w:2077:A:N7	2.37	0.57
1:w:2084:C:N4	1:w:2085:C:C4	2.72	0.57
1:w:2197:U:O5'	1:w:2197:U:H6	1.87	0.57
1:w:2239:G:C2	1:w:2240:C:C5	2.92	0.57
1:w:2355:C:N4	1:w:2356:C:C5	2.73	0.57
1:w:2367:G:C8	1:w:2367:G:P	2.97	0.57
1:w:2467:C:P	30:b:6:SER:HB3	2.44	0.57
1:w:2472:G:N1	1:w:2476:A:O3'	2.37	0.57
1:w:2505:G:O2'	1:w:2506:U:H5'	2.05	0.57
1:w:2583:G:H3'	1:w:2584:U:C5	2.40	0.57
1:w:2737:G:H2'	1:w:2738:A:H8	1.68	0.57
1:w:2758:A:C6	1:w:2759:G:C1'	2.87	0.57
1:w:2793:G:N3	1:w:2794:C:C6	2.72	0.57
1:w:2809:A:C2'	1:w:2810:A:H8	2.16	0.57
1:w:2857:G:C3'	1:w:2858:C:H5''	2.34	0.57
2:x:55:U:O2'	7:E:29:TRP:CZ3	2.57	0.57
2:x:73:A:C5	2:x:104:A:C2	2.91	0.57
3:A:182:PRO:C	3:A:184:GLU:H	2.11	0.57
4:B:65:ILE:CD1	4:B:105:ILE:CA	2.79	0.57
4:B:97:TYR:C	4:B:98:VAL:HG23	2.30	0.57
7:E:128:ARG:HG2	7:E:129:GLY:N	2.13	0.57
8:F:127:GLU:HB2	8:F:130:ARG:CG	2.27	0.57
9:G:68:LEU:HB3	9:G:72:LEU:CD1	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:65:THR:O	11:I:79:PHE:C	2.47	0.57
11:I:85:VAL:HG12	11:I:86:ILE:H	1.68	0.57
12:J:100:LEU:O	12:J:101:VAL:C	2.45	0.57
16:N:55:ASN:HD22	16:N:58:ASN:H	1.51	0.57
16:N:123:LYS:HG3	16:N:124:ASP:N	2.20	0.57
17:O:31:SER:CB	17:O:34:LYS:HB2	2.27	0.57
18:P:4:ILE:CG1	18:P:13:ARG:HB3	2.22	0.57
18:P:36:PRO:CD	18:P:62:LEU:HD12	2.34	0.57
19:Q:86:LEU:HD22	19:Q:87:PRO:HD2	1.86	0.57
20:R:8:ILE:HD13	25:W:26:ARG:HH22	1.69	0.57
22:T:8:TYR:CE1	22:T:39:VAL:HG13	2.39	0.57
23:U:16:SER:OG	23:U:17:GLN:N	2.37	0.57
23:U:21:LEU:HD22	23:U:39:ARG:CG	2.34	0.57
29:a:22:VAL:HG21	29:a:53:PRO:C	2.29	0.57
30:b:16:VAL:HG13	30:b:25:VAL:HB	1.86	0.57
31:y:128:G:C2	31:y:234:C:C4	2.91	0.57
31:y:161:A:C5	31:y:162:A:C5	2.93	0.57
31:y:220:G:H2'	31:y:220:G:N3	2.19	0.57
31:y:226:G:C2	31:y:227:G:C5	2.92	0.57
31:y:234:C:C4	31:y:235:C:C4	2.92	0.57
31:y:391:G:C5'	49:q:8:ARG:HH12	2.17	0.57
31:y:570:G:H8	31:y:570:G:OP1	1.87	0.57
31:y:580:U:C6	31:y:580:U:C3'	2.87	0.57
31:y:583:A:H2'	31:y:584:G:C8	2.39	0.57
31:y:599:C:O2'	31:y:600:C:H5'	2.04	0.57
31:y:627:G:H8	31:y:627:G:OP2	1.88	0.57
31:y:718:G:C5'	31:y:720:C:N4	2.62	0.57
31:y:894:G:N1	31:y:895:G:C5	2.73	0.57
31:y:959:A:OP2	31:y:960:U:H5''	2.03	0.57
31:y:972:C:H4'	43:k:57:LYS:CD	2.28	0.57
31:y:1114:C:H2'	31:y:1115:C:H6	1.70	0.57
31:y:1188:A:C1'	47:o:60:SER:HB2	2.32	0.57
31:y:1290:G:OP1	40:h:35:LYS:HD2	2.05	0.57
31:y:1410:G:C4	31:y:1411:C:C5	2.93	0.57
32:z:18:G:O2'	32:z:19:G:P	2.63	0.57
33:0:16:U:C2'	33:0:17:U:H5'	2.33	0.57
35:c:66:GLY:O	35:c:68:ILE:CD1	2.51	0.57
35:c:110:GLN:O	35:c:112:VAL:N	2.31	0.57
36:d:22:TRP:CZ3	36:d:24:ALA:HB3	2.38	0.57
36:d:48:TYR:HE1	36:d:52:LEU:HD22	1.70	0.57
36:d:156:ARG:HE	36:d:161:GLU:HA	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:194:GLY:C	36:d:195:VAL:HG22	2.29	0.57
37:e:108:LEU:C	37:e:110:PHE:H	2.12	0.57
38:f:55:VAL:CG2	38:f:56:GLN:N	2.66	0.57
38:f:99:GLY:O	38:f:101:ILE:HG13	2.04	0.57
41:i:13:ILE:HG13	41:i:63:LEU:HD21	1.85	0.57
41:i:21:LYS:HD2	41:i:24:THR:CA	2.34	0.57
41:i:87:SER:HB3	41:i:133:LEU:O	2.05	0.57
42:j:48:GLU:CB	42:j:49:PRO:HD3	2.34	0.57
42:j:63:ILE:CG2	42:j:64:THR:H	2.17	0.57
44:l:58:PRO:HA	44:l:90:GLY:HA2	1.85	0.57
44:l:96:ARG:C	44:l:98:LEU:N	2.61	0.57
46:n:4:ILE:CB	46:n:57:ARG:HA	2.35	0.57
47:o:3:ARG:HH11	47:o:3:ARG:CG	2.16	0.57
47:o:5:ALA:O	47:o:7:ILE:N	2.37	0.57
47:o:15:LYS:O	47:o:16:PHE:HB2	2.03	0.57
50:r:21:VAL:HG11	50:r:59:ILE:CG1	2.34	0.57
52:t:30:LEU:C	52:t:31:ILE:HD12	2.29	0.57
53:u:57:ARG:HH22	53:u:102:GLY:CA	2.17	0.57
53:u:67:ALA:O	53:u:73:HIS:CD2	2.57	0.57
1:w:13:A:C2'	1:w:15:G:N7	2.67	0.57
1:w:90:U:C5	1:w:91:A:N7	2.72	0.57
1:w:131:G:H2'	1:w:132:G:H5'	1.87	0.57
1:w:181:A:H2'	1:w:181:A:N3	2.19	0.57
1:w:270(J):G:N1	1:w:270(K):G:O6	2.38	0.57
1:w:308:G:N2	1:w:329:G:C2	2.72	0.57
1:w:396:G:O2'	24:V:46:LEU:CA	2.52	0.57
1:w:529:A:H62	1:w:2041:U:H3	0.73	0.57
1:w:627:A:O2'	1:w:628:G:O4'	2.23	0.57
1:w:682:G:C5	1:w:683:C:C5	2.93	0.57
1:w:687:C:N3	1:w:787:U:H4'	2.19	0.57
1:w:712:G:C6	1:w:713:G:C5	2.93	0.57
1:w:760:G:H2'	1:w:761:A:H8	1.69	0.57
1:w:843:G:C2'	1:w:844:C:C6	2.87	0.57
1:w:854:G:C4	1:w:855:G:C8	2.92	0.57
1:w:950:G:C6	1:w:968:G:N1	2.72	0.57
1:w:1027:A:H4'	2:x:88:C:C4	2.40	0.57
1:w:1062:G:H2'	1:w:1063:G:H8	1.70	0.57
1:w:1156:A:OP1	17:O:51:LYS:NZ	2.31	0.57
1:w:1215:G:H2'	1:w:1216:G:C4'	2.33	0.57
1:w:1220:A:H5'	1:w:1221:C:OP2	2.05	0.57
1:w:1312:U:H4'	1:w:1313:U:O5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1319:G:C2	1:w:1334:G:C5	2.92	0.57
1:w:1447:G:H4'	1:w:1545:A:O2'	2.03	0.57
1:w:1457:A:O5'	1:w:1457:A:C8	2.57	0.57
1:w:1531:C:H2'	1:w:1532:C:C5'	2.35	0.57
1:w:2075:U:H3	1:w:2077:A:H8	1.50	0.57
1:w:2271:G:H4'	23:U:19:LYS:CA	2.32	0.57
1:w:2334:G:C5'	1:w:2335:A:OP2	2.48	0.57
1:w:2396:G:O2'	24:V:32:LYS:HE2	2.04	0.57
1:w:2439:A:N3	1:w:2439:A:C2'	2.66	0.57
1:w:2590:A:H5''	4:B:239:ARG:CZ	2.34	0.57
1:w:2652:C:N3	1:w:2653:U:O4	2.38	0.57
1:w:2745:C:O2'	8:F:142:GLY:C	2.47	0.57
1:w:2822:G:N7	14:L:2:ARG:CB	2.62	0.57
1:w:2825:G:C8	1:w:2825:G:H3'	2.39	0.57
2:x:19:G:N2	2:x:20:C:Cl'	2.67	0.57
2:x:80:U:C2	2:x:97:G:C6	2.93	0.57
2:x:82:G:C4'	26:X:49:LYS:HZ3	2.15	0.57
2:x:86:G:C6	2:x:91:C:N4	2.72	0.57
3:A:35:THR:CG2	3:A:36:ALA:N	2.67	0.57
4:B:69:ARG:HD2	4:B:119:ALA:HB2	1.84	0.57
4:B:76:PRO:CB	4:B:117:VAL:CG1	2.73	0.57
4:B:257:LEU:O	4:B:259:THR:N	2.38	0.57
5:C:113:PHE:HA	5:C:158:GLY:O	2.05	0.57
5:C:133:LYS:O	5:C:134:ILE:HG23	2.05	0.57
6:D:5:PRO:CG	6:D:120:LEU:HD21	2.34	0.57
7:E:5:LEU:HB2	7:E:100:TRP:HH2	1.68	0.57
7:E:123:ASN:HA	7:E:125:PHE:CE2	2.39	0.57
9:G:13:GLY:C	9:G:15:VAL:H	2.11	0.57
12:J:35:HIS:HD2	12:J:36:LYS:HD2	1.68	0.57
13:K:65:PHE:O	13:K:104:PHE:HD2	1.86	0.57
14:L:66:VAL:HG23	14:L:67:LEU:HD22	1.85	0.57
15:M:7:TYR:O	15:M:8:GLU:HB2	2.03	0.57
15:M:110:LEU:HD12	15:M:110:LEU:H	1.69	0.57
16:N:95:ARG:CD	16:N:96:ARG:HH12	2.17	0.57
20:R:55:ASN:N	20:R:77:LYS:HD3	2.20	0.57
20:R:87:GLN:O	20:R:88:LYS:CB	2.53	0.57
21:S:61:ILE:CG2	21:S:62:GLU:N	2.49	0.57
22:T:61:LEU:HB3	22:T:63:ASP:OD2	2.03	0.57
22:T:102:LEU:HD13	22:T:123:ASP:CA	2.34	0.57
22:T:151:HIS:HB3	22:T:170:THR:OG1	2.04	0.57
25:W:26:ARG:HA	25:W:29:LYS:HG3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:7:LYS:O	26:X:8:LEU:O	2.23	0.57
29:a:58:ILE:O	29:a:60:LEU:N	2.35	0.57
31:y:52:G:C2'	31:y:53:A:H5'	2.34	0.57
31:y:68:G:N2	31:y:101:A:H2	2.02	0.57
31:y:116:A:OP2	31:y:289:G:C5'	2.46	0.57
31:y:117:G:C6	31:y:118:U:N3	2.72	0.57
31:y:186(A):C:H5'	53:u:78:ALA:HA	1.86	0.57
31:y:409:G:N7	31:y:410:G:C5	2.73	0.57
31:y:498:A:O2'	31:y:500:G:P	2.62	0.57
31:y:502:G:C5'	31:y:550:G:O2'	2.52	0.57
31:y:503:C:O2	31:y:504:C:C6	2.58	0.57
31:y:585:G:H4'	45:m:7:ASN:ND2	2.19	0.57
31:y:617:G:H4'	49:q:44:THR:CG2	2.35	0.57
31:y:635:G:H2'	31:y:636:U:O4'	2.03	0.57
31:y:675:A:H2	44:l:115:PRO:HB3	1.69	0.57
31:y:686:U:C4'	44:l:42:TRP:HE1	2.17	0.57
31:y:717:C:O2'	31:y:734:G:C4'	2.52	0.57
31:y:756:C:O5'	31:y:756:C:C6	2.56	0.57
31:y:764:C:H2'	31:y:765:G:O5'	2.03	0.57
31:y:878:G:H5''	41:i:89:PRO:HG2	1.87	0.57
31:y:900:A:C6	31:y:901:A:C2	2.92	0.57
31:y:1148:U:H5''	42:j:9:ARG:NH1	2.19	0.57
31:y:1216:G:C2	31:y:1217:C:C6	2.92	0.57
31:y:1252:A:H2	31:y:1355:G:C1'	2.16	0.57
31:y:1343:G:H2'	31:y:1344:C:O4'	2.05	0.57
31:y:1347:G:H5'	42:j:108:VAL:O	2.05	0.57
31:y:1357:A:H5'	43:k:47:PHE:CE2	2.37	0.57
31:y:1424:C:H2'	31:y:1425:U:C6	2.39	0.57
31:y:1509:C:C6	31:y:1510:U:C5	2.93	0.57
31:y:1522:U:C2	31:y:1523:G:C8	2.93	0.57
33:0:1:G:O2'	33:0:2:C:H5'	2.04	0.57
33:0:37:A:H3'	33:0:38:A:H8	1.70	0.57
35:c:163:PHE:CD1	35:c:185:ILE:O	2.58	0.57
36:d:132:ARG:O	36:d:133:ALA:C	2.47	0.57
37:e:100:ARG:HG3	37:e:136:PRO:O	2.04	0.57
37:e:108:LEU:HD11	37:e:174:LEU:HD22	1.87	0.57
40:h:133:GLY:C	40:h:137:LYS:HG3	2.25	0.57
41:i:35:ILE:O	41:i:39:LEU:CD2	2.45	0.57
41:i:67:PRO:C	41:i:76:PRO:HG2	2.30	0.57
41:i:103:VAL:O	41:i:104:ARG:CB	2.52	0.57
41:i:119:LEU:CB	41:i:124:ALA:HA	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:30:SER:HB2	43:k:84:GLN:CB	2.30	0.57
44:l:109:VAL:CG1	51:s:84:LYS:HE2	2.35	0.57
45:m:83:LEU:HD13	45:m:104:TYR:CE1	2.39	0.57
47:o:9:LYS:HB2	47:o:21:TYR:CZ	2.39	0.57
47:o:9:LYS:HB2	47:o:21:TYR:OH	2.04	0.57
47:o:30:ALA:C	47:o:33:VAL:HG13	2.30	0.57
1:w:132:G:C3'	1:w:133:C:C6	2.87	0.57
1:w:181:A:H3'	1:w:182:A:C8	2.39	0.57
1:w:212:G:C8	1:w:212:G:P	2.98	0.57
1:w:240:G:H1'	1:w:257:A:H61	1.69	0.57
1:w:440:G:C2'	1:w:441:U:C6	2.87	0.57
1:w:461:C:H2'	1:w:462:C:H6	1.57	0.57
1:w:477:A:H3'	1:w:478:A:N7	2.18	0.57
1:w:518:G:N3	1:w:519:U:C5	2.73	0.57
1:w:666:G:C8	1:w:666:G:OP2	2.58	0.57
1:w:796:C:O2'	1:w:797:C:H5'	2.04	0.57
1:w:814:C:C2	1:w:815:C:C6	2.92	0.57
1:w:855:G:N7	1:w:856:C:C4	2.72	0.57
1:w:1135:C:H5'	1:w:1136:G:OP2	2.04	0.57
1:w:1231:G:C2	1:w:1232:G:N7	2.73	0.57
1:w:1243:G:H2'	1:w:1244:G:H1'	1.87	0.57
1:w:1252:G:H2'	1:w:1253:A:C8	2.39	0.57
1:w:1294:U:C5'	14:L:26:LYS:CE	2.79	0.57
1:w:1306:C:C2	1:w:1307:A:C8	2.92	0.57
1:w:1391:U:N3	1:w:1394:U:O4	2.38	0.57
1:w:1747:G:C4	1:w:1748:G:C8	2.93	0.57
1:w:2001:A:C2'	1:w:2002:G:O4'	2.53	0.57
1:w:2018:G:C6	1:w:2019:A:C5	2.93	0.57
1:w:2083:G:C8	1:w:2083:G:OP2	2.58	0.57
1:w:2096:U:H3'	1:w:2097:C:C6	2.40	0.57
1:w:2100:G:C5	1:w:2190:G:C2	2.92	0.57
1:w:2289:G:N2	1:w:2290:G:C8	2.72	0.57
1:w:2333:A:C5	1:w:2335:A:N6	2.72	0.57
1:w:2344:U:C6	1:w:2344:U:O5'	2.57	0.57
1:w:2371:G:C2	1:w:2372:G:C5	2.92	0.57
1:w:2376:A:H2'	1:w:2377:A:C8	2.39	0.57
1:w:2563:U:O4'	1:w:2566:A:N6	2.38	0.57
1:w:2667:C:N4	1:w:2668:G:C6	2.72	0.57
1:w:2794:C:C4	1:w:2795:G:C6	2.92	0.57
1:w:2804:C:H6	1:w:2804:C:H3'	1.68	0.57
1:w:2825:G:C8	1:w:2825:G:OP2	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:55:U:C2'	2:x:56:G:C5'	2.78	0.57
2:x:107:U:H2'	2:x:108:C:C6	2.39	0.57
3:A:18:ASN:C	3:A:18:ASN:ND2	2.61	0.57
4:B:117:VAL:HG13	4:B:128:GLY:C	2.29	0.57
5:C:90:THR:CG2	5:C:91:VAL:N	2.67	0.57
8:F:151:ILE:O	8:F:153:LYS:N	2.37	0.57
11:I:70:LYS:HA	11:I:76:ALA:CA	2.34	0.57
11:I:109:LYS:HE3	11:I:109:LYS:CA	2.35	0.57
12:J:41:ARG:HD2	12:J:45:LEU:HD12	1.85	0.57
13:K:2:LEU:HD12	22:T:182:LYS:HZ2	1.69	0.57
13:K:48:GLU:CA	13:K:51:ARG:HE	2.07	0.57
13:K:110:THR:O	13:K:112:GLU:N	2.38	0.57
22:T:14:LYS:HG3	22:T:15:PRO:CD	2.35	0.57
28:Z:14:LYS:HA	28:Z:20:ALA:HB1	1.86	0.57
29:a:6:THR:CG2	29:a:63:PRO:HD3	2.35	0.57
29:a:32:LEU:HD12	29:a:34:TRP:HE3	1.69	0.57
31:y:31:G:OP1	31:y:31:G:C8	2.49	0.57
31:y:97:U:C2	31:y:99:C:C6	2.92	0.57
31:y:130:A:OP2	31:y:130:A:C4'	2.52	0.57
31:y:160:A:C6	31:y:161:A:N1	2.73	0.57
31:y:227:G:C4	31:y:228:A:H8	2.18	0.57
31:y:300:A:C2'	50:r:31:LEU:HD21	2.31	0.57
31:y:321:A:C2	31:y:322:C:C6	2.92	0.57
31:y:357:G:OP1	31:y:367:U:C5'	2.51	0.57
31:y:382:A:N7	31:y:383:A:C5	2.72	0.57
31:y:514:C:N3	31:y:537:G:N1	2.43	0.57
31:y:594:G:O2'	31:y:595:G:H5'	2.05	0.57
31:y:618:C:H4'	31:y:618:C:OP1	2.05	0.57
31:y:626:U:C5'	49:q:38:TYR:HB2	2.22	0.57
31:y:769:G:H2'	31:y:770:C:C5'	2.35	0.57
31:y:899:C:C6	31:y:900:A:N7	2.73	0.57
31:y:1313:U:H5	52:t:4:SER:HB2	1.66	0.57
31:y:1364:U:C2'	31:y:1365:G:OP1	2.52	0.57
31:y:1410:G:C2	31:y:1491:G:C5	2.93	0.57
31:y:1459:C:H4'	53:u:24:LEU:HD11	1.86	0.57
35:c:28:PHE:CE1	35:c:31:TYR:CB	2.85	0.57
39:g:8:ILE:HA	39:g:88:VAL:HA	1.87	0.57
40:h:123:GLU:O	40:h:126:ASP:N	2.37	0.57
40:h:126:ASP:HB3	40:h:132:GLY:N	2.20	0.57
41:i:11:THR:OG1	41:i:14:ARG:NH1	2.36	0.57
42:j:90:PRO:C	42:j:92:TYR:H	2.11	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:65:ALA:O	44:l:66:LEU:C	2.47	0.57
45:m:39:VAL:HG12	45:m:40:ARG:H	1.67	0.57
46:n:78:ILE:CG1	46:n:79:LYS:H	2.05	0.57
50:r:12:SER:O	50:r:13:ASP:OD1	2.22	0.57
53:u:79:ARG:O	53:u:81:LYS:N	2.37	0.57
1:w:5:A:H2'	1:w:6:A:H8	1.70	0.57
1:w:47:C:H2'	1:w:48:G:O4'	2.05	0.57
1:w:85:G:C1'	1:w:103:A:C2	2.71	0.57
1:w:106:C:H1'	1:w:293:U:O4'	2.04	0.57
1:w:116:C:H2'	1:w:117:G:O4'	2.05	0.57
1:w:270(V):C:H2'	1:w:270(W):G:O4'	2.05	0.57
1:w:465:G:N7	1:w:466:A:C6	2.73	0.57
1:w:516:C:O2	1:w:516:C:C2'	2.47	0.57
1:w:565:C:C5'	18:P:81:TYR:CE1	2.78	0.57
1:w:571:A:P	1:w:974(B):C:H42	2.26	0.57
1:w:811:U:OP2	1:w:811:U:C1'	2.53	0.57
1:w:812:C:O2'	17:O:13:LYS:NZ	2.38	0.57
1:w:816:C:O5'	1:w:816:C:C6	2.58	0.57
1:w:874:G:O3'	1:w:875:G:H8	1.88	0.57
1:w:906:G:O2'	13:K:29:PHE:CZ	2.54	0.57
1:w:1042:G:C1'	1:w:1114:G:N2	2.55	0.57
1:w:1197:G:H4'	1:w:1227:G:O3'	2.05	0.57
1:w:1257:C:O4'	6:D:77:ILE:HG13	2.05	0.57
1:w:1300:U:H1'	1:w:1626:G:C2	2.40	0.57
1:w:1312:U:H6	1:w:1312:U:O5'	1.88	0.57
1:w:1394:U:H5''	1:w:1603:A:HO2'	1.66	0.57
1:w:1565:C:N3	1:w:1567:A:C8	2.72	0.57
1:w:1818:U:C2'	4:B:155:LEU:HD21	2.35	0.57
1:w:2074:U:H2'	1:w:2074:U:O2	2.04	0.57
1:w:2105:C:H2'	1:w:2106:G:C8	2.38	0.57
1:w:2307:G:H1'	1:w:2311:A:C8	2.39	0.57
1:w:2432:A:N6	1:w:2433:A:N6	2.51	0.57
1:w:2618:G:C2'	5:C:150:VAL:HB	2.35	0.57
1:w:2721:A:H2'	1:w:2722:G:O4'	2.04	0.57
1:w:2758:A:C5	1:w:2759:G:O4'	2.58	0.57
1:w:2900:A:C3'	1:w:2901:C:C5'	2.78	0.57
2:x:18:G:H2'	2:x:19:G:C8	2.39	0.57
2:x:25:A:N7	2:x:26:A:C1'	2.68	0.57
2:x:29:A:C2	2:x:56:G:C5	2.93	0.57
4:B:21:PHE:HA	4:B:24:ILE:CD1	2.35	0.57
4:B:31:LYS:HB2	4:B:104:TYR:CE1	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:130:ALA:CB	4:B:190:TYR:CZ	2.87	0.57
4:B:142:VAL:CG2	4:B:143:HIS:H	2.18	0.57
5:C:34:VAL:HA	5:C:67:PHE:CD1	2.38	0.57
6:D:143:LEU:HD11	6:D:186:ARG:HD2	1.87	0.57
7:E:40:ASN:O	7:E:156:ASP:O	2.23	0.57
7:E:41:GLN:HG2	7:E:155:MET:CA	2.35	0.57
9:G:81:VAL:O	9:G:82:ARG:HB2	2.04	0.57
9:G:82:ARG:HB2	9:G:89:TYR:CE1	2.40	0.57
9:G:130:TYR:CD2	9:G:138:ILE:CG2	2.74	0.57
11:I:7:TYR:O	11:I:8:LEU:HD22	2.04	0.57
12:J:75:ILE:CG1	12:J:77:ARG:NH1	2.68	0.57
13:K:25:ASP:CG	13:K:102:VAL:HB	2.30	0.57
14:L:15:SER:O	14:L:18:LEU:N	2.38	0.57
14:L:113:LEU:C	14:L:113:LEU:HD13	2.30	0.57
15:M:60:GLY:CA	15:M:65:VAL:HG11	2.35	0.57
16:N:44:ASP:OD2	16:N:85:LYS:HE2	2.05	0.57
17:O:89:GLU:O	17:O:90:VAL:CG2	2.52	0.57
18:P:3:ALA:C	18:P:4:ILE:HG13	2.30	0.57
21:S:14:LEU:HB3	21:S:23:ARG:N	2.19	0.57
22:T:56:VAL:HG12	22:T:70:LEU:CG	2.35	0.57
23:U:21:LEU:HD22	23:U:39:ARG:HG3	1.86	0.57
23:U:50:ASN:HA	23:U:63:VAL:CG2	2.33	0.57
24:V:54:ALA:HB1	24:V:57:GLU:N	2.20	0.57
24:V:85:LEU:CD1	24:V:87:PRO:HD2	2.29	0.57
25:W:8:LYS:O	25:W:54:LYS:NZ	2.34	0.57
26:X:8:LEU:O	26:X:9:VAL:CG2	2.49	0.57
29:a:6:THR:HG21	29:a:63:PRO:HD3	1.86	0.57
31:y:19:C:H2'	31:y:20:U:C6	2.39	0.57
31:y:156:G:C3'	31:y:157:G:C5'	2.71	0.57
31:y:210:U:C3'	31:y:216:G:C8	2.87	0.57
31:y:246:A:H1'	31:y:247:G:O2'	2.03	0.57
31:y:292:G:N1	31:y:309:G:C6	2.73	0.57
31:y:366:C:C2'	31:y:367:U:H5'	2.28	0.57
31:y:413:G:N2	31:y:428:G:HO2'	1.98	0.57
31:y:481:G:HO2'	31:y:483:C:N4	2.00	0.57
31:y:724:G:N3	31:y:725:G:C8	2.73	0.57
31:y:778:G:C2	31:y:779:C:C2	2.93	0.57
31:y:894:G:N1	31:y:895:G:N7	2.53	0.57
31:y:1047:G:C2'	31:y:1048:G:H5'	2.34	0.57
31:y:1053:G:N7	31:y:1199:U:C6	2.72	0.57
31:y:1087:G:O5'	31:y:1087:G:H8	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1092:A:H1'	31:y:1183:A:H61	1.70	0.57
31:y:1145:C:H4'	31:y:1146:A:H8	1.69	0.57
31:y:1167:A:N6	31:y:1169:A:N1	2.53	0.57
31:y:1436:U:H2'	31:y:1437:C:C1'	2.35	0.57
31:y:1506:U:O2	31:y:1506:U:C2'	2.51	0.57
33:0:42:G:H5'	40:h:143:ARG:NH1	2.19	0.57
35:c:132:LYS:HA	35:c:135:GLN:NE2	2.20	0.57
35:c:223:ILE:HG13	35:c:230:VAL:CG2	2.35	0.57
35:c:223:ILE:CG1	35:c:230:VAL:HG23	2.32	0.57
36:d:203:PHE:O	36:d:204:LEU:HG	2.04	0.57
37:e:22:LYS:HB2	37:e:26:CYS:HB2	1.84	0.57
37:e:48:ALA:C	37:e:49:ARG:HG3	2.29	0.57
39:g:6:VAL:HG21	39:g:63:TYR:CD2	2.40	0.57
39:g:89:MET:HE3	39:g:90:VAL:H	1.69	0.57
40:h:125:MET:C	40:h:127:ALA:H	2.13	0.57
41:i:100:ILE:HG22	41:i:125:ARG:NH2	2.19	0.57
44:l:80:VAL:CG2	44:l:104:GLN:O	2.46	0.57
49:q:50:LYS:HD3	49:q:50:LYS:C	2.30	0.57
52:t:53:ASN:HB3	52:t:58:VAL:CG2	2.33	0.57
53:u:44:ALA:CB	53:u:88:VAL:HA	2.34	0.57
1:w:68:G:H2'	1:w:68:G:N3	2.20	0.57
1:w:191:A:H2'	1:w:192:C:H6	1.68	0.57
1:w:281:G:H2'	1:w:358:U:O4	2.05	0.57
1:w:386:G:C4'	1:w:387:U:H5	2.18	0.57
1:w:404:C:H1'	1:w:406:G:C8	2.39	0.57
1:w:425:G:C2	1:w:426:C:C5	2.93	0.57
1:w:465:G:C2	1:w:683:C:O2	2.58	0.57
1:w:466:A:C5'	28:Z:21:ARG:HH22	2.13	0.57
1:w:563:G:C2	1:w:2018:G:C2	2.92	0.57
1:w:603:A:N1	1:w:655:A:O4'	2.38	0.57
1:w:1059:G:C8	1:w:1060:U:H2'	2.40	0.57
1:w:1284:A:C5	1:w:1285:G:C2	2.92	0.57
1:w:1415:U:O5'	1:w:1415:U:H6	1.88	0.57
1:w:1444:G:O6	1:w:1466:G:C6	2.58	0.57
1:w:1501:C:H2'	1:w:1502:C:C6	2.40	0.57
1:w:1606:G:C4'	1:w:1608:A:C2	2.88	0.57
1:w:1709:U:O2'	1:w:2859:G:C2	2.57	0.57
1:w:1718:G:C2	1:w:1742:C:C2	2.93	0.57
1:w:1793:C:H1'	1:w:1970:A:H2	1.69	0.57
1:w:1812:A:H2'	1:w:1813:G:O4'	2.05	0.57
1:w:1857:G:C2	1:w:1858:G:C2	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1967:C:N4	1:w:1968:G:C5	2.72	0.57
1:w:2017:U:P	27:Y:8:LYS:HE3	2.45	0.57
1:w:2058:A:C8	1:w:2058:A:H3'	2.39	0.57
1:w:2141:G:C6	1:w:2151:G:N1	2.73	0.57
1:w:2159:G:N3	1:w:2160:G:H1'	2.18	0.57
1:w:2298:A:C1'	1:w:2321:G:H22	2.15	0.57
1:w:2479:G:H2'	1:w:2480:C:O5'	2.04	0.57
1:w:2620:C:O2'	5:C:157:ALA:O	2.22	0.57
1:w:2653:U:C4	1:w:2654:A:C6	2.92	0.57
1:w:2820:A:C4'	5:C:109:LYS:NZ	2.66	0.57
1:w:2820:A:C4'	5:C:109:LYS:HE3	2.35	0.57
1:w:2892:A:C2	1:w:2893:G:H1'	2.38	0.57
2:x:15:A:C5'	2:x:109:G:H5''	2.22	0.57
3:A:198:GLU:O	3:A:201:LYS:HG3	2.05	0.57
5:C:172:VAL:HG22	5:C:184:VAL:HG12	1.87	0.57
6:D:149:VAL:HG11	6:D:186:ARG:HB2	1.87	0.57
9:G:6:LEU:HD13	9:G:35:LEU:CD1	2.33	0.57
9:G:13:GLY:HA2	9:G:17:GLN:HG2	1.86	0.57
10:H:57:LEU:O	10:H:72:GLY:HA2	2.04	0.57
11:I:13:ASN:HB2	11:I:17:ARG:HD2	1.86	0.57
11:I:20:MET:HG2	11:I:21:CYS:N	2.19	0.57
14:L:38:VAL:N	14:L:39:PRO:CD	2.67	0.57
15:M:44:LYS:O	15:M:46:VAL:HG23	2.04	0.57
16:N:2:ASN:OD1	16:N:3:ARG:HD3	2.03	0.57
16:N:89:VAL:HG12	16:N:121:ILE:HG12	1.87	0.57
19:Q:32:ALA:O	19:Q:33:ARG:C	2.47	0.57
20:R:80:ILE:O	20:R:81:VAL:CB	2.52	0.57
21:S:39:VAL:O	21:S:40:GLU:C	2.47	0.57
22:T:18:LEU:C	22:T:23:LYS:HB2	2.29	0.57
22:T:69:THR:CG2	22:T:88:PHE:CE1	2.87	0.57
26:X:46:ASN:O	26:X:50:VAL:HG13	2.04	0.57
29:a:17:THR:O	29:a:19:SER:N	2.37	0.57
30:b:7:VAL:HG12	30:b:9:ARG:H	1.69	0.57
31:y:74:C:H3'	31:y:75:C:C5	2.40	0.57
31:y:126:G:N1	31:y:127:G:C6	2.73	0.57
31:y:256:U:C6	31:y:256:U:O5'	2.58	0.57
31:y:267:C:OP2	50:r:67:LYS:HB2	2.04	0.57
31:y:332:G:C4	31:y:333:G:C8	2.92	0.57
31:y:451:A:O4'	31:y:452:A:C5	2.57	0.57
31:y:483:C:O5'	31:y:483:C:C6	2.56	0.57
31:y:633:G:C6	31:y:634:C:C4	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:703:G:H4'	31:y:704:A:C8	2.40	0.57
31:y:744:C:H2'	31:y:745:C:C6	2.39	0.57
31:y:775:G:H3'	31:y:776:G:H8	1.69	0.57
31:y:1381:U:H4'	40:h:78:ARG:HH21	1.70	0.57
31:y:1416:G:C2'	31:y:1417:G:H5'	2.35	0.57
31:y:1525:G:N2	31:y:1526:G:C4	2.73	0.57
32:z:7:A:H5''	32:z:7:A:H8	1.70	0.57
33:0:13:C:H6	33:0:13:C:H5''	1.68	0.57
35:c:97:TRP:CZ2	35:c:101:MET:HG3	2.40	0.57
36:d:33:LEU:CB	47:o:37:PHE:HE2	2.17	0.57
36:d:137:ALA:O	36:d:141:VAL:HB	2.05	0.57
37:e:127:THR:HG22	37:e:147:ALA:C	2.29	0.57
38:f:53:LEU:HD22	38:f:53:LEU:H	1.68	0.57
38:f:67:VAL:HG21	38:f:140:ARG:NH2	2.19	0.57
38:f:72:GLN:H	38:f:72:GLN:CD	2.03	0.57
38:f:76:ILE:HD11	38:f:118:ILE:CG2	2.34	0.57
39:g:5:GLU:HA	39:g:64:GLN:HA	1.87	0.57
39:g:95:GLU:CB	51:s:32:ARG:HG2	2.25	0.57
40:h:134:ALA:O	40:h:137:LYS:CB	2.51	0.57
41:i:56:LYS:O	41:i:58:TYR:CD2	2.58	0.57
43:k:5:ARG:HB3	43:k:99:LYS:HB3	1.87	0.57
45:m:33:ARG:N	45:m:84:ILE:HD11	2.20	0.57
47:o:23:ARG:HD3	47:o:24:CYS:H	1.67	0.57
50:r:34:LYS:CG	50:r:35:VAL:N	2.67	0.57
52:t:19:VAL:HG22	52:t:23:ASN:ND2	2.19	0.57
53:u:98:PRO:HG2	53:u:99:LEU:H	1.69	0.57
1:w:20:C:H1'	1:w:521:G:N2	2.19	0.57
1:w:116:C:H2'	1:w:126:A:C2	2.39	0.57
1:w:182:A:N3	1:w:433:C:H1'	2.19	0.57
1:w:273(F):U:C2	1:w:363(B):A:H2	2.23	0.57
1:w:333:G:N2	1:w:334:C:O4'	2.38	0.57
1:w:519:U:C4	1:w:520:G:C4	2.93	0.57
1:w:580:C:H2'	1:w:581:C:C6	2.39	0.57
1:w:589:C:O3'	6:D:92:TYR:CE1	2.58	0.57
1:w:710:G:C2	1:w:722:A:N1	2.73	0.57
1:w:819:A:O2'	1:w:837:C:H2'	2.04	0.57
1:w:847:U:C4	1:w:933:A:N1	2.73	0.57
1:w:972:G:H3'	1:w:973:A:H2'	1.86	0.57
1:w:1024:G:H2'	1:w:1025:G:C8	2.40	0.57
1:w:1181:C:C5'	1:w:1182:A:OP1	2.53	0.57
1:w:1203:G:C5'	1:w:1204:A:H5''	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1341:U:H4'	1:w:1602:U:C4	2.40	0.57
1:w:1342:A:O2'	1:w:1344:G:OP2	2.19	0.57
1:w:1362:C:C5'	1:w:1362:C:H6	2.17	0.57
1:w:1369:G:H1'	1:w:1809:A:H62	1.59	0.57
1:w:1501:C:O5'	1:w:1501:C:C6	2.51	0.57
1:w:1803:A:H5''	4:B:259:THR:O	2.05	0.57
1:w:1816:G:N3	1:w:1816:G:H2'	2.20	0.57
1:w:1923:U:H2'	1:w:1924:C:H5	1.64	0.57
1:w:2195:C:N3	1:w:2196:C:C5	2.73	0.57
1:w:2215:G:C2	1:w:2216:G:C8	2.93	0.57
1:w:2306:C:O5'	1:w:2311:A:N6	2.38	0.57
1:w:2333:A:C8	1:w:2335:A:C6	2.93	0.57
1:w:2404:C:O5'	1:w:2404:C:H6	1.88	0.57
1:w:2516:G:N1	1:w:2569:G:C6	2.73	0.57
2:x:20:C:H2'	2:x:21:G:C1'	2.34	0.57
2:x:85:G:C6	2:x:92:G:C6	2.93	0.57
2:x:91:C:H2'	2:x:92:G:O4'	2.05	0.57
3:A:6:LYS:C	3:A:7:ARG:HG3	2.30	0.57
3:A:42:VAL:HG12	3:A:43:GLU:N	2.20	0.57
4:B:151:LYS:O	4:B:151:LYS:CG	2.52	0.57
5:C:4:ILE:HG13	5:C:5:LEU:H	1.69	0.57
5:C:11:MET:HE3	5:C:12:THR:C	2.29	0.57
5:C:172:VAL:HA	5:C:184:VAL:CG1	2.35	0.57
7:E:87:PRO:O	7:E:88:ILE:HG13	2.05	0.57
8:F:144:VAL:HG12	8:F:145:ALA:H	1.68	0.57
13:K:23:GLY:HA2	13:K:98:LYS:CB	2.23	0.57
13:K:36:ALA:N	13:K:103:MET:CE	2.68	0.57
13:K:48:GLU:CA	13:K:51:ARG:NE	2.63	0.57
13:K:75:THR:HA	13:K:87:LYS:O	2.05	0.57
13:K:102:VAL:C	13:K:103:MET:SD	2.88	0.57
13:K:124:LYS:HG3	13:K:125:LEU:N	2.20	0.57
15:M:73:LEU:O	15:M:76:LYS:CB	2.46	0.57
18:P:77:ALA:HB3	18:P:83:ARG:CA	2.34	0.57
21:S:24:VAL:HG22	21:S:25:GLY:N	2.20	0.57
22:T:101:PRO:CG	22:T:136:PHE:HB3	2.35	0.57
29:a:9:GLY:HA2	29:a:12:LYS:HD2	1.86	0.57
30:b:26:ILE:HG22	30:b:27:CYS:O	2.05	0.57
31:y:5:U:C4	38:f:97:GLY:CA	2.86	0.57
31:y:319:G:N3	31:y:1434:A:H2	2.03	0.57
31:y:330:C:H2'	31:y:331:G:H5'	1.78	0.57
31:y:363:A:N3	45:m:31:PHE:CE2	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:465:A:N3	31:y:465:A:C2'	2.66	0.57
31:y:509:A:H2'	31:y:510:A:H8	1.64	0.57
31:y:585:G:H5''	31:y:586:C:OP2	2.03	0.57
31:y:748:C:H1'	31:y:749:C:H5	1.70	0.57
31:y:820:U:H6	31:y:820:U:C5'	2.07	0.57
31:y:971:G:C5'	31:y:972:C:H5''	2.34	0.57
31:y:1225:A:H5'	46:n:103:THR:CG2	2.35	0.57
31:y:1253:G:N3	31:y:1355:G:H4'	2.19	0.57
31:y:1367:C:H5''	43:k:60:ARG:CZ	2.35	0.57
32:z:3:C:H2'	32:z:4:C:C5	2.34	0.57
32:z:6:G:N2	32:z:68:C:C6	2.73	0.57
32:z:24:G:C5	32:z:25:C:C2	2.93	0.57
32:z:39:PSU:C4	32:z:40:C:C5	2.93	0.57
32:z:61:C:H2'	32:z:62:C:C5'	2.35	0.57
33:0:48:C:H4'	33:0:49:C:H5''	1.85	0.57
33:0:54:U:C2	33:0:58:A:N6	2.72	0.57
35:c:32:ILE:HD12	35:c:32:ILE:C	2.30	0.57
35:c:97:TRP:CE2	35:c:101:MET:SD	2.97	0.57
35:c:149:LEU:N	35:c:149:LEU:HD23	2.19	0.57
37:e:117:ALA:HA	37:e:120:LEU:CD1	2.35	0.57
39:g:6:VAL:O	39:g:62:TRP:HD1	1.86	0.57
40:h:111:ARG:NH1	40:h:112:PRO:HD2	2.20	0.57
40:h:119:ARG:CG	40:h:120:ILE:H	2.18	0.57
41:i:26:VAL:CG1	41:i:61:VAL:HG22	2.35	0.57
41:i:62:TYR:N	41:i:62:TYR:CD2	2.72	0.57
43:k:8:LEU:HD21	43:k:70:ARG:HB2	1.87	0.57
44:l:62:GLN:O	44:l:65:ALA:HB3	2.05	0.57
44:l:77:MET:CA	44:l:80:VAL:CG1	2.83	0.57
44:l:78:GLN:C	44:l:80:VAL:H	2.13	0.57
46:n:14:ARG:NE	46:n:16:ASP:HB2	2.20	0.57
46:n:15:VAL:CG2	46:n:41:PRO:CA	2.76	0.57
46:n:55:ARG:O	46:n:59:TYR:HB2	2.05	0.57
52:t:25:LYS:HD3	52:t:26:GLY:H	1.68	0.57
53:u:80:ARG:CA	53:u:80:ARG:HE	2.17	0.57
1:w:37:C:H2'	1:w:38:A:H8	1.63	0.56
1:w:99:U:H5'	1:w:102:G:N9	2.20	0.56
1:w:252:G:O2'	1:w:253:C:H5'	2.05	0.56
1:w:270(C):A:H2'	1:w:270(D):C:H5''	1.87	0.56
1:w:415:A:C8	1:w:415:A:O5'	2.58	0.56
1:w:532:A:C2'	1:w:533:G:OP2	2.53	0.56
1:w:607:U:N3	1:w:620:G:H1'	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:657:U:H2'	1:w:658:C:C6	2.40	0.56
1:w:661:C:O2'	12:J:17:LYS:O	2.20	0.56
1:w:686:G:N2	1:w:788:A:N1	2.53	0.56
1:w:711:G:C6	1:w:712:G:C5	2.93	0.56
1:w:987:G:C3'	1:w:988:A:N7	2.60	0.56
1:w:1141:U:H1'	1:w:114(B):A:C4	2.40	0.56
1:w:1308:A:H8	1:w:1308:A:O5'	1.88	0.56
1:w:1348:G:C4	1:w:1349:A:N7	2.73	0.56
1:w:1349:A:N3	1:w:1349:A:C3'	2.68	0.56
1:w:1459:G:N1	1:w:1461:G:C4	2.73	0.56
1:w:154(B):C:O2'	1:w:1547:C:OP2	2.19	0.56
1:w:1615:C:C4	1:w:1617:C:O2	2.59	0.56
1:w:1636:C:O4'	1:w:1760:A:H2	1.88	0.56
1:w:1779:U:H5''	1:w:1780:A:H5''	1.86	0.56
1:w:1782:C:C2'	1:w:1783:A:H5'	2.35	0.56
1:w:1789:A:H3'	1:w:1790:C:H5	1.65	0.56
1:w:1796:U:O5'	1:w:1796:U:C6	2.58	0.56
1:w:1798:U:O2	1:w:1802:A:C2	2.57	0.56
1:w:1812:A:H1'	4:B:46:GLN:H	1.67	0.56
1:w:1828:G:OP1	1:w:1972:A:OP2	2.22	0.56
1:w:1920:C:H4'	31:y:1517:G:N1	2.18	0.56
1:w:2037:G:C4	1:w:2038:G:C5	2.93	0.56
1:w:2243:U:N3	1:w:2244:U:C5	2.72	0.56
1:w:2414:G:N1	1:w:2415:G:C8	2.73	0.56
1:w:2417:C:HO2'	1:w:2418:A:H5'	1.67	0.56
1:w:2466:C:O5'	1:w:2466:C:H6	1.88	0.56
1:w:2571:C:H2'	5:C:143:ASN:HD22	1.67	0.56
1:w:2652:C:C4	1:w:2653:U:C4	2.93	0.56
1:w:2835:A:N3	1:w:2835:A:H2'	2.20	0.56
1:w:2857:G:C5	1:w:2859:G:OP2	2.58	0.56
1:w:2896:C:H2'	1:w:2897:U:C6	2.40	0.56
4:B:62:TYR:CD1	4:B:64:ILE:HB	2.39	0.56
6:D:15:LEU:HD13	6:D:19:LEU:CD2	2.35	0.56
7:E:132:ASN:O	7:E:133:LEU:HD13	2.05	0.56
7:E:165:THR:C	7:E:167:GLU:N	2.62	0.56
8:F:16:SER:C	8:F:26:VAL:HG13	2.30	0.56
9:G:94:ALA:HB3	9:G:95:LYS:NZ	2.11	0.56
10:H:113:MET:O	10:H:114:LEU:C	2.46	0.56
12:J:49:ARG:O	12:J:51:PHE:N	2.36	0.56
12:J:61:ARG:HA	29:a:27:THR:CG2	2.35	0.56
13:K:55:VAL:O	13:K:58:PHE:C	2.48	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:69:PHE:O	13:K:69:PHE:HD2	1.86	0.56
14:L:73:VAL:CG2	14:L:77:ARG:HB3	2.32	0.56
16:N:110:ILE:C	16:N:112:ARG:N	2.61	0.56
18:P:96:ILE:CG2	18:P:97:LYS:N	2.27	0.56
19:Q:85:VAL:HG12	19:Q:86:LEU:N	2.19	0.56
20:R:32:PRO:HA	20:R:75:ASP:CB	2.35	0.56
22:T:45:ASP:CB	22:T:49:ARG:HH21	2.18	0.56
22:T:97:GLU:OE1	22:T:164:ALA:HB3	2.04	0.56
23:U:46:LYS:HB2	23:U:78:TYR:CE2	2.40	0.56
24:V:19:GLN:H	24:V:44:PRO:CD	2.18	0.56
24:V:19:GLN:O	24:V:42:GLN:O	2.23	0.56
24:V:31:GLY:O	24:V:32:LYS:HB2	2.05	0.56
26:X:55:ARG:HH11	26:X:56:VAL:H	1.53	0.56
31:y:17:U:H1'	31:y:1080:A:H1'	1.86	0.56
31:y:74:C:N3	31:y:75:C:N4	2.53	0.56
31:y:137:C:C2	31:y:138:G:N7	2.73	0.56
31:y:222:U:C3'	31:y:223:U:C5'	2.75	0.56
31:y:243:A:O4'	31:y:245:C:H5''	2.04	0.56
31:y:272:C:N3	31:y:273:A:C5	2.73	0.56
31:y:739:C:H6	31:y:739:C:O5'	1.87	0.56
31:y:769:G:C2'	31:y:770:C:H5'	2.36	0.56
31:y:815:A:C4'	31:y:817:C:C5	2.89	0.56
31:y:851:G:H2'	31:y:852:G:C8	2.38	0.56
31:y:913:A:HO2'	31:y:914:A:P	2.28	0.56
31:y:936:C:C3'	31:y:937:A:C8	2.86	0.56
31:y:1164:G:C5	31:y:1165:C:N4	2.72	0.56
31:y:1266:G:H3'	31:y:1268:A:OP2	2.05	0.56
31:y:1276:G:N3	31:y:1282:C:O2	2.38	0.56
31:y:1305:G:H1	31:y:1331:G:H1'	1.68	0.56
31:y:1316:G:H1	31:y:1319:A:H5'	1.68	0.56
31:y:1359:C:N3	31:y:1361:G:OP2	2.38	0.56
31:y:1367:C:H4'	43:k:60:ARG:CZ	2.33	0.56
31:y:1408:A:C8	31:y:1408:A:C3'	2.87	0.56
31:y:1442:G:N2	31:y:1442:G:OP2	2.38	0.56
31:y:1468:A:C3'	31:y:1469:G:H5'	2.30	0.56
32:z:19:G:H5''	32:z:20:H2U:OP2	2.05	0.56
35:c:50:GLU:O	35:c:52:GLU:N	2.38	0.56
36:d:172:ARG:HH12	36:d:174:PRO:HD3	1.70	0.56
37:e:21:LEU:C	37:e:26:CYS:HB2	2.28	0.56
37:e:59:ARG:HE	37:e:60:GLU:N	2.03	0.56
38:f:45:PHE:HB3	38:f:61:TYR:CD1	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:g:35:ALA:HB1	39:g:65:VAL:HG12	1.87	0.56
40:h:15:ASP:OD2	40:h:16:LEU:N	2.38	0.56
42:j:125:TYR:CD2	42:j:125:TYR:N	2.64	0.56
46:n:59:TYR:O	46:n:64:TRP:CE3	2.58	0.56
47:o:22:THR:O	47:o:33:VAL:HG11	2.04	0.56
47:o:32:SER:HB2	47:o:41:ARG:HB3	1.87	0.56
47:o:47:LEU:HD22	47:o:47:LEU:N	2.21	0.56
50:r:9:VAL:N	50:r:21:VAL:CG1	2.66	0.56
1:w:61:G:C5	1:w:62:C:C4	2.93	0.56
1:w:89:G:C3'	1:w:90:U:C6	2.85	0.56
1:w:293:U:O5'	1:w:293:U:H6	1.87	0.56
1:w:321:G:C2	6:D:160:ARG:NE	2.73	0.56
1:w:385:C:O2	1:w:390:A:H2	1.87	0.56
1:w:418:G:C4	1:w:419:C:C5	2.93	0.56
1:w:450:G:C3'	1:w:451:C:H5''	2.34	0.56
1:w:458:G:C5'	28:Z:40:TRP:HE1	2.11	0.56
1:w:465:G:O2'	1:w:683:C:O3'	2.21	0.56
1:w:518:G:C2	1:w:519:U:C4	2.92	0.56
1:w:562:U:O2'	1:w:572:A:H1'	2.05	0.56
1:w:661:C:H2'	1:w:662:G:H5'	1.87	0.56
1:w:663:G:N7	1:w:664:C:C6	2.72	0.56
1:w:944:G:C8	1:w:944:G:O5'	2.58	0.56
1:w:1025:G:C5	1:w:1135:C:O4'	2.57	0.56
1:w:1299:G:H4'	1:w:1301:A:O4'	2.05	0.56
1:w:1382:G:H3'	1:w:1383:C:C6	2.40	0.56
1:w:1422:G:H2'	1:w:1423:G:O4'	2.05	0.56
1:w:1461:G:C2	1:w:1462:C:C4	2.94	0.56
1:w:1551:C:H3'	1:w:1552:G:H8	1.68	0.56
1:w:1552:G:O2'	1:w:1553:A:O5'	2.16	0.56
1:w:1576:U:C2	1:w:1577:C:C5	2.92	0.56
1:w:1657:C:C4	1:w:1658:C:C4	2.92	0.56
1:w:1711:C:H2'	1:w:1712:C:H6	1.70	0.56
1:w:1746:G:N3	1:w:1747:G:H1'	2.17	0.56
1:w:1798:U:C5'	4:B:259:THR:C	2.78	0.56
1:w:1821:A:C5	1:w:1822:G:N7	2.73	0.56
1:w:1827:C:O2	1:w:1827:C:H2'	2.05	0.56
1:w:1836:C:H2'	1:w:1837:C:C6	2.39	0.56
1:w:1965:C:OP1	1:w:1966:A:H2'	2.05	0.56
1:w:2057:A:N6	1:w:2058:A:H2	2.03	0.56
1:w:2058:A:C6	1:w:2059:A:N7	2.72	0.56
1:w:2101:G:N2	1:w:2189:U:H1'	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2296:U:OP2	15:M:9:ARG:NH2	2.36	0.56
1:w:2331:G:C2'	1:w:2332:U:C6	2.83	0.56
1:w:2415:G:C8	1:w:2416:C:C5	2.93	0.56
1:w:2488:A:C5	1:w:2489:G:C5	2.93	0.56
1:w:2619:C:OP1	5:C:152:LYS:CD	2.41	0.56
1:w:2620:C:H5'	5:C:156:MET:HB2	1.87	0.56
1:w:2640:G:H2'	1:w:2641:G:H8	1.70	0.56
1:w:2658:C:H2'	1:w:2659:G:C5'	2.35	0.56
1:w:2728:U:C2	1:w:2729:G:C8	2.93	0.56
1:w:2786:U:O2	1:w:2786:U:C2'	2.53	0.56
2:x:102:G:H2'	2:x:103:U:C4'	2.35	0.56
4:B:27:THR:O	4:B:28:GLU:HB2	2.04	0.56
4:B:132:PRO:HB3	4:B:188:GLU:CG	2.35	0.56
5:C:59:VAL:HG11	5:C:63:LEU:CD1	2.31	0.56
5:C:154:LYS:O	5:C:156:MET:N	2.38	0.56
6:D:47:LYS:O	6:D:48:THR:HB	2.05	0.56
6:D:52:VAL:O	6:D:53:ALA:CB	2.52	0.56
8:F:144:VAL:CG1	8:F:145:ALA:H	2.18	0.56
9:G:125:GLU:HA	9:G:143:SER:CA	2.35	0.56
10:H:38:LEU:H	10:H:159:GLU:HA	1.70	0.56
11:I:12:ASP:CG	11:I:86:ILE:CD1	2.78	0.56
11:I:106:LEU:O	11:I:111:PHE:CD2	2.57	0.56
12:J:94:GLU:HG3	12:J:96:THR:HG23	1.88	0.56
13:K:8:LYS:HD3	13:K:8:LYS:N	2.21	0.56
15:M:27:SER:OG	15:M:40:ILE:HD12	2.05	0.56
16:N:32:TYR:CB	16:N:81:PRO:O	2.53	0.56
17:O:29:SER:O	17:O:30:LYS:HD3	2.04	0.56
17:O:35:ALA:O	17:O:39:LEU:CD2	2.52	0.56
18:P:51:VAL:CG1	18:P:52:VAL:H	2.00	0.56
19:Q:28:SER:CA	19:Q:71:VAL:HG23	2.35	0.56
19:Q:30:GLU:HB2	19:Q:31:GLU:OE1	2.05	0.56
21:S:27:VAL:O	21:S:28:LYS:HD3	2.05	0.56
22:T:99:TYR:HB3	22:T:123:ASP:CG	2.29	0.56
22:T:130:PRO:HA	22:T:133:ILE:CG1	2.35	0.56
24:V:46:LEU:HD23	24:V:46:LEU:N	2.17	0.56
31:y:227:G:N2	31:y:228:A:H1'	2.20	0.56
31:y:332:G:O2'	53:u:16:HIS:HD2	1.88	0.56
31:y:332:G:H2'	31:y:333:G:O4'	2.05	0.56
31:y:507:C:N1	31:y:508:C:H5	2.02	0.56
31:y:539:A:OP2	45:m:114:LYS:HE3	2.05	0.56
31:y:721:G:O5'	31:y:721:G:C8	2.56	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:728:A:N3	31:y:728:A:H2'	2.20	0.56
31:y:798:G:C2	31:y:799:G:C8	2.93	0.56
31:y:1004:A:C2'	31:y:1005:A:H5'	2.36	0.56
31:y:1064:G:H22	31:y:1190:G:H2'	1.66	0.56
31:y:1115:C:C2	31:y:1186:G:N2	2.73	0.56
31:y:1157:A:C2	31:y:1181:G:C5	2.93	0.56
31:y:1225:A:OP2	46:n:103:THR:HG23	2.05	0.56
31:y:1311:G:O6	31:y:1312:G:O6	2.23	0.56
31:y:1326:C:H4'	54:v:19:GLY:N	2.17	0.56
31:y:1454:G:N1	31:y:1455:G:C5	2.73	0.56
31:y:1526:G:C3'	31:y:1527:C:C6	2.80	0.56
32:z:24:G:C6	32:z:25:C:N3	2.73	0.56
32:z:60:U:H2'	32:z:61:C:OP1	2.02	0.56
35:c:21:ARG:HB2	35:c:23:ARG:NH1	2.19	0.56
36:d:120:VAL:O	36:d:123:GLN:OE1	2.23	0.56
36:d:196:LEU:HG	36:d:197:GLY:H	1.69	0.56
38:f:45:PHE:O	38:f:61:TYR:HB3	2.05	0.56
39:g:91:VAL:CG2	39:g:92:LYS:H	2.14	0.56
40:h:8:GLU:HG3	40:h:9:VAL:N	2.20	0.56
41:i:122:ARG:O	41:i:123:GLU:C	2.48	0.56
42:j:49:PRO:HB2	42:j:55:ALA:CB	2.35	0.56
42:j:97:LYS:HB3	42:j:98:PRO:CD	2.29	0.56
45:m:10:VAL:HG11	50:r:29:HIS:HE1	1.69	0.56
45:m:52:ARG:NH2	45:m:52:ARG:O	2.39	0.56
46:n:29:ARG:O	46:n:32:GLU:HB2	2.04	0.56
48:p:4:THR:O	48:p:6:GLU:N	2.38	0.56
49:q:19:ILE:CB	49:q:37:GLY:O	2.50	0.56
49:q:19:ILE:HD12	49:q:39:TYR:HB2	1.86	0.56
49:q:50:LYS:HD3	49:q:51:VAL:N	2.20	0.56
50:r:10:VAL:CG1	50:r:57:VAL:CG2	2.83	0.56
51:s:78:LEU:N	51:s:78:LEU:HD12	2.19	0.56
53:u:15:ARG:HA	53:u:18:GLN:NE2	2.19	0.56
53:u:79:ARG:C	53:u:81:LYS:N	2.61	0.56
54:v:22:ARG:N	54:v:23:PRO:CD	2.60	0.56
1:w:25:U:N3	1:w:26:G:C2	2.73	0.56
1:w:55:G:N2	1:w:116:C:N1	2.53	0.56
1:w:78:A:N6	1:w:109:G:O6	2.38	0.56
1:w:116:C:O2'	1:w:126:A:C5	2.50	0.56
1:w:134:C:H2'	1:w:135:G:H8	1.71	0.56
1:w:184:C:C4	1:w:213:A:N1	2.73	0.56
1:w:439:G:C6	1:w:440:G:C5	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:464:U:C2	1:w:465:G:N7	2.73	0.56
1:w:465:G:O2'	28:Z:21:ARG:NH1	2.39	0.56
1:w:483:A:C2'	1:w:484:C:C6	2.88	0.56
1:w:487:C:C4	1:w:488:G:H1'	2.39	0.56
1:w:502:A:O5'	1:w:502:A:H8	1.88	0.56
1:w:519:U:C4'	19:Q:25:ARG:NH2	2.45	0.56
1:w:571:A:N6	1:w:575:A:N7	2.52	0.56
1:w:585:G:C2'	1:w:586:A:C8	2.87	0.56
1:w:592:G:N3	1:w:593:G:C8	2.73	0.56
1:w:615:G:C2	1:w:616:A:O4'	2.57	0.56
1:w:624:C:H2'	1:w:625:G:O4'	2.05	0.56
1:w:655:A:O2'	1:w:656:G:C8	2.57	0.56
1:w:669:G:C8	1:w:801:G:N7	2.73	0.56
1:w:694:U:H5''	1:w:1569:A:C2	2.40	0.56
1:w:711:G:N1	1:w:712:G:C5	2.73	0.56
1:w:784:A:OP1	1:w:2589:A:H5'	2.05	0.56
1:w:800:A:N1	1:w:802:A:C8	2.73	0.56
1:w:814:C:H5	12:J:28:GLY:H	1.53	0.56
1:w:848:G:H3'	1:w:929:G:N2	2.20	0.56
1:w:886:C:H1'	1:w:887:A:C5	2.40	0.56
1:w:897:C:H2'	1:w:898:C:H6	1.70	0.56
1:w:925:C:C6	1:w:925:C:C3'	2.89	0.56
1:w:1201:C:H4'	6:D:40:ARG:CZ	2.36	0.56
1:w:1260:G:C4	1:w:1261:C:C4	2.93	0.56
1:w:1295:C:O2	1:w:1295:C:H2'	2.03	0.56
1:w:1296:G:P	1:w:1296:G:H8	2.29	0.56
1:w:1323:U:O2	1:w:1331:A:C2	2.58	0.56
1:w:1327:C:N4	1:w:1328:G:O6	2.38	0.56
1:w:1342:A:C5	1:w:1397:U:C6	2.93	0.56
1:w:1364:G:N7	24:V:8:SER:O	2.38	0.56
1:w:1367:A:O2'	1:w:1368:G:C5'	2.50	0.56
1:w:1536:A:H5''	1:w:1537:C:OP2	2.06	0.56
1:w:1536:A:H61	1:w:1538:G:H21	1.50	0.56
1:w:1672:C:H3'	1:w:1672:C:H6	1.69	0.56
1:w:1696:G:H8	1:w:1696:G:P	2.27	0.56
1:w:1702:G:N1	1:w:1703:G:C6	2.73	0.56
1:w:1725:G:N1	1:w:1726:G:O6	2.38	0.56
1:w:1800:C:N4	1:w:1819:A:H8	2.03	0.56
1:w:1843:C:N3	1:w:1844:C:H5	2.03	0.56
1:w:1924:C:C5	1:w:1925:C:N4	2.73	0.56
1:w:1993:U:C2	1:w:1994:C:C6	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2027:G:N1	1:w:2037:G:C6	2.73	0.56
1:w:2094:G:C2'	1:w:2095:C:O4'	2.50	0.56
1:w:2094:G:C2'	1:w:2095:C:C6	2.88	0.56
1:w:2119:A:N6	1:w:2168:G:O2'	2.38	0.56
1:w:2122:U:O2'	1:w:2123:G:H5'	2.06	0.56
1:w:2158:A:H2'	1:w:2159:G:C5'	2.36	0.56
1:w:2218:G:N3	1:w:2219:G:C8	2.73	0.56
1:w:2290:G:C5	1:w:2291:U:C4	2.93	0.56
1:w:2317:C:O5'	1:w:2317:C:H6	1.87	0.56
1:w:2428:G:H21	12:J:60:MET:HE3	1.70	0.56
1:w:2443:C:C2'	1:w:2444:G:H8	2.11	0.56
1:w:2461:C:C2'	1:w:2462:U:H6	2.16	0.56
1:w:2516:G:C6	1:w:2569:G:C6	2.93	0.56
1:w:2522:U:H6	1:w:2522:U:O5'	1.87	0.56
1:w:2530:A:O2'	1:w:2532:G:P	2.63	0.56
1:w:2556:C:H3'	1:w:2556:C:C6	2.41	0.56
1:w:2558:C:N3	1:w:2559:C:C4	2.73	0.56
1:w:2573:C:H5''	1:w:2574:G:C5'	2.35	0.56
1:w:2576:G:H5''	1:w:2578:G:N7	2.19	0.56
1:w:2587:A:N6	1:w:2608:G:H1'	2.20	0.56
1:w:2619:C:O5'	1:w:2619:C:C6	2.57	0.56
1:w:2650:U:O2'	1:w:2651:C:C5'	2.50	0.56
1:w:2659:G:C2'	1:w:2660:A:C8	2.88	0.56
1:w:2688:U:N3	1:w:2720:U:OP2	2.38	0.56
1:w:2762:G:C3'	1:w:2763:G:C5'	2.78	0.56
1:w:2802:G:C2'	1:w:2803:C:H5'	2.35	0.56
1:w:2892:A:N6	1:w:2893:G:N3	2.54	0.56
2:x:28:C:O5'	2:x:28:C:H6	1.89	0.56
2:x:77:U:O2'	2:x:78:A:O4'	2.22	0.56
3:A:53:ARG:N	3:A:53:ARG:HE	2.02	0.56
4:B:70:TRP:CZ3	4:B:190:TYR:HB3	2.40	0.56
4:B:126:GLN:HG2	4:B:129:ASN:ND2	2.19	0.56
5:C:63:LEU:CD2	5:C:65:GLY:HA3	2.35	0.56
5:C:146:THR:N	5:C:148:GLY:N	2.54	0.56
6:D:191:LEU:HD22	6:D:193:ALA:CB	2.35	0.56
7:E:16:ARG:HA	7:E:19:LEU:CD1	2.34	0.56
8:F:144:VAL:C	8:F:146:ALA:H	2.11	0.56
8:F:152:ARG:NH2	8:F:152:ARG:N	2.52	0.56
9:G:5:LEU:HD22	9:G:5:LEU:N	2.19	0.56
9:G:66:GLU:OE1	9:G:66:GLU:HA	2.04	0.56
9:G:95:LYS:CD	9:G:95:LYS:N	2.56	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:114:LEU:HA	9:G:130:TYR:HD1	1.63	0.56
10:H:36:TRP:O	10:H:158:PRO:HG2	2.05	0.56
10:H:78:VAL:HG21	10:H:149:PRO:HB3	1.87	0.56
10:H:146:TYR:OH	10:H:150:ASP:O	2.22	0.56
11:I:87:ILE:HG22	11:I:87:ILE:O	2.06	0.56
11:I:97:ARG:HA	11:I:97:ARG:NH1	2.20	0.56
12:J:89:ALA:C	12:J:121:LYS:HZ2	2.13	0.56
12:J:101:VAL:O	12:J:103:ALA:N	2.39	0.56
13:K:35:VAL:CG2	13:K:130:LYS:N	2.68	0.56
13:K:72:LYS:HD3	13:K:72:LYS:C	2.30	0.56
13:K:103:MET:HB3	13:K:104:PHE:CE1	2.40	0.56
14:L:104:ARG:HG2	14:L:105:ARG:HG2	1.87	0.56
15:M:10:ARG:HD2	15:M:10:ARG:N	2.20	0.56
15:M:75:GLU:OE2	15:M:76:LYS:N	2.39	0.56
15:M:103:GLU:CG	15:M:104:GLY:N	2.69	0.56
16:N:28:VAL:HG13	16:N:44:ASP:HB2	1.87	0.56
18:P:42:GLY:C	18:P:47:VAL:CG1	2.78	0.56
18:P:57:VAL:O	18:P:57:VAL:HG12	2.06	0.56
18:P:66:ARG:CD	18:P:94:LEU:HD22	2.32	0.56
19:Q:74:ALA:HB1	19:Q:103:ILE:HG12	1.86	0.56
19:Q:75:TYR:N	19:Q:103:ILE:CG1	2.69	0.56
20:R:58:HIS:O	20:R:59:VAL:CG1	2.48	0.56
22:T:24:LEU:HG	22:T:40:ASP:CA	2.36	0.56
23:U:26:TYR:CE2	23:U:29:GLN:CD	2.83	0.56
23:U:41:ARG:C	23:U:41:ARG:CD	2.71	0.56
24:V:38:SER:C	24:V:39:LYS:CD	2.77	0.56
25:W:22:GLU:O	25:W:25:VAL:HG13	2.05	0.56
26:X:8:LEU:CG	26:X:33:GLN:O	2.53	0.56
27:Y:31:VAL:CB	27:Y:32:PRO:CD	2.72	0.56
27:Y:40:LYS:HG2	27:Y:46:CYS:SG	2.45	0.56
27:Y:56:LYS:HD2	27:Y:56:LYS:H	1.70	0.56
28:Z:11:LYS:O	28:Z:12:ARG:C	2.47	0.56
28:Z:16:HIS:O	28:Z:17:GLY:O	2.23	0.56
29:a:34:TRP:CE2	29:a:36:LYS:HB2	2.40	0.56
29:a:44:LYS:CG	29:a:45:GLY:H	2.18	0.56
29:a:50:LEU:O	29:a:50:LEU:HG	2.04	0.56
31:y:18:C:O4'	31:y:1079:G:C2	2.58	0.56
31:y:33:A:H4'	31:y:364:A:H1'	1.86	0.56
31:y:109:A:C8	31:y:327:A:O4'	2.59	0.56
31:y:124:G:C6	31:y:125:U:C2	2.94	0.56
31:y:200:G:C2'	31:y:201:C:C6	2.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:265:G:H3'	31:y:267:C:H5	1.69	0.56
31:y:361:G:C5	31:y:362:G:C4	2.93	0.56
31:y:396:G:H21	31:y:398:C:H1'	1.70	0.56
31:y:505:G:H4'	31:y:534:U:C2	2.39	0.56
31:y:600:C:H2'	31:y:601:C:H6	1.68	0.56
31:y:627:G:OP1	49:q:18:ARG:NH2	2.37	0.56
31:y:668:G:H5'	48:p:49:ASP:O	2.06	0.56
31:y:853:G:C2'	31:y:854:G:H5'	2.35	0.56
31:y:892:A:C2	31:y:907:A:C5	2.93	0.56
31:y:951:G:C5	31:y:1231:G:C2	2.93	0.56
31:y:967:5MC:H4'	42:j:128:ARG:CD	2.26	0.56
31:y:102(C):C:C2	31:y:1029:G:C1'	2.88	0.56
31:y:1053:G:C2'	31:y:1198:G:OP2	2.53	0.56
31:y:1060:C:H2'	31:y:1061:G:O4'	2.04	0.56
31:y:1077:G:C6	31:y:1079:G:H5'	2.40	0.56
31:y:1161:C:H2'	31:y:1162:C:C6	2.39	0.56
31:y:1187:G:C6	31:y:1188:A:N6	2.74	0.56
31:y:1247:U:O2	31:y:1247:U:C2'	2.53	0.56
31:y:1261:A:P	31:y:1262:C:C5	2.98	0.56
31:y:1367:C:OP1	42:j:114:TYR:O	2.22	0.56
32:z:9:A:C4	32:z:46:7MG:C2	2.93	0.56
32:z:39:PSU:H2'	32:z:40:C:C6	2.41	0.56
32:z:60:U:O2'	32:z:61:C:P	2.63	0.56
32:z:70:G:C6	32:z:71:G:C5	2.93	0.56
33:0:24:G:H3'	33:0:25:C:C6	2.40	0.56
33:0:30:G:H22	40:h:144:MET:HE1	1.68	0.56
33:0:50:U:H2'	33:0:51:G:C8	2.39	0.56
33:0:54:U:O2'	33:0:55:PSU:P	2.63	0.56
35:c:42:ILE:HG13	35:c:202:PRO:HB2	1.87	0.56
36:d:29:TYR:HD1	36:d:33:LEU:CD2	2.18	0.56
36:d:59:ARG:NH2	36:d:99:VAL:HG11	2.20	0.56
36:d:132:ARG:HA	36:d:135:LYS:NZ	2.20	0.56
37:e:21:LEU:C	37:e:26:CYS:CB	2.78	0.56
37:e:76:ARG:NH1	37:e:80:GLU:N	2.53	0.56
37:e:100:ARG:HB3	37:e:103:ASN:OD1	2.05	0.56
37:e:122:ARG:C	37:e:124:GLY:N	2.59	0.56
37:e:163:GLU:C	37:e:165:MET:H	2.13	0.56
38:f:121:LYS:O	38:f:123:LEU:HD22	2.05	0.56
40:h:69:VAL:HG23	40:h:127:ALA:HB1	1.87	0.56
40:h:85:TYR:HD2	40:h:85:TYR:H	1.51	0.56
41:i:13:ILE:O	41:i:17:THR:CB	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:44:PHE:CG	41:i:80:ILE:HD11	2.41	0.56
41:i:49:GLU:HG3	41:i:51:VAL:HG23	1.88	0.56
41:i:119:LEU:HB2	41:i:124:ALA:CA	2.35	0.56
45:m:57:VAL:HG23	45:m:67:ALA:N	2.20	0.56
46:n:108:ARG:CZ	46:n:113:PRO:HA	2.34	0.56
48:p:63:ARG:O	48:p:67:LEU:HG	2.04	0.56
50:r:26:GLN:O	50:r:27:PHE:CD1	2.59	0.56
50:r:69:LYS:C	50:r:70:ARG:HG2	2.28	0.56
51:s:44:LEU:HA	51:s:49:LYS:O	2.05	0.56
52:t:45:VAL:O	52:t:47:HIS:N	2.34	0.56
52:t:48:THR:CB	52:t:61:TYR:HA	2.32	0.56
1:w:64:A:OP2	20:R:63:LYS:HB3	2.05	0.56
1:w:88:G:H2'	1:w:89:G:H5'	1.87	0.56
1:w:120:U:H1'	1:w:149:A:N7	2.19	0.56
1:w:286:C:C4	1:w:287:C:N4	2.73	0.56
1:w:384:U:O5'	1:w:384:U:C6	2.57	0.56
1:w:397:G:H8	1:w:397:G:O5'	1.88	0.56
1:w:440:G:C4	1:w:441:U:C2	2.94	0.56
1:w:465:G:C2	1:w:683:C:H2'	2.41	0.56
1:w:796:C:H6	1:w:796:C:O5'	1.89	0.56
1:w:850:C:O3'	26:X:18:ASP:OD1	2.23	0.56
1:w:930:U:H4'	1:w:931:G:H5'	1.86	0.56
1:w:952:G:C6	1:w:966:G:C6	2.93	0.56
1:w:994:C:H3'	17:O:54:LYS:HE2	1.86	0.56
1:w:1016:G:N1	1:w:1017:G:C6	2.73	0.56
1:w:122(A):C:N3	1:w:1229:G:N2	2.53	0.56
1:w:1256:G:C6	1:w:1257:C:N4	2.74	0.56
1:w:1267:U:HO2'	1:w:1268:A:H5'	1.71	0.56
1:w:1273:U:O2	1:w:2003:G:O4'	2.22	0.56
1:w:1291:C:C6	1:w:1291:C:C3'	2.88	0.56
1:w:1317:A:H2'	1:w:1318:C:H6	1.59	0.56
1:w:1339:G:N3	1:w:1340:U:H5	2.04	0.56
1:w:1385:G:O2'	1:w:1386:C:O4'	2.22	0.56
1:w:1484:G:C2'	1:w:1485:G:C5'	2.83	0.56
1:w:1568:G:C5'	4:B:61:LEU:HD13	2.35	0.56
1:w:1699:G:H2'	1:w:1700:A:C4'	2.35	0.56
1:w:1729:A:H2'	1:w:1730:U:C5'	2.36	0.56
1:w:1759:A:C4'	1:w:2714:G:H21	2.18	0.56
1:w:1759:A:N3	1:w:1759:A:H2'	2.20	0.56
1:w:1764:G:C2'	1:w:1765:C:O5'	2.54	0.56
1:w:1785:A:H2'	1:w:1786:A:H3'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1794:U:N3	1:w:1795:C:C5	2.73	0.56
1:w:1803:A:H62	1:w:1814:G:H21	1.53	0.56
1:w:1836:C:H4'	31:y:784:C:H5''	1.86	0.56
1:w:1838:C:H4'	1:w:1839:G:C8	2.40	0.56
1:w:1897:G:C2'	1:w:1898:U:C5'	2.80	0.56
1:w:1914:C:C2'	1:w:1915:U:O4'	2.41	0.56
1:w:1942:C:OP1	1:w:1943:U:H3'	2.06	0.56
1:w:1977:A:N6	1:w:1978:A:C6	2.73	0.56
1:w:1992:G:O2'	1:w:1993:U:P	2.63	0.56
1:w:2017:U:P	27:Y:8:LYS:HG3	2.46	0.56
1:w:2296:U:H1'	1:w:2297:C:O4'	2.05	0.56
1:w:2532:G:N2	1:w:2663:G:N3	2.53	0.56
1:w:2543:G:C6	1:w:2544:G:C6	2.94	0.56
1:w:2573:C:OP1	1:w:2574:G:OP1	2.24	0.56
1:w:2589:A:C6	1:w:2590:A:C8	2.93	0.56
1:w:2638:G:O2'	1:w:2639:A:C8	2.58	0.56
1:w:2857:G:N1	1:w:2859:G:H5''	2.21	0.56
2:x:75:G:H2'	22:T:85:HIS:HE1	1.70	0.56
2:x:89(A):G:H2'	2:x:89(B):A:O4'	2.05	0.56
3:A:176:VAL:HG13	3:A:177:GLY:N	2.19	0.56
4:B:28:GLU:CB	4:B:29:PRO:CD	2.84	0.56
4:B:97:TYR:O	4:B:98:VAL:HG23	2.06	0.56
4:B:242:ARG:HD2	4:B:242:ARG:H	1.68	0.56
6:D:105:LEU:CD1	6:D:109:VAL:HG21	2.35	0.56
6:D:119:LEU:O	6:D:119:LEU:HD12	2.06	0.56
7:E:122:PRO:HB2	7:E:173:LEU:HD21	1.87	0.56
8:F:52:VAL:O	8:F:52:VAL:HG23	2.05	0.56
9:G:21:VAL:HG23	9:G:21:VAL:O	2.06	0.56
9:G:124:GLY:CA	9:G:144:VAL:CG2	2.68	0.56
12:J:6:LEU:HB2	12:J:8:PRO:HG3	1.87	0.56
13:K:26:TYR:CZ	13:K:27:VAL:HG13	2.41	0.56
16:N:43:GLN:C	16:N:44:ASP:OD1	2.48	0.56
16:N:50:ILE:CG2	16:N:62:THR:O	2.38	0.56
17:O:84:LYS:H	17:O:84:LYS:HE2	1.69	0.56
18:P:76:LYS:CB	18:P:85:LYS:HB2	2.35	0.56
19:Q:23:LEU:HD11	27:Y:27:PRO:CD	2.34	0.56
19:Q:31:GLU:CD	19:Q:31:GLU:H	2.11	0.56
19:Q:61:ASN:O	19:Q:62:HIS:CD2	2.58	0.56
20:R:12:VAL:CA	20:R:29:TRP:HE1	2.12	0.56
20:R:36:LYS:O	20:R:37:THR:C	2.49	0.56
21:S:16:ALA:HB1	21:S:20:TYR:CD1	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:150:LEU:HD22	22:T:154:ASP:CB	2.35	0.56
23:U:28:GLY:C	23:U:67:VAL:HG13	2.30	0.56
24:V:12:PRO:HG2	24:V:63:ALA:HB2	1.87	0.56
26:X:4:LEU:CA	26:X:58:VAL:HG22	2.35	0.56
27:Y:33:CYS:SG	27:Y:38:ALA:O	2.64	0.56
31:y:296:U:C4	31:y:297:G:O6	2.58	0.56
31:y:336:C:C4	31:y:337:C:C5	2.94	0.56
31:y:399:G:H2'	31:y:400:C:C6	2.40	0.56
31:y:518:C:C5	31:y:529:G:N7	2.73	0.56
31:y:782:A:C2	31:y:783:C:O4'	2.58	0.56
31:y:951:G:C6	31:y:1231:G:C5	2.94	0.56
31:y:103(A):A:C8	31:y:103(A):A:O5'	2.58	0.56
31:y:1043:C:O2	31:y:1044:A:C8	2.58	0.56
31:y:1120:G:C2	31:y:1154:G:N3	2.73	0.56
31:y:1192:C:O5'	31:y:1192:C:H6	1.88	0.56
31:y:1230:C:C2'	31:y:1231:G:C5'	2.72	0.56
31:y:1342:C:H4'	42:j:125:TYR:HE2	1.68	0.56
31:y:1441:G:H4'	31:y:1442:G:C8	2.41	0.56
31:y:1452:C:C4'	31:y:1453:G:C4	2.86	0.56
31:y:1459:C:H2'	31:y:1460:A:H8	1.70	0.56
32:z:7:A:H5'	32:z:8:4SU:OP2	2.05	0.56
32:z:24:G:N1	32:z:25:C:O2	2.38	0.56
32:z:55:PSU:C2	32:z:57:G:H3'	2.40	0.56
40:h:49:ILE:HA	40:h:52:GLU:HG2	1.86	0.56
42:j:28:VAL:O	42:j:36:TYR:HB3	2.05	0.56
44:l:73:MET:HE2	44:l:103:LEU:HD22	1.87	0.56
45:m:86:GLY:O	45:m:98:HIS:HE1	1.86	0.56
48:p:54:ARG:HH11	48:p:55:GLY:N	2.04	0.56
1:w:20:C:C1'	1:w:521:G:N2	2.69	0.56
1:w:34:C:H2'	1:w:35:G:C5'	2.29	0.56
1:w:121:G:O6	1:w:130:C:N4	2.34	0.56
1:w:273(F):U:O2	1:w:363(B):A:H2	1.89	0.56
1:w:313:C:O2'	1:w:314:A:O4'	2.14	0.56
1:w:340:A:H2'	1:w:341:G:C5'	2.35	0.56
1:w:376:C:C4	1:w:399:G:N1	2.73	0.56
1:w:406:G:N2	1:w:407:G:H1'	2.21	0.56
1:w:521:G:C4	1:w:522:G:C8	2.94	0.56
1:w:655:A:H4'	1:w:656:G:C4'	2.33	0.56
1:w:713:G:C1'	1:w:718:A:H61	2.15	0.56
1:w:729:G:O2'	1:w:1775:U:O2	2.11	0.56
1:w:817:C:OP2	1:w:817:C:C5	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:857:C:H5'	23:U:69:PHE:CZ	2.40	0.56
1:w:957:A:N3	1:w:957:A:H2'	2.18	0.56
1:w:1081:U:C2'	1:w:1082:U:C5	2.89	0.56
1:w:1217:C:H2'	1:w:1218:C:C5'	2.35	0.56
1:w:1220:A:H4'	1:w:1221:C:OP1	2.05	0.56
1:w:1356:G:C4	1:w:1357:U:C6	2.93	0.56
1:w:1383:C:C2'	1:w:1384:A:H5''	2.35	0.56
1:w:1399:C:H2'	1:w:1400:G:O4'	2.06	0.56
1:w:1562:A:C2	1:w:1563:G:C5	2.93	0.56
1:w:1565:C:H6	1:w:1565:C:P	2.28	0.56
1:w:1565:C:C4	1:w:1567:A:C8	2.93	0.56
1:w:1672:C:O2'	1:w:2553:G:OP2	2.22	0.56
1:w:1680:U:H2'	1:w:1681:G:O4'	2.06	0.56
1:w:1699:G:O6	1:w:1763:G:N3	2.38	0.56
1:w:1771:C:O2'	1:w:1786:A:N3	2.37	0.56
1:w:1796:U:O2'	4:B:255:LYS:HA	2.06	0.56
1:w:2081:C:H6	1:w:2081:C:C5'	2.17	0.56
1:w:2306:C:C4'	1:w:2311:A:H61	2.19	0.56
1:w:2320:A:H2	1:w:2333:A:OP2	1.88	0.56
1:w:2391:G:O6	1:w:2425:A:H5'	2.05	0.56
1:w:2517:C:C3'	1:w:2519:U:H5	2.18	0.56
1:w:2526:G:H2'	1:w:2527:C:H6	1.70	0.56
1:w:2559:C:H2'	1:w:2560:C:C5'	2.34	0.56
1:w:2670:A:H3'	1:w:2671:A:C8	2.41	0.56
1:w:2679:A:N1	1:w:2729:G:C6	2.73	0.56
1:w:712(B):A:C3'	1:w:2713:A:H5'	2.36	0.56
1:w:2755:C:O2	30:b:19:ARG:NH1	2.37	0.56
1:w:2786:U:O2	5:C:62:PRO:CB	2.53	0.56
2:x:54:G:H8	2:x:54:G:O5'	1.88	0.56
2:x:84:C:H2'	2:x:85:G:C8	2.41	0.56
2:x:110:G:N7	2:x:111:U:C5	2.73	0.56
3:A:43:GLU:HB2	3:A:45:HIS:NE2	2.21	0.56
3:A:223:VAL:O	3:A:224:ARG:HB2	2.04	0.56
4:B:65:ILE:HG13	4:B:66:ASP:N	2.20	0.56
4:B:262:ARG:O	4:B:264:LYS:N	2.39	0.56
5:C:48:GLN:CB	5:C:78:LEU:HD22	2.24	0.56
5:C:51:PHE:CD1	5:C:52:LEU:CA	2.88	0.56
5:C:111:ARG:O	5:C:112:GLY:O	2.24	0.56
6:D:15:LEU:CB	6:D:19:LEU:HD11	2.18	0.56
6:D:121:VAL:CG1	6:D:191:LEU:H	2.09	0.56
6:D:151:LEU:HD13	6:D:188:VAL:CB	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:165:LEU:HD23	6:D:168:VAL:O	2.04	0.56
7:E:61:ALA:O	7:E:64:THR:CG2	2.49	0.56
7:E:70:VAL:CA	7:E:90:LEU:HD11	2.35	0.56
7:E:148:MET:HB3	7:E:151:ALA:CB	2.35	0.56
8:F:126:PRO:HD3	8:F:131:VAL:HA	1.86	0.56
8:F:140:LYS:HE3	8:F:141:VAL:HG22	1.86	0.56
9:G:83:ALA:HB3	9:G:88:ILE:HA	1.87	0.56
10:H:101:TYR:HB2	10:H:102:PRO:CD	2.32	0.56
11:I:12:ASP:OD2	11:I:86:ILE:HD11	2.05	0.56
11:I:86:ILE:CG2	11:I:94:ARG:HH11	2.17	0.56
12:J:147:LEU:HD13	12:J:148:LEU:HD22	1.86	0.56
13:K:103:MET:O	13:K:104:PHE:CD1	2.58	0.56
14:L:47:PHE:CZ	14:L:48:VAL:HG12	2.40	0.56
16:N:108:ARG:CG	31:y:1431:C:OP1	2.54	0.56
17:O:40:PHE:HB3	18:P:78:LYS:HG2	1.87	0.56
18:P:30:GLY:HA3	18:P:66:ARG:H	1.70	0.56
22:T:62:PRO:C	22:T:64:GLY:H	2.13	0.56
22:T:138:GLU:HG2	22:T:139:VAL:N	2.21	0.56
24:V:27:GLU:HG3	33:O:74:C:C5'	2.34	0.56
31:y:37:U:H2'	31:y:38:G:C4'	2.35	0.56
31:y:103:C:C6	31:y:103:C:P	2.98	0.56
31:y:158:G:C3'	31:y:159:G:H8	2.18	0.56
31:y:161:A:C6	31:y:162:A:N3	2.73	0.56
31:y:172:A:H5'	31:y:173:U:OP1	2.05	0.56
31:y:253:U:C4	31:y:254:G:N7	2.73	0.56
31:y:330:C:H2'	31:y:331:G:C4'	2.36	0.56
31:y:364:A:O5'	31:y:364:A:C8	2.48	0.56
31:y:404:U:C5	37:e:2:GLY:HA3	2.40	0.56
31:y:476:G:N3	31:y:477:G:N7	2.53	0.56
31:y:657:G:C4'	48:p:28:GLN:HG2	2.36	0.56
31:y:663:A:O2'	31:y:664:G:H5'	2.04	0.56
31:y:690:G:N7	44:l:55:LYS:NZ	2.50	0.56
31:y:774:G:O5'	31:y:774:G:H8	1.89	0.56
31:y:780:A:O2'	31:y:781:A:H5''	2.05	0.56
31:y:817:C:O4'	31:y:819:A:O5'	2.24	0.56
31:y:883:C:OP2	31:y:883:C:H5	1.87	0.56
31:y:889:A:C3'	31:y:890:G:H4'	2.33	0.56
31:y:931:C:O2	31:y:932:C:C5	2.59	0.56
31:y:1005:A:C8	31:y:1025:U:O2	2.58	0.56
31:y:1138:G:HO2'	31:y:1140:C:C5'	2.18	0.56
31:y:1158:C:H2'	31:y:1158:C:O2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1174:G:H8	31:y:1174:G:O5'	1.88	0.56
31:y:1228:C:H5'	46:n:114:ARG:NE	2.20	0.56
31:y:1231:G:C8	31:y:1232:U:C5	2.94	0.56
31:y:1238:A:C5	31:y:1301:U:O2	2.58	0.56
31:y:1321:C:N3	31:y:1322:C:N4	2.54	0.56
31:y:1504:G:H4'	31:y:1505:G:C5'	2.35	0.56
32:z:18:G:O2'	32:z:19:G:H5'	2.05	0.56
35:c:134:GLU:C	35:c:137:ARG:HD2	2.29	0.56
36:d:118:GLN:O	36:d:121:ALA:HB3	2.05	0.56
37:e:10:ARG:HD2	37:e:32:ALA:CB	2.35	0.56
37:e:94:LEU:H	37:e:94:LEU:HD13	1.71	0.56
41:i:19:VAL:CG1	41:i:20:TYR:H	2.16	0.56
41:i:91:ARG:HA	41:i:91:ARG:NH1	2.19	0.56
42:j:8:GLY:O	42:j:14:VAL:HG13	2.06	0.56
42:j:42:ARG:C	42:j:44:VAL:H	2.13	0.56
45:m:5:THR:OG1	45:m:7:ASN:HB3	2.06	0.56
45:m:5:THR:O	45:m:6:ILE:C	2.48	0.56
45:m:8:GLN:HA	45:m:11:ARG:HH11	1.71	0.56
46:n:15:VAL:HG22	46:n:41:PRO:O	2.05	0.56
52:t:53:ASN:OD1	52:t:56:GLN:O	2.24	0.56
53:u:34:LYS:HB2	53:u:34:LYS:HZ3	1.68	0.56
53:u:45:GLN:CA	53:u:91:LEU:HB3	2.28	0.56
1:w:95:G:N3	25:W:41:ILE:CD1	2.56	0.56
1:w:530:G:C2'	1:w:532:A:N7	2.67	0.56
1:w:566:U:H6	1:w:566:U:C5'	2.17	0.56
1:w:696:G:H2'	1:w:697:C:O4'	2.04	0.56
1:w:856:C:O3'	23:U:69:PHE:CD1	2.58	0.56
1:w:856:C:H1'	23:U:27:GLU:HB2	1.87	0.56
1:w:951:C:H2'	1:w:952:G:C8	2.41	0.56
1:w:991:C:H2'	1:w:991:C:O2	2.04	0.56
1:w:1033:U:H5''	1:w:1033:U:C6	2.41	0.56
1:w:1188:U:O5'	1:w:1188:U:C6	2.57	0.56
1:w:1190:G:P	12:J:32:THR:CB	2.94	0.56
1:w:1303:G:C2'	1:w:1642:G:O2'	2.53	0.56
1:w:1364:G:H5'	1:w:1365:A:OP2	2.05	0.56
1:w:1373:A:C8	1:w:1374:G:C8	2.93	0.56
1:w:1526:G:O2'	1:w:1527:G:C5'	2.54	0.56
1:w:1527:G:H3'	1:w:1527:G:C8	2.41	0.56
1:w:1563:G:C4	1:w:1564:C:C5	2.94	0.56
1:w:1658:C:H42	1:w:2002:G:H1	1.53	0.56
1:w:1819:A:H3'	4:B:179:SER:OG	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1910:G:C6	1:w:1921:G:C2	2.93	0.56
1:w:1937:A:H2'	1:w:1939:U:OP2	2.06	0.56
1:w:2019:A:H4'	17:O:34:LYS:HE3	1.87	0.56
1:w:2057:A:C4'	27:Y:8:LYS:NZ	2.69	0.56
1:w:2067:G:H4'	1:w:2068:U:OP2	2.04	0.56
1:w:2079:U:O2'	24:V:38:SER:CB	2.53	0.56
1:w:2213:U:H5'	24:V:57:GLU:OE1	2.06	0.56
1:w:2305:A:N6	1:w:2306:C:C4	2.74	0.56
1:w:2326:C:O5'	1:w:2326:C:H6	1.88	0.56
1:w:2416:C:P	12:J:64:LYS:HD2	2.45	0.56
1:w:2712:U:H4'	1:w:2714:G:H5'	1.88	0.56
1:w:2735:G:C3'	1:w:2736:G:H5''	2.36	0.56
1:w:2835:A:H1'	1:w:2879:C:H5	1.63	0.56
2:x:14:U:O4'	2:x:107:U:H1'	2.05	0.56
2:x:15:A:N3	2:x:109:G:N3	2.54	0.56
2:x:99:A:C6	2:x:100:G:N1	2.74	0.56
3:A:16:ASP:O	3:A:17:PRO:C	2.48	0.56
3:A:59:VAL:HG12	3:A:201:LYS:HA	1.88	0.56
3:A:202:PRO:O	3:A:204:GLY:N	2.38	0.56
4:B:92:ILE:HD13	4:B:104:TYR:CG	2.40	0.56
4:B:257:LEU:O	4:B:257:LEU:HD12	2.05	0.56
5:C:7:VAL:HG21	5:C:27:LEU:HD22	1.88	0.56
5:C:36:ARG:NH1	5:C:86:PRO:HD2	2.20	0.56
5:C:198:VAL:HG12	5:C:199:ARG:O	2.05	0.56
7:E:124:SER:O	7:E:131:TYR:CD2	2.58	0.56
7:E:153:ARG:NE	7:E:154:GLY:H	2.02	0.56
9:G:6:LEU:HD22	9:G:7:GLU:OE1	2.06	0.56
9:G:6:LEU:HD12	9:G:35:LEU:HA	1.88	0.56
11:I:15:GLY:N	11:I:17:ARG:HH22	2.04	0.56
11:I:45:GLU:HG3	11:I:45:GLU:O	2.06	0.56
11:I:88:ASN:HB3	11:I:90:GLN:HE21	1.69	0.56
15:M:46:VAL:HG11	15:M:48:LEU:HD23	1.86	0.56
16:N:64:ARG:NH2	16:N:66:VAL:CG2	2.63	0.56
17:O:49:HIS:CA	17:O:52:ARG:HB2	2.35	0.56
18:P:24:LYS:HD3	18:P:25:LEU:N	2.21	0.56
19:Q:29:LEU:CD2	19:Q:30:GLU:H	2.16	0.56
22:T:85:HIS:HD2	22:T:86:VAL:H	1.53	0.56
22:T:102:LEU:HA	22:T:137:ILE:CG2	2.35	0.56
23:U:31:VAL:HG23	23:U:61:ALA:C	2.30	0.56
23:U:62:LEU:CD1	23:U:63:VAL:N	2.51	0.56
24:V:26:ARG:HG3	24:V:34:THR:CA	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Z:10:ARG:HG3	28:Z:11:LYS:N	2.20	0.56
29:a:9:GLY:O	29:a:12:LYS:N	2.38	0.56
29:a:41:ILE:O	29:a:42:ARG:C	2.49	0.56
29:a:51:ALA:H	29:a:53:PRO:CD	2.19	0.56
31:y:41:G:N1	31:y:402:G:C6	2.73	0.56
31:y:80:G:C3'	31:y:81:G:H8	2.19	0.56
31:y:262:A:H4'	53:u:74:LYS:HD2	1.86	0.56
31:y:341:C:H2'	31:y:342:C:C6	2.41	0.56
31:y:400:C:C2'	31:y:401:C:C5'	2.83	0.56
31:y:504:C:C2	31:y:542:G:C2	2.93	0.56
31:y:510:A:O2'	31:y:542:G:C2'	2.54	0.56
31:y:555:C:C3'	31:y:556:C:C5'	2.74	0.56
31:y:577:G:C2'	31:y:578:C:C5'	2.82	0.56
31:y:594:G:C2'	31:y:595:G:C5'	2.77	0.56
31:y:607:A:N3	49:q:32:TYR:OH	2.39	0.56
31:y:666:G:H2'	31:y:667:G:C5'	2.17	0.56
31:y:741:G:N2	31:y:742:G:C8	2.74	0.56
31:y:827:U:C5'	41:i:15:ASN:ND2	2.69	0.56
31:y:834:C:N3	31:y:853:G:C2	2.74	0.56
31:y:1092:A:H1'	31:y:1183:A:N6	2.20	0.56
31:y:1504:G:HO2'	31:y:1505:G:P	2.24	0.56
35:c:20:GLU:HG3	35:c:23:ARG:CZ	2.36	0.56
35:c:28:PHE:CE1	35:c:31:TYR:N	2.64	0.56
36:d:152:ILE:O	36:d:152:ILE:HG23	2.02	0.56
36:d:191:THR:OG1	36:d:195:VAL:HA	2.05	0.56
38:f:93:PRO:CB	41:i:105:ARG:HD3	2.34	0.56
39:g:98:LEU:HD23	51:s:29:PHE:C	2.30	0.56
40:h:6:ARG:O	40:h:7:ALA:HB3	2.06	0.56
40:h:77:SER:O	40:h:78:ARG:HB2	2.04	0.56
40:h:136:LYS:C	40:h:136:LYS:CD	2.79	0.56
41:i:1:MET:HG2	41:i:2:LEU:H	1.71	0.56
41:i:109:ILE:CD1	41:i:137:VAL:CG2	2.83	0.56
42:j:117:HIS:HB2	42:j:121:ARG:NH2	2.21	0.56
44:l:22:HIS:HB3	44:l:29:ILE:CD1	2.36	0.56
44:l:61:ALA:HB3	44:l:90:GLY:HA3	1.88	0.56
50:r:16:GLN:C	50:r:18:THR:H	2.14	0.56
51:s:59:SER:O	51:s:63:GLN:OE1	2.22	0.56
1:w:67:U:C2	1:w:68:G:C8	2.94	0.56
1:w:132:G:H2'	1:w:133:C:H6	1.70	0.56
1:w:288:C:P	1:w:289:A:H2	2.29	0.56
1:w:325:G:H2'	1:w:326:G:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:331:A:C2	1:w:1209:G:C5	2.94	0.56
1:w:372:G:H8	24:V:68:PRO:CD	2.19	0.56
1:w:519:U:C4	1:w:520:G:C6	2.94	0.56
1:w:531:C:C5'	1:w:532:A:OP1	2.49	0.56
1:w:615:G:C6	1:w:616:A:H1'	2.40	0.56
1:w:772:C:O2'	1:w:773:U:H5'	2.06	0.56
1:w:800:A:C2'	1:w:802:A:H5'	2.36	0.56
1:w:860:U:H3	1:w:917:A:H62	1.52	0.56
1:w:884:C:C4	1:w:885:C:H1'	2.41	0.56
1:w:945:A:OP2	1:w:945:A:H4'	2.05	0.56
1:w:1042:G:H1'	1:w:1114:G:H21	1.60	0.56
1:w:1194:A:C6	1:w:1195:G:N7	2.74	0.56
1:w:1197:G:O6	1:w:1198:U:N3	2.39	0.56
1:w:1203:G:H3'	1:w:1204:A:H5''	1.88	0.56
1:w:1257:C:O4'	6:D:77:ILE:HG12	2.04	0.56
1:w:1275:A:N3	1:w:1275:A:C2'	2.66	0.56
1:w:1341:U:H5'	1:w:1602:U:C2	2.41	0.56
1:w:1405:U:O5'	1:w:1405:U:C6	2.59	0.56
1:w:1410:G:C2	1:w:1593:G:C6	2.93	0.56
1:w:1502:C:C4	1:w:1503:U:C5	2.94	0.56
1:w:1544:C:H2'	1:w:1546:A:N6	2.14	0.56
1:w:1550:C:O2'	1:w:1551:C:H5'	2.05	0.56
1:w:1555:G:H8	1:w:1555:G:O5'	1.87	0.56
1:w:1758:G:O5'	1:w:1759:A:OP2	2.24	0.56
1:w:1862:G:N2	1:w:1881:C:H1'	2.20	0.56
1:w:2007:C:O5'	1:w:2007:C:C6	2.59	0.56
1:w:2013:A:H2'	1:w:2014:A:H5'	1.75	0.56
1:w:2065:C:C2	1:w:2066:C:C6	2.94	0.56
1:w:2141:G:O6	1:w:2151:G:C6	2.58	0.56
1:w:2189:U:H2'	1:w:2190:G:C4'	2.35	0.56
1:w:2319:G:O2'	1:w:2320:A:C6	2.48	0.56
1:w:2397:G:C2'	1:w:2398:U:C6	2.86	0.56
1:w:2574:G:O2'	5:C:144:ARG:HD3	2.05	0.56
1:w:2644:G:C8	1:w:2644:G:OP2	2.56	0.56
1:w:2717:G:C3'	1:w:2718:G:O4'	2.53	0.56
1:w:2723:C:H6	1:w:2723:C:O5'	1.89	0.56
1:w:2812:G:H2'	1:w:2813:A:H8	1.70	0.56
1:w:2820:A:C4'	5:C:109:LYS:CE	2.83	0.56
1:w:2887:U:N3	1:w:2888:C:C4	2.74	0.56
1:w:2900:A:C2	1:w:2901:C:N1	2.74	0.56
2:x:42:C:C1'	7:E:92:VAL:HG21	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:24:ILE:CA	4:B:91:ARG:NH1	2.61	0.56
4:B:243:GLY:O	4:B:244:ARG:CB	2.54	0.56
5:C:78:LEU:N	5:C:79:ARG:HE	2.04	0.56
5:C:117:MET:HA	5:C:121:ASN:HA	1.87	0.56
9:G:37:VAL:O	9:G:39:ALA:N	2.39	0.56
9:G:97:ILE:HD13	9:G:97:ILE:C	2.30	0.56
10:H:26:THR:CG2	10:H:27:TYR:N	2.57	0.56
10:H:62:ARG:CG	10:H:71:MET:HG3	2.34	0.56
11:I:43:VAL:HG11	11:I:53:LYS:C	2.31	0.56
12:J:61:ARG:HA	29:a:27:THR:HG21	1.87	0.56
12:J:111:ARG:HH22	12:J:148:LEU:CD2	2.15	0.56
13:K:35:VAL:O	13:K:129:THR:CA	2.53	0.56
14:L:5:LYS:CG	14:L:8:ARG:NH2	2.68	0.56
14:L:49:ASP:O	14:L:94:TYR:OH	2.17	0.56
14:L:54:LEU:HB3	14:L:65:LEU:HD21	1.86	0.56
14:L:87:TYR:OH	14:L:116:LEU:HD23	2.06	0.56
15:M:13:ARG:O	15:M:14:VAL:C	2.48	0.56
16:N:66:VAL:HG13	16:N:70:VAL:HA	1.88	0.56
18:P:84:LYS:HE3	18:P:84:LYS:CA	2.27	0.56
19:Q:75:TYR:H	19:Q:103:ILE:CG1	2.19	0.56
21:S:54:LYS:CG	21:S:55:TYR:N	2.68	0.56
22:T:141:VAL:CG1	22:T:144:LEU:CB	2.69	0.56
24:V:68:PRO:O	24:V:69:LYS:C	2.48	0.56
31:y:50:A:C2	31:y:52:G:H1'	2.41	0.56
31:y:116:A:H2'	31:y:117:G:C8	2.40	0.56
31:y:226:G:H2'	31:y:227:G:N7	2.17	0.56
31:y:286:G:H8	31:y:286:G:OP2	1.89	0.56
31:y:290:C:N4	31:y:291:C:H41	2.04	0.56
31:y:298:A:N1	31:y:299:G:O6	2.39	0.56
31:y:454:C:OP2	31:y:455:C:H5	1.88	0.56
31:y:517:G:H22	31:y:532:A:C4'	2.12	0.56
31:y:681:C:O5'	31:y:681:C:H6	1.89	0.56
31:y:700:G:O2'	31:y:701:C:C5'	2.54	0.56
31:y:734:G:C5	31:y:735:C:C6	2.93	0.56
31:y:768:A:O5'	31:y:768:A:H8	1.89	0.56
31:y:815:A:H1'	31:y:817:C:C5	2.41	0.56
31:y:956:U:H3'	31:y:957:U:C6	2.41	0.56
31:y:1126:U:C2'	31:y:1127:G:OP1	2.53	0.56
31:y:1128:C:C2'	31:y:1129:C:H5'	2.35	0.56
31:y:1235:U:OP1	54:v:3:LYS:HG3	2.05	0.56
31:y:1423:G:C2'	31:y:1424:C:H6	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1453:G:H2'	31:y:1454:G:C4'	2.36	0.56
31:y:1505:G:H5''	31:y:1506:U:C5'	2.35	0.56
33:0:26:G:N2	33:0:27:C:H1'	2.20	0.56
35:c:222:ILE:HG13	35:c:223:ILE:N	2.20	0.56
36:d:4:LYS:HD3	36:d:4:LYS:N	2.21	0.56
36:d:11:ARG:HH11	36:d:177:THR:C	2.13	0.56
36:d:19:GLU:HG3	36:d:56:ASP:OD1	2.05	0.56
37:e:25:ARG:O	37:e:28:SER:O	2.23	0.56
37:e:65:ARG:CZ	37:e:75:PHE:CE2	2.88	0.56
37:e:170:VAL:O	37:e:174:LEU:HD12	2.04	0.56
38:f:67:VAL:CG2	38:f:140:ARG:HH22	2.19	0.56
38:f:151:LEU:O	38:f:153:LYS:N	2.34	0.56
39:g:8:ILE:HB	39:g:61:LEU:CD2	2.36	0.56
45:m:44:PRO:HD3	45:m:52:ARG:CD	2.36	0.56
45:m:109:VAL:O	45:m:112:ARG:HG2	2.06	0.56
46:n:108:ARG:HH11	46:n:108:ARG:HG2	1.70	0.56
47:o:3:ARG:HG3	47:o:3:ARG:NH1	2.13	0.56
47:o:18:VAL:HG23	47:o:19:ARG:HD2	1.87	0.56
48:p:18:PHE:HD2	48:p:21:ASP:CB	2.18	0.56
50:r:84:LEU:HD13	50:r:84:LEU:C	2.30	0.56
52:t:45:VAL:HG22	52:t:62:ILE:CG1	2.35	0.56
1:w:44:A:O2'	1:w:45:G:H5'	2.06	0.56
1:w:188:G:C6	1:w:189:G:C4	2.93	0.56
1:w:244:A:H4'	12:J:74:GLU:HG3	1.87	0.56
1:w:270(W):G:N2	1:w:270(X):G:C5	2.74	0.56
1:w:309:G:H8	1:w:309:G:O5'	1.88	0.56
1:w:575:A:H2	1:w:576:U:C6	2.24	0.56
1:w:590:A:C8	1:w:591:C:C5	2.93	0.56
1:w:669:G:N2	1:w:670:A:N9	2.54	0.56
1:w:719:C:N3	1:w:720:C:C5	2.73	0.56
1:w:802:A:C2	1:w:803:U:C2	2.93	0.56
1:w:803:U:C2	1:w:804:A:C5	2.93	0.56
1:w:918:A:C2	2:x:81:G:H5'	2.40	0.56
1:w:942:G:H2'	1:w:943:U:C4'	2.35	0.56
1:w:1008:C:O2'	1:w:1009:A:P	2.64	0.56
1:w:1081:U:H2'	1:w:1082:U:C5	2.39	0.56
1:w:1094:U:O2	1:w:1096:A:C8	2.59	0.56
1:w:1150:C:H2'	1:w:1151:G:H8	1.70	0.56
1:w:1173:G:C2'	1:w:1177:A:N6	2.68	0.56
1:w:1240:U:O2'	1:w:1241:A:C5'	2.54	0.56
1:w:1248:G:C8	17:O:3:ARG:HA	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1296:G:H5''	1:w:2709:G:O2'	2.05	0.56
1:w:1365:A:C2	1:w:1366:A:C8	2.94	0.56
1:w:1371:G:N2	1:w:1372:U:C5	2.73	0.56
1:w:1517:G:C4	1:w:1518:C:C5	2.94	0.56
1:w:1810:A:C8	1:w:1810:A:OP2	2.58	0.56
1:w:1920:C:H4'	3l:y:1517:G:C6	2.41	0.56
1:w:1920:C:O5'	1:w:1920:C:H6	1.88	0.56
1:w:1996:C:O5'	1:w:1996:C:H6	1.89	0.56
1:w:2011:U:O4	1:w:2012:G:C6	2.59	0.56
1:w:2083:G:H8	1:w:2083:G:O5'	1.87	0.56
1:w:2095:C:H3'	1:w:2096:U:H6	1.70	0.56
1:w:2096:U:H3'	1:w:2097:C:C5	2.41	0.56
1:w:2117:A:C5'	1:w:2118:U:C5'	2.75	0.56
1:w:2158:A:C2'	1:w:2159:G:O4'	2.53	0.56
1:w:2290:G:C5	1:w:2291:U:C5	2.94	0.56
1:w:2307:G:H1'	1:w:2311:A:N7	2.19	0.56
1:w:2355:C:HO2'	23:U:24:LYS:HZ1	1.50	0.56
1:w:2383:G:OP1	29:a:39:LYS:HD3	2.06	0.56
1:w:2602:A:N3	1:w:2602:A:H2'	2.21	0.56
1:w:2639:A:C2	1:w:2640:G:H1'	2.41	0.56
1:w:2669:G:C6	1:w:2670:A:C5	2.94	0.56
1:w:2722:G:H4'	14:L:4:LEU:HB3	1.87	0.56
1:w:2838:G:N2	14:L:93:GLY:H	2.04	0.56
2:x:7:G:H3'	2:x:8:U:C5	2.41	0.56
2:x:13:A:N3	2:x:13:A:H2'	2.20	0.56
2:x:20:C:C4	2:x:21:G:C6	2.94	0.56
4:B:72:LYS:HG3	4:B:97:TYR:HE2	1.71	0.56
4:B:77:ALA:O	4:B:116:GLN:C	2.49	0.56
4:B:128:GLY:HA2	4:B:192:THR:OG1	2.06	0.56
4:B:195:ALA:O	4:B:196:VAL:O	2.24	0.56
5:C:104:VAL:HG13	5:C:198:VAL:HA	1.87	0.56
6:D:26:HIS:HB2	12:J:13:ASN:HB3	1.85	0.56
7:E:7:LEU:O	7:E:10:LYS:HB3	2.06	0.56
7:E:139:LEU:CD2	46:n:3:ARG:NH2	2.69	0.56
8:F:156:ALA:HB1	8:F:170:ARG:O	2.06	0.56
9:G:31:LEU:HD13	9:G:31:LEU:C	2.31	0.56
9:G:129:THR:HA	9:G:139:GLN:CA	2.35	0.56
10:H:78:VAL:CA	10:H:146:TYR:CE2	2.83	0.56
11:I:61:VAL:H	11:I:84:ALA:HB1	1.70	0.56
11:I:65:THR:HA	11:I:82:ASN:ND2	2.21	0.56
11:I:111:PHE:HB3	11:I:114:ILE:CG1	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:13:ASN:C	12:J:13:ASN:HD22	2.13	0.56
12:J:57:THR:HG23	12:J:57:THR:O	2.04	0.56
12:J:91:PHE:HZ	12:J:99:LEU:CD2	2.18	0.56
12:J:139:LYS:CD	12:J:140:ALA:N	2.68	0.56
15:M:63:THR:HG22	15:M:96:GLY:HA3	1.87	0.56
17:O:90:VAL:O	17:O:91:ASP:CB	2.54	0.56
19:Q:59:VAL:HA	19:Q:64:MET:H	1.70	0.56
19:Q:75:TYR:C	19:Q:103:ILE:CG1	2.72	0.56
19:Q:97:LYS:HD2	19:Q:97:LYS:C	2.31	0.56
20:R:57:LEU:CD2	20:R:76:ARG:NE	2.69	0.56
20:R:72:LYS:HG3	20:R:73:ARG:N	2.21	0.56
22:T:10:ARG:CZ	22:T:36:LYS:HB3	2.35	0.56
22:T:151:HIS:O	22:T:152:ALA:C	2.48	0.56
23:U:26:TYR:HE2	23:U:29:GLN:NE2	2.04	0.56
24:V:19:GLN:HG2	24:V:20:ARG:N	2.21	0.56
29:a:29:LYS:O	29:a:29:LYS:HG2	2.05	0.56
29:a:59:LYS:HE3	29:a:59:LYS:N	2.13	0.56
31:y:93:U:C6	31:y:93:U:C5'	2.81	0.56
31:y:161:A:C6	31:y:162:A:C4	2.94	0.56
31:y:176:C:C2	31:y:177:C:C5	2.94	0.56
31:y:176:C:N3	31:y:177:C:N4	2.54	0.56
31:y:383:A:H2'	31:y:384:G:C8	2.41	0.56
31:y:455:C:N3	31:y:478:A:C2	2.73	0.56
31:y:475:G:C5	31:y:476:G:N7	2.74	0.56
31:y:476:G:C6	31:y:477:G:O6	2.58	0.56
31:y:484:G:H5'	31:y:486:U:O4'	2.06	0.56
31:y:502:G:H4'	31:y:550:G:H4'	1.86	0.56
31:y:667:G:O3'	48:p:51:HIS:CE1	2.59	0.56
31:y:979:C:C6	31:y:979:C:H3'	2.40	0.56
31:y:1104:G:C2	31:y:1105:A:C5	2.94	0.56
31:y:1139:G:H1'	31:y:1141:C:H41	1.71	0.56
31:y:1428:A:C2'	31:y:1429:C:C6	2.78	0.56
31:y:1506:U:C2'	31:y:1507:A:H5'	2.36	0.56
33:0:35:A:H8	33:0:35:A:H5'	1.71	0.56
35:c:36:ARG:C	35:c:38:GLY:N	2.63	0.56
36:d:128:PHE:HB3	36:d:132:ARG:HH21	1.70	0.56
38:f:10:MET:HA	38:f:32:VAL:CB	2.36	0.56
40:h:43:PHE:O	40:h:46:ALA:HB3	2.06	0.56
41:i:81:HIS:HB2	41:i:138:TRP:OXT	2.06	0.56
42:j:27:THR:HB	42:j:62:TYR:HA	1.87	0.56
42:j:125:TYR:HD2	42:j:125:TYR:N	1.91	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:10:GLY:O	43:k:67:THR:HG23	2.06	0.56
43:k:25:GLU:C	43:k:27:ALA:N	2.42	0.56
44:l:99:GLN:CB	44:l:105:VAL:CG2	2.84	0.56
45:m:37:THR:HG23	45:m:58:ARG:NE	2.18	0.56
46:n:105:THR:O	46:n:106:ASN:HB2	2.05	0.56
50:r:13:ASP:OD2	50:r:49:GLU:HB3	2.06	0.56
53:u:83:ARG:O	53:u:86:ARG:HB3	2.06	0.56
1:w:20:C:C2'	1:w:21:A:H8	2.17	0.56
1:w:38:A:C2	1:w:39:C:C4	2.94	0.56
1:w:185:U:C4'	1:w:218:A:O2'	2.52	0.56
1:w:222:A:C5'	1:w:421:U:OP1	2.54	0.56
1:w:270(V):C:C4	1:w:270(W):G:C6	2.93	0.56
1:w:270(W):G:N3	1:w:270(X):G:N7	2.53	0.56
1:w:287:C:C6	1:w:287:C:O5'	2.59	0.56
1:w:315:G:C2'	1:w:316:C:C1'	2.56	0.56
1:w:404:C:H5''	1:w:405:U:OP1	2.05	0.56
1:w:514:A:C6	1:w:515:A:N6	2.74	0.56
1:w:526:A:O2'	1:w:2043:C:O2'	2.24	0.56
1:w:527:C:C4	1:w:2779:U:H2'	2.41	0.56
1:w:596:G:O2'	1:w:597:U:H5'	2.05	0.56
1:w:614:U:H2'	1:w:615:G:C5'	2.36	0.56
1:w:622:G:N3	1:w:622:G:H2'	2.20	0.56
1:w:682:G:H8	1:w:682:G:O5'	1.89	0.56
1:w:691:C:O5'	1:w:691:C:H6	1.89	0.56
1:w:1124:C:C5	1:w:1125:G:C5	2.94	0.56
1:w:1129:A:O2'	1:w:2515:C:O2'	2.23	0.56
1:w:1130:U:C4	1:w:2026:C:OP2	2.59	0.56
1:w:1223:G:C2	1:w:1227:G:C4	2.93	0.56
1:w:1318:C:C2	1:w:1319:G:C8	2.94	0.56
1:w:1356:G:C2'	1:w:1357:U:O4'	2.54	0.56
1:w:1417:C:C4	1:w:1418:G:C5	2.93	0.56
1:w:1459:G:C2	1:w:1461:G:C4	2.94	0.56
1:w:1543:A:H5''	1:w:1544:C:OP2	2.05	0.56
1:w:1662:C:N4	1:w:1663:C:N4	2.54	0.56
1:w:1907:G:C2	1:w:1924:C:C2	2.93	0.56
1:w:1915:U:C3'	1:w:1916:A:H8	2.04	0.56
1:w:1926:U:C1'	1:w:1929:G:C2	2.80	0.56
1:w:2022:U:H1'	1:w:2034:U:O4	2.02	0.56
1:w:2090:G:H2'	1:w:2091:U:C5'	2.33	0.56
1:w:2174:C:H2'	1:w:2175:C:C6	2.41	0.56
1:w:2205:C:C5'	24:V:52:ARG:NH1	2.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2552:U:H3'	1:w:2554:U:OP2	2.06	0.56
1:w:2690:C:O2'	1:w:2691:C:C5'	2.54	0.56
1:w:2746:U:H1'	8:F:139:GLN:OE1	2.06	0.56
1:w:2772:C:H4'	5:C:166:THR:CB	2.35	0.56
1:w:2870:C:O2'	1:w:2871:C:H5'	2.06	0.56
2:x:74:U:H5''	2:x:75:G:OP1	2.06	0.56
2:x:83:G:C5	2:x:84:C:C5	2.93	0.56
4:B:72:LYS:HG3	4:B:97:TYR:CE2	2.40	0.56
5:C:30:PRO:C	5:C:31:CYS:SG	2.89	0.56
6:D:77:ILE:HD13	6:D:78:PHE:N	2.21	0.56
6:D:170:THR:O	6:D:170:THR:CG2	2.54	0.56
7:E:89:GLY:O	7:E:90:LEU:HD12	2.05	0.56
9:G:7:GLU:HG3	9:G:8:PRO:HD3	1.78	0.56
9:G:41:GLU:O	9:G:44:LEU:N	2.38	0.56
10:H:39:ILE:O	10:H:40:ASP:HB3	2.05	0.56
10:H:114:LEU:HD12	10:H:115:ALA:H	1.70	0.56
10:H:155:ALA:O	10:H:156:GLN:HB3	2.04	0.56
12:J:83:VAL:HG11	12:J:114:ILE:HG22	1.87	0.56
14:L:24:GLN:O	14:L:28:LEU:HB3	2.06	0.56
18:P:13:ARG:HG2	18:P:13:ARG:NH1	2.21	0.56
19:Q:12:ILE:HG22	19:Q:13:SER:H	1.71	0.56
19:Q:23:LEU:HD23	19:Q:36:LEU:HD21	1.88	0.56
20:R:82:GLN:HG3	20:R:83:VAL:HG22	1.88	0.56
22:T:12:GLY:O	22:T:13:GLU:O	2.23	0.56
23:U:16:SER:O	23:U:20:ARG:HA	2.06	0.56
24:V:54:ALA:HB1	24:V:57:GLU:CA	2.35	0.56
27:Y:47:PRO:CA	27:Y:57:VAL:HG21	2.36	0.56
31:y:6:G:H5'	31:y:7:G:OP1	2.06	0.56
31:y:129(B):G:C1'	31:y:191(A):G:H5'	2.36	0.56
31:y:162:A:H8	31:y:162:A:O5'	1.88	0.56
31:y:166:G:H2'	31:y:167:G:H8	1.59	0.56
31:y:191(G):G:H21	53:u:103:GLY:HA2	1.71	0.56
31:y:248:C:O2	31:y:277:C:C2	2.58	0.56
31:y:258:G:C5	31:y:259:G:N7	2.74	0.56
31:y:336:C:N4	31:y:337:C:N4	2.52	0.56
31:y:346:G:C2'	31:y:347:G:C5'	2.74	0.56
31:y:425:G:N3	31:y:426:G:C1'	2.69	0.56
31:y:520:A:N6	31:y:529:G:N2	2.30	0.56
31:y:569:C:C2	31:y:575:G:N7	2.74	0.56
31:y:886:G:C2'	31:y:887:G:H5'	2.34	0.56
31:y:1126:U:H3	31:y:1280:A:H2'	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1127:G:H5'	31:y:1280:A:N1	2.21	0.56
31:y:1160:G:C2'	31:y:1161:C:C5'	2.66	0.56
31:y:1330:U:O2	31:y:1330:U:C2'	2.54	0.56
31:y:1342:C:O2'	42:j:124:GLN:CB	2.54	0.56
31:y:1513:A:N1	31:y:1514:C:C6	2.74	0.56
31:y:1516:G:C2'	31:y:1518:MA6:OP1	2.54	0.56
33:0:31:A:H2'	33:0:32:C:C6	2.41	0.56
35:c:93:VAL:CG2	35:c:94:ASN:N	2.68	0.56
35:c:117:GLU:O	35:c:121:LEU:HD12	2.06	0.56
35:c:118:LEU:HD13	35:c:121:LEU:HD12	1.82	0.56
35:c:121:LEU:O	35:c:127:ILE:HG13	2.05	0.56
36:d:123:GLN:CG	36:d:124:ILE:N	2.68	0.56
37:e:33:MET:HG2	37:e:34:GLU:N	2.20	0.56
38:f:100:VAL:HG12	38:f:110:LEU:CD1	2.36	0.56
39:g:21:LEU:O	39:g:25:ILE:HG12	2.06	0.56
40:h:46:ALA:HA	40:h:49:ILE:HB	1.88	0.56
41:i:19:VAL:HG12	41:i:20:TYR:H	1.70	0.56
42:j:52:ALA:O	42:j:53:VAL:HG13	2.06	0.56
42:j:90:PRO:O	42:j:92:TYR:N	2.31	0.56
43:k:85:LEU:HD12	43:k:86:MET:CA	2.36	0.56
44:l:99:GLN:HB2	44:l:105:VAL:CG2	2.36	0.56
45:m:62:GLY:C	45:m:63:TYR:CD2	2.84	0.56
45:m:87:GLY:CA	45:m:97:TYR:HA	2.36	0.56
45:m:96:ARG:O	45:m:97:TYR:CG	2.59	0.56
45:m:124:PRO:C	45:m:125:LYS:HD2	2.31	0.56
48:p:51:HIS:O	48:p:54:ARG:HG3	2.06	0.56
48:p:55:GLY:C	48:p:57:LEU:N	2.61	0.56
49:q:54:GLU:O	49:q:55:ARG:C	2.47	0.56
52:t:8:GLY:O	52:t:9:VAL:C	2.49	0.56
53:u:18:GLN:HA	53:u:21:LYS:CD	2.36	0.56
1:w:13:A:C4	1:w:15:G:C6	2.94	0.56
1:w:215:G:HO2'	1:w:216:A:C4'	2.18	0.56
1:w:247:G:C5	1:w:249:C:H1'	2.41	0.56
1:w:270(U):G:C2'	1:w:270(V):C:C6	2.85	0.56
1:w:278:A:H8	1:w:278:A:O5'	1.89	0.56
1:w:373:U:O2'	1:w:423:A:N3	2.37	0.56
1:w:455:C:N4	1:w:472:A:C5	2.74	0.56
1:w:465:G:H3'	1:w:466:A:N7	2.21	0.56
1:w:487:C:H42	1:w:493:G:H1	1.53	0.56
1:w:505:A:O2'	1:w:506:G:H5'	2.06	0.56
1:w:532:A:C4	1:w:2021:C:N4	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:559:G:C5	1:w:560:C:C5	2.94	0.56
1:w:569:U:C4'	1:w:946:G:O2'	2.54	0.56
1:w:617:G:C6	1:w:618(A):G:C4	2.93	0.56
1:w:855:G:C5	1:w:856:C:C4	2.93	0.56
1:w:866:A:H2	1:w:867:C:H41	1.54	0.56
1:w:923:C:O2'	23:U:26:TYR:CZ	2.57	0.56
1:w:944:G:O6	12:J:38:GLN:HG2	2.06	0.56
1:w:992:C:O2'	1:w:993:G:C5'	2.46	0.56
1:w:1015:G:C5	1:w:1016:G:C5	2.94	0.56
1:w:1174:A:O2'	1:w:1175:U:C6	2.52	0.56
1:w:1381:G:N7	1:w:1382:G:N7	2.54	0.56
1:w:1563:G:N3	1:w:1564:C:C6	2.74	0.56
1:w:1618:A:O2'	1:w:1619:G:OP1	2.23	0.56
1:w:1668:A:N3	1:w:1670:C:N3	2.54	0.56
1:w:1777:U:H2'	1:w:1778:U:C5'	2.36	0.56
1:w:1941:C:H2'	1:w:1942:C:O4'	2.05	0.56
1:w:2034:U:C3'	1:w:2035:G:C5'	2.79	0.56
1:w:2141:G:C2	1:w:2142:C:C2	2.94	0.56
1:w:2141:G:H2'	1:w:2142:C:H6	1.71	0.56
1:w:2243:U:N3	1:w:2244:U:C4	2.74	0.56
1:w:2334:G:O2'	15:M:15:ARG:CG	2.49	0.56
1:w:2459:A:C4	1:w:2460:U:C6	2.94	0.56
1:w:2556:C:C6	1:w:2556:C:C3'	2.89	0.56
1:w:2574:G:C5	1:w:2575:C:C5	2.94	0.56
1:w:2588:G:C2	1:w:2589:A:N3	2.74	0.56
1:w:2725:A:O2'	1:w:2726:U:P	2.62	0.56
1:w:2772:C:H2'	1:w:2773:C:C6	2.41	0.56
2:x:37:C:N4	2:x:49:C:O4'	2.39	0.56
3:A:197:LEU:CD1	3:A:198:GLU:N	2.69	0.56
5:C:93:VAL:HA	5:C:182:LEU:HD22	1.88	0.56
6:D:4:ILE:HD12	6:D:119:LEU:C	2.31	0.56
6:D:65:THR:C	6:D:67:ARG:N	2.59	0.56
7:E:100:TRP:O	7:E:104:GLU:HG3	2.06	0.56
8:F:25:LYS:HG2	8:F:34:GLU:CB	2.36	0.56
9:G:38:LEU:HD12	9:G:38:LEU:N	2.18	0.56
9:G:112:LYS:HD2	9:G:112:LYS:N	2.21	0.56
10:H:65:TRP:CB	17:O:64:ARG:NE	2.57	0.56
10:H:94:ILE:N	10:H:94:ILE:HD12	2.21	0.56
11:I:59:LYS:HB3	11:I:94:ARG:NH1	2.14	0.56
13:K:23:GLY:CA	13:K:99:PRO:HD2	2.36	0.56
14:L:11:ASN:O	14:L:12:ARG:HB3	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:45:ARG:CG	14:L:45:ARG:HH11	2.18	0.56
15:M:68:GLN:C	15:M:70:GLY:N	2.59	0.56
16:N:98:LYS:HG3	16:N:100:TYR:HE1	1.70	0.56
18:P:16:PRO:HD2	18:P:18:LEU:HD22	1.83	0.56
18:P:20:LEU:C	18:P:21:ARG:HG3	2.30	0.56
19:Q:5:ALA:HB2	19:Q:54:ALA:CA	2.36	0.56
19:Q:5:ALA:HB2	19:Q:54:ALA:HA	1.88	0.56
19:Q:7:ALA:HB1	19:Q:103:ILE:CG2	2.35	0.56
21:S:9:LYS:CG	21:S:10:GLY:H	2.18	0.56
21:S:12:THR:O	21:S:13:VAL:CB	2.54	0.56
22:T:71:VAL:CG1	22:T:72:ARG:H	2.15	0.56
22:T:105:VAL:HB	22:T:139:VAL:O	2.06	0.56
22:T:146:ILE:HB	22:T:175:VAL:HA	1.88	0.56
22:T:146:ILE:HB	22:T:176:PRO:HD2	1.87	0.56
23:U:37:LEU:HD21	23:U:59:LEU:CB	2.36	0.56
24:V:18:ILE:N	24:V:18:ILE:CD1	2.69	0.56
24:V:53:VAL:HB	24:V:60:PHE:HE2	1.71	0.56
24:V:71:TYR:HA	24:V:74:VAL:CG2	2.34	0.56
24:V:85:LEU:HD12	24:V:85:LEU:N	2.20	0.56
25:W:3:LEU:HD11	25:W:8:LYS:CE	2.35	0.56
27:Y:13:LYS:HA	27:Y:16:ARG:HB2	1.87	0.56
27:Y:16:ARG:HG3	27:Y:20:ARG:NH1	2.21	0.56
29:a:52:LYS:O	29:a:56:GLU:OE2	2.23	0.56
31:y:22:G:H4'	31:y:885:G:O4'	2.06	0.56
31:y:254:G:OP1	50:r:68:ARG:HB2	2.05	0.56
31:y:324:G:N2	31:y:326:G:H3'	2.21	0.56
31:y:439:A:O2'	31:y:440:A:OP1	2.24	0.56
31:y:483:C:P	31:y:484:G:H3'	2.46	0.56
31:y:564:C:OP1	45:m:9:LEU:HD11	2.05	0.56
31:y:564:C:O3'	31:y:566:G:H3'	2.05	0.56
31:y:565:U:OP2	31:y:566:G:C3'	2.46	0.56
31:y:615:C:N3	31:y:625:G:N1	2.49	0.56
31:y:692:U:H1'	31:y:695:A:N7	2.21	0.56
31:y:695:A:P	44:l:53:SER:HB2	2.46	0.56
31:y:750:G:H1'	48:p:22:THR:HG23	1.87	0.56
31:y:857:C:H2'	31:y:858:G:H8	1.65	0.56
31:y:858:G:H1	31:y:869:G:C3'	2.18	0.56
31:y:889:A:H61	31:y:907:A:H3'	1.70	0.56
31:y:958:A:C3'	31:y:959:A:C8	2.89	0.56
31:y:967:5MC:C5'	42:j:128:ARG:HD3	2.35	0.56
31:y:1102:A:C5	31:y:1103:C:C4	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1148:U:H6	31:y:1148:U:O5'	1.88	0.56
31:y:1164:G:N3	31:y:1164:G:H2'	2.20	0.56
31:y:1300:G:N2	31:y:1335:C:O4'	2.39	0.56
31:y:1312:G:H2'	31:y:1313:U:C4'	2.36	0.56
31:y:1369:C:OP1	42:j:111:ARG:HB2	2.05	0.56
31:y:1401:G:C8	31:y:1401:G:O5'	2.49	0.56
31:y:1447:G:C8	31:y:1447:G:OP2	2.59	0.56
33:0:56:C:C5	33:0:56:C:OP1	2.59	0.56
35:c:69:LEU:HB3	35:c:162:ILE:CD1	2.36	0.56
37:e:63:LYS:HA	37:e:66:ARG:HG2	1.87	0.56
40:h:54:THR:C	40:h:56:GLN:N	2.64	0.56
40:h:126:ASP:O	40:h:135:VAL:HG21	2.05	0.56
41:i:82:HIS:HB3	41:i:138:TRP:CE2	2.41	0.56
41:i:105:ARG:HG3	41:i:105:ARG:HH11	1.70	0.56
41:i:123:GLU:O	41:i:127:LEU:HG	2.06	0.56
41:i:128:GLY:O	41:i:129:VAL:CG1	2.54	0.56
42:j:10:ARG:CZ	42:j:75:ASP:HB2	2.36	0.56
44:l:59:TYR:CE1	44:l:63:LEU:HD11	2.41	0.56
45:m:36:CYS:HB3	45:m:80:SER:H	1.71	0.56
45:m:84:ILE:HA	45:m:99:ILE:HD12	1.88	0.56
46:n:82:MET:SD	46:n:92:HIS:CE1	2.99	0.56
47:o:26:ARG:NH2	47:o:43:CYS:N	2.54	0.56
47:o:40:CYS:C	47:o:42:ILE:H	2.14	0.56
50:r:45:HIS:O	50:r:46:ASP:HB3	2.05	0.56
50:r:54:GLY:HA2	50:r:85:VAL:CG1	2.34	0.56
1:w:220:G:H4'	1:w:234:C:H4'	1.88	0.55
1:w:270(T):G:C6	1:w:270(U):G:C5	2.94	0.55
1:w:303:U:H2'	1:w:304:G:C8	2.41	0.55
1:w:328:U:O5'	1:w:328:U:C6	2.56	0.55
1:w:492:A:C3'	1:w:493:G:C8	2.80	0.55
1:w:543:C:C4	1:w:551:G:C2	2.95	0.55
1:w:558:G:H4'	10:H:135:LEU:HD22	1.88	0.55
1:w:633:A:C6	1:w:634:C:H1'	2.41	0.55
1:w:660:G:C2'	1:w:661:C:H5'	2.35	0.55
1:w:1203:G:C5	1:w:1204:A:C2	2.94	0.55
1:w:1512:G:C2'	1:w:1513:C:H5'	2.36	0.55
1:w:1529:A:H2'	1:w:1530:G:O4'	2.06	0.55
1:w:1595:G:N3	1:w:1595:G:C2'	2.68	0.55
1:w:1699:G:H2'	1:w:1700:A:O3'	2.06	0.55
1:w:1815:A:H5'	1:w:1817:G:O4'	2.05	0.55
1:w:1912:A:N7	1:w:1918:A:C2	2.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1915:U:O4	1:w:1916:A:C2	2.59	0.55
1:w:2037:G:N3	1:w:2038:G:C4	2.74	0.55
1:w:2107:C:C2	1:w:2108:C:C5	2.94	0.55
1:w:2192:G:O2'	1:w:2193:G:C5'	2.54	0.55
1:w:2363:C:C2	1:w:2364:C:C5	2.94	0.55
1:w:2371:G:N1	1:w:2372:G:C6	2.74	0.55
1:w:2532:G:C8	1:w:2533:A:C8	2.93	0.55
1:w:2594:C:C6	1:w:2594:C:C3'	2.89	0.55
1:w:2668:G:O6	1:w:2669:G:O6	2.23	0.55
2:x:80:U:C2	2:x:97:G:N1	2.74	0.55
4:B:90:ALA:HB1	4:B:106:ILE:HB	1.86	0.55
4:B:108:PRO:CA	4:B:197:GLY:HA2	2.36	0.55
5:C:52:LEU:O	5:C:54:GLN:N	2.40	0.55
5:C:66:HIS:CD2	5:C:66:HIS:H	2.23	0.55
6:D:31:VAL:O	6:D:34:TRP:HB3	2.05	0.55
7:E:11:TYR:HD1	7:E:15:VAL:HB	1.70	0.55
8:F:41:MET:HA	8:F:54:ARG:HA	1.87	0.55
8:F:45:VAL:O	8:F:45:VAL:CG1	2.50	0.55
8:F:92:ILE:HD13	8:F:92:ILE:N	2.20	0.55
10:H:49:LEU:C	10:H:53:ILE:HG13	2.31	0.55
11:I:17:ARG:HH21	11:I:47:ILE:CB	2.19	0.55
11:I:23:ARG:HG3	11:I:24:VAL:O	2.06	0.55
11:I:44:LYS:O	11:I:54:GLU:HG2	2.07	0.55
11:I:59:LYS:O	11:I:86:ILE:C	2.48	0.55
11:I:77:ILE:HD13	11:I:78:ARG:N	2.20	0.55
12:J:70:GLN:HG3	12:J:71:VAL:N	2.20	0.55
13:K:89:ASN:O	13:K:91:GLU:N	2.30	0.55
15:M:9:ARG:C	15:M:11:LYS:H	2.14	0.55
16:N:11:GLU:C	16:N:13:ARG:N	2.54	0.55
16:N:29:ARG:CB	16:N:86:ILE:H	2.20	0.55
16:N:50:ILE:HB	16:N:63:VAL:C	2.31	0.55
19:Q:45:TYR:HD2	19:Q:46:PHE:CE1	2.24	0.55
19:Q:48:ALA:O	19:Q:49:LYS:C	2.47	0.55
19:Q:102:HIS:O	19:Q:103:ILE:HB	2.06	0.55
20:R:28:PHE:HE1	20:R:78:LYS:HB2	1.70	0.55
22:T:15:PRO:HB3	22:T:19:ARG:CZ	2.36	0.55
22:T:19:ARG:NH2	22:T:25:PRO:HB2	2.15	0.55
22:T:69:THR:CG2	22:T:88:PHE:CZ	2.88	0.55
22:T:84:GLU:CG	22:T:85:HIS:H	2.19	0.55
24:V:17:SER:O	24:V:44:PRO:CG	2.50	0.55
31:y:51:A:H2	31:y:353:A:N6	1.92	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:97:U:O4	31:y:99:C:N4	2.39	0.55
31:y:130:A:C2	31:y:232:G:N2	2.72	0.55
31:y:159:G:C2'	31:y:162:A:H61	2.18	0.55
31:y:187:C:H1'	31:y:191(A):G:C2	2.41	0.55
31:y:517:G:H4'	31:y:519:C:N4	2.20	0.55
31:y:564:C:H2'	31:y:565:U:C5'	2.36	0.55
31:y:584:G:C8	31:y:584:G:O5'	2.58	0.55
31:y:596:C:O2	31:y:597:G:C8	2.58	0.55
31:y:615:C:H6	31:y:615:C:P	2.29	0.55
31:y:675:A:H2	44:l:115:PRO:CB	2.19	0.55
31:y:725:G:H2'	31:y:725:G:N3	2.20	0.55
31:y:734:G:C2	31:y:735:C:H1'	2.41	0.55
31:y:783:C:H2'	31:y:784:C:C5'	2.36	0.55
31:y:848:C:H2'	31:y:849:C:C6	2.41	0.55
31:y:929:G:C6	31:y:930:C:C5	2.93	0.55
31:y:1010:G:C6	31:y:1011:G:O6	2.59	0.55
31:y:1048:G:OP1	47:o:4:LYS:HG2	2.05	0.55
31:y:1074:G:C4	31:y:1102:A:C6	2.94	0.55
31:y:1138:G:C2'	31:y:1140:C:O4'	2.51	0.55
31:y:1153:C:C4	31:y:1154:G:C8	2.93	0.55
31:y:1188:A:O4'	47:o:58:LYS:HE2	2.06	0.55
31:y:1212:U:H2'	31:y:1213:A:H5''	1.83	0.55
31:y:1304:G:H5''	54:v:2:GLY:HA3	1.88	0.55
31:y:1452:C:O4'	31:y:1453:G:C6	2.59	0.55
32:z:57:G:O2'	32:z:58:A:H5'	2.06	0.55
32:z:71:G:C6	32:z:72:C:C5	2.93	0.55
35:c:51:LEU:C	35:c:51:LEU:HD22	2.31	0.55
37:e:11:LEU:C	37:e:13:ARG:N	2.58	0.55
37:e:38:TYR:CD1	37:e:38:TYR:C	2.84	0.55
38:f:37:ARG:O	38:f:114:GLY:CA	2.54	0.55
38:f:64:ARG:HD3	38:f:64:ARG:N	2.21	0.55
40:h:99:LEU:O	40:h:100:ALA:C	2.49	0.55
40:h:111:ARG:HB3	40:h:111:ARG:HH11	1.67	0.55
40:h:118:VAL:CG2	40:h:119:ARG:H	2.12	0.55
41:i:119:LEU:HD11	41:i:127:LEU:CD1	2.36	0.55
41:i:134:ILE:HG22	41:i:135:CYS:SG	2.46	0.55
43:k:31:GLY:HA3	43:k:81:THR:CA	2.36	0.55
44:l:20:TYR:CE1	44:l:33:THR:CG2	2.90	0.55
47:o:25:VAL:CG1	47:o:39:LEU:HD21	2.36	0.55
48:p:66:LEU:HD12	48:p:66:LEU:H	1.71	0.55
49:q:23:ASP:O	49:q:24:ALA:C	2.48	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:56:VAL:H	50:r:81:ARG:NH1	2.03	0.55
51:s:31:LEU:HD13	51:s:31:LEU:H	1.71	0.55
52:t:32:LYS:HA	52:t:50:ALA:HB3	1.88	0.55
1:w:8:A:C2	1:w:9:U:C6	2.94	0.55
1:w:55:G:N2	1:w:56:A:C5	2.74	0.55
1:w:77:C:O3'	25:W:53:LEU:HG	2.05	0.55
1:w:384:U:O2'	1:w:385:C:H5'	2.05	0.55
1:w:414:C:H5''	1:w:414:C:C6	2.33	0.55
1:w:418:G:H2'	1:w:419:C:H6	1.71	0.55
1:w:479:A:H2'	1:w:481:G:C8	2.42	0.55
1:w:480:A:C3'	1:w:481:G:H5''	2.24	0.55
1:w:483:A:OP1	21:S:47:LYS:HG3	2.06	0.55
1:w:510:C:H3'	1:w:511:U:C5	2.40	0.55
1:w:557:U:N3	1:w:558:G:C5	2.75	0.55
1:w:669:G:N3	1:w:669:G:H2'	2.21	0.55
1:w:686:G:N2	1:w:788:A:N6	2.54	0.55
1:w:690:G:C4'	1:w:780:G:OP1	2.55	0.55
1:w:786:C:N3	1:w:787:U:C5	2.73	0.55
1:w:850:C:H5'	26:X:18:ASP:HA	1.89	0.55
1:w:918:A:C5	1:w:919:G:C1'	2.87	0.55
1:w:918:A:P	1:w:919:G:N7	2.78	0.55
1:w:1094:U:N3	1:w:1097:U:OP2	2.31	0.55
1:w:1177:A:H8	1:w:1177:A:OP2	1.87	0.55
1:w:1222:C:N3	1:w:1228:G:C2	2.75	0.55
1:w:1370:C:H3'	1:w:1371:G:C8	2.40	0.55
1:w:1417:C:N4	1:w:1418:G:C5	2.74	0.55
1:w:1421:G:C8	1:w:1421:G:P	2.99	0.55
1:w:1478:G:N2	1:w:1479:G:C6	2.74	0.55
1:w:1509:A:OP1	1:w:1510:A:C4	2.59	0.55
1:w:1652:A:C3'	1:w:1653:G:H8	2.19	0.55
1:w:1700:A:O2'	1:w:1701:A:H5'	2.05	0.55
1:w:1759:A:O2'	1:w:2714:G:C1'	2.46	0.55
1:w:1769:G:O2'	1:w:1770:G:H5'	2.06	0.55
1:w:1824:G:H3'	1:w:1825:A:H5''	1.87	0.55
1:w:1917:U:H2'	1:w:1918:A:O4'	2.06	0.55
1:w:1939:U:O2	1:w:1967:C:H4'	2.06	0.55
1:w:2134:A:N3	1:w:2158:A:N3	2.54	0.55
1:w:2251:G:C6	32:z:76:A:N1	2.74	0.55
1:w:2295:C:O2'	1:w:2296:U:O5'	2.23	0.55
1:w:2297:C:C6	1:w:2333:A:C2	2.94	0.55
1:w:2309:A:C8	1:w:2310:A:N9	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2619:C:H5'	5:C:150:VAL:HG12	1.88	0.55
1:w:2682:U:H1'	5:C:12:THR:CG2	2.33	0.55
1:w:2747:G:N1	1:w:2754:U:C2	2.74	0.55
3:A:8:TYR:HB2	3:A:11:LEU:HB2	1.88	0.55
3:A:20:ILE:HD11	3:A:225:ILE:O	2.07	0.55
4:B:62:TYR:O	4:B:62:TYR:HD1	1.88	0.55
4:B:78:LYS:C	4:B:95:LEU:CB	2.77	0.55
5:C:63:LEU:C	5:C:65:GLY:N	2.61	0.55
7:E:56:ALA:CB	7:E:60:LEU:HD11	2.34	0.55
9:G:26:ALA:CA	9:G:30:LEU:HB2	2.36	0.55
10:H:34:PRO:HB3	10:H:73:ASP:N	2.21	0.55
11:I:27:GLY:O	11:I:28:SER:HB3	2.05	0.55
11:I:85:VAL:HG11	11:I:93:PRO:HB2	1.87	0.55
11:I:104:ARG:HB3	11:I:104:ARG:NH1	2.01	0.55
13:K:11:LYS:HE2	13:K:12:GLN:HA	1.88	0.55
14:L:35:THR:O	14:L:36:THR:HG22	2.06	0.55
15:M:34:HIS:CB	15:M:36:TYR:CE1	2.88	0.55
15:M:38:GLN:CG	15:M:50:SER:OG	2.54	0.55
16:N:68:TYR:N	16:N:68:TYR:CD2	2.72	0.55
16:N:108:ARG:CZ	31:y:1432:G:OP2	2.54	0.55
22:T:58:VAL:HG12	22:T:59:LEU:N	2.21	0.55
22:T:103:ARG:HG3	22:T:136:PHE:HB2	1.88	0.55
24:V:26:ARG:CG	24:V:27:GLU:N	2.53	0.55
24:V:90:ILE:HB	24:V:91:LYS:CE	2.35	0.55
25:W:54:LYS:C	25:W:55:ARG:HG2	2.31	0.55
26:X:28:LEU:CD2	26:X:35:ARG:HG3	2.35	0.55
26:X:50:VAL:HG23	26:X:54:VAL:CG2	2.37	0.55
31:y:186(F):C:C2	31:y:186(G):C:C6	2.94	0.55
31:y:232:G:O5'	31:y:232:G:C8	2.54	0.55
31:y:363:A:C4	45:m:31:PHE:HE2	2.24	0.55
31:y:367:U:HO2'	31:y:368:U:P	2.28	0.55
31:y:392:G:N7	31:y:393:A:C5	2.74	0.55
31:y:556:C:H2'	31:y:557:G:O5'	2.07	0.55
31:y:671:G:H2'	31:y:672:U:O5'	2.06	0.55
31:y:679:C:OP2	31:y:679:C:C5	2.59	0.55
31:y:786:G:C6	31:y:787:A:N7	2.74	0.55
31:y:858:G:O5'	31:y:858:G:H8	1.88	0.55
31:y:957:U:O3'	31:y:959:A:N6	2.34	0.55
31:y:963:G:H2'	31:y:964:A:C8	2.40	0.55
31:y:1001:G:H2'	31:y:1002:G:C5'	2.34	0.55
31:y:1104:G:H2'	31:y:1105:A:C8	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1285:A:OP1	31:y:1286:A:H2	1.89	0.55
31:y:1316:G:H3'	31:y:1316:G:OP2	2.05	0.55
31:y:1358:U:C4	31:y:1359:C:C5	2.94	0.55
31:y:1410:G:H2'	31:y:1411:C:H6	1.71	0.55
31:y:1519:MA6:O2'	31:y:1520:G:OP1	2.24	0.55
32:z:67:C:O2	32:z:67:C:C2'	2.46	0.55
35:c:91:PRO:HB3	35:c:152:PHE:HA	1.87	0.55
35:c:221:LEU:HD13	35:c:221:LEU:C	2.30	0.55
36:d:108:ASN:HB2	36:d:111:LEU:HD12	1.87	0.55
36:d:112:SER:O	36:d:115:LEU:HG	2.06	0.55
36:d:125:GLU:OE1	36:d:190:ARG:HB3	2.05	0.55
37:e:31:CYS:O	37:e:33:MET:SD	2.65	0.55
37:e:57:ARG:NH2	38:f:107:ARG:CB	2.69	0.55
37:e:76:ARG:HH12	37:e:80:GLU:N	2.02	0.55
38:f:18:ARG:HH21	38:f:26:PHE:HA	1.70	0.55
38:f:34:VAL:HA	38:f:112:LEU:HD23	1.86	0.55
38:f:123:LEU:HD22	38:f:123:LEU:N	2.20	0.55
40:h:8:GLU:CG	40:h:9:VAL:N	2.69	0.55
41:i:9:MET:O	41:i:10:LEU:C	2.48	0.55
44:l:59:TYR:O	44:l:62:GLN:N	2.39	0.55
46:n:125:ARG:CB	46:n:125:ARG:NH1	2.69	0.55
49:q:4:ILE:HD13	49:q:22:THR:H	1.71	0.55
49:q:39:TYR:CG	49:q:40:ASP:N	2.74	0.55
52:t:66:MET:O	52:t:67:VAL:C	2.48	0.55
1:w:7:G:C2'	1:w:8:A:C8	2.89	0.55
1:w:118:A:OP2	1:w:119:A:C8	2.59	0.55
1:w:271(C):G:C8	1:w:271(D):U:C5	2.94	0.55
1:w:413:C:H6	1:w:413:C:O5'	1.89	0.55
1:w:551:G:C2'	1:w:552:G:H8	2.20	0.55
1:w:563:G:O6	1:w:2018:G:C6	2.60	0.55
1:w:591:C:C2'	1:w:592:G:H8	2.19	0.55
1:w:630:G:H21	1:w:633:A:N6	2.01	0.55
1:w:696:G:H22	1:w:767:U:H1'	1.64	0.55
1:w:830:G:O4'	1:w:2448:A:C2	2.60	0.55
1:w:850:C:C2	1:w:851:U:C5	2.94	0.55
1:w:1120:G:C2'	1:w:1121:C:C6	2.84	0.55
1:w:1138:G:H3'	1:w:1139:G:H5'	1.88	0.55
1:w:1197:G:C6	1:w:1250:G:C2	2.95	0.55
1:w:1209:G:H1'	1:w:1238:G:N2	2.21	0.55
1:w:1230:C:C2'	1:w:1231:G:C8	2.84	0.55
1:w:1254:A:H5''	1:w:1255:U:C5'	2.29	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1260:G:C6	1:w:1261:C:N4	2.75	0.55
1:w:1269:A:N6	1:w:2012:G:N2	2.55	0.55
1:w:1403:C:H4'	1:w:1471:A:C4	2.41	0.55
1:w:1546:A:O5'	1:w:154(B):C:O5'	2.25	0.55
1:w:1671:U:H2'	1:w:1673:U:OP2	2.06	0.55
1:w:1821:A:C5	1:w:1822:G:C8	2.95	0.55
1:w:1925:C:C2'	1:w:1926:U:H5'	2.36	0.55
1:w:2038:G:C4	1:w:2039:C:C5	2.95	0.55
1:w:2058:A:H2'	1:w:2059:A:O4'	2.06	0.55
1:w:2102:U:H2'	1:w:2103:C:N1	2.21	0.55
1:w:2114:A:H1'	1:w:2168:G:H5''	1.87	0.55
1:w:2169:A:P	1:w:2170:A:H62	2.30	0.55
1:w:2230:G:C4	1:w:2231:C:C5	2.94	0.55
1:w:2261:C:OP1	23:U:14:ARG:HB2	2.06	0.55
1:w:2415:G:H5''	12:J:66:GLY:HA3	1.88	0.55
1:w:2485:G:O2'	1:w:2486:G:H5'	2.06	0.55
1:w:2576:G:OP1	1:w:2576:G:C2	2.58	0.55
1:w:2661:G:O2'	1:w:2662:A:H5'	2.06	0.55
1:w:2822:G:O2'	1:w:2823:A:H5''	2.03	0.55
2:x:2:C:O2	2:x:2:C:H2'	2.06	0.55
2:x:42:C:H2'	2:x:42:C:O2	2.05	0.55
3:A:176:VAL:HG13	3:A:177:GLY:H	1.71	0.55
4:B:94:LEU:HG	4:B:104:TYR:CE2	2.33	0.55
4:B:117:VAL:CA	4:B:126:GLN:NE2	2.70	0.55
5:C:38:THR:C	5:C:40:GLU:H	2.15	0.55
7:E:139:LEU:CB	7:E:146:TYR:CA	2.84	0.55
8:F:54:ARG:HD2	8:F:65:HIS:HE1	1.69	0.55
8:F:148:ILE:O	8:F:148:ILE:CG2	2.54	0.55
9:G:138:ILE:O	9:G:138:ILE:HG13	2.06	0.55
11:I:4:PRO:O	11:I:5:GLN:HB2	2.06	0.55
11:I:63:VAL:O	11:I:64:ARG:C	2.48	0.55
11:I:65:THR:CA	11:I:81:ASP:O	2.53	0.55
11:I:105:GLU:O	11:I:109:LYS:HG2	2.05	0.55
12:J:41:ARG:CZ	12:J:45:LEU:HD12	2.36	0.55
13:K:8:LYS:CB	13:K:12:GLN:NE2	2.63	0.55
16:N:49:VAL:O	16:N:49:VAL:CG2	2.50	0.55
16:N:51:ARG:CB	16:N:62:THR:CG2	2.68	0.55
17:O:12:ARG:C	17:O:15:LYS:HG2	2.27	0.55
17:O:92:ARG:NH1	18:P:10:LYS:HA	2.21	0.55
18:P:36:PRO:HD2	18:P:62:LEU:HD12	1.86	0.55
18:P:90:PRO:O	18:P:91:TYR:CB	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:75:TYR:CD1	19:Q:75:TYR:O	2.58	0.55
20:R:21:PHE:CE2	20:R:26:TYR:CE1	2.94	0.55
20:R:21:PHE:HE2	20:R:26:TYR:CE1	2.23	0.55
21:S:46:LYS:H	21:S:57:GLN:CA	2.18	0.55
22:T:11:GLU:O	22:T:13:GLU:N	2.39	0.55
22:T:77:ASP:O	22:T:78:LYS:C	2.49	0.55
22:T:176:PRO:CB	22:T:177:PRO:HD2	2.34	0.55
23:U:48:GLY:HA3	23:U:80:HIS:HA	1.89	0.55
31:y:99:C:C3'	31:y:101:A:H8	2.15	0.55
31:y:117:G:H3'	31:y:118:U:C6	2.41	0.55
31:y:147:G:C3'	31:y:148:G:H8	2.20	0.55
31:y:161:A:H2'	31:y:162:A:C8	2.41	0.55
31:y:227:G:N2	49:q:62:VAL:CB	2.52	0.55
31:y:248:C:C2	31:y:277:C:O2	2.59	0.55
31:y:273:A:O2'	31:y:274:A:C5'	2.32	0.55
31:y:288:A:C2'	31:y:289:G:H4'	2.22	0.55
31:y:436:C:H6	31:y:436:C:C5'	2.16	0.55
31:y:451:A:C8	31:y:481:G:O6	2.60	0.55
31:y:475:G:N1	31:y:476:G:C5	2.75	0.55
31:y:551:U:H2'	31:y:552:U:C6	2.40	0.55
31:y:552:U:H4'	45:m:85:ARG:HH22	1.71	0.55
31:y:585:G:H3'	31:y:586:C:C6	2.40	0.55
31:y:713:G:H2'	31:y:714:G:N7	2.20	0.55
31:y:842:C:O5'	31:y:842:C:H6	1.90	0.55
31:y:1061:G:O6	31:y:1197:G:C6	2.59	0.55
31:y:1125:U:C4	31:y:1127:G:N9	2.75	0.55
31:y:1197:G:C2	31:y:1198:G:C4	2.95	0.55
31:y:1253:G:N2	31:y:1355:G:H4'	2.21	0.55
31:y:1396:A:H4'	31:y:1398:A:C5'	2.37	0.55
31:y:1509:C:C2	31:y:1510:U:C6	2.94	0.55
35:c:104:ASN:O	35:c:105:PHE:C	2.50	0.55
36:d:120:VAL:O	36:d:123:GLN:NE2	2.39	0.55
37:e:10:ARG:O	37:e:13:ARG:CB	2.52	0.55
37:e:26:CYS:HG	37:e:31:CYS:HG	1.50	0.55
38:f:143:ARG:HG2	38:f:144:THR:H	1.71	0.55
40:h:75:VAL:HG12	40:h:88:PRO:CB	2.36	0.55
41:i:6:ILE:HD12	41:i:85:ARG:HE	1.71	0.55
41:i:35:ILE:HG22	41:i:39:LEU:HD23	1.86	0.55
42:j:50:LEU:CA	42:j:54:ASP:HA	2.29	0.55
43:k:38:ILE:O	43:k:70:ARG:HB3	2.06	0.55
50:r:40:LYS:HG2	50:r:41:LYS:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:51:G:H5'	1:w:52:A:OP1	2.06	0.55
1:w:56:A:H61	1:w:114:U:H3	1.52	0.55
1:w:273(D):C:H2'	1:w:273(E):C:H5'	1.88	0.55
1:w:293:U:C3'	1:w:293:U:C6	2.90	0.55
1:w:341:G:C3'	1:w:342:G:C8	2.90	0.55
1:w:489:G:C2	1:w:491:G:C6	2.93	0.55
1:w:579:G:C1'	1:w:2017:U:C2	2.89	0.55
1:w:741:G:C6	1:w:757:U:O2	2.60	0.55
1:w:755:C:H2'	1:w:756:C:C6	2.42	0.55
1:w:765:G:C2	1:w:766:C:C2	2.95	0.55
1:w:782:A:N1	4:B:226:MET:CE	2.69	0.55
1:w:796:C:O2'	1:w:797:C:O4'	2.24	0.55
1:w:797:C:H2'	1:w:798:G:C8	2.41	0.55
1:w:813:U:H4'	1:w:1225:G:O2'	2.06	0.55
1:w:841:A:N6	1:w:842:G:O6	2.39	0.55
1:w:930:U:C5'	1:w:931:G:OP1	2.50	0.55
1:w:949:C:C2	1:w:950:G:C8	2.95	0.55
1:w:996:A:C6	1:w:1160:G:C6	2.95	0.55
1:w:1445:C:H2'	1:w:1446:C:C6	2.40	0.55
1:w:1539:G:C6	1:w:1540:G:C4	2.94	0.55
1:w:1780:A:OP2	1:w:1781:C:O2'	2.24	0.55
1:w:1848:A:H1'	31:y:702:A:OP2	2.05	0.55
1:w:1923:U:C2'	1:w:1924:C:C6	2.90	0.55
1:w:1945:G:H2'	1:w:1946:U:C5'	2.37	0.55
1:w:2014:A:H2'	1:w:2015:A:C5	2.38	0.55
1:w:2016:U:H5''	1:w:2058:A:H5''	1.83	0.55
1:w:2022:U:C1'	1:w:2034:U:N3	2.70	0.55
1:w:2080:G:H2'	1:w:2081:C:C6	2.41	0.55
1:w:2134:A:C2	1:w:2158:A:H1'	2.41	0.55
1:w:2164:C:C2	1:w:2165:G:C8	2.94	0.55
1:w:2165:G:H2'	1:w:2166:G:C5'	2.34	0.55
1:w:2196:C:C4	1:w:2197:U:C4	2.95	0.55
1:w:2699:C:C2'	1:w:2700:C:O5'	2.54	0.55
1:w:2785:C:H2'	1:w:2786:U:C6	2.42	0.55
1:w:2790:A:H5'	1:w:2892:A:H61	1.72	0.55
2:x:61:G:C2	2:x:62:C:C2	2.95	0.55
2:x:67:G:H2'	2:x:68:C:H6	1.72	0.55
2:x:83:G:C8	2:x:83:G:OP2	2.59	0.55
4:B:134:ARG:HH21	4:B:172:TYR:HA	1.72	0.55
4:B:199:ALA:O	4:B:202:LYS:N	2.40	0.55
5:C:9:VAL:HG21	5:C:26:ILE:CA	2.31	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:93:VAL:HB	5:C:175:VAL:CG2	2.36	0.55
6:D:16:ALA:O	6:D:18:ASP:N	2.39	0.55
6:D:35:GLN:HE22	6:D:39:ARG:HH22	1.54	0.55
6:D:105:LEU:CD1	6:D:105:LEU:C	2.79	0.55
7:E:31:VAL:HG13	7:E:32:PRO:HD2	1.88	0.55
8:F:34:GLU:HG2	8:F:35:VAL:H	1.71	0.55
8:F:49:VAL:CG1	8:F:50:VAL:H	2.19	0.55
8:F:153:LYS:HD2	8:F:162:ILE:O	2.07	0.55
10:H:65:TRP:HZ3	10:H:71:MET:HE1	1.72	0.55
11:I:10:VAL:O	11:I:10:VAL:CG2	2.54	0.55
11:I:41:ALA:CA	11:I:57:VAL:HG13	2.36	0.55
12:J:98:GLU:HA	12:J:102:ARG:CB	2.36	0.55
14:L:85:PRO:HA	14:L:88:ARG:CB	2.35	0.55
15:M:71:ARG:HB3	15:M:108:GLY:O	2.06	0.55
16:N:28:VAL:CG1	16:N:44:ASP:O	2.41	0.55
16:N:106:SER:HA	16:N:110:ILE:CD1	2.36	0.55
16:N:117:ASP:HB3	16:N:120:ARG:NE	2.20	0.55
17:O:50:ARG:CZ	17:O:50:ARG:HB3	2.35	0.55
18:P:40:LEU:HD13	18:P:40:LEU:C	2.30	0.55
18:P:90:PRO:HG2	18:P:91:TYR:H	1.71	0.55
19:Q:29:LEU:CG	19:Q:30:GLU:N	2.70	0.55
19:Q:46:PHE:O	19:Q:50:VAL:HG23	2.05	0.55
19:Q:75:TYR:O	19:Q:103:ILE:HA	2.06	0.55
20:R:8:ILE:H	25:W:26:ARG:NH1	2.04	0.55
22:T:29:TYR:CE1	22:T:89:PHE:HD1	2.25	0.55
23:U:27:GLU:CA	23:U:69:PHE:CD2	2.89	0.55
26:X:4:LEU:HD11	26:X:57:GLU:H	1.71	0.55
31:y:18:C:O5'	31:y:18:C:H6	1.90	0.55
31:y:60:A:C2	31:y:107:G:N2	2.70	0.55
31:y:228:A:H1'	49:q:62:VAL:CB	2.21	0.55
31:y:234:C:O5'	31:y:234:C:H6	1.89	0.55
31:y:268:C:H2'	31:y:269:C:H6	1.72	0.55
31:y:300:A:H4'	50:r:31:LEU:HD11	1.88	0.55
31:y:303:A:C6	31:y:304:U:C5	2.94	0.55
31:y:468:A:O3'	49:q:80:PHE:HB3	2.06	0.55
31:y:479:C:H3'	31:y:480:U:C5	2.40	0.55
31:y:493:G:H2'	31:y:494:U:H5	1.71	0.55
31:y:581:G:C5'	48:p:65:ARG:HH21	2.20	0.55
31:y:636:U:C2	31:y:637:G:N7	2.74	0.55
31:y:654:G:C5	31:y:655:A:N7	2.74	0.55
31:y:815:A:C1'	31:y:817:C:C4	2.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:944:G:C8	31:y:945:G:C8	2.94	0.55
31:y:1034:G:N1	31:y:1035:A:N6	2.54	0.55
31:y:1130:A:N3	31:y:1130:A:H2'	2.21	0.55
31:y:1160:G:C3'	31:y:1161:C:H5'	2.35	0.55
31:y:1217:C:N3	31:y:1218:C:C5	2.75	0.55
31:y:1228:C:N4	46:n:104:ARG:HD2	2.20	0.55
31:y:1281:U:C5'	31:y:1282:C:H41	2.20	0.55
31:y:1316:G:N3	31:y:1318:A:N7	2.55	0.55
31:y:1331:G:O2'	31:y:1332:A:P	2.65	0.55
31:y:1342:C:O2'	42:j:124:GLN:HB2	2.05	0.55
31:y:1483:A:H8	31:y:1483:A:O5'	1.89	0.55
32:z:1:G:N3	32:z:1:G:H3'	2.21	0.55
39:g:2:ARG:HD3	39:g:69:GLU:HG2	1.88	0.55
40:h:50:ILE:HG21	40:h:61:VAL:CG2	2.26	0.55
42:j:118:LYS:HB2	42:j:121:ARG:CG	2.36	0.55
43:k:42:THR:HG22	43:k:44:VAL:CG1	2.32	0.55
45:m:38:VAL:O	45:m:55:ALA:HB1	2.07	0.55
46:n:24:GLY:O	46:n:25:ILE:HD13	2.05	0.55
46:n:81:LEU:HA	46:n:84:ILE:HG12	1.88	0.55
48:p:30:ALA:O	48:p:33:THR:N	2.39	0.55
49:q:28:ARG:HG3	49:q:29:ASP:N	2.20	0.55
1:w:72:U:O4	1:w:112:U:H4'	2.06	0.55
1:w:78:A:N6	1:w:109:G:C6	2.75	0.55
1:w:345:A:O3'	1:w:346:A:H8	1.89	0.55
1:w:359:A:C2	1:w:360:G:H1'	2.42	0.55
1:w:435:C:H2'	1:w:436:C:O4'	2.06	0.55
1:w:479:A:C4'	1:w:480:A:O5'	2.52	0.55
1:w:489:G:C2	1:w:491:G:O6	2.58	0.55
1:w:499:U:C2'	1:w:500:G:O4'	2.43	0.55
1:w:531:C:H5'	1:w:532:A:C4	2.42	0.55
1:w:666:G:C6	1:w:667:U:O4	2.59	0.55
1:w:745:G:OP2	1:w:745:G:H8	1.88	0.55
1:w:851:U:C3'	26:X:45:GLY:HA3	2.36	0.55
1:w:1286:A:H5'	14:L:105:ARG:NH1	2.20	0.55
1:w:1313:U:H4'	1:w:1332:G:H4'	1.87	0.55
1:w:1319:G:C3'	1:w:1320:C:H6	2.19	0.55
1:w:1656:C:HO2'	1:w:1657:C:H5'	1.68	0.55
1:w:1668:A:C6	1:w:1674:G:C5	2.94	0.55
1:w:1800:C:H1'	1:w:1802:A:N9	2.20	0.55
1:w:1932:A:C8	1:w:1932:A:O5'	2.60	0.55
1:w:1938:A:H5'	1:w:1939:U:P	2.47	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1942:C:O5'	1:w:1942:C:C6	2.56	0.55
1:w:2084:C:C4	1:w:2085:C:C4	2.94	0.55
1:w:2209:C:H2'	1:w:2210:G:H8	1.72	0.55
1:w:2296:U:C5	15:M:9:ARG:NH1	2.75	0.55
1:w:2354:G:H2'	1:w:2355:C:C6	2.42	0.55
1:w:2437:U:HO2'	1:w:2438:U:H6	1.54	0.55
1:w:2697:G:N1	1:w:2711:A:C2	2.74	0.55
1:w:2793:G:C4	1:w:2794:C:C5	2.94	0.55
1:w:2797:U:H2'	1:w:2799:A:C8	2.40	0.55
4:B:106:ILE:O	4:B:108:PRO:CD	2.53	0.55
4:B:264:LYS:O	4:B:266:SER:N	2.39	0.55
5:C:29:GLY:O	5:C:91:VAL:HB	2.07	0.55
6:D:182:VAL:HB	12:J:6:LEU:N	2.21	0.55
7:E:39:ILE:HA	7:E:157:ILE:HD12	1.89	0.55
7:E:72:ARG:HA	7:E:87:PRO:CA	2.36	0.55
8:F:90:LYS:HG2	8:F:162:ILE:HA	1.88	0.55
9:G:6:LEU:HD23	9:G:6:LEU:C	2.32	0.55
9:G:29:TYR:O	9:G:33:ARG:HG3	2.07	0.55
10:H:36:TRP:HB2	10:H:156:GLN:CD	2.31	0.55
10:H:47:GLY:O	10:H:50:ALA:HB3	2.06	0.55
11:I:62:VAL:O	11:I:63:VAL:CG1	2.44	0.55
12:J:100:LEU:HD22	12:J:100:LEU:N	2.21	0.55
13:K:127:ILE:HG13	13:K:128:LYS:N	2.21	0.55
14:L:38:VAL:HG13	14:L:39:PRO:N	2.21	0.55
15:M:66:ALA:O	15:M:68:GLN:N	2.39	0.55
16:N:113:LYS:HA	16:N:113:LYS:CE	2.30	0.55
16:N:119:LYS:C	16:N:123:LYS:HD2	2.31	0.55
17:O:92:ARG:HG2	17:O:94:ASN:CG	2.31	0.55
19:Q:39:THR:CG2	27:Y:28:PRO:HD3	2.37	0.55
22:T:68:PRO:O	22:T:91:LEU:HG	2.07	0.55
22:T:176:PRO:HB2	22:T:177:PRO:CD	2.34	0.55
22:T:180:VAL:HG22	22:T:180:VAL:O	2.06	0.55
31:y:22:G:O2'	31:y:23:C:H5'	2.07	0.55
31:y:124:G:C2	31:y:238:G:C5	2.94	0.55
31:y:264:U:H1'	50:r:63:ARG:NH1	2.22	0.55
31:y:297:G:O2'	31:y:298:A:C8	2.56	0.55
31:y:490:G:H8	31:y:490:G:O5'	1.89	0.55
31:y:553:A:C5	31:y:554:C:N4	2.75	0.55
31:y:874:G:O5'	31:y:874:G:C8	2.51	0.55
31:y:911:U:H3'	31:y:912:C:C5	2.42	0.55
31:y:919:A:C2	31:y:920:U:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1076:C:H2'	31:y:1077:G:H8	1.72	0.55
31:y:1152:A:C5'	43:k:13:HIS:HB3	2.37	0.55
31:y:1169:A:C6	31:y:1170:A:C2	2.95	0.55
31:y:1312:G:C2	31:y:1326:C:C4	2.94	0.55
31:y:1349:A:N6	31:y:1373:G:H2'	2.20	0.55
31:y:1423:G:C2'	31:y:1424:C:C6	2.90	0.55
31:y:1440:C:H6	31:y:1440:C:O5'	1.89	0.55
32:z:1:G:N2	32:z:2:C:C5	2.74	0.55
35:c:50:GLU:C	35:c:50:GLU:OE2	2.50	0.55
35:c:115:LEU:HD13	35:c:145:LEU:HD12	1.89	0.55
36:d:134:ILE:O	36:d:136:GLN:N	2.40	0.55
37:e:35:ARG:O	37:e:36:ARG:HB3	2.07	0.55
37:e:128:VAL:HG13	37:e:131:ARG:HB2	1.87	0.55
40:h:115:ARG:O	40:h:116:ALA:C	2.50	0.55
40:h:123:GLU:OE2	40:h:132:GLY:HA3	2.06	0.55
41:i:122:ARG:HD3	41:i:123:GLU:CD	2.31	0.55
42:j:111:ARG:HG3	42:j:112:LYS:H	1.70	0.55
45:m:85:ARG:CB	45:m:99:ILE:O	2.51	0.55
46:n:58:GLU:O	46:n:59:TYR:C	2.49	0.55
46:n:85:GLY:O	52:t:74:PHE:CD2	2.60	0.55
48:p:43:LEU:HD11	48:p:53:HIS:NE2	2.21	0.55
51:s:66:LEU:HD22	51:s:67:ALA:N	2.21	0.55
1:w:47:C:N4	1:w:179:G:C5	2.74	0.55
1:w:132:G:C3'	1:w:133:C:H6	2.19	0.55
1:w:210:C:H2'	1:w:211:A:H8	1.71	0.55
1:w:214:G:O2'	1:w:216:A:O2'	2.14	0.55
1:w:268:C:C3'	1:w:269:U:H5''	2.36	0.55
1:w:297:C:OP2	1:w:297:C:C6	2.59	0.55
1:w:320:A:OP1	6:D:130:LYS:HD2	2.07	0.55
1:w:388:G:N3	1:w:390:A:C6	2.74	0.55
1:w:601:C:C1'	6:D:99:LYS:NZ	2.70	0.55
1:w:752:A:C6	1:w:1781:C:O4'	2.60	0.55
1:w:963:U:H2'	1:w:964:C:H5'	1.89	0.55
1:w:1014:U:N3	1:w:1015:G:C8	2.74	0.55
1:w:1128:A:C2'	1:w:1129:A:OP2	2.54	0.55
1:w:1136:G:HO2'	1:w:1137:G:H8	1.54	0.55
1:w:1259:G:C2	1:w:1260:G:C4	2.95	0.55
1:w:1264:G:C6	1:w:2014:A:OP2	2.59	0.55
1:w:1264:G:H3'	1:w:1265:A:C8	2.41	0.55
1:w:1557:C:H3'	1:w:1558:A:H5'	1.80	0.55
1:w:1670:C:HO2'	1:w:1994:C:C4'	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1793:C:C6	1:w:1793:C:C3'	2.89	0.55
1:w:1805:U:N3	1:w:1813:G:N1	2.55	0.55
1:w:1930:G:HO2'	1:w:1931:U:H5	1.55	0.55
1:w:2015:A:C8	1:w:2015:A:O5'	2.58	0.55
1:w:2015:A:H3'	1:w:2016:U:C5	2.42	0.55
1:w:2057:A:H4'	27:Y:8:LYS:HZ3	1.72	0.55
1:w:2205:C:N4	1:w:2206:C:C4	2.75	0.55
1:w:2216:G:N3	1:w:2217:G:C8	2.75	0.55
1:w:2298:A:N9	1:w:2321:G:N2	2.55	0.55
1:w:2676:C:O5'	1:w:2676:C:H6	1.89	0.55
1:w:2689:U:H5''	1:w:2690:C:O4'	2.06	0.55
1:w:2744:G:N1	1:w:2761:G:C6	2.75	0.55
2:x:27:C:N3	2:x:28:C:N4	2.55	0.55
2:x:87:G:N1	2:x:90:C:C4	2.74	0.55
2:x:100:G:C4	2:x:101:A:C8	2.95	0.55
4:B:25:THR:HB	4:B:83:GLU:CA	2.37	0.55
4:B:106:ILE:CD1	4:B:196:VAL:HG13	2.36	0.55
4:B:267:SER:O	4:B:269:PHE:CE1	2.59	0.55
5:C:31:CYS:SG	5:C:76:ARG:NH1	2.80	0.55
6:D:117:LYS:HZ2	6:D:186:ARG:CA	1.99	0.55
6:D:139:LYS:C	6:D:141:ALA:H	2.14	0.55
7:E:5:LEU:HB2	7:E:100:TRP:CH2	2.42	0.55
7:E:39:ILE:HD12	7:E:39:ILE:N	2.22	0.55
7:E:43:LEU:CD2	7:E:45:GLU:HG2	2.33	0.55
7:E:56:ALA:CA	7:E:60:LEU:HD21	2.37	0.55
7:E:106:LEU:HD12	7:E:106:LEU:C	2.32	0.55
8:F:41:MET:N	8:F:54:ARG:HA	2.22	0.55
8:F:89:ILE:HD12	8:F:90:LYS:N	2.21	0.55
9:G:122:GLU:OE2	9:G:126:TYR:CG	2.60	0.55
13:K:32:PHE:CB	13:K:106:VAL:HG12	2.35	0.55
13:K:124:LYS:C	13:K:124:LYS:CE	2.80	0.55
14:L:80:PHE:C	14:L:84:ALA:HB2	2.32	0.55
20:R:89:ILE:H	20:R:92:LEU:HD12	1.70	0.55
22:T:6:LYS:O	22:T:7:ALA:HB2	2.06	0.55
25:W:7:ARG:HB3	25:W:8:LYS:HZ2	1.66	0.55
25:W:47:ASN:N	25:W:47:ASN:ND2	2.51	0.55
25:W:61:LEU:HD12	25:W:62:THR:N	2.22	0.55
26:X:4:LEU:HD13	26:X:58:VAL:CG2	2.37	0.55
29:a:54:GLU:O	29:a:57:ARG:NE	2.39	0.55
30:b:3:VAL:HG12	30:b:35:ARG:N	2.20	0.55
31:y:80:G:C3'	31:y:81:G:C8	2.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:105:G:H2'	31:y:106:C:O4'	2.07	0.55
31:y:114:U:C2'	31:y:115:G:H5''	2.34	0.55
31:y:124:G:C5'	31:y:291:C:H1'	2.36	0.55
31:y:124:G:C5	31:y:125:U:C2	2.95	0.55
31:y:144:G:C5	31:y:145:G:C8	2.94	0.55
31:y:227:G:C6	31:y:228:A:C5	2.95	0.55
31:y:230:G:H2'	31:y:230:G:N3	2.21	0.55
31:y:276:G:C2	31:y:277:C:C6	2.94	0.55
31:y:404:U:C4	31:y:405:U:H5	2.24	0.55
31:y:564:C:H3'	31:y:566:G:HO2'	1.70	0.55
31:y:659:U:H6	31:y:659:U:P	2.30	0.55
31:y:751:U:H4'	48:p:21:ASP:OD1	2.07	0.55
31:y:777:A:C2	31:y:778:G:N9	2.74	0.55
31:y:830:G:N1	31:y:857:C:C4	2.74	0.55
31:y:841:U:HO2'	31:y:842:C:P	2.28	0.55
31:y:879:C:H2'	31:y:880:C:H5'	1.88	0.55
31:y:881:G:C4	31:y:882:C:C5	2.94	0.55
31:y:1112:C:H2'	36:d:178:LEU:CD2	2.37	0.55
31:y:1182:G:C8	31:y:1182:G:P	2.99	0.55
31:y:1308:U:OP1	46:n:99:ARG:HB2	2.07	0.55
31:y:1347:G:C2	31:y:1348:U:O4	2.60	0.55
31:y:1454:G:C2	31:y:1455:G:N7	2.74	0.55
31:y:1489:G:C6	31:y:1490:C:N4	2.75	0.55
35:c:68:ILE:CG1	35:c:161:ALA:HB3	2.36	0.55
35:c:92:TYR:C	35:c:93:VAL:HG12	2.32	0.55
36:d:78:GLY:HA3	36:d:82:GLU:HB2	1.89	0.55
36:d:123:GLN:OE1	36:d:123:GLN:N	2.40	0.55
37:e:12:CYS:SG	37:e:21:LEU:CG	2.95	0.55
37:e:57:ARG:C	37:e:206:PHE:CE1	2.84	0.55
37:e:61:LYS:HD2	37:e:62:GLN:N	2.22	0.55
38:f:14:ARG:NE	38:f:15:ARG:H	2.03	0.55
39:g:4:TYR:HB3	39:g:90:VAL:HG23	1.88	0.55
39:g:10:LEU:CD1	39:g:14:LEU:HD11	2.36	0.55
39:g:44:GLY:N	39:g:60:PHE:O	2.38	0.55
40:h:54:THR:CG2	40:h:56:GLN:HB2	2.36	0.55
40:h:89:MET:HG3	40:h:90:GLU:H	1.70	0.55
41:i:27:PRO:O	41:i:59:LEU:HD13	2.07	0.55
41:i:52:ASP:CA	41:i:58:TYR:H	2.15	0.55
41:i:86:ILE:HB	41:i:133:LEU:HD21	1.88	0.55
48:p:4:THR:O	48:p:5:LYS:C	2.50	0.55
50:r:51:TYR:CE2	50:r:73:VAL:HB	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:t:40:ILE:HG22	52:t:41:VAL:N	2.21	0.55
1:w:125:G:N7	28:Z:48:LYS:NZ	2.54	0.55
1:w:164:U:P	1:w:165:U:C6	3.00	0.55
1:w:185:U:O2'	1:w:186:G:H5'	2.07	0.55
1:w:288:C:H1'	1:w:353:G:N2	2.22	0.55
1:w:449:A:H3'	1:w:450:G:C8	2.42	0.55
1:w:615:G:C6	1:w:616:A:N3	2.74	0.55
1:w:628:G:C6	1:w:636:G:C2	2.94	0.55
1:w:650:C:O3'	29:a:17:THR:HB	2.06	0.55
1:w:679:C:O2'	1:w:680:G:H5'	2.06	0.55
1:w:706:A:N6	1:w:707:G:C2	2.74	0.55
1:w:798:G:O2'	1:w:799:G:H5'	2.07	0.55
1:w:857:C:H5'	23:U:69:PHE:CE1	2.41	0.55
1:w:911:A:H61	13:K:15:GLY:HA3	1.71	0.55
1:w:941:A:N1	1:w:942:G:C6	2.75	0.55
1:w:1080:C:H2'	1:w:1081:U:O4'	2.06	0.55
1:w:1128:A:O2'	1:w:1129:A:O4'	2.25	0.55
1:w:1176:G:N3	1:w:1176:G:C2'	2.69	0.55
1:w:1303:G:C3'	1:w:1642:G:O2'	2.54	0.55
1:w:1322:A:N6	1:w:1331:A:N6	2.55	0.55
1:w:1341:U:O2'	20:R:55:ASN:CB	2.54	0.55
1:w:1341:U:O2'	20:R:55:ASN:CG	2.50	0.55
1:w:1412:A:C2	1:w:1590:U:C2	2.94	0.55
1:w:1593:G:O6	1:w:1594:G:C6	2.60	0.55
1:w:1754:C:O2'	1:w:1755:A:H5'	2.07	0.55
1:w:1780:A:OP2	1:w:1781:C:H3'	2.07	0.55
1:w:1791:A:H2'	1:w:1792:G:C5'	2.37	0.55
1:w:1871:A:C8	1:w:1872:A:N7	2.74	0.55
1:w:1907:G:C2	1:w:1924:C:C4	2.94	0.55
1:w:1945:G:H2'	1:w:1946:U:H5'	1.88	0.55
1:w:2023:G:H2'	1:w:2024:G:H8	1.72	0.55
1:w:2038:G:C6	1:w:2039:C:N4	2.74	0.55
1:w:2094:G:H4'	9:G:25:TYR:CE1	2.41	0.55
1:w:2120:G:H2'	1:w:2120:G:N3	2.22	0.55
1:w:2291:U:H2'	1:w:2292:C:C6	2.42	0.55
1:w:2291:U:H2'	1:w:2292:C:H6	1.72	0.55
1:w:2296:U:N3	1:w:2337:G:N2	2.55	0.55
1:w:2297:C:C2	1:w:2298:A:C8	2.94	0.55
1:w:2399:G:C4	1:w:2400:G:C8	2.94	0.55
1:w:2631:G:O4'	1:w:2892:A:H4'	2.05	0.55
1:w:2652:C:H2'	1:w:2653:U:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2666:C:C6	1:w:2666:C:OP2	2.60	0.55
1:w:2697:G:C6	1:w:2711:A:N1	2.75	0.55
1:w:2772:C:C5'	5:C:166:THR:HG21	2.37	0.55
1:w:2819:G:O2'	1:w:2821:A:C8	2.56	0.55
1:w:2841:C:C2'	1:w:2842:G:C5'	2.84	0.55
1:w:2848:G:P	16:N:96:ARG:HE	2.30	0.55
3:A:54:ARG:HB2	3:A:56:ASP:OD1	2.06	0.55
4:B:142:VAL:HG22	4:B:143:HIS:H	1.71	0.55
4:B:150:LYS:NZ	4:B:188:GLU:OE2	2.39	0.55
4:B:242:ARG:N	4:B:242:ARG:HH11	2.02	0.55
5:C:144:ARG:HG2	5:C:146:THR:OG1	2.07	0.55
7:E:139:LEU:HD23	46:n:3:ARG:NH2	2.22	0.55
8:F:8:PRO:CA	8:F:49:VAL:HG13	2.37	0.55
8:F:162:ILE:HD13	8:F:162:ILE:C	2.31	0.55
10:H:37:VAL:HG12	10:H:38:LEU:H	1.70	0.55
12:J:7:ARG:CD	12:J:10:PRO:HD2	2.22	0.55
13:K:59:ARG:N	13:K:59:ARG:CD	2.70	0.55
13:K:59:ARG:H	13:K:59:ARG:CD	2.20	0.55
13:K:124:LYS:HZ2	13:K:125:LEU:CA	2.19	0.55
14:L:33:ARG:HA	14:L:115:GLU:CB	2.35	0.55
20:R:12:VAL:CB	20:R:27:THR:HB	2.36	0.55
20:R:20:GLY:HA2	20:R:24:GLY:C	2.25	0.55
20:R:25:LYS:CE	20:R:26:TYR:CE1	2.89	0.55
20:R:63:LYS:HD3	20:R:64:LYS:C	2.32	0.55
23:U:24:LYS:HD3	23:U:24:LYS:H	1.71	0.55
24:V:46:LEU:H	24:V:46:LEU:CD2	2.16	0.55
24:V:59:THR:HG22	24:V:60:PHE:N	2.20	0.55
29:a:32:LEU:HD12	29:a:41:ILE:CG2	2.37	0.55
31:y:60:A:H8	31:y:60:A:O5'	1.89	0.55
31:y:117:G:C3'	31:y:118:U:C6	2.90	0.55
31:y:624:C:H2'	31:y:625:G:C5'	2.36	0.55
31:y:624:C:C2'	31:y:625:G:H5'	2.37	0.55
31:y:659:U:C6	31:y:659:U:P	3.00	0.55
31:y:754:C:C6	48:p:69:TYR:CE1	2.80	0.55
31:y:779:C:C5'	44:l:122:LYS:HE3	2.35	0.55
31:y:913:A:O2'	31:y:914:A:O4'	2.25	0.55
31:y:943:U:C6	31:y:943:U:P	2.99	0.55
31:y:103(B):G:C2'	31:y:103(C):G:H5'	2.37	0.55
31:y:1042:G:C6	31:y:1043:C:C5	2.94	0.55
31:y:1107:C:HO2'	31:y:1191:A:H1'	1.69	0.55
31:y:1392:G:C4	31:y:1393:U:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1451:A:C5'	31:y:1452:C:H5	2.20	0.55
32:z:32:PSU:H2'	32:z:33:U:C6	2.42	0.55
32:z:65:G:N3	32:z:66:U:C5	2.75	0.55
33:0:33:U:C2	33:0:35:A:H3'	2.42	0.55
35:c:82:ARG:HH12	35:c:93:VAL:C	2.14	0.55
35:c:130:ARG:HE	35:c:131:PRO:HD3	1.69	0.55
35:c:133:LYS:NZ	35:c:137:ARG:NH2	2.52	0.55
36:d:69:HIS:HD2	36:d:107:GLN:NE2	2.04	0.55
36:d:78:GLY:HA3	36:d:82:GLU:CB	2.36	0.55
38:f:15:ARG:HD3	38:f:28:PHE:CE2	2.42	0.55
39:g:3:ARG:O	39:g:4:TYR:CD1	2.59	0.55
39:g:14:LEU:HD21	39:g:84:ASN:HB3	1.89	0.55
39:g:100:ASN:ND2	51:s:29:PHE:H	2.03	0.55
40:h:44:TYR:O	40:h:47:CYS:HB2	2.07	0.55
40:h:116:ALA:O	40:h:117:ALA:C	2.49	0.55
41:i:109:ILE:HD12	41:i:137:VAL:CG2	2.37	0.55
42:j:95:LYS:C	42:j:96:LEU:HD12	2.32	0.55
45:m:32:ARG:C	45:m:84:ILE:HD11	2.32	0.55
46:n:88:ARG:HA	46:n:91:ARG:HG3	1.89	0.55
48:p:28:GLN:CA	48:p:31:LEU:HD22	2.35	0.55
48:p:44:LYS:O	48:p:45:VAL:HG23	2.07	0.55
49:q:73:LEU:CD1	49:q:73:LEU:H	2.19	0.55
50:r:17:LYS:HB2	50:r:45:HIS:NE2	2.21	0.55
52:t:63:THR:O	52:t:66:MET:CG	2.55	0.55
53:u:74:LYS:O	53:u:76:ALA:N	2.39	0.55
1:w:7:G:C4	1:w:8:A:C8	2.95	0.55
1:w:36:G:H2'	1:w:36:G:N3	2.22	0.55
1:w:38:A:C4	1:w:442:G:N2	2.74	0.55
1:w:139:G:H2'	1:w:140:A:H8	1.71	0.55
1:w:425:G:C2	1:w:426:C:C4	2.95	0.55
1:w:516:C:H5''	27:Y:13:LYS:NZ	2.22	0.55
1:w:588:U:C4	1:w:589:C:N3	2.75	0.55
1:w:677:A:N3	1:w:678:C:C6	2.74	0.55
1:w:781:A:O2'	1:w:1789:A:H1'	2.07	0.55
1:w:833:U:OP1	12:J:52:GLU:HG3	2.07	0.55
1:w:865:C:O2	1:w:868:U:O4	2.25	0.55
1:w:1131:G:O6	1:w:2024:G:N2	2.18	0.55
1:w:1194:A:C6	1:w:1195:G:C6	2.95	0.55
1:w:1224:C:H2'	18:P:87:HIS:HA	1.89	0.55
1:w:1309:G:H4'	28:Z:7:PRO:O	2.07	0.55
1:w:1310:G:C8	1:w:1311:G:C8	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1323:U:O2	1:w:1331:A:H2	1.89	0.55
1:w:1363:C:H4'	1:w:1810:A:H5'	1.88	0.55
1:w:1543:A:H2'	1:w:1544:C:C1'	2.37	0.55
1:w:1566:A:O2'	1:w:1567:A:C8	2.60	0.55
1:w:1649:G:H2'	14:L:107:ASP:OD2	2.05	0.55
1:w:1657:C:C5	1:w:1658:C:C5	2.94	0.55
1:w:1770:G:H2'	1:w:1771:C:O4'	2.07	0.55
1:w:1884:A:P	1:w:1884:A:H8	2.30	0.55
1:w:2067:G:C2	1:w:2444:G:C2	2.95	0.55
1:w:2240:C:N4	1:w:2241:A:C8	2.74	0.55
1:w:2253:G:H2'	1:w:2254:C:C6	2.41	0.55
1:w:2319:G:H1'	1:w:2320:A:C8	2.36	0.55
1:w:2419:U:H5	29:a:31:HIS:CB	2.12	0.55
1:w:2478:A:H1'	1:w:2528:U:O2'	2.06	0.55
1:w:2699:C:O2'	1:w:2700:C:C5'	2.53	0.55
1:w:2841:C:O5'	1:w:2841:C:H6	1.90	0.55
1:w:2857:G:H2'	1:w:2858:C:H5''	1.87	0.55
1:w:2876:G:C6	1:w:2877:G:C6	2.94	0.55
2:x:114:G:N3	15:M:38:GLN:NE2	2.55	0.55
4:B:227:ASN:CB	4:B:228:PRO:HD2	2.37	0.55
4:B:262:ARG:C	4:B:262:ARG:CD	2.79	0.55
5:C:172:VAL:HG12	5:C:173:VAL:N	2.21	0.55
6:D:11:GLY:C	6:D:12:ARG:HG3	2.32	0.55
7:E:96:ARG:NH2	7:E:97:ASP:HB2	2.22	0.55
8:F:87:LEU:HA	8:F:164:TYR:O	2.06	0.55
10:H:50:ALA:CA	10:H:53:ILE:CD1	2.73	0.55
10:H:69:VAL:O	10:H:71:MET:HE1	2.07	0.55
10:H:151:HIS:CE1	10:H:157:ARG:HG2	2.42	0.55
11:I:42:SER:N	11:I:57:VAL:HG22	2.22	0.55
11:I:111:PHE:O	11:I:114:ILE:HG13	2.05	0.55
14:L:45:ARG:NH1	14:L:46:GLY:N	2.55	0.55
15:M:11:LYS:HD2	15:M:11:LYS:N	2.16	0.55
15:M:47:THR:O	15:M:48:LEU:C	2.49	0.55
19:Q:38:TYR:CE2	27:Y:41:PRO:HD3	2.41	0.55
19:Q:40:ASN:O	19:Q:41:LYS:HB2	2.07	0.55
20:R:8:ILE:O	25:W:26:ARG:NH1	2.40	0.55
21:S:23:ARG:CD	21:S:38:ILE:CG2	2.85	0.55
21:S:95:LYS:O	21:S:95:LYS:HG2	2.06	0.55
24:V:90:ILE:HG23	24:V:94:LEU:HD11	1.89	0.55
26:X:5:LYS:HE2	26:X:7:LYS:CE	2.35	0.55
26:X:20:LYS:C	26:X:23:LEU:HG	2.26	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:11:G:H2'	31:y:12:U:O4'	2.07	0.55
31:y:140:A:H2'	31:y:141:A:H8	1.65	0.55
31:y:237:C:OP1	50:r:40:LYS:NZ	2.34	0.55
31:y:254:G:N1	31:y:273:A:C6	2.75	0.55
31:y:302:G:C6	31:y:303:A:C6	2.95	0.55
31:y:320:C:H2'	31:y:321:A:C8	2.41	0.55
31:y:489:C:O2'	31:y:490:G:H5'	2.06	0.55
31:y:608:A:H2'	31:y:609:A:H8	1.72	0.55
31:y:673:G:N1	31:y:674:G:C6	2.75	0.55
31:y:701:C:O2'	31:y:702:A:OP1	2.24	0.55
31:y:713:G:O2'	31:y:776:G:H5''	2.07	0.55
31:y:743:U:OP2	31:y:743:U:C5	2.60	0.55
31:y:841:U:O2'	31:y:842:C:OP2	2.24	0.55
31:y:888:G:C6	31:y:889:A:C6	2.94	0.55
31:y:907:A:N6	31:y:908:A:C5	2.75	0.55
31:y:1178:G:N2	31:y:1181:G:OP2	2.40	0.55
31:y:1246:C:C3'	31:y:1247:U:H6	2.19	0.55
31:y:1272:G:C5	31:y:1273:G:C5	2.95	0.55
31:y:1396:A:C4'	31:y:1398:A:H5''	2.37	0.55
32:z:34:G:O2'	32:z:35:A:H5'	2.07	0.55
33:0:18:G:N1	33:0:57:G:C6	2.75	0.55
33:0:56:C:OP1	33:0:56:C:H5	1.89	0.55
35:c:69:LEU:HB2	35:c:159:PRO:HB3	1.87	0.55
35:c:169:LYS:CD	35:c:170:GLU:HG3	2.37	0.55
36:d:141:VAL:O	36:d:145:GLY:O	2.25	0.55
36:d:156:ARG:HB3	36:d:193:TYR:CE2	2.38	0.55
36:d:169:ALA:O	36:d:170:GLN:HB3	2.06	0.55
37:e:36:ARG:O	37:e:38:TYR:N	2.39	0.55
37:e:101:LEU:CD1	37:e:138:TYR:HB3	2.34	0.55
40:h:62:PHE:HA	40:h:65:ALA:HB2	1.88	0.55
41:i:78:GLN:O	41:i:79:VAL:C	2.50	0.55
43:k:27:ALA:HB1	43:k:33:GLN:HA	1.89	0.55
43:k:34:VAL:CG2	43:k:35:SER:N	2.69	0.55
43:k:71:LEU:O	43:k:72:VAL:CB	2.55	0.55
44:l:124:LYS:HD3	44:l:124:LYS:C	2.31	0.55
47:o:29:ARG:HB3	47:o:40:CYS:HA	1.89	0.55
53:u:54:LYS:NZ	53:u:54:LYS:CB	2.69	0.55
1:w:14:A:C2	27:Y:21:SER:HB2	2.41	0.55
1:w:26:G:O5'	1:w:26:G:H8	1.89	0.55
1:w:36:G:C6	1:w:445:C:N4	2.75	0.55
1:w:55:G:N3	1:w:56:A:N7	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:65:C:C5	1:w:66:C:C5	2.94	0.55
1:w:273(F):U:N3	1:w:363(B):A:H2	2.04	0.55
1:w:287:C:N3	1:w:288:C:C4	2.75	0.55
1:w:299:A:N6	1:w:322:A:C2'	2.69	0.55
1:w:319:C:C2	1:w:320:A:C8	2.93	0.55
1:w:398:G:C4	1:w:399:G:C8	2.95	0.55
1:w:440:G:C5	1:w:441:U:C4	2.95	0.55
1:w:440:G:C6	1:w:441:U:N3	2.75	0.55
1:w:450:G:H3'	1:w:451:C:C5'	2.36	0.55
1:w:467:G:C8	28:Z:34:ARG:NH2	2.74	0.55
1:w:522:G:C6	1:w:523:C:N4	2.75	0.55
1:w:627:A:C2	1:w:637:A:N3	2.75	0.55
1:w:634:C:HO2'	1:w:635:C:H6	1.54	0.55
1:w:802:A:OP1	1:w:803:U:C5	2.60	0.55
1:w:1010:A:N3	1:w:1153:C:H1'	2.22	0.55
1:w:1027:A:C2	1:w:2488:A:H5''	2.42	0.55
1:w:1131:G:N7	1:w:2025:C:O4'	2.40	0.55
1:w:1161:C:O4'	18:P:8:GLY:HA3	2.07	0.55
1:w:1225:G:O2'	1:w:1226:A:H5'	2.07	0.55
1:w:1326:U:C4	1:w:1327:C:C4	2.95	0.55
1:w:1326:U:O2'	1:w:1327:C:H5'	2.06	0.55
1:w:1354:A:H62	1:w:1377:G:H21	1.53	0.55
1:w:1380:G:C4	1:w:1381:G:C8	2.95	0.55
1:w:1475:G:C6	1:w:1519:G:C5	2.95	0.55
1:w:1695:G:H3'	1:w:1696:G:H8	1.70	0.55
1:w:1805:U:C3'	1:w:1806:C:C5'	2.79	0.55
1:w:1806:C:O4'	4:B:50:THR:HG22	2.06	0.55
1:w:1857:G:C5	1:w:1858:G:C5	2.94	0.55
1:w:1917:U:C2'	1:w:1918:A:O4'	2.55	0.55
1:w:2023:G:OP2	1:w:2617:C:H5''	2.06	0.55
1:w:2056:G:N2	27:Y:6:VAL:N	2.48	0.55
1:w:2074:U:OP1	4:B:232:PRO:HA	2.06	0.55
1:w:2127:G:O2'	1:w:2128:C:OP1	2.25	0.55
1:w:2240:C:H6	1:w:2240:C:O5'	1.89	0.55
1:w:2512:C:H5'	1:w:2512:C:H6	1.71	0.55
1:w:2531:A:N3	1:w:2532:G:C8	2.75	0.55
1:w:2623:G:C5'	1:w:2825:G:N2	2.69	0.55
1:w:2701:C:H3'	1:w:2702:U:H5'	1.88	0.55
1:w:2723:C:N4	1:w:2724:C:H5	1.98	0.55
1:w:2839:G:H4'	14:L:49:ASP:OD1	2.06	0.55
1:w:2840:C:OP1	14:L:50:HIS:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:50:G:H8	2:x:50:G:OP2	1.89	0.55
2:x:110:G:C6	2:x:111:U:C4	2.94	0.55
3:A:42:VAL:HB	3:A:177:GLY:O	2.06	0.55
4:B:25:THR:CB	4:B:82:ILE:O	2.53	0.55
4:B:34:VAL:HG13	4:B:35:LYS:CE	2.37	0.55
4:B:35:LYS:HB2	4:B:36:PRO:CA	2.33	0.55
4:B:58:HIS:O	4:B:59:LYS:C	2.50	0.55
4:B:118:VAL:CG1	4:B:129:ASN:ND2	2.69	0.55
4:B:257:LEU:CD1	4:B:257:LEU:C	2.80	0.55
5:C:93:VAL:HG12	5:C:182:LEU:CD1	2.35	0.55
6:D:30:GLU:HG2	6:D:33:ARG:NH2	2.22	0.55
6:D:30:GLU:CD	12:J:13:ASN:CG	2.74	0.55
6:D:149:VAL:O	6:D:150:LEU:CD1	2.49	0.55
6:D:181:ILE:HD13	6:D:181:ILE:O	2.06	0.55
7:E:124:SER:HB3	7:E:133:LEU:HD11	1.89	0.55
8:F:141:VAL:CG1	8:F:144:VAL:CG1	2.81	0.55
10:H:25:LYS:CE	18:P:13:ARG:HH21	2.20	0.55
10:H:57:LEU:O	10:H:58:ARG:C	2.50	0.55
10:H:129:MET:O	10:H:130:LEU:O	2.24	0.55
12:J:41:ARG:HD2	12:J:45:LEU:CD1	2.36	0.55
13:K:25:ASP:CB	13:K:101:ARG:HD3	2.27	0.55
14:L:37:THR:HG22	14:L:111:LEU:CD1	2.36	0.55
15:M:82:ILE:HG21	15:M:85:VAL:HG11	1.89	0.55
16:N:121:ILE:HD13	16:N:121:ILE:C	2.32	0.55
18:P:71:LEU:CD2	18:P:93:GLU:HB3	2.37	0.55
19:Q:75:TYR:C	19:Q:75:TYR:CD1	2.85	0.55
22:T:42:VAL:HG12	22:T:46:LYS:HD2	1.87	0.55
22:T:48:PHE:C	22:T:48:PHE:CD1	2.85	0.55
22:T:153:SER:O	22:T:154:ASP:C	2.50	0.55
23:U:37:LEU:HD12	23:U:38:VAL:N	2.22	0.55
28:Z:14:LYS:CA	28:Z:20:ALA:HB1	2.37	0.55
29:a:22:VAL:O	29:a:48:PHE:HA	2.07	0.55
31:y:8:A:O2'	31:y:9:G:O4'	2.25	0.55
31:y:116:A:C6	31:y:117:G:C4	2.95	0.55
31:y:117:G:C2'	31:y:118:U:C5	2.89	0.55
31:y:125:U:O2	31:y:236:G:C6	2.60	0.55
31:y:224:C:H2'	31:y:225:C:C6	2.42	0.55
31:y:246:A:C6	31:y:279:A:C2	2.94	0.55
31:y:282:A:N1	31:y:283:C:C2	2.75	0.55
31:y:357:G:OP1	31:y:367:U:H6	1.90	0.55
31:y:424:G:C6	31:y:425:G:N7	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:484:G:O2'	31:y:485:G:H5''	2.07	0.55
31:y:529:G:C2	45:m:48:ASN:CG	2.85	0.55
31:y:564:C:O2'	31:y:565:U:C5'	2.55	0.55
31:y:586:C:HO2'	31:y:878:G:H4'	1.71	0.55
31:y:611:A:O2'	31:y:612:C:H5'	2.06	0.55
31:y:657:G:H21	48:p:22:THR:CB	2.12	0.55
31:y:741:G:C5'	48:p:35:ARG:NH2	2.70	0.55
31:y:775:G:C4	31:y:776:G:C8	2.95	0.55
31:y:786:G:C6	31:y:787:A:C5	2.95	0.55
31:y:786:G:C2	31:y:797:C:C2	2.95	0.55
31:y:885:G:H3'	31:y:885:G:P	2.47	0.55
31:y:1000:A:N6	31:y:1001:G:C6	2.75	0.55
31:y:1064:G:H1'	31:y:1065:U:C5'	2.21	0.55
31:y:1077:G:H21	31:y:1080:A:N6	2.03	0.55
31:y:1197:G:OP2	31:y:1197:G:N7	2.37	0.55
31:y:1222:G:OP2	31:y:1222:G:N7	2.40	0.55
31:y:1225:A:H5'	46:n:103:THR:CB	2.36	0.55
31:y:1300:G:C3'	31:y:1301:U:C5	2.89	0.55
31:y:1327:C:OP2	54:v:6:ARG:CZ	2.55	0.55
31:y:1368:G:OP2	42:j:114:TYR:HB3	2.06	0.55
31:y:1376:U:O2	31:y:1377:A:N7	2.40	0.55
31:y:1461:G:C2	31:y:1462:G:C5	2.95	0.55
31:y:1495:U:O5'	31:y:1495:U:H6	1.89	0.55
32:z:50:U:O4	32:z:64:A:N1	2.40	0.55
33:0:30:G:N2	40:h:144:MET:CE	2.60	0.55
35:c:36:ARG:C	35:c:38:GLY:H	2.12	0.55
35:c:163:PHE:CG	35:c:164:VAL:N	2.73	0.55
36:d:97:LYS:O	36:d:98:ASN:C	2.49	0.55
36:d:123:GLN:HG2	36:d:128:PHE:CB	2.36	0.55
37:e:57:ARG:NH2	38:f:107:ARG:CD	2.62	0.55
37:e:120:LEU:O	37:e:124:GLY:HA2	2.06	0.55
38:f:100:VAL:CG1	38:f:118:ILE:CG1	2.79	0.55
39:g:44:GLY:HA2	39:g:59:TYR:CZ	2.42	0.55
41:i:35:ILE:O	41:i:38:ILE:N	2.40	0.55
42:j:85:LEU:HD13	42:j:86:VAL:HG13	1.86	0.55
46:n:9:ILE:H	46:n:9:ILE:CD1	2.19	0.55
46:n:79:LYS:CA	46:n:82:MET:SD	2.94	0.55
48:p:9:GLN:HA	48:p:12:ILE:HD13	1.89	0.55
1:w:78:A:N6	1:w:79:G:C6	2.75	0.55
1:w:219:G:H2'	1:w:220:G:C8	2.42	0.55
1:w:258:G:H2'	1:w:259:G:H8	1.68	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:273(G):C:C5	1:w:274:G:N7	2.74	0.55
1:w:432:A:O2'	1:w:433:C:H5'	2.07	0.55
1:w:446:G:C1'	1:w:449:A:H2	2.18	0.55
1:w:454:A:C5'	1:w:455:C:OP2	2.54	0.55
1:w:551:G:H4'	1:w:551:G:OP1	2.07	0.55
1:w:671:C:C5'	12:J:41:ARG:NH1	2.70	0.55
1:w:703:U:C5	1:w:704:G:C8	2.94	0.55
1:w:703:U:H6	1:w:703:U:O5'	1.90	0.55
1:w:724:U:C5	1:w:725:G:C5	2.95	0.55
1:w:813:U:HO2'	1:w:1225:G:H1'	1.70	0.55
1:w:847:U:C2'	1:w:848:G:H5''	2.36	0.55
1:w:966:G:H2'	1:w:967:C:O4'	2.06	0.55
1:w:987:G:N7	1:w:988:A:C6	2.75	0.55
1:w:1120:G:H3'	1:w:1121:C:C6	2.41	0.55
1:w:1195:G:N2	1:w:1196:C:C1'	2.70	0.55
1:w:1206:G:O5'	1:w:1206:G:C8	2.60	0.55
1:w:1255:U:O2	6:D:67:ARG:NE	2.40	0.55
1:w:1361:G:N1	1:w:1362:C:C5	2.75	0.55
1:w:1385:G:H5''	1:w:1385:G:H8	1.72	0.55
1:w:1408:C:N4	1:w:1594:G:H1	2.05	0.55
1:w:1419:A:N7	1:w:1578:U:O4	2.39	0.55
1:w:1457:A:C2	1:w:2703:C:C4	2.94	0.55
1:w:1653:G:N9	14:L:9:LYS:HE2	2.20	0.55
1:w:1717:G:C5	1:w:1718:G:H1'	2.42	0.55
1:w:1728:G:N1	1:w:1731:G:C8	2.75	0.55
1:w:1791:A:H2'	1:w:1792:G:H5'	1.87	0.55
1:w:1797:C:H3'	1:w:1798:U:H6	1.72	0.55
1:w:1958:C:N3	1:w:1959:G:N7	2.55	0.55
1:w:2015:A:OP2	1:w:2016:U:O4	2.24	0.55
1:w:2025:C:C2'	1:w:2026:C:C5	2.79	0.55
1:w:2290:G:N2	1:w:2343:C:C1'	2.62	0.55
1:w:2297:C:C6	1:w:2333:A:H2	2.24	0.55
1:w:2315:G:H8	1:w:2315:G:O5'	1.88	0.55
1:w:2439:A:H1'	1:w:2587:A:P	2.47	0.55
1:w:2486:G:C2	1:w:2487:G:H1'	2.41	0.55
1:w:2537:U:C6	1:w:2537:U:O5'	2.60	0.55
1:w:2753:A:C2'	1:w:2754:U:H5'	2.37	0.55
1:w:2803:C:H2'	1:w:2804:C:H5''	1.87	0.55
1:w:2820:A:OP1	14:L:1:MET:O	2.25	0.55
2:x:103:U:O2'	2:x:104:A:H5'	2.07	0.55
3:A:48:LEU:C	3:A:211:ARG:NH1	2.65	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:179:ALA:C	3:A:181:PHE:H	2.15	0.55
4:B:8:PRO:HB3	4:B:14:ARG:C	2.30	0.55
4:B:25:THR:HG23	4:B:28:GLU:OE2	2.06	0.55
4:B:149:PRO:C	4:B:150:LYS:HE3	2.32	0.55
4:B:197:GLY:O	4:B:198:ASN:O	2.25	0.55
4:B:198:ASN:HB3	4:B:201:HIS:HD2	1.72	0.55
5:C:146:THR:N	5:C:148:GLY:H	2.04	0.55
6:D:30:GLU:OE2	12:J:13:ASN:CG	2.50	0.55
6:D:94:TYR:N	6:D:94:TYR:CD2	2.75	0.55
6:D:112:ARG:C	6:D:117:LYS:HG2	2.31	0.55
7:E:10:LYS:CE	7:E:14:GLU:HB2	2.37	0.55
9:G:127:VAL:HG12	9:G:141:LYS:HZ2	1.71	0.55
10:H:49:LEU:O	10:H:50:ALA:C	2.50	0.55
10:H:149:PRO:O	10:H:150:ASP:CB	2.55	0.55
11:I:2:ILE:N	11:I:2:ILE:CD1	2.70	0.55
12:J:39:LYS:HZ3	12:J:40:SER:H	1.54	0.55
12:J:128:HIS:O	12:J:129:ALA:HB2	2.05	0.55
14:L:33:ARG:HG2	14:L:115:GLU:HB2	1.89	0.55
14:L:36:THR:O	14:L:111:LEU:CB	2.55	0.55
17:O:44:ASN:O	17:O:48:ALA:HB2	2.07	0.55
18:P:29:PRO:HA	18:P:66:ARG:CB	2.38	0.55
19:Q:3:ALA:O	19:Q:106:ILE:HG22	2.06	0.55
19:Q:89:ALA:O	19:Q:92:ARG:HG2	2.07	0.55
21:S:26:LYS:CB	21:S:37:VAL:HA	2.35	0.55
21:S:72:VAL:C	21:S:73:ARG:HG3	2.32	0.55
22:T:53:ILE:O	22:T:100:VAL:HA	2.07	0.55
22:T:182:LYS:C	22:T:184:ALA:H	2.15	0.55
23:U:37:LEU:HD21	23:U:59:LEU:HB2	1.89	0.55
24:V:26:ARG:CG	24:V:34:THR:HA	2.37	0.55
24:V:44:PRO:O	24:V:46:LEU:HD23	2.07	0.55
24:V:66:HIS:CG	24:V:69:LYS:HD2	2.41	0.55
27:Y:16:ARG:O	27:Y:20:ARG:NE	2.39	0.55
28:Z:1:MET:O	28:Z:2:LYS:C	2.50	0.55
29:a:36:LYS:HD2	29:a:36:LYS:H	1.71	0.55
30:b:27:CYS:SG	30:b:29:ASN:HB2	2.46	0.55
31:y:228:A:C4	31:y:229:U:C5	2.95	0.55
31:y:265:G:C5'	50:r:65:ILE:O	2.54	0.55
31:y:324:G:N1	31:y:327:A:OP2	2.34	0.55
31:y:425:G:C6	31:y:426:G:C5	2.95	0.55
31:y:492:G:C2'	31:y:493:G:O5'	2.55	0.55
31:y:681:C:O2'	31:y:682:G:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:687:A:C2	31:y:704:A:C5	2.95	0.55
31:y:870:U:H6	31:y:870:U:H5''	1.70	0.55
31:y:879:C:O5'	31:y:879:C:H6	1.90	0.55
31:y:965:A:O4'	31:y:969:A:C8	2.60	0.55
31:y:988:G:N2	31:y:989:C:C1'	2.69	0.55
31:y:1014:A:H2'	31:y:1015:A:C4'	2.36	0.55
31:y:1065:U:C4'	31:y:1066:C:H6	2.20	0.55
31:y:1083:U:C5	31:y:1084:G:C6	2.94	0.55
31:y:1084:G:O4'	31:y:1102:A:C8	2.60	0.55
31:y:1329:A:C5'	46:n:26:GLY:CA	2.68	0.55
35:c:100:GLY:HA3	35:c:104:ASN:HB2	1.88	0.55
36:d:28:GLN:O	36:d:29:TYR:C	2.50	0.55
36:d:132:ARG:CA	36:d:136:GLN:HG3	2.36	0.55
37:e:22:LYS:N	37:e:113:SER:CB	2.67	0.55
37:e:31:CYS:CB	37:e:34:GLU:HB2	2.29	0.55
37:e:31:CYS:SG	37:e:33:MET:SD	3.05	0.55
38:f:53:LEU:HD22	38:f:53:LEU:N	2.22	0.55
38:f:143:ARG:HE	38:f:143:ARG:N	2.03	0.55
39:g:91:VAL:C	39:g:92:LYS:HD2	2.31	0.55
41:i:24:THR:CG2	41:i:61:VAL:HG23	2.31	0.55
41:i:69:ARG:N	41:i:74:PRO:HB2	2.22	0.55
43:k:25:GLU:O	43:k:29:ARG:O	2.24	0.55
43:k:48:THR:CA	43:k:62:HIS:HB3	2.27	0.55
43:k:51:ARG:O	43:k:53:PRO:HD3	2.07	0.55
45:m:40:ARG:NE	45:m:41:THR:H	2.05	0.55
45:m:90:LYS:C	45:m:92:LEU:N	2.58	0.55
48:p:11:VAL:O	48:p:15:PHE:CD1	2.60	0.55
50:r:33:GLY:O	50:r:34:LYS:HB2	2.07	0.55
50:r:49:GLU:O	50:r:50:LYS:C	2.48	0.55
1:w:7:G:H2'	1:w:8:A:C8	2.41	0.54
1:w:61:G:O6	1:w:94:G:C2	2.60	0.54
1:w:140:A:C2'	1:w:141(A):A:H5'	2.38	0.54
1:w:270(N):U:H2'	1:w:270(O):G:O5'	2.07	0.54
1:w:299:A:HO2'	1:w:319:C:H1'	1.64	0.54
1:w:469:G:C6	28:Z:39:ARG:CZ	2.90	0.54
1:w:497:A:H8	1:w:497:A:C5'	2.15	0.54
1:w:708:C:N3	1:w:709:U:C5	2.74	0.54
1:w:1532:C:C5	1:w:1533:C:N4	2.75	0.54
1:w:1576:U:H2'	1:w:1577:C:C6	2.42	0.54
1:w:2049:G:H2'	1:w:2050:C:C5	2.41	0.54
1:w:2050:C:H2'	1:w:2051:A:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2073:C:C5	1:w:2074:U:C5	2.95	0.54
1:w:2084:C:H6	1:w:2084:C:O5'	1.88	0.54
1:w:2087:G:C2	1:w:2233:U:H1'	2.42	0.54
1:w:2105:C:C4	1:w:2106:G:N7	2.75	0.54
1:w:2157:G:H8	1:w:2157:G:OP2	1.89	0.54
1:w:2169:A:OP1	1:w:2170:A:N6	2.40	0.54
1:w:2216:G:C4	1:w:2217:G:C8	2.95	0.54
1:w:2333:A:H4'	1:w:2335:A:OP2	2.06	0.54
1:w:2359:C:H1'	29:a:52:LYS:CD	2.36	0.54
1:w:2396:G:C6	1:w:2397:G:C5	2.95	0.54
1:w:2444:G:H5'	6:D:69:ARG:HH12	1.71	0.54
1:w:2525:G:HO2'	1:w:2742:C:H4'	1.72	0.54
1:w:2577:A:H3'	1:w:2578:G:C5'	2.36	0.54
1:w:2680:C:O5'	5:C:189:PRO:HB3	2.07	0.54
1:w:2682:U:H1'	5:C:12:THR:HA	1.88	0.54
1:w:2718:G:C5	1:w:2719:G:C8	2.96	0.54
1:w:2744:G:H2'	1:w:2745:C:H6	1.72	0.54
1:w:2744:G:C8	1:w:2755:C:O2	2.60	0.54
2:x:6:C:C2	2:x:7:G:C8	2.95	0.54
3:A:33:LEU:O	3:A:40:GLU:OE1	2.25	0.54
3:A:184:GLU:C	3:A:186:LEU:N	2.63	0.54
4:B:89:SER:O	4:B:90:ALA:HB2	2.06	0.54
5:C:77:ILE:C	5:C:79:ARG:HE	2.15	0.54
5:C:91:VAL:HG12	5:C:92:THR:N	2.21	0.54
7:E:31:VAL:HG13	7:E:32:PRO:CD	2.37	0.54
8:F:40:GLU:CG	8:F:55:PRO:HB3	2.38	0.54
12:J:27:HIS:NE2	12:J:30:THR:OG1	2.39	0.54
12:J:55:ARG:C	12:J:57:THR:H	2.15	0.54
13:K:28:ALA:HB1	13:K:105:GLU:CD	2.32	0.54
13:K:111:GLU:O	13:K:115:MET:CG	2.55	0.54
14:L:5:LYS:HG3	14:L:8:ARG:HH21	1.71	0.54
14:L:83:ILE:O	14:L:84:ALA:C	2.51	0.54
17:O:92:ARG:CG	17:O:94:ASN:ND2	2.70	0.54
19:Q:7:ALA:HB3	19:Q:103:ILE:HG23	1.87	0.54
20:R:60:ARG:HB2	20:R:74:PRO:CD	2.37	0.54
22:T:128:VAL:HG21	22:T:134:PRO:HD3	1.89	0.54
22:T:150:LEU:C	22:T:150:LEU:CD1	2.79	0.54
23:U:56:ASP:N	23:U:56:ASP:OD2	2.39	0.54
25:W:13:ALA:C	25:W:15:LYS:H	2.15	0.54
29:a:9:GLY:O	29:a:12:LYS:HB2	2.07	0.54
31:y:38:G:HO2'	31:y:397:A:H62	1.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:44:G:OP1	49:q:11:SER:CB	2.55	0.54
31:y:108:G:N7	53:u:15:ARG:HB3	2.22	0.54
31:y:143:A:H61	31:y:220:G:H1	0.71	0.54
31:y:241:C:H5'	45:m:18:ARG:NH2	2.21	0.54
31:y:280:C:H1'	50:r:38:ARG:HD3	1.89	0.54
31:y:318:G:C6	31:y:319:G:N7	2.75	0.54
31:y:395:C:O5'	31:y:395:C:H6	1.91	0.54
31:y:443:C:C2'	31:y:444:C:C5'	2.73	0.54
31:y:498:A:N1	31:y:546:G:H2'	2.22	0.54
31:y:500:G:H8	31:y:500:G:O5'	1.90	0.54
31:y:506:G:H3'	31:y:507:C:C6	2.43	0.54
31:y:517:G:C2'	31:y:531:U:C5	2.88	0.54
31:y:675:A:C2	44:l:115:PRO:CB	2.91	0.54
31:y:684:A:H8	31:y:684:A:O5'	1.90	0.54
31:y:691:G:O6	44:l:55:LYS:CE	2.53	0.54
31:y:744:C:C2	31:y:745:C:C5	2.95	0.54
31:y:889:A:N1	31:y:907:A:C5'	2.62	0.54
31:y:913:A:H8	31:y:913:A:O5'	1.90	0.54
31:y:959:A:H1'	31:y:1221:G:H21	1.71	0.54
31:y:1065:U:O2'	31:y:1066:C:O5'	2.23	0.54
31:y:1081:G:OP1	38:f:18:ARG:CZ	2.54	0.54
31:y:1139:G:N2	31:y:1143:G:C2	2.75	0.54
31:y:1158:C:O2	31:y:1158:C:C3'	2.56	0.54
31:y:1162:C:C5	31:y:1163:C:N4	2.75	0.54
31:y:1223:C:C6	31:y:1223:C:C3'	2.90	0.54
31:y:1248:A:H2	31:y:1289:A:H61	1.55	0.54
31:y:1307:U:C4'	46:n:109:THR:HG23	2.37	0.54
31:y:1307:U:C2	31:y:1308:U:C5	2.95	0.54
31:y:1311:G:C6	31:y:1312:G:C6	2.95	0.54
31:y:1375:A:N3	31:y:1376:U:C1'	2.69	0.54
31:y:1489:G:C2	31:y:1490:C:C2	2.95	0.54
33:0:7:U:O2	33:0:66:A:C2	2.60	0.54
33:0:23:A:C6	33:0:24:G:C5	2.95	0.54
35:c:137:ARG:CZ	35:c:137:ARG:HB3	2.35	0.54
35:c:211:ILE:CG2	35:c:214:ILE:HD11	2.37	0.54
36:d:48:TYR:O	36:d:49:SER:C	2.50	0.54
36:d:136:GLN:C	36:d:138:VAL:N	2.65	0.54
37:e:27:TYR:HE1	37:e:112:VAL:O	1.87	0.54
37:e:91:SER:HA	37:e:94:LEU:CD2	2.23	0.54
37:e:170:VAL:HB	37:e:174:LEU:HB3	1.88	0.54
40:h:119:ARG:CG	40:h:120:ILE:CD1	2.81	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:36:LEU:O	41:i:45:ILE:HD12	2.08	0.54
41:i:123:GLU:N	41:i:123:GLU:OE2	2.40	0.54
43:k:13:HIS:O	43:k:15:THR:N	2.36	0.54
44:l:22:HIS:CG	44:l:29:ILE:HG23	2.42	0.54
45:m:11:ARG:CG	45:m:12:LYS:N	2.70	0.54
45:m:102:GLY:O	45:m:103:VAL:CB	2.55	0.54
47:o:34:TYR:OH	47:o:36:PHE:CD2	2.55	0.54
1:w:123:G:O2'	1:w:124:G:H5'	2.06	0.54
1:w:288:C:H5''	1:w:289:A:OP2	2.07	0.54
1:w:463:G:O2'	1:w:464:U:C6	2.60	0.54
1:w:508:G:N3	1:w:508:G:C2'	2.70	0.54
1:w:535:C:N3	1:w:536:A:N7	2.54	0.54
1:w:667:U:H5''	12:J:49:ARG:HH12	1.71	0.54
1:w:671:C:P	12:J:41:ARG:HH22	2.30	0.54
1:w:724:U:H2'	1:w:725:G:C1'	2.33	0.54
1:w:847:U:H3'	1:w:848:G:H5''	1.88	0.54
1:w:996:A:C5	1:w:1160:G:C2	2.95	0.54
1:w:1051:G:H2'	1:w:1052:C:H6	1.67	0.54
1:w:1123:C:O2	1:w:1124:C:C6	2.60	0.54
1:w:1148:A:C6	1:w:1149:G:O6	2.60	0.54
1:w:1335:U:C3'	1:w:1336:A:C8	2.91	0.54
1:w:1373:A:C3'	1:w:1374:G:C8	2.72	0.54
1:w:1650:G:H2'	1:w:1651:G:C8	2.42	0.54
1:w:1663:C:O2	1:w:1992:G:O6	2.25	0.54
1:w:1756:G:C8	1:w:1756:G:C3'	2.89	0.54
1:w:1789:A:C3'	1:w:1790:C:C6	2.83	0.54
1:w:2112:G:O6	1:w:2169:A:N7	2.40	0.54
1:w:2353:G:C2'	23:U:34:GLY:HA3	2.37	0.54
1:w:2377:A:N7	1:w:2378:A:N1	2.55	0.54
1:w:2402:C:C2'	1:w:2403:C:H5'	2.29	0.54
1:w:2413:G:H2'	1:w:2414:G:O4'	2.06	0.54
1:w:2514:U:N3	1:w:2515:C:N4	2.54	0.54
1:w:2572:A:P	1:w:2572:A:H8	2.31	0.54
1:w:2583:G:N7	1:w:2584:U:C4	2.75	0.54
2:x:43:C:C3'	2:x:44:G:H5'	2.37	0.54
2:x:107:U:C3'	2:x:108:C:C5	2.81	0.54
4:B:88:ARG:HG3	4:B:89:SER:N	2.22	0.54
6:D:165:LEU:HG	6:D:169:VAL:O	2.07	0.54
7:E:55:LYS:CD	7:E:56:ALA:N	2.63	0.54
8:F:95:ARG:HH11	8:F:107:VAL:CA	2.20	0.54
8:F:151:ILE:C	8:F:152:ARG:HD2	2.30	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:75:VAL:HG12	10:H:76:VAL:H	1.72	0.54
11:I:66:LYS:O	11:I:78:ARG:HG3	2.07	0.54
13:K:89:ASN:OD1	13:K:89:ASN:N	2.37	0.54
13:K:134:ARG:HD2	13:K:135:ASP:N	2.22	0.54
16:N:106:SER:HA	16:N:110:ILE:CG1	2.37	0.54
17:O:94:ASN:HD22	17:O:95:LEU:H	1.54	0.54
18:P:19:LYS:HD2	18:P:20:LEU:H	1.71	0.54
18:P:21:ARG:HB2	18:P:21:ARG:NH1	2.21	0.54
18:P:73:SER:HB2	18:P:89:GLN:CB	2.30	0.54
19:Q:51:LEU:HD13	19:Q:51:LEU:H	1.72	0.54
20:R:55:ASN:O	20:R:56:THR:CG2	2.50	0.54
21:S:62:GLU:O	21:S:63:LYS:CB	2.52	0.54
22:T:76:LEU:HG	22:T:77:ASP:H	1.72	0.54
26:X:8:LEU:HB3	26:X:54:VAL:HG12	1.90	0.54
26:X:9:VAL:HG12	26:X:32:GLN:CB	2.38	0.54
31:y:119:A:C5	31:y:287:U:O2	2.60	0.54
31:y:163:C:O5'	31:y:163:C:H6	1.90	0.54
31:y:175:C:C5	31:y:176:C:C6	2.94	0.54
31:y:269:C:H2'	31:y:270:A:C8	2.42	0.54
31:y:423:G:C2	31:y:424:G:O4'	2.60	0.54
31:y:451:A:N1	31:y:480:U:H3'	2.22	0.54
31:y:452:A:C2	31:y:453:A:C2	2.94	0.54
31:y:581:G:H5''	48:p:65:ARG:NH2	2.22	0.54
31:y:757:U:C3'	31:y:758:G:O4'	2.55	0.54
31:y:864:A:H2	31:y:917:G:C2	2.21	0.54
31:y:865:A:C2	31:y:918:A:H4'	2.37	0.54
31:y:871:U:H3'	31:y:872:A:C5'	2.38	0.54
31:y:918:A:C6	31:y:919:A:C5	2.95	0.54
31:y:1004:A:C2'	31:y:1005:A:C5'	2.85	0.54
31:y:1006:C:H6	31:y:1006:C:O5'	1.90	0.54
31:y:1014:A:H8	31:y:1014:A:O5'	1.90	0.54
31:y:1348:U:H5''	42:j:120:ARG:CD	2.28	0.54
31:y:1488:G:C2	31:y:1489:G:C8	2.96	0.54
32:z:32:PSU:C5'	32:z:32:PSU:H6	2.20	0.54
32:z:56:C:H2'	32:z:57:G:H5'	1.88	0.54
36:d:89:GLU:O	36:d:92:ALA:N	2.40	0.54
36:d:123:GLN:HG2	36:d:128:PHE:HB2	1.89	0.54
37:e:54:TYR:CD1	37:e:57:ARG:HG2	2.42	0.54
40:h:45:ASP:C	40:h:49:ILE:HG12	2.32	0.54
41:i:104:ARG:CG	41:i:108:GLY:H	2.18	0.54
43:k:24:VAL:CG1	43:k:28:ARG:HE	2.19	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:82:VAL:HG22	45:m:83:LEU:N	2.16	0.54
45:m:104:TYR:HD1	45:m:104:TYR:H	1.54	0.54
46:n:48:LEU:CD1	46:n:53:VAL:CG2	2.81	0.54
47:o:24:CYS:O	47:o:28:GLY:HA2	2.06	0.54
50:r:10:VAL:CA	50:r:21:VAL:HG22	2.36	0.54
50:r:26:GLN:C	50:r:27:PHE:CD1	2.86	0.54
51:s:61:LYS:HD3	51:s:64:ARG:HD2	1.89	0.54
52:t:5:LEU:HD13	52:t:6:LYS:HZ3	1.71	0.54
52:t:10:PHE:CE2	52:t:37:ARG:HD2	2.42	0.54
1:w:35:G:O6	1:w:446:G:C2	2.60	0.54
1:w:64:A:H5''	20:R:63:LYS:HD2	1.89	0.54
1:w:118:A:H2	1:w:178:G:N3	2.05	0.54
1:w:213:A:HO2'	1:w:214:G:H5'	1.68	0.54
1:w:363(E):G:C6	1:w:363(F):U:C5	2.95	0.54
1:w:449:A:O2'	17:O:3:ARG:NH2	2.40	0.54
1:w:579:G:N2	1:w:580:C:C2	2.76	0.54
1:w:667:U:O5'	1:w:667:U:C6	2.49	0.54
1:w:713:G:C1'	1:w:718:A:N6	2.64	0.54
1:w:858:U:O2'	1:w:2269:A:H5''	2.06	0.54
1:w:942:G:O2'	1:w:943:U:H5'	2.07	0.54
1:w:1005:C:C3'	1:w:1006:C:C5'	2.83	0.54
1:w:1141:U:O5'	1:w:1141:U:C6	2.61	0.54
1:w:1173:G:O3'	1:w:1174:A:C8	2.60	0.54
1:w:1181:C:O3'	1:w:1182:A:C8	2.60	0.54
1:w:1193:G:H2'	1:w:1194:A:H1'	1.87	0.54
1:w:1214:A:H61	1:w:1235:G:C1'	2.16	0.54
1:w:1236:G:H8	1:w:1236:G:O5'	1.89	0.54
1:w:1264:G:H2'	1:w:2014:A:N6	2.23	0.54
1:w:1438:U:O2	1:w:1553:A:N7	2.40	0.54
1:w:1458:C:C1'	1:w:1459:G:N3	2.61	0.54
1:w:1565:C:C4	1:w:1567:A:N9	2.75	0.54
1:w:1589:C:O2'	1:w:1590:U:H5'	2.07	0.54
1:w:1725:G:N3	1:w:1726:G:N7	2.56	0.54
1:w:1789:A:C3'	1:w:1790:C:H6	2.20	0.54
1:w:2009:G:N2	14:L:106:GLY:O	2.40	0.54
1:w:2016:U:O3'	27:Y:8:LYS:HE3	2.08	0.54
1:w:2065:C:N3	1:w:2066:C:C5	2.75	0.54
1:w:2197:U:O5'	1:w:2197:U:C6	2.60	0.54
1:w:2216:G:C2	1:w:2217:G:C8	2.95	0.54
1:w:2234:G:N3	1:w:2235:G:C8	2.76	0.54
1:w:2569:G:N3	1:w:2570:G:C8	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2574:G:P	1:w:2575:C:OP2	2.65	0.54
1:w:2714:G:H2'	1:w:2715:C:C6	2.42	0.54
1:w:2729:G:C5	1:w:2730:C:N4	2.75	0.54
1:w:2799:A:C3'	1:w:2801:A:C8	2.90	0.54
1:w:2820:A:O2'	1:w:2821:A:O5'	2.24	0.54
1:w:2888:C:C4	1:w:2889:C:C5	2.95	0.54
2:x:33:G:H4'	2:x:33:G:OP1	2.08	0.54
2:x:96:G:C2	2:x:97:G:C5	2.96	0.54
4:B:165:ILE:HG21	4:B:173:VAL:CG2	2.30	0.54
4:B:208:LYS:HE3	4:B:210:GLY:HA3	1.89	0.54
6:D:75:ALA:C	6:D:77:ILE:H	2.15	0.54
6:D:153:THR:O	6:D:153:THR:OG1	2.25	0.54
7:E:7:LEU:O	7:E:8:LYS:O	2.26	0.54
7:E:110:ALA:O	7:E:113:ARG:CG	2.53	0.54
7:E:127:GLY:C	7:E:165:THR:HA	2.32	0.54
9:G:70:GLU:O	9:G:74:ASN:OD1	2.26	0.54
10:H:59:GLY:HA2	10:H:72:GLY:HA2	1.88	0.54
10:H:80:ALA:CA	10:H:83:ILE:CG1	2.83	0.54
11:I:10:VAL:O	11:I:99:PHE:HE2	1.90	0.54
14:L:50:HIS:O	14:L:51:LEU:C	2.50	0.54
16:N:31:SER:HB3	16:N:43:GLN:N	2.22	0.54
16:N:51:ARG:CZ	16:N:60:THR:HB	2.36	0.54
16:N:53:ARG:HD2	16:N:54:ARG:O	2.07	0.54
16:N:107:ASP:CB	31:y:1431:C:O5'	2.56	0.54
17:O:112:ARG:O	17:O:113:ALA:C	2.50	0.54
18:P:68:LYS:HB3	18:P:94:LEU:HD21	1.83	0.54
19:Q:17:VAL:O	19:Q:20:VAL:HB	2.07	0.54
21:S:100:ALA:O	21:S:101:LYS:HB2	2.07	0.54
23:U:37:LEU:H	23:U:60:PHE:HA	1.73	0.54
30:b:2:LYS:N	30:b:35:ARG:CB	2.68	0.54
31:y:157:G:C6	31:y:158:G:N7	2.75	0.54
31:y:216:G:C2'	31:y:217:C:C6	2.91	0.54
31:y:253:U:H2'	31:y:254:G:H8	1.71	0.54
31:y:290:C:N3	31:y:291:C:H5	2.04	0.54
31:y:393:A:N3	31:y:394:G:N7	2.56	0.54
31:y:562:C:C4'	31:y:563:A:O5'	2.45	0.54
31:y:599:C:H2'	31:y:600:C:H5'	1.89	0.54
31:y:618:C:N4	31:y:623:C:N3	2.52	0.54
31:y:623:C:H2'	31:y:624:C:C1'	2.37	0.54
31:y:707:C:H2'	31:y:708:C:C5	2.40	0.54
31:y:830:G:H2'	31:y:831:U:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:900:A:C8	31:y:900:A:OP2	2.60	0.54
31:y:910:C:O5'	31:y:910:C:C6	2.61	0.54
31:y:934:C:C2	31:y:938:A:N6	2.75	0.54
31:y:1129:C:H4'	31:y:1130:A:C5	2.42	0.54
31:y:1181:G:H2'	31:y:1182:G:N9	2.21	0.54
31:y:1332:A:C2'	31:y:1333:A:O4'	2.50	0.54
31:y:1408:A:H3'	31:y:1408:A:H8	1.70	0.54
33:0:24:G:C2	33:0:25:C:H1'	2.42	0.54
35:c:127:ILE:HG21	35:c:138:LEU:CD1	2.38	0.54
35:c:133:LYS:NZ	35:c:137:ARG:HH12	2.05	0.54
35:c:163:PHE:CE1	35:c:186:ALA:CA	2.77	0.54
36:d:151:VAL:CG1	36:d:168:ALA:N	2.70	0.54
38:f:121:LYS:O	38:f:123:LEU:HD21	2.08	0.54
38:f:144:THR:O	38:f:147:ASP:OD1	2.24	0.54
38:f:148:VAL:HG12	38:f:152:ARG:NE	2.23	0.54
38:f:149:GLU:HA	38:f:152:ARG:HB2	1.89	0.54
39:g:37:VAL:HG12	39:g:38:GLU:H	1.73	0.54
39:g:40:VAL:HG23	39:g:41:GLU:N	2.22	0.54
40:h:89:MET:HG3	40:h:90:GLU:N	2.23	0.54
40:h:136:LYS:HA	40:h:139:GLU:CD	2.32	0.54
41:i:93:VAL:HG12	41:i:95:VAL:HG13	1.89	0.54
44:l:66:LEU:CD1	44:l:70:LYS:HE3	2.37	0.54
44:l:99:GLN:HB2	44:l:105:VAL:HG22	1.90	0.54
50:r:5:VAL:C	50:r:6:LEU:CD2	2.81	0.54
50:r:60:ILE:CG1	50:r:61:GLU:O	2.51	0.54
52:t:31:ILE:H	52:t:49:ILE:HG22	1.72	0.54
1:w:39:C:C2	1:w:40:C:C5	2.95	0.54
1:w:108:U:O2	1:w:348:G:O2'	2.21	0.54
1:w:212:G:O5'	1:w:212:G:H8	1.91	0.54
1:w:286:C:OP2	1:w:286:C:C5	2.61	0.54
1:w:479:A:N1	1:w:506:G:C2	2.75	0.54
1:w:552:G:C8	1:w:552:G:O5'	2.61	0.54
1:w:674:G:C2'	1:w:675:A:C5'	2.85	0.54
1:w:722:A:C2'	1:w:723:G:O4'	2.53	0.54
1:w:762:U:C4'	1:w:763:G:H5''	2.27	0.54
1:w:883:G:H2'	1:w:884:C:H6	1.69	0.54
1:w:948:G:O4'	1:w:984:A:C6	2.60	0.54
1:w:1023:U:H4'	1:w:1123:C:OP1	2.07	0.54
1:w:1038:C:C2'	1:w:1039:G:C5'	2.78	0.54
1:w:1047:G:H3'	1:w:1047:G:P	2.47	0.54
1:w:1141:U:H1'	1:w:114(B):A:N9	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1173:G:O5'	1:w:1174:A:H5'	2.07	0.54
1:w:1208:C:C2'	1:w:1209:G:H8	2.18	0.54
1:w:1397:U:H2'	1:w:1397:U:O2	2.07	0.54
1:w:1542:G:H2'	1:w:1543:A:C8	2.42	0.54
1:w:1652:A:C3'	1:w:1653:G:C8	2.91	0.54
1:w:1681:G:H1'	1:w:1763:G:H5'	1.89	0.54
1:w:1806:C:P	4:B:250:TRP:HZ2	2.31	0.54
1:w:1831:G:H2'	1:w:1832:C:C5	2.42	0.54
1:w:1926:U:C2	1:w:1929:G:N2	2.75	0.54
1:w:1959:G:C6	1:w:1960:A:C5	2.96	0.54
1:w:1975:G:C6	1:w:1976:U:N3	2.76	0.54
1:w:2011:U:C5	1:w:2012:G:N7	2.76	0.54
1:w:2017:U:OP1	27:Y:8:LYS:HD3	2.07	0.54
1:w:2138:C:OP2	1:w:2138:C:C6	2.58	0.54
1:w:2141:G:H2'	1:w:2142:C:C6	2.42	0.54
1:w:2285:C:H1'	1:w:2288:A:C5	2.42	0.54
1:w:2345:G:H21	1:w:2381:C:H3'	1.72	0.54
1:w:2378:A:OP2	1:w:2378:A:C8	2.61	0.54
1:w:2742:C:C4	1:w:2763:G:N2	2.75	0.54
1:w:2747:G:C2	1:w:2756:U:P	3.01	0.54
1:w:2754:U:C6	1:w:2754:U:C3'	2.90	0.54
1:w:2762:G:N3	1:w:2762:G:H2'	2.22	0.54
2:x:105:G:H8	2:x:105:G:O5'	1.90	0.54
4:B:199:ALA:O	4:B:202:LYS:HB2	2.06	0.54
4:B:227:ASN:O	4:B:228:PRO:O	2.26	0.54
5:C:4:ILE:HD11	5:C:29:GLY:C	2.31	0.54
7:E:41:GLN:NE2	7:E:155:MET:HA	2.21	0.54
7:E:78:SER:O	7:E:79:ASN:O	2.26	0.54
8:F:40:GLU:O	8:F:42:ARG:HG2	2.07	0.54
8:F:152:ARG:NH2	8:F:152:ARG:H	2.04	0.54
9:G:126:TYR:CE1	9:G:127:VAL:HG22	2.43	0.54
10:H:124:HIS:HA	10:H:127:LYS:CD	2.30	0.54
11:I:78:ARG:HD3	16:N:73:GLU:HG3	1.89	0.54
11:I:111:PHE:O	11:I:114:ILE:CG1	2.54	0.54
12:J:146:VAL:HG22	12:J:147:LEU:N	2.22	0.54
13:K:109:VAL:HB	13:K:113:GLN:HB2	1.90	0.54
14:L:73:VAL:O	14:L:77:ARG:CB	2.56	0.54
14:L:106:GLY:C	14:L:107:ASP:OD1	2.50	0.54
16:N:51:ARG:HD3	16:N:62:THR:CG2	2.36	0.54
16:N:74:ARG:HD2	16:N:76:PHE:CE2	2.43	0.54
16:N:108:ARG:HH11	31:y:1431:C:P	2.29	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:65:LEU:O	19:Q:66:GLU:O	2.26	0.54
20:R:25:LYS:CG	20:R:26:TYR:H	2.20	0.54
22:T:15:PRO:HB3	22:T:19:ARG:NH2	2.22	0.54
22:T:67:LEU:HD11	22:T:69:THR:OG1	2.08	0.54
22:T:128:VAL:HG21	22:T:132:ASN:O	2.07	0.54
24:V:27:GLU:HA	33:O:74:C:H5'	1.89	0.54
30:b:26:ILE:CG1	30:b:34:GLN:H	2.18	0.54
31:y:162:A:C5	31:y:163:C:C2	2.94	0.54
31:y:279:A:OP1	31:y:280:C:H2'	2.07	0.54
31:y:301:G:C2'	31:y:302:G:H5'	2.37	0.54
31:y:324:G:N2	31:y:327:A:H5'	2.23	0.54
31:y:376:G:C2'	31:y:377:G:H5'	2.36	0.54
31:y:457:C:C2'	31:y:458:C:C5'	2.79	0.54
31:y:502:G:H5''	31:y:550:G:O2'	2.07	0.54
31:y:508:C:C4'	31:y:509:A:N7	2.70	0.54
31:y:644:G:C6	31:y:645:C:N1	2.75	0.54
31:y:725:G:H4'	31:y:834:C:O2'	2.08	0.54
31:y:775:G:H3'	31:y:776:G:C8	2.42	0.54
31:y:895:G:O2'	50:r:100:LYS:O	2.24	0.54
31:y:899:C:C5	31:y:900:A:N7	2.76	0.54
31:y:936:C:H1'	31:y:1383:C:H41	1.66	0.54
31:y:1089:G:H2'	31:y:1089:G:N3	2.22	0.54
31:y:1112:C:N3	36:d:177:THR:CA	2.64	0.54
31:y:1222:G:C8	31:y:1222:G:P	3.01	0.54
31:y:1329:A:C5'	46:n:26:GLY:HA2	2.33	0.54
31:y:1396:A:H4'	31:y:1398:A:O4'	2.07	0.54
31:y:1473:A:C2'	31:y:1474:G:H5'	2.37	0.54
36:d:11:ARG:NH1	36:d:177:THR:C	2.66	0.54
36:d:61:ALA:O	36:d:62:ASP:CB	2.51	0.54
36:d:203:PHE:C	36:d:204:LEU:HD12	2.32	0.54
37:e:36:ARG:H	37:e:37:PRO:HD3	1.72	0.54
37:e:48:ALA:C	37:e:49:ARG:CG	2.81	0.54
37:e:58:LEU:HA	37:e:206:PHE:CE1	2.41	0.54
40:h:51:GLN:CG	40:h:58:PRO:HD3	2.37	0.54
40:h:107:ALA:HB2	40:h:134:ALA:H	1.72	0.54
42:j:4:TYR:CD1	42:j:4:TYR:N	2.74	0.54
44:l:108:ILE:CG2	51:s:88:LYS:HB3	2.38	0.54
45:m:59:LEU:HB3	45:m:63:TYR:N	2.22	0.54
49:q:26:ARG:NH1	49:q:31:LYS:O	2.40	0.54
49:q:35:LYS:H	49:q:35:LYS:CD	2.20	0.54
50:r:9:VAL:HG12	50:r:85:VAL:HG13	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:s:74:ARG:HE	51:s:79:LEU:HD22	1.70	0.54
51:s:86:VAL:O	51:s:87:ARG:HB2	2.07	0.54
52:t:43:GLU:C	52:t:44:MET:HG2	2.32	0.54
1:w:47:C:C5	1:w:179:G:C2	2.95	0.54
1:w:80:G:C8	1:w:80:G:O5'	2.60	0.54
1:w:114:U:H3'	1:w:115:C:C6	2.43	0.54
1:w:161:U:O2	1:w:161:U:H2'	2.08	0.54
1:w:212:G:P	1:w:212:G:H8	2.29	0.54
1:w:586:A:H8	1:w:586:A:P	2.30	0.54
1:w:600:G:N2	1:w:657:U:O2	2.35	0.54
1:w:661:C:O2'	1:w:662:G:H5'	2.07	0.54
1:w:674:G:O2'	1:w:675:A:H5'	2.07	0.54
1:w:748:G:OP2	19:Q:88:ARG:HB2	2.08	0.54
1:w:768:G:C2	1:w:769:G:C5	2.96	0.54
1:w:918:A:H4'	2:x:97:G:C2	2.42	0.54
1:w:934:G:C6	1:w:935:C:C4	2.96	0.54
1:w:982:C:O2	1:w:2029:G:H5'	2.08	0.54
1:w:983:A:H2'	1:w:984:A:O4'	2.08	0.54
1:w:1189:A:O3'	12:J:32:THR:HB	2.07	0.54
1:w:1202:C:C2'	1:w:1203:G:C5'	2.85	0.54
1:w:1213:A:H2'	1:w:1214:A:C5'	2.38	0.54
1:w:1216:G:N2	1:w:1234:U:C2	2.75	0.54
1:w:1224:C:O2	1:w:1224:C:H2'	2.07	0.54
1:w:1234:U:H2'	1:w:1235:G:H5'	1.90	0.54
1:w:1393:A:O5'	1:w:1393:A:H8	1.89	0.54
1:w:1532:C:C4	1:w:1533:C:N3	2.75	0.54
1:w:1604:C:H3'	1:w:1604:C:C6	2.43	0.54
1:w:1791:A:OP2	1:w:1791:A:H3'	2.08	0.54
1:w:2057:A:C3'	27:Y:8:LYS:HZ1	2.21	0.54
1:w:2061:G:OP1	1:w:2061:G:H4'	2.07	0.54
1:w:2067:G:N1	1:w:2444:G:C6	2.76	0.54
1:w:2306:C:P	1:w:2307:G:H5''	2.48	0.54
1:w:2344:U:O5'	1:w:2344:U:H6	1.90	0.54
1:w:2356:C:H4'	23:U:17:GLN:OE1	2.08	0.54
1:w:2456:C:O5'	1:w:2456:C:H6	1.91	0.54
1:w:2521:C:O5'	1:w:2521:C:C6	2.59	0.54
1:w:2570:G:H2'	1:w:2571:C:H6	1.72	0.54
1:w:2623:G:C5'	1:w:2825:G:H21	2.20	0.54
1:w:2678:C:C2	1:w:2679:A:C8	2.96	0.54
1:w:2753:A:O2'	1:w:2754:U:C5'	2.51	0.54
1:w:2785:C:H2'	1:w:2786:U:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2818:G:C2'	1:w:2819:G:C5'	2.66	0.54
2:x:8:U:H1'	15:M:40:ILE:CD1	2.37	0.54
2:x:12:C:H5	23:U:74:ARG:HB3	1.71	0.54
2:x:21:G:C2'	2:x:22:U:C6	2.67	0.54
4:B:82:ILE:O	4:B:82:ILE:HG22	2.06	0.54
4:B:131:LEU:HD23	4:B:132:PRO:CD	2.38	0.54
4:B:158:ALA:O	4:B:159:ALA:CB	2.54	0.54
4:B:211:ARG:HD3	4:B:214:TRP:HE3	1.71	0.54
5:C:92:THR:H	5:C:95:ILE:CD1	2.20	0.54
6:D:19:LEU:N	6:D:20:PRO:CD	2.68	0.54
6:D:73:ILE:O	6:D:73:ILE:CG1	2.54	0.54
6:D:121:VAL:O	6:D:121:VAL:HG12	2.08	0.54
6:D:150:LEU:C	6:D:187:LEU:HG	2.31	0.54
8:F:89:ILE:CG2	8:F:129:THR:HG21	2.23	0.54
8:F:171:LEU:HD12	8:F:171:LEU:H	1.73	0.54
9:G:87:LYS:O	9:G:88:ILE:HB	2.08	0.54
10:H:120:ARG:HG3	10:H:124:HIS:HE1	1.68	0.54
12:J:61:ARG:HD2	12:J:62:LEU:N	2.23	0.54
12:J:84:ASN:OD1	12:J:85:LEU:HD22	2.08	0.54
12:J:97:PRO:HD2	12:J:126:VAL:CB	2.37	0.54
13:K:35:VAL:N	13:K:129:THR:OG1	2.40	0.54
14:L:104:ARG:CB	14:L:109:ALA:CB	2.79	0.54
15:M:78:LEU:CD1	15:M:109:GLY:HA2	2.23	0.54
19:Q:57:ASN:HA	19:Q:60:ASN:CB	2.19	0.54
19:Q:75:TYR:H	19:Q:103:ILE:HG13	1.71	0.54
19:Q:85:VAL:CG1	19:Q:95:ILE:HG12	2.34	0.54
21:S:97:ARG:CZ	21:S:99:CYS:HA	2.37	0.54
22:T:76:LEU:HG	22:T:77:ASP:N	2.22	0.54
22:T:98:MET:O	22:T:124:ILE:O	2.26	0.54
22:T:146:ILE:HG21	22:T:176:PRO:HD3	1.89	0.54
24:V:84:GLY:O	24:V:85:LEU:C	2.48	0.54
24:V:87:PRO:O	24:V:91:LYS:HD2	2.07	0.54
28:Z:2:LYS:N	28:Z:2:LYS:CD	2.63	0.54
31:y:51:A:C2	31:y:353:A:N6	2.62	0.54
31:y:321:A:C2	31:y:322:C:C5	2.95	0.54
31:y:343:U:C1'	31:y:347:G:N2	2.55	0.54
31:y:419:C:C4	31:y:420:U:C5	2.95	0.54
31:y:509:A:C8	31:y:509:A:C3'	2.90	0.54
31:y:557:G:O6	31:y:558:G:C2	2.61	0.54
31:y:628:G:C2'	31:y:629:G:O4'	2.55	0.54
31:y:672:U:H2'	31:y:673:G:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:673:G:C4	31:y:674:G:C8	2.96	0.54
31:y:834:C:C4	31:y:853:G:N1	2.75	0.54
31:y:1037:C:N3	31:y:1038:C:C4	2.75	0.54
31:y:1126:U:H2'	31:y:1127:G:OP1	2.07	0.54
31:y:1267:C:O5'	31:y:1267:C:C6	2.60	0.54
31:y:1345:U:H4'	42:j:120:ARG:HG2	1.89	0.54
31:y:1506:U:H2'	31:y:1507:A:H5'	1.87	0.54
32:z:46:7MG:C5'	32:z:46:7MG:H82	2.37	0.54
35:c:129:GLU:O	35:c:130:ARG:CB	2.56	0.54
35:c:146:GLN:HA	35:c:150:SER:HB3	1.89	0.54
35:c:152:PHE:O	35:c:153:ARG:C	2.50	0.54
35:c:169:LYS:HD2	35:c:170:GLU:HG3	1.90	0.54
36:d:33:LEU:CD2	36:d:33:LEU:H	2.21	0.54
36:d:125:GLU:HG3	36:d:126:ARG:CD	2.33	0.54
36:d:172:ARG:HB3	36:d:172:ARG:HH11	1.72	0.54
36:d:175:LEU:HD22	36:d:176:HIS:N	2.22	0.54
37:e:145:GLU:HB2	37:e:184:LYS:HD3	1.89	0.54
37:e:178:VAL:C	37:e:180:GLY:N	2.59	0.54
41:i:59:LEU:O	41:i:60:ARG:C	2.50	0.54
42:j:45:ALA:O	42:j:47:LEU:N	2.40	0.54
43:k:93:GLY:C	43:k:94:VAL:HG23	2.31	0.54
46:n:122:LYS:HG3	46:n:122:LYS:O	2.08	0.54
47:o:41:ARG:HA	47:o:44:LEU:CG	2.37	0.54
47:o:58:LYS:C	47:o:60:SER:N	2.64	0.54
52:t:33:THR:N	52:t:50:ALA:HB3	2.21	0.54
53:u:14:LYS:HA	53:u:17:ARG:HB2	1.89	0.54
1:w:17:G:N3	1:w:17:G:C2'	2.70	0.54
1:w:141(B):C:N4	1:w:142:G:O6	2.41	0.54
1:w:154:G:C6	1:w:173:G:C6	2.96	0.54
1:w:278:A:N6	1:w:279:C:N4	2.56	0.54
1:w:349:G:H3'	1:w:350:U:H6	1.70	0.54
1:w:363(G):A:N3	1:w:364:C:H5	2.06	0.54
1:w:418:G:C2	1:w:419:C:C4	2.95	0.54
1:w:447:A:C6	1:w:454:A:H2'	2.42	0.54
1:w:589:C:HO2'	1:w:590:A:H8	1.50	0.54
1:w:713:G:H2'	1:w:714:U:O4'	2.07	0.54
1:w:887:A:H1'	1:w:889:C:O2	2.07	0.54
1:w:888:C:O2'	1:w:889:C:OP1	2.21	0.54
1:w:965:C:C2	1:w:966:G:C8	2.95	0.54
1:w:1145:C:C4	1:w:1146:C:C4	2.96	0.54
1:w:1154:G:O5'	1:w:1154:G:H8	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1162:G:C2	1:w:1163:G:C8	2.95	0.54
1:w:1224:C:O2	1:w:1224:C:H3'	2.08	0.54
1:w:1275:A:H61	1:w:1296:G:H1'	1.72	0.54
1:w:1294:U:O5'	1:w:1294:U:H6	1.90	0.54
1:w:1365:A:C5'	24:V:8:SER:N	2.67	0.54
1:w:1411:C:N4	1:w:1412:A:H62	2.05	0.54
1:w:1479:G:C4	1:w:1558:A:OP1	2.60	0.54
1:w:1527:G:H2'	1:w:1528:A:OP2	2.08	0.54
1:w:1741:C:H3'	1:w:1742:C:C5'	2.29	0.54
1:w:1929:G:N3	1:w:1929:G:H5''	2.22	0.54
1:w:1974:C:H2'	1:w:1975:G:C5'	2.36	0.54
1:w:2084:C:N3	1:w:2085:C:C6	2.76	0.54
1:w:2135:A:N6	1:w:2156:G:HO2'	2.03	0.54
1:w:2146:C:O5'	1:w:2146:C:H6	1.91	0.54
1:w:2397:G:H5'	24:V:31:GLY:HA3	1.90	0.54
1:w:2567:G:C5	1:w:2568:C:C6	2.95	0.54
1:w:2628:C:H1'	1:w:2781:A:C2	2.41	0.54
1:w:2668:G:C6	1:w:2669:G:C6	2.96	0.54
1:w:2693:A:C4	1:w:2717:G:C2	2.96	0.54
1:w:2717:G:H3'	1:w:2718:G:O4'	2.07	0.54
1:w:2722:G:H4'	14:L:4:LEU:CB	2.36	0.54
1:w:2745:C:C4'	8:F:142:GLY:O	2.45	0.54
1:w:2773:C:O5'	5:C:164:ARG:HD3	2.08	0.54
1:w:2820:A:H4'	14:L:4:LEU:H	1.72	0.54
1:w:2832:U:H2'	1:w:2833:G:OP2	2.07	0.54
2:x:15:A:OP1	2:x:69:G:N2	2.39	0.54
2:x:22:U:C2'	2:x:23:G:C8	2.78	0.54
2:x:113:C:H2'	15:M:47:THR:CB	2.37	0.54
3:A:22:THR:N	3:A:25:GLU:CG	2.70	0.54
3:A:217:THR:C	3:A:219:MET:N	2.60	0.54
4:B:3:VAL:O	4:B:4:LYS:C	2.50	0.54
4:B:48:ARG:CD	4:B:49:ILE:N	2.69	0.54
4:B:95:LEU:HD23	4:B:95:LEU:N	2.18	0.54
4:B:105:ILE:HG12	4:B:106:ILE:H	1.69	0.54
4:B:112:GLN:O	4:B:113:VAL:C	2.51	0.54
4:B:121:PRO:HA	4:B:131:LEU:CG	2.28	0.54
5:C:33:VAL:N	5:C:49:LEU:HD13	2.22	0.54
9:G:81:VAL:HG11	9:G:144:VAL:CG1	2.31	0.54
9:G:124:GLY:O	9:G:143:SER:CA	2.54	0.54
11:I:65:THR:CA	11:I:82:ASN:ND2	2.71	0.54
12:J:139:LYS:HD2	12:J:140:ALA:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:54:MET:HB3	13:K:58:PHE:CZ	2.42	0.54
13:K:104:PHE:O	13:K:105:GLU:HG3	2.07	0.54
17:O:5:LYS:NZ	17:O:7:GLY:CA	2.66	0.54
18:P:40:LEU:HD23	18:P:50:PRO:CB	2.35	0.54
22:T:85:HIS:CD2	22:T:85:HIS:C	2.85	0.54
22:T:98:MET:O	22:T:125:LEU:HD12	2.06	0.54
26:X:45:GLY:HA2	26:X:48:GLU:CG	2.37	0.54
27:Y:33:CYS:SG	27:Y:34:PRO:CD	2.78	0.54
29:a:16:ILE:CG1	29:a:20:GLY:HA2	2.38	0.54
31:y:226:G:C4	31:y:227:G:N7	2.75	0.54
31:y:356:A:N3	31:y:368:U:H1'	2.21	0.54
31:y:406:G:C8	31:y:495:A:O2'	2.60	0.54
31:y:476:G:H2'	31:y:477:G:N7	2.20	0.54
31:y:495:A:C5	31:y:496:A:N6	2.75	0.54
31:y:507:C:OP2	31:y:508:C:C3'	2.55	0.54
31:y:712:A:C6	31:y:713:G:O6	2.61	0.54
31:y:715:A:H4'	31:y:777:A:C6	2.43	0.54
31:y:792:A:C2	31:y:794:A:C2	2.95	0.54
31:y:966:M2G:O2'	31:y:967:5MC:P	2.65	0.54
31:y:1084:G:C4'	31:y:1102:A:H5''	2.34	0.54
31:y:1124:G:H8	31:y:1124:G:P	2.30	0.54
31:y:1135:U:H3	31:y:1138:G:H22	1.55	0.54
31:y:1516:G:C4	31:y:1518:MA6:OP1	2.60	0.54
32:z:43:C:H2'	32:z:44:G:C8	2.42	0.54
35:c:102:LEU:CD1	35:c:176:GLU:HB3	2.38	0.54
35:c:117:GLU:HG3	35:c:121:LEU:CD1	2.37	0.54
36:d:109:PRO:HG2	36:d:110:ASN:H	1.72	0.54
37:e:58:LEU:CA	37:e:206:PHE:CZ	2.85	0.54
37:e:76:ARG:HD2	37:e:79:PHE:CB	2.38	0.54
41:i:86:ILE:HG21	41:i:133:LEU:HD22	1.90	0.54
43:k:40:LEU:CD1	43:k:69:ASN:HB3	2.37	0.54
44:l:58:PRO:HA	44:l:90:GLY:CA	2.38	0.54
45:m:77:GLN:O	45:m:78:GLU:C	2.51	0.54
47:o:59:ALA:O	47:o:61:TRP:N	2.41	0.54
48:p:48:LYS:O	48:p:49:ASP:HB2	2.08	0.54
49:q:5:ARG:NE	49:q:22:THR:CB	2.70	0.54
49:q:74:LEU:O	49:q:79:VAL:HG23	2.07	0.54
1:w:7:G:C3'	1:w:8:A:C8	2.84	0.54
1:w:14:A:N3	1:w:15:G:C1'	2.65	0.54
1:w:56:A:H1'	1:w:127:A:C4	2.42	0.54
1:w:116:C:C1'	1:w:127:A:H1'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:126:A:H5''	28:Z:18:PHE:CG	2.42	0.54
1:w:162:U:H3'	1:w:162:U:C6	2.43	0.54
1:w:270(K):G:C2	1:w:270(L):C:N1	2.74	0.54
1:w:396:G:C4'	24:V:46:LEU:HB3	2.38	0.54
1:w:397:G:H8	1:w:397:G:P	2.30	0.54
1:w:432:A:C2'	1:w:433:C:C6	2.72	0.54
1:w:465:G:N2	1:w:684:G:HO2'	2.06	0.54
1:w:529:A:N6	1:w:2041:U:C2	2.76	0.54
1:w:658:C:O2'	1:w:659:C:O5'	2.19	0.54
1:w:718:A:C2'	1:w:719:C:O4'	2.46	0.54
1:w:775:G:C6	1:w:787:U:N3	2.76	0.54
1:w:779:U:C2	1:w:780:G:C8	2.96	0.54
1:w:841:A:N1	1:w:842:G:C6	2.76	0.54
1:w:952:G:C6	1:w:953:A:C6	2.96	0.54
1:w:960:A:H8	1:w:960:A:H3'	1.73	0.54
1:w:1210:A:H5''	1:w:1211:U:H3'	1.90	0.54
1:w:1264:G:C2	1:w:2014:A:C8	2.96	0.54
1:w:1270:C:C4'	1:w:1271:G:H5'	2.37	0.54
1:w:1305:C:C2'	1:w:1306:C:H5'	2.37	0.54
1:w:1309:G:O5'	1:w:1309:G:C8	2.50	0.54
1:w:1358:G:O6	1:w:1371:G:H3'	2.08	0.54
1:w:1429:G:N3	1:w:1568:G:N2	2.55	0.54
1:w:1459:G:N2	1:w:1461:G:N7	2.55	0.54
1:w:1530:G:C6	1:w:1540:G:C2	2.96	0.54
1:w:1565:C:OP2	1:w:1565:C:C5	2.61	0.54
1:w:1668:A:C6	1:w:1993:U:C4	2.95	0.54
1:w:1689:A:C2'	1:w:1690:A:H5'	2.37	0.54
1:w:1742:C:N4	1:w:1743:G:O6	2.40	0.54
1:w:1796:U:O3'	4:B:256:GLY:HA2	2.07	0.54
1:w:1813:G:H5''	4:B:40:THR:HG21	1.88	0.54
1:w:1830:C:C4	1:w:1831:G:N7	2.76	0.54
1:w:1857:G:C6	1:w:1858:G:C5	2.96	0.54
1:w:2111:C:H41	1:w:2144:U:C5'	2.20	0.54
1:w:2186:G:C3'	1:w:2187:G:H8	2.21	0.54
1:w:2234:G:O2'	1:w:2235:G:H5'	2.07	0.54
1:w:2497:A:O2'	1:w:2498:C:OP2	2.22	0.54
1:w:2576:G:C5'	1:w:2578:G:N7	2.71	0.54
1:w:2621:A:O3'	5:C:159:HIS:HB2	2.08	0.54
1:w:2697:G:C2'	1:w:2698:U:H5'	2.36	0.54
1:w:712(B):A:H5''	1:w:712(B):A:C2	2.40	0.54
1:w:2721:A:C8	1:w:2722:G:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2783:G:C3'	1:w:2784:C:C6	2.90	0.54
2:x:23:G:C5	2:x:61:G:C2	2.96	0.54
3:A:163:GLU:CD	3:A:164:PHE:N	2.66	0.54
4:B:30:GLU:HG3	4:B:63:ARG:NH1	2.21	0.54
4:B:53:PHE:O	4:B:54:ARG:HB2	2.08	0.54
4:B:268:ARG:HH21	4:B:269:PHE:HE2	1.55	0.54
5:C:31:CYS:H	5:C:91:VAL:HB	1.73	0.54
5:C:33:VAL:HG22	5:C:35:GLN:H	1.73	0.54
5:C:52:LEU:HD12	5:C:52:LEU:H	1.72	0.54
6:D:27:LEU:CD1	6:D:27:LEU:H	2.15	0.54
6:D:153:THR:O	6:D:155:ASN:N	2.40	0.54
8:F:20:ALA:HB3	8:F:23:ARG:O	2.07	0.54
9:G:1:MET:O	9:G:21:VAL:O	2.25	0.54
9:G:52:ARG:C	9:G:54:GLN:N	2.64	0.54
9:G:117:GLU:HG3	9:G:118:LYS:CD	2.37	0.54
10:H:26:THR:O	10:H:27:TYR:CB	2.44	0.54
10:H:45:THR:HG22	10:H:48:ARG:HG3	1.90	0.54
10:H:112:LYS:HZ3	10:H:116:THR:H	1.54	0.54
12:J:27:HIS:ND1	12:J:28:GLY:N	2.55	0.54
12:J:40:SER:OG	12:J:46:LYS:HE2	2.08	0.54
12:J:79:ARG:HB3	12:J:110:TYR:H	1.73	0.54
12:J:80:TYR:O	12:J:81:GLN:NE2	2.41	0.54
13:K:98:LYS:O	13:K:101:ARG:HB2	2.08	0.54
19:Q:34:ASN:ND2	19:Q:35:ILE:HG12	2.23	0.54
19:Q:48:ALA:HA	19:Q:51:LEU:CD1	2.37	0.54
20:R:8:ILE:HD12	20:R:8:ILE:N	2.23	0.54
20:R:26:TYR:OH	20:R:88:LYS:O	2.25	0.54
22:T:8:TYR:HB2	22:T:38:TYR:CE2	2.42	0.54
22:T:18:LEU:HD13	22:T:38:TYR:CD1	2.42	0.54
23:U:32:ARG:H	23:U:61:ALA:HB1	1.72	0.54
25:W:55:ARG:NH1	25:W:55:ARG:HA	2.23	0.54
28:Z:10:ARG:HD3	28:Z:14:LYS:HE2	1.90	0.54
31:y:14:U:H6	31:y:14:U:H3'	1.71	0.54
31:y:36:C:H1'	31:y:501:C:C5'	2.37	0.54
31:y:282:A:C6	31:y:283:C:N3	2.76	0.54
31:y:321:A:H4'	31:y:1436:U:C5'	2.31	0.54
31:y:363:A:O2'	31:y:364:A:H5'	2.07	0.54
31:y:448:A:N3	31:y:449:C:C5	2.76	0.54
31:y:518:C:C5'	31:y:530:G:C4'	2.48	0.54
31:y:552:U:H4'	45:m:85:ARG:NH1	2.22	0.54
31:y:667:G:C4'	48:p:51:HIS:CG	2.77	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:695:A:N6	31:y:797:C:H4'	2.23	0.54
31:y:752:G:O2'	31:y:753:A:H8	1.90	0.54
31:y:811:C:C2'	31:y:812:C:C5'	2.72	0.54
31:y:937:A:N7	31:y:938:A:C8	2.76	0.54
31:y:957:U:H5'	31:y:960:U:O4	2.08	0.54
31:y:964:A:H2'	31:y:965:A:C5'	2.38	0.54
31:y:103(C):G:H2'	31:y:1033:G:O4'	2.07	0.54
31:y:1093:A:C2	31:y:1109:C:O2'	2.57	0.54
31:y:1306:A:N6	31:y:1331:G:H21	2.06	0.54
31:y:1345:U:C1'	31:y:1375:A:H61	2.21	0.54
31:y:1447:G:P	31:y:1447:G:C8	2.99	0.54
31:y:1500:A:OP1	31:y:1505:G:P	2.66	0.54
33:0:34:G:C2'	33:0:35:A:C5'	2.77	0.54
33:0:40:C:O2	40:h:144:MET:HE1	2.07	0.54
33:0:41:U:H6	33:0:41:U:C5'	2.20	0.54
37:e:4:TYR:C	37:e:5:ILE:HD12	2.32	0.54
37:e:15:GLU:OE1	37:e:15:GLU:N	2.41	0.54
37:e:117:ALA:HA	37:e:120:LEU:HD11	1.90	0.54
38:f:70:PRO:O	38:f:71:LEU:HB2	2.08	0.54
38:f:76:ILE:CD1	38:f:91:LEU:HD12	2.38	0.54
41:i:20:TYR:CD1	41:i:65:TYR:CG	2.96	0.54
41:i:50:ARG:HA	41:i:59:LEU:CA	2.38	0.54
41:i:95:VAL:HG23	41:i:99:GLU:HB2	1.89	0.54
42:j:119:ALA:C	42:j:121:ARG:H	2.15	0.54
45:m:42:VAL:HG13	45:m:43:THR:N	2.21	0.54
45:m:42:VAL:CG2	45:m:43:THR:N	2.57	0.54
46:n:22:ILE:HD12	46:n:25:ILE:HD12	1.89	0.54
48:p:2:PRO:O	48:p:3:ILE:CB	2.56	0.54
50:r:29:HIS:CD2	50:r:30:PRO:CD	2.90	0.54
50:r:88:TYR:CD1	50:r:88:TYR:C	2.82	0.54
53:u:43:LEU:HD13	53:u:51:GLU:CB	2.30	0.54
53:u:101:GLY:HA3	53:u:104:LEU:HD23	1.89	0.54
1:w:65:C:H5''	20:R:67:GLY:C	2.32	0.54
1:w:270(Y):G:C3'	1:w:270(Z):G:C8	2.91	0.54
1:w:439:G:C6	1:w:440:G:C6	2.96	0.54
1:w:457:A:HO2'	1:w:458:G:H1'	1.71	0.54
1:w:458:G:C2'	1:w:459:U:OP2	2.56	0.54
1:w:533:G:C6	1:w:561:G:C2	2.96	0.54
1:w:553:U:H2'	1:w:554:U:O4'	2.07	0.54
1:w:623:G:H2'	1:w:624:C:C5	2.42	0.54
1:w:663:G:C8	1:w:664:C:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:686:G:H5'	1:w:687:C:OP2	2.08	0.54
1:w:724:U:C3'	1:w:725:G:H8	2.17	0.54
1:w:749:C:H4'	1:w:1271:G:N3	2.22	0.54
1:w:918:A:C8	1:w:2268:A:N6	2.75	0.54
1:w:945:A:P	1:w:946:G:OP2	2.66	0.54
1:w:1009:A:C5	1:w:1010:A:N6	2.76	0.54
1:w:1013:C:O2'	1:w:1014:U:H5'	2.07	0.54
1:w:1148:A:C3'	1:w:1149:G:C8	2.87	0.54
1:w:1258:C:C2	1:w:1259:G:C8	2.95	0.54
1:w:1279:G:C5'	14:L:34:ILE:HG23	2.31	0.54
1:w:1391:U:C5	1:w:1393:A:OP1	2.61	0.54
1:w:1442:G:H2'	1:w:1443:G:C8	2.42	0.54
1:w:1444:G:C2	1:w:1445:C:C2	2.96	0.54
1:w:1497:U:C6	1:w:1497:U:C3'	2.90	0.54
1:w:1535:U:C6	1:w:1535:U:OP1	2.61	0.54
1:w:1559:G:H5''	1:w:1560:G:C5'	2.37	0.54
1:w:1650:G:H2'	1:w:1651:G:O4'	2.07	0.54
1:w:1707:G:H2'	1:w:1708:C:C1'	2.38	0.54
1:w:1710:C:H4'	1:w:2858:C:N3	2.22	0.54
1:w:1751:C:C6	1:w:1751:C:H3'	2.42	0.54
1:w:2041:U:C2	1:w:2042:A:C8	2.96	0.54
1:w:2102:U:C2'	1:w:2103:C:C6	2.90	0.54
1:w:2105:C:N4	1:w:2106:G:O6	2.40	0.54
1:w:2186:G:C2'	1:w:2187:G:H8	2.18	0.54
1:w:2331:G:H2'	1:w:2332:U:H6	1.67	0.54
1:w:2439:A:O4'	1:w:2587:A:C5'	2.55	0.54
1:w:2460:U:C2	1:w:2492:U:O4	2.61	0.54
1:w:2688:U:C6	1:w:2719:G:N1	2.76	0.54
1:w:2793:G:N3	1:w:2794:C:C5	2.76	0.54
1:w:2825:G:H2'	1:w:2826:A:O4'	2.06	0.54
1:w:2837:G:C2'	1:w:2838:G:C5'	2.67	0.54
2:x:30:C:O2'	2:x:31:C:H5'	2.06	0.54
4:B:103:ARG:NE	4:B:103:ARG:HA	2.23	0.54
5:C:103:ASP:C	5:C:104:VAL:CG2	2.80	0.54
6:D:150:LEU:HB2	6:D:187:LEU:CD1	2.38	0.54
12:J:139:LYS:HD2	12:J:140:ALA:N	2.23	0.54
16:N:19:LEU:HD11	16:N:79:HIS:HA	1.90	0.54
16:N:56:GLY:H	16:N:59:THR:CG2	2.19	0.54
16:N:78:LEU:N	16:N:78:LEU:HD23	2.22	0.54
19:Q:19:LEU:O	19:Q:23:LEU:HB2	2.08	0.54
19:Q:31:GLU:O	19:Q:35:ILE:HG12	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:83:VAL:O	20:R:84:ALA:HB2	2.08	0.54
22:T:9:TYR:HD2	22:T:9:TYR:N	2.05	0.54
26:X:4:LEU:HB2	26:X:58:VAL:HG22	1.89	0.54
30:b:13:LYS:C	30:b:27:CYS:CB	2.81	0.54
30:b:27:CYS:SG	30:b:29:ASN:CB	2.96	0.54
31:y:42:G:N3	31:y:622:A:H2	2.06	0.54
31:y:158:G:C2	31:y:164:U:H1'	2.43	0.54
31:y:181:G:O2'	31:y:182:U:OP2	2.24	0.54
31:y:273:A:C2'	31:y:274:A:C5'	2.77	0.54
31:y:479:C:H2'	31:y:480:U:C6	2.42	0.54
31:y:584:G:H1	31:y:757:U:H3	1.55	0.54
31:y:602:A:H2'	31:y:603:U:H5'	1.88	0.54
31:y:691:G:N1	44:l:52:GLY:HA2	2.23	0.54
31:y:733:A:O3'	31:y:735:C:OP2	2.25	0.54
31:y:896:C:H2'	31:y:897:C:H5'	1.90	0.54
31:y:934:C:HO2'	31:y:1344:C:H5	1.54	0.54
31:y:1061:G:C5	31:y:1197:G:N1	2.75	0.54
31:y:1344:C:C4'	42:j:120:ARG:HA	2.36	0.54
31:y:1350:A:P	42:j:121:ARG:HD2	2.48	0.54
31:y:1357:A:H2	31:y:1365:G:H1	1.55	0.54
31:y:1366:C:H2'	31:y:1367:C:H5'	1.90	0.54
31:y:1454:G:C2	31:y:1455:G:C8	2.96	0.54
31:y:1517:G:C8	31:y:1518:MA6:OP2	2.60	0.54
33:0:2:C:O5'	33:0:2:C:H6	1.91	0.54
33:0:37:A:H3'	33:0:38:A:C8	2.42	0.54
35:c:161:ALA:HA	35:c:183:PRO:HD2	1.90	0.54
36:d:120:VAL:HA	36:d:123:GLN:NE2	2.23	0.54
36:d:123:GLN:HG2	36:d:128:PHE:CG	2.42	0.54
37:e:15:GLU:CG	37:e:59:ARG:HH22	2.20	0.54
38:f:136:MET:HB3	38:f:140:ARG:NH1	2.20	0.54
38:f:148:VAL:HG12	38:f:152:ARG:HE	1.72	0.54
39:g:26:ILE:HG13	39:g:27:GLN:N	2.23	0.54
41:i:7:ALA:O	41:i:10:LEU:HB2	2.07	0.54
41:i:53:VAL:C	41:i:55:GLY:H	2.16	0.54
41:i:62:TYR:HD2	41:i:62:TYR:N	2.06	0.54
41:i:119:LEU:CD1	41:i:127:LEU:HG	2.38	0.54
42:j:20:ARG:HG3	42:j:21:PRO:HD2	1.89	0.54
42:j:37:PHE:CA	42:j:40:LEU:HD12	2.38	0.54
44:l:14:VAL:O	44:l:14:VAL:HG12	2.08	0.54
45:m:95:VAL:HG12	45:m:96:ARG:N	2.22	0.54
46:n:47:ASP:O	46:n:49:THR:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:q:54:GLU:C	49:q:56:ALA:H	2.14	0.54
1:w:37:C:H2'	1:w:37:C:O2	2.08	0.54
1:w:101:G:N3	1:w:101:G:H2'	2.23	0.54
1:w:116:C:H1'	1:w:127:A:H1'	1.89	0.54
1:w:153:C:H2'	1:w:154:G:H8	1.73	0.54
1:w:191:A:C2'	1:w:192:C:O4'	2.56	0.54
1:w:227:A:N7	1:w:2407:G:O4'	2.40	0.54
1:w:273(F):U:H2'	1:w:273(G):C:C6	2.43	0.54
1:w:463:G:C2	1:w:467:G:C5	2.96	0.54
1:w:576:U:C2'	1:w:577:G:H5'	2.34	0.54
1:w:582:G:C5	1:w:583:G:N7	2.75	0.54
1:w:668:G:C4	1:w:670:A:N7	2.75	0.54
1:w:752:A:C2	1:w:2609:U:N3	2.69	0.54
1:w:978:G:N7	1:w:979:G:C5	2.75	0.54
1:w:1055:G:C2'	1:w:1056:G:C8	2.79	0.54
1:w:1195:G:H2'	1:w:1195:G:N3	2.23	0.54
1:w:1197:G:C6	1:w:1198:U:C2	2.96	0.54
1:w:1203:G:OP1	1:w:1204:A:H3'	2.07	0.54
1:w:1249:U:H2'	1:w:1250:G:H4'	1.90	0.54
1:w:1274:A:O2'	1:w:1275:A:P	2.66	0.54
1:w:1296:G:C2'	1:w:1297:C:H5'	2.38	0.54
1:w:1326:U:C2'	1:w:1327:C:H5'	2.37	0.54
1:w:1361:G:H3'	1:w:1362:C:H5''	1.86	0.54
1:w:1405:U:N3	1:w:1406:U:C5	2.76	0.54
1:w:1438:U:H4'	1:w:1519:G:P	2.48	0.54
1:w:1562:A:C5	1:w:1563:G:N7	2.76	0.54
1:w:1655:A:H2'	1:w:1656:C:O4'	2.07	0.54
1:w:1810:A:C8	1:w:1810:A:H3'	2.43	0.54
1:w:1897:G:N7	1:w:1898:U:C5	2.75	0.54
1:w:1964:G:O2'	1:w:1967:C:OP1	2.25	0.54
1:w:1998:G:H5'	1:w:2725:A:H5'	1.90	0.54
1:w:2095:C:H2'	1:w:2096:U:O4'	2.07	0.54
1:w:2217:G:H2'	1:w:2217:G:N3	2.23	0.54
1:w:2306:C:N4	7:E:43:LEU:HA	2.22	0.54
1:w:2353:G:H2'	23:U:34:GLY:C	2.32	0.54
1:w:2354:G:N2	1:w:2355:C:C2	2.76	0.54
1:w:2444:G:C5'	6:D:69:ARG:NH1	2.70	0.54
1:w:2569:G:N1	1:w:2570:G:N7	2.56	0.54
1:w:2583:G:C5	1:w:2584:U:C4	2.95	0.54
1:w:2656:U:OP2	1:w:2664:G:C2	2.60	0.54
1:w:2785:C:C6	1:w:2785:C:C4'	2.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:105:ILE:C	4:B:106:ILE:HG23	2.33	0.54
4:B:106:ILE:HD12	4:B:196:VAL:HG13	1.89	0.54
4:B:126:GLN:O	4:B:128:GLY:N	2.41	0.54
4:B:157:ARG:O	4:B:161:THR:OG1	2.25	0.54
4:B:211:ARG:O	4:B:212:SER:C	2.50	0.54
5:C:93:VAL:HG12	5:C:182:LEU:HD22	1.90	0.54
5:C:103:ASP:O	5:C:104:VAL:CG2	2.56	0.54
6:D:105:LEU:HD23	6:D:178:VAL:HG12	1.88	0.54
6:D:118:LEU:O	6:D:119:LEU:CB	2.56	0.54
6:D:177:ASN:HA	6:D:179:TYR:CZ	2.43	0.54
6:D:183:ARG:NH1	12:J:7:ARG:HG2	2.22	0.54
8:F:88:LEU:HG	8:F:90:LYS:HZ3	1.71	0.54
8:F:103:LEU:HB2	8:F:123:PHE:CZ	2.42	0.54
8:F:124:GLU:HB2	8:F:132:ARG:CG	2.29	0.54
8:F:138:LYS:HA	8:F:141:VAL:CB	2.35	0.54
9:G:13:GLY:O	9:G:17:GLN:HG2	2.08	0.54
10:H:37:VAL:HG22	10:H:158:PRO:O	2.08	0.54
10:H:66:THR:O	10:H:68:ASN:N	2.40	0.54
12:J:147:LEU:C	12:J:147:LEU:HD12	2.33	0.54
13:K:131:ILE:HG13	13:K:132:VAL:O	2.08	0.54
13:K:132:VAL:CG2	13:K:133:ARG:CZ	2.85	0.54
14:L:20:LEU:HD23	14:L:20:LEU:C	2.32	0.54
15:M:25:ARG:HG2	15:M:42:ASP:CG	2.33	0.54
16:N:123:LYS:HB2	16:N:123:LYS:HZ3	1.70	0.54
20:R:57:LEU:HD22	20:R:76:ARG:NE	2.23	0.54
20:R:76:ARG:O	20:R:77:LYS:HG2	2.08	0.54
21:S:7:VAL:HG23	21:S:8:LYS:N	2.23	0.54
21:S:47:LYS:O	21:S:56:PRO:HB3	2.07	0.54
23:U:33:ALA:C	23:U:61:ALA:O	2.50	0.54
24:V:13:ILE:CG2	24:V:14:VAL:N	2.70	0.54
24:V:85:LEU:HD11	24:V:88:LYS:CG	2.38	0.54
30:b:19:ARG:O	30:b:21:GLY:N	2.41	0.54
31:y:26:A:N6	31:y:557:G:N2	2.56	0.54
31:y:135:C:C3'	31:y:136:C:C5'	2.86	0.54
31:y:187:C:H1'	31:y:191(A):G:N1	2.22	0.54
31:y:248:C:C5	31:y:249:U:C4	2.95	0.54
31:y:251:G:H4'	31:y:252:U:O5'	2.08	0.54
31:y:362:G:O2'	31:y:364:A:C5	2.45	0.54
31:y:477:G:C4	31:y:478:A:C8	2.96	0.54
31:y:507:C:N1	31:y:508:C:C5	2.76	0.54
31:y:565:U:C4	31:y:566:G:C4	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:579:G:H2'	31:y:580:U:C5	2.43	0.54
31:y:692:U:C4	44:l:53:SER:HA	2.42	0.54
31:y:778:G:C4	31:y:779:C:C5	2.96	0.54
31:y:831:U:C2'	31:y:832:C:H5'	2.38	0.54
31:y:833:U:H3'	31:y:834:C:H5	1.73	0.54
31:y:980:C:H5	31:y:981:U:O2	1.91	0.54
31:y:1014:A:H1'	52:t:34:TRP:CZ3	2.43	0.54
31:y:1106:G:C5'	36:d:172:ARG:HD3	2.37	0.54
31:y:1176:A:H8	31:y:1176:A:O5'	1.91	0.54
31:y:1261:A:H5''	31:y:1284:C:OP1	2.08	0.54
31:y:1316:G:H2'	31:y:1318:A:N7	2.22	0.54
31:y:1385:G:C6	31:y:1386:G:C5	2.95	0.54
31:y:1388:C:N3	31:y:1389:C:C5	2.76	0.54
31:y:1467:G:C8	31:y:1467:G:C3'	2.91	0.54
31:y:1522:U:H2'	31:y:1523:G:H8	1.72	0.54
32:z:31:A:H2	32:z:39:PSU:N3	2.00	0.54
33:0:41:U:C2'	33:0:42:G:O4'	2.50	0.54
33:0:75:C:H5'	33:0:76:A:P	2.48	0.54
35:c:180:LEU:C	35:c:182:ILE:N	2.65	0.54
36:d:35:GLU:O	36:d:37:GLN:N	2.41	0.54
36:d:137:ALA:HB2	36:d:140:ARG:NH2	2.22	0.54
37:e:150:GLU:O	37:e:152:SER:N	2.38	0.54
38:f:37:ARG:CG	38:f:112:LEU:HA	2.34	0.54
38:f:81:GLU:HA	38:f:89:ILE:O	2.08	0.54
40:h:31:MET:HE3	40:h:33:ASP:H	1.73	0.54
40:h:121:ALA:CA	40:h:124:LEU:HG	2.38	0.54
41:i:119:LEU:CB	41:i:124:ALA:N	2.68	0.54
43:k:62:HIS:C	43:k:63:PHE:CD1	2.86	0.54
44:l:73:MET:HE1	44:l:103:LEU:H	1.71	0.54
44:l:82:VAL:HG21	44:l:105:VAL:O	2.08	0.54
44:l:93:GLN:NE2	44:l:93:GLN:N	2.45	0.54
46:n:71:ARG:CA	46:n:74:VAL:CG2	2.82	0.54
47:o:26:ARG:CB	47:o:39:LEU:HD22	2.38	0.54
52:t:38:SER:O	52:t:70:LYS:HG2	2.07	0.54
1:w:7:G:C8	1:w:8:A:N7	2.76	0.54
1:w:14:A:H2	27:Y:21:SER:HB2	1.73	0.54
1:w:65:C:H4'	20:R:67:GLY:CA	2.38	0.54
1:w:216:A:N6	1:w:217:G:C2	2.76	0.54
1:w:226:G:O2'	1:w:227:A:H5'	2.08	0.54
1:w:298:G:N1	1:w:339:U:C4	2.76	0.54
1:w:465:G:N3	1:w:683:C:C2'	2.67	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:483:A:N6	1:w:497:A:C4	2.73	0.54
1:w:519:U:N3	1:w:520:G:C4	2.76	0.54
1:w:565:C:O2'	1:w:1253:A:C2	2.57	0.54
1:w:581:C:P	17:O:33:ARG:HH12	2.31	0.54
1:w:593:G:C3'	1:w:594:U:H6	2.16	0.54
1:w:630:G:H2'	1:w:632:A:OP2	2.07	0.54
1:w:819:A:H4'	1:w:837:C:O2'	2.08	0.54
1:w:921:G:H2'	1:w:922:U:C5	2.42	0.54
1:w:951:C:H2'	1:w:952:G:H8	1.73	0.54
1:w:978:G:N1	1:w:986:C:N4	2.56	0.54
1:w:1000:A:OP2	1:w:1154:G:C6	2.61	0.54
1:w:1028:A:O2'	1:w:1029:A:C5'	2.54	0.54
1:w:1138:G:C3'	1:w:1139:G:H5'	2.38	0.54
1:w:1196:C:C2	1:w:1197:G:C8	2.96	0.54
1:w:1338:G:C4	1:w:1339:G:C8	2.96	0.54
1:w:1411:C:N4	1:w:1412:A:N6	2.56	0.54
1:w:1540:G:H2'	1:w:1541:U:C6	2.43	0.54
1:w:1620:G:C5	1:w:1621:U:C4	2.95	0.54
1:w:1653:G:C4	14:L:9:LYS:CE	2.91	0.54
1:w:1699:G:H2'	1:w:1700:A:C3'	2.38	0.54
1:w:1747:G:C2	1:w:1748:G:C4	2.96	0.54
1:w:1904:G:H2'	1:w:1905:C:C5'	2.38	0.54
1:w:2166:G:H22	1:w:2172:U:H5	1.56	0.54
1:w:2245:U:O2	1:w:2245:U:H2'	2.07	0.54
1:w:2414:G:C6	1:w:2415:G:C5	2.95	0.54
1:w:2466:C:C5'	30:b:5:ALA:HB3	2.34	0.54
1:w:2513:G:C5	1:w:2574:G:O6	2.61	0.54
1:w:2536:G:C2'	1:w:2537:U:C6	2.91	0.54
1:w:2644:G:H2'	1:w:2645:G:N7	2.15	0.54
1:w:2714:G:C2	1:w:2715:C:C5	2.96	0.54
1:w:2785:C:C2	1:w:2786:U:C6	2.96	0.54
2:x:60:C:O2'	2:x:61:G:H5'	2.07	0.54
3:A:195:ARG:O	3:A:197:LEU:N	2.33	0.54
4:B:127:VAL:HA	4:B:193:VAL:HG13	1.90	0.54
4:B:165:ILE:CG1	4:B:174:ILE:O	2.56	0.54
5:C:48:GLN:C	5:C:49:LEU:HD22	2.33	0.54
6:D:148:SER:C	6:D:184:THR:HB	2.33	0.54
6:D:155:ASN:HB2	6:D:157:LEU:HG	1.88	0.54
7:E:19:LEU:O	7:E:20:ILE:C	2.50	0.54
7:E:46:ALA:O	7:E:53:LEU:CD2	2.55	0.54
7:E:125:PHE:HB2	7:E:166:ASP:OD1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:17:ARG:HH21	11:I:47:ILE:CG2	2.20	0.54
11:I:63:VAL:CG2	11:I:83:ALA:O	2.56	0.54
12:J:13:ASN:ND2	12:J:13:ASN:C	2.66	0.54
12:J:92:GLU:CG	12:J:123:LEU:HD13	2.38	0.54
12:J:101:VAL:HA	12:J:106:LEU:HB2	1.90	0.54
13:K:34:LEU:HD13	13:K:129:THR:CB	2.38	0.54
13:K:79:LEU:HG	13:K:80:GLU:HG3	1.90	0.54
13:K:118:LEU:HD12	13:K:118:LEU:N	2.23	0.54
16:N:64:ARG:H	16:N:99:LEU:HD12	1.72	0.54
17:O:17:ILE:O	17:O:18:LEU:C	2.51	0.54
17:O:40:PHE:C	18:P:78:LYS:HE3	2.33	0.54
18:P:30:GLY:CA	18:P:66:ARG:H	2.20	0.54
19:Q:10:VAL:HG12	19:Q:12:ILE:N	2.20	0.54
20:R:54:VAL:HG22	20:R:77:LYS:HE3	1.89	0.54
21:S:23:ARG:CZ	21:S:38:ILE:HG22	2.38	0.54
21:S:44:ILE:O	21:S:58:GLY:CA	2.54	0.54
23:U:51:VAL:CG2	23:U:81:VAL:HG23	2.37	0.54
24:V:10:LYS:O	24:V:12:PRO:HD3	2.08	0.54
24:V:88:LYS:HG2	24:V:89:GLU:CD	2.26	0.54
25:W:51:ARG:CD	25:W:52:ASP:OD2	2.42	0.54
31:y:140:A:H2	31:y:223:U:H3	1.54	0.54
31:y:223:U:C4	31:y:224:C:C4	2.96	0.54
31:y:275:G:N1	31:y:276:G:O6	2.41	0.54
31:y:298:A:N3	31:y:299:G:C5	2.75	0.54
31:y:500:G:N1	31:y:546:G:C2	2.76	0.54
31:y:593:G:C6	31:y:594:G:C5	2.96	0.54
31:y:761:G:H4'	50:r:104:LYS:O	2.07	0.54
31:y:943:U:C2'	31:y:944:G:C5'	2.83	0.54
31:y:959:A:OP2	31:y:960:U:C5'	2.56	0.54
31:y:963:G:O2'	31:y:964:A:H5'	2.07	0.54
31:y:980:C:H3'	31:y:981:U:C6	2.43	0.54
31:y:1047:G:C2'	31:y:1048:G:C5'	2.86	0.54
31:y:1080:A:H8	31:y:1080:A:O5'	1.90	0.54
31:y:1092:A:C1'	31:y:1183:A:H61	2.21	0.54
31:y:1102:A:C5	31:y:1103:C:C5	2.96	0.54
31:y:1176:A:C2'	31:y:1177:G:O4'	2.52	0.54
31:y:1233:G:N2	31:y:1364:U:H3	2.06	0.54
31:y:1281:U:H5''	31:y:1282:C:C4	2.30	0.54
31:y:1305:G:N1	31:y:1331:G:C4	2.75	0.54
31:y:1381:U:O2	31:y:1381:U:C2'	2.56	0.54
31:y:1431:C:N4	31:y:1432:G:C6	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1500:A:C3'	31:y:1501:C:H5'	2.36	0.54
33:0:14:A:C2'	33:0:15:G:H5'	2.38	0.54
35:c:106:LYS:C	35:c:108:ILE:N	2.65	0.54
35:c:110:GLN:NE2	35:c:110:GLN:H	2.06	0.54
35:c:168:THR:CG2	35:c:191:ASP:O	2.55	0.54
35:c:215:LEU:HD12	35:c:216:SER:N	2.23	0.54
35:c:219:VAL:O	35:c:222:ILE:HG23	2.08	0.54
37:e:15:GLU:HG3	37:e:59:ARG:HH12	1.73	0.54
37:e:93:PHE:CE1	37:e:97:LEU:HD11	2.43	0.54
37:e:127:THR:HG22	37:e:148:VAL:O	2.08	0.54
38:f:70:PRO:HG2	38:f:142:LEU:HD22	1.89	0.54
39:g:37:VAL:HG13	39:g:64:GLN:O	2.07	0.54
40:h:120:ILE:HD12	40:h:120:ILE:N	2.22	0.54
40:h:150:ALA:HB3	40:h:151:TYR:CE2	2.43	0.54
41:i:44:PHE:CD1	41:i:80:ILE:CD1	2.90	0.54
42:j:24:GLY:HA2	42:j:60:ASP:N	2.22	0.54
43:k:40:LEU:HD11	43:k:43:ARG:HG3	1.90	0.54
45:m:59:LEU:HB3	45:m:63:TYR:CA	2.38	0.54
45:m:116:ARG:NH1	45:m:122:LYS:HA	2.22	0.54
46:n:81:LEU:HA	46:n:84:ILE:CG1	2.38	0.54
47:o:15:LYS:HB3	47:o:19:ARG:HG2	1.89	0.54
47:o:34:TYR:CD2	47:o:37:PHE:HD1	2.26	0.54
48:p:74:ASP:OD1	48:p:76:GLU:N	2.41	0.54
49:q:27:LYS:HD2	49:q:30:GLY:CA	2.38	0.54
50:r:3:LYS:HE3	50:r:61:GLU:OE2	2.08	0.54
50:r:10:VAL:HG21	50:r:54:GLY:C	2.32	0.54
51:s:64:ARG:O	51:s:65:ILE:HD13	2.08	0.54
52:t:49:ILE:O	52:t:59:PRO:CB	2.56	0.54
1:w:84:A:H1'	1:w:103:A:N6	2.23	0.53
1:w:327:G:C2	1:w:336:C:N4	2.75	0.53
1:w:521:G:C2'	1:w:522:G:H8	2.21	0.53
1:w:563:G:C6	1:w:2018:G:C2	2.97	0.53
1:w:578:A:H2'	1:w:2018:G:H5'	1.90	0.53
1:w:593:G:C2	1:w:664:C:O2	2.60	0.53
1:w:604:G:C2	1:w:625:G:C2	2.96	0.53
1:w:611:C:H3'	1:w:612:G:H8	1.72	0.53
1:w:768:G:N1	1:w:769:G:C5	2.76	0.53
1:w:777:A:H2'	1:w:778:G:C5'	2.38	0.53
1:w:813:U:C5	12:J:27:HIS:HB2	2.42	0.53
1:w:818:G:C8	1:w:1187:G:C5	2.95	0.53
1:w:1128:A:O2'	1:w:1129:A:C8	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1138:G:H1'	10:H:129:MET:CB	2.38	0.53
1:w:1149:G:HO2'	1:w:1150:C:C5'	2.19	0.53
1:w:1275:A:N6	1:w:1296:G:H1'	2.23	0.53
1:w:1327:C:H3'	1:w:1328:G:C8	2.43	0.53
1:w:1464:C:O2'	1:w:1528:A:C1'	2.52	0.53
1:w:1800:C:O2	1:w:1800:C:C2'	2.55	0.53
1:w:1817:G:P	4:B:62:TYR:HH	2.30	0.53
1:w:1839:G:C6	1:w:1927:A:N3	2.76	0.53
1:w:2054:A:H8	1:w:2577:A:H61	1.50	0.53
1:w:2120:G:C2'	1:w:2121:G:H5'	2.39	0.53
1:w:2309:A:H8	1:w:2310:A:C4	2.25	0.53
1:w:2416:C:OP2	12:J:64:LYS:HD2	2.07	0.53
1:w:2558:C:C2	1:w:2559:C:C6	2.95	0.53
1:w:2574:G:C1'	5:C:143:ASN:HD22	2.03	0.53
1:w:2626:C:H2'	1:w:2627:G:C8	2.35	0.53
1:w:2772:C:H4'	5:C:166:THR:OG1	2.08	0.53
1:w:2795:G:H8	1:w:2795:G:P	2.31	0.53
1:w:2901:C:C2	1:w:2902:C:C5	2.95	0.53
2:x:43:C:C2'	2:x:44:G:C5'	2.75	0.53
3:A:48:LEU:HA	3:A:211:ARG:HH11	1.73	0.53
4:B:90:ALA:HB1	4:B:106:ILE:CB	2.38	0.53
4:B:94:LEU:HD23	4:B:94:LEU:C	2.34	0.53
5:C:32:PRO:CG	5:C:69:LYS:HD2	2.38	0.53
5:C:109:LYS:NZ	14:L:4:LEU:CD2	2.71	0.53
6:D:5:PRO:HG3	6:D:120:LEU:CD2	2.38	0.53
6:D:5:PRO:HG2	6:D:9:PRO:HG2	1.90	0.53
6:D:55:SER:O	6:D:57:ARG:N	2.41	0.53
6:D:112:ARG:HA	6:D:115:GLU:HG3	1.88	0.53
7:E:120:LEU:C	7:E:181:ARG:HD2	2.31	0.53
9:G:27:ARG:HH22	9:G:28:ASN:ND2	2.06	0.53
9:G:40:THR:OG1	9:G:43:ASN:CG	2.51	0.53
9:G:77:LEU:O	9:G:142:VAL:HG13	2.07	0.53
11:I:45:GLU:OE1	11:I:46:ALA:N	2.42	0.53
13:K:132:VAL:HG22	13:K:133:ARG:CZ	2.39	0.53
14:L:17:ARG:O	14:L:18:LEU:C	2.50	0.53
14:L:17:ARG:HB3	14:L:21:TYR:OH	2.08	0.53
14:L:90:ARG:NH1	14:L:117:VAL:HG11	2.21	0.53
15:M:31:SER:OG	15:M:32:LEU:N	2.38	0.53
16:N:45:PHE:CG	16:N:46:GLU:N	2.75	0.53
18:P:22:VAL:O	18:P:22:VAL:HG22	2.07	0.53
18:P:38:LEU:CD1	18:P:55:ALA:HA	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:47:VAL:HG13	18:P:48:GLY:H	1.73	0.53
19:Q:42:ARG:HG3	19:Q:43:GLY:N	2.22	0.53
20:R:27:THR:C	20:R:28:PHE:CD1	2.87	0.53
20:R:27:THR:C	20:R:28:PHE:CG	2.86	0.53
21:S:27:VAL:O	21:S:35:TYR:HB2	2.08	0.53
21:S:55:TYR:CD1	21:S:56:PRO:HD2	2.43	0.53
26:X:4:LEU:CB	26:X:58:VAL:HG22	2.38	0.53
28:Z:3:ARG:HG2	28:Z:3:ARG:HH11	1.72	0.53
31:y:129(B):G:HO2'	31:y:189:U:H2'	1.60	0.53
31:y:609:A:H3'	31:y:610:G:H8	1.72	0.53
31:y:768:A:H4'	31:y:1523:G:H21	1.73	0.53
31:y:963:G:H2'	31:y:964:A:H8	1.73	0.53
31:y:1136:U:OP2	31:y:1137:C:C5	2.57	0.53
31:y:1196:U:O5'	31:y:1197:G:H5'	2.07	0.53
32:z:1:G:N3	32:z:1:G:C3'	2.70	0.53
32:z:34:G:O2'	32:z:35:A:C5'	2.56	0.53
33:0:68:U:H2'	33:0:69:U:C6	2.42	0.53
35:c:28:PHE:CE1	35:c:31:TYR:CA	2.91	0.53
35:c:35:GLU:CA	35:c:41:ILE:HD13	2.35	0.53
35:c:106:LYS:O	35:c:107:THR:C	2.51	0.53
35:c:130:ARG:CB	35:c:131:PRO:HD3	2.35	0.53
37:e:26:CYS:CA	37:e:31:CYS:HA	2.36	0.53
37:e:131:ARG:HG3	37:e:131:ARG:HH11	1.72	0.53
38:f:13:ILE:HD11	38:f:28:PHE:HB3	1.91	0.53
38:f:76:ILE:CD1	38:f:118:ILE:HG23	2.37	0.53
40:h:99:LEU:O	40:h:101:LEU:N	2.41	0.53
41:i:35:ILE:O	41:i:38:ILE:HB	2.07	0.53
41:i:50:ARG:CA	41:i:59:LEU:HA	2.38	0.53
41:i:59:LEU:O	41:i:60:ARG:O	2.26	0.53
41:i:112:LEU:CD2	41:i:119:LEU:O	2.56	0.53
43:k:16:LEU:HD23	43:k:16:LEU:N	2.12	0.53
46:n:15:VAL:CG2	46:n:16:ASP:N	2.71	0.53
52:t:27:GLU:O	52:t:47:HIS:NE2	2.40	0.53
1:w:80:G:N2	1:w:81:G:H1'	2.23	0.53
1:w:319:C:C2'	1:w:320:A:H5'	2.38	0.53
1:w:321:G:C8	1:w:340:A:H2	2.26	0.53
1:w:331:A:OP1	1:w:331:A:H8	1.90	0.53
1:w:335:C:H2'	1:w:336:C:H5	1.73	0.53
1:w:415:A:O5'	1:w:415:A:H8	1.91	0.53
1:w:418:G:C4	1:w:419:C:H5	2.26	0.53
1:w:441:U:C2	1:w:442:G:N7	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:464:U:C2	1:w:788:A:C6	2.96	0.53
1:w:485:C:C2	1:w:486:C:C5	2.96	0.53
1:w:513:A:C8	1:w:513:A:O5'	2.61	0.53
1:w:558:G:OP1	10:H:134:PRO:CD	2.47	0.53
1:w:576:U:C2	1:w:577:G:C8	2.96	0.53
1:w:584:C:OP1	17:O:6:THR:CB	2.55	0.53
1:w:711:G:N3	1:w:712:G:C8	2.76	0.53
1:w:775:G:N1	1:w:787:U:C4	2.76	0.53
1:w:779:U:OP1	4:B:49:ILE:CD1	2.57	0.53
1:w:821:A:O3'	1:w:946:G:H5''	2.08	0.53
1:w:832:G:OP1	12:J:38:GLN:HB3	2.09	0.53
1:w:859:G:H2'	1:w:916:G:C6	2.43	0.53
1:w:888:C:H41	46:n:79:LYS:HE3	1.72	0.53
1:w:925:C:C2	1:w:926:A:H1'	2.44	0.53
1:w:935:C:H2'	1:w:936:C:C6	2.44	0.53
1:w:1062:G:H2'	1:w:1063:G:C8	2.44	0.53
1:w:1085:A:O2'	1:w:1086:A:H5'	2.08	0.53
1:w:1140:C:O5'	10:H:48:ARG:CD	2.56	0.53
1:w:1196:C:C1'	1:w:1226:A:N3	2.71	0.53
1:w:1255:U:O2	1:w:1255:U:C2'	2.56	0.53
1:w:1264:G:H21	1:w:2015:A:N6	2.06	0.53
1:w:1294:U:H5'	14:L:26:LYS:CE	2.39	0.53
1:w:1364:G:H3'	1:w:1365:A:H5'	1.89	0.53
1:w:1567:A:C2	4:B:84:TYR:CD2	2.96	0.53
1:w:1685:C:C2	1:w:1686:C:C6	2.96	0.53
1:w:1760:A:H2	1:w:1761:C:H1'	1.72	0.53
1:w:2052:G:OP2	5:C:140:SER:HB2	2.08	0.53
1:w:2088:G:N1	1:w:2232:U:N3	2.56	0.53
1:w:2134:A:C2	1:w:2135:A:C8	2.95	0.53
1:w:2234:G:H2'	1:w:2235:G:H8	1.72	0.53
1:w:2419:U:O2'	1:w:2420:C:H5'	2.08	0.53
1:w:2588:G:C6	1:w:2606:C:N3	2.77	0.53
1:w:2598:A:C5'	4:B:234:GLY:O	2.56	0.53
1:w:2793:G:H2'	1:w:2793:G:N3	2.24	0.53
2:x:42:C:C2'	2:x:42:C:O2	2.56	0.53
2:x:80:U:C2'	2:x:81:G:H8	2.01	0.53
4:B:169:GLU:HG2	4:B:174:ILE:CD1	2.30	0.53
4:B:206:LEU:H	4:B:206:LEU:CD2	2.21	0.53
5:C:11:MET:C	5:C:12:THR:HG23	2.32	0.53
5:C:25:VAL:O	5:C:26:ILE:CD1	2.55	0.53
5:C:26:ILE:CG2	5:C:27:LEU:N	2.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:110:GLY:CA	5:C:161:GLY:HA3	2.35	0.53
5:C:128:SER:O	5:C:129:HIS:HD2	1.90	0.53
5:C:133:LYS:C	5:C:134:ILE:CG1	2.81	0.53
5:C:178:GLU:HG3	5:C:179:GLU:OE1	2.07	0.53
6:D:28:LEU:O	6:D:32:VAL:HG23	2.08	0.53
6:D:62:GLN:OE1	6:D:69:ARG:CZ	2.55	0.53
6:D:148:SER:C	6:D:149:VAL:HG13	2.33	0.53
6:D:151:LEU:HD12	6:D:188:VAL:O	2.08	0.53
6:D:182:VAL:HB	12:J:6:LEU:C	2.33	0.53
7:E:82:LEU:HD13	7:E:83:ARG:N	2.24	0.53
9:G:147:GLN:CG	9:G:148:GLU:H	2.18	0.53
10:H:117:HIS:ND1	10:H:120:ARG:HD2	2.23	0.53
11:I:43:VAL:CB	11:I:54:GLU:HA	2.38	0.53
11:I:44:LYS:NZ	11:I:44:LYS:HA	2.23	0.53
12:J:85:LEU:HD21	12:J:118:GLY:CA	2.38	0.53
13:K:25:ASP:CG	13:K:102:VAL:HG23	2.33	0.53
13:K:82:ARG:N	13:K:82:ARG:CD	2.71	0.53
14:L:66:VAL:HG11	14:L:80:PHE:CE1	2.43	0.53
16:N:5:ALA:O	16:N:6:LEU:C	2.50	0.53
16:N:23:ARG:CB	16:N:24:PRO:HD2	2.37	0.53
18:P:80:GLN:C	18:P:82:ARG:H	2.16	0.53
18:P:100:ARG:CD	18:P:101:GLY:N	2.71	0.53
20:R:65:ARG:HB3	20:R:66:LEU:HD22	1.91	0.53
22:T:11:GLU:O	22:T:12:GLY:C	2.50	0.53
23:U:28:GLY:HA3	23:U:67:VAL:O	2.03	0.53
23:U:68:GLU:N	23:U:79:VAL:HB	2.23	0.53
25:W:43:GLN:O	25:W:45:SER:N	2.41	0.53
26:X:10:LYS:HG2	26:X:53:LEU:CA	2.28	0.53
26:X:20:LYS:HB3	26:X:23:LEU:HD11	1.90	0.53
31:y:37:U:H5'	45:m:116:ARG:NH2	2.24	0.53
31:y:41:G:N1	31:y:402:G:C5	2.76	0.53
31:y:60:A:H2	31:y:107:G:N3	2.06	0.53
31:y:190:G:OP2	31:y:190:G:C2'	2.45	0.53
31:y:250:A:HO2'	31:y:251:G:P	2.28	0.53
31:y:255:G:H2'	31:y:256:U:H6	1.69	0.53
31:y:383:A:H3'	31:y:384:G:C8	2.43	0.53
31:y:522:C:O5'	31:y:522:C:H6	1.90	0.53
31:y:564:C:O5'	50:r:32:TYR:CE1	2.62	0.53
31:y:597:G:N3	41:i:94:TYR:CE1	2.76	0.53
31:y:754:C:C1'	48:p:69:TYR:CD1	2.75	0.53
31:y:861:G:N7	31:y:862:C:C4	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:862:C:H4'	31:y:875:C:OP1	2.08	0.53
31:y:975:A:N3	31:y:1357:A:N3	2.57	0.53
31:y:102(C):C:C2'	31:y:1029:G:C8	2.86	0.53
31:y:1052:U:H2'	31:y:1055:A:OP2	2.09	0.53
31:y:1072:G:H2'	31:y:1073:U:C6	2.43	0.53
31:y:1125:U:OP2	31:y:1127:G:N1	2.42	0.53
31:y:1209:C:C2'	31:y:1210:C:C5'	2.85	0.53
31:y:1269:A:O4'	31:y:1326:C:C1'	2.56	0.53
31:y:1305:G:N2	31:y:1331:G:H1'	2.23	0.53
31:y:1406:U:C6	31:y:1407:5MC:HM53	2.42	0.53
32:z:9:A:C6	32:z:22:G:N7	2.76	0.53
33:0:62:A:H2'	33:0:63:C:H6	1.63	0.53
35:c:90:MET:N	35:c:90:MET:SD	2.81	0.53
35:c:97:TRP:CZ2	35:c:173:ALA:HA	2.43	0.53
37:e:35:ARG:HB3	37:e:36:ARG:HE	1.72	0.53
37:e:170:VAL:HB	37:e:174:LEU:CB	2.37	0.53
37:e:195:ALA:O	37:e:196:LEU:CG	2.56	0.53
38:f:125:SER:O	38:f:127:ASN:N	2.33	0.53
40:h:62:PHE:O	40:h:63:LYS:C	2.51	0.53
42:j:8:GLY:C	42:j:76:ALA:HB1	2.33	0.53
42:j:68:GLY:O	42:j:69:GLY:C	2.50	0.53
44:l:58:PRO:HD3	44:l:89:ALA:CB	2.24	0.53
45:m:80:SER:O	45:m:81:VAL:HG13	2.08	0.53
45:m:115:SER:HB3	45:m:118:LYS:CD	2.38	0.53
46:n:4:ILE:O	46:n:4:ILE:HG22	2.08	0.53
46:n:78:ILE:O	46:n:82:MET:SD	2.66	0.53
48:p:27:VAL:C	48:p:31:LEU:HD13	2.34	0.53
48:p:39:LEU:O	48:p:43:LEU:CD2	2.55	0.53
1:w:140:A:C2	1:w:1408:C:H4'	2.42	0.53
1:w:217:G:C3'	1:w:218:A:H8	2.20	0.53
1:w:327:G:N1	1:w:336:C:N4	2.57	0.53
1:w:374:A:H61	1:w:400:G:C2'	2.21	0.53
1:w:375:C:O5'	1:w:375:C:H6	1.89	0.53
1:w:399:G:C5	1:w:400:G:C4	2.95	0.53
1:w:457:A:O2'	1:w:458:G:C1'	2.56	0.53
1:w:467:G:H5''	1:w:796:C:O2'	2.08	0.53
1:w:588:U:O2'	1:w:589:C:H5'	2.06	0.53
1:w:609(A):A:C2	1:w:609(B):G:H1'	2.44	0.53
1:w:705:A:O2'	1:w:706:A:H5'	2.08	0.53
1:w:718:A:C2	50:r:104:LYS:HE2	2.42	0.53
1:w:731:C:N3	1:w:732:C:C5	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:784:A:OP1	1:w:2589:A:C5'	2.56	0.53
1:w:920:G:C3'	1:w:921:G:H5'	2.37	0.53
1:w:965:C:C4	1:w:966:G:C5	2.97	0.53
1:w:1004:C:C5'	1:w:1010:A:C6	2.88	0.53
1:w:1042:G:C5'	1:w:1043:C:OP2	2.54	0.53
1:w:1083:U:H1'	1:w:1086:A:N6	2.23	0.53
1:w:1326:U:H2'	1:w:1327:C:C6	2.42	0.53
1:w:1329:U:OP2	1:w:1330:C:N4	2.37	0.53
1:w:1335:U:H5''	20:R:64:LYS:HE2	1.90	0.53
1:w:1355:G:H2'	1:w:1356:G:O4'	2.08	0.53
1:w:1394:U:H4'	1:w:1603:A:O4'	2.08	0.53
1:w:1451:C:OP2	1:w:1451:C:C6	2.60	0.53
1:w:1652:A:O2'	1:w:1653:G:H5'	2.09	0.53
1:w:1728:G:C2	1:w:1731:G:N7	2.77	0.53
1:w:1798:U:H5''	4:B:259:THR:C	2.34	0.53
1:w:1811:G:H5''	1:w:1811:G:H8	1.68	0.53
1:w:1904:G:C2'	1:w:1905:C:C5'	2.87	0.53
1:w:2009:G:C8	1:w:2009:G:OP2	2.61	0.53
1:w:2072:G:C6	1:w:2073:C:C4	2.97	0.53
1:w:2126:A:O2'	1:w:2127:G:C4'	2.56	0.53
1:w:2210:G:O5'	1:w:2211:G:H5''	2.08	0.53
1:w:2231:C:C4	1:w:2232:U:C5	2.96	0.53
1:w:2303:G:N3	7:E:132:ASN:HB2	2.23	0.53
1:w:2321:G:H2'	1:w:2321:G:N3	2.23	0.53
1:w:2333:A:C8	1:w:2335:A:N1	2.76	0.53
1:w:2355:C:C4	1:w:2356:C:C6	2.95	0.53
1:w:2396:G:H5''	1:w:2396:G:H8	1.74	0.53
1:w:2423:U:O4'	1:w:2425:A:C5	2.61	0.53
1:w:2563:U:O3'	11:I:27:GLY:O	2.25	0.53
1:w:2564:A:H3'	1:w:2565:A:C8	2.44	0.53
1:w:2576:G:N2	1:w:2576:G:P	2.81	0.53
1:w:2623:G:C2	1:w:2624:G:C5	2.96	0.53
1:w:2649:U:H3'	1:w:2649:U:C6	2.44	0.53
1:w:2686:G:O6	1:w:2724:C:C4	2.62	0.53
1:w:2751:G:O2'	1:w:2752:C:O5'	2.16	0.53
1:w:2762:G:H2'	1:w:2763:G:H5'	1.89	0.53
1:w:2837:G:O5'	1:w:2837:G:C8	2.59	0.53
1:w:2850:A:N3	1:w:2851:A:C1'	2.72	0.53
3:A:21:TYR:CG	3:A:26:ALA:HB2	2.42	0.53
4:B:15:PHE:O	4:B:16:MET:HE3	2.08	0.53
4:B:25:THR:OG1	4:B:27:THR:CG2	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:25:THR:HG1	4:B:27:THR:HG23	1.72	0.53
4:B:63:ARG:HH21	4:B:86:PRO:CD	2.21	0.53
4:B:132:PRO:HA	4:B:189:CYS:C	2.33	0.53
4:B:144:ALA:O	4:B:191:ALA:CB	2.56	0.53
5:C:59:VAL:O	5:C:60:ASN:CB	2.56	0.53
6:D:23:ILE:C	6:D:25:PRO:HD2	2.33	0.53
6:D:88:LYS:C	6:D:90:ARG:N	2.65	0.53
7:E:12:TYR:O	7:E:13:GLU:HB2	2.07	0.53
8:F:12:PRO:O	8:F:14:GLY:N	2.41	0.53
8:F:17:VAL:HG11	8:F:45:VAL:H	1.74	0.53
10:H:40:ASP:HB2	10:H:77:VAL:HG22	1.89	0.53
11:I:66:LYS:HB3	11:I:78:ARG:NH2	2.22	0.53
13:K:1:MET:O	13:K:2:LEU:HB2	2.07	0.53
13:K:118:LEU:HD23	13:K:130:LYS:O	2.07	0.53
15:M:65:VAL:O	15:M:68:GLN:HB2	2.08	0.53
20:R:21:PHE:CE2	20:R:90:GLU:HA	2.43	0.53
22:T:99:TYR:CD2	22:T:124:ILE:C	2.86	0.53
30:b:14:CYS:N	30:b:27:CYS:CB	2.70	0.53
31:y:136:C:C1'	49:q:1:MET:H3	2.20	0.53
31:y:156:G:C2'	31:y:157:G:H5''	2.38	0.53
31:y:243:A:C1'	31:y:245:C:H5''	2.38	0.53
31:y:276:G:N1	31:y:277:C:C6	2.77	0.53
31:y:355:C:C5	31:y:356:A:C8	2.96	0.53
31:y:391:G:N1	31:y:392:G:N7	2.56	0.53
31:y:442:C:N4	31:y:493:G:N2	2.57	0.53
31:y:448:A:H2'	31:y:449:C:C5	2.42	0.53
31:y:594:G:N2	31:y:596:C:C5	2.76	0.53
31:y:609:A:C5'	49:q:9:PHE:CE1	2.90	0.53
31:y:628:G:H2'	31:y:629:G:C1'	2.38	0.53
31:y:758:G:C8	31:y:758:G:OP2	2.62	0.53
31:y:865:A:H2'	31:y:866:C:H5'	1.89	0.53
31:y:953:G:H2'	31:y:954:G:H8	1.71	0.53
31:y:959:A:O3'	31:y:960:U:H4'	2.09	0.53
31:y:1055:A:C3'	31:y:1056:U:H5''	2.34	0.53
31:y:1084:G:O4'	31:y:1102:A:H8	1.91	0.53
31:y:1112:C:H2'	36:d:178:LEU:HD22	1.89	0.53
31:y:1265:G:H2'	31:y:1266:G:O4'	2.09	0.53
31:y:1408:A:C8	31:y:1408:A:O5'	2.61	0.53
31:y:1429:C:N3	31:y:1430:C:C5	2.77	0.53
31:y:1494:G:C6	31:y:1495:U:C4	2.96	0.53
33:0:3:G:C2	33:0:4:G:C8	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:32:ILE:CB	35:c:41:ILE:O	2.55	0.53
37:e:78:LEU:HD12	37:e:78:LEU:N	2.22	0.53
45:m:8:GLN:HA	45:m:11:ARG:HB3	1.89	0.53
45:m:40:ARG:CG	45:m:41:THR:H	2.20	0.53
45:m:51:LEU:C	45:m:52:ARG:HE	2.16	0.53
45:m:75:ASN:ND2	45:m:105:ASP:O	2.42	0.53
47:o:26:ARG:HH21	47:o:43:CYS:CA	2.21	0.53
52:t:52:TYR:OH	52:t:55:LYS:O	2.21	0.53
53:u:32:ALA:O	53:u:36:LEU:HD23	2.07	0.53
53:u:49:ALA:O	53:u:50:GLU:C	2.51	0.53
53:u:72:LEU:C	53:u:73:HIS:ND1	2.67	0.53
1:w:33:U:H3'	1:w:33:U:C6	2.42	0.53
1:w:154:G:C5	1:w:155:C:C5	2.97	0.53
1:w:182:A:C2	1:w:215:G:N2	2.67	0.53
1:w:216:A:O4'	1:w:432:A:N6	2.42	0.53
1:w:238:C:H5'	1:w:609(A):A:H4'	1.90	0.53
1:w:238:C:C4	1:w:260:G:N1	2.76	0.53
1:w:260:G:N1	1:w:261:G:C5	2.77	0.53
1:w:328:U:C4'	21:S:66:PRO:HG2	2.38	0.53
1:w:345:A:C1'	1:w:346:A:N7	2.70	0.53
1:w:349:G:C3'	1:w:350:U:H6	2.20	0.53
1:w:442:G:O2'	6:D:43:THR:OG1	2.26	0.53
1:w:445:C:H2'	1:w:446:G:C4'	2.39	0.53
1:w:515:A:C3'	1:w:516:C:H6	2.21	0.53
1:w:519:U:C4'	19:Q:74:ALA:O	2.54	0.53
1:w:626:U:P	1:w:627:A:H5'	2.48	0.53
1:w:752:A:N7	1:w:1781:C:C2	2.76	0.53
1:w:779:U:OP1	4:B:49:ILE:HG12	2.09	0.53
1:w:787:U:C3'	1:w:791:C:N4	2.60	0.53
1:w:842:G:H2'	1:w:843:G:H8	1.72	0.53
1:w:888:C:H6	1:w:888:C:P	2.31	0.53
1:w:1138:G:H1'	10:H:129:MET:HB3	1.89	0.53
1:w:1161:C:C2'	1:w:1162:G:H8	2.17	0.53
1:w:1188:U:C2'	1:w:1189:A:H5'	2.38	0.53
1:w:1262:A:N3	1:w:1262:A:H2'	2.23	0.53
1:w:1593:G:C5	1:w:1594:G:C5	2.97	0.53
1:w:1669:A:N3	1:w:1670:C:O4'	2.41	0.53
1:w:1676:A:C2'	1:w:1677:A:C8	2.89	0.53
1:w:1794:U:H2'	1:w:1795:C:H6	1.72	0.53
1:w:1843:C:OP2	1:w:1843:C:H5	1.91	0.53
1:w:2077:A:C4	1:w:2078:C:C5	2.95	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2187:G:C3'	1:w:2188:C:C5'	2.81	0.53
1:w:2239:G:C6	1:w:2240:C:C4	2.95	0.53
1:w:2444:G:OP2	6:D:63:LYS:HE2	2.09	0.53
1:w:2467:C:H4'	13:K:123:HIS:ND1	2.23	0.53
3:A:44:VAL:H	3:A:175:PRO:HA	1.73	0.53
3:A:179:ALA:O	3:A:181:PHE:N	2.38	0.53
5:C:56:PRO:HB2	5:C:58:ARG:HE	1.73	0.53
5:C:84:PHE:O	5:C:84:PHE:CD1	2.62	0.53
6:D:24:ASN:N	6:D:25:PRO:CD	2.72	0.53
6:D:109:VAL:O	6:D:110:ALA:C	2.51	0.53
6:D:169:VAL:CG1	6:D:170:THR:H	2.08	0.53
7:E:19:LEU:O	7:E:25:TYR:CE1	2.61	0.53
7:E:115:ARG:HD3	46:n:7:VAL:CG2	2.38	0.53
7:E:120:LEU:O	7:E:122:PRO:CD	2.53	0.53
9:G:69:LYS:HG3	9:G:138:ILE:CD1	2.38	0.53
9:G:88:ILE:HD11	9:G:89:TYR:CE1	2.43	0.53
9:G:142:VAL:HG12	9:G:143:SER:N	2.24	0.53
10:H:37:VAL:HB	10:H:75:VAL:HG22	1.89	0.53
10:H:38:LEU:HB2	10:H:157:ARG:HB2	1.91	0.53
10:H:65:TRP:HE3	10:H:71:MET:CE	2.21	0.53
10:H:93:LYS:O	10:H:110:LEU:HD22	2.09	0.53
10:H:127:LYS:HA	10:H:130:LEU:HG	1.88	0.53
11:I:63:VAL:O	11:I:64:ARG:O	2.25	0.53
12:J:97:PRO:HD3	12:J:126:VAL:HB	1.89	0.53
13:K:69:PHE:CD2	13:K:69:PHE:C	2.84	0.53
16:N:66:VAL:O	16:N:66:VAL:HG12	2.09	0.53
17:O:83:LEU:CD2	17:O:84:LYS:NZ	2.69	0.53
19:Q:7:ALA:CB	19:Q:103:ILE:CG2	2.87	0.53
19:Q:46:PHE:O	19:Q:47:VAL:C	2.52	0.53
26:X:5:LYS:HA	26:X:36:VAL:CG1	2.28	0.53
27:Y:16:ARG:HG2	27:Y:17:ASP:N	2.22	0.53
29:a:12:LYS:HB2	29:a:13:ARG:NH1	2.23	0.53
31:y:65:U:C2	31:y:200:G:H4'	2.43	0.53
31:y:105:G:O2'	31:y:106:C:H5'	2.08	0.53
31:y:237:C:H5''	50:r:25:ARG:HH12	1.73	0.53
31:y:369:C:C2'	31:y:370:C:H5'	2.39	0.53
31:y:445:G:C4	31:y:446:G:C8	2.97	0.53
31:y:505:G:H4'	31:y:534:U:C4	2.41	0.53
31:y:512:U:O2	31:y:513:C:H5	1.91	0.53
31:y:576:G:C5'	31:y:577:G:OP2	2.54	0.53
31:y:608:A:O2'	49:q:9:PHE:CZ	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:696:A:C2'	31:y:786:G:HO2'	2.17	0.53
31:y:807:A:C5	31:y:808:C:N4	2.76	0.53
31:y:911:U:H3'	31:y:912:C:C6	2.43	0.53
31:y:964:A:C2'	31:y:965:A:C5'	2.86	0.53
31:y:990:C:H5''	31:y:1018:C:OP1	2.08	0.53
31:y:1259:C:H1'	31:y:1283:G:N3	2.23	0.53
31:y:1293:G:H8	31:y:1293:G:P	2.31	0.53
31:y:1347:G:N2	31:y:1349:A:H61	2.06	0.53
31:y:1378:C:H2'	31:y:1379:G:O4'	2.08	0.53
31:y:1452:C:H4'	31:y:1453:G:N3	2.22	0.53
32:z:7:A:C5'	32:z:8:4SU:OP2	2.57	0.53
32:z:25:C:H2'	32:z:26:A:O4'	2.08	0.53
32:z:26:A:H2'	32:z:27:G:C8	2.44	0.53
33:0:9:A:H1'	33:0:46:G:H1'	1.91	0.53
33:0:29:A:H2'	33:0:30:G:H8	1.73	0.53
35:c:97:TRP:CE3	35:c:99:GLY:N	2.75	0.53
36:d:201:TYR:N	36:d:201:TYR:CD1	2.73	0.53
37:e:9:CYS:SG	37:e:22:LYS:HG3	2.48	0.53
37:e:9:CYS:SG	37:e:26:CYS:CA	2.97	0.53
40:h:47:CYS:CA	40:h:58:PRO:HB3	2.38	0.53
40:h:113:GLU:C	40:h:114:ARG:HG3	2.34	0.53
40:h:150:ALA:N	44:l:59:TYR:CB	2.72	0.53
40:h:150:ALA:HB1	44:l:57:THR:HG21	1.89	0.53
41:i:13:ILE:CD1	41:i:13:ILE:N	2.71	0.53
47:o:11:LYS:O	47:o:12:ARG:HB2	2.08	0.53
51:s:59:SER:CB	51:s:62:GLU:HB2	2.38	0.53
52:t:31:ILE:CG2	52:t:32:LYS:HD2	2.37	0.53
1:w:55:G:N1	1:w:56:A:C6	2.77	0.53
1:w:468:G:H5'	1:w:797:C:OP1	2.08	0.53
1:w:492:A:P	1:w:492:A:H8	2.32	0.53
1:w:527:C:H1'	1:w:528:A:N9	2.22	0.53
1:w:558:G:C5'	10:H:135:LEU:HD22	2.38	0.53
1:w:569:U:H1'	1:w:947:G:O4'	2.08	0.53
1:w:584:C:OP2	1:w:584:C:C6	2.61	0.53
1:w:610:C:C2	1:w:611:C:C5	2.97	0.53
1:w:633:A:O4'	1:w:2404:C:H5''	2.09	0.53
1:w:640:C:N3	1:w:641:C:C5	2.76	0.53
1:w:775:G:C4	1:w:794:G:N7	2.76	0.53
1:w:870:A:N6	1:w:871:U:O4	2.42	0.53
1:w:1039:G:C8	1:w:1117:G:N2	2.77	0.53
1:w:1045:A:H1'	1:w:1047:G:C4	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1128:A:C6	1:w:2518:A:N6	2.71	0.53
1:w:1195:G:C2	1:w:1196:C:N1	2.77	0.53
1:w:1220:A:H5'	1:w:1221:C:P	2.49	0.53
1:w:1259:G:H2'	1:w:1260:G:O4'	2.09	0.53
1:w:1260:G:C5	1:w:1261:C:N4	2.77	0.53
1:w:1273:U:O2'	1:w:712(B):A:N6	2.41	0.53
1:w:1294:U:C4'	14:L:26:LYS:CE	2.82	0.53
1:w:1345:C:C2	1:w:1346:G:N7	2.77	0.53
1:w:1476:C:O5'	1:w:1476:C:C6	2.52	0.53
1:w:1650:G:C4	1:w:1651:G:C8	2.97	0.53
1:w:1651:G:C2	1:w:1652:A:C5	2.96	0.53
1:w:1742:C:H2'	1:w:1743:G:O4'	2.09	0.53
1:w:1902:C:O3'	4:B:243:GLY:CA	2.56	0.53
1:w:1904:G:H2'	1:w:1905:C:O4'	2.09	0.53
1:w:1912:A:C5	1:w:1918:A:H2	2.26	0.53
1:w:2017:U:OP1	27:Y:8:LYS:CG	2.57	0.53
1:w:2021:C:OP1	27:Y:15:ARG:NH2	2.36	0.53
1:w:2055:C:P	1:w:2056:G:C4'	2.96	0.53
1:w:2144:U:O2'	1:w:2146:C:N4	2.40	0.53
1:w:2155:G:O6	1:w:2156:G:C2	2.61	0.53
1:w:2176:A:H5'	1:w:2176:A:C8	2.29	0.53
1:w:2193:G:N1	1:w:2194:G:C5	2.77	0.53
1:w:2271:G:H5''	23:U:20:ARG:CG	2.34	0.53
1:w:2286:A:OP2	1:w:2286:A:C2	2.59	0.53
1:w:2354:G:O2'	23:U:36:ILE:HB	2.09	0.53
1:w:2355:C:O4'	23:U:36:ILE:CG2	2.57	0.53
1:w:2466:C:C5'	30:b:5:ALA:HB1	2.39	0.53
1:w:2476:A:N3	1:w:2477:C:N3	2.56	0.53
1:w:2572:A:H5''	1:w:2574:G:H5''	1.91	0.53
1:w:2652:C:O2	1:w:2669:G:C2	2.61	0.53
2:x:78:A:H2'	2:x:79:C:O5'	2.08	0.53
5:C:7:VAL:CG2	5:C:7:VAL:O	2.56	0.53
6:D:4:ILE:CG2	6:D:118:LEU:HD22	2.39	0.53
6:D:25:PRO:HB2	6:D:29:TRP:CZ2	2.43	0.53
6:D:98:LYS:CA	6:D:101:ARG:HB3	2.23	0.53
7:E:110:ALA:HB2	7:E:142:PRO:CD	2.33	0.53
7:E:166:ASP:CA	7:E:169:ALA:HB3	2.37	0.53
9:G:77:LEU:HD13	9:G:77:LEU:C	2.33	0.53
10:H:76:VAL:CG1	10:H:77:VAL:N	2.71	0.53
10:H:151:HIS:O	10:H:151:HIS:CG	2.62	0.53
11:I:101:PRO:O	11:I:102:VAL:CG1	2.50	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:57:HIS:O	13:K:57:HIS:ND1	2.42	0.53
15:M:26:LEU:HD13	15:M:27:SER:H	1.74	0.53
16:N:50:ILE:CG2	16:N:51:ARG:H	2.21	0.53
18:P:73:SER:CB	18:P:89:GLN:HB3	2.31	0.53
19:Q:33:ARG:HG3	19:Q:34:ASN:N	2.22	0.53
19:Q:38:TYR:HE2	27:Y:41:PRO:CD	2.22	0.53
22:T:9:TYR:N	22:T:9:TYR:CD2	2.76	0.53
22:T:181:GLU:O	22:T:182:LYS:CB	2.56	0.53
29:a:14:VAL:HG22	29:a:24:ALA:HB3	1.90	0.53
30:b:19:ARG:O	30:b:20:HIS:C	2.51	0.53
31:y:24:U:H2'	31:y:25:C:H5'	1.84	0.53
31:y:44:G:OP1	49:q:12:LYS:N	2.41	0.53
31:y:136:C:C5'	49:q:1:MET:HB2	2.39	0.53
31:y:285:G:N3	31:y:285:G:H2'	2.23	0.53
31:y:374:A:N6	31:y:389:A:N6	2.56	0.53
31:y:493:G:C2'	31:y:494:U:C5	2.91	0.53
31:y:562:C:H2'	45:m:15:GLU:O	2.09	0.53
31:y:664:G:H22	31:y:741:G:H22	1.55	0.53
31:y:685:G:C2'	31:y:686:U:H5'	2.33	0.53
31:y:719:C:H3'	31:y:720:C:H6	1.73	0.53
31:y:739:C:H2'	48:p:42:HIS:HD2	1.74	0.53
31:y:777:A:C2	31:y:778:G:C8	2.97	0.53
31:y:1014:A:O4'	52:t:34:TRP:CZ2	2.62	0.53
31:y:1054:C:OP2	31:y:1198:G:OP2	2.25	0.53
31:y:1159:U:OP2	31:y:1181:G:N2	2.41	0.53
31:y:1267:C:H2'	54:v:20:LYS:HE3	1.90	0.53
31:y:1296:C:C1'	31:y:1302:U:H3	2.05	0.53
31:y:1339:A:N3	32:z:31:A:H1'	2.23	0.53
31:y:1348:U:H4'	42:j:120:ARG:CD	2.37	0.53
31:y:1358:U:OP1	47:o:35:ARG:CG	2.53	0.53
31:y:1405:G:H1'	31:y:1519:MA6:C4'	2.39	0.53
32:z:19:G:N2	32:z:57:G:N9	2.57	0.53
35:c:18:GLY:HA3	35:c:42:ILE:H	1.73	0.53
35:c:97:TRP:CZ2	35:c:102:LEU:HG	2.40	0.53
35:c:97:TRP:HB3	35:c:172:ILE:HG21	1.90	0.53
36:d:33:LEU:CD2	36:d:33:LEU:N	2.70	0.53
36:d:184:TYR:CD1	36:d:185:GLY:N	2.77	0.53
38:f:46:GLY:HA3	38:f:58:ALA:CB	2.38	0.53
38:f:129:ILE:HD12	38:f:129:ILE:N	2.23	0.53
39:g:100:ASN:ND2	51:s:31:LEU:HD12	2.23	0.53
40:h:124:LEU:N	40:h:124:LEU:HD23	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:8:ASP:CG	41:i:9:MET:N	2.66	0.53
43:k:11:PHE:O	43:k:16:LEU:CD2	2.56	0.53
44:l:110:ASP:HB2	51:s:88:LYS:HZ3	1.72	0.53
45:m:40:ARG:C	45:m:54:VAL:HG22	2.33	0.53
45:m:53:LYS:O	45:m:68:TYR:CD1	2.62	0.53
45:m:59:LEU:HD13	45:m:59:LEU:C	2.32	0.53
46:n:15:VAL:CG2	46:n:16:ASP:OD2	2.57	0.53
46:n:56:LEU:C	46:n:59:TYR:HB2	2.34	0.53
48:p:37:ASN:O	48:p:40:SER:HB3	2.08	0.53
48:p:70:LEU:O	48:p:70:LEU:HD22	2.07	0.53
49:q:23:ASP:CB	49:q:26:ARG:HG3	2.29	0.53
50:r:40:LYS:HE2	50:r:42:TYR:CZ	2.44	0.53
50:r:82:MET:O	50:r:85:VAL:HB	2.08	0.53
52:t:45:VAL:HG13	52:t:63:THR:HA	1.90	0.53
1:w:64:A:O2'	1:w:65:C:H5'	2.09	0.53
1:w:129:C:H2'	1:w:129:C:O2	2.08	0.53
1:w:220:G:N1	1:w:428:A:OP2	2.41	0.53
1:w:270(O):G:C8	1:w:270(O):G:C3'	2.91	0.53
1:w:288:C:C6	1:w:289:A:C2	2.96	0.53
1:w:397:G:OP2	1:w:397:G:H8	1.90	0.53
1:w:467:G:C5'	1:w:796:C:O2'	2.56	0.53
1:w:519:U:C5	1:w:520:G:N7	2.77	0.53
1:w:562:U:H4'	1:w:563:G:H5''	1.89	0.53
1:w:613:U:H5'	1:w:616:A:C6	2.44	0.53
1:w:666:G:H8	1:w:666:G:O5'	1.92	0.53
1:w:775:G:N1	1:w:787:U:N3	2.56	0.53
1:w:878:A:H1'	1:w:899:A:N6	2.24	0.53
1:w:1100:C:O2'	1:w:1101:U:H5'	2.09	0.53
1:w:1194:A:H2'	1:w:1195:G:C1'	2.39	0.53
1:w:1243:G:H4'	12:J:9:ASN:CG	2.32	0.53
1:w:1305:C:H5'	1:w:1305:C:C6	2.36	0.53
1:w:1341:U:OP1	1:w:1397:U:O4	2.26	0.53
1:w:1613:G:C2	1:w:1617:C:O2	2.61	0.53
1:w:1615:C:C4	1:w:1617:C:C2	2.97	0.53
1:w:1664:A:C1'	1:w:2686:G:H5'	2.39	0.53
1:w:1684:C:C2	1:w:1685:C:C5	2.97	0.53
1:w:1690:A:H61	1:w:1697:G:C1'	2.21	0.53
1:w:1690:A:H61	1:w:1697:G:H1'	1.74	0.53
1:w:1857:G:H8	1:w:1857:G:O5'	1.91	0.53
1:w:1908:C:O2	32:z:12:U:H4'	2.08	0.53
1:w:1940:U:OP1	1:w:1965:C:C5	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2051:A:C5'	1:w:2578:G:P	2.97	0.53
1:w:2207:C:H2'	1:w:2208:U:C5'	2.35	0.53
1:w:2356:C:C2'	1:w:2357:U:C5'	2.78	0.53
1:w:2359:C:C6	1:w:2359:C:P	3.01	0.53
1:w:2364:C:C4'	23:U:58:THR:HG21	2.38	0.53
1:w:2391:G:N2	1:w:2429:G:O4'	2.41	0.53
1:w:2519:U:C2	1:w:2542:A:C5	2.97	0.53
1:w:2795:G:N2	1:w:2799:A:O5'	2.42	0.53
1:w:2820:A:O5'	14:L:4:LEU:N	2.42	0.53
1:w:2842:G:C2	1:w:2876:G:C2	2.97	0.53
3:A:20:ILE:CA	3:A:224:ARG:HB3	2.39	0.53
4:B:34:VAL:HG13	4:B:35:LYS:HE2	1.91	0.53
4:B:259:THR:O	4:B:259:THR:HG22	2.09	0.53
5:C:5:LEU:CD1	5:C:91:VAL:HG21	2.38	0.53
6:D:26:HIS:CD2	6:D:26:HIS:H	2.25	0.53
6:D:70:HIS:CG	6:D:71:GLY:N	2.77	0.53
6:D:151:LEU:N	6:D:169:VAL:CB	2.72	0.53
7:E:115:ARG:O	7:E:116:ASP:OD2	2.27	0.53
7:E:139:LEU:O	7:E:144:ILE:O	2.26	0.53
7:E:177:GLY:C	7:E:178:PHE:CD1	2.87	0.53
8:F:88:LEU:CA	8:F:129:THR:O	2.57	0.53
8:F:149:ARG:HD2	8:F:153:LYS:CE	2.36	0.53
9:G:22:LYS:HB2	9:G:23:PRO:CD	2.37	0.53
10:H:131:PRO:C	10:H:132:LYS:HD3	2.32	0.53
11:I:10:VAL:O	11:I:99:PHE:CE2	2.62	0.53
11:I:71:ARG:NH1	11:I:75:SER:HB3	2.23	0.53
12:J:5:ASP:O	12:J:6:LEU:HG	2.09	0.53
12:J:88:LEU:HD11	12:J:90:ARG:CZ	2.39	0.53
12:J:110:TYR:HD2	12:J:111:ARG:HG2	1.74	0.53
16:N:61:PHE:O	16:N:62:THR:HG22	2.08	0.53
16:N:64:ARG:CZ	16:N:103:ARG:CA	2.85	0.53
16:N:90:GLN:HB2	16:N:120:ARG:NH1	2.24	0.53
17:O:47:TYR:O	17:O:48:ALA:C	2.51	0.53
18:P:21:ARG:HD2	18:P:93:GLU:CG	2.39	0.53
18:P:22:VAL:C	18:P:23:GLU:HG3	2.34	0.53
20:R:12:VAL:CG1	20:R:27:THR:HB	2.38	0.53
20:R:39:ILE:C	20:R:41:ASN:N	2.63	0.53
20:R:59:VAL:O	20:R:74:PRO:CD	2.41	0.53
21:S:80:GLY:H	21:S:97:ARG:HH21	1.57	0.53
22:T:3:TYR:O	22:T:57:ILE:CG1	2.57	0.53
24:V:87:PRO:HB2	24:V:91:LYS:CD	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:91:LYS:N	24:V:91:LYS:CE	2.64	0.53
31:y:44:G:C5'	49:q:12:LYS:HE2	2.38	0.53
31:y:97:U:C2'	31:y:99:C:C6	2.91	0.53
31:y:286:G:C2'	31:y:287:U:H6	2.15	0.53
31:y:348:G:O2'	31:y:349:A:H5'	2.09	0.53
31:y:411:A:C6	31:y:429:U:C6	2.97	0.53
31:y:416:G:C6	31:y:417:C:C2	2.97	0.53
31:y:506:G:H3'	31:y:507:C:C5	2.44	0.53
31:y:670:G:C6	31:y:671:G:C5	2.97	0.53
31:y:687:A:OP2	31:y:687:A:H3'	2.09	0.53
31:y:719:C:P	31:y:720:C:H5	2.31	0.53
31:y:1023:G:C2'	31:y:1024:G:H5'	2.33	0.53
31:y:1308:U:N3	31:y:1329:A:C2	2.76	0.53
31:y:1377:A:H2'	40:h:5:ARG:NE	2.24	0.53
31:y:1378:C:H2'	40:h:156:TRP:CZ3	2.44	0.53
31:y:1397:C:O5'	31:y:1397:C:H6	1.91	0.53
31:y:1442:G:N3	31:y:1442:G:C3'	2.69	0.53
31:y:1470:G:C4	31:y:1471:G:C8	2.97	0.53
32:z:45:U:C6	32:z:45:U:C3'	2.92	0.53
35:c:8:LYS:CD	35:c:10:LEU:HG	2.38	0.53
36:d:66:VAL:HB	36:d:101:LEU:CB	2.39	0.53
36:d:149:ALA:HB2	36:d:202:ILE:HA	1.90	0.53
37:e:100:ARG:NH2	37:e:137:SER:CB	2.67	0.53
37:e:204:ILE:O	37:e:205:GLU:O	2.26	0.53
39:g:79:LEU:HD13	39:g:79:LEU:C	2.33	0.53
39:g:95:GLU:HB2	51:s:32:ARG:CD	2.38	0.53
41:i:80:ILE:CG2	41:i:83:ILE:HG13	2.38	0.53
44:l:51:LYS:O	44:l:52:GLY:C	2.51	0.53
46:n:84:ILE:HG21	52:t:65:ASN:HB2	1.90	0.53
47:o:32:SER:HB2	47:o:41:ARG:HD3	1.90	0.53
48:p:18:PHE:HD2	48:p:21:ASP:N	2.06	0.53
51:s:52:PRO:C	51:s:54:ARG:N	2.66	0.53
51:s:73:ALA:HA	51:s:76:LEU:CD1	2.36	0.53
52:t:22:LEU:HD13	52:t:47:HIS:CD2	2.44	0.53
52:t:64:GLU:O	52:t:67:VAL:N	2.42	0.53
53:u:51:GLU:O	53:u:52:ALA:C	2.52	0.53
1:w:7:G:C6	1:w:8:A:C6	2.97	0.53
1:w:36:G:C4	1:w:37:C:C5	2.97	0.53
1:w:51:G:O3'	1:w:52:A:H8	1.91	0.53
1:w:132:G:C5	1:w:133:C:C4	2.96	0.53
1:w:182:A:H3'	1:w:183:C:C5	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:460:A:C3'	1:w:461:C:H6	2.18	0.53
1:w:465:G:N2	1:w:794:G:H22	1.99	0.53
1:w:479:A:H5''	1:w:480:A:O5'	2.08	0.53
1:w:592:G:C2	1:w:593:G:C5	2.97	0.53
1:w:752:A:H5''	1:w:753:C:OP1	2.08	0.53
1:w:775:G:C2	1:w:787:U:O4	2.61	0.53
1:w:783:A:H8	1:w:784:A:H1'	1.61	0.53
1:w:945:A:OP2	1:w:946:G:OP2	2.27	0.53
1:w:968:G:N7	1:w:969:U:C5	2.77	0.53
1:w:1046:A:H3'	1:w:1047:G:C5'	2.39	0.53
1:w:1058:G:C2'	1:w:1059:G:H5''	2.38	0.53
1:w:1128:A:C6	1:w:2518:A:C6	2.96	0.53
1:w:1228:G:N1	1:w:1229:G:C4	2.76	0.53
1:w:1287:A:OP2	14:L:105:ARG:HD2	2.08	0.53
1:w:1294:U:H5'	14:L:26:LYS:NZ	2.22	0.53
1:w:1294:U:O2'	14:L:19:ALA:O	2.24	0.53
1:w:1315:C:C2'	1:w:1392:A:N3	2.71	0.53
1:w:1480:G:N1	1:w:1514:U:C2	2.77	0.53
1:w:1666:G:N7	1:w:1667:G:C4	2.76	0.53
1:w:1707:G:C8	1:w:1756:G:C5	2.96	0.53
1:w:1849:G:C5'	1:w:1850:G:OP2	2.47	0.53
1:w:1945:G:C5'	1:w:1945:G:H8	2.21	0.53
1:w:2008:C:O5'	1:w:2008:C:H6	1.91	0.53
1:w:2046:G:C3'	1:w:2047:U:H6	2.21	0.53
1:w:2083:G:C6	1:w:2084:C:C4	2.96	0.53
1:w:2218:G:C4'	4:B:149:PRO:CG	2.85	0.53
1:w:2219:G:O2'	1:w:2224:G:H5'	2.08	0.53
1:w:2236:C:H2'	1:w:2237:G:O4'	2.07	0.53
1:w:2240:C:O5'	1:w:2240:C:C6	2.62	0.53
1:w:2471:C:C6	1:w:2471:C:C5'	2.72	0.53
2:x:23:G:C2	2:x:24:G:C6	2.96	0.53
2:x:40:U:H2'	2:x:43:C:H5	1.73	0.53
5:C:32:PRO:C	5:C:49:LEU:HD13	2.34	0.53
5:C:32:PRO:CA	5:C:90:THR:HA	2.39	0.53
5:C:60:ASN:O	5:C:61:ARG:C	2.51	0.53
6:D:70:HIS:CE1	6:D:72:ASP:O	2.58	0.53
6:D:132:LYS:CB	6:D:132:LYS:NZ	2.72	0.53
7:E:59:GLU:OE2	7:E:151:ALA:CB	2.57	0.53
7:E:68:PRO:HB3	7:E:92:VAL:HB	1.89	0.53
7:E:72:ARG:CA	7:E:87:PRO:HB3	2.37	0.53
9:G:26:ALA:HA	9:G:31:LEU:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:84:ARG:O	10:H:86:THR:N	2.40	0.53
12:J:82:GLY:CA	12:J:113:LYS:O	2.56	0.53
12:J:104:GLY:O	12:J:105:LEU:HG	2.08	0.53
13:K:81:VAL:O	13:K:82:ARG:CB	2.54	0.53
13:K:95:ALA:O	13:K:97:VAL:HG23	2.08	0.53
13:K:103:MET:SD	13:K:103:MET:N	2.82	0.53
14:L:32:GLY:O	14:L:115:GLU:HA	2.08	0.53
14:L:70:LEU:N	14:L:70:LEU:HD23	2.24	0.53
15:M:24:LEU:CB	15:M:85:VAL:HG23	2.35	0.53
16:N:11:GLU:CD	16:N:11:GLU:N	2.67	0.53
16:N:64:ARG:NH1	16:N:65:LYS:HA	2.24	0.53
18:P:3:ALA:O	18:P:4:ILE:HG13	2.09	0.53
22:T:152:ALA:CB	22:T:169:GLU:H	2.22	0.53
22:T:159:PRO:O	22:T:161:VAL:HG23	2.09	0.53
23:U:37:LEU:HB3	23:U:60:PHE:HA	1.91	0.53
29:a:8:LYS:O	29:a:12:LYS:HG3	2.09	0.53
31:y:5:U:HO2'	31:y:6:G:H5''	1.72	0.53
31:y:37:U:O4	31:y:397:A:C2	2.62	0.53
31:y:91:C:C6	31:y:91:C:O5'	2.60	0.53
31:y:126:G:N2	31:y:236:G:N7	2.57	0.53
31:y:136:C:H2'	31:y:137:C:C5	2.39	0.53
31:y:136:C:HO2'	49:q:63:GLY:CA	2.21	0.53
31:y:402:G:O2'	31:y:620:C:N4	2.42	0.53
31:y:528:C:H41	45:m:47:PRO:CG	2.22	0.53
31:y:565:U:C5	31:y:566:G:C8	2.95	0.53
31:y:583:A:O3'	50:r:91:ARG:NH2	2.41	0.53
31:y:692:U:C6	31:y:692:U:C3'	2.91	0.53
31:y:717:C:H4'	44:l:117:ASN:O	2.09	0.53
31:y:756:C:HO2'	31:y:757:U:H5'	1.74	0.53
31:y:783:C:C2'	31:y:784:C:H5'	2.38	0.53
31:y:966:M2G:O6	31:y:1400:5MC:N3	2.42	0.53
31:y:1276:G:H1'	31:y:1282:C:H1'	1.91	0.53
31:y:1298:C:H1'	31:y:1299:A:C6	2.44	0.53
31:y:1400:5MC:C2	32:z:34:G:C2	2.97	0.53
31:y:1443:G:OP1	31:y:1446:A:C5'	2.56	0.53
31:y:1509:C:C4	31:y:1510:U:C4	2.96	0.53
33:0:27:C:C3'	33:0:28:C:C6	2.92	0.53
35:c:20:GLU:CB	35:c:190:THR:HG21	2.22	0.53
35:c:84:GLU:CD	35:c:215:LEU:CD1	2.81	0.53
36:d:22:TRP:CZ3	36:d:24:ALA:CB	2.91	0.53
36:d:53:ALA:HB2	36:d:106:VAL:CG2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:81:GLY:HA2	36:d:84:ILE:HG21	1.90	0.53
36:d:180:ALA:O	36:d:203:PHE:CD1	2.62	0.53
37:e:21:LEU:O	37:e:22:LYS:HG2	2.09	0.53
37:e:65:ARG:HD3	37:e:66:ARG:N	2.24	0.53
37:e:65:ARG:CD	37:e:66:ARG:HD3	2.32	0.53
37:e:121:VAL:HA	37:e:136:PRO:HG2	1.89	0.53
37:e:172:PRO:HG2	37:e:173:TRP:CE3	2.42	0.53
40:h:108:ALA:HB2	40:h:120:ILE:HA	1.89	0.53
41:i:80:ILE:O	41:i:82:HIS:N	2.41	0.53
42:j:99:LEU:C	42:j:101:PHE:N	2.66	0.53
43:k:66:ARG:HH22	47:o:57:ARG:N	2.06	0.53
45:m:41:THR:CA	45:m:54:VAL:HG13	2.34	0.53
45:m:115:SER:C	45:m:117:SER:H	2.17	0.53
50:r:48:GLU:O	50:r:49:GLU:HB2	2.09	0.53
52:t:45:VAL:HG12	52:t:46:GLY:N	2.23	0.53
1:w:34:C:H41	1:w:447:A:H61	1.54	0.53
1:w:49:A:H61	1:w:177:G:H22	1.57	0.53
1:w:132:G:C2'	1:w:133:C:H6	2.22	0.53
1:w:307:G:N2	1:w:330:A:H61	1.86	0.53
1:w:314:A:H8	1:w:314:A:O5'	1.91	0.53
1:w:379:G:C3'	24:V:21:ARG:HD2	2.38	0.53
1:w:440:G:C5	1:w:441:U:C2	2.96	0.53
1:w:465:G:N2	1:w:684:G:O2'	2.42	0.53
1:w:536:A:C2'	1:w:537:C:C6	2.90	0.53
1:w:613:U:C4'	1:w:616:A:C5	2.92	0.53
1:w:625:G:C6	1:w:626:U:N3	2.77	0.53
1:w:633:A:H2'	1:w:634:C:H5'	1.91	0.53
1:w:734:A:N6	1:w:735:A:C2	2.77	0.53
1:w:752:A:N6	1:w:1781:C:H1'	2.24	0.53
1:w:843:G:C3'	1:w:844:C:C6	2.91	0.53
1:w:1323:U:C2'	1:w:1324:G:H5''	2.18	0.53
1:w:1341:U:O2'	20:R:55:ASN:HB3	2.08	0.53
1:w:1358:G:N2	1:w:1372:U:C6	2.77	0.53
1:w:1539:G:H2'	1:w:1540:G:H4'	1.91	0.53
1:w:1652:A:C2'	1:w:1653:G:H5'	2.39	0.53
1:w:1659:U:P	5:C:132:HIS:NE2	2.82	0.53
1:w:1769:G:C6	1:w:1770:G:N7	2.77	0.53
1:w:1777:U:O5'	1:w:1777:U:C6	2.60	0.53
1:w:1796:U:C2'	4:B:256:GLY:H	2.21	0.53
1:w:1974:C:O5'	1:w:1974:C:H6	1.92	0.53
1:w:2051:A:H5''	1:w:2578:G:P	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2118:U:O5'	1:w:2118:U:H6	1.90	0.53
1:w:2134:A:N6	1:w:2157:G:C2'	2.72	0.53
1:w:2139:C:H6	1:w:2139:C:O5'	1.92	0.53
1:w:2168:G:C2	1:w:2171:A:OP2	2.61	0.53
1:w:2297:C:C2	1:w:2333:A:N1	2.77	0.53
1:w:2354:G:O4'	23:U:35:ASN:HA	2.08	0.53
1:w:2359:C:C2	1:w:2360:A:C8	2.96	0.53
1:w:2368:C:H3'	1:w:2368:C:C6	2.44	0.53
1:w:2458:G:N9	1:w:2490:G:O6	2.41	0.53
1:w:2471:C:O2'	1:w:2472:G:H5'	2.09	0.53
1:w:2585:U:H4'	1:w:2586:C:H5''	1.86	0.53
1:w:2592:G:C2	1:w:2603:G:C6	2.96	0.53
3:A:34:ALA:HB2	3:A:179:ALA:HB1	1.89	0.53
3:A:214:TYR:HB3	3:A:223:VAL:N	2.13	0.53
4:B:3:VAL:HA	4:B:17:THR:HG21	1.89	0.53
4:B:4:LYS:HB2	4:B:18:VAL:O	2.08	0.53
4:B:52:ARG:HE	4:B:53:PHE:HD1	1.56	0.53
4:B:133:LEU:CB	4:B:187:GLY:O	2.57	0.53
4:B:166:GLN:CD	31:y:712:A:C5'	2.82	0.53
4:B:173:VAL:HG12	4:B:187:GLY:CA	2.33	0.53
5:C:5:LEU:H	5:C:5:LEU:CD1	2.08	0.53
6:D:31:VAL:O	6:D:32:VAL:C	2.52	0.53
7:E:43:LEU:CD2	7:E:44:GLY:N	2.72	0.53
9:G:94:ALA:O	9:G:97:ILE:CD1	2.56	0.53
9:G:125:GLU:CG	9:G:126:TYR:N	2.65	0.53
10:H:110:LEU:CD2	10:H:110:LEU:N	2.71	0.53
10:H:132:LYS:O	10:H:132:LYS:CE	2.56	0.53
12:J:41:ARG:NH1	12:J:45:LEU:HB2	2.23	0.53
14:L:69:ASP:C	14:L:70:LEU:HD23	2.34	0.53
14:L:75:LEU:O	14:L:79:LEU:CG	2.40	0.53
15:M:65:VAL:HA	15:M:68:GLN:HG3	1.89	0.53
16:N:1:MET:O	16:N:3:ARG:N	2.41	0.53
19:Q:22:ASP:CA	19:Q:25:ARG:HD2	2.38	0.53
20:R:44:GLU:HA	20:R:48:LYS:HA	1.91	0.53
20:R:50:LYS:CE	20:R:51:VAL:H	2.19	0.53
21:S:84:ARG:N	21:S:84:ARG:CD	2.58	0.53
22:T:77:ASP:HB2	22:T:83:PRO:C	2.34	0.53
25:W:26:ARG:HG3	25:W:29:LYS:CD	2.37	0.53
26:X:9:VAL:CA	26:X:32:GLN:HA	2.39	0.53
29:a:55:ALA:C	29:a:59:LYS:HZ1	2.17	0.53
31:y:120:A:N7	31:y:122:G:C5	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:287:U:C6	31:y:287:U:O5'	2.62	0.53
31:y:400:C:C4	31:y:401:C:C4	2.97	0.53
31:y:477:G:C6	31:y:478:A:C5	2.97	0.53
31:y:510:A:O2'	31:y:542:G:O2'	2.26	0.53
31:y:514:C:H5''	31:y:514:C:H6	1.73	0.53
31:y:546:G:C8	31:y:546:G:H3'	2.43	0.53
31:y:597:G:P	31:y:597:G:C3'	2.95	0.53
31:y:644:G:H2'	31:y:645:C:C5'	2.34	0.53
31:y:644:G:C8	31:y:645:C:C6	2.96	0.53
31:y:684:A:O5'	31:y:684:A:C8	2.62	0.53
31:y:995:C:O5'	31:y:995:C:C6	2.61	0.53
31:y:1056:U:OP1	36:d:162:GLN:HA	2.09	0.53
31:y:1077:G:C6	31:y:1081:G:C6	2.95	0.53
31:y:1081:G:P	38:f:18:ARG:HH11	2.31	0.53
31:y:1125:U:O4	31:y:1127:G:H1'	2.08	0.53
31:y:1153:C:C4	31:y:1154:G:N7	2.77	0.53
31:y:1252:A:H5'	31:y:1369:C:H4'	1.90	0.53
31:y:1330:U:C4	31:y:1331:G:N2	2.77	0.53
31:y:1473:A:O2'	31:y:1474:G:H5'	2.09	0.53
31:y:1498:UR3:C5	34:l:2:U:O5'	2.57	0.53
35:c:129:GLU:C	35:c:131:PRO:HD2	2.34	0.53
36:d:119:ARG:HD2	36:d:119:ARG:O	2.08	0.53
37:e:9:CYS:SG	37:e:31:CYS:C	2.92	0.53
37:e:15:GLU:HB3	37:e:63:LYS:HD3	1.91	0.53
37:e:129:ASN:H	37:e:146:ILE:HD13	1.73	0.53
38:f:83:GLU:HG2	38:f:84:PHE:N	2.23	0.53
40:h:108:ALA:HB1	40:h:120:ILE:CA	2.39	0.53
41:i:9:MET:O	41:i:13:ILE:HB	2.08	0.53
41:i:9:MET:CA	41:i:13:ILE:HD13	2.38	0.53
41:i:70:GLN:N	41:i:74:PRO:HB3	2.24	0.53
42:j:104:ARG:O	42:j:105:ASP:HB2	2.08	0.53
43:k:71:LEU:CD2	43:k:72:VAL:N	2.71	0.53
45:m:76:LEU:HD12	45:m:76:LEU:C	2.33	0.53
48:p:15:PHE:CD1	48:p:15:PHE:N	2.77	0.53
50:r:88:TYR:O	50:r:91:ARG:CB	2.49	0.53
1:w:23:G:N2	1:w:24:G:C1'	2.72	0.53
1:w:104:U:O2	1:w:104:U:H2'	2.08	0.53
1:w:306:U:H3	1:w:310:A:H62	1.55	0.53
1:w:434:U:O5'	1:w:434:U:H6	1.91	0.53
1:w:579:G:C4	1:w:580:C:C6	2.97	0.53
1:w:675:A:N7	1:w:804:A:H2	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:675:A:H4'	6:D:62:GLN:OE1	2.09	0.53
1:w:708:C:C2'	1:w:709:U:C5'	2.66	0.53
1:w:709:U:C4	1:w:710:G:C5	2.97	0.53
1:w:748:G:N7	19:Q:89:ALA:HA	2.24	0.53
1:w:813:U:H5''	1:w:1226:A:H4'	1.91	0.53
1:w:838:C:H2'	1:w:839:U:H5'	1.90	0.53
1:w:855:G:H22	23:U:26:TYR:HB2	1.73	0.53
1:w:904:C:H2'	1:w:905:U:C6	2.41	0.53
1:w:918:A:H3'	1:w:919:G:C8	2.40	0.53
1:w:918:A:C4	1:w:919:G:H1'	2.43	0.53
1:w:1064:C:H2'	1:w:1065:U:H6	1.73	0.53
1:w:1129:A:O2'	1:w:2516:G:O4'	2.26	0.53
1:w:1164:G:H8	1:w:1164:G:OP2	1.92	0.53
1:w:1227:G:N1	1:w:1228:G:C5	2.77	0.53
1:w:1335:U:O3'	1:w:1336:A:O4'	2.26	0.53
1:w:1344:G:P	1:w:1345:C:H5	2.32	0.53
1:w:1429:G:H5'	1:w:1568:G:H2'	1.89	0.53
1:w:1475:G:C5	1:w:1519:G:C6	2.97	0.53
1:w:1531:C:C2'	1:w:1532:C:C5'	2.87	0.53
1:w:1535:U:C6	1:w:1536:A:H1'	2.44	0.53
1:w:1545:A:C8	1:w:1546:A:C5	2.96	0.53
1:w:1623:G:C4	1:w:1624:G:C8	2.97	0.53
1:w:1657:C:N4	1:w:1658:C:C4	2.77	0.53
1:w:1676:A:C3'	1:w:1677:A:H8	2.21	0.53
1:w:1702:G:C2	1:w:1703:G:C4	2.97	0.53
1:w:1728:G:C8	1:w:1728:G:H3'	2.44	0.53
1:w:1741:C:C3'	1:w:1742:C:C5'	2.84	0.53
1:w:1825:A:N1	1:w:1826:G:N7	2.56	0.53
1:w:1975:G:C5	1:w:1976:U:C4	2.97	0.53
1:w:1988:C:O2'	1:w:1989:G:H5'	2.09	0.53
1:w:2013:A:C4'	19:Q:96:ILE:HG21	2.38	0.53
1:w:2030:A:C5'	1:w:2031:A:C8	2.79	0.53
1:w:2053:G:C8	1:w:2053:G:O5'	2.62	0.53
1:w:2308:G:H3'	1:w:2309:A:C5'	2.38	0.53
1:w:2415:G:H2'	1:w:2416:C:C6	2.44	0.53
1:w:2472:G:C5'	1:w:2473:U:H5''	2.37	0.53
1:w:2514:U:C2'	1:w:2515:C:C6	2.90	0.53
1:w:2536:G:H3'	1:w:2537:U:C6	2.44	0.53
1:w:2540:C:H1'	1:w:2741:A:H1'	1.90	0.53
1:w:2623:G:H4'	1:w:2826:A:H1'	1.91	0.53
1:w:2652:C:OP1	1:w:2654:A:O2'	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2677:G:O6	1:w:2731:G:O6	2.27	0.53
1:w:2680:C:O5'	5:C:189:PRO:CB	2.57	0.53
1:w:2824:C:C5	1:w:2825:G:C6	2.97	0.53
2:x:8:U:C5'	15:M:17:ARG:NH1	2.72	0.53
2:x:28:C:C6	2:x:28:C:O5'	2.62	0.53
2:x:67:G:H2'	2:x:68:C:C6	2.44	0.53
2:x:118:G:C2'	2:x:119:A:H5'	2.39	0.53
4:B:72:LYS:O	4:B:74:GLY:N	2.42	0.53
5:C:36:ARG:HH21	5:C:88:GLY:CA	2.22	0.53
5:C:71:GLY:O	5:C:73:GLU:N	2.42	0.53
5:C:109:LYS:O	5:C:161:GLY:CA	2.56	0.53
5:C:180:ASN:N	5:C:181:LEU:HD22	2.24	0.53
6:D:5:PRO:HB2	6:D:9:PRO:HG2	1.89	0.53
6:D:58:LYS:C	6:D:59:ILE:CG1	2.81	0.53
6:D:84:VAL:HG22	6:D:85:PHE:N	2.23	0.53
7:E:113:ARG:O	7:E:140:ILE:CD1	2.57	0.53
7:E:139:LEU:HB3	7:E:146:TYR:CA	2.38	0.53
9:G:95:LYS:H	9:G:95:LYS:HE2	1.71	0.53
10:H:32:VAL:CG1	10:H:35:ARG:NH1	2.70	0.53
10:H:81:ASP:O	10:H:81:ASP:OD2	2.27	0.53
10:H:113:MET:CG	10:H:121:VAL:HG22	2.39	0.53
11:I:6:THR:C	11:I:7:TYR:CD2	2.87	0.53
11:I:23:ARG:HD2	11:I:24:VAL:H	1.74	0.53
11:I:24:VAL:CG2	11:I:37:ASP:HB3	2.39	0.53
12:J:55:ARG:C	12:J:57:THR:N	2.67	0.53
15:M:25:ARG:NE	15:M:40:ILE:CG2	2.67	0.53
16:N:47:GLY:HA2	16:N:64:ARG:O	2.09	0.53
17:O:83:LEU:CG	17:O:84:LYS:HZ3	2.21	0.53
22:T:44:PHE:CD2	22:T:45:ASP:HB2	2.42	0.53
23:U:37:LEU:HG	23:U:59:LEU:C	2.34	0.53
23:U:79:VAL:O	23:U:79:VAL:CG2	2.57	0.53
26:X:8:LEU:O	26:X:9:VAL:HG13	2.07	0.53
26:X:22:ALA:HB1	26:X:46:ASN:CB	2.33	0.53
31:y:8:A:C2	38:f:103:GLY:C	2.87	0.53
31:y:67:C:O2'	31:y:68:G:H5'	2.08	0.53
31:y:101:A:H8	31:y:101:A:P	2.32	0.53
31:y:136:C:H4'	49:q:1:MET:CA	2.39	0.53
31:y:257:G:H2'	31:y:258:G:C8	2.44	0.53
31:y:281:G:C8	31:y:281:G:O5'	2.62	0.53
31:y:373:A:C2	31:y:482:A:N6	2.77	0.53
31:y:376:G:H2'	31:y:377:G:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:520:A:H8	31:y:520:A:O5'	1.90	0.53
31:y:572:A:O4'	31:y:917:G:H5'	2.07	0.53
31:y:718:G:C8	44:l:116:HIS:HD2	2.27	0.53
31:y:958:A:C5	52:t:55:LYS:HD2	2.43	0.53
31:y:1004:A:O2'	31:y:1005:A:C5'	2.57	0.53
31:y:1229:A:O2'	32:z:30:G:P	2.66	0.53
31:y:1277:C:O3'	31:y:1279:A:H1'	2.08	0.53
31:y:1313:U:C5	52:t:4:SER:CB	2.91	0.53
31:y:1396:A:C4'	31:y:1398:A:O4'	2.57	0.53
31:y:1461:G:C2	31:y:1462:G:C6	2.97	0.53
32:z:5:G:N2	32:z:6:G:C1'	2.72	0.53
33:0:23:A:C4	33:0:24:G:C8	2.97	0.53
35:c:97:TRP:CZ3	35:c:99:GLY:O	2.62	0.53
35:c:152:PHE:O	35:c:154:LEU:N	2.42	0.53
36:d:34:LEU:HB3	36:d:38:ARG:NE	2.24	0.53
36:d:44:GLU:O	36:d:45:LYS:CB	2.57	0.53
36:d:92:ALA:O	36:d:98:ASN:HA	2.08	0.53
37:e:9:CYS:HB3	37:e:32:ALA:CB	2.39	0.53
37:e:24:GLU:O	37:e:24:GLU:CG	2.56	0.53
37:e:85:LYS:O	37:e:87:GLY:N	2.41	0.53
37:e:176:LEU:HD23	37:e:177:ASP:N	2.24	0.53
41:i:122:ARG:HG2	41:i:123:GLU:CD	2.34	0.53
42:j:28:VAL:HG11	42:j:37:PHE:CD2	2.44	0.53
43:k:51:ARG:CB	43:k:59:SER:HB3	2.38	0.53
43:k:80:LYS:HA	43:k:83:GLU:CG	2.39	0.53
45:m:121:THR:HG22	45:m:122:LYS:N	2.24	0.53
49:q:21:VAL:C	49:q:26:ARG:HH22	2.17	0.53
50:r:26:GLN:C	50:r:27:PHE:HD1	2.16	0.53
52:t:65:ASN:C	52:t:67:VAL:H	2.17	0.53
54:v:20:LYS:C	54:v:21:TYR:HD2	2.16	0.53
1:w:35:G:C4	1:w:454:A:C5	2.96	0.53
1:w:186:G:H2'	1:w:187:G:C8	2.44	0.53
1:w:250:G:H2'	1:w:251:A:C8	2.44	0.53
1:w:286:C:OP2	1:w:286:C:H5	1.91	0.53
1:w:305:U:H6	1:w:305:U:O5'	1.91	0.53
1:w:493:G:H2'	1:w:493:G:N3	2.23	0.53
1:w:548:A:H8	1:w:548:A:P	2.32	0.53
1:w:618(A):G:C3'	1:w:618(B):C:C6	2.90	0.53
1:w:671:C:N4	12:J:33:ARG:NH2	2.57	0.53
1:w:699:A:H2'	1:w:700:G:O4'	2.09	0.53
1:w:854:G:C4	1:w:855:G:N7	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:867:C:N4	1:w:912:C:O2	2.38	0.53
1:w:943:U:OP1	12:J:35:HIS:C	2.51	0.53
1:w:1120:G:H3'	1:w:1121:C:C5	2.45	0.53
1:w:1270:C:OP2	1:w:1270:C:C5	2.62	0.53
1:w:144(B):A:N3	1:w:144(B):A:H2'	2.23	0.53
1:w:1448:G:H8	1:w:1448:G:OP2	1.91	0.53
1:w:1458:C:H1'	1:w:1459:G:N1	2.11	0.53
1:w:1532:C:H3'	1:w:1533:C:C5	2.44	0.53
1:w:1534:G:H1'	1:w:1538:G:N1	2.25	0.53
1:w:1650:G:C2	1:w:2008:C:C2	2.97	0.53
1:w:1674:G:N2	1:w:1677:A:C2	2.74	0.53
1:w:1702:G:H2'	1:w:1703:G:C5'	2.38	0.53
1:w:1818:U:H5'	4:B:157:ARG:HG3	1.91	0.53
1:w:1836:C:H2'	1:w:1837:C:H6	1.74	0.53
1:w:2006:C:H2'	1:w:2007:C:C6	2.43	0.53
1:w:2054:A:H62	1:w:2577:A:H2	1.54	0.53
1:w:2106:G:H2'	1:w:2107:C:O4'	2.09	0.53
1:w:2392:A:N6	1:w:2429:G:H1'	2.24	0.53
1:w:2457:U:O2'	1:w:2458:G:H5'	2.08	0.53
1:w:2584:U:H6	1:w:2584:U:P	2.31	0.53
1:w:2657:A:P	1:w:2657:A:C8	3.02	0.53
1:w:2679:A:C6	1:w:2729:G:N1	2.77	0.53
1:w:2857:G:C2'	1:w:2858:C:H5''	2.39	0.53
2:x:25:A:C5	2:x:26:A:H1'	2.44	0.53
2:x:31:C:H3'	2:x:32:C:C6	2.44	0.53
2:x:64:C:H5'	2:x:64:C:H6	1.74	0.53
2:x:67:G:C5	2:x:68:C:C5	2.96	0.53
2:x:106:G:C4	2:x:107:U:C5	2.97	0.53
4:B:25:THR:CB	4:B:82:ILE:C	2.82	0.53
4:B:105:ILE:O	4:B:106:ILE:CG2	2.57	0.53
7:E:115:ARG:O	7:E:116:ASP:HB2	2.09	0.53
7:E:163:ALA:HB1	7:E:165:THR:O	2.09	0.53
9:G:6:LEU:HB2	9:G:35:LEU:C	2.34	0.53
9:G:69:LYS:CG	9:G:138:ILE:HD13	2.38	0.53
9:G:82:ARG:O	9:G:83:ALA:C	2.51	0.53
10:H:54:ALA:C	10:H:56:LEU:H	2.17	0.53
11:I:2:ILE:CD1	11:I:34:THR:HA	2.39	0.53
11:I:17:ARG:HG2	11:I:47:ILE:CG1	2.33	0.53
11:I:35:VAL:CA	11:I:62:VAL:HG11	2.38	0.53
11:I:73:ASP:N	11:I:73:ASP:OD2	2.40	0.53
11:I:103:ALA:C	11:I:105:GLU:H	2.15	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:16:ARG:CG	13:K:17:LEU:H	2.21	0.53
13:K:133:ARG:N	13:K:133:ARG:CD	2.72	0.53
15:M:110:LEU:HD12	15:M:110:LEU:N	2.23	0.53
16:N:35:LYS:HD2	16:N:35:LYS:H	1.72	0.53
16:N:50:ILE:HG21	16:N:62:THR:OG1	2.09	0.53
16:N:108:ARG:O	16:N:112:ARG:CB	2.58	0.53
17:O:75:ASN:O	17:O:79:PHE:HB2	2.09	0.53
17:O:92:ARG:NE	18:P:11:GLN:CG	2.73	0.53
18:P:4:ILE:O	18:P:39:LEU:HD12	2.09	0.53
18:P:24:LYS:O	18:P:25:LEU:HG	2.08	0.53
18:P:36:PRO:HD2	18:P:60:GLU:OE1	2.08	0.53
19:Q:29:LEU:HD21	19:Q:67:ASP:HA	1.89	0.53
19:Q:95:ILE:HG22	19:Q:96:ILE:N	2.23	0.53
23:U:35:ASN:O	23:U:60:PHE:HB2	2.09	0.53
25:W:7:ARG:HB2	25:W:8:LYS:HD2	1.91	0.53
29:a:26:LYS:HE3	29:a:47:LYS:HB2	1.90	0.53
30:b:9:ARG:NH1	30:b:15:LYS:HA	2.23	0.53
31:y:7:G:HO2'	38:f:121:LYS:HZ2	1.56	0.53
31:y:8:A:N3	38:f:103:GLY:C	2.67	0.53
31:y:116:A:C3'	31:y:117:G:C8	2.91	0.53
31:y:149:A:N6	31:y:172:A:H62	2.02	0.53
31:y:321:A:C4'	31:y:1436:U:H5'	2.29	0.53
31:y:364:A:C4	31:y:365:U:C5	2.97	0.53
31:y:367:U:O2'	31:y:368:U:P	2.67	0.53
31:y:475:G:C6	31:y:476:G:C5	2.97	0.53
31:y:772:U:C2	31:y:773:G:C8	2.97	0.53
31:y:871:U:H5'	31:y:871:U:H6	1.73	0.53
31:y:950:U:H2'	31:y:951:G:O5'	2.08	0.53
31:y:968:A:C8	31:y:968:A:O5'	2.61	0.53
31:y:1001:G:C3'	31:y:1002:G:H5''	2.39	0.53
31:y:1185:G:C6	31:y:1186:G:C4	2.97	0.53
31:y:1244:C:N4	31:y:1292:U:O4	2.41	0.53
31:y:1252:A:C2	31:y:1355:G:C1'	2.92	0.53
31:y:1413:A:C2	31:y:1414:U:C6	2.97	0.53
31:y:1423:G:H3'	31:y:1424:C:C6	2.44	0.53
31:y:1449:C:H2'	31:y:1450:U:H5'	1.92	0.53
33:0:67:A:H2'	33:0:68:U:H6	1.74	0.53
38:f:11:ILE:HG21	38:f:105:VAL:HG21	1.90	0.53
38:f:98:THR:HG21	38:f:101:ILE:HD11	1.90	0.53
39:g:42:GLU:HG3	39:g:61:LEU:CB	2.38	0.53
40:h:108:ALA:HB1	40:h:120:ILE:HG13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:27:PRO:C	41:i:57:PRO:O	2.52	0.53
43:k:51:ARG:H	43:k:59:SER:HB3	1.74	0.53
46:n:20:THR:C	46:n:22:ILE:N	2.63	0.53
49:q:35:LYS:O	49:q:35:LYS:HG2	2.09	0.53
49:q:45:THR:O	49:q:48:TRP:CG	2.62	0.53
51:s:63:GLN:O	51:s:66:LEU:HB3	2.09	0.53
52:t:70:LYS:CG	52:t:71:LEU:N	2.62	0.53
53:u:45:GLN:HA	53:u:91:LEU:CD1	2.37	0.53
53:u:53:LEU:HG	53:u:100:ILE:HG21	1.89	0.53
53:u:64:ASP:O	53:u:67:ALA:HB3	2.09	0.53
1:w:13:A:C5	1:w:15:G:N1	2.77	0.52
1:w:35:G:C1'	1:w:454:A:H1'	2.39	0.52
1:w:86:C:C2'	1:w:87:C:H5'	2.36	0.52
1:w:136:G:C2	1:w:144:C:C2	2.96	0.52
1:w:178:G:C6	1:w:179:G:C8	2.97	0.52
1:w:217:G:H8	1:w:217:G:O5'	1.92	0.52
1:w:348:G:N7	1:w:349:G:N7	2.57	0.52
1:w:349:G:H2'	1:w:350:U:H6	1.73	0.52
1:w:376:C:C4	1:w:377:C:C5	2.96	0.52
1:w:484:C:H2'	1:w:485:C:C6	2.44	0.52
1:w:498:G:C6	1:w:499:U:C4	2.97	0.52
1:w:499:U:H2'	1:w:500:G:C4'	2.38	0.52
1:w:529:A:HO2'	1:w:530:G:P	2.31	0.52
1:w:592:G:O2'	29:a:3:LYS:O	2.27	0.52
1:w:653:C:OP2	1:w:654:U:O4'	2.27	0.52
1:w:673:C:H2'	1:w:674:G:H5'	1.90	0.52
1:w:803:U:C6	1:w:803:U:OP2	2.62	0.52
1:w:823:G:C6	1:w:824:A:C6	2.96	0.52
1:w:906:G:O6	1:w:907:U:C4	2.62	0.52
1:w:909:A:C1'	13:K:69:PHE:CE1	2.92	0.52
1:w:969:U:C3'	1:w:970:C:C6	2.92	0.52
1:w:977:G:O2'	1:w:1001:A:N1	2.42	0.52
1:w:1347:G:N3	1:w:1347:G:H2'	2.23	0.52
1:w:1370:C:C2'	1:w:1371:G:C8	2.92	0.52
1:w:1426:G:C5'	1:w:1427:A:H5''	2.39	0.52
1:w:1427:A:C1'	1:w:1428:C:C4	2.92	0.52
1:w:1518:C:C2'	1:w:1519:G:H5''	2.37	0.52
1:w:1592:C:H2'	1:w:1593:G:N7	2.19	0.52
1:w:1616:A:H3'	1:w:1617:C:C5'	2.39	0.52
1:w:1666:G:O6	1:w:1667:G:N2	2.42	0.52
1:w:1759:A:C8	1:w:2696:U:C2	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1812:A:C2'	1:w:1813:G:H5'	2.39	0.52
1:w:1827:C:H5'	1:w:1971:A:C3'	2.39	0.52
1:w:1920:C:H2'	1:w:1921:G:C5'	2.39	0.52
1:w:2050:C:C5'	5:C:137:HIS:CE1	2.89	0.52
1:w:2084:C:C5	1:w:2085:C:C5	2.96	0.52
1:w:2173:A:C5'	1:w:2174:C:OP2	2.57	0.52
1:w:2270:G:C8	1:w:2270:G:O5'	2.62	0.52
1:w:2306:C:C2	7:E:153:ARG:NH2	2.78	0.52
1:w:2315:G:H1'	7:E:130:ASN:OD1	2.08	0.52
1:w:2399:G:C5	1:w:2400:G:N7	2.77	0.52
1:w:2657:A:C8	1:w:2657:A:O5'	2.62	0.52
1:w:2667:C:C5	1:w:2668:G:C8	2.97	0.52
1:w:2707:G:H2'	1:w:2708:G:H8	1.75	0.52
1:w:2714:G:N3	1:w:2715:C:C5	2.77	0.52
1:w:2795:G:N2	1:w:2802:G:C6	2.77	0.52
2:x:18:G:C2	2:x:19:G:O6	2.62	0.52
2:x:91:C:H2'	2:x:92:G:C8	2.42	0.52
2:x:105:G:H5''	22:T:31:ARG:HB3	1.90	0.52
3:A:47:LYS:HZ3	3:A:47:LYS:CB	2.21	0.52
3:A:226:ASN:C	3:A:228:HIS:H	2.17	0.52
4:B:34:VAL:O	4:B:35:LYS:HG2	2.08	0.52
4:B:72:LYS:HB2	4:B:97:TYR:OH	2.09	0.52
4:B:231:HIS:ND1	4:B:233:HIS:HB2	2.24	0.52
5:C:54:GLN:HG2	5:C:75:VAL:HG23	1.87	0.52
7:E:31:VAL:O	7:E:33:ARG:N	2.39	0.52
7:E:79:ASN:ND2	7:E:86:MET:HG2	2.24	0.52
7:E:106:LEU:O	7:E:111:LEU:CD1	2.56	0.52
8:F:129:THR:O	8:F:129:THR:HG22	2.09	0.52
8:F:161:GLY:O	8:F:162:ILE:CB	2.57	0.52
9:G:88:ILE:HG13	9:G:89:TYR:CD1	2.44	0.52
10:H:111:GLU:HA	10:H:114:LEU:CD2	2.31	0.52
10:H:126:VAL:O	10:H:128:GLY:N	2.42	0.52
12:J:16:ARG:NE	12:J:17:LYS:N	2.50	0.52
14:L:5:LYS:CG	14:L:6:SER:N	2.50	0.52
14:L:62:ALA:O	14:L:66:VAL:HG13	2.09	0.52
15:M:71:ARG:HG3	15:M:105:ALA:N	2.24	0.52
16:N:92:GLY:CA	16:N:114:LEU:HD13	2.32	0.52
17:O:74:LEU:HD21	17:O:110:VAL:CG2	2.32	0.52
19:Q:29:LEU:O	19:Q:30:GLU:O	2.27	0.52
20:R:32:PRO:HG2	20:R:33:LYS:H	1.73	0.52
25:W:17:SER:HA	25:W:21:LEU:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:41:ILE:HA	25:W:44:LEU:HB2	1.89	0.52
26:X:28:LEU:HD11	26:X:35:ARG:CG	2.34	0.52
26:X:31:LEU:HD22	26:X:31:LEU:N	2.24	0.52
26:X:44:ARG:O	26:X:45:GLY:C	2.52	0.52
28:Z:19:ARG:HD3	28:Z:23:ARG:NH2	2.24	0.52
31:y:121:C:N4	31:y:235:C:C6	2.77	0.52
31:y:132:C:C3'	31:y:133:U:H5'	2.37	0.52
31:y:173:U:H6	31:y:198:G:HO2'	1.52	0.52
31:y:292:G:OP2	31:y:305:G:N2	2.42	0.52
31:y:299:G:O6	31:y:300:A:C2	2.62	0.52
31:y:358:U:H5'	31:y:359:U:OP2	2.09	0.52
31:y:444:C:H2'	31:y:445:G:H8	1.66	0.52
31:y:448:A:OP2	31:y:485:G:N2	2.40	0.52
31:y:583:A:C2'	31:y:584:G:C8	2.92	0.52
31:y:584:G:C2	31:y:585:G:H1'	2.44	0.52
31:y:597:G:C2'	31:y:598:U:H5'	2.39	0.52
31:y:598:U:O2'	31:y:599:C:H5'	2.09	0.52
31:y:635:G:C5	31:y:636:U:C6	2.97	0.52
31:y:691:G:O2'	31:y:692:U:C5'	2.56	0.52
31:y:713:G:N2	31:y:777:A:H1'	2.23	0.52
31:y:813:U:H2'	31:y:814:A:H5'	1.92	0.52
31:y:951:G:C2	31:y:1231:G:N3	2.77	0.52
31:y:962:C:H1'	31:y:1201:A:N6	2.24	0.52
31:y:980:C:C5	31:y:981:U:C1'	2.92	0.52
31:y:1388:C:N4	31:y:1389:C:H41	2.06	0.52
31:y:1395:C:O2'	31:y:1396:A:H5'	2.08	0.52
31:y:1502:A:H5'	31:y:1504:G:N7	2.24	0.52
32:z:74:C:H2'	32:z:75:C:C6	2.43	0.52
33:0:41:U:H4'	40:h:143:ARG:HD3	1.91	0.52
33:0:50:U:H2'	33:0:51:G:H8	1.74	0.52
35:c:27:LYS:HG3	35:c:194:PRO:HG3	1.91	0.52
35:c:92:TYR:HD1	35:c:93:VAL:CA	2.22	0.52
35:c:110:GLN:C	35:c:112:VAL:H	2.17	0.52
36:d:124:ILE:HD12	36:d:128:PHE:C	2.34	0.52
36:d:124:ILE:CG2	36:d:130:VAL:HG13	2.18	0.52
37:e:88:VAL:HA	38:f:97:GLY:CA	2.40	0.52
38:f:16:THR:C	38:f:18:ARG:HH22	2.16	0.52
38:f:129:ILE:HG23	38:f:133:TYR:CE1	2.44	0.52
39:g:12:PRO:HD2	39:g:55:ASP:OD2	2.09	0.52
40:h:77:SER:HA	40:h:86:GLN:HG2	1.90	0.52
41:i:19:VAL:O	41:i:20:TYR:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:62:TYR:C	41:i:63:LEU:CD1	2.82	0.52
42:j:45:ALA:C	42:j:47:LEU:N	2.66	0.52
43:k:24:VAL:HG13	43:k:28:ARG:HE	1.73	0.52
44:l:27:ASN:HA	44:l:55:LYS:CB	2.34	0.52
45:m:42:VAL:H	45:m:54:VAL:CG1	2.22	0.52
46:n:48:LEU:O	46:n:49:THR:C	2.52	0.52
47:o:12:ARG:O	47:o:13:THR:C	2.52	0.52
47:o:46:GLU:O	47:o:49:HIS:CE1	2.62	0.52
1:w:35:G:C8	1:w:454:A:C2	2.96	0.52
1:w:37:C:C4'	1:w:451:C:OP1	2.53	0.52
1:w:59:U:OP2	1:w:59:U:H6	1.91	0.52
1:w:109:G:C2	1:w:110:G:C4	2.97	0.52
1:w:140:A:H2'	1:w:141(A):A:H5'	1.91	0.52
1:w:334:C:OP2	1:w:335:C:C5	2.63	0.52
1:w:371:A:C1'	1:w:373:U:N1	2.70	0.52
1:w:381:G:H5'	24:V:20:ARG:HG2	1.91	0.52
1:w:388:G:H1'	1:w:390:A:H62	1.74	0.52
1:w:532:A:H4'	1:w:533:G:O4'	2.08	0.52
1:w:533:G:C6	1:w:534:U:C4	2.97	0.52
1:w:543:C:H2'	1:w:544:C:H6	1.74	0.52
1:w:774:A:O2'	1:w:775:G:C8	2.62	0.52
1:w:816:C:C4	1:w:1192:G:N1	2.78	0.52
1:w:1030:G:H2'	1:w:1031:G:O5'	2.09	0.52
1:w:1070:A:C8	1:w:1096:A:O2'	2.53	0.52
1:w:1145:C:N3	1:w:1146:C:C4	2.77	0.52
1:w:1154:G:C5'	17:O:59:ARG:HH21	2.17	0.52
1:w:1265:A:OP1	1:w:1265:A:H8	1.92	0.52
1:w:1550:C:O5'	1:w:1550:C:H6	1.92	0.52
1:w:1753:G:H21	1:w:1755:A:C3'	2.15	0.52
1:w:1775:U:C6	1:w:1775:U:O5'	2.62	0.52
1:w:1920:C:OP1	31:y:1517:G:O4'	2.27	0.52
1:w:2057:A:O5'	1:w:2057:A:C8	2.58	0.52
1:w:2095:C:C4	1:w:2096:U:C4	2.97	0.52
1:w:2192:G:OP2	1:w:2192:G:C8	2.57	0.52
1:w:2210:G:P	1:w:2211:G:H5''	2.49	0.52
1:w:2333:A:C4	1:w:2335:A:C6	2.97	0.52
1:w:2512:C:C3'	1:w:2512:C:H6	2.19	0.52
1:w:2638:G:N7	1:w:2775:A:N6	2.56	0.52
1:w:2734:A:C2'	1:w:2735:G:C5'	2.76	0.52
1:w:2744:G:N2	8:F:143:GLN:HB3	2.24	0.52
1:w:2784:C:O4'	5:C:42:ASP:OD1	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2785:C:H2'	1:w:2786:U:H6	1.74	0.52
1:w:2811:G:O2'	1:w:2812:G:H5'	2.10	0.52
2:x:12:C:C5	23:U:74:ARG:HB3	2.44	0.52
4:B:227:ASN:ND2	4:B:237:GLU:CG	2.72	0.52
5:C:31:CYS:SG	5:C:51:PHE:CB	2.80	0.52
6:D:179:TYR:C	6:D:182:VAL:HG13	2.34	0.52
7:E:21:ARG:C	7:E:23:PHE:N	2.67	0.52
9:G:19:VAL:O	9:G:21:VAL:N	2.43	0.52
10:H:44:LYS:O	10:H:84:ARG:CB	2.55	0.52
10:H:76:VAL:HG13	10:H:144:LYS:HB3	1.91	0.52
10:H:157:ARG:HH11	10:H:159:GLU:HB3	1.73	0.52
15:M:71:ARG:CA	15:M:108:GLY:O	2.57	0.52
22:T:5:LEU:CD1	22:T:6:LYS:N	2.63	0.52
22:T:99:TYR:CD2	22:T:125:LEU:N	2.78	0.52
24:V:19:GLN:HB3	24:V:44:PRO:HD3	1.91	0.52
25:W:17:SER:N	25:W:18:PRO:CD	2.71	0.52
29:a:16:ILE:CD1	29:a:16:ILE:C	2.75	0.52
30:b:9:ARG:CZ	30:b:15:LYS:HA	2.39	0.52
31:y:7:G:C4	31:y:298:A:H1'	2.44	0.52
31:y:156:G:C6	31:y:157:G:C8	2.97	0.52
31:y:191(C):G:C2'	31:y:191(D):U:H5'	2.39	0.52
31:y:234:C:H2'	31:y:235:C:O4'	2.10	0.52
31:y:260:G:H2'	31:y:261:U:H6	1.74	0.52
31:y:321:A:O2'	31:y:322:C:P	2.67	0.52
31:y:336:C:N3	31:y:337:C:C5	2.77	0.52
31:y:393:A:C2	31:y:394:G:N7	2.77	0.52
31:y:407:G:H4'	37:e:119:GLN:HB2	1.91	0.52
31:y:424:G:C6	31:y:425:G:C5	2.96	0.52
31:y:424:G:N1	31:y:425:G:C5	2.77	0.52
31:y:426:G:C5	31:y:427:U:C4	2.97	0.52
31:y:451:A:N1	31:y:480:U:C3'	2.73	0.52
31:y:457:C:C4	31:y:458:C:C5	2.97	0.52
31:y:740:U:H5'	48:p:42:HIS:HD2	1.74	0.52
31:y:842:C:H5''	31:y:848:C:C4	2.44	0.52
31:y:959:A:N6	52:t:79:THR:CB	2.71	0.52
31:y:102(C):C:C2'	31:y:1029:G:O4'	2.44	0.52
31:y:1094:G:O2'	31:y:1095:U:P	2.67	0.52
31:y:1196:U:OP1	31:y:1197:G:H5''	2.09	0.52
31:y:1272:G:C8	31:y:1273:G:C8	2.98	0.52
31:y:1329:A:H5''	46:n:26:GLY:N	2.24	0.52
31:y:1349:A:C8	31:y:1349:A:O5'	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1488:G:N1	31:y:1489:G:C5	2.77	0.52
32:z:66:U:O5'	32:z:66:U:H6	1.92	0.52
36:d:29:TYR:CD1	36:d:33:LEU:HD21	2.43	0.52
36:d:186:PHE:HE2	36:d:199:LYS:HD2	1.73	0.52
37:e:9:CYS:N	37:e:22:LYS:NZ	2.58	0.52
37:e:10:ARG:HD2	37:e:32:ALA:HB2	1.90	0.52
37:e:58:LEU:CA	37:e:206:PHE:CE1	2.93	0.52
38:f:10:MET:HA	38:f:32:VAL:HG12	1.89	0.52
38:f:18:ARG:HH21	38:f:26:PHE:CA	2.22	0.52
39:g:7:ASN:C	39:g:8:ILE:CD1	2.77	0.52
40:h:64:GLN:HE22	40:h:68:ASN:CG	2.17	0.52
42:j:118:LYS:O	42:j:121:ARG:CG	2.54	0.52
46:n:4:ILE:HA	46:n:57:ARG:HA	1.89	0.52
48:p:14:GLU:C	48:p:15:PHE:CD1	2.87	0.52
48:p:30:ALA:O	48:p:31:LEU:C	2.53	0.52
53:u:14:LYS:CA	53:u:17:ARG:HB3	2.39	0.52
53:u:18:GLN:CA	53:u:21:LYS:HD3	2.38	0.52
1:w:7:G:C2'	1:w:8:A:H8	2.22	0.52
1:w:7:G:C6	1:w:8:A:C5	2.98	0.52
1:w:13:A:N1	1:w:15:G:C2	2.77	0.52
1:w:19:C:H2'	1:w:20:C:H5''	1.81	0.52
1:w:74:A:N3	1:w:74:A:O5'	2.42	0.52
1:w:224:G:P	1:w:408:G:H21	2.31	0.52
1:w:265:A:C4	1:w:428:A:N1	2.78	0.52
1:w:271(D):U:C2'	1:w:271:G:H5'	2.39	0.52
1:w:286:C:O5'	1:w:286:C:H6	1.91	0.52
1:w:331:A:OP2	1:w:1210:A:C6	2.62	0.52
1:w:449:A:H5'	6:D:79:VAL:HG22	1.91	0.52
1:w:449:A:C4'	6:D:79:VAL:HG22	2.38	0.52
1:w:487:C:C5	1:w:488:G:H1'	2.43	0.52
1:w:584:C:OP2	1:w:584:C:C5	2.62	0.52
1:w:588:U:C6	1:w:589:C:C5	2.97	0.52
1:w:1001:A:H2'	1:w:1002:G:O4'	2.09	0.52
1:w:1124:C:C4	1:w:1125:G:C4	2.97	0.52
1:w:1125:G:H8	1:w:1125:G:P	2.33	0.52
1:w:1326:U:C2'	1:w:1327:C:O4'	2.41	0.52
1:w:1385:G:H5''	1:w:1385:G:C8	2.44	0.52
1:w:1436:G:C5	1:w:1437:C:C5	2.98	0.52
1:w:1445:C:O2	1:w:1446:C:C5	2.62	0.52
1:w:1563:G:H21	1:w:1564:C:H1'	1.74	0.52
1:w:1604:C:O5'	1:w:1604:C:C6	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1671:U:C2	1:w:1673:U:OP2	2.63	0.52
1:w:1806:C:H6	1:w:1806:C:C5'	2.19	0.52
1:w:1820:U:C2	4:B:202:LYS:O	2.62	0.52
1:w:1939:U:OP2	1:w:1939:U:H6	1.91	0.52
1:w:1944:U:C1'	1:w:1955:U:H4'	2.40	0.52
1:w:1998:G:H5'	1:w:2725:A:C5'	2.40	0.52
1:w:2019:A:O3'	17:O:27:LEU:HG	2.10	0.52
1:w:2052:G:H4'	5:C:143:ASN:O	2.10	0.52
1:w:2073:C:O2'	1:w:2074:U:O4'	2.26	0.52
1:w:2198:A:C2	1:w:2225:A:N6	2.72	0.52
1:w:2361:A:OP1	1:w:2361:A:O4'	2.27	0.52
1:w:2362:G:H2'	1:w:2363:C:H6	1.74	0.52
1:w:2459:A:O5'	1:w:2460:U:H5	1.91	0.52
1:w:2515:C:N3	1:w:2570:G:C6	2.78	0.52
1:w:2583:G:OP2	1:w:2584:U:O4	2.26	0.52
1:w:2589:A:C4	1:w:2590:A:C8	2.97	0.52
1:w:2629:A:N6	1:w:2895:U:H1'	2.25	0.52
1:w:2655:G:O4'	1:w:2655:G:P	2.67	0.52
1:w:2784:C:P	1:w:2784:C:H6	2.32	0.52
1:w:2820:A:C4'	5:C:109:LYS:HZ2	2.20	0.52
2:x:60:C:N3	2:x:61:G:N7	2.57	0.52
2:x:117:G:C2	2:x:118:G:C8	2.97	0.52
4:B:96:HIS:HA	4:B:102:LYS:CG	2.39	0.52
4:B:106:ILE:HD12	4:B:197:GLY:H	1.74	0.52
4:B:120:GLY:C	4:B:122:ASP:H	2.17	0.52
4:B:180:GLY:O	4:B:181:GLU:O	2.27	0.52
5:C:32:PRO:C	5:C:49:LEU:CD1	2.82	0.52
5:C:92:THR:HG22	5:C:180:ASN:HD21	1.74	0.52
6:D:78:PHE:N	6:D:78:PHE:CD2	2.72	0.52
6:D:127:VAL:C	6:D:129:GLY:N	2.64	0.52
6:D:132:LYS:CG	6:D:133:GLU:H	2.20	0.52
7:E:13:GLU:HA	7:E:16:ARG:NH1	2.24	0.52
8:F:10:PRO:HG2	8:F:12:PRO:CD	2.39	0.52
8:F:54:ARG:CB	8:F:55:PRO:CD	2.75	0.52
9:G:26:ALA:O	9:G:31:LEU:HB3	2.09	0.52
9:G:55:ALA:HA	9:G:58:LEU:HB3	1.91	0.52
10:H:80:ALA:CA	10:H:83:ILE:HG12	2.38	0.52
10:H:122:LEU:H	10:H:122:LEU:HD12	1.74	0.52
11:I:80:ASP:H	16:N:70:VAL:HG13	1.73	0.52
12:J:62:LEU:HD22	12:J:62:LEU:C	2.35	0.52
12:J:127:ALA:HB1	12:J:130:PHE:HD1	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:119:ARG:NH2	13:K:131:ILE:HG22	2.19	0.52
14:L:68:ARG:HH11	14:L:68:ARG:CB	2.05	0.52
17:O:49:HIS:C	17:O:52:ARG:HB2	2.34	0.52
19:Q:48:ALA:C	19:Q:50:VAL:N	2.66	0.52
19:Q:79:GLY:HA2	19:Q:102:HIS:CD2	2.45	0.52
19:Q:87:PRO:O	19:Q:88:ARG:CB	2.53	0.52
20:R:32:PRO:HA	20:R:75:ASP:HB2	1.91	0.52
20:R:81:VAL:HG21	20:R:86:GLY:HA2	1.81	0.52
22:T:9:TYR:O	22:T:38:TYR:CE2	2.62	0.52
23:U:63:VAL:O	23:U:64:ASP:CB	2.57	0.52
24:V:23:LYS:HB2	24:V:37:ILE:CG2	2.40	0.52
25:W:27:GLU:CA	25:W:30:ARG:HG2	2.39	0.52
30:b:27:CYS:SG	30:b:29:ASN:N	2.81	0.52
31:y:41:G:N1	31:y:42:G:C6	2.77	0.52
31:y:121:C:C4	31:y:235:C:C5	2.97	0.52
31:y:148:G:N3	31:y:149:A:C8	2.76	0.52
31:y:156:G:C2	31:y:157:G:O4'	2.62	0.52
31:y:186(A):C:O4'	53:u:81:LYS:HB3	2.09	0.52
31:y:217:C:H2'	31:y:218:C:H6	1.73	0.52
31:y:392:G:H3'	31:y:393:A:C8	2.43	0.52
31:y:425:G:C6	31:y:426:G:C4	2.97	0.52
31:y:495:A:C2	31:y:496:A:C6	2.97	0.52
31:y:637:G:H2'	31:y:638:G:C8	2.44	0.52
31:y:656:C:HO2'	31:y:657:G:H5'	1.75	0.52
31:y:668:G:C2'	31:y:669:U:H6	2.17	0.52
31:y:703:G:OP2	31:y:704:A:OP1	2.27	0.52
31:y:718:G:H1'	44:l:116:HIS:O	2.09	0.52
31:y:798:G:C6	31:y:799:G:C5	2.97	0.52
31:y:1012:U:C4	31:y:1013:G:C4	2.97	0.52
31:y:1167:A:C5	31:y:1169:A:C5	2.97	0.52
31:y:1204:A:N7	31:y:1205:U:C4	2.77	0.52
31:y:1324:A:H5''	31:y:136(B):C:H5'	1.89	0.52
31:y:1346:A:P	42:j:120:ARG:HH21	2.31	0.52
31:y:1431:C:C4	31:y:1432:G:C5	2.97	0.52
31:y:1500:A:OP1	31:y:1508:G:OP1	2.27	0.52
31:y:1525:G:C2	31:y:1526:G:C8	2.98	0.52
32:z:71:G:O6	32:z:72:C:C4	2.62	0.52
33:0:24:G:N9	33:0:25:C:C6	2.78	0.52
33:0:24:G:C3'	33:0:25:C:H6	2.23	0.52
35:c:130:ARG:HG3	35:c:130:ARG:HH11	1.74	0.52
35:c:168:THR:CG2	35:c:191:ASP:HB2	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:41:VAL:CG1	38:f:42:GLY:N	2.72	0.52
38:f:115:VAL:CG1	38:f:118:ILE:CD1	2.88	0.52
38:f:132:ALA:O	38:f:136:MET:CE	2.57	0.52
39:g:61:LEU:HD12	39:g:63:TYR:OH	2.09	0.52
40:h:12:LEU:HD23	40:h:21:VAL:HG23	1.91	0.52
40:h:20:ASP:HB3	40:h:22:LEU:CD2	2.39	0.52
40:h:43:PHE:O	40:h:46:ALA:N	2.42	0.52
41:i:26:VAL:HG11	41:i:61:VAL:HG22	1.91	0.52
41:i:45:ILE:O	41:i:46:LYS:CG	2.58	0.52
41:i:57:PRO:C	41:i:58:TYR:HD2	2.16	0.52
43:k:90:LEU:N	43:k:91:PRO:CD	2.71	0.52
44:l:73:MET:SD	44:l:102:GLY:HA2	2.49	0.52
45:m:44:PRO:HD3	45:m:52:ARG:NE	2.24	0.52
47:o:42:ILE:C	47:o:46:GLU:OE1	2.52	0.52
49:q:45:THR:O	49:q:48:TRP:CD1	2.62	0.52
50:r:17:LYS:O	50:r:45:HIS:O	2.27	0.52
53:u:56:MET:CE	53:u:84:LEU:HD21	2.40	0.52
1:w:83:G:H1	1:w:102:G:H2'	1.74	0.52
1:w:221:A:C2	1:w:233:A:C4	2.97	0.52
1:w:227:A:H62	1:w:410:G:H1'	1.69	0.52
1:w:270(Q):C:C2	1:w:270(R):C:C5	2.97	0.52
1:w:390:A:O2'	1:w:391:G:N7	2.42	0.52
1:w:414:C:C1'	1:w:1864:U:O2'	2.58	0.52
1:w:438:G:C2'	1:w:439:G:C5'	2.82	0.52
1:w:467:G:O2'	1:w:796:C:H4'	2.10	0.52
1:w:667:U:C4	1:w:668:G:C4	2.98	0.52
1:w:669:G:C8	1:w:801:G:C6	2.98	0.52
1:w:786:C:C4	1:w:787:U:C5	2.98	0.52
1:w:1047:G:O2'	1:w:1110:G:N2	2.43	0.52
1:w:1138:G:C1'	10:H:129:MET:N	2.72	0.52
1:w:1229:G:C6	1:w:1230:C:C2	2.97	0.52
1:w:1298:C:H2'	1:w:1299:G:C5'	2.39	0.52
1:w:1309:G:HO2'	1:w:1611:C:H4'	1.73	0.52
1:w:1318:C:H2'	1:w:1319:G:O4'	2.10	0.52
1:w:1369:G:N2	1:w:1810:A:H1'	2.24	0.52
1:w:1373:A:C2'	1:w:1374:G:O4'	2.56	0.52
1:w:1612:C:H2'	1:w:1613:G:C5'	2.40	0.52
1:w:1796:U:O2'	4:B:256:GLY:N	2.43	0.52
1:w:1925:C:O2'	1:w:1926:U:C5'	2.44	0.52
1:w:1939:U:P	1:w:1939:U:H6	2.32	0.52
1:w:2005:A:C8	1:w:2006:C:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2054:A:N7	1:w:2577:A:C6	2.78	0.52
1:w:2117:A:H5''	1:w:2118:U:H5''	1.90	0.52
1:w:2253:G:H2'	1:w:2254:C:H6	1.74	0.52
1:w:2261:C:P	23:U:14:ARG:HB2	2.50	0.52
1:w:2277:G:H2'	1:w:2278:A:O5'	2.09	0.52
1:w:2279:G:C2	1:w:2280:G:H1'	2.45	0.52
1:w:2283:C:C2'	1:w:2284:C:H6	2.21	0.52
1:w:2325:G:H2'	1:w:2326:C:C6	2.44	0.52
1:w:2333:A:C8	1:w:2333:A:O5'	2.60	0.52
1:w:2423:U:OP1	1:w:2424:C:OP1	2.28	0.52
1:w:2429:G:H3'	1:w:2429:G:OP2	2.09	0.52
1:w:2618:G:N1	1:w:2619:C:C4	2.77	0.52
1:w:2638:G:O2'	1:w:2775:A:C2	2.62	0.52
1:w:2660:A:C2'	1:w:2661:G:C8	2.85	0.52
1:w:2677:G:C2	1:w:2678:C:C2	2.97	0.52
1:w:712(B):A:OP1	1:w:2713:A:H3'	2.09	0.52
1:w:2824:C:C3'	1:w:2825:G:N7	2.72	0.52
1:w:2875:C:O4'	16:N:5:ALA:HB2	2.09	0.52
3:A:213:VAL:HB	3:A:224:ARG:HH22	1.73	0.52
5:C:4:ILE:CG1	5:C:91:VAL:CG1	2.81	0.52
6:D:7:LEU:HD12	6:D:7:LEU:N	2.25	0.52
6:D:88:LYS:O	6:D:90:ARG:N	2.43	0.52
6:D:112:ARG:CG	6:D:112:ARG:NH2	2.48	0.52
6:D:119:LEU:HB3	6:D:188:VAL:CA	2.16	0.52
6:D:166:PRO:C	6:D:168:VAL:H	2.16	0.52
10:H:36:TRP:CE3	10:H:156:GLN:O	2.62	0.52
10:H:117:HIS:O	10:H:120:ARG:HB3	2.09	0.52
10:H:145:VAL:O	10:H:146:TYR:CG	2.63	0.52
11:I:1:MET:N	11:I:67:LYS:HB2	2.23	0.52
11:I:15:GLY:CA	11:I:17:ARG:HH22	2.22	0.52
12:J:85:LEU:C	12:J:87:ASP:N	2.68	0.52
13:K:7:MET:CB	13:K:8:LYS:NZ	2.70	0.52
13:K:21:THR:O	13:K:22:LYS:C	2.52	0.52
13:K:45:GLN:O	13:K:46:GLN:C	2.51	0.52
16:N:92:GLY:HA3	16:N:114:LEU:HB3	1.92	0.52
17:O:36:ARG:HA	17:O:39:LEU:CG	2.39	0.52
17:O:105:VAL:HA	18:P:43:GLU:OE2	2.07	0.52
18:P:21:ARG:HG2	18:P:93:GLU:CG	2.39	0.52
20:R:17:ALA:HB1	20:R:26:TYR:HB3	1.91	0.52
22:T:102:LEU:HA	22:T:137:ILE:HG23	1.91	0.52
27:Y:33:CYS:SG	27:Y:49:CYS:CB	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:57:VAL:HG23	27:Y:58:LEU:H	1.74	0.52
28:Z:14:LYS:HA	28:Z:20:ALA:HB2	1.91	0.52
29:a:34:TRP:HH2	29:a:39:LYS:N	2.08	0.52
31:y:42:G:C2'	31:y:43:C:C6	2.77	0.52
31:y:73:G:C6	31:y:74:C:N3	2.77	0.52
31:y:113:G:C2'	31:y:114:U:C6	2.67	0.52
31:y:190:G:H8	31:y:190:G:O5'	1.92	0.52
31:y:228:A:C3'	31:y:229:U:H5	2.19	0.52
31:y:229:U:O2'	49:q:23:ASP:HB2	2.09	0.52
31:y:321:A:H2'	31:y:322:C:H6	1.73	0.52
31:y:328:C:C4'	31:y:329:A:H5'	2.33	0.52
31:y:507:C:OP2	31:y:508:C:H3'	2.08	0.52
31:y:635:G:H2'	31:y:636:U:C4'	2.40	0.52
31:y:642:A:O4'	41:i:115:SER:HA	2.09	0.52
31:y:741:G:H4'	48:p:56:LEU:HB3	1.92	0.52
31:y:775:G:C3'	31:y:776:G:H8	2.23	0.52
31:y:777:A:C2'	31:y:778:G:C8	2.92	0.52
31:y:781:A:C4'	31:y:1523:G:O4'	2.58	0.52
31:y:982:U:H3	31:y:1222:G:N2	2.08	0.52
31:y:1031:G:H3'	31:y:103(A):A:H8	1.74	0.52
31:y:1090:U:O2'	31:y:1091:U:H5'	2.10	0.52
31:y:1350:A:OP2	42:j:121:ARG:HD2	2.10	0.52
31:y:1367:C:C5'	43:k:60:ARG:CZ	2.87	0.52
31:y:1382:C:C4'	40:h:79:ARG:HG3	2.38	0.52
31:y:1409:C:C2'	31:y:1410:G:H5'	2.38	0.52
31:y:1428:A:N1	31:y:1472:U:O2	2.42	0.52
31:y:1433:A:H2'	31:y:1434:A:C8	2.45	0.52
35:c:7:VAL:HA	35:c:217:ARG:CZ	2.38	0.52
35:c:194:PRO:C	35:c:196:LEU:N	2.65	0.52
36:d:32:LEU:HD22	36:d:35:GLU:HB2	1.90	0.52
37:e:76:ARG:HH12	37:e:80:GLU:HB2	1.74	0.52
38:f:106:PRO:HG2	38:f:122:GLU:CD	2.34	0.52
38:f:125:SER:C	38:f:127:ASN:H	2.17	0.52
41:i:3:THR:HG23	41:i:89:PRO:HG3	1.91	0.52
44:l:27:ASN:OD1	44:l:55:LYS:HB3	2.09	0.52
45:m:33:ARG:C	45:m:84:ILE:CD1	2.81	0.52
45:m:38:VAL:O	45:m:55:ALA:CA	2.57	0.52
45:m:85:ARG:HB2	45:m:100:VAL:HB	1.92	0.52
46:n:9:ILE:N	46:n:10:PRO:CD	2.68	0.52
46:n:31:LYS:O	46:n:35:GLU:CB	2.52	0.52
46:n:116:THR:CG2	46:n:117:VAL:H	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:o:46:GLU:CA	47:o:49:HIS:CE1	2.84	0.52
49:q:5:ARG:HE	49:q:22:THR:CB	2.23	0.52
50:r:42:TYR:N	50:r:42:TYR:CD1	2.77	0.52
50:r:87:LYS:HD3	50:r:88:TYR:CA	2.39	0.52
53:u:43:LEU:HD12	53:u:55:ILE:HG21	1.91	0.52
53:u:47:GLY:O	53:u:49:ALA:N	2.43	0.52
1:w:26:G:C5	1:w:27:G:C4	2.98	0.52
1:w:35:G:C6	1:w:36:G:C6	2.97	0.52
1:w:44:A:O2'	1:w:45:G:C5'	2.56	0.52
1:w:61:G:C5	1:w:62:C:N4	2.77	0.52
1:w:154:G:C2	1:w:155:C:H1'	2.44	0.52
1:w:281:G:O2'	1:w:359:A:N6	2.24	0.52
1:w:332:A:O2'	1:w:333:G:OP1	2.22	0.52
1:w:341:G:H3'	1:w:342:G:C8	2.44	0.52
1:w:349:G:H2'	1:w:350:U:C6	2.44	0.52
1:w:371:A:C4'	1:w:373:U:O4'	2.55	0.52
1:w:418:G:N1	1:w:419:C:N4	2.58	0.52
1:w:481:G:H1'	1:w:506:G:N2	2.18	0.52
1:w:489:G:N3	1:w:491:G:N7	2.58	0.52
1:w:705:A:H2'	1:w:706:A:C5'	2.38	0.52
1:w:759:G:C2	1:w:760:G:C4	2.98	0.52
1:w:759:G:C2	1:w:760:G:C5	2.98	0.52
1:w:1322:A:C8	1:w:1322:A:OP2	2.62	0.52
1:w:1355:G:H2'	1:w:1356:G:C5'	2.39	0.52
1:w:1433:U:C4	1:w:1560:G:O6	2.63	0.52
1:w:1434:A:C5	1:w:1435:G:C1'	2.92	0.52
1:w:1434:A:N1	1:w:1435:G:C8	2.78	0.52
1:w:1553:A:H2'	1:w:1553:A:N3	2.24	0.52
1:w:1662:C:C6	1:w:1662:C:C3'	2.92	0.52
1:w:1797:C:C6	1:w:1823:G:N2	2.78	0.52
1:w:2066:C:H1'	1:w:2445:G:N2	2.24	0.52
1:w:2130:U:C4	1:w:2159:G:C2	2.97	0.52
1:w:2243:U:C2	1:w:2244:U:C5	2.98	0.52
1:w:2278:A:N6	23:U:10:THR:O	2.42	0.52
1:w:2297:C:C4	1:w:2320:A:H8	2.28	0.52
1:w:2303:G:H2'	7:E:132:ASN:CB	2.39	0.52
1:w:2306:C:H3'	1:w:2311:A:N1	2.24	0.52
1:w:2338:G:O5'	1:w:2338:G:C8	2.62	0.52
1:w:2376:A:C8	15:M:94:TYR:HE1	2.27	0.52
1:w:2415:G:H2'	1:w:2416:C:H6	1.75	0.52
1:w:2434:A:H5''	1:w:2434:A:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2519:U:C2	1:w:2542:A:N7	2.77	0.52
1:w:2784:C:C4	1:w:2785:C:H5	2.25	0.52
1:w:2872:G:O2'	1:w:2873:A:N7	2.36	0.52
2:x:113:C:O2'	15:M:47:THR:N	2.33	0.52
4:B:133:LEU:HD13	4:B:136:ILE:CG2	2.38	0.52
5:C:38:THR:O	5:C:40:GLU:N	2.42	0.52
7:E:101:ILE:HG12	7:E:105:LYS:HE3	1.92	0.52
9:G:129:THR:CG2	9:G:130:TYR:N	2.73	0.52
10:H:84:ARG:HD3	10:H:86:THR:N	2.25	0.52
11:I:43:VAL:HG12	11:I:54:GLU:HA	1.90	0.52
13:K:90:VAL:HG13	13:K:90:VAL:O	2.08	0.52
16:N:17:THR:HG23	16:N:18:ASP:N	2.25	0.52
16:N:70:VAL:O	16:N:72:VAL:N	2.43	0.52
16:N:89:VAL:CG1	16:N:121:ILE:HG12	2.40	0.52
18:P:22:VAL:O	18:P:23:GLU:CG	2.58	0.52
19:Q:58:ALA:HA	19:Q:62:HIS:CB	2.35	0.52
19:Q:68:ARG:HG2	19:Q:110:LYS:CA	2.39	0.52
22:T:97:GLU:CB	22:T:126:VAL:O	2.58	0.52
22:T:155:LEU:CD1	22:T:156:LYS:N	2.64	0.52
23:U:16:SER:O	23:U:17:GLN:HB3	2.10	0.52
23:U:17:GLN:O	23:U:18:ALA:HB3	2.10	0.52
25:W:16:LEU:HD23	25:W:16:LEU:C	2.34	0.52
25:W:26:ARG:HG3	25:W:26:ARG:O	2.08	0.52
31:y:128:G:C2'	31:y:129(A):U:H5'	2.39	0.52
31:y:133:U:O3'	31:y:134:A:C8	2.62	0.52
31:y:242:C:O2'	31:y:243:A:C5'	2.51	0.52
31:y:424:G:C2'	31:y:425:G:O5'	2.58	0.52
31:y:482:A:H3'	31:y:483:C:C6	2.45	0.52
31:y:590:C:O2'	31:y:591:U:H5'	2.09	0.52
31:y:656:C:O2'	48:p:28:GLN:HG2	2.10	0.52
31:y:687:A:O2'	31:y:688:G:P	2.68	0.52
31:y:750:G:C2	48:p:23:GLY:HA3	2.38	0.52
31:y:786:G:C2	31:y:797:C:O2	2.63	0.52
31:y:793:U:OP2	31:y:794:A:N7	2.42	0.52
31:y:952:U:O2'	31:y:953:G:H5'	2.08	0.52
31:y:976:G:H2'	31:y:1359:C:C5'	2.33	0.52
31:y:1003:G:N2	31:y:1004:A:HO2'	2.06	0.52
31:y:1053:G:H8	31:y:1199:U:OP2	1.93	0.52
31:y:1057:G:O2'	31:y:1058:G:H5'	2.08	0.52
31:y:1060:C:H2'	31:y:1061:G:C5'	2.39	0.52
31:y:1078:U:H6	31:y:1078:U:C3'	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1139:G:O5'	31:y:1140:C:C5	2.61	0.52
31:y:1159:U:H5''	31:y:1181:G:N2	2.25	0.52
31:y:1266:G:C4	31:y:1268:A:OP1	2.62	0.52
31:y:1304:G:H5''	54:v:2:GLY:HA2	1.91	0.52
31:y:1349:A:N6	31:y:1373:G:C2'	2.67	0.52
31:y:1392:G:O2'	31:y:1393:U:C5'	2.58	0.52
31:y:1473:A:H2'	31:y:1474:G:H5'	1.90	0.52
31:y:1518:MA6:C8	31:y:1518:MA6:C4'	2.86	0.52
33:0:34:G:C3'	33:0:35:A:C5'	2.87	0.52
33:0:69:U:O5'	33:0:69:U:C6	2.60	0.52
35:c:111:ARG:O	35:c:115:LEU:CB	2.57	0.52
37:e:23:GLY:O	37:e:25:ARG:N	2.42	0.52
37:e:34:GLU:O	37:e:35:ARG:HB2	2.09	0.52
40:h:51:GLN:OE1	40:h:56:GLN:O	2.27	0.52
42:j:5:TYR:CD1	42:j:5:TYR:C	2.87	0.52
43:k:16:LEU:O	43:k:17:ASP:C	2.53	0.52
43:k:49:VAL:CG1	43:k:50:ILE:N	2.72	0.52
43:k:61:GLU:CD	47:o:58:LYS:HD3	2.35	0.52
45:m:5:THR:OG1	45:m:8:GLN:N	2.42	0.52
45:m:84:ILE:HA	45:m:99:ILE:CD1	2.39	0.52
47:o:47:LEU:O	47:o:50:LYS:HB3	2.09	0.52
49:q:3:LYS:O	49:q:22:THR:C	2.53	0.52
50:r:36:ILE:O	50:r:36:ILE:CD1	2.57	0.52
51:s:34:TYR:O	51:s:37:VAL:CG2	2.56	0.52
51:s:53:ARG:HD2	51:s:58:LEU:HD13	1.90	0.52
53:u:36:LEU:H	53:u:36:LEU:HD22	1.75	0.52
53:u:36:LEU:HD22	53:u:36:LEU:N	2.24	0.52
1:w:52:A:H3'	1:w:117:G:H22	1.74	0.52
1:w:78:A:C6	1:w:109:G:N1	2.78	0.52
1:w:108:U:C2'	1:w:109:G:H8	2.03	0.52
1:w:116:C:C5	1:w:117:G:C8	2.98	0.52
1:w:189:G:H1	1:w:205:G:HO2'	1.52	0.52
1:w:207:A:C2'	1:w:208:C:H5'	2.40	0.52
1:w:216:A:C5	1:w:217:G:C4	2.98	0.52
1:w:331:A:N6	1:w:1210:A:OP2	2.43	0.52
1:w:363(E):G:C2	1:w:363(F):U:C6	2.97	0.52
1:w:533:G:HO2'	17:O:42:ALA:HB2	1.73	0.52
1:w:593:G:C4	1:w:594:U:C6	2.98	0.52
1:w:650:C:O2'	29:a:17:THR:HB	2.08	0.52
1:w:711:G:C6	1:w:712:G:N7	2.77	0.52
1:w:735:A:N7	1:w:736:C:C5	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:755:C:N4	1:w:756:C:N4	2.58	0.52
1:w:813:U:H6	1:w:813:U:C5'	2.18	0.52
1:w:816:C:N4	1:w:1192:G:N1	2.58	0.52
1:w:816:C:O5'	1:w:816:C:H6	1.90	0.52
1:w:1024:G:H2'	1:w:1025:G:N7	2.25	0.52
1:w:1193:G:H2'	1:w:1194:A:O4'	2.09	0.52
1:w:1269:A:N6	1:w:2012:G:C2	2.77	0.52
1:w:1317:A:C5	1:w:1318:C:N4	2.77	0.52
1:w:1441:G:H2'	1:w:1442:G:C5'	2.39	0.52
1:w:1444:G:C4	1:w:1445:C:C4	2.97	0.52
1:w:1472:A:H2'	1:w:1473:G:C1'	2.38	0.52
1:w:1567:A:OP1	4:B:60:ARG:NH2	2.43	0.52
1:w:1620:G:O4'	28:Z:2:LYS:HD2	2.10	0.52
1:w:1653:G:H1	14:L:11:ASN:N	2.07	0.52
1:w:1797:C:C2'	1:w:1798:U:O4'	2.54	0.52
1:w:1934:C:C6	1:w:1934:C:C3'	2.92	0.52
1:w:1943:U:O2'	1:w:1944:U:P	2.68	0.52
1:w:2099:U:O2	1:w:2190:G:N2	2.41	0.52
1:w:2174:C:O2	3:A:218:THR:O	2.26	0.52
1:w:2251:G:H2'	1:w:2252:G:O4'	2.10	0.52
1:w:2271:G:H5'	23:U:19:LYS:O	2.09	0.52
1:w:2308:G:N9	1:w:2310:A:N6	2.57	0.52
1:w:2358:G:N2	12:J:55:ARG:HH22	2.06	0.52
1:w:2469:A:OP1	13:K:57:HIS:HB2	2.09	0.52
1:w:2513:G:C2	1:w:2514:U:C2	2.98	0.52
1:w:2549:G:C6	1:w:2550:G:C5	2.97	0.52
1:w:2623:G:H4'	1:w:2825:G:N3	2.25	0.52
1:w:2721:A:C4	1:w:2873:A:C2	2.98	0.52
1:w:2827:C:O5'	1:w:2827:C:H6	1.93	0.52
1:w:2838:G:O2'	1:w:2839:G:C5'	2.51	0.52
1:w:2838:G:H4'	14:L:45:ARG:HD3	1.90	0.52
2:x:30:C:H2'	2:x:31:C:O4'	2.10	0.52
4:B:36:PRO:CG	4:B:61:LEU:HD23	2.39	0.52
4:B:69:ARG:O	4:B:69:ARG:CG	2.55	0.52
5:C:119:ARG:HD2	5:C:120:TRP:NE1	2.23	0.52
5:C:145:LYS:HA	5:C:148:GLY:HA3	1.91	0.52
6:D:110:ALA:O	6:D:113:ALA:HB3	2.09	0.52
6:D:195:GLU:O	6:D:196:VAL:CB	2.57	0.52
7:E:41:GLN:HG3	7:E:155:MET:HB3	1.92	0.52
9:G:44:LEU:HA	9:G:47:LEU:HG	1.91	0.52
9:G:91:SER:HB3	9:G:121:LYS:CE	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:79:ASN:H	10:H:148:GLY:N	2.08	0.52
10:H:90:LEU:N	10:H:110:LEU:HG	2.24	0.52
10:H:93:LYS:NZ	10:H:95:TYR:HA	2.24	0.52
10:H:100:GLY:N	10:H:105:LEU:HB3	2.25	0.52
14:L:5:LYS:CG	14:L:8:ARG:HH21	2.23	0.52
14:L:17:ARG:O	14:L:21:TYR:CE1	2.62	0.52
14:L:27:SER:C	14:L:34:ILE:HG13	2.34	0.52
15:M:26:LEU:HD13	15:M:39:ILE:HA	1.91	0.52
15:M:106:ARG:O	15:M:106:ARG:NE	2.33	0.52
17:O:15:LYS:O	17:O:18:LEU:HB2	2.10	0.52
17:O:38:THR:O	17:O:40:PHE:N	2.41	0.52
17:O:49:HIS:HA	17:O:52:ARG:CB	2.39	0.52
17:O:104:GLN:O	18:P:43:GLU:OE1	2.28	0.52
18:P:71:LEU:O	18:P:72:VAL:HG23	2.08	0.52
19:Q:9:TYR:H	19:Q:102:HIS:HE1	1.55	0.52
20:R:12:VAL:HA	20:R:29:TRP:CD1	2.41	0.52
20:R:12:VAL:HG22	20:R:13:LEU:N	2.25	0.52
21:S:13:VAL:HG12	21:S:70:SER:H	1.74	0.52
21:S:14:LEU:H	21:S:23:ARG:H	1.58	0.52
22:T:123:ASP:O	22:T:124:ILE:HB	2.10	0.52
25:W:14:ARG:N	25:W:14:ARG:CD	2.64	0.52
30:b:14:CYS:SG	30:b:27:CYS:SG	3.07	0.52
31:y:15:G:H2'	31:y:16:A:C8	2.45	0.52
31:y:38:G:N2	31:y:397:A:O4'	2.42	0.52
31:y:191(G):G:H8	31:y:191(G):G:O5'	1.93	0.52
31:y:289:G:H1	31:y:311:C:H42	1.57	0.52
31:y:346:G:N3	31:y:347:G:H5''	2.25	0.52
31:y:352:C:H2'	31:y:353:A:OP2	2.09	0.52
31:y:390:C:C2'	31:y:391:G:H5'	2.39	0.52
31:y:397:A:N3	31:y:397:A:H5''	2.25	0.52
31:y:586:C:C2'	31:y:587:G:H5'	2.39	0.52
31:y:675:A:C2'	31:y:676:A:H5'	2.38	0.52
31:y:749:C:O3'	31:y:750:G:H8	1.92	0.52
31:y:781:A:H5''	31:y:1523:G:H4'	1.92	0.52
31:y:865:A:C2	31:y:918:A:C4'	2.89	0.52
31:y:904:C:H3'	31:y:904:C:C6	2.44	0.52
31:y:1004:A:H2'	31:y:1005:A:O5'	2.10	0.52
31:y:1160:G:O6	31:y:1176:A:N1	2.43	0.52
31:y:1346:A:N6	31:y:1375:A:C8	2.76	0.52
31:y:1377:A:H8	31:y:1377:A:O5'	1.93	0.52
32:z:70:G:C2	32:z:71:G:C4	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:58:ILE:HG22	35:c:59:GLU:N	2.23	0.52
36:d:22:TRP:HZ3	36:d:24:ALA:CB	2.22	0.52
36:d:87:LEU:HD11	36:d:101:LEU:HD11	1.88	0.52
36:d:123:GLN:CD	36:d:124:ILE:HG12	2.34	0.52
37:e:186:LEU:HD23	37:e:186:LEU:C	2.34	0.52
38:f:14:ARG:NE	38:f:15:ARG:N	2.57	0.52
39:g:14:LEU:HB2	39:g:18:GLN:CG	2.38	0.52
39:g:67:MET:HB2	39:g:68:PRO:HD2	1.92	0.52
41:i:20:TYR:CE1	41:i:65:TYR:HB2	2.45	0.52
41:i:24:THR:HG21	41:i:63:LEU:HD11	1.92	0.52
41:i:35:ILE:CD1	41:i:38:ILE:CD1	2.84	0.52
41:i:85:ARG:O	41:i:86:ILE:HD12	2.10	0.52
42:j:23:ASN:O	42:j:25:LYS:N	2.43	0.52
42:j:83:ARG:HH11	42:j:83:ARG:CB	2.22	0.52
43:k:40:LEU:CB	43:k:41:PRO:HD2	2.40	0.52
44:l:81:ASP:HA	44:l:107:SER:HB3	1.91	0.52
47:o:24:CYS:HB2	47:o:39:LEU:HA	1.91	0.52
51:s:70:ILE:O	51:s:73:ALA:HB3	2.09	0.52
52:t:12:ASP:HB2	52:t:15:LEU:HD11	1.91	0.52
52:t:31:ILE:HD12	52:t:31:ILE:N	2.24	0.52
1:w:5:A:H2'	1:w:6:A:C8	2.45	0.52
1:w:64:A:OP1	20:R:70:LEU:HG	2.10	0.52
1:w:92:G:C5	1:w:93:C:N4	2.78	0.52
1:w:191:A:O2'	1:w:192:C:C5'	2.57	0.52
1:w:270(F):G:C2	1:w:270(W):G:N2	2.78	0.52
1:w:520:G:C2	1:w:521:G:C5	2.97	0.52
1:w:577:G:HO2'	1:w:578:A:H5'	1.73	0.52
1:w:631:A:C2	1:w:2415:G:H1'	2.44	0.52
1:w:815:C:H2'	1:w:816:C:H5	1.75	0.52
1:w:833:U:C5'	12:J:52:GLU:HB3	2.30	0.52
1:w:865:C:N4	1:w:909:A:N6	2.39	0.52
1:w:886:C:H2'	1:w:886:C:O2	2.09	0.52
1:w:987:G:C5	1:w:988:A:C6	2.97	0.52
1:w:1022:G:N1	1:w:1141:U:H5	2.06	0.52
1:w:1058:G:H3'	1:w:1059:G:C5'	2.38	0.52
1:w:1071:G:H3'	1:w:1072:C:C5	2.44	0.52
1:w:1130:U:N3	1:w:2026:C:P	2.83	0.52
1:w:1131:G:C8	1:w:2025:C:C4'	2.93	0.52
1:w:1216:G:N2	1:w:1234:U:N3	2.58	0.52
1:w:1268:A:C2	1:w:2013:A:C5	2.97	0.52
1:w:1327:C:H2'	1:w:1328:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1343:G:C3'	1:w:1344:G:C5'	2.87	0.52
1:w:1436:G:C5	1:w:1437:C:C6	2.97	0.52
1:w:1488:G:C5	1:w:1489:U:C4	2.97	0.52
1:w:1531:C:H2'	1:w:1532:C:O5'	2.10	0.52
1:w:1563:G:C4	1:w:1564:C:C6	2.98	0.52
1:w:1725:G:N2	1:w:1741:C:H1'	2.24	0.52
1:w:1751:C:O3'	1:w:1752:C:H6	1.93	0.52
1:w:1773:A:C5	1:w:1774:C:H5	2.28	0.52
1:w:1804:C:O3'	4:B:252:TRP:CH2	2.63	0.52
1:w:2014:A:C5	1:w:2015:A:N6	2.77	0.52
1:w:2051:A:H3'	1:w:2614:A:H61	1.72	0.52
1:w:2063:C:C5	1:w:2064:C:C6	2.98	0.52
1:w:2166:G:H8	1:w:2166:G:O5'	1.93	0.52
1:w:2307:G:H21	1:w:2308:G:C5'	2.22	0.52
1:w:2352:A:N1	23:U:33:ALA:C	2.68	0.52
1:w:2406:U:H3	12:J:73:GLY:CA	2.21	0.52
1:w:2518:A:HO2'	1:w:2519:U:P	2.31	0.52
1:w:2529:G:OP2	1:w:2530:A:H8	1.91	0.52
1:w:2536:G:C5	1:w:2537:U:C2	2.98	0.52
1:w:2559:C:O2'	1:w:2560:C:C5'	2.52	0.52
1:w:2572:A:N7	5:C:146:THR:CG2	2.73	0.52
1:w:2580:U:OP1	5:C:131:ALA:CB	2.58	0.52
1:w:2651:C:N3	1:w:2652:C:C5	2.77	0.52
1:w:2720:U:H2'	1:w:2721:A:H8	1.75	0.52
1:w:2744:G:C5	1:w:2745:C:C5	2.97	0.52
1:w:2787:C:O2	1:w:2787:C:C2'	2.58	0.52
1:w:2817:G:C6	1:w:2818:G:C6	2.97	0.52
2:x:71:C:C5	2:x:72:G:O6	2.63	0.52
2:x:105:G:H5''	22:T:31:ARG:CB	2.40	0.52
3:A:23:ILE:O	3:A:27:ALA:HB2	2.07	0.52
5:C:174:ASP:HB3	5:C:183:LEU:HD11	1.92	0.52
6:D:60:TRP:CE3	6:D:60:TRP:HA	2.45	0.52
6:D:112:ARG:HH12	6:D:185:GLU:HA	1.75	0.52
6:D:181:ILE:CA	6:D:184:THR:OG1	2.55	0.52
6:D:192:ASP:OD2	6:D:192:ASP:C	2.53	0.52
7:E:5:LEU:H	7:E:100:TRP:HH2	1.54	0.52
7:E:35:GLU:OE2	7:E:160:VAL:CG1	2.56	0.52
8:F:24:VAL:HG12	8:F:26:VAL:CG2	2.35	0.52
8:F:103:LEU:HD23	8:F:104:GLU:N	2.24	0.52
9:G:31:LEU:C	9:G:33:ARG:N	2.68	0.52
9:G:38:LEU:O	9:G:39:ALA:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:125:GLU:HA	9:G:142:VAL:C	2.35	0.52
10:H:90:LEU:HA	10:H:110:LEU:HG	1.90	0.52
10:H:157:ARG:O	10:H:159:GLU:N	2.42	0.52
13:K:36:ALA:N	13:K:103:MET:SD	2.82	0.52
13:K:133:ARG:NE	13:K:134:ARG:N	2.54	0.52
14:L:42:LYS:C	14:L:44:LEU:N	2.68	0.52
15:M:86:ALA:N	15:M:112:PHE:CZ	2.78	0.52
16:N:29:ARG:C	16:N:44:ASP:CG	2.77	0.52
16:N:29:ARG:H	16:N:44:ASP:HB3	1.74	0.52
16:N:66:VAL:HG13	16:N:70:VAL:C	2.35	0.52
17:O:40:PHE:O	17:O:44:ASN:HB2	2.10	0.52
17:O:110:VAL:HG12	17:O:114:LYS:HD2	1.91	0.52
20:R:78:LYS:CD	20:R:79:ALA:H	2.23	0.52
23:U:23:VAL:CA	23:U:38:VAL:HG13	2.35	0.52
23:U:28:GLY:H	23:U:69:PHE:HB2	1.75	0.52
24:V:13:ILE:HG23	24:V:14:VAL:HG12	1.92	0.52
25:W:45:SER:O	25:W:46:GLN:HG2	2.09	0.52
31:y:89:U:O2'	31:y:90:C:H5'	2.10	0.52
31:y:138:G:H3'	31:y:139:G:H8	1.75	0.52
31:y:201:C:H2'	31:y:208:U:H2'	1.92	0.52
31:y:250:A:H1'	31:y:252:U:C6	2.44	0.52
31:y:259:G:C2	31:y:268:C:N3	2.78	0.52
31:y:292:G:C6	31:y:309:G:C6	2.97	0.52
31:y:300:A:H8	31:y:300:A:OP2	1.92	0.52
31:y:341:C:C2	31:y:342:C:N4	2.78	0.52
31:y:368:U:C6	31:y:368:U:C3'	2.91	0.52
31:y:412:A:C2'	31:y:413:G:C8	2.93	0.52
31:y:494:U:H2'	31:y:496:A:N7	2.24	0.52
31:y:583:A:C2	31:y:584:G:N3	2.78	0.52
31:y:714:G:O2'	31:y:777:A:N6	2.42	0.52
31:y:720:C:H3'	31:y:721:G:C8	2.44	0.52
31:y:762:C:C2	31:y:763:G:C8	2.98	0.52
31:y:766:A:H62	31:y:813:U:H3	1.57	0.52
31:y:829:G:O6	31:y:870:U:OP2	2.28	0.52
31:y:855:G:C4	31:y:856:C:C5	2.98	0.52
31:y:958:A:C4	31:y:959:A:C8	2.98	0.52
31:y:975:A:C2	31:y:1357:A:C1'	2.89	0.52
31:y:1070:U:O2'	31:y:1071:C:H5'	2.09	0.52
31:y:1083:U:C5	31:y:1084:G:O6	2.62	0.52
31:y:1149:C:O5'	31:y:1149:C:H6	1.93	0.52
31:y:1225:A:P	52:t:78:ARG:HH12	2.32	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1293:G:HO2'	31:y:1294:G:C1'	2.22	0.52
31:y:1373:G:H4'	40:h:31:MET:SD	2.50	0.52
31:y:1523:G:O2'	31:y:1524:C:H5'	2.10	0.52
35:c:23:ARG:NH2	35:c:24:TRP:H	2.06	0.52
35:c:114:ARG:HG2	35:c:118:LEU:CD2	2.40	0.52
36:d:8:ILE:C	36:d:10:PHE:H	2.18	0.52
36:d:70:VAL:HG11	36:d:76:VAL:CG2	2.37	0.52
36:d:136:GLN:CB	36:d:140:ARG:HE	2.18	0.52
36:d:154:SER:O	36:d:164:ARG:O	2.26	0.52
38:f:136:MET:CB	38:f:140:ARG:HH12	2.20	0.52
39:g:80:ARG:H	39:g:80:ARG:HD3	1.73	0.52
40:h:27:ILE:HA	40:h:30:ILE:HG12	1.92	0.52
41:i:49:GLU:O	41:i:59:LEU:CA	2.56	0.52
41:i:118:VAL:O	41:i:119:LEU:CG	2.57	0.52
44:l:17:GLY:H	44:l:80:VAL:HA	1.75	0.52
45:m:4:PRO:O	45:m:5:THR:C	2.53	0.52
45:m:11:ARG:HG2	45:m:12:LYS:N	2.24	0.52
45:m:37:THR:CB	45:m:56:LYS:O	2.32	0.52
47:o:24:CYS:SG	47:o:39:LEU:CD2	2.98	0.52
47:o:47:LEU:HD12	47:o:50:LYS:HZ1	1.75	0.52
48:p:55:GLY:C	48:p:57:LEU:H	2.18	0.52
49:q:1:MET:HG3	49:q:65:GLN:CG	2.40	0.52
49:q:36:ILE:O	49:q:51:VAL:HA	2.09	0.52
50:r:7:THR:OG1	50:r:23:VAL:HG13	2.10	0.52
50:r:57:VAL:CG1	50:r:58:GLU:H	2.23	0.52
51:s:78:LEU:O	51:s:80:PRO:HD3	2.10	0.52
53:u:27:LYS:HA	53:u:30:LYS:HD2	1.91	0.52
53:u:92:LEU:O	53:u:93:GLU:C	2.53	0.52
1:w:106:C:O5'	1:w:106:C:H6	1.93	0.52
1:w:398:G:C6	1:w:399:G:N7	2.78	0.52
1:w:471:A:H2'	1:w:472:A:O4'	2.10	0.52
1:w:479:A:O4'	1:w:480:A:C8	2.63	0.52
1:w:488:G:C2	1:w:491:G:OP1	2.63	0.52
1:w:520:G:N1	1:w:521:G:N7	2.58	0.52
1:w:556:G:H2'	1:w:557:U:C6	2.45	0.52
1:w:579:G:N2	1:w:580:C:O2	2.42	0.52
1:w:583:G:C5	1:w:584:C:N4	2.77	0.52
1:w:618(A):G:C2	1:w:618(B):C:C4	2.98	0.52
1:w:667:U:OP1	12:J:47:ASP:OD1	2.28	0.52
1:w:717:G:C2'	1:w:718:A:C5'	2.86	0.52
1:w:811:U:H1'	1:w:1251:C:O3'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1173:G:O3'	1:w:1174:A:H8	1.92	0.52
1:w:1260:G:H2'	1:w:1261:C:C5	2.41	0.52
1:w:1270:C:O5'	1:w:1270:C:H6	1.92	0.52
1:w:1286:A:H5'	14:L:105:ARG:HH12	1.75	0.52
1:w:1297:C:P	1:w:2710:C:C4'	2.85	0.52
1:w:1309:G:C3'	1:w:1310:G:C5'	2.88	0.52
1:w:1313:U:O3'	1:w:1332:G:H4'	2.10	0.52
1:w:1327:C:C5	1:w:1327:C:OP2	2.62	0.52
1:w:1398:C:H2'	1:w:1399:C:C6	2.45	0.52
1:w:1479:G:N3	1:w:1480:G:H1'	2.22	0.52
1:w:1567:A:OP2	4:B:84:TYR:CE2	2.62	0.52
1:w:1593:G:C6	1:w:1594:G:C6	2.98	0.52
1:w:1657:C:HO2'	1:w:1658:C:H5'	1.71	0.52
1:w:1756:G:O2'	1:w:1758:G:N3	2.39	0.52
1:w:1869:G:C5	1:w:1871:A:P	3.03	0.52
1:w:1885:A:C5	1:w:1886:C:C4	2.98	0.52
1:w:1904:G:H2'	1:w:1905:C:H5'	1.91	0.52
1:w:1979:C:O2'	1:w:1980:G:H5'	2.09	0.52
1:w:2114:A:C3'	1:w:2115:G:H8	2.16	0.52
1:w:2120:G:O2'	1:w:2121:G:H5'	2.09	0.52
1:w:2403:C:H2'	1:w:2404:C:H5	1.74	0.52
1:w:2416:C:H5''	12:J:64:LYS:NZ	2.24	0.52
1:w:2468:G:C4	1:w:2481:G:C2	2.97	0.52
1:w:2514:U:N3	1:w:2515:C:C5	2.76	0.52
1:w:2542:A:C2	1:w:2544:G:O6	2.63	0.52
1:w:2542:A:HO2'	1:w:2543:G:P	2.28	0.52
1:w:2801:A:P	1:w:2801:A:C8	3.02	0.52
2:x:50:G:OP2	2:x:50:G:C8	2.63	0.52
2:x:99:A:C4	2:x:100:G:C5	2.98	0.52
3:A:8:TYR:HB3	3:A:11:LEU:CD2	2.39	0.52
3:A:164:PHE:CZ	3:A:197:LEU:HB2	2.45	0.52
3:A:194:ILE:HA	3:A:197:LEU:CD2	2.40	0.52
4:B:17:THR:CG2	4:B:18:VAL:N	2.73	0.52
4:B:17:THR:HG21	4:B:204:ILE:HA	1.92	0.52
6:D:23:ILE:HG23	6:D:23:ILE:O	2.10	0.52
7:E:64:THR:OG1	7:E:102:PHE:CZ	2.62	0.52
7:E:77:ILE:CG1	32:z:56:C:C5	2.92	0.52
7:E:123:ASN:HD22	7:E:123:ASN:N	2.06	0.52
8:F:31:GLY:O	8:F:32:GLU:HB3	2.10	0.52
8:F:123:PHE:CD1	8:F:123:PHE:N	2.77	0.52
10:H:90:LEU:HD12	10:H:110:LEU:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:97:PRO:O	12:J:98:GLU:HB2	2.09	0.52
13:K:25:ASP:HA	13:K:101:ARG:NH1	2.24	0.52
13:K:71:ASP:CG	13:K:96:VAL:HG23	2.35	0.52
14:L:4:LEU:O	14:L:5:LYS:O	2.28	0.52
14:L:101:ALA:HA	27:Y:44:THR:HG23	1.91	0.52
14:L:117:VAL:CG1	14:L:118:GLU:H	2.19	0.52
15:M:73:LEU:CD1	15:M:73:LEU:H	2.23	0.52
16:N:3:ARG:O	16:N:4:GLY:C	2.52	0.52
16:N:24:PRO:CB	16:N:49:VAL:HG21	2.40	0.52
16:N:26:ASP:OD1	16:N:88:ILE:HB	2.09	0.52
16:N:47:GLY:O	16:N:63:VAL:HB	2.10	0.52
16:N:100:TYR:O	16:N:103:ARG:CZ	2.58	0.52
17:O:64:ARG:NH2	17:O:64:ARG:CB	2.73	0.52
18:P:40:LEU:HD22	18:P:40:LEU:C	2.35	0.52
18:P:75:PHE:CD2	18:P:75:PHE:N	2.75	0.52
19:Q:24:ILE:HG12	19:Q:36:LEU:CD1	2.38	0.52
21:S:55:TYR:HB2	21:S:56:PRO:HD3	1.77	0.52
23:U:62:LEU:O	23:U:63:VAL:C	2.51	0.52
25:W:4:SER:O	25:W:7:ARG:N	2.41	0.52
27:Y:20:ARG:HB3	27:Y:23:HIS:HD2	1.75	0.52
28:Z:1:MET:C	28:Z:2:LYS:HD3	2.35	0.52
29:a:22:VAL:CG2	29:a:53:PRO:HB2	2.40	0.52
31:y:5:U:O2	38:f:98:THR:OG1	2.24	0.52
31:y:191(F):U:H2'	31:y:191(G):G:H8	1.67	0.52
31:y:344:A:H2'	31:y:346:G:O6	2.09	0.52
31:y:369:C:O2'	31:y:370:C:H5'	2.09	0.52
31:y:493:G:H2'	31:y:494:U:C5	2.45	0.52
31:y:577:G:H2'	31:y:578:C:O5'	2.09	0.52
31:y:616:G:H2'	31:y:617:G:C8	2.44	0.52
31:y:757:U:H2'	31:y:758:G:O4'	2.09	0.52
31:y:886:G:C6	31:y:887:G:C5	2.98	0.52
31:y:1011:G:H8	31:y:1011:G:O5'	1.93	0.52
31:y:1103:C:O3'	31:y:1104:G:O4'	2.26	0.52
31:y:1141:C:C3'	31:y:1142:G:H5''	2.38	0.52
31:y:1266:G:C4	31:y:1268:A:P	3.02	0.52
31:y:1269:A:C8	31:y:1269:A:P	3.01	0.52
31:y:1441:G:H1'	31:y:1461:G:N2	2.25	0.52
32:z:71:G:O6	32:z:72:C:C5	2.62	0.52
33:0:37:A:H3'	33:0:38:A:O4'	2.09	0.52
35:c:28:PHE:CZ	35:c:32:ILE:CG2	2.89	0.52
35:c:144:ARG:HA	35:c:147:LYS:HE2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:184:TYR:CE2	36:d:201:TYR:HD2	2.27	0.52
37:e:17:VAL:HG11	37:e:19:LEU:HD23	1.90	0.52
37:e:78:LEU:HA	37:e:81:GLU:OE2	2.10	0.52
38:f:142:LEU:C	38:f:143:ARG:NE	2.65	0.52
40:h:149:ARG:CB	44:l:59:TYR:HB2	2.38	0.52
43:k:31:GLY:N	43:k:81:THR:HA	2.24	0.52
44:l:57:THR:OG1	44:l:58:PRO:CD	2.53	0.52
49:q:6:LEU:CD2	49:q:6:LEU:H	2.18	0.52
49:q:19:ILE:O	49:q:35:LYS:HA	2.10	0.52
53:u:80:ARG:O	53:u:84:LEU:HB3	2.09	0.52
1:w:18:C:O5'	1:w:18:C:C6	2.54	0.52
1:w:465:G:C5	1:w:466:A:C2	2.98	0.52
1:w:500:G:N2	1:w:503:A:OP2	2.43	0.52
1:w:518:G:O2'	1:w:519:U:C5'	2.57	0.52
1:w:519:U:O4'	19:Q:75:TYR:HA	2.10	0.52
1:w:560:C:C4'	17:O:52:ARG:NH1	2.53	0.52
1:w:640:C:C2	1:w:641:C:C5	2.97	0.52
1:w:770:G:N3	1:w:770:G:H2'	2.25	0.52
1:w:777:A:H2'	1:w:778:G:O4'	2.10	0.52
1:w:779:U:O5'	1:w:779:U:H6	1.93	0.52
1:w:813:U:C6	1:w:813:U:C3'	2.93	0.52
1:w:855:G:OP1	1:w:855:G:H4'	2.09	0.52
1:w:885:C:H5''	1:w:886:C:H3'	1.92	0.52
1:w:937:U:C2'	1:w:938:G:C8	2.93	0.52
1:w:940:G:N3	1:w:941:A:C8	2.78	0.52
1:w:987:G:H5''	26:X:11:SER:CB	2.40	0.52
1:w:1005:C:O2'	10:H:51:THR:OG1	2.14	0.52
1:w:1006:C:O2'	10:H:129:MET:HE3	2.09	0.52
1:w:1027:A:H4'	2:x:88:C:N3	2.25	0.52
1:w:1153:C:OP1	17:O:76:TYR:OH	2.28	0.52
1:w:1158:C:H4'	26:X:30:ARG:HG3	1.91	0.52
1:w:1173:G:O5'	1:w:1174:A:C5'	2.58	0.52
1:w:1223:G:H5'	1:w:1224:C:OP2	2.09	0.52
1:w:1356:G:H22	1:w:1376:C:N4	1.99	0.52
1:w:1361:G:H2'	1:w:1362:C:C4'	2.39	0.52
1:w:1413:G:H8	1:w:1413:G:OP2	1.92	0.52
1:w:1568:G:C8	1:w:1568:G:C3'	2.93	0.52
1:w:1569:A:O4'	4:B:59:LYS:HE2	2.10	0.52
1:w:1576:U:C2'	1:w:1577:C:H5'	2.40	0.52
1:w:1770:G:O2'	1:w:1771:C:H5'	2.10	0.52
1:w:1906:G:C5	1:w:1929:G:C2	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1927:A:N6	1:w:1928:A:N6	2.58	0.52
1:w:2079:U:C2	1:w:2241:A:C2	2.97	0.52
1:w:2085:C:H3'	1:w:2086:U:H5	1.74	0.52
1:w:2187:G:H2'	1:w:2188:C:H5''	1.91	0.52
1:w:2286:A:H5''	1:w:2287:A:P	2.48	0.52
1:w:2308:G:P	1:w:2310:A:N6	2.83	0.52
1:w:2344:U:H4'	1:w:2345:G:O5'	2.08	0.52
1:w:2431:U:C2	1:w:2433:A:OP2	2.62	0.52
1:w:2440:C:O3'	1:w:2587:A:H4'	2.10	0.52
1:w:2516:G:N2	1:w:2569:G:C4	2.78	0.52
1:w:2560:C:O2'	1:w:2561:A:H5'	2.10	0.52
1:w:2657:A:OP2	1:w:2657:A:C8	2.62	0.52
1:w:2901:C:C4	1:w:2902:C:C5	2.98	0.52
2:x:17:C:H2'	2:x:18:G:O4'	2.10	0.52
3:A:27:ALA:O	3:A:30:VAL:CG2	2.58	0.52
3:A:55:SER:C	3:A:57:GLN:H	2.18	0.52
4:B:8:PRO:CB	4:B:14:ARG:O	2.52	0.52
4:B:27:THR:CG2	4:B:83:GLU:HG2	2.39	0.52
5:C:101:ARG:O	5:C:201:THR:HB	2.10	0.52
5:C:169:ASN:ND2	5:C:203:LYS:HB3	2.25	0.52
6:D:38:LYS:O	6:D:39:ARG:C	2.52	0.52
6:D:186:ARG:O	6:D:187:LEU:HB2	2.10	0.52
7:E:25:TYR:HD2	7:E:31:VAL:CG2	2.22	0.52
7:E:43:LEU:HD21	7:E:45:GLU:OE1	2.10	0.52
8:F:19:VAL:CA	8:F:24:VAL:HA	2.40	0.52
8:F:114:VAL:O	8:F:115:VAL:HG23	2.10	0.52
9:G:122:GLU:OE2	9:G:126:TYR:HB2	2.10	0.52
12:J:82:GLY:HA2	12:J:113:LYS:C	2.35	0.52
12:J:138:LEU:CB	12:J:144:GLU:HG3	2.40	0.52
13:K:52:VAL:O	13:K:53:ALA:C	2.53	0.52
14:L:68:ARG:NH1	14:L:69:ASP:H	2.07	0.52
16:N:6:LEU:HD23	16:N:10:VAL:HG23	1.92	0.52
16:N:12:SER:HA	16:N:15:VAL:HG22	1.92	0.52
17:O:110:VAL:O	17:O:111:GLU:C	2.52	0.52
18:P:76:LYS:HD2	18:P:77:ALA:N	2.25	0.52
19:Q:4:LYS:NZ	19:Q:62:HIS:HE1	2.07	0.52
20:R:30:VAL:CG1	20:R:31:HIS:H	2.22	0.52
21:S:23:ARG:CD	21:S:38:ILE:HG21	2.39	0.52
22:T:45:ASP:HB3	22:T:49:ARG:CZ	2.38	0.52
24:V:18:ILE:HD12	24:V:18:ILE:H	1.75	0.52
25:W:8:LYS:HA	25:W:11:GLU:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:47:PRO:HB3	27:Y:57:VAL:CG2	2.39	0.52
30:b:9:ARG:NH2	30:b:15:LYS:HA	2.24	0.52
30:b:34:GLN:C	30:b:35:ARG:HG3	2.35	0.52
31:y:191(G):G:H21	53:u:103:GLY:CA	2.23	0.52
31:y:280:C:OP2	31:y:281:G:C8	2.63	0.52
31:y:403:C:H42	31:y:547:A:H5'	1.75	0.52
31:y:510:A:H8	31:y:510:A:P	2.33	0.52
31:y:565:U:C4	31:y:566:G:C5	2.98	0.52
31:y:677:U:C2	31:y:678:U:C4	2.98	0.52
31:y:781:A:H4'	31:y:1522:U:O2'	2.10	0.52
31:y:809:G:O5'	31:y:809:G:H8	1.93	0.52
31:y:982:U:H3	31:y:1222:G:H22	1.57	0.52
31:y:1029:G:H2'	31:y:103(A):A:H62	1.73	0.52
31:y:1066:C:O2	31:y:1066:C:H2'	2.08	0.52
31:y:1148:U:H2'	31:y:1149:C:H5	1.67	0.52
31:y:1379:G:C8	40:h:4:ARG:CA	2.92	0.52
31:y:1488:G:H2'	31:y:1489:G:H8	1.75	0.52
31:y:1491:G:H5''	45:m:45:LYS:NZ	2.25	0.52
32:z:54:5MU:H2'	32:z:55:PSU:H5'	1.92	0.52
36:d:11:ARG:NH1	36:d:176:HIS:O	2.43	0.52
36:d:87:LEU:CD1	36:d:88:ARG:H	2.20	0.52
36:d:107:GLN:O	36:d:108:ASN:O	2.28	0.52
37:e:59:ARG:HH21	37:e:62:GLN:HG2	1.74	0.52
37:e:74:GLN:HA	37:e:77:ASN:OD1	2.09	0.52
38:f:12:LEU:N	38:f:12:LEU:CD1	2.73	0.52
38:f:45:PHE:CD1	38:f:45:PHE:C	2.86	0.52
38:f:132:ALA:O	38:f:136:MET:HG2	2.10	0.52
41:i:35:ILE:C	41:i:39:LEU:CD2	2.83	0.52
42:j:2:GLU:O	42:j:3:GLN:CB	2.56	0.52
42:j:99:LEU:HD22	42:j:99:LEU:N	2.25	0.52
45:m:24:PRO:HD2	45:m:97:TYR:CE2	2.42	0.52
45:m:38:VAL:CB	45:m:56:LYS:HB2	2.32	0.52
45:m:123:LYS:HE2	45:m:123:LYS:CA	2.21	0.52
46:n:125:ARG:HH11	46:n:125:ARG:CB	2.23	0.52
47:o:47:LEU:HD12	47:o:50:LYS:NZ	2.25	0.52
48:p:78:TYR:O	48:p:82:ILE:HD13	2.09	0.52
49:q:38:TYR:O	49:q:49:LEU:HA	2.10	0.52
50:r:5:VAL:O	50:r:6:LEU:CB	2.58	0.52
53:u:104:LEU:HD12	53:u:104:LEU:C	2.35	0.52
1:w:71:A:N3	20:R:31:HIS:HE1	2.07	0.52
1:w:181:A:H3'	1:w:182:A:H8	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:270(I):C:C2	1:w:270(T):G:C2	2.98	0.52
1:w:292:C:O5'	1:w:293:U:OP2	2.27	0.52
1:w:584:C:O5'	1:w:584:C:H6	1.93	0.52
1:w:588:U:C5	1:w:589:C:N4	2.78	0.52
1:w:703:U:C6	1:w:704:G:C8	2.98	0.52
1:w:759:G:O5'	1:w:759:G:C8	2.56	0.52
1:w:801:G:H3'	1:w:802:A:H5''	1.90	0.52
1:w:847:U:O4	1:w:933:A:N1	2.43	0.52
1:w:888:C:C2	1:w:889:C:C5	2.99	0.52
1:w:1003:G:H21	1:w:1153:C:H1'	1.75	0.52
1:w:1013:C:C5	1:w:1014:U:C5	2.98	0.52
1:w:1085:A:H2'	1:w:1086:A:C5'	2.38	0.52
1:w:1128:A:C6	1:w:2518:A:N1	2.78	0.52
1:w:1196:C:O2	1:w:1197:G:C8	2.63	0.52
1:w:1280:G:OP2	1:w:1280:G:C8	2.61	0.52
1:w:1283:G:N2	1:w:1286:A:OP2	2.42	0.52
1:w:1367:A:C2'	1:w:1368:G:H5'	2.40	0.52
1:w:1371:G:C2'	1:w:1372:U:H5'	2.40	0.52
1:w:1494:A:N6	1:w:1495:A:C6	2.78	0.52
1:w:1669:A:H5''	1:w:1670:C:H5	1.75	0.52
1:w:1771:C:O2'	1:w:1772:G:H5'	2.09	0.52
1:w:1857:G:C1'	1:w:1885:A:N6	2.71	0.52
1:w:1895:C:O5'	1:w:1895:C:H6	1.93	0.52
1:w:1988:C:O5'	1:w:1988:C:H6	1.93	0.52
1:w:2035:G:O5'	1:w:2036:C:H5	1.93	0.52
1:w:2058:A:C8	1:w:2058:A:C3'	2.93	0.52
1:w:2065:C:C3'	1:w:2066:C:C5'	2.87	0.52
1:w:2134:A:C4	1:w:2158:A:N3	2.77	0.52
1:w:2141:G:C4	1:w:2142:C:C5	2.98	0.52
1:w:2244:U:H2'	1:w:2245:U:H6	1.75	0.52
1:w:2278:A:H2'	1:w:2279:G:O5'	2.09	0.52
1:w:2290:G:C8	1:w:2291:U:C5	2.98	0.52
1:w:2450:A:H2	32:z:76:A:C2'	2.23	0.52
2:x:23:G:C2	2:x:61:G:C4	2.98	0.52
2:x:93:C:C3'	2:x:94:C:C6	2.92	0.52
2:x:100:G:H8	2:x:100:G:C5'	2.22	0.52
2:x:114:G:C1'	15:M:50:SER:HG	2.23	0.52
3:A:164:PHE:CZ	3:A:197:LEU:CA	2.78	0.52
4:B:142:VAL:CG2	4:B:192:THR:C	2.82	0.52
4:B:247:ALA:O	4:B:248:SER:CB	2.58	0.52
5:C:192:ASN:C	5:C:192:ASN:ND2	2.66	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:159:ARG:O	6:D:161:ALA:N	2.43	0.52
6:D:163:ARG:NH2	6:D:164:ASN:HB3	2.25	0.52
7:E:92:VAL:CG2	7:E:93:THR:N	2.73	0.52
8:F:98:LEU:HA	8:F:103:LEU:HA	1.92	0.52
9:G:6:LEU:HD13	9:G:35:LEU:CG	2.39	0.52
10:H:69:VAL:HG13	10:H:71:MET:HE1	1.92	0.52
10:H:117:HIS:CE1	10:H:120:ARG:HH11	2.28	0.52
11:I:78:ARG:N	16:N:73:GLU:HB2	2.25	0.52
12:J:127:ALA:C	12:J:129:ALA:H	2.18	0.52
14:L:18:LEU:CA	14:L:21:TYR:CD1	2.92	0.52
14:L:37:THR:CA	14:L:40:LYS:HE3	2.40	0.52
14:L:66:VAL:CG1	14:L:70:LEU:HD12	2.40	0.52
15:M:23:ARG:CB	15:M:24:LEU:HD22	2.38	0.52
15:M:42:ASP:O	15:M:44:LYS:N	2.43	0.52
16:N:45:PHE:CE2	16:N:72:VAL:HB	2.45	0.52
16:N:45:PHE:CE2	16:N:72:VAL:O	2.63	0.52
16:N:50:ILE:CD1	16:N:64:ARG:HB2	2.36	0.52
16:N:86:ILE:HG22	16:N:87:ASP:O	2.10	0.52
17:O:15:LYS:HA	17:O:18:LEU:HD12	1.92	0.52
17:O:27:LEU:HD12	17:O:34:LYS:HE3	1.92	0.52
19:Q:4:LYS:HG2	19:Q:5:ALA:N	2.25	0.52
19:Q:7:ALA:HB3	19:Q:103:ILE:C	2.35	0.52
19:Q:25:ARG:NH2	19:Q:74:ALA:O	2.42	0.52
20:R:62:LYS:HE3	20:R:62:LYS:N	2.24	0.52
22:T:8:TYR:CD1	22:T:39:VAL:HA	2.44	0.52
22:T:99:TYR:HB3	22:T:123:ASP:HB2	1.91	0.52
23:U:26:TYR:CE2	23:U:29:GLN:NE2	2.78	0.52
24:V:40:ARG:HD3	24:V:41:ARG:N	2.24	0.52
24:V:85:LEU:CD1	24:V:88:LYS:N	2.53	0.52
27:Y:38:ALA:O	27:Y:40:LYS:HG3	2.10	0.52
28:Z:46:VAL:HG12	28:Z:47:ARG:N	2.25	0.52
29:a:48:PHE:CD2	29:a:49:VAL:N	2.78	0.52
30:b:15:LYS:C	30:b:25:VAL:HG23	2.35	0.52
31:y:120:A:N6	31:y:122:G:C2	2.78	0.52
31:y:296:U:O2'	31:y:557:G:O4'	2.27	0.52
31:y:360:A:C4	31:y:361:G:C8	2.98	0.52
31:y:399:G:H2'	31:y:400:C:O5'	2.10	0.52
31:y:411:A:OP2	31:y:429:U:H6	1.93	0.52
31:y:475:G:C2	31:y:476:G:C4	2.97	0.52
31:y:490:G:C8	31:y:490:G:O5'	2.63	0.52
31:y:502:G:O2'	31:y:503:C:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:519:C:H3'	31:y:520:A:N7	2.25	0.52
31:y:541:G:C2	31:y:542:G:N9	2.78	0.52
31:y:555:C:O5'	31:y:555:C:C6	2.62	0.52
31:y:571:U:C5'	31:y:572:A:OP2	2.58	0.52
31:y:608:A:H2'	31:y:609:A:C8	2.45	0.52
31:y:609:A:H3'	31:y:610:G:C8	2.44	0.52
31:y:622:A:H8	31:y:622:A:H3'	1.75	0.52
31:y:682:G:C6	31:y:709:G:O6	2.63	0.52
31:y:750:G:N3	48:p:22:THR:O	2.43	0.52
31:y:858:G:H1	31:y:869:G:H3'	1.74	0.52
31:y:883:C:C2'	31:y:884:U:C5'	2.78	0.52
31:y:1003:G:C6	31:y:1004:A:C4	2.98	0.52
31:y:1004:A:C2'	31:y:1005:A:O5'	2.57	0.52
31:y:1067:A:C2'	31:y:1068:G:O4'	2.56	0.52
31:y:1120:G:C6	31:y:1154:G:C2	2.98	0.52
31:y:1195:C:H3'	31:y:1196:U:H5''	1.91	0.52
31:y:1285:A:O2'	31:y:1286:A:P	2.68	0.52
31:y:1329:A:C5'	46:n:26:GLY:HA3	2.32	0.52
31:y:1408:A:C2'	31:y:1409:C:H5'	2.39	0.52
31:y:1449:C:C2	31:y:1450:U:C6	2.97	0.52
32:z:5:G:N1	32:z:69:G:C6	2.78	0.52
32:z:18:G:C5	32:z:57:G:N1	2.78	0.52
35:c:36:ARG:O	35:c:39:ILE:HG12	2.10	0.52
35:c:50:GLU:HG3	35:c:51:LEU:H	1.74	0.52
35:c:184:VAL:CG2	35:c:197:VAL:HB	2.40	0.52
35:c:226:ARG:HB2	35:c:226:ARG:HH11	1.72	0.52
36:d:30:ARG:C	36:d:34:LEU:HD13	2.35	0.52
37:e:8:VAL:O	37:e:9:CYS:C	2.53	0.52
37:e:20:TYR:HA	37:e:26:CYS:HB3	1.92	0.52
37:e:23:GLY:N	37:e:112:VAL:O	2.39	0.52
37:e:35:ARG:CG	37:e:36:ARG:HH21	2.23	0.52
37:e:121:VAL:O	37:e:136:PRO:CD	2.58	0.52
38:f:115:VAL:HG12	38:f:118:ILE:CD1	2.32	0.52
39:g:7:ASN:O	39:g:8:ILE:CD1	2.57	0.52
40:h:119:ARG:NH1	40:h:119:ARG:CB	2.73	0.52
40:h:123:GLU:OE2	40:h:126:ASP:HB2	2.10	0.52
41:i:68:ARG:C	41:i:76:PRO:HG2	2.35	0.52
41:i:89:PRO:HA	41:i:92:ARG:NH2	2.25	0.52
41:i:126:LYS:C	41:i:128:GLY:N	2.65	0.52
44:l:59:TYR:HE1	44:l:63:LEU:HD11	1.74	0.52
46:n:15:VAL:HG22	46:n:16:ASP:OD2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:o:37:PHE:C	47:o:39:LEU:H	2.17	0.52
48:p:44:LYS:O	48:p:45:VAL:CG2	2.58	0.52
49:q:17:TYR:O	49:q:39:TYR:HB3	2.09	0.52
49:q:55:ARG:O	49:q:58:TYR:HB3	2.10	0.52
52:t:12:ASP:HB2	52:t:15:LEU:CD1	2.39	0.52
53:u:43:LEU:HD22	53:u:51:GLU:CG	2.25	0.52
53:u:87:LYS:HB3	53:u:91:LEU:CG	2.40	0.52
1:w:77:C:C2'	1:w:78:A:H5'	2.38	0.51
1:w:130:C:O2'	1:w:1349:A:H1'	2.11	0.51
1:w:207:A:O2'	1:w:208:C:H5'	2.10	0.51
1:w:217:G:C6	1:w:218:A:C6	2.98	0.51
1:w:270(Q):C:OP1	1:w:270(Q):C:H6	1.93	0.51
1:w:299:A:H8	1:w:299:A:OP2	1.93	0.51
1:w:307:G:C2	1:w:309:G:H3'	2.38	0.51
1:w:340:A:C3'	1:w:341:G:H5'	2.39	0.51
1:w:457:A:C4'	28:Z:40:TRP:HZ2	2.18	0.51
1:w:507:A:H5'	1:w:509:C:C1'	2.40	0.51
1:w:522:G:H2'	1:w:523:C:C6	2.44	0.51
1:w:569:U:HO2'	1:w:946:G:N2	2.08	0.51
1:w:676:A:C8	1:w:2069:G:N2	2.78	0.51
1:w:695:G:H2'	1:w:696:G:H5'	1.92	0.51
1:w:775:G:O5'	1:w:777:A:H1'	2.11	0.51
1:w:827:U:N3	1:w:2430:A:C6	2.78	0.51
1:w:830:G:C4	1:w:2448:A:C5	2.98	0.51
1:w:855:G:C2	23:U:27:GLU:HB3	2.41	0.51
1:w:1025:G:C5	1:w:1135:C:C1'	2.93	0.51
1:w:1085:A:O5'	1:w:1085:A:H8	1.93	0.51
1:w:1255:U:O2	6:D:67:ARG:CB	2.37	0.51
1:w:1259:G:C4	1:w:1260:G:C5	2.98	0.51
1:w:1296:G:H4'	14:L:16:HIS:CE1	2.45	0.51
1:w:1322:A:OP2	1:w:1322:A:H8	1.93	0.51
1:w:1326:U:C4	1:w:1648:C:O2'	2.63	0.51
1:w:1581:G:C2'	1:w:1582:C:O4'	2.45	0.51
1:w:1668:A:C6	1:w:1993:U:N3	2.78	0.51
1:w:1693:U:HO2'	1:w:1694:C:P	2.30	0.51
1:w:1756:G:C4'	1:w:1757:U:OP1	2.54	0.51
1:w:1830:C:H2'	1:w:1831:G:C5'	2.40	0.51
1:w:1863:G:C2'	1:w:1864:U:C4'	2.88	0.51
1:w:1944:U:C5	1:w:1955:U:C6	2.99	0.51
1:w:2009:G:C5'	19:Q:41:LYS:CE	2.68	0.51
1:w:2315:G:C8	1:w:2315:G:C3'	2.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2348:U:C6	1:w:2382:G:N2	2.77	0.51
1:w:2353:G:C1'	23:U:34:GLY:HA3	2.40	0.51
1:w:2356:C:C6	1:w:2357:U:C5	2.98	0.51
1:w:2403:C:C2	1:w:2404:C:C5	2.98	0.51
1:w:2414:G:C6	1:w:2415:G:C8	2.98	0.51
1:w:2441:C:P	1:w:2587:A:H4'	2.50	0.51
1:w:2478:A:O2'	1:w:2479:G:H5'	2.09	0.51
1:w:2572:A:P	1:w:2574:G:HO2'	2.33	0.51
1:w:2572:A:H2'	5:C:144:ARG:HE	1.75	0.51
1:w:2726:U:O2'	1:w:2727:G:H8	1.82	0.51
1:w:2743:C:N3	1:w:2744:G:C8	2.78	0.51
1:w:2783:G:C2'	1:w:2784:C:C5	2.90	0.51
2:x:85:G:C6	2:x:86:G:C5	2.98	0.51
3:A:28:HIS:O	3:A:30:VAL:N	2.42	0.51
3:A:217:THR:N	3:A:220:GLY:O	2.43	0.51
4:B:256:GLY:O	4:B:258:LYS:N	2.44	0.51
5:C:119:ARG:HD2	5:C:120:TRP:CZ2	2.42	0.51
6:D:151:LEU:N	6:D:169:VAL:HG11	2.25	0.51
6:D:155:ASN:CB	6:D:157:LEU:HD12	2.40	0.51
7:E:18:GLU:OE2	7:E:18:GLU:CA	2.57	0.51
7:E:35:GLU:CD	7:E:161:THR:C	2.78	0.51
7:E:135:LEU:CD1	7:E:136:ARG:N	2.73	0.51
8:F:88:LEU:HD21	8:F:165:ALA:HA	1.91	0.51
8:F:124:GLU:CB	8:F:132:ARG:HG2	2.32	0.51
9:G:101:LEU:CD1	9:G:107:ILE:CG2	2.67	0.51
10:H:90:LEU:CA	10:H:110:LEU:HG	2.40	0.51
10:H:121:VAL:O	10:H:124:HIS:N	2.43	0.51
13:K:42:ILE:CD1	13:K:46:GLN:HB2	2.32	0.51
14:L:47:PHE:CD1	14:L:48:VAL:HG12	2.45	0.51
16:N:22:PHE:CD1	16:N:23:ARG:N	2.78	0.51
16:N:108:ARG:O	16:N:112:ARG:HB2	2.10	0.51
17:O:38:THR:HG23	17:O:42:ALA:CB	2.41	0.51
17:O:105:VAL:O	17:O:109:LEU:HD21	2.10	0.51
19:Q:5:ALA:HB3	19:Q:105:VAL:HG11	1.92	0.51
19:Q:6:ILE:O	19:Q:105:VAL:HG23	2.10	0.51
20:R:17:ALA:HA	20:R:26:TYR:HA	1.92	0.51
22:T:28:MET:HE1	22:T:34:ASN:HA	1.92	0.51
22:T:41:LEU:C	22:T:44:PHE:CD2	2.88	0.51
22:T:102:LEU:HD13	22:T:123:ASP:HA	1.91	0.51
23:U:28:GLY:HA2	23:U:67:VAL:CA	2.40	0.51
27:Y:32:PRO:O	27:Y:33:CYS:HB2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:6:G:O6	41:i:102:ARG:CZ	2.57	0.51
31:y:161:A:C8	31:y:161:A:O5'	2.53	0.51
31:y:195:A:P	53:u:65:LYS:HE3	2.50	0.51
31:y:220:G:C2	31:y:221:C:C5	2.99	0.51
31:y:227:G:N1	31:y:228:A:C8	2.77	0.51
31:y:268:C:C2	31:y:269:C:C6	2.98	0.51
31:y:438:G:C4	31:y:494:U:C5	2.98	0.51
31:y:445:G:H2'	31:y:446:G:C8	2.45	0.51
31:y:477:G:H2'	31:y:478:A:C8	2.46	0.51
31:y:483:C:OP2	31:y:484:G:H2'	2.09	0.51
31:y:514:C:H2'	31:y:515:G:N7	2.25	0.51
31:y:517:G:N2	31:y:532:A:O3'	2.43	0.51
31:y:601:C:C3'	31:y:602:A:C8	2.92	0.51
31:y:671:G:C6	31:y:736:C:N4	2.78	0.51
31:y:738:C:O5'	31:y:738:C:C6	2.59	0.51
31:y:757:U:C2'	31:y:758:G:O4'	2.58	0.51
31:y:819:A:H4'	31:y:820:U:OP1	2.10	0.51
31:y:890:G:O2'	31:y:906:G:C6	2.63	0.51
31:y:1269:A:H1'	31:y:1326:C:C1'	2.35	0.51
31:y:1428:A:C2	31:y:1472:U:O2	2.63	0.51
31:y:1470:G:C3'	31:y:1471:G:H5'	2.36	0.51
33:0:68:U:H2'	33:0:69:U:O4'	2.09	0.51
35:c:44:LEU:CA	35:c:47:THR:CG2	2.81	0.51
36:d:92:ALA:HB1	36:d:98:ASN:CB	2.40	0.51
36:d:118:GLN:OE1	36:d:119:ARG:N	2.43	0.51
37:e:117:ALA:O	37:e:121:VAL:HG23	2.09	0.51
37:e:207:TYR:O	37:e:208:SER:C	2.52	0.51
38:f:57:LYS:HD2	38:f:58:ALA:N	2.25	0.51
39:g:67:MET:HB2	39:g:68:PRO:CD	2.40	0.51
40:h:16:LEU:HB2	42:j:44:VAL:HG12	1.90	0.51
40:h:97:GLN:O	40:h:101:LEU:HG	2.11	0.51
40:h:134:ALA:O	40:h:135:VAL:C	2.53	0.51
41:i:29:SER:HB3	41:i:32:LYS:CD	2.40	0.51
41:i:42:GLU:CB	41:i:44:PHE:CD2	2.92	0.51
42:j:116:LYS:HG2	42:j:122:ALA:HB1	1.87	0.51
44:l:20:TYR:HE1	44:l:33:THR:OG1	1.92	0.51
44:l:39:PRO:O	44:l:40:ILE:CD1	2.52	0.51
44:l:96:ARG:C	44:l:98:LEU:H	2.18	0.51
45:m:14:ARG:O	45:m:14:ARG:CZ	2.58	0.51
45:m:42:VAL:N	45:m:54:VAL:HG11	2.26	0.51
46:n:39:ILE:HG23	46:n:52:GLU:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:n:55:ARG:HG3	46:n:56:LEU:HD13	1.91	0.51
47:o:29:ARG:HB2	47:o:29:ARG:HH11	1.73	0.51
50:r:21:VAL:CG1	50:r:59:ILE:HG13	2.40	0.51
51:s:37:VAL:HA	51:s:40:LEU:HD12	1.92	0.51
52:t:51:VAL:O	52:t:53:ASN:N	2.42	0.51
1:w:48:G:C2	1:w:178:G:C6	2.98	0.51
1:w:348:G:C8	1:w:349:G:C8	2.99	0.51
1:w:579:G:C2	1:w:580:C:N3	2.78	0.51
1:w:621:A:C2	1:w:622:G:C8	2.97	0.51
1:w:669:G:C2	1:w:670:A:N9	2.77	0.51
1:w:674:G:H5''	6:D:72:ASP:CA	2.40	0.51
1:w:674:G:H2'	1:w:675:A:C5'	2.35	0.51
1:w:743:G:H2'	1:w:744:G:C8	2.46	0.51
1:w:768:G:C4	1:w:769:G:N7	2.78	0.51
1:w:849:A:N6	1:w:929:G:H1'	2.24	0.51
1:w:936:C:C2'	1:w:937:U:C5'	2.89	0.51
1:w:974(B):C:OP2	1:w:974(B):C:H4'	2.09	0.51
1:w:1337:G:C6	1:w:1338:G:C6	2.98	0.51
1:w:1480:G:C6	1:w:1514:U:N3	2.79	0.51
1:w:1576:U:O2'	1:w:1577:C:H5''	2.10	0.51
1:w:1833:U:O2'	1:w:1834:U:H5'	2.10	0.51
1:w:2003:G:H2'	1:w:2004:G:O5'	2.11	0.51
1:w:2145:C:H2'	1:w:2146:C:C4	2.45	0.51
1:w:2263:C:N4	1:w:2264:C:C5	2.78	0.51
1:w:2305:A:H2'	1:w:2306:C:O5'	2.10	0.51
1:w:2556:C:H2'	1:w:2557:G:C5'	2.40	0.51
1:w:2563:U:O2'	1:w:2565:A:N7	2.39	0.51
1:w:2654:A:C6	1:w:2666:C:N4	2.64	0.51
1:w:2682:U:C2	5:C:11:MET:HE2	2.45	0.51
1:w:2780:G:HO2'	1:w:2781:A:P	2.33	0.51
1:w:2901:C:C4	1:w:2902:C:C4	2.98	0.51
2:x:24:G:N2	2:x:56:G:H21	2.07	0.51
2:x:42:C:C3'	2:x:43:C:H6	2.23	0.51
3:A:184:GLU:C	3:A:186:LEU:H	2.18	0.51
4:B:55:GLY:N	4:B:216:GLY:O	2.44	0.51
5:C:103:ASP:O	5:C:104:VAL:HG22	2.10	0.51
5:C:109:LYS:NZ	14:L:4:LEU:CG	2.72	0.51
5:C:179:GLU:H	5:C:181:LEU:CD2	2.20	0.51
6:D:85:PHE:CB	6:D:88:LYS:HE2	2.35	0.51
6:D:119:LEU:HD22	6:D:189:MET:HB2	1.92	0.51
6:D:135:LEU:O	6:D:138:ALA:CB	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:25:TYR:HD1	7:E:25:TYR:H	1.58	0.51
7:E:33:ARG:N	7:E:33:ARG:HD2	2.23	0.51
7:E:34:LEU:HG	7:E:35:GLU:H	1.76	0.51
8:F:64:LEU:O	8:F:66:GLY:N	2.41	0.51
8:F:141:VAL:O	8:F:141:VAL:HG12	2.10	0.51
10:H:38:LEU:CD1	10:H:39:ILE:N	2.64	0.51
11:I:12:ASP:CG	11:I:13:ASN:N	2.67	0.51
11:I:22:ILE:HD11	11:I:40:VAL:CG2	2.40	0.51
13:K:7:MET:O	13:K:8:LYS:O	2.29	0.51
15:M:9:ARG:HB2	15:M:9:ARG:NH2	2.24	0.51
15:M:27:SER:O	15:M:28:VAL:CG2	2.57	0.51
16:N:91:ARG:O	16:N:114:LEU:HD13	2.09	0.51
18:P:43:GLU:HA	18:P:47:VAL:CG1	2.40	0.51
19:Q:68:ARG:HH21	19:Q:109:GLU:HG2	1.75	0.51
20:R:28:PHE:C	20:R:29:TRP:CD1	2.84	0.51
20:R:84:ALA:N	20:R:85:PRO:HD3	2.25	0.51
22:T:152:ALA:HB3	22:T:169:GLU:H	1.76	0.51
23:U:49:LYS:CE	23:U:80:HIS:HB3	2.40	0.51
29:a:53:PRO:CA	29:a:56:GLU:OE1	2.57	0.51
31:y:44:G:H5''	49:q:12:LYS:CE	2.41	0.51
31:y:116:A:C3'	31:y:117:G:H8	2.24	0.51
31:y:132:C:H2'	31:y:133:U:C5'	2.07	0.51
31:y:137:C:H6	31:y:137:C:O5'	1.93	0.51
31:y:216:G:H2'	31:y:217:C:H6	1.71	0.51
31:y:343:U:H3'	31:y:345:C:C5	2.45	0.51
31:y:581:G:N2	31:y:760:G:N7	2.57	0.51
31:y:652:U:C5	31:y:752:G:C6	2.99	0.51
31:y:714:G:C8	31:y:714:G:P	3.01	0.51
31:y:725:G:H5'	31:y:834:C:H1'	1.93	0.51
31:y:831:U:O2'	31:y:832:C:C5'	2.58	0.51
31:y:1050:G:N2	31:y:1208:C:N3	2.57	0.51
31:y:1053:G:O4'	31:y:1054:C:H5''	2.10	0.51
31:y:1061:G:C5	31:y:1062:U:O4	2.63	0.51
31:y:1091:U:C1'	31:y:1095:U:C2	2.88	0.51
31:y:1114:C:C2	31:y:1115:C:C5	2.97	0.51
31:y:1267:C:H1'	54:v:20:LYS:HE3	1.92	0.51
31:y:1375:A:H5''	40:h:29:LYS:CG	2.35	0.51
31:y:1411:C:N3	31:y:1412:C:C4	2.78	0.51
35:c:32:ILE:HB	35:c:41:ILE:O	2.10	0.51
35:c:124:SER:O	35:c:126:GLU:N	2.43	0.51
36:d:71:ALA:HA	36:d:106:VAL:CB	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:76:ARG:NH1	37:e:79:PHE:CB	2.73	0.51
38:f:142:LEU:HD23	38:f:143:ARG:H	1.74	0.51
41:i:77:GLU:OE2	41:i:81:HIS:CD2	2.63	0.51
41:i:118:VAL:O	41:i:119:LEU:HD23	2.11	0.51
42:j:11:LYS:O	42:j:69:GLY:HA3	2.09	0.51
44:l:78:GLN:NE2	44:l:103:LEU:HD11	2.24	0.51
44:l:83:ILE:HA	44:l:109:VAL:O	2.10	0.51
45:m:42:VAL:N	45:m:54:VAL:CG1	2.73	0.51
46:n:48:LEU:C	46:n:48:LEU:HD13	2.35	0.51
46:n:95:GLY:C	46:n:110:ARG:HB2	2.34	0.51
49:q:67:THR:HG22	49:q:68:ASP:N	2.18	0.51
52:t:6:LYS:N	52:t:6:LYS:CD	2.72	0.51
53:u:61:SER:O	53:u:65:LYS:HG2	2.10	0.51
1:w:44:A:H2'	1:w:45:G:C8	2.45	0.51
1:w:74:A:C2	1:w:74:A:OP2	2.64	0.51
1:w:89:G:N7	1:w:90:U:C5	2.78	0.51
1:w:132:G:H5'	1:w:132:G:C8	2.40	0.51
1:w:149:A:O2'	1:w:150:C:H5'	2.10	0.51
1:w:173:G:C3'	1:w:174:C:C6	2.93	0.51
1:w:189:G:N1	1:w:205:G:O2'	2.37	0.51
1:w:242:G:N7	29:a:5:LYS:HB3	2.21	0.51
1:w:243:U:HO2'	1:w:244:A:H5'	1.73	0.51
1:w:264:C:H4'	1:w:429:A:C2	2.44	0.51
1:w:267:C:C4	1:w:268:C:N4	2.78	0.51
1:w:456:C:OP1	1:w:456:C:C5	2.63	0.51
1:w:503:A:O4'	1:w:505:A:C8	2.64	0.51
1:w:557:U:O2	1:w:558:G:C8	2.63	0.51
1:w:607:U:C5	1:w:620:G:N2	2.79	0.51
1:w:609(B):G:H2'	1:w:610:C:H6	1.68	0.51
1:w:720:C:H2'	1:w:721:C:H6	1.75	0.51
1:w:789:A:P	1:w:790:C:H5	2.33	0.51
1:w:859:G:HO2'	1:w:860:U:H6	1.58	0.51
1:w:916:G:O2'	1:w:917:A:O4'	2.27	0.51
1:w:1150:C:H2'	1:w:1151:G:O4'	2.09	0.51
1:w:1276:A:N1	1:w:1294:U:C2	2.78	0.51
1:w:1356:G:O2'	1:w:1357:U:O4'	2.27	0.51
1:w:1519:G:C2	1:w:1520:U:C1'	2.93	0.51
1:w:1760:A:C2	1:w:1761:C:C1'	2.92	0.51
1:w:1810:A:H3'	1:w:1810:A:H8	1.75	0.51
1:w:1820:U:N3	4:B:201:HIS:CE1	2.78	0.51
1:w:2048:G:H2'	1:w:2049:G:O5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2100:G:C2	1:w:2101:G:C8	2.98	0.51
1:w:2141:G:C6	1:w:2151:G:C2	2.98	0.51
1:w:2159:G:C2	1:w:2160:G:C1'	2.93	0.51
1:w:2270:G:N2	1:w:2271:G:C4	2.78	0.51
1:w:2295:C:H2'	1:w:2296:U:H5	1.75	0.51
1:w:2355:C:O4'	23:U:36:ILE:CB	2.58	0.51
1:w:2359:C:C4	12:J:55:ARG:NH2	2.78	0.51
1:w:2460:U:O2	1:w:2492:U:O4	2.28	0.51
1:w:2576:G:C2	1:w:2576:G:P	3.03	0.51
1:w:2594:C:N3	1:w:2599:G:N1	2.52	0.51
1:w:2619:C:O2'	5:C:156:MET:HB2	2.10	0.51
1:w:2654:A:O2'	1:w:2655:G:P	2.69	0.51
1:w:2749:A:H2'	1:w:2750:A:C8	2.45	0.51
1:w:2825:G:C8	1:w:2825:G:C3'	2.93	0.51
1:w:2900:A:N1	1:w:2901:C:C4	2.79	0.51
2:x:13:A:C2	2:x:70:C:H5'	2.45	0.51
3:A:43:GLU:OE2	3:A:217:THR:HA	2.10	0.51
3:A:216:THR:HB	3:A:220:GLY:O	2.09	0.51
4:B:65:ILE:HD12	4:B:105:ILE:CA	2.39	0.51
4:B:267:SER:O	4:B:268:ARG:CB	2.58	0.51
4:B:271:ILE:CG2	4:B:272:ALA:N	2.72	0.51
5:C:11:MET:HB3	5:C:24:THR:HA	1.92	0.51
5:C:59:VAL:HG21	5:C:63:LEU:CB	2.40	0.51
6:D:61:PRO:HG2	6:D:65:THR:HA	1.92	0.51
6:D:155:ASN:HB2	6:D:157:LEU:CD1	2.41	0.51
7:E:46:ALA:O	7:E:53:LEU:HD21	2.10	0.51
7:E:60:LEU:O	7:E:63:ILE:CB	2.58	0.51
7:E:82:LEU:HD12	7:E:84:LYS:CG	2.41	0.51
7:E:153:ARG:CG	7:E:154:GLY:N	2.73	0.51
8:F:10:PRO:C	8:F:12:PRO:HD3	2.34	0.51
8:F:126:PRO:C	8:F:128:PRO:HA	2.36	0.51
9:G:2:LYS:CB	9:G:20:ASP:HA	2.40	0.51
9:G:40:THR:HG21	9:G:43:ASN:HB2	1.89	0.51
9:G:42:SER:O	9:G:45:LYS:HB2	2.09	0.51
9:G:110:ASP:O	9:G:112:LYS:N	2.38	0.51
9:G:124:GLY:CA	9:G:144:VAL:CA	2.87	0.51
10:H:40:ASP:OD1	10:H:83:ILE:CD1	2.58	0.51
10:H:82:LYS:C	10:H:83:ILE:O	2.54	0.51
10:H:100:GLY:C	10:H:101:TYR:CD1	2.89	0.51
10:H:107:LYS:O	10:H:108:ILE:CG1	2.58	0.51
11:I:6:THR:C	11:I:7:TYR:HD2	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:39:ILE:HD11	11:I:62:VAL:HG23	1.90	0.51
11:I:69:VAL:CG2	11:I:70:LYS:H	2.16	0.51
12:J:95:VAL:CB	12:J:125:VAL:HB	2.40	0.51
12:J:110:TYR:CE2	12:J:111:ARG:NE	2.78	0.51
13:K:91:GLU:OE2	13:K:92:GLY:N	2.43	0.51
15:M:88:ASP:O	15:M:89:ARG:CG	2.46	0.51
16:N:11:GLU:O	16:N:13:ARG:N	2.44	0.51
16:N:48:ILE:CG2	16:N:49:VAL:H	2.22	0.51
16:N:95:ARG:HE	16:N:96:ARG:HH22	1.58	0.51
17:O:59:ARG:O	17:O:60:LEU:C	2.54	0.51
18:P:1:MET:HG2	18:P:2:PHE:N	2.25	0.51
19:Q:39:THR:CB	27:Y:28:PRO:HG3	2.39	0.51
20:R:13:LEU:HD22	20:R:29:TRP:HZ2	1.74	0.51
20:R:87:GLN:HG2	20:R:90:GLU:OE2	2.10	0.51
21:S:60:PHE:CD1	21:S:61:ILE:N	2.78	0.51
25:W:1:MET:O	25:W:2:LYS:C	2.53	0.51
25:W:29:LYS:HZ2	25:W:29:LYS:HB2	1.75	0.51
26:X:40:THR:OG1	26:X:43:ILE:CD1	2.58	0.51
28:Z:26:GLY:O	28:Z:29:LYS:CB	2.56	0.51
31:y:15:G:O5'	31:y:1396:A:O2'	2.28	0.51
31:y:36:C:OP1	45:m:120:GLY:CA	2.56	0.51
31:y:95:G:O2'	31:y:96:G:H8	1.88	0.51
31:y:186(G):C:N3	31:y:191(B):G:N2	2.58	0.51
31:y:256:U:C2	31:y:270:A:C2	2.98	0.51
31:y:257:G:C2'	31:y:258:G:O4'	2.58	0.51
31:y:265:G:H3'	31:y:267:C:C5	2.45	0.51
31:y:266:G:O5'	31:y:267:C:H5	1.92	0.51
31:y:268:C:C2'	31:y:269:C:O4'	2.53	0.51
31:y:276:G:C6	31:y:277:C:C5	2.98	0.51
31:y:337:C:C2	31:y:338:A:N7	2.78	0.51
31:y:394:G:C2	31:y:395:C:C5	2.98	0.51
31:y:579:G:H2'	31:y:580:U:C6	2.46	0.51
31:y:597:G:HO2'	41:i:94:TYR:HD1	1.54	0.51
31:y:598:U:C4'	41:i:94:TYR:CB	2.74	0.51
31:y:656:C:C2'	31:y:657:G:O4'	2.59	0.51
31:y:673:G:C2	31:y:674:G:C4	2.98	0.51
31:y:718:G:C2'	44:l:116:HIS:HB2	2.40	0.51
31:y:745:C:H5''	31:y:851:G:C2'	2.41	0.51
31:y:784:C:H2'	31:y:785:G:H8	1.75	0.51
31:y:855:G:C2	31:y:856:C:N3	2.78	0.51
31:y:894:G:N1	31:y:895:G:C8	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:944:G:H21	31:y:1339:A:H62	0.55	0.51
31:y:1096:C:N4	31:y:1097:C:N4	2.59	0.51
31:y:1119:C:O2	31:y:1120:G:C8	2.63	0.51
31:y:1121:U:O5'	31:y:1121:U:H6	1.94	0.51
31:y:1266:G:H1'	31:y:1269:A:H61	1.74	0.51
31:y:1383:C:O2'	31:y:1384:C:H5'	2.09	0.51
31:y:1516:G:C2'	31:y:1518:MA6:P	2.98	0.51
31:y:1524:C:O5'	31:y:1524:C:H6	1.93	0.51
32:z:55:PSU:O2	32:z:57:G:H3'	2.10	0.51
35:c:35:GLU:HG3	35:c:39:ILE:C	2.33	0.51
35:c:66:GLY:O	35:c:68:ILE:HD12	2.10	0.51
35:c:97:TRP:CD1	35:c:101:MET:SD	3.04	0.51
35:c:115:LEU:HA	35:c:142:LEU:CD1	2.40	0.51
36:d:44:GLU:OE1	36:d:48:TYR:HA	2.10	0.51
36:d:69:HIS:CD2	36:d:107:GLN:HE21	2.27	0.51
36:d:137:ALA:CA	36:d:140:ARG:CZ	2.89	0.51
36:d:182:ILE:CD1	36:d:203:PHE:HB2	2.41	0.51
37:e:61:LYS:C	37:e:61:LYS:CD	2.70	0.51
39:g:19:LEU:HD21	39:g:59:TYR:CE2	2.45	0.51
46:n:22:ILE:CB	46:n:25:ILE:CD1	2.54	0.51
46:n:34:LEU:HD12	46:n:34:LEU:O	2.10	0.51
50:r:26:GLN:O	50:r:27:PHE:CB	2.59	0.51
50:r:56:VAL:HB	50:r:78:GLU:HB2	1.92	0.51
50:r:100:LYS:HZ2	50:r:101:ARG:CD	2.18	0.51
53:u:48:LYS:O	53:u:52:ALA:HB2	2.10	0.51
1:w:65:C:H2'	1:w:66:C:C6	2.45	0.51
1:w:71:A:OP2	1:w:113:G:H5'	2.09	0.51
1:w:90:U:O4	1:w:91:A:N6	2.42	0.51
1:w:135:G:C2	1:w:136:G:C8	2.99	0.51
1:w:173:G:C3'	1:w:174:C:H6	2.22	0.51
1:w:222:A:H3'	1:w:421:U:OP1	2.09	0.51
1:w:253:C:C2'	1:w:254:G:O5'	2.51	0.51
1:w:257:A:H8	1:w:257:A:O5'	1.93	0.51
1:w:293:U:H3'	1:w:294:A:C4'	2.37	0.51
1:w:328:U:O4	1:w:332:A:N7	2.43	0.51
1:w:363(F):U:C2	1:w:363(G):A:C8	2.99	0.51
1:w:389:G:H8	1:w:2413:G:C5'	2.22	0.51
1:w:398:G:N1	1:w:399:G:C5	2.79	0.51
1:w:463:G:N3	1:w:467:G:C5	2.78	0.51
1:w:465:G:H2'	1:w:683:C:HO2'	1.66	0.51
1:w:466:A:C8	1:w:466:A:OP2	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:519:U:P	1:w:520:G:OP2	2.69	0.51
1:w:663:G:C6	1:w:664:C:C2	2.98	0.51
1:w:669:G:N9	1:w:801:G:C5	2.78	0.51
1:w:748:G:C8	1:w:750:A:OP2	2.63	0.51
1:w:789:A:HO2'	1:w:790:C:P	2.32	0.51
1:w:870:A:C6	1:w:871:U:C5	2.99	0.51
1:w:987:G:N7	1:w:988:A:N6	2.58	0.51
1:w:1100:C:H2'	1:w:1101:U:H6	1.74	0.51
1:w:1138:G:C3'	10:H:128:GLY:HA3	2.41	0.51
1:w:1256:G:C2'	1:w:1257:C:O5'	2.59	0.51
1:w:1309:G:OP1	28:Z:9:ARG:CB	2.58	0.51
1:w:1380:G:N1	1:w:1381:G:C5	2.78	0.51
1:w:1394:U:O2'	1:w:1603:A:C5'	2.58	0.51
1:w:1426:G:C8	1:w:1427:A:H2'	2.45	0.51
1:w:1508:A:C2	1:w:1510:A:N7	2.79	0.51
1:w:1556:C:O2'	1:w:1557:C:H5'	2.10	0.51
1:w:1572:A:H2'	1:w:1573:G:C8	2.45	0.51
1:w:1614:A:O5'	1:w:1615:C:H5	1.94	0.51
1:w:1790:C:H2'	1:w:1791:A:C8	2.45	0.51
1:w:1805:U:H5'	4:B:252:TRP:HH2	1.75	0.51
1:w:2016:U:O2'	27:Y:8:LYS:CA	2.59	0.51
1:w:2062:A:OP1	6:D:63:LYS:NZ	2.41	0.51
1:w:2063:C:C2'	1:w:2064:C:H5'	2.37	0.51
1:w:2076:U:H3'	1:w:2076:U:P	2.50	0.51
1:w:2234:G:C2	1:w:2235:G:C8	2.99	0.51
1:w:2268:A:O2'	1:w:2269:A:H5''	2.10	0.51
1:w:2269:A:N3	1:w:2269:A:H2'	2.25	0.51
1:w:2276:G:OP2	13:K:84:GLY:N	2.43	0.51
1:w:2328:A:H2'	1:w:2329:G:C8	2.46	0.51
1:w:2442:C:H5'	1:w:2442:C:C6	2.43	0.51
1:w:2459:A:C3'	1:w:2460:U:C6	2.89	0.51
1:w:2623:G:N1	1:w:2624:G:C5	2.79	0.51
1:w:2709:G:O2'	1:w:2710:C:H5'	2.11	0.51
1:w:2722:G:O3'	14:L:4:LEU:CD1	2.57	0.51
1:w:2820:A:O2'	1:w:2821:A:H5'	2.10	0.51
1:w:2872:G:C2'	1:w:2873:A:N7	2.72	0.51
2:x:9:G:OP1	15:M:89:ARG:NH2	2.44	0.51
2:x:78:A:N1	2:x:99:A:N7	2.59	0.51
2:x:84:C:H2'	2:x:85:G:H8	1.75	0.51
2:x:103:U:H2'	2:x:104:A:H8	1.73	0.51
3:A:167:ASP:OD2	3:A:171:ALA:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:24:ILE:CD1	4:B:25:THR:HG22	2.38	0.51
4:B:254:THR:HG23	4:B:254:THR:O	2.10	0.51
4:B:262:ARG:HB3	4:B:263:ARG:HH21	1.75	0.51
5:C:52:LEU:HB2	5:C:76:ARG:H	1.70	0.51
7:E:11:TYR:CD2	7:E:12:TYR:CE2	2.97	0.51
7:E:139:LEU:HB3	7:E:146:TYR:C	2.33	0.51
10:H:58:ARG:HA	10:H:139:LEU:CD2	2.40	0.51
12:J:88:LEU:HG	12:J:88:LEU:O	2.09	0.51
13:K:72:LYS:O	13:K:94:VAL:HG13	2.10	0.51
15:M:10:ARG:O	15:M:12:PHE:CE1	2.63	0.51
15:M:43:GLU:HG3	15:M:44:LYS:H	1.73	0.51
18:P:5:VAL:HG21	18:P:37:VAL:O	2.09	0.51
18:P:18:LEU:HA	18:P:97:LYS:HZ2	1.75	0.51
18:P:72:VAL:HG12	18:P:73:SER:N	2.26	0.51
20:R:8:ILE:HB	25:W:26:ARG:CZ	2.41	0.51
20:R:10:ALA:HB1	20:R:11:PRO:HD2	1.92	0.51
22:T:17:ALA:CB	22:T:20:ARG:NH2	2.74	0.51
22:T:130:PRO:HA	22:T:133:ILE:HG12	1.91	0.51
24:V:86:SER:N	24:V:87:PRO:CD	2.73	0.51
27:Y:45:VAL:HG22	27:Y:56:LYS:HG2	1.93	0.51
29:a:34:TRP:CH2	29:a:39:LYS:C	2.89	0.51
30:b:16:VAL:HA	30:b:25:VAL:HA	1.93	0.51
31:y:9:G:H3'	38:f:126:ARG:HH11	1.75	0.51
31:y:15:G:OP1	31:y:1397:C:OP2	2.28	0.51
31:y:90:C:C2'	31:y:91:C:C5	2.91	0.51
31:y:138:G:H3'	31:y:139:G:C8	2.45	0.51
31:y:191(G):G:H2'	31:y:192:U:C6	2.46	0.51
31:y:200:G:O2'	31:y:201:C:O5'	2.28	0.51
31:y:228:A:H2'	31:y:229:U:C5	2.45	0.51
31:y:272:C:N4	31:y:273:A:H62	2.09	0.51
31:y:282:A:H8	31:y:282:A:P	2.34	0.51
31:y:396:G:N2	31:y:398:C:H1'	2.25	0.51
31:y:407:G:H2'	31:y:408:A:H5'	1.92	0.51
31:y:408:A:OP1	37:e:115:ARG:HB3	2.11	0.51
31:y:430:A:OP1	37:e:7:PRO:HB3	2.10	0.51
31:y:491:G:C4	31:y:492:G:N7	2.78	0.51
31:y:668:G:C4	31:y:669:U:C6	2.98	0.51
31:y:701:C:H4'	31:y:703:G:C8	2.45	0.51
31:y:742:G:H21	31:y:743:U:H1'	1.76	0.51
31:y:767:A:H2	31:y:1512:U:H1'	1.75	0.51
31:y:831:U:O2'	31:y:832:C:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:907:A:N6	31:y:908:A:C2	2.79	0.51
31:y:1000:A:O5'	31:y:1000:A:C8	2.57	0.51
31:y:1039:C:H2'	31:y:1040:U:C5	2.45	0.51
31:y:1109:C:H5'	31:y:1110:A:C8	2.45	0.51
31:y:1244:C:C2'	31:y:1245:A:N7	2.66	0.51
31:y:1268:A:H2'	31:y:1269:A:C8	2.46	0.51
31:y:1310:G:C4	31:y:1311:G:C8	2.99	0.51
31:y:1365:G:H3'	31:y:1366:C:C6	2.45	0.51
31:y:1433:A:C6	31:y:1434:A:C6	2.98	0.51
31:y:1443:G:C1'	31:y:1446:A:O3'	2.58	0.51
32:z:25:C:C4	32:z:26:A:N7	2.78	0.51
32:z:30:G:H1	32:z:40:C:N4	2.08	0.51
33:0:54:U:HO2'	33:0:55:PSU:P	2.33	0.51
33:0:61:C:H2'	33:0:62:A:H8	1.74	0.51
35:c:42:ILE:CD1	35:c:43:ASP:N	2.58	0.51
35:c:71:VAL:HG13	35:c:164:VAL:CG2	2.40	0.51
35:c:163:PHE:CD1	35:c:186:ALA:CA	2.84	0.51
35:c:187:LEU:HD13	35:c:187:LEU:C	2.35	0.51
36:d:49:SER:O	36:d:51:GLY:N	2.41	0.51
36:d:135:LYS:N	36:d:168:ALA:HB1	2.25	0.51
37:e:9:CYS:HG	37:e:25:ARG:HB3	1.76	0.51
37:e:61:LYS:HG2	37:e:206:PHE:CD1	2.46	0.51
37:e:61:LYS:CD	37:e:62:GLN:N	2.74	0.51
37:e:92:VAL:HG13	37:e:93:PHE:N	2.24	0.51
38:f:41:VAL:CG1	38:f:42:GLY:H	2.21	0.51
38:f:64:ARG:O	38:f:66:MET:N	2.44	0.51
39:g:23:LYS:O	39:g:27:GLN:HG2	2.11	0.51
39:g:23:LYS:HB2	39:g:23:LYS:HZ3	1.74	0.51
39:g:94:GLN:O	39:g:95:GLU:C	2.53	0.51
42:j:41:VAL:C	42:j:43:ALA:N	2.54	0.51
42:j:121:ARG:HE	42:j:121:ARG:C	2.17	0.51
43:k:65:LEU:HD23	43:k:65:LEU:C	2.35	0.51
43:k:75:ILE:HG22	43:k:76:ASN:ND2	2.25	0.51
45:m:59:LEU:HD12	45:m:63:TYR:CD2	2.45	0.51
46:n:48:LEU:HD22	46:n:52:GLU:OE1	2.11	0.51
47:o:24:CYS:SG	47:o:39:LEU:HA	2.50	0.51
47:o:47:LEU:HA	47:o:50:LYS:HE3	1.92	0.51
52:t:45:VAL:HA	52:t:62:ILE:CG1	2.40	0.51
1:w:20:C:C2	1:w:21:A:C8	2.98	0.51
1:w:46:C:O2	1:w:46:C:H2'	2.11	0.51
1:w:133:C:C5	1:w:133:C:OP2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:140:A:C2	1:w:1408:C:O4'	2.62	0.51
1:w:161:U:O2	1:w:165:U:C4	2.64	0.51
1:w:187:G:H8	1:w:187:G:O5'	1.93	0.51
1:w:302:C:H41	1:w:314:A:H61	1.58	0.51
1:w:336:C:O5'	1:w:336:C:H6	1.92	0.51
1:w:465:G:O4'	28:Z:16:HIS:NE2	2.43	0.51
1:w:479:A:C5'	1:w:480:A:C8	2.86	0.51
1:w:532:A:O4'	1:w:561:G:N2	2.43	0.51
1:w:613:U:H4'	1:w:616:A:C5	2.45	0.51
1:w:618(A):G:C2	1:w:618(B):C:C2	2.98	0.51
1:w:669:G:C6	1:w:670:A:C6	2.99	0.51
1:w:682:G:C4	1:w:683:C:C6	2.99	0.51
1:w:747:U:H3	1:w:2014:A:H1'	1.74	0.51
1:w:820:A:H5'	1:w:837:C:O2	2.10	0.51
1:w:855:G:H22	23:U:27:GLU:N	2.08	0.51
1:w:865:C:C2'	1:w:866:A:OP2	2.59	0.51
1:w:964:C:N4	1:w:965:C:C5	2.78	0.51
1:w:1000:A:N3	1:w:1000:A:H2'	2.25	0.51
1:w:1026:U:O2	1:w:1027:A:C8	2.64	0.51
1:w:1054:A:C5'	1:w:1055:G:OP2	2.56	0.51
1:w:1059:G:HO2'	1:w:1060:U:H6	1.56	0.51
1:w:1153:C:O5'	1:w:1153:C:H6	1.93	0.51
1:w:1160:G:N3	1:w:1160:G:H2'	2.24	0.51
1:w:1203:G:N1	1:w:1241:A:OP2	2.43	0.51
1:w:1503:U:OP1	1:w:1504:C:OP1	2.29	0.51
1:w:1570:A:O5'	1:w:1570:A:C8	2.63	0.51
1:w:1570:A:C2'	1:w:1571:A:C8	2.70	0.51
1:w:1806:C:P	4:B:250:TRP:CZ2	3.03	0.51
1:w:1822:G:H4'	1:w:1822:G:OP1	2.10	0.51
1:w:1841:U:C6	1:w:1841:U:OP2	2.64	0.51
1:w:2055:C:OP1	1:w:2056:G:C5'	2.57	0.51
1:w:2351:G:H2'	1:w:2352:A:OP2	2.11	0.51
1:w:2374:C:H2'	1:w:2375:G:H5'	1.93	0.51
1:w:2485:G:C2'	1:w:2486:G:H5'	2.41	0.51
1:w:2564:A:H8	1:w:2564:A:O5'	1.92	0.51
1:w:2740:A:N1	1:w:2764:A:N9	2.58	0.51
1:w:2870:C:C2'	1:w:2871:C:H5'	2.40	0.51
2:x:42:C:H4'	7:E:68:PRO:HA	1.92	0.51
2:x:87:G:C2	2:x:90:C:C4	2.98	0.51
3:A:38:PHE:HD1	3:A:39:ASP:H	1.57	0.51
4:B:134:ARG:NH2	4:B:172:TYR:HA	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:4:ILE:HD11	5:C:29:GLY:O	2.09	0.51
5:C:20:ALA:O	5:C:21:VAL:HG13	2.10	0.51
5:C:46:ALA:HA	5:C:82:ARG:O	2.10	0.51
5:C:183:LEU:C	5:C:183:LEU:CD1	2.84	0.51
6:D:112:ARG:NH2	6:D:112:ARG:CB	2.69	0.51
6:D:127:VAL:O	6:D:127:VAL:HG12	2.10	0.51
6:D:128:ASN:O	6:D:161:ALA:HB2	2.10	0.51
6:D:150:LEU:C	6:D:169:VAL:HB	2.35	0.51
7:E:41:GLN:O	7:E:89:GLY:HA3	2.11	0.51
7:E:51:ARG:HG3	7:E:51:ARG:HH21	1.75	0.51
7:E:74:LYS:C	7:E:75:LYS:HG2	2.35	0.51
8:F:22:GLY:O	8:F:37:VAL:HG22	2.10	0.51
8:F:40:GLU:HB3	8:F:55:PRO:N	2.25	0.51
8:F:87:LEU:HD22	8:F:132:ARG:HA	1.93	0.51
8:F:103:LEU:HD23	8:F:103:LEU:C	2.35	0.51
9:G:129:THR:HG22	9:G:130:TYR:N	2.25	0.51
10:H:119:GLU:O	10:H:120:ARG:C	2.53	0.51
11:I:77:ILE:CD1	11:I:78:ARG:O	2.58	0.51
11:I:104:ARG:H	11:I:104:ARG:HD2	1.74	0.51
12:J:50:ARG:HH11	12:J:57:THR:CB	2.05	0.51
12:J:147:LEU:C	12:J:147:LEU:CD1	2.84	0.51
13:K:111:GLU:O	13:K:115:MET:HG2	2.09	0.51
13:K:116:GLU:HA	13:K:119:ARG:HB2	1.92	0.51
13:K:134:ARG:C	13:K:134:ARG:HD2	2.35	0.51
15:M:28:VAL:HG12	15:M:29:PHE:H	1.51	0.51
16:N:7:ILE:O	16:N:11:GLU:OE1	2.28	0.51
16:N:29:ARG:H	16:N:44:ASP:CB	2.24	0.51
21:S:28:LYS:CA	21:S:35:TYR:HB3	2.37	0.51
23:U:57:PHE:O	23:U:59:LEU:HD12	2.11	0.51
24:V:81:ARG:HG2	24:V:81:ARG:HH21	1.75	0.51
26:X:19:GLN:HE21	26:X:49:LYS:HG2	1.76	0.51
27:Y:42:PRO:O	27:Y:43:HIS:HB2	2.11	0.51
29:a:7:HIS:CE1	29:a:9:GLY:CA	2.93	0.51
31:y:74:C:H3'	31:y:75:C:H5	1.73	0.51
31:y:122:G:C4	31:y:123:C:C6	2.99	0.51
31:y:125:U:C4	31:y:126:G:N7	2.78	0.51
31:y:143:A:H4'	31:y:196:A:C2	2.46	0.51
31:y:291:C:P	31:y:305:G:C2	3.03	0.51
31:y:422:C:C6	31:y:423:G:C2	2.98	0.51
31:y:467:G:C2'	31:y:468:A:C8	2.88	0.51
31:y:521:G:O6	45:m:48:ASN:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:586:C:O5'	31:y:586:C:H6	1.92	0.51
31:y:588:G:C2	31:y:589:C:C5	2.99	0.51
31:y:602:A:C6	31:y:637:G:C6	2.99	0.51
31:y:607:A:C2	49:q:32:TYR:HE1	2.29	0.51
31:y:656:C:O2'	31:y:657:G:O4'	2.29	0.51
31:y:696:A:C1'	31:y:786:G:O2'	2.56	0.51
31:y:701:C:OP1	31:y:701:C:H3'	2.10	0.51
31:y:783:C:H2'	31:y:784:C:H5'	1.93	0.51
31:y:798:G:N3	31:y:799:G:C8	2.79	0.51
31:y:918:A:N9	31:y:919:A:C8	2.79	0.51
31:y:983:A:N3	31:y:983:A:C2'	2.74	0.51
31:y:1016:A:H4'	31:y:1218:C:H4'	1.93	0.51
31:y:1047:G:H2'	31:y:1048:G:C5'	2.40	0.51
31:y:1063:C:O5'	31:y:1063:C:C6	2.58	0.51
31:y:1171:G:H2'	31:y:1172:C:H6	1.73	0.51
32:z:7:A:H4'	32:z:8:4SU:OP2	2.10	0.51
35:c:221:LEU:O	35:c:221:LEU:HD22	2.11	0.51
36:d:124:ILE:HG13	36:d:130:VAL:HA	1.92	0.51
36:d:176:HIS:H	36:d:176:HIS:CD2	2.29	0.51
37:e:105:VAL:HG13	37:e:110:PHE:CB	2.41	0.51
37:e:120:LEU:HD22	37:e:121:VAL:N	2.26	0.51
37:e:176:LEU:HD23	37:e:176:LEU:C	2.36	0.51
37:e:203:VAL:HG12	37:e:204:ILE:N	2.24	0.51
40:h:92:SER:C	40:h:96:GLN:HE21	2.17	0.51
40:h:120:ILE:C	40:h:124:LEU:CD2	2.83	0.51
41:i:29:SER:N	41:i:32:LYS:HD2	2.26	0.51
41:i:45:ILE:HG23	41:i:46:LYS:N	2.26	0.51
42:j:14:VAL:CG1	42:j:15:ALA:N	2.74	0.51
43:k:16:LEU:C	43:k:18:ALA:N	2.68	0.51
44:l:73:MET:HE1	44:l:102:GLY:C	2.35	0.51
45:m:53:LYS:HB3	45:m:69:ILE:HB	1.93	0.51
45:m:116:ARG:CD	45:m:121:THR:HG22	2.25	0.51
46:n:13:LYS:HB3	46:n:17:VAL:HG11	1.92	0.51
46:n:82:MET:HE3	46:n:93:ARG:HB2	1.92	0.51
49:q:15:PRO:HB2	49:q:41:PRO:HG2	1.93	0.51
49:q:33:ILE:O	49:q:34:GLU:O	2.29	0.51
50:r:50:LYS:O	50:r:52:LYS:N	2.36	0.51
51:s:79:LEU:HD23	51:s:81:PHE:N	2.25	0.51
53:u:87:LYS:O	53:u:88:VAL:C	2.53	0.51
1:w:104:U:H3'	1:w:105:C:C6	2.45	0.51
1:w:270(D):C:C2'	1:w:270(E):C:H4'	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:546:C:H2'	1:w:547:A:H8	1.74	0.51
1:w:597:U:O2'	12:J:15:ARG:CB	2.53	0.51
1:w:691:C:C4	1:w:692:C:C5	2.99	0.51
1:w:702:G:C2'	1:w:703:U:C5	2.94	0.51
1:w:731:C:OP2	1:w:760:G:O3'	2.28	0.51
1:w:756:C:C2	1:w:757:U:H1'	2.45	0.51
1:w:794:G:C2'	1:w:795:C:C6	2.93	0.51
1:w:811:U:O2	1:w:1250:G:O3'	2.26	0.51
1:w:839:U:O2'	1:w:840:C:H5'	2.11	0.51
1:w:847:U:H3'	1:w:847:U:H6	1.76	0.51
1:w:852:G:H2'	1:w:853:G:H8	1.76	0.51
1:w:856:C:C1'	23:U:27:GLU:HB2	2.41	0.51
1:w:867:C:C6	1:w:867:C:O5'	2.63	0.51
1:w:1000:A:N6	1:w:1001:A:N7	2.59	0.51
1:w:1191:G:H3'	1:w:1191:G:C8	2.46	0.51
1:w:1231:G:C2	1:w:1232:G:C8	2.98	0.51
1:w:1284:A:H2'	1:w:1285:G:C5'	2.41	0.51
1:w:1422:G:C2	1:w:1423:G:N9	2.79	0.51
1:w:1459:G:C4	1:w:1461:G:H1'	2.45	0.51
1:w:1591:G:H2'	1:w:1592:C:O4'	2.10	0.51
1:w:1615:C:C2'	1:w:1617:C:C6	2.93	0.51
1:w:1663:C:O2'	1:w:1664:A:H5'	2.11	0.51
1:w:1692:U:H2'	1:w:1693:U:H5''	1.92	0.51
1:w:1882:C:C6	1:w:1882:C:O5'	2.62	0.51
1:w:1915:U:C3'	1:w:1916:A:C8	2.62	0.51
1:w:1975:G:H2'	1:w:1976:U:O5'	2.11	0.51
1:w:2029:G:C2	1:w:2033:A:N7	2.79	0.51
1:w:2100:G:H2'	1:w:2101:G:C8	2.43	0.51
1:w:2144:U:H2'	1:w:2145:C:O5'	2.11	0.51
1:w:2295:C:C2	1:w:2296:U:C5	2.98	0.51
1:w:2443:C:C6	1:w:2443:C:O5'	2.64	0.51
1:w:2451:A:N3	32:z:76:A:C3'	2.69	0.51
1:w:2528:U:OP2	1:w:2530:A:C6	2.57	0.51
1:w:2544:G:H2'	1:w:2545:G:O4'	2.11	0.51
1:w:2560:C:O5'	1:w:2560:C:C6	2.64	0.51
1:w:2589:A:N1	1:w:2590:A:C8	2.79	0.51
1:w:2651:C:H42	1:w:2670:A:N6	2.09	0.51
1:w:2744:G:H2'	1:w:2745:C:C6	2.46	0.51
1:w:2783:G:H3'	1:w:2784:C:C5	2.46	0.51
1:w:2789:C:H2'	1:w:2892:A:C2	2.46	0.51
1:w:2859:G:H2'	1:w:2860:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2877:G:C2'	1:w:2878:U:O4'	2.55	0.51
2:x:48:A:H5''	15:M:95:HIS:CE1	2.45	0.51
2:x:52:A:C2'	2:x:53:A:O4'	2.48	0.51
2:x:82:G:N2	2:x:83:G:C2	2.78	0.51
4:B:3:VAL:O	4:B:3:VAL:HG12	2.10	0.51
4:B:58:HIS:CD2	4:B:58:HIS:C	2.86	0.51
4:B:140:THR:O	4:B:141:VAL:HG13	2.11	0.51
5:C:38:THR:C	5:C:40:GLU:N	2.69	0.51
5:C:63:LEU:HD21	5:C:65:GLY:CA	2.38	0.51
6:D:39:ARG:HG2	6:D:39:ARG:HH21	1.76	0.51
6:D:98:LYS:HD2	6:D:101:ARG:HH21	1.74	0.51
8:F:84:SER:OG	8:F:133:VAL:HG23	2.10	0.51
8:F:105:LEU:HD13	8:F:105:LEU:C	2.35	0.51
10:H:36:TRP:O	10:H:158:PRO:HD2	2.11	0.51
10:H:62:ARG:HH21	10:H:63:PRO:CG	2.24	0.51
11:I:67:LYS:CG	11:I:68:GLU:N	2.51	0.51
11:I:86:ILE:HG22	11:I:86:ILE:O	2.10	0.51
12:J:7:ARG:HD2	12:J:10:PRO:CG	2.40	0.51
13:K:23:GLY:O	13:K:98:LYS:HD3	2.09	0.51
13:K:57:HIS:C	13:K:58:PHE:CD2	2.89	0.51
16:N:26:ASP:N	16:N:90:GLN:HA	2.25	0.51
16:N:62:THR:OG1	16:N:74:ARG:C	2.54	0.51
17:O:40:PHE:CB	18:P:78:LYS:HG2	2.40	0.51
17:O:92:ARG:CB	18:P:11:GLN:HG3	2.40	0.51
18:P:5:VAL:CG2	18:P:6:LYS:N	2.61	0.51
20:R:13:LEU:O	20:R:14:SER:O	2.29	0.51
20:R:29:TRP:CD1	20:R:76:ARG:HG2	2.45	0.51
21:S:2:ARG:HH22	21:S:4:LYS:CE	2.23	0.51
22:T:7:ALA:O	22:T:8:TYR:CD2	2.63	0.51
22:T:42:VAL:O	22:T:44:PHE:HD2	1.94	0.51
24:V:51:VAL:HG12	24:V:59:THR:HA	1.93	0.51
24:V:65:SER:C	24:V:67:ILE:N	2.58	0.51
24:V:69:LYS:HA	24:V:72:GLU:CD	2.35	0.51
24:V:69:LYS:CA	24:V:72:GLU:HB3	2.40	0.51
26:X:5:LYS:H	26:X:58:VAL:HA	1.75	0.51
26:X:31:LEU:O	26:X:32:GLN:CB	2.58	0.51
31:y:73:G:C5	31:y:74:C:C4	2.99	0.51
31:y:108:G:N7	53:u:15:ARG:CB	2.73	0.51
31:y:186(A):C:H1'	53:u:81:LYS:HB3	1.91	0.51
31:y:246:A:OP2	31:y:246:A:C8	2.61	0.51
31:y:341:C:H2'	31:y:342:C:H5	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:515:G:H8	31:y:515:G:O5'	1.91	0.51
31:y:667:G:C2	31:y:668:G:C5	2.98	0.51
31:y:670:G:C6	31:y:671:G:N7	2.78	0.51
31:y:708:C:H2'	31:y:709:G:O5'	2.11	0.51
31:y:737:A:C2	31:y:738:C:C4	2.99	0.51
31:y:749:C:P	31:y:750:G:OP2	2.68	0.51
31:y:796:C:C2'	31:y:797:C:C5'	2.84	0.51
31:y:879:C:H2'	31:y:880:C:C5'	2.40	0.51
31:y:917:G:C2	31:y:918:A:C4	2.98	0.51
31:y:946:A:C8	31:y:946:A:P	3.01	0.51
31:y:955:U:OP2	31:y:955:U:H5	1.92	0.51
31:y:955:U:O2	31:y:956:U:O2'	2.29	0.51
31:y:960:U:C5	31:y:1225:A:C2	2.98	0.51
31:y:102(C):C:C3'	31:y:1029:G:H8	2.23	0.51
31:y:1320:C:C1'	52:t:72:GLY:CA	2.89	0.51
31:y:1346:A:H1'	31:y:1348:U:C6	2.44	0.51
31:y:1436:U:O5'	31:y:1436:U:H6	1.91	0.51
31:y:1454:G:C2	31:y:1455:G:C5	2.98	0.51
35:c:84:GLU:OE1	35:c:215:LEU:CD1	2.58	0.51
35:c:164:VAL:HG22	35:c:165:VAL:HG22	1.93	0.51
35:c:209:ARG:HG3	35:c:209:ARG:HH11	1.74	0.51
36:d:124:ILE:CD1	36:d:133:ALA:HB2	2.34	0.51
36:d:137:ALA:N	36:d:140:ARG:CZ	2.74	0.51
37:e:127:THR:O	37:e:146:ILE:HD12	2.10	0.51
40:h:20:ASP:HB3	40:h:22:LEU:HD21	1.91	0.51
41:i:45:ILE:CG1	41:i:46:LYS:N	2.69	0.51
41:i:86:ILE:HG22	41:i:93:VAL:HG21	1.93	0.51
43:k:5:ARG:O	43:k:6:ILE:CG1	2.43	0.51
44:l:82:VAL:HG13	44:l:105:VAL:HA	1.91	0.51
45:m:42:VAL:O	45:m:52:ARG:NH2	2.31	0.51
45:m:76:LEU:HD23	45:m:105:ASP:CG	2.36	0.51
46:n:65:LYS:HD2	46:n:69:GLU:OE1	2.11	0.51
46:n:94:ARG:NH1	52:t:81:ARG:HH21	2.09	0.51
48:p:40:SER:O	48:p:44:LYS:HG2	2.11	0.51
49:q:3:LYS:HG2	49:q:65:GLN:O	2.11	0.51
50:r:11:VAL:CG2	50:r:20:THR:O	2.59	0.51
52:t:63:THR:H	52:t:66:MET:CE	2.22	0.51
54:v:21:TYR:N	54:v:21:TYR:CD2	2.77	0.51
1:w:7:G:C6	1:w:8:A:C2	2.99	0.51
1:w:54:G:N2	1:w:55:G:H1'	2.26	0.51
1:w:71:A:OP2	1:w:113:G:C4'	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:107:C:O3'	1:w:292:C:H1'	2.11	0.51
1:w:142:G:C5	1:w:143:C:C5	2.98	0.51
1:w:188:G:C5	1:w:189:G:C8	2.99	0.51
1:w:270(S):G:OP2	1:w:270(S):G:H8	1.94	0.51
1:w:307:G:N2	1:w:309:G:C2'	2.74	0.51
1:w:314:A:C8	1:w:314:A:OP2	2.64	0.51
1:w:387:U:H1'	1:w:388:G:N7	2.24	0.51
1:w:534:U:O2'	17:O:46:ALA:CA	2.58	0.51
1:w:543:C:N4	1:w:551:G:C6	2.78	0.51
1:w:546:C:C2'	1:w:547:A:C8	2.94	0.51
1:w:655:A:H4'	1:w:656:G:C1'	2.40	0.51
1:w:712:G:N1	1:w:720:C:C4	2.78	0.51
1:w:747:U:O2	1:w:2013:A:H2	1.93	0.51
1:w:781:A:O2'	1:w:1789:A:C1'	2.58	0.51
1:w:848:G:C5'	1:w:929:G:H22	2.20	0.51
1:w:1000:A:N7	1:w:1154:G:C2	2.79	0.51
1:w:1195:G:N3	1:w:1196:C:C6	2.79	0.51
1:w:1213:A:O2'	1:w:1214:A:H5'	2.10	0.51
1:w:1259:G:C3'	1:w:1260:G:H8	2.23	0.51
1:w:1365:A:OP2	24:V:8:SER:HB3	2.11	0.51
1:w:1417:C:N4	1:w:1418:G:C4	2.79	0.51
1:w:1484:G:O2'	1:w:1485:G:H5''	2.11	0.51
1:w:1562:A:C6	1:w:1563:G:C6	2.98	0.51
1:w:1650:G:C6	1:w:1651:G:C4	2.99	0.51
1:w:1704:G:H4'	31:y:1429:C:O5'	2.10	0.51
1:w:1782:C:O2	1:w:2608:G:H2'	2.09	0.51
1:w:1798:U:O2'	1:w:1802:A:H1'	2.10	0.51
1:w:1822:G:N1	1:w:1823:G:C5	2.79	0.51
1:w:1862:G:C2	1:w:1863:G:C8	2.98	0.51
1:w:1916:A:C8	1:w:1916:A:H5''	2.46	0.51
1:w:2033:A:HO2'	1:w:2034:U:H5''	1.67	0.51
1:w:2055:C:C5'	1:w:2056:G:O5'	2.51	0.51
1:w:2133:G:OP2	1:w:2133:G:O4'	2.29	0.51
1:w:2286:A:C4'	1:w:2287:A:O5'	2.58	0.51
1:w:2319:G:O2'	1:w:2320:A:C5	2.56	0.51
1:w:2519:U:N3	1:w:2542:A:N7	2.58	0.51
1:w:2745:C:H5	1:w:2755:C:O4'	1.89	0.51
2:x:14:U:OP2	2:x:70:C:C1'	2.56	0.51
2:x:81:G:N2	2:x:82:G:H1'	2.25	0.51
2:x:93:C:C4	2:x:94:C:N4	2.79	0.51
4:B:20:ASP:HB2	4:B:91:ARG:HH22	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:98:VAL:C	4:B:100:GLY:N	2.69	0.51
4:B:101:GLU:C	4:B:102:LYS:NZ	2.69	0.51
4:B:175:LEU:O	4:B:182:LEU:HG	2.09	0.51
4:B:221:VAL:O	4:B:223:GLY:N	2.41	0.51
5:C:52:LEU:CD1	5:C:76:ARG:HE	2.24	0.51
6:D:103:LYS:O	6:D:106:ALA:HB3	2.09	0.51
7:E:16:ARG:HA	7:E:19:LEU:HD13	1.92	0.51
7:E:122:PRO:CB	7:E:173:LEU:HD21	2.41	0.51
7:E:176:LEU:HG	7:E:178:PHE:CZ	2.45	0.51
8:F:53:GLU:O	8:F:54:ARG:HB3	2.10	0.51
8:F:124:GLU:N	8:F:131:VAL:HG23	2.26	0.51
9:G:6:LEU:HD13	9:G:35:LEU:HA	1.92	0.51
9:G:31:LEU:HB3	9:G:32:PRO:HD3	1.92	0.51
9:G:40:THR:HG1	9:G:43:ASN:CG	2.18	0.51
9:G:65:ALA:HB2	9:G:113:ARG:NH2	2.20	0.51
9:G:132:PRO:HD3	9:G:138:ILE:CG2	2.35	0.51
11:I:81:ASP:CG	11:I:82:ASN:N	2.67	0.51
13:K:109:VAL:HG21	13:K:113:GLN:HB2	1.93	0.51
14:L:87:TYR:CD1	14:L:87:TYR:N	2.78	0.51
14:L:109:ALA:HB1	14:L:111:LEU:CD1	2.31	0.51
16:N:32:TYR:O	16:N:33:LYS:O	2.27	0.51
16:N:109:GLU:HA	16:N:112:ARG:NE	2.25	0.51
18:P:85:LYS:CG	18:P:86:GLY:N	2.68	0.51
19:Q:88:ARG:CG	19:Q:92:ARG:H	2.24	0.51
21:S:65:ALA:O	21:S:66:PRO:O	2.29	0.51
21:S:71:LYS:HG3	21:S:96:ILE:CG1	2.40	0.51
22:T:28:MET:SD	22:T:35:ARG:N	2.84	0.51
22:T:48:PHE:C	22:T:50:GLN:N	2.69	0.51
23:U:49:LYS:C	23:U:81:VAL:HB	2.35	0.51
23:U:68:GLU:O	23:U:78:TYR:O	2.29	0.51
24:V:12:PRO:CG	24:V:63:ALA:H	2.18	0.51
24:V:13:ILE:HD13	24:V:66:HIS:CE1	2.46	0.51
27:Y:40:LYS:HD2	27:Y:51:TYR:HE1	1.68	0.51
29:a:6:THR:HG21	29:a:63:PRO:CB	2.39	0.51
29:a:26:LYS:HE3	29:a:47:LYS:HB3	1.93	0.51
31:y:10:A:O2'	31:y:507:C:O2'	2.20	0.51
31:y:16:A:C4	31:y:17:U:C5	2.99	0.51
31:y:39:G:O6	31:y:547:A:C5'	2.58	0.51
31:y:59:A:C1'	31:y:354:G:N2	2.72	0.51
31:y:226:G:C6	31:y:227:G:C6	2.99	0.51
31:y:278:G:O4'	31:y:282:A:H1'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:374:A:OP1	31:y:452:A:N1	2.44	0.51
31:y:424:G:C2	31:y:425:G:C4	2.98	0.51
31:y:514:C:O2	31:y:515:G:N7	2.44	0.51
31:y:608:A:O4'	49:q:32:TYR:OH	2.29	0.51
31:y:657:G:O2'	48:p:27:VAL:CG1	2.55	0.51
31:y:694:A:N1	31:y:788:U:C5'	2.73	0.51
31:y:889:A:C4'	31:y:890:G:OP1	2.56	0.51
31:y:909:A:C6	31:y:910:C:C2	2.99	0.51
31:y:943:U:H2'	31:y:944:G:C5'	2.41	0.51
31:y:1025:U:H2'	31:y:1026:G:N9	2.26	0.51
31:y:1159:U:C5	31:y:1182:G:H1'	2.46	0.51
31:y:1196:U:OP1	31:y:1197:G:C5'	2.58	0.51
31:y:1221:G:C5'	52:t:36:ARG:NH2	2.70	0.51
31:y:1365:G:H3'	31:y:1366:C:C5	2.45	0.51
31:y:1423:G:C3'	31:y:1424:C:H6	2.24	0.51
31:y:1435:G:C2'	31:y:1436:U:H5	2.22	0.51
31:y:1497:G:C8	31:y:1497:G:H3'	2.46	0.51
33:0:34:G:H8	33:0:34:G:OP1	1.93	0.51
33:0:56:C:C2	33:0:57:G:C8	2.98	0.51
35:c:97:TRP:HE1	35:c:173:ALA:HB2	1.69	0.51
35:c:132:LYS:O	35:c:135:GLN:CB	2.55	0.51
35:c:178:ARG:NH2	41:i:74:PRO:CD	2.60	0.51
37:e:156:GLU:HG2	37:e:157:LEU:H	1.76	0.51
40:h:5:ARG:HH11	40:h:5:ARG:CG	2.24	0.51
40:h:111:ARG:HB2	40:h:119:ARG:HB2	1.92	0.51
40:h:116:ALA:HA	40:h:120:ILE:HG12	1.92	0.51
41:i:65:TYR:HB3	41:i:78:GLN:CD	2.35	0.51
43:k:38:ILE:HD12	43:k:72:VAL:N	2.25	0.51
45:m:121:THR:H	45:m:122:LYS:HZ3	1.55	0.51
46:n:71:ARG:O	46:n:74:VAL:HG23	2.11	0.51
47:o:45:ARG:O	47:o:48:ALA:HB3	2.11	0.51
50:r:10:VAL:HG23	50:r:54:GLY:H	1.75	0.51
52:t:32:LYS:N	52:t:32:LYS:HD2	2.26	0.51
52:t:79:THR:O	52:t:80:TYR:HB2	2.09	0.51
53:u:49:ALA:HB1	53:u:100:ILE:CG1	2.40	0.51
54:v:6:ARG:HG2	54:v:7:ARG:N	2.22	0.51
1:w:35:G:O6	1:w:446:G:N2	2.44	0.51
1:w:71:A:H5''	1:w:73:A:P	2.49	0.51
1:w:217:G:C5	1:w:218:A:N7	2.78	0.51
1:w:221:A:N3	1:w:233:A:H1'	2.26	0.51
1:w:237:C:N3	1:w:238:C:C5	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:249:C:H4'	1:w:250:G:C5'	2.39	0.51
1:w:321:G:N3	6:D:160:ARG:NE	2.59	0.51
1:w:372:G:C8	24:V:68:PRO:CD	2.89	0.51
1:w:396:G:O2'	24:V:46:LEU:HB3	2.10	0.51
1:w:479:A:H5''	1:w:480:A:P	2.50	0.51
1:w:539:G:C2	1:w:540:G:C5	2.99	0.51
1:w:814:C:H5'	18:P:86:GLY:CA	2.41	0.51
1:w:884:C:C2'	1:w:885:C:O5'	2.59	0.51
1:w:885:C:C5'	1:w:886:C:H3'	2.41	0.51
1:w:896:A:H4'	1:w:897:C:C5'	2.41	0.51
1:w:947:G:C6	1:w:948:G:O6	2.64	0.51
1:w:1120:G:C3'	1:w:1121:C:H6	2.23	0.51
1:w:1250:G:OP1	1:w:1251:C:C6	2.64	0.51
1:w:1298:C:N3	1:w:1299:G:N7	2.57	0.51
1:w:1461:G:H2'	1:w:1461:G:N3	2.26	0.51
1:w:1479:G:N1	1:w:1515:C:O2	2.44	0.51
1:w:1612:C:C5'	28:Z:7:PRO:CG	2.85	0.51
1:w:1662:C:C4	1:w:1663:C:C5	2.99	0.51
1:w:1669:A:H2	1:w:1670:C:C2	2.28	0.51
1:w:1686:C:C2	1:w:1687:G:O4'	2.63	0.51
1:w:1712:C:H3'	1:w:1716:U:C6	2.43	0.51
1:w:1810:A:O5'	1:w:1810:A:H8	1.94	0.51
1:w:1848:A:C1'	31:y:702:A:OP2	2.59	0.51
1:w:1915:U:C5	1:w:1916:A:C6	2.99	0.51
1:w:1920:C:H5'	31:y:1517:G:C4	2.43	0.51
1:w:1953:A:H1'	1:w:2549:G:H21	1.76	0.51
1:w:2052:G:N2	5:C:149:ARG:CA	2.59	0.51
1:w:2213:U:H4'	24:V:57:GLU:CG	2.38	0.51
1:w:2213:U:H2'	1:w:2215:G:H5'	1.93	0.51
1:w:2279:G:O6	23:U:11:LYS:CG	2.59	0.51
1:w:2328:A:H8	1:w:2328:A:P	2.34	0.51
1:w:2357:U:O5'	1:w:2358:G:OP2	2.29	0.51
1:w:2419:U:O4	29:a:31:HIS:CD2	2.64	0.51
1:w:2432:A:C6	1:w:2433:A:C6	2.99	0.51
1:w:2478:A:O4'	1:w:2528:U:H4'	2.11	0.51
1:w:2536:G:C6	1:w:2537:U:C2	2.99	0.51
1:w:2567:G:C6	1:w:2568:C:C4	2.98	0.51
1:w:2639:A:C1'	1:w:2778:A:C2	2.88	0.51
2:x:51:G:H2'	2:x:52:A:O5'	2.11	0.51
2:x:89(A):G:C2'	2:x:89(B):A:C5'	2.88	0.51
4:B:24:ILE:HG23	4:B:25:THR:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:48:ARG:HH11	4:B:49:ILE:HG13	1.76	0.51
4:B:75:ILE:HG23	4:B:98:VAL:CB	2.16	0.51
4:B:111:LEU:HD13	4:B:111:LEU:C	2.35	0.51
4:B:148:GLU:CG	4:B:149:PRO:CD	2.76	0.51
5:C:6:GLY:O	5:C:196:VAL:HG22	2.11	0.51
5:C:7:VAL:CG1	5:C:76:ARG:HH22	2.24	0.51
5:C:38:THR:HG21	5:C:40:GLU:CD	2.34	0.51
5:C:54:GLN:CG	5:C:75:VAL:HG23	2.38	0.51
5:C:111:ARG:O	5:C:112:GLY:C	2.53	0.51
5:C:196:VAL:O	5:C:197:ILE:CG2	2.58	0.51
5:C:201:THR:O	5:C:202:LYS:HD3	2.11	0.51
6:D:98:LYS:C	6:D:100:VAL:N	2.68	0.51
6:D:130:LYS:HG3	6:D:132:LYS:CG	2.40	0.51
6:D:172:ALA:HB3	6:D:173:PRO:HD3	1.89	0.51
7:E:124:SER:HB3	7:E:131:TYR:HE2	1.75	0.51
8:F:58:GLU:CG	8:F:61:HIS:HD2	2.24	0.51
8:F:122:THR:HG23	8:F:134:SER:CB	2.40	0.51
8:F:138:LYS:HA	8:F:141:VAL:CG2	2.41	0.51
10:H:50:ALA:N	10:H:53:ILE:CD1	2.74	0.51
11:I:69:VAL:HG13	11:I:70:LYS:H	1.74	0.51
11:I:73:ASP:O	16:N:77:PRO:HG2	2.10	0.51
12:J:85:LEU:CD2	12:J:86:LYS:N	2.66	0.51
13:K:16:ARG:O	13:K:17:LEU:HD13	2.11	0.51
14:L:83:ILE:HA	14:L:86:ARG:HG2	1.93	0.51
15:M:40:ILE:CG2	15:M:41:ASP:H	2.24	0.51
15:M:67:ARG:CB	15:M:100:ALA:O	2.58	0.51
16:N:33:LYS:HD2	16:N:43:GLN:N	2.25	0.51
17:O:109:LEU:HD23	17:O:109:LEU:H	1.76	0.51
18:P:47:VAL:CG2	18:P:48:GLY:H	2.03	0.51
18:P:71:LEU:C	18:P:72:VAL:HG23	2.35	0.51
21:S:25:GLY:HA2	21:S:37:VAL:HG11	1.91	0.51
22:T:40:ASP:O	22:T:43:GLU:OE2	2.29	0.51
22:T:61:LEU:HD13	22:T:66:SER:O	2.10	0.51
24:V:13:ILE:HB	24:V:66:HIS:CE1	2.46	0.51
25:W:5:GLU:O	25:W:5:GLU:OE1	2.29	0.51
26:X:50:VAL:HG23	26:X:54:VAL:HG22	1.93	0.51
27:Y:40:LYS:HE2	27:Y:46:CYS:CB	2.41	0.51
29:a:32:LEU:HA	29:a:41:ILE:CG2	2.40	0.51
30:b:33:LYS:NZ	30:b:35:ARG:NH2	2.59	0.51
31:y:90:C:C2'	31:y:91:C:C6	2.78	0.51
31:y:329:A:C6	31:y:332:G:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:385:C:C2'	31:y:386:C:H5'	2.40	0.51
31:y:519:C:H5	31:y:520:A:C6	2.28	0.51
31:y:546:G:C5'	31:y:548:G:H4'	2.36	0.51
31:y:597:G:C6	31:y:644:G:C6	2.98	0.51
31:y:668:G:H1'	48:p:49:ASP:OD2	2.10	0.51
31:y:671:G:C2'	31:y:672:U:O5'	2.58	0.51
31:y:721:G:P	31:y:721:G:C8	2.93	0.51
31:y:773:G:C8	31:y:773:G:H3'	2.45	0.51
31:y:796:C:N4	31:y:797:C:N4	2.59	0.51
31:y:817:C:O4'	31:y:819:A:C5'	2.59	0.51
31:y:834:C:H2'	31:y:835:U:C6	2.46	0.51
31:y:885:G:H3'	31:y:885:G:OP1	2.10	0.51
31:y:996:A:O5'	31:y:996:A:C8	2.47	0.51
31:y:1153:C:N3	31:y:1154:G:C8	2.78	0.51
31:y:1276:G:C8	31:y:1277:C:C5	2.98	0.51
31:y:1285:A:O2'	31:y:1286:A:C5'	2.55	0.51
31:y:1373:G:OP2	31:y:1373:G:C8	2.64	0.51
31:y:1528:U:O5'	31:y:1529:G:N2	2.44	0.51
32:z:8:4SU:H6	32:z:8:4SU:H5'	1.93	0.51
33:0:65:G:C2	33:0:66:A:C8	2.99	0.51
36:d:39:ILE:O	36:d:41:GLY:N	2.44	0.51
36:d:181:ASN:HB3	36:d:205:GLY:HA3	1.92	0.51
37:e:9:CYS:HG	37:e:31:CYS:CA	2.19	0.51
37:e:111:ALA:CB	37:e:116:GLN:CG	2.85	0.51
41:i:10:LEU:O	41:i:14:ARG:HB3	2.10	0.51
41:i:82:HIS:O	41:i:83:ILE:CG1	2.54	0.51
41:i:85:ARG:CA	41:i:85:ARG:HH11	2.23	0.51
41:i:85:ARG:HH11	41:i:85:ARG:HA	1.75	0.51
42:j:70:LYS:HA	42:j:73:GLN:HG3	1.93	0.51
43:k:61:GLU:CG	47:o:58:LYS:HD3	2.40	0.51
44:l:53:SER:O	44:l:54:ARG:O	2.28	0.51
46:n:4:ILE:H	46:n:8:GLU:HG3	1.76	0.51
47:o:23:ARG:NH1	47:o:23:ARG:HG3	2.26	0.51
50:r:9:VAL:O	50:r:21:VAL:HG13	2.11	0.51
51:s:41:LYS:O	51:s:44:LEU:HD22	2.11	0.51
53:u:51:GLU:HA	53:u:54:LYS:HZ3	1.76	0.51
53:u:84:LEU:C	53:u:84:LEU:CD2	2.84	0.51
1:w:16:G:O5'	27:Y:17:ASP:HB3	2.11	0.51
1:w:44:A:H2'	1:w:45:G:H8	1.74	0.51
1:w:138:G:C2	1:w:140:A:P	3.04	0.51
1:w:270(J):G:N2	1:w:270(K):G:C5	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:270(K):G:H2'	1:w:270(L):C:O4'	2.11	0.51
1:w:332:A:C2	1:w:335:C:C5	2.99	0.51
1:w:518:G:C2'	19:Q:76:VAL:HG23	2.41	0.51
1:w:576:U:O3'	1:w:2502:G:H2'	2.11	0.51
1:w:594:U:C6	1:w:594:U:OP2	2.64	0.51
1:w:601:C:C2	1:w:602:G:C1'	2.94	0.51
1:w:625:G:C6	1:w:626:U:C4	2.99	0.51
1:w:747:U:O4	1:w:2014:A:N3	2.44	0.51
1:w:775:G:C4	1:w:777:A:N1	2.79	0.51
1:w:776:G:C5'	1:w:777:A:O5'	2.59	0.51
1:w:889:C:C1'	1:w:890:A:H1'	2.31	0.51
1:w:1156:A:OP1	17:O:55:ARG:NH2	2.43	0.51
1:w:1195:G:C6	1:w:1196:C:C5	2.99	0.51
1:w:1224:C:C2	18:P:87:HIS:CD2	2.98	0.51
1:w:1313:U:O2	1:w:1313:U:C2'	2.58	0.51
1:w:1319:G:C3'	1:w:1320:C:C6	2.93	0.51
1:w:1350:C:O2'	1:w:1351:C:H5'	2.10	0.51
1:w:1375:C:H2'	1:w:1376:C:C5	2.46	0.51
1:w:1381:G:H2'	1:w:1382:G:H5'	1.92	0.51
1:w:1421:G:H2'	1:w:1422:G:C8	2.46	0.51
1:w:1457:A:C2	1:w:2703:C:N4	2.78	0.51
1:w:1477:A:C6	1:w:1517:G:N1	2.79	0.51
1:w:1527:G:C2'	1:w:1528:A:OP2	2.59	0.51
1:w:1686:C:C2	1:w:1703:G:N2	2.79	0.51
1:w:1764:G:C5	1:w:1989:G:N2	2.79	0.51
1:w:1798:U:H5'	4:B:259:THR:C	2.35	0.51
1:w:1816:G:O3'	4:B:62:TYR:OH	2.23	0.51
1:w:1920:C:C5'	31:y:1517:G:N3	2.73	0.51
1:w:1945:G:C5'	1:w:1945:G:C8	2.94	0.51
1:w:2127:G:O2'	1:w:2173:A:N1	2.43	0.51
1:w:2290:G:O6	1:w:2291:U:N3	2.44	0.51
1:w:2294:C:N3	1:w:2338:G:N2	2.56	0.51
1:w:2311:A:O5'	1:w:2312:U:H5	1.90	0.51
1:w:2399:G:C5'	1:w:2400:G:OP2	2.59	0.51
1:w:2419:U:C4	29:a:31:HIS:CG	2.98	0.51
1:w:2519:U:O4'	1:w:2542:A:N6	2.44	0.51
1:w:2588:G:H5'	1:w:2588:G:C8	2.42	0.51
1:w:2652:C:H1'	1:w:2669:G:N2	2.26	0.51
1:w:2683:C:H1'	5:C:13:ARG:CZ	2.38	0.51
1:w:2737:G:N3	1:w:2738:A:C8	2.79	0.51
1:w:2775:A:H5''	1:w:2775:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2794:C:OP2	1:w:2795:G:O6	2.29	0.51
2:x:53:A:N3	2:x:53:A:H2'	2.25	0.51
2:x:89(A):G:H2'	2:x:89(B):A:C5'	2.41	0.51
3:A:34:ALA:CB	3:A:179:ALA:CB	2.86	0.51
4:B:172:TYR:HE1	4:B:186:HIS:ND1	2.08	0.51
4:B:266:SER:O	4:B:270:ILE:HG23	2.11	0.51
7:E:50:ALA:C	7:E:53:LEU:HG	2.36	0.51
8:F:25:LYS:HG2	8:F:34:GLU:HB2	1.93	0.51
8:F:115:VAL:HG12	8:F:116:GLU:N	2.26	0.51
9:G:6:LEU:O	9:G:14:ASP:HB2	2.09	0.51
9:G:98:ALA:CA	9:G:109:ILE:HD11	2.23	0.51
10:H:65:TRP:CZ3	10:H:71:MET:CE	2.94	0.51
12:J:50:ARG:O	12:J:51:PHE:O	2.29	0.51
12:J:61:ARG:NE	12:J:61:ARG:CA	2.74	0.51
12:J:111:ARG:NH2	12:J:148:LEU:CG	2.74	0.51
13:K:102:VAL:HG12	13:K:103:MET:N	2.25	0.51
14:L:14:SER:O	14:L:17:ARG:HB2	2.11	0.51
17:O:92:ARG:C	17:O:94:ASN:HD22	2.09	0.51
17:O:105:VAL:HA	18:P:43:GLU:CG	2.41	0.51
20:R:12:VAL:CG1	20:R:13:LEU:N	2.55	0.51
22:T:4:ARG:HH11	22:T:4:ARG:CB	2.21	0.51
29:a:6:THR:HG21	29:a:63:PRO:CD	2.40	0.51
29:a:9:GLY:HA2	29:a:12:LYS:CG	2.41	0.51
31:y:128:G:C6	31:y:234:C:N4	2.79	0.51
31:y:265:G:C4'	50:r:65:ILE:O	2.58	0.51
31:y:275:G:C2	31:y:276:G:C6	2.99	0.51
31:y:298:A:O4'	31:y:298:A:OP1	2.28	0.51
31:y:366:C:N3	31:y:367:U:C5	2.79	0.51
31:y:445:G:H2'	31:y:446:G:H8	1.75	0.51
31:y:504:C:C4	31:y:542:G:C2	2.98	0.51
31:y:508:C:H1'	31:y:509:A:N6	2.26	0.51
31:y:523:A:N7	31:y:527:7MG:O6	2.44	0.51
31:y:714:G:N3	31:y:777:A:C8	2.79	0.51
31:y:784:C:C4	31:y:785:G:N7	2.79	0.51
31:y:816:A:H5'	31:y:817:C:O5'	2.10	0.51
31:y:879:C:C6	45:m:5:THR:HG22	2.43	0.51
31:y:1113:C:O2	31:y:1113:C:C2'	2.59	0.51
31:y:1229:A:O3'	32:z:30:G:H5''	2.10	0.51
31:y:1291:G:C5	31:y:1292:U:C5	2.99	0.51
31:y:1312:G:H2'	31:y:1313:U:O4'	2.11	0.51
31:y:1319:A:H2'	31:y:1323:G:C5	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1347:G:H22	31:y:1373:G:H2'	0.68	0.51
31:y:1386:G:H2'	31:y:1387:G:C8	2.46	0.51
31:y:1447:G:O5'	31:y:1447:G:C8	2.53	0.51
35:c:82:ARG:NH1	35:c:92:TYR:CE1	2.79	0.51
35:c:111:ARG:O	35:c:115:LEU:HB3	2.11	0.51
38:f:82:VAL:O	38:f:88:LYS:HA	2.11	0.51
40:h:88:PRO:HG3	40:h:148:ASN:HB3	1.91	0.51
41:i:40:ALA:C	41:i:42:GLU:N	2.65	0.51
42:j:93:ARG:NH1	42:j:97:LYS:CD	2.74	0.51
44:l:80:VAL:O	44:l:80:VAL:CG2	2.59	0.51
49:q:1:MET:C	49:q:3:LYS:H	2.19	0.51
50:r:34:LYS:HG3	50:r:35:VAL:H	1.76	0.51
1:w:64:A:OP2	20:R:63:LYS:CB	2.58	0.51
1:w:270(J):G:H2'	1:w:270(K):G:C8	2.44	0.51
1:w:324:A:C6	1:w:338:G:O2'	2.64	0.51
1:w:442:G:N2	1:w:444:C:H1'	2.26	0.51
1:w:522:G:H2'	1:w:522:G:N3	2.26	0.51
1:w:567:A:H61	1:w:571:A:C5'	2.24	0.51
1:w:598:G:H4'	12:J:14:LYS:HD2	1.92	0.51
1:w:603:A:H2	1:w:656:G:O2'	1.94	0.51
1:w:609(B):G:C2'	1:w:610:C:C5	2.93	0.51
1:w:613:U:H4'	1:w:616:A:C6	2.46	0.51
1:w:767:U:H2'	1:w:768:G:C8	2.46	0.51
1:w:833:U:O5'	1:w:833:U:C6	2.64	0.51
1:w:996:A:C2	1:w:997:G:C4	2.99	0.51
1:w:1291:C:C4	1:w:1292:U:C5	2.99	0.51
1:w:1317:A:C6	1:w:1318:C:N4	2.79	0.51
1:w:1318:C:N4	1:w:1319:G:C5	2.79	0.51
1:w:1320:C:N3	1:w:1331:A:N7	2.59	0.51
1:w:1364:G:OP2	24:V:8:SER:HA	2.11	0.51
1:w:1536:A:C8	1:w:1537:C:H5	2.28	0.51
1:w:1606:G:C4'	1:w:1608:A:N3	2.71	0.51
1:w:1678:G:O5'	1:w:1678:G:C8	2.57	0.51
1:w:1857:G:C2'	1:w:1885:A:H61	2.23	0.51
1:w:1897:G:H2'	1:w:1898:U:O5'	2.11	0.51
1:w:2007:C:C4'	1:w:2824:C:O2'	2.57	0.51
1:w:2013:A:C5'	19:Q:96:ILE:HG21	2.38	0.51
1:w:2021:C:H5''	1:w:2022:U:OP2	2.11	0.51
1:w:2026:C:C4	1:w:2027:G:N7	2.79	0.51
1:w:2037:G:C5	1:w:2038:G:C6	2.99	0.51
1:w:2100:G:C2	1:w:2101:G:N9	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2285:C:C1'	1:w:2288:A:C5	2.93	0.51
1:w:2304:G:C2'	7:E:132:ASN:OD1	2.59	0.51
1:w:2309:A:H2'	1:w:2310:A:H5'	1.92	0.51
1:w:2320:A:N1	1:w:2333:A:C8	2.79	0.51
1:w:2354:G:N3	23:U:36:ILE:CD1	2.74	0.51
1:w:2356:C:C2	1:w:2357:U:C6	2.99	0.51
1:w:2400:G:H5'	1:w:2401:U:OP2	2.10	0.51
1:w:2526:G:C2	1:w:2527:C:C2	2.98	0.51
1:w:2544:G:C6	1:w:2545:G:N7	2.79	0.51
1:w:2556:C:C6	1:w:2556:C:C4'	2.94	0.51
1:w:2618:G:H21	5:C:150:VAL:HG21	1.76	0.51
1:w:2680:C:P	5:C:189:PRO:CB	2.95	0.51
1:w:2710:C:C4	1:w:2711:A:N7	2.79	0.51
1:w:2743:C:N3	1:w:2762:G:C2	2.79	0.51
1:w:2793:G:C8	1:w:2793:G:OP2	2.64	0.51
1:w:2822:G:O2'	1:w:2823:A:C5'	2.59	0.51
1:w:2824:C:H2'	1:w:2825:G:N7	2.26	0.51
1:w:2850:A:C8	1:w:2868:A:C2	2.98	0.51
1:w:2875:C:H4'	16:N:5:ALA:N	2.24	0.51
1:w:2886:G:C8	1:w:2886:G:H3'	2.46	0.51
2:x:42:C:O2	7:E:92:VAL:CG2	2.59	0.51
4:B:24:ILE:HA	4:B:91:ARG:HH11	1.69	0.51
4:B:97:TYR:CB	4:B:101:GLU:O	2.49	0.51
4:B:269:PHE:HD1	4:B:270:ILE:H	1.59	0.51
5:C:9:VAL:H	5:C:26:ILE:HD13	1.76	0.51
6:D:148:SER:O	6:D:149:VAL:CG1	2.58	0.51
6:D:179:TYR:O	6:D:182:VAL:CG2	2.58	0.51
7:E:31:VAL:O	7:E:33:ARG:HG2	2.11	0.51
8:F:34:GLU:O	8:F:35:VAL:CG2	2.58	0.51
8:F:49:VAL:O	8:F:50:VAL:HG23	2.11	0.51
9:G:77:LEU:HD22	9:G:78:THR:N	2.23	0.51
10:H:131:PRO:O	10:H:132:LYS:CB	2.57	0.51
11:I:59:LYS:NZ	11:I:89:ASN:HA	2.25	0.51
12:J:27:HIS:O	12:J:28:GLY:C	2.54	0.51
13:K:89:ASN:C	13:K:91:GLU:N	2.68	0.51
14:L:7:GLY:O	14:L:8:ARG:CG	2.58	0.51
14:L:38:VAL:HB	14:L:110:PRO:CG	2.40	0.51
14:L:64:ARG:NH1	14:L:64:ARG:CG	2.73	0.51
15:M:56:LEU:HD12	15:M:56:LEU:N	2.26	0.51
16:N:45:PHE:CE1	16:N:65:LYS:O	2.64	0.51
16:N:108:ARG:CZ	31:y:1431:C:OP2	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:100:ARG:CD	18:P:101:GLY:H	2.24	0.51
19:Q:14:PRO:HB3	19:Q:18:ARG:HH12	1.74	0.51
19:Q:36:LEU:O	19:Q:37:ARG:C	2.54	0.51
19:Q:86:LEU:HB3	19:Q:94:ASP:HB3	1.93	0.51
20:R:53:LYS:O	20:R:79:ALA:HA	2.10	0.51
21:S:14:LEU:HD12	21:S:15:VAL:H	1.76	0.51
21:S:16:ALA:HA	21:S:20:TYR:H	1.76	0.51
23:U:31:VAL:HG21	23:U:62:LEU:H	1.75	0.51
23:U:50:ASN:HD22	23:U:65:GLY:HA3	1.75	0.51
24:V:22:GLY:HA3	24:V:39:LYS:CA	2.41	0.51
24:V:59:THR:HG22	24:V:60:PHE:H	1.76	0.51
24:V:89:GLU:O	24:V:93:GLU:HG2	2.12	0.51
31:y:37:U:C2	31:y:38:G:C1'	2.93	0.51
31:y:67:C:C2	31:y:68:G:C8	2.98	0.51
31:y:117:G:C8	31:y:118:U:O4	2.64	0.51
31:y:190:G:OP2	31:y:190:G:C8	2.63	0.51
31:y:247:G:N3	31:y:247:G:H2'	2.26	0.51
31:y:251:G:N2	31:y:253:U:C4	2.79	0.51
31:y:375:U:H2'	31:y:376:G:H8	1.76	0.51
31:y:417:C:O2	31:y:418:C:C5	2.64	0.51
31:y:426:G:C2	31:y:427:U:N3	2.79	0.51
31:y:438:G:C4'	37:e:123:HIS:CE1	2.93	0.51
31:y:465:A:O2'	31:y:466:G:H5'	2.11	0.51
31:y:674:G:N2	44:l:116:HIS:CE1	2.79	0.51
31:y:781:A:O2'	31:y:1522:U:O2	2.29	0.51
31:y:865:A:C2	31:y:918:A:O4'	2.64	0.51
31:y:900:A:N1	31:y:901:A:C2	2.79	0.51
31:y:910:C:C4	31:y:911:U:C4	2.99	0.51
31:y:924:C:O2'	31:y:925:G:C5'	2.52	0.51
31:y:973:G:H5''	31:y:974:A:H5''	1.93	0.51
31:y:1014:A:H4'	52:t:14:HIS:NE2	2.24	0.51
31:y:1053:G:H5'	31:y:1053:G:C8	2.46	0.51
31:y:1088:G:O6	31:y:1089:G:O6	2.28	0.51
31:y:1152:A:H5'	43:k:13:HIS:HB3	1.93	0.51
31:y:1157:A:C2	31:y:1181:G:N7	2.79	0.51
31:y:1198:G:C6	31:y:1199:U:O4	2.63	0.51
31:y:1207:2MG:C3'	31:y:1208:C:C6	2.93	0.51
31:y:1222:G:O5'	31:y:1222:G:H8	1.85	0.51
31:y:1254:C:H2'	31:y:1255:G:C5'	2.41	0.51
31:y:1315:U:O2	31:y:1361:G:C1'	2.55	0.51
31:y:1359:C:C2	31:y:1361:G:OP2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1375:A:H2'	31:y:1376:U:C5'	2.41	0.51
31:y:1415:G:C2	31:y:1416:G:C8	2.99	0.51
31:y:1528:U:H4'	31:y:1529:G:H21	1.76	0.51
35:c:82:ARG:CG	35:c:82:ARG:NH1	2.67	0.51
35:c:138:LEU:HA	35:c:141:GLU:HB2	1.92	0.51
38:f:76:ILE:HG23	38:f:77:PRO:CD	2.38	0.51
38:f:76:ILE:HG23	38:f:91:LEU:HD11	1.91	0.51
41:i:57:PRO:C	41:i:58:TYR:CD2	2.89	0.51
41:i:128:GLY:O	41:i:129:VAL:HG13	2.11	0.51
45:m:42:VAL:CG2	45:m:43:THR:H	1.88	0.51
46:n:52:GLU:HG2	46:n:55:ARG:HH21	1.74	0.51
48:p:28:GLN:O	48:p:31:LEU:HB2	2.11	0.51
48:p:39:LEU:O	48:p:43:LEU:HD23	2.11	0.51
51:s:66:LEU:CD2	51:s:67:ALA:N	2.74	0.51
51:s:74:ARG:CZ	51:s:79:LEU:HD13	2.40	0.51
52:t:30:LEU:HD13	52:t:48:THR:HG23	1.92	0.51
1:w:118:A:C2	1:w:178:G:H1'	2.44	0.50
1:w:270(D):C:C5	1:w:270(E):C:C1'	2.94	0.50
1:w:349:G:H3'	1:w:350:U:C5	2.45	0.50
1:w:479:A:C1'	1:w:481:G:O4'	2.56	0.50
1:w:611:C:N3	1:w:612:G:C8	2.79	0.50
1:w:651:G:N2	1:w:652:U:H1'	2.25	0.50
1:w:744:G:C8	1:w:744:G:OP2	2.63	0.50
1:w:755:C:N3	1:w:756:C:C4	2.79	0.50
1:w:813:U:C6	1:w:813:U:H3'	2.46	0.50
1:w:851:U:O2'	26:X:42:ALA:HA	2.10	0.50
1:w:873:G:H2'	1:w:874:G:H8	1.73	0.50
1:w:889:C:H4'	1:w:890:A:O4'	2.11	0.50
1:w:1038:C:O2'	1:w:1039:G:H5'	2.11	0.50
1:w:1047:G:O2'	1:w:1110:G:N1	2.15	0.50
1:w:1059:G:C2'	1:w:1060:U:O5'	2.58	0.50
1:w:1186:G:C4	1:w:1187:G:O4'	2.64	0.50
1:w:1186:G:C2'	1:w:1187:G:H5'	2.40	0.50
1:w:1186:G:N7	1:w:1187:G:C4	2.78	0.50
1:w:1189:A:HO2'	12:J:34:GLY:HA2	1.76	0.50
1:w:1264:G:N2	1:w:2014:A:C8	2.79	0.50
1:w:1275:A:O2'	1:w:1276:A:P	2.69	0.50
1:w:1287:A:H3'	1:w:1288:U:C6	2.46	0.50
1:w:1381:G:C8	1:w:1382:G:N7	2.79	0.50
1:w:1471:A:N7	1:w:1522:G:O6	2.44	0.50
1:w:1477:A:H3'	1:w:1478:G:C4'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1609:A:O2'	1:w:1610:A:H5'	2.11	0.50
1:w:1834:U:C2	1:w:1972:A:C2	2.99	0.50
1:w:1843:C:H4'	4:B:257:LEU:CD2	2.41	0.50
1:w:1862:G:N1	1:w:1881:C:C2	2.79	0.50
1:w:1863:G:H3'	1:w:1864:U:H5''	1.93	0.50
1:w:2094:G:C3'	1:w:2095:C:C6	2.94	0.50
1:w:2095:C:C4	1:w:2096:U:C5	2.99	0.50
1:w:2146:C:H3'	1:w:2146:C:H6	1.71	0.50
1:w:2169:A:P	1:w:2170:A:N6	2.84	0.50
1:w:2186:G:C2	1:w:2187:G:C6	2.99	0.50
1:w:2240:C:C4	1:w:2241:A:H8	2.27	0.50
1:w:2263:C:C2'	1:w:2264:C:H5'	2.41	0.50
1:w:2352:A:C5	1:w:2353:G:C1'	2.94	0.50
1:w:2353:G:O2'	23:U:35:ASN:ND2	2.44	0.50
1:w:2377:A:C5	1:w:2378:A:N1	2.79	0.50
1:w:2380:C:N4	1:w:2381:C:C4	2.79	0.50
1:w:2458:G:C4	1:w:2490:G:C5	3.00	0.50
1:w:2547:U:H1'	1:w:2566:A:C6	2.46	0.50
1:w:2618:G:N2	5:C:150:VAL:HG21	2.26	0.50
1:w:2622:C:H2'	1:w:2825:G:H22	1.76	0.50
1:w:2636:U:O4'	5:C:80:GLU:OE2	2.28	0.50
1:w:2651:C:N3	1:w:2652:C:C4	2.79	0.50
1:w:2758:A:H2'	1:w:2759:G:H5''	1.92	0.50
1:w:2785:C:C4	1:w:2786:U:C5	2.99	0.50
1:w:2801:A:H8	1:w:2801:A:O5'	1.94	0.50
1:w:2827:C:N3	1:w:2828:C:C5	2.79	0.50
1:w:2901:C:C4	1:w:2902:C:N4	2.79	0.50
2:x:2:C:N4	2:x:3:C:N4	2.59	0.50
2:x:12:C:OP1	23:U:73:GLY:CA	2.57	0.50
3:A:195:ARG:C	3:A:197:LEU:H	2.17	0.50
4:B:157:ARG:CG	4:B:158:ALA:N	2.70	0.50
4:B:164:GLN:HE21	4:B:176:ARG:CB	2.24	0.50
4:B:192:THR:O	4:B:192:THR:CG2	2.58	0.50
4:B:270:ILE:O	4:B:271:ILE:HD12	2.11	0.50
6:D:196:VAL:C	6:D:197:PHE:HD1	2.18	0.50
7:E:8:LYS:C	7:E:10:LYS:N	2.68	0.50
7:E:41:GLN:CG	7:E:155:MET:HB3	2.40	0.50
9:G:33:ARG:HB2	9:G:33:ARG:CZ	2.40	0.50
9:G:112:LYS:O	9:G:114:LEU:N	2.44	0.50
10:H:95:TYR:HD1	10:H:108:ILE:HG13	1.76	0.50
10:H:101:TYR:CD1	10:H:101:TYR:N	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:2:ILE:HB	11:I:33:ALA:O	2.11	0.50
11:I:62:VAL:CG1	11:I:63:VAL:H	2.25	0.50
11:I:65:THR:CG2	11:I:82:ASN:HD22	2.23	0.50
11:I:77:ILE:HB	16:N:74:ARG:HD3	1.92	0.50
15:M:27:SER:OG	15:M:89:ARG:CZ	2.59	0.50
16:N:29:ARG:O	16:N:29:ARG:HG3	2.11	0.50
16:N:61:PHE:O	16:N:62:THR:CB	2.59	0.50
17:O:32:PHE:CD1	17:O:33:ARG:N	2.80	0.50
17:O:106:PHE:O	17:O:109:LEU:CB	2.59	0.50
19:Q:7:ALA:HB1	19:Q:103:ILE:HG23	1.94	0.50
19:Q:23:LEU:HD13	27:Y:25:LEU:CB	2.41	0.50
19:Q:105:VAL:O	19:Q:106:ILE:HG23	2.12	0.50
21:S:23:ARG:NE	21:S:38:ILE:CG2	2.69	0.50
23:U:31:VAL:HG23	23:U:61:ALA:CB	2.41	0.50
24:V:12:PRO:C	24:V:66:HIS:HE1	2.19	0.50
24:V:37:ILE:CG2	24:V:38:SER:N	2.74	0.50
29:a:49:VAL:HB	29:a:53:PRO:HB3	1.93	0.50
31:y:143:A:C4'	31:y:196:A:C2	2.94	0.50
31:y:243:A:O2'	31:y:244:U:P	2.69	0.50
31:y:323:U:H4'	53:u:22:ARG:HB2	1.93	0.50
31:y:364:A:C5	31:y:365:U:C5	2.99	0.50
31:y:483:C:C5	31:y:484:G:C8	2.99	0.50
31:y:565:U:C6	31:y:566:G:N9	2.79	0.50
31:y:1065:U:O2'	31:y:1066:C:P	2.69	0.50
31:y:1066:C:H42	31:y:1191:A:H62	1.58	0.50
31:y:1188:A:C1'	47:o:60:SER:CB	2.89	0.50
31:y:1221:G:N2	31:y:1222:G:H1'	2.23	0.50
31:y:1228:C:C4'	46:n:114:ARG:HE	2.24	0.50
31:y:1270:C:C2'	31:y:1271:G:H5'	2.40	0.50
31:y:1410:G:N2	31:y:1491:G:C8	2.79	0.50
31:y:1425:U:H2'	31:y:1426:C:C5	2.45	0.50
32:z:19:G:H4'	32:z:20:H2U:OP1	2.10	0.50
33:0:33:U:C4	33:0:36:A:OP1	2.64	0.50
33:0:74:C:C2'	33:0:75:C:O4'	2.48	0.50
35:c:132:LYS:C	35:c:135:GLN:H	2.19	0.50
36:d:23:TYR:CD1	43:k:11:PHE:HE1	2.28	0.50
36:d:89:GLU:O	36:d:93:LYS:HG3	2.11	0.50
36:d:127:ARG:NE	36:d:127:ARG:HA	2.26	0.50
37:e:9:CYS:CB	37:e:31:CYS:O	2.59	0.50
37:e:62:GLN:HG3	37:e:63:LYS:N	2.26	0.50
37:e:80:GLU:C	37:e:82:ALA:N	2.66	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:128:VAL:O	37:e:129:ASN:C	2.53	0.50
38:f:143:ARG:O	38:f:144:THR:HB	2.11	0.50
40:h:20:ASP:OD1	40:h:22:LEU:HD21	2.12	0.50
40:h:69:VAL:CG2	40:h:135:VAL:HG22	2.37	0.50
41:i:36:LEU:O	41:i:40:ALA:HB2	2.12	0.50
41:i:80:ILE:O	41:i:80:ILE:HG22	2.10	0.50
41:i:90:GLY:CA	50:r:34:LYS:CE	2.85	0.50
41:i:93:VAL:O	41:i:93:VAL:CG1	2.49	0.50
46:n:90:LEU:HD22	46:n:94:ARG:NH1	2.26	0.50
46:n:108:ARG:HA	46:n:112:GLY:HA2	1.93	0.50
51:s:33:ASP:CG	51:s:34:TYR:N	2.69	0.50
53:u:18:GLN:O	53:u:21:LYS:CD	2.58	0.50
53:u:20:LEU:HD12	53:u:21:LYS:CA	2.38	0.50
53:u:53:LEU:HD22	53:u:53:LEU:H	1.75	0.50
1:w:7:G:C6	1:w:8:A:C4	3.00	0.50
1:w:14:A:C2	27:Y:21:SER:CB	2.95	0.50
1:w:132:G:H2'	1:w:133:C:C6	2.45	0.50
1:w:186:G:C2	1:w:211:A:C4	2.99	0.50
1:w:188:G:C2	1:w:209:C:C4	2.99	0.50
1:w:206:U:C2'	1:w:207:A:H5'	2.42	0.50
1:w:244:A:N6	1:w:254:G:H1'	2.26	0.50
1:w:357:A:H2'	1:w:358:U:H6	1.68	0.50
1:w:387:U:H4'	1:w:388:G:C5'	2.40	0.50
1:w:515:A:H3'	1:w:516:C:C5	2.46	0.50
1:w:582:G:C3'	1:w:583:G:H8	2.24	0.50
1:w:601:C:C1'	6:D:99:LYS:HZ1	2.23	0.50
1:w:620:G:O2'	1:w:621:A:H5''	2.11	0.50
1:w:632:A:H2'	1:w:633:A:H8	1.73	0.50
1:w:656:G:C6	1:w:657:U:N3	2.80	0.50
1:w:729:G:C2	1:w:1775:U:C6	2.99	0.50
1:w:800:A:N3	1:w:800:A:C2'	2.63	0.50
1:w:811:U:C1'	1:w:1251:C:O3'	2.59	0.50
1:w:814:C:O3'	18:P:87:HIS:CE1	2.64	0.50
1:w:935:C:H2'	1:w:936:C:C5	2.46	0.50
1:w:943:U:OP2	1:w:943:U:C6	2.53	0.50
1:w:996:A:C4	1:w:1160:G:N2	2.80	0.50
1:w:1013:C:C4	1:w:1014:U:C4	2.99	0.50
1:w:1039:G:OP1	1:w:1040:C:OP2	2.29	0.50
1:w:1042:G:C5	1:w:1043:C:N4	2.79	0.50
1:w:1256:G:H4'	6:D:68:ALA:HB1	1.93	0.50
1:w:1263:U:C4	1:w:2014:A:OP2	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1294:U:H5'	14:L:26:LYS:HE3	1.89	0.50
1:w:1309:G:C2'	1:w:1611:C:H4'	2.40	0.50
1:w:1361:G:N1	1:w:1362:C:C4	2.79	0.50
1:w:1365:A:O5'	24:V:16:ASN:OD1	2.29	0.50
1:w:1406:U:H2'	1:w:1406:U:O2	2.09	0.50
1:w:1434:A:C3'	1:w:1435:G:C5'	2.81	0.50
1:w:144(B):A:H1'	1:w:1460:A:N3	2.26	0.50
1:w:1454:U:O4	1:w:2702:U:N3	2.44	0.50
1:w:1550:C:H2'	1:w:1551:C:C6	2.47	0.50
1:w:1567:A:C2	4:B:84:TYR:CB	2.94	0.50
1:w:1620:G:C4'	28:Z:2:LYS:NZ	2.68	0.50
1:w:1693:U:H5'	1:w:1694:C:H5	1.73	0.50
1:w:1755:A:C2'	1:w:1756:G:H5'	2.40	0.50
1:w:1790:C:H2'	1:w:1791:A:N7	2.27	0.50
1:w:1791:A:H2'	1:w:1792:G:O5'	2.11	0.50
1:w:1801:G:N1	1:w:2207:C:H4'	2.26	0.50
1:w:2041:U:H2'	1:w:2042:A:H8	1.76	0.50
1:w:2067:G:O2'	1:w:2069:G:H5''	2.10	0.50
1:w:2124:G:C2	3:A:218:THR:HG23	2.47	0.50
1:w:2278:A:N7	23:U:10:THR:N	2.59	0.50
1:w:2368:C:C6	1:w:2368:C:C3'	2.94	0.50
1:w:2458:G:H1'	1:w:2490:G:H1	1.76	0.50
1:w:2520:C:H1'	1:w:2565:A:HO2'	1.73	0.50
1:w:2544:G:C5	1:w:2545:G:N7	2.79	0.50
1:w:2553:G:N3	1:w:2582:G:N2	2.58	0.50
1:w:2588:G:O6	1:w:2606:C:C4	2.64	0.50
1:w:2598:A:OP1	4:B:234:GLY:CA	2.60	0.50
1:w:2601:C:H4'	32:z:74:C:C3'	2.40	0.50
1:w:2643:G:H2'	1:w:2644:G:N9	2.26	0.50
1:w:2652:C:N3	1:w:2653:U:C5	2.78	0.50
1:w:2668:G:C2	1:w:2669:G:C5	2.98	0.50
1:w:2698:U:N3	1:w:2699:C:C4	2.79	0.50
1:w:2725:A:HO2'	1:w:2726:U:H2'	1.72	0.50
1:w:2753:A:H2'	1:w:2754:U:C6	2.47	0.50
1:w:2812:G:O2'	1:w:2813:A:H5'	2.11	0.50
1:w:2819:G:O2'	1:w:2820:A:OP2	2.29	0.50
2:x:57:A:H2'	2:x:58:A:O4'	2.12	0.50
2:x:102:G:C3'	2:x:103:U:C5'	2.85	0.50
3:A:52:PRO:HB3	3:A:166:ASN:HB2	1.92	0.50
3:A:172:ILE:CG1	3:A:173:HIS:H	2.24	0.50
4:B:34:VAL:HG11	4:B:35:LYS:HZ3	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:69:ARG:HD2	4:B:119:ALA:CB	2.41	0.50
5:C:114:ALA:O	5:C:157:ALA:HB1	2.11	0.50
5:C:120:TRP:O	5:C:121:ASN:CB	2.59	0.50
6:D:98:LYS:HA	6:D:101:ARG:CB	2.22	0.50
6:D:119:LEU:O	6:D:119:LEU:CD1	2.58	0.50
7:E:123:ASN:C	7:E:125:PHE:N	2.66	0.50
7:E:178:PHE:CD1	7:E:178:PHE:N	2.79	0.50
10:H:79:ASN:N	10:H:147:ALA:CA	2.73	0.50
11:I:87:ILE:O	11:I:88:ASN:C	2.53	0.50
12:J:84:ASN:HA	12:J:116:GLY:HA3	1.93	0.50
16:N:6:LEU:C	16:N:6:LEU:HD23	2.36	0.50
16:N:27:THR:HG23	16:N:63:VAL:HG11	1.93	0.50
19:Q:5:ALA:HB3	19:Q:105:VAL:CG1	2.41	0.50
20:R:20:GLY:HA2	20:R:25:LYS:CA	2.41	0.50
21:S:49:VAL:O	21:S:55:TYR:CA	2.49	0.50
25:W:4:SER:H	25:W:7:ARG:HG2	1.75	0.50
25:W:47:ASN:C	25:W:51:ARG:NH1	2.66	0.50
31:y:282:A:P	31:y:282:A:C8	3.04	0.50
31:y:373:A:H2'	31:y:374:A:C5'	2.37	0.50
31:y:449:C:H41	31:y:484:G:H1	1.60	0.50
31:y:512:U:C2	31:y:513:C:H5	2.29	0.50
31:y:565:U:OP2	31:y:566:G:C5'	2.58	0.50
31:y:636:U:H2'	31:y:637:G:H8	1.76	0.50
31:y:657:G:N3	48:p:23:GLY:CA	2.74	0.50
31:y:673:G:C2	31:y:674:G:C6	2.99	0.50
31:y:674:G:N2	31:y:675:A:C5	2.79	0.50
31:y:713:G:H21	31:y:777:A:C1'	2.23	0.50
31:y:714:G:C2'	31:y:715:A:H5'	2.41	0.50
31:y:779:C:OP2	31:y:779:C:O4'	2.29	0.50
31:y:896:C:H5'	50:r:100:LYS:HZ2	1.59	0.50
31:y:904:C:H6	31:y:904:C:O5'	1.94	0.50
31:y:911:U:C2'	31:y:912:C:H6	2.09	0.50
31:y:1047:G:O3'	47:o:4:LYS:HG3	2.10	0.50
31:y:1088:G:N1	31:y:1089:G:C5	2.80	0.50
31:y:1164:G:C4	31:y:1173:G:C2	2.98	0.50
31:y:1201:A:HO2'	31:y:1202:G:H5''	1.76	0.50
31:y:1237:C:N4	31:y:1336:C:H1'	2.26	0.50
31:y:1323:G:H5''	31:y:136(B):C:C4	2.46	0.50
31:y:1348:U:H4'	42:j:120:ARG:CG	2.41	0.50
31:y:1367:C:N3	31:y:1368:G:C8	2.79	0.50
31:y:1379:G:OP2	40:h:4:ARG:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1399:C:H5'	31:y:1401:G:N7	2.23	0.50
31:y:1500:A:C3'	31:y:1501:C:C5'	2.88	0.50
33:0:14:A:N6	33:0:21:A:H2	1.86	0.50
35:c:88:ALA:C	35:c:90:MET:H	2.19	0.50
35:c:170:GLU:C	35:c:172:ILE:N	2.69	0.50
36:d:120:VAL:HG11	36:d:134:ILE:HA	1.93	0.50
36:d:151:VAL:HG11	36:d:168:ALA:N	2.26	0.50
37:e:31:CYS:O	37:e:32:ALA:HB3	2.11	0.50
37:e:127:THR:O	37:e:127:THR:HG23	2.11	0.50
38:f:109:ILE:HG22	38:f:110:LEU:N	2.27	0.50
40:h:8:GLU:HG3	40:h:10:ARG:H	1.76	0.50
41:i:93:VAL:HG12	41:i:95:VAL:CG1	2.41	0.50
43:k:60:ARG:O	43:k:61:GLU:HB2	2.11	0.50
45:m:42:VAL:N	45:m:52:ARG:HH22	1.97	0.50
47:o:36:PHE:O	47:o:37:PHE:CG	2.65	0.50
48:p:18:PHE:CD2	48:p:21:ASP:CB	2.93	0.50
48:p:24:SER:O	48:p:27:VAL:HB	2.11	0.50
50:r:21:VAL:CG1	50:r:22:LEU:H	2.25	0.50
1:w:36:G:C2	1:w:445:C:N3	2.80	0.50
1:w:64:A:C5'	20:R:63:LYS:HD2	2.41	0.50
1:w:71:A:C5'	1:w:73:A:OP2	2.44	0.50
1:w:92:G:C6	1:w:93:C:N4	2.79	0.50
1:w:203:C:O5'	1:w:204:A:H5''	2.11	0.50
1:w:239:U:H2'	1:w:240:G:O4'	2.11	0.50
1:w:289:A:H5''	1:w:289:A:C2	2.44	0.50
1:w:329:G:H2'	1:w:329:G:N3	2.26	0.50
1:w:340:A:O2'	1:w:341:G:H5'	2.11	0.50
1:w:519:U:C5	1:w:520:G:C5	2.99	0.50
1:w:521:G:C3'	1:w:522:G:H8	2.24	0.50
1:w:545:G:O5'	1:w:545:G:C8	2.60	0.50
1:w:600:G:C5	1:w:601:C:N4	2.79	0.50
1:w:702:G:H2'	1:w:703:U:C5	2.47	0.50
1:w:813:U:O2'	18:P:86:GLY:O	2.30	0.50
1:w:869:G:H4'	13:K:12:GLN:NE2	2.24	0.50
1:w:871:U:H6	1:w:871:U:O5'	1.94	0.50
1:w:1004:C:C4'	1:w:1010:A:C6	2.95	0.50
1:w:1174:A:H3'	1:w:1176:G:O6	2.11	0.50
1:w:1243:G:HO2'	12:J:9:ASN:HA	1.76	0.50
1:w:1340:U:H4'	1:w:1394:U:H1'	1.93	0.50
1:w:1357:U:C5	1:w:1358:G:C5	2.99	0.50
1:w:1408:C:H42	1:w:1594:G:H1	1.56	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1519:G:O2'	1:w:1520:U:H5'	2.10	0.50
1:w:1700:A:C2'	1:w:1701:A:C5'	2.74	0.50
1:w:1760:A:C2	1:w:1761:C:C2	3.00	0.50
1:w:1764:G:C5	1:w:1765:C:C5	2.99	0.50
1:w:1789:A:C8	1:w:1790:C:C6	3.00	0.50
1:w:1927:A:C6	1:w:1928:A:C6	3.00	0.50
1:w:2046:G:H3'	1:w:2047:U:C5	2.46	0.50
1:w:2102:U:H3'	1:w:2103:C:C5	2.46	0.50
1:w:2104:G:H2'	1:w:2105:C:C6	2.47	0.50
1:w:2195:C:O2	1:w:2196:C:C6	2.64	0.50
1:w:2295:C:H3'	15:M:9:ARG:HE	1.70	0.50
1:w:2306:C:H42	7:E:43:LEU:C	2.18	0.50
1:w:2651:C:C2	1:w:2652:C:C6	2.98	0.50
1:w:2667:C:C4	1:w:2668:G:C5	2.99	0.50
1:w:2744:G:H21	8:F:143:GLN:CB	2.23	0.50
1:w:2749:A:H2'	1:w:2750:A:H8	1.77	0.50
1:w:2798:C:H2'	1:w:2798:C:O2	2.10	0.50
1:w:2839:G:H2'	1:w:2840:C:H6	1.75	0.50
2:x:8:U:H5'	15:M:17:ARG:NH1	2.25	0.50
2:x:23:G:C4	2:x:61:G:C2	2.99	0.50
2:x:40:U:H6	2:x:40:U:OP2	1.93	0.50
3:A:8:TYR:CB	3:A:11:LEU:HB2	2.42	0.50
3:A:57:GLN:HG2	3:A:202:PRO:CG	2.41	0.50
4:B:105:ILE:CG1	4:B:106:ILE:N	2.68	0.50
4:B:228:PRO:CD	4:B:236:GLY:HA2	2.40	0.50
5:C:32:PRO:CB	5:C:69:LYS:HE3	2.27	0.50
5:C:84:PHE:O	5:C:84:PHE:CG	2.63	0.50
5:C:176:ILE:HB	5:C:181:LEU:CG	2.41	0.50
6:D:4:ILE:O	6:D:12:ARG:NH1	2.44	0.50
6:D:25:PRO:HA	6:D:28:LEU:CD1	2.41	0.50
6:D:153:THR:C	6:D:155:ASN:H	2.20	0.50
7:E:70:VAL:CB	7:E:90:LEU:HD11	2.41	0.50
7:E:78:SER:CA	7:E:83:ARG:HG2	2.36	0.50
7:E:106:LEU:HB3	7:E:141:PHE:HE1	1.77	0.50
7:E:107:LEU:HD23	7:E:111:LEU:HD11	1.93	0.50
8:F:41:MET:HA	8:F:53:GLU:C	2.37	0.50
8:F:95:ARG:NH1	8:F:107:VAL:HA	2.25	0.50
8:F:122:THR:C	8:F:123:PHE:HD1	2.17	0.50
9:G:103:ARG:CD	9:G:104:GLN:N	2.61	0.50
10:H:110:LEU:HD22	10:H:110:LEU:H	1.75	0.50
11:I:17:ARG:CG	11:I:47:ILE:CG1	2.89	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:7:GLY:O	14:L:8:ARG:CB	2.60	0.50
18:P:71:LEU:O	18:P:72:VAL:CG2	2.59	0.50
19:Q:14:PRO:HG2	19:Q:78:GLU:CG	2.41	0.50
21:S:38:ILE:HG23	21:S:39:VAL:HG23	1.92	0.50
21:S:38:ILE:N	21:S:62:GLU:HG3	2.25	0.50
23:U:44:ARG:HG3	23:U:45:PHE:H	1.76	0.50
23:U:51:VAL:CG2	23:U:81:VAL:CG2	2.90	0.50
25:W:22:GLU:O	25:W:23:LYS:C	2.52	0.50
27:Y:14:ALA:HB3	27:Y:15:ARG:HH21	1.76	0.50
30:b:11:CYS:SG	30:b:27:CYS:HB3	2.51	0.50
31:y:14:U:H2'	31:y:15:G:H3'	1.94	0.50
31:y:27:G:N1	31:y:557:G:C6	2.79	0.50
31:y:161:A:H2'	31:y:162:A:C5'	2.42	0.50
31:y:242:C:H3'	31:y:242:C:C6	2.46	0.50
31:y:254:G:C2	31:y:273:A:C2	2.99	0.50
31:y:281:G:N3	31:y:281:G:H2'	2.25	0.50
31:y:412:A:C4'	31:y:413:G:C8	2.94	0.50
31:y:445:G:C6	31:y:446:G:C5	2.98	0.50
31:y:827:U:H5'	41:i:15:ASN:ND2	2.27	0.50
31:y:959:A:C4	31:y:960:U:O4'	2.64	0.50
31:y:1167:A:C8	31:y:1169:A:N7	2.79	0.50
31:y:1192:C:O5'	31:y:1192:C:C6	2.64	0.50
31:y:1219:U:H2'	31:y:1220:G:C1'	2.41	0.50
31:y:1293:G:C8	31:y:1293:G:OP2	2.64	0.50
31:y:1318:A:H8	31:y:1318:A:P	2.34	0.50
31:y:1494:G:N1	31:y:1495:U:C2	2.80	0.50
31:y:1494:G:H2'	31:y:1495:U:C6	2.46	0.50
32:z:24:G:N1	32:z:25:C:C2	2.79	0.50
35:c:63:MET:HE2	35:c:64:ARG:N	2.26	0.50
36:d:16:ARG:HH11	36:d:16:ARG:HG2	1.75	0.50
36:d:134:ILE:CD1	36:d:168:ALA:HB2	2.41	0.50
37:e:62:GLN:O	37:e:66:ARG:HG2	2.11	0.50
37:e:91:SER:HB2	37:e:200:GLU:OE1	2.11	0.50
39:g:5:GLU:HG2	39:g:64:GLN:HG3	1.93	0.50
39:g:10:LEU:HD21	39:g:19:LEU:HD12	1.92	0.50
39:g:39:LYS:O	39:g:64:GLN:HB3	2.11	0.50
40:h:75:VAL:HG12	40:h:88:PRO:HA	1.93	0.50
40:h:134:ALA:CA	40:h:137:LYS:HG3	2.37	0.50
40:h:150:ALA:HB3	40:h:151:TYR:CD2	2.47	0.50
45:m:32:ARG:O	45:m:84:ILE:HD11	2.11	0.50
45:m:36:CYS:CB	45:m:80:SER:C	2.81	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:n:97:PRO:HA	46:n:110:ARG:HD3	1.90	0.50
48:p:53:HIS:O	48:p:55:GLY:N	2.45	0.50
49:q:21:VAL:HG12	49:q:22:THR:N	2.27	0.50
50:r:41:LYS:HG2	50:r:42:TYR:H	1.74	0.50
51:s:49:LYS:O	51:s:50:ILE:HD13	2.11	0.50
53:u:34:LYS:HB2	53:u:34:LYS:HZ2	1.75	0.50
1:w:7:G:O2'	10:H:74:PHE:CZ	2.63	0.50
1:w:58:G:C2'	1:w:59:U:O5'	2.59	0.50
1:w:270(J):G:C2	1:w:270(K):G:N7	2.80	0.50
1:w:270(Q):C:OP1	1:w:270(Q):C:C6	2.65	0.50
1:w:393:C:H2'	1:w:393:C:O2	2.09	0.50
1:w:532:A:N3	1:w:532:A:C3'	2.68	0.50
1:w:650:C:O3'	29:a:17:THR:CB	2.59	0.50
1:w:743:G:C2	1:w:744:G:C5	2.99	0.50
1:w:765:G:H8	1:w:765:G:P	2.34	0.50
1:w:776:G:H4'	1:w:777:A:O5'	2.11	0.50
1:w:800:A:C4	1:w:802:A:O4'	2.65	0.50
1:w:850:C:C5'	26:X:18:ASP:HA	2.40	0.50
1:w:890:A:N6	1:w:892:G:C2	2.79	0.50
1:w:936:C:C6	1:w:936:C:H3'	2.46	0.50
1:w:950:G:C4	1:w:951:C:C5	2.98	0.50
1:w:1047:G:P	1:w:1047:G:H2'	2.51	0.50
1:w:1195:G:C5	1:w:1196:C:C5	2.99	0.50
1:w:1206:G:C4	1:w:1207:C:C5	2.99	0.50
1:w:1275:A:H1'	14:L:12:ARG:NH1	2.26	0.50
1:w:1299:G:H1	1:w:1640:C:H5'	1.76	0.50
1:w:1354:A:P	1:w:1354:A:H8	2.34	0.50
1:w:1570:A:H2'	1:w:1571:A:N9	2.21	0.50
1:w:1794:U:N3	1:w:1795:C:N4	2.60	0.50
1:w:1829:A:C8	1:w:1830:C:C5	3.00	0.50
1:w:1838:C:O2	1:w:1841:U:O4	2.29	0.50
1:w:1862:G:C6	1:w:1881:C:N3	2.80	0.50
1:w:1945:G:C2	1:w:1946:U:C5	2.99	0.50
1:w:1971:A:H5'	1:w:1972:A:C4'	2.41	0.50
1:w:2052:G:H21	5:C:149:ARG:CA	2.22	0.50
1:w:2073:C:H4'	4:B:229:VAL:HG22	1.94	0.50
1:w:2168:G:H22	1:w:2171:A:P	2.34	0.50
1:w:2251:G:N1	32:z:76:A:C2	2.80	0.50
1:w:2262:U:C6	1:w:2262:U:C3'	2.94	0.50
1:w:2290:G:C2	1:w:2343:C:O2	2.65	0.50
1:w:2296:U:O4'	1:w:2297:C:H5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2319:G:N3	1:w:2319:G:C2'	2.72	0.50
1:w:2443:C:OP1	6:D:63:LYS:HE3	2.11	0.50
1:w:2519:U:C1'	1:w:2542:A:N6	2.74	0.50
1:w:2544:G:C6	1:w:2545:G:C5	2.99	0.50
1:w:2654:A:H1'	1:w:2655:G:OP2	2.12	0.50
1:w:2786:U:C1'	5:C:64:LYS:HG3	2.34	0.50
1:w:2880:C:O5'	1:w:2880:C:H6	1.95	0.50
2:x:17:C:C5	2:x:18:G:N7	2.79	0.50
3:A:50:ILE:HD12	3:A:50:ILE:C	2.36	0.50
4:B:3:VAL:CA	4:B:17:THR:HG23	2.42	0.50
4:B:35:LYS:HD2	4:B:64:ILE:O	2.12	0.50
4:B:60:ARG:CG	4:B:86:PRO:HB2	2.41	0.50
4:B:138:VAL:C	4:B:140:THR:H	2.19	0.50
5:C:9:VAL:CG2	5:C:26:ILE:HD13	2.41	0.50
5:C:51:PHE:CD1	5:C:76:ARG:CZ	2.94	0.50
5:C:192:ASN:OD1	16:N:4:GLY:CA	2.59	0.50
6:D:4:ILE:HG13	6:D:12:ARG:HG2	1.89	0.50
6:D:11:GLY:C	6:D:12:ARG:CG	2.85	0.50
6:D:31:VAL:HG13	6:D:32:VAL:N	2.26	0.50
6:D:46:THR:C	6:D:47:LYS:HG3	2.37	0.50
6:D:147:GLU:N	6:D:167:TRP:CZ2	2.79	0.50
6:D:176:LEU:HD13	6:D:176:LEU:C	2.37	0.50
7:E:6:ALA:O	7:E:7:LEU:C	2.54	0.50
8:F:157:TYR:N	8:F:157:TYR:CD2	2.79	0.50
9:G:4:ILE:HG22	9:G:5:LEU:N	2.27	0.50
9:G:21:VAL:O	9:G:22:LYS:O	2.29	0.50
10:H:50:ALA:HB1	10:H:126:VAL:CG1	2.40	0.50
10:H:51:THR:HG23	10:H:52:LYS:N	2.19	0.50
10:H:63:PRO:O	10:H:65:TRP:N	2.44	0.50
11:I:39:ILE:HD13	11:I:39:ILE:N	2.27	0.50
12:J:89:ALA:O	12:J:121:LYS:HD2	2.11	0.50
13:K:109:VAL:O	13:K:114:ALA:HB2	2.11	0.50
14:L:20:LEU:O	14:L:23:ASN:HB3	2.12	0.50
14:L:38:VAL:CG1	14:L:39:PRO:N	2.73	0.50
16:N:65:LYS:O	16:N:72:VAL:HG23	2.11	0.50
19:Q:18:ARG:HD2	19:Q:76:VAL:HB	1.94	0.50
20:R:51:VAL:O	20:R:52:VAL:CG2	2.59	0.50
22:T:5:LEU:HB3	22:T:58:VAL:O	2.11	0.50
23:U:32:ARG:H	23:U:61:ALA:CB	2.24	0.50
24:V:17:SER:C	24:V:44:PRO:HG2	2.34	0.50
24:V:76:ARG:HH12	24:V:94:LEU:HD11	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:81:ARG:O	24:V:82:LEU:HB2	2.10	0.50
25:W:15:LYS:O	25:W:16:LEU:HB3	2.12	0.50
26:X:28:LEU:HD22	26:X:35:ARG:HG3	1.93	0.50
30:b:16:VAL:HG11	30:b:18:ARG:HE	1.76	0.50
31:y:35:G:O2'	31:y:36:C:H5'	2.12	0.50
31:y:37:U:C1'	31:y:500:G:H4'	2.31	0.50
31:y:161:A:N6	31:y:162:A:N1	2.59	0.50
31:y:188:U:H6	31:y:188:U:H5''	1.76	0.50
31:y:267:C:C4	31:y:268:C:H5	2.28	0.50
31:y:358:U:H2'	31:y:358:U:O2	2.11	0.50
31:y:368:U:C6	31:y:368:U:H3'	2.46	0.50
31:y:475:G:N3	31:y:476:G:C8	2.79	0.50
31:y:564:C:H42	50:r:31:LEU:CD2	2.23	0.50
31:y:582:U:C2'	31:y:583:A:H5'	2.36	0.50
31:y:739:C:C2'	48:p:42:HIS:CD2	2.94	0.50
31:y:940:C:O4'	31:y:1374:A:N1	2.44	0.50
31:y:967:5MC:O5'	42:j:128:ARG:HB3	2.12	0.50
31:y:991:U:N3	31:y:1213:A:N7	2.59	0.50
31:y:1022:G:H2'	31:y:1023:G:C8	2.46	0.50
31:y:1120:G:C4	31:y:1154:G:N2	2.80	0.50
31:y:1126:U:O2	31:y:1126:U:C2'	2.53	0.50
31:y:1236:A:C2'	31:y:1237:C:O5'	2.59	0.50
31:y:1245:A:O2'	31:y:1246:C:H5'	2.12	0.50
31:y:1286:A:C8	31:y:1287:A:H1'	2.46	0.50
31:y:1320:C:C2'	31:y:1321:C:H5'	2.40	0.50
31:y:1326:C:C5'	54:v:19:GLY:N	2.74	0.50
31:y:1331:G:C8	31:y:1331:G:P	3.05	0.50
31:y:1385:G:N1	31:y:1386:G:C4	2.80	0.50
31:y:1390:U:O5'	31:y:1390:U:H6	1.93	0.50
31:y:1500:A:P	31:y:1505:G:P	3.10	0.50
31:y:1519:MA6:C8	31:y:1520:G:H1'	2.42	0.50
33:0:27:C:H3'	33:0:28:C:C5	2.47	0.50
35:c:19:HIS:NE2	35:c:204:ASN:HB2	2.27	0.50
37:e:21:LEU:O	37:e:22:LYS:CG	2.59	0.50
37:e:108:LEU:O	37:e:110:PHE:N	2.42	0.50
37:e:150:GLU:C	37:e:152:SER:H	2.20	0.50
37:e:195:ALA:O	37:e:196:LEU:CB	2.58	0.50
38:f:9:LYS:NZ	38:f:11:ILE:HG12	2.26	0.50
39:g:81:ILE:HG22	39:g:82:ARG:N	2.26	0.50
40:h:42:ILE:O	40:h:43:PHE:C	2.55	0.50
40:h:58:PRO:O	40:h:61:VAL:HB	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:123:GLU:CD	40:h:126:ASP:HB2	2.36	0.50
41:i:77:GLU:CD	41:i:81:HIS:NE2	2.70	0.50
41:i:112:LEU:CD2	41:i:119:LEU:C	2.84	0.50
41:i:112:LEU:HD23	41:i:119:LEU:O	2.11	0.50
42:j:10:ARG:HH21	42:j:72:GLY:HA3	1.67	0.50
43:k:10:GLY:N	43:k:68:HIS:O	2.33	0.50
43:k:45:ARG:O	43:k:64:GLU:HA	2.12	0.50
44:l:78:GLN:HA	44:l:103:LEU:HD12	1.93	0.50
44:l:108:ILE:C	51:s:87:ARG:O	2.54	0.50
46:n:56:LEU:O	46:n:59:TYR:HB2	2.10	0.50
47:o:15:LYS:O	47:o:16:PHE:CB	2.59	0.50
47:o:21:TYR:N	47:o:21:TYR:CD1	2.79	0.50
47:o:32:SER:CB	47:o:41:ARG:HD3	2.41	0.50
47:o:46:GLU:H	47:o:46:GLU:CD	2.19	0.50
49:q:13:HIS:O	49:q:15:PRO:HD3	2.11	0.50
51:s:16:PRO:O	51:s:17:SER:CB	2.59	0.50
52:t:32:LYS:HA	52:t:50:ALA:CB	2.41	0.50
52:t:32:LYS:CA	52:t:50:ALA:HB3	2.42	0.50
52:t:49:ILE:N	52:t:49:ILE:CD1	2.71	0.50
52:t:58:VAL:HG23	52:t:58:VAL:O	2.11	0.50
1:w:93:C:H2'	1:w:93:C:O2	2.11	0.50
1:w:273(E):C:H2'	1:w:273(F):U:C5'	2.23	0.50
1:w:443:A:C8	6:D:40:ARG:HD3	2.42	0.50
1:w:494:G:C5'	19:Q:8:ARG:NH1	2.70	0.50
1:w:515:A:C8	1:w:516:C:C6	2.99	0.50
1:w:577:G:H2'	1:w:578:A:C4'	2.40	0.50
1:w:609(B):G:H3'	1:w:610:C:C5	2.40	0.50
1:w:618(A):G:N3	1:w:618(A):G:H2'	2.26	0.50
1:w:669:G:C2	1:w:670:A:C4	3.00	0.50
1:w:680:G:H2'	1:w:681:G:O4'	2.12	0.50
1:w:706:A:H2'	1:w:707:G:C8	2.47	0.50
1:w:874:G:C6	1:w:875:G:C6	2.99	0.50
1:w:909:A:C8	13:K:69:PHE:HE1	2.30	0.50
1:w:960:A:H3'	1:w:960:A:C8	2.46	0.50
1:w:1125:G:H8	1:w:1125:G:OP2	1.92	0.50
1:w:1171:G:C2'	1:w:1173:G:H5'	2.40	0.50
1:w:1279:G:H2'	1:w:1280:G:C1'	2.40	0.50
1:w:1299:G:O2'	1:w:1300:U:OP1	2.28	0.50
1:w:1329:U:C5'	1:w:1330:C:H5	2.25	0.50
1:w:1369:G:H21	1:w:1810:A:H1'	1.77	0.50
1:w:1406:U:OP2	1:w:1406:U:C6	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1492:G:C8	1:w:1492:G:O5'	2.65	0.50
1:w:1636:C:O5'	1:w:1636:C:H6	1.95	0.50
1:w:1649:G:C1'	14:L:107:ASP:OD2	2.60	0.50
1:w:1712:C:N3	1:w:1747:G:C2	2.79	0.50
1:w:1725:G:H21	1:w:1741:C:H1'	1.77	0.50
1:w:1753:G:C8	1:w:1755:A:OP2	2.63	0.50
1:w:1799:G:O4'	1:w:1800:C:H5	1.91	0.50
1:w:1844:C:C4'	4:B:258:LYS:HE3	2.41	0.50
1:w:2013:A:O2'	1:w:2014:A:C5'	2.46	0.50
1:w:2135:A:OP2	1:w:2136:C:H5	1.94	0.50
1:w:2159:G:N3	1:w:2160:G:C1'	2.74	0.50
1:w:2257:U:O2'	1:w:2258:C:O5'	2.29	0.50
1:w:2295:C:H2'	1:w:2296:U:C5	2.47	0.50
1:w:2352:A:C4	1:w:2353:G:H1'	2.46	0.50
1:w:2370:G:C6	1:w:2371:G:C2	3.00	0.50
1:w:2556:C:C5'	1:w:2556:C:C6	2.86	0.50
1:w:2573:C:C5'	1:w:2574:G:O5'	2.51	0.50
1:w:2588:G:C2	1:w:2589:A:C4	2.99	0.50
1:w:2804:C:H2'	1:w:2805:G:O4'	2.12	0.50
1:w:2818:G:C2	1:w:2819:G:N9	2.80	0.50
1:w:2843:G:C3'	1:w:2844:G:H8	2.20	0.50
2:x:87:G:H1'	2:x:89(B):A:H62	1.77	0.50
2:x:97:G:C5	2:x:98:G:N7	2.80	0.50
3:A:8:TYR:CD1	3:A:12:LEU:HD22	2.46	0.50
3:A:22:THR:C	3:A:225:ILE:HG23	2.37	0.50
4:B:34:VAL:O	4:B:35:LYS:CG	2.59	0.50
4:B:36:PRO:CB	4:B:61:LEU:HB3	2.42	0.50
4:B:124:PRO:O	4:B:129:ASN:CG	2.55	0.50
4:B:241:PRO:CB	4:B:242:ARG:CZ	2.90	0.50
5:C:108:SER:HB3	5:C:165:VAL:HG21	1.93	0.50
6:D:176:LEU:CD1	6:D:178:VAL:HG22	2.41	0.50
7:E:139:LEU:H	7:E:139:LEU:CD1	2.22	0.50
8:F:147:ASN:C	8:F:148:ILE:HD12	2.36	0.50
8:F:155:SER:HA	8:F:157:TYR:HE2	1.76	0.50
9:G:7:GLU:H	9:G:8:PRO:HD2	1.75	0.50
9:G:101:LEU:HB2	9:G:109:ILE:CD1	2.38	0.50
10:H:58:ARG:HB2	10:H:139:LEU:HD13	1.93	0.50
10:H:81:ASP:N	10:H:146:TYR:O	2.45	0.50
11:I:15:GLY:CA	11:I:50:GLY:HA3	2.40	0.50
13:K:11:LYS:CB	13:K:14:ARG:NH1	2.70	0.50
13:K:25:ASP:CG	13:K:102:VAL:CG2	2.84	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:44:LYS:CB	15:M:46:VAL:HG23	2.40	0.50
16:N:43:GLN:C	16:N:44:ASP:CG	2.80	0.50
18:P:73:SER:N	18:P:89:GLN:O	2.40	0.50
19:Q:21:VAL:O	19:Q:25:ARG:HG2	2.10	0.50
20:R:12:VAL:CG1	20:R:17:ALA:HB2	2.42	0.50
24:V:40:ARG:NH1	24:V:42:GLN:HA	2.27	0.50
25:W:21:LEU:O	25:W:21:LEU:HD23	2.11	0.50
25:W:32:LEU:CG	25:W:33:MET:N	2.65	0.50
29:a:52:LYS:C	29:a:56:GLU:CD	2.80	0.50
29:a:56:GLU:O	29:a:57:ARG:C	2.54	0.50
31:y:6:G:O3'	31:y:7:G:C8	2.65	0.50
31:y:41:G:C4	31:y:42:G:N7	2.80	0.50
31:y:44:G:C6	31:y:399:G:C5	3.00	0.50
31:y:103:C:C5	31:y:103:C:OP2	2.64	0.50
31:y:210:U:C4'	31:y:216:G:C8	2.94	0.50
31:y:230:G:H5''	49:q:31:LYS:HZ1	1.72	0.50
31:y:234:C:N3	31:y:235:C:C4	2.80	0.50
31:y:245:C:C5	31:y:284:G:N1	2.78	0.50
31:y:385:C:O2'	31:y:386:C:C4'	2.59	0.50
31:y:445:G:H2'	31:y:446:G:O4'	2.12	0.50
31:y:485:G:HO2'	31:y:486:U:P	2.34	0.50
31:y:542:G:C2	31:y:543:C:C4	2.99	0.50
31:y:580:U:H2'	31:y:581:G:C8	2.39	0.50
31:y:606:G:H1'	31:y:632:A:H61	1.76	0.50
31:y:654:G:H8	31:y:654:G:P	2.34	0.50
31:y:687:A:O2'	31:y:688:G:OP2	2.28	0.50
31:y:694:A:H5''	31:y:694:A:H8	1.76	0.50
31:y:714:G:C2'	31:y:777:A:N7	2.74	0.50
31:y:718:G:OP2	31:y:718:G:C8	2.64	0.50
31:y:777:A:N3	31:y:777:A:C2'	2.71	0.50
31:y:911:U:C3'	31:y:912:C:C5	2.95	0.50
31:y:1080:A:OP2	31:y:1081:G:C8	2.65	0.50
31:y:1176:A:O5'	31:y:1176:A:C8	2.65	0.50
31:y:1298:C:H1'	31:y:1299:A:N6	2.27	0.50
31:y:1325:C:O3'	54:v:17:THR:HG22	2.11	0.50
31:y:1326:C:C5'	54:v:19:GLY:CA	2.90	0.50
31:y:1378:C:OP1	40:h:7:ALA:HA	2.11	0.50
31:y:1380:U:H5'	40:h:3:ARG:O	2.12	0.50
31:y:1392:G:C2'	31:y:1393:U:O5'	2.59	0.50
31:y:1439:C:N4	31:y:1440:C:N3	2.60	0.50
31:y:1440:C:C3'	31:y:1441:G:H5'	2.39	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1442:G:C4	31:y:1446:A:N1	2.78	0.50
31:y:1442:G:N9	31:y:1446:A:N1	2.60	0.50
35:c:178:ARG:HH11	35:c:184:VAL:CG2	2.17	0.50
36:d:5:ILE:HG22	36:d:6:HIS:N	2.27	0.50
36:d:33:LEU:HD23	36:d:33:LEU:H	1.77	0.50
36:d:55:VAL:O	36:d:56:ASP:CB	2.59	0.50
37:e:9:CYS:N	37:e:26:CYS:SG	2.84	0.50
37:e:49:ARG:O	37:e:50:ARG:C	2.54	0.50
37:e:106:TYR:CD1	37:e:106:TYR:C	2.85	0.50
39:g:40:VAL:HB	39:g:63:TYR:HD1	1.77	0.50
40:h:111:ARG:CD	40:h:122:HIS:HB2	2.42	0.50
41:i:27:PRO:HA	41:i:58:TYR:HD2	1.77	0.50
42:j:10:ARG:NH2	42:j:72:GLY:CA	2.38	0.50
42:j:107:ARG:HG2	42:j:107:ARG:NH1	2.26	0.50
45:m:59:LEU:CD1	45:m:62:GLY:N	2.74	0.50
46:n:4:ILE:O	46:n:61:GLU:HB2	2.12	0.50
46:n:52:GLU:CG	46:n:55:ARG:HH21	2.25	0.50
46:n:80:ARG:O	46:n:84:ILE:HG23	2.11	0.50
46:n:91:ARG:HD2	46:n:96:LEU:HD13	1.92	0.50
47:o:21:TYR:O	47:o:33:VAL:HG21	2.11	0.50
47:o:26:ARG:NH2	47:o:43:CYS:CA	2.74	0.50
48:p:3:ILE:HG13	48:p:4:THR:H	1.77	0.50
49:q:18:ARG:HG3	49:q:38:TYR:HA	1.93	0.50
49:q:60:LEU:HD22	49:q:64:ALA:HB3	1.94	0.50
51:s:16:PRO:O	51:s:17:SER:HB3	2.12	0.50
51:s:68:LYS:HE3	51:s:68:LYS:C	2.37	0.50
52:t:18:LYS:O	52:t:21:GLU:HB2	2.12	0.50
52:t:71:LEU:HD12	52:t:71:LEU:O	2.12	0.50
1:w:65:C:C6	1:w:65:C:C3'	2.95	0.50
1:w:88:G:OP1	1:w:88:G:O3'	2.29	0.50
1:w:139:G:N2	1:w:1408:C:O2'	2.44	0.50
1:w:216:A:C4	1:w:217:G:C4	3.00	0.50
1:w:359:A:H2'	1:w:360:G:C8	2.42	0.50
1:w:361:G:C6	1:w:362:U:C4	3.00	0.50
1:w:376:C:C4	1:w:377:C:C4	3.00	0.50
1:w:376:C:N4	1:w:399:G:C6	2.80	0.50
1:w:476:G:H2'	1:w:478:A:OP2	2.11	0.50
1:w:497:A:C2'	1:w:498:G:H5'	2.40	0.50
1:w:588:U:C3'	1:w:589:C:H5'	2.35	0.50
1:w:609(B):G:C4	1:w:610:C:C5	2.98	0.50
1:w:748:G:O6	1:w:751:A:H5''	2.08	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:777:A:H2'	1:w:778:G:H5'	1.92	0.50
1:w:855:G:H21	23:U:27:GLU:CA	2.23	0.50
1:w:903:C:H2'	1:w:904:C:H6	1.75	0.50
1:w:921:G:C5'	1:w:2269:A:N7	2.74	0.50
1:w:1011:G:H2'	1:w:1013:C:H5''	1.93	0.50
1:w:1122:G:C2'	1:w:1123:C:C5'	2.85	0.50
1:w:1156:A:H4'	1:w:1157:G:OP2	2.11	0.50
1:w:1203:G:C6	1:w:1204:A:N1	2.79	0.50
1:w:1284:A:N7	1:w:1285:G:N3	2.56	0.50
1:w:1320:C:H2'	1:w:1329:U:OP2	2.11	0.50
1:w:1367:A:H2'	1:w:1368:G:C4'	2.41	0.50
1:w:1412:A:H2'	1:w:1413:G:C8	2.45	0.50
1:w:1416:G:O2'	1:w:1417:C:C6	2.57	0.50
1:w:1448:G:N2	1:w:1528:A:H2	2.09	0.50
1:w:1480:G:C6	1:w:1514:U:C2	2.99	0.50
1:w:1527:G:N2	1:w:1543:A:C6	2.80	0.50
1:w:1820:U:H3	4:B:202:LYS:CA	2.19	0.50
1:w:1844:C:H2'	1:w:1845:G:O4'	2.12	0.50
1:w:1862:G:C3'	1:w:1863:G:C5'	2.85	0.50
1:w:2100:G:C6	1:w:2190:G:C2	2.99	0.50
1:w:2283:C:OP1	1:w:2283:C:C4'	2.60	0.50
1:w:2299:G:H2'	1:w:2300:G:C8	2.47	0.50
1:w:2355:C:O2	23:U:17:GLN:CD	2.54	0.50
1:w:2478:A:C5'	1:w:2528:U:C4'	2.89	0.50
1:w:2559:C:C2	1:w:2560:C:C5	3.00	0.50
1:w:2625:G:N7	1:w:2626:C:N4	2.59	0.50
1:w:2652:C:H6	1:w:2652:C:O5'	1.92	0.50
1:w:2677:G:O2'	1:w:2678:C:H5'	2.11	0.50
1:w:2688:U:H5	1:w:2719:G:C6	2.30	0.50
1:w:2784:C:H2'	1:w:2785:C:C5'	2.41	0.50
3:A:28:HIS:O	3:A:29:LEU:C	2.53	0.50
3:A:201:LYS:C	3:A:201:LYS:HD2	2.37	0.50
4:B:76:PRO:HB2	4:B:117:VAL:HB	1.94	0.50
5:C:45:THR:O	5:C:45:THR:HG22	2.11	0.50
5:C:93:VAL:HG22	5:C:180:ASN:OD1	2.11	0.50
5:C:141:ILE:HD13	5:C:141:ILE:N	2.25	0.50
5:C:154:LYS:HE3	5:C:154:LYS:CA	2.37	0.50
7:E:28:VAL:C	7:E:30:GLU:H	2.19	0.50
7:E:126:ASP:HB3	7:E:130:ASN:O	2.11	0.50
8:F:34:GLU:C	8:F:35:VAL:HG23	2.37	0.50
9:G:3:VAL:HG12	9:G:4:ILE:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:76:THR:HG23	9:G:141:LYS:C	2.36	0.50
12:J:53:GLY:C	12:J:55:ARG:N	2.69	0.50
13:K:28:ALA:CB	13:K:105:GLU:OE1	2.60	0.50
13:K:69:PHE:O	13:K:95:ALA:CB	2.59	0.50
15:M:110:LEU:HD23	15:M:112:PHE:CE1	2.46	0.50
17:O:89:GLU:C	17:O:90:VAL:HG23	2.37	0.50
18:P:34:GLU:H	18:P:64:HIS:HE1	1.54	0.50
21:S:47:LYS:C	21:S:56:PRO:HB3	2.37	0.50
22:T:8:TYR:HB2	22:T:38:TYR:HE2	1.77	0.50
22:T:42:VAL:O	22:T:44:PHE:CD2	2.65	0.50
25:W:5:GLU:O	25:W:6:VAL:C	2.54	0.50
31:y:117:G:C8	31:y:117:G:P	3.05	0.50
31:y:129(B):G:O2'	31:y:189:U:C6	2.47	0.50
31:y:186(A):C:H1'	53:u:81:LYS:HE2	1.94	0.50
31:y:254:G:C6	31:y:273:A:C6	2.99	0.50
31:y:264:U:H1'	50:r:63:ARG:HH12	1.77	0.50
31:y:407:G:H5''	37:e:118:ARG:CD	2.27	0.50
31:y:509:A:H2'	31:y:510:A:C5'	2.41	0.50
31:y:516:PSU:H5'	31:y:517:G:N7	2.26	0.50
31:y:748:C:HO2'	31:y:749:C:P	2.30	0.50
31:y:775:G:H2'	31:y:775:G:N3	2.26	0.50
31:y:790:A:H2'	31:y:791:G:C8	2.46	0.50
31:y:891:U:O5'	31:y:891:U:H6	1.95	0.50
31:y:956:U:O2	31:y:960:U:C2	2.65	0.50
31:y:978:A:H2	31:y:1319:A:O4'	1.95	0.50
31:y:1010:G:H2'	31:y:1011:G:H8	1.67	0.50
31:y:102(C):C:N3	31:y:103(C):G:C6	2.80	0.50
31:y:1433:A:N6	31:y:1468:A:C5	2.80	0.50
31:y:1449:C:C4	31:y:1450:U:C5	3.00	0.50
35:c:69:LEU:CD2	35:c:70:PHE:H	2.16	0.50
36:d:40:ARG:C	36:d:43:LEU:HD21	2.37	0.50
36:d:97:LYS:N	36:d:97:LYS:HD3	2.26	0.50
36:d:109:PRO:O	36:d:111:LEU:N	2.41	0.50
36:d:124:ILE:O	36:d:127:ARG:N	2.43	0.50
37:e:126:ILE:HA	37:e:148:VAL:C	2.35	0.50
37:e:128:VAL:HG13	37:e:128:VAL:O	2.12	0.50
38:f:76:ILE:CG2	38:f:77:PRO:N	2.74	0.50
39:g:45:LEU:HD23	39:g:45:LEU:C	2.36	0.50
39:g:77:ARG:O	39:g:80:ARG:HD3	2.11	0.50
40:h:121:ALA:C	40:h:124:LEU:HG	2.36	0.50
41:i:20:TYR:CD1	41:i:65:TYR:CD1	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:87:SER:HA	41:i:91:ARG:O	2.10	0.50
44:l:108:ILE:HD12	44:l:108:ILE:N	2.23	0.50
45:m:57:VAL:HB	45:m:65:VAL:C	2.36	0.50
45:m:59:LEU:HD13	45:m:62:GLY:H	1.75	0.50
46:n:81:LEU:CA	46:n:84:ILE:HG12	2.42	0.50
48:p:71:GLN:HE21	48:p:78:TYR:HE1	1.59	0.50
49:q:19:ILE:HB	49:q:37:GLY:C	2.37	0.50
50:r:10:VAL:HB	50:r:53:LEU:HA	1.92	0.50
50:r:41:LYS:C	50:r:42:TYR:CG	2.90	0.50
51:s:34:TYR:O	51:s:35:ARG:C	2.54	0.50
51:s:61:LYS:HD2	51:s:64:ARG:HB3	1.92	0.50
1:w:2:G:C6	1:w:3:U:C4	3.00	0.50
1:w:23:G:N3	1:w:23:G:H2'	2.25	0.50
1:w:61:G:O6	1:w:94:G:N2	2.44	0.50
1:w:261:G:H1'	1:w:609(A):A:N3	2.26	0.50
1:w:273(C):C:H2'	1:w:273(D):C:O5'	2.12	0.50
1:w:276:A:H2'	1:w:277:C:O4'	2.12	0.50
1:w:297:C:H2'	1:w:298:G:H5''	1.94	0.50
1:w:321:G:C2	6:D:160:ARG:CZ	2.95	0.50
1:w:359:A:C3'	1:w:360:G:C8	2.88	0.50
1:w:418:G:C6	1:w:419:C:N4	2.80	0.50
1:w:439:G:C2'	1:w:440:G:C5'	2.90	0.50
1:w:450:G:C3'	1:w:451:C:C5'	2.89	0.50
1:w:463:G:C2'	1:w:464:U:H3'	2.41	0.50
1:w:529:A:N6	1:w:2041:U:N3	2.34	0.50
1:w:697:C:N3	1:w:698:C:C5	2.80	0.50
1:w:826:U:H5'	1:w:827:U:OP2	2.12	0.50
1:w:921:G:C2	1:w:922:U:C2	2.99	0.50
1:w:929:G:C2'	1:w:930:U:O2	2.56	0.50
1:w:970:C:H2'	1:w:971:C:C5	2.46	0.50
1:w:997:G:N3	1:w:997:G:H2'	2.26	0.50
1:w:1179:C:C5'	1:w:1180:C:P	3.00	0.50
1:w:1208:C:N4	1:w:1239:G:N1	2.60	0.50
1:w:1342:A:H5'	1:w:1397:U:H1'	1.93	0.50
1:w:1378:A:O2'	1:w:1379:A:H8	1.92	0.50
1:w:1388:G:C6	1:w:1400:G:N1	2.80	0.50
1:w:1655:A:OP2	1:w:1655:A:C8	2.65	0.50
1:w:1822:G:HO2'	1:w:1823:G:C5'	2.24	0.50
1:w:1925:C:HO2'	1:w:1926:U:H5'	1.72	0.50
1:w:2010:G:OP1	19:Q:42:ARG:HB2	2.12	0.50
1:w:2077:A:H3'	1:w:2078:C:C5	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2080:G:N2	1:w:2081:C:C4	2.77	0.50
1:w:2125:G:O5'	1:w:2125:G:H8	1.94	0.50
1:w:2133:G:P	1:w:2133:G:C8	2.93	0.50
1:w:2133:G:H3'	1:w:2157:G:H22	1.77	0.50
1:w:2133:G:C2'	1:w:2157:G:N2	2.72	0.50
1:w:2271:G:N7	1:w:2272:U:C5	2.80	0.50
1:w:2309:A:H8	1:w:2310:A:C5	2.30	0.50
1:w:2343:C:C2	1:w:2344:U:C5	3.00	0.50
1:w:2345:G:N2	1:w:2381:C:H2'	2.25	0.50
1:w:2640:G:O2'	1:w:2641:G:H5'	2.11	0.50
1:w:2654:A:N6	1:w:2666:C:C5	2.80	0.50
1:w:2678:C:N4	1:w:2679:A:H62	2.10	0.50
1:w:2719:G:H5'	1:w:2847:U:OP1	2.11	0.50
1:w:2734:A:C8	1:w:2734:A:H3'	2.46	0.50
1:w:2776:A:H1'	1:w:2781:A:O4'	2.12	0.50
1:w:2850:A:C8	1:w:2868:A:H2	2.29	0.50
1:w:2899:G:C4	1:w:2900:A:C8	3.00	0.50
2:x:41:U:C5	2:x:41:U:OP2	2.65	0.50
2:x:79:C:N4	2:x:98:G:N2	2.59	0.50
4:B:84:TYR:HA	4:B:91:ARG:HA	1.94	0.50
4:B:182:LEU:O	4:B:271:ILE:CB	2.46	0.50
4:B:184:LYS:CG	4:B:185:VAL:N	2.74	0.50
4:B:261:LYS:O	4:B:263:ARG:N	2.45	0.50
5:C:66:HIS:O	5:C:66:HIS:CG	2.65	0.50
6:D:177:ASN:HB3	6:D:180:ASP:OD1	2.11	0.50
7:E:5:LEU:O	7:E:6:ALA:O	2.30	0.50
8:F:41:MET:C	8:F:42:ARG:HG2	2.36	0.50
9:G:115:ALA:HB3	9:G:129:THR:C	2.35	0.50
10:H:95:TYR:CZ	10:H:113:MET:HB3	2.46	0.50
11:I:43:VAL:HG11	11:I:54:GLU:N	2.27	0.50
12:J:31:ALA:O	12:J:32:THR:CG2	2.50	0.50
12:J:71:VAL:HG22	12:J:72:PRO:N	2.27	0.50
13:K:26:TYR:CE2	13:K:27:VAL:HG13	2.46	0.50
13:K:107:ALA:O	13:K:109:VAL:N	2.40	0.50
14:L:61:HIS:O	14:L:62:ALA:C	2.54	0.50
16:N:32:TYR:CD1	16:N:32:TYR:C	2.89	0.50
16:N:81:PRO:HB2	16:N:82:LEU:HD12	1.94	0.50
16:N:135:VAL:HG22	16:N:136:GLN:H	1.77	0.50
17:O:5:LYS:CG	17:O:6:THR:N	2.65	0.50
17:O:19:LYS:HA	17:O:19:LYS:HZ2	1.77	0.50
20:R:77:LYS:CE	20:R:77:LYS:HA	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:73:ARG:NE	21:S:78:ALA:HB2	2.27	0.50
22:T:17:ALA:CA	22:T:20:ARG:NH2	2.75	0.50
26:X:20:LYS:HA	26:X:23:LEU:CG	2.42	0.50
31:y:39:G:O2'	31:y:40:C:H5'	2.12	0.50
31:y:102:G:C6	31:y:103:C:N4	2.80	0.50
31:y:117:G:H8	31:y:117:G:P	2.34	0.50
31:y:120:A:N7	31:y:122:G:C6	2.80	0.50
31:y:122:G:O6	31:y:239:U:O2	2.29	0.50
31:y:237:C:H2'	31:y:238:G:C8	2.29	0.50
31:y:298:A:C2	31:y:299:G:C4	3.00	0.50
31:y:422:C:C6	31:y:423:G:N1	2.80	0.50
31:y:682:G:C6	31:y:709:G:C6	2.99	0.50
31:y:1325:C:C2	31:y:1326:C:H5	2.29	0.50
31:y:1424:C:N3	31:y:1425:U:C4	2.79	0.50
32:z:46:7MG:H82	32:z:46:7MG:H5''	1.93	0.50
33:0:46:G:C5'	33:0:46:G:H8	2.24	0.50
35:c:106:LYS:O	35:c:110:GLN:NE2	2.45	0.50
35:c:122:PHE:HA	35:c:127:ILE:CG1	2.40	0.50
35:c:144:ARG:HA	35:c:147:LYS:CD	2.42	0.50
36:d:77:ILE:CG1	36:d:81:GLY:HA2	2.41	0.50
36:d:184:TYR:CD1	36:d:184:TYR:C	2.89	0.50
37:e:65:ARG:HD2	37:e:66:ARG:NH1	2.26	0.50
37:e:78:LEU:H	37:e:78:LEU:HD12	1.76	0.50
41:i:82:HIS:CD2	41:i:83:ILE:N	2.77	0.50
42:j:50:LEU:HA	42:j:55:ALA:H	1.77	0.50
42:j:86:VAL:HG12	42:j:90:PRO:CA	2.36	0.50
44:l:20:TYR:HE1	44:l:33:THR:HG1	1.59	0.50
44:l:69:ALA:C	44:l:71:LYS:N	2.66	0.50
46:n:14:ARG:HB3	46:n:17:VAL:HG23	1.94	0.50
47:o:55:GLY:O	47:o:56:VAL:CB	2.59	0.50
48:p:69:TYR:CD2	48:p:70:LEU:N	2.79	0.50
49:q:41:PRO:O	49:q:42:ARG:HD3	2.11	0.50
50:r:16:GLN:O	50:r:18:THR:N	2.45	0.50
51:s:31:LEU:C	51:s:33:ASP:N	2.69	0.50
52:t:31:ILE:N	52:t:49:ILE:HG22	2.26	0.50
1:w:20:C:C2	1:w:521:G:C2	3.00	0.50
1:w:38:A:C6	1:w:39:C:N4	2.79	0.50
1:w:38:A:N1	1:w:39:C:N4	2.60	0.50
1:w:106:C:O2'	1:w:293:U:O4'	2.23	0.50
1:w:271(C):G:N7	1:w:271(D):U:H5	2.09	0.50
1:w:363(B):A:H2'	1:w:363(C):G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:447:A:N7	1:w:454:A:C5	2.80	0.50
1:w:449:A:C5'	6:D:79:VAL:HG22	2.41	0.50
1:w:528:A:N1	1:w:2042:A:H3'	2.22	0.50
1:w:562:U:HO2'	1:w:563:G:C5'	2.22	0.50
1:w:579:G:C6	1:w:580:C:C4	2.99	0.50
1:w:603:A:H4'	1:w:604:G:O5'	2.12	0.50
1:w:671:C:H5''	12:J:41:ARG:CZ	2.42	0.50
1:w:794:G:C3'	1:w:795:C:H6	2.25	0.50
1:w:821:A:H4'	1:w:944:G:C4'	2.42	0.50
1:w:1024:G:C4	1:w:1025:G:C5	3.00	0.50
1:w:1024:G:O5'	1:w:1026:U:OP1	2.30	0.50
1:w:1029:A:C8	1:w:1029:A:O5'	2.62	0.50
1:w:1197:G:C6	1:w:1198:U:C5	3.00	0.50
1:w:1339:G:C2	1:w:1340:U:O4	2.64	0.50
1:w:1358:G:O6	1:w:1371:G:C8	2.65	0.50
1:w:1401:G:C6	1:w:1402:C:N4	2.80	0.50
1:w:1535:U:C3'	1:w:1536:A:O4'	2.57	0.50
1:w:1668:A:N6	1:w:1993:U:C5	2.79	0.50
1:w:1702:G:H2'	1:w:1703:G:C4'	2.41	0.50
1:w:1797:C:H4'	4:B:257:LEU:C	2.30	0.50
1:w:1816:G:C5'	4:B:39:LYS:NZ	2.75	0.50
1:w:1858:G:C6	1:w:1883:G:C6	3.00	0.50
1:w:1943:U:C6	1:w:1943:U:O5'	2.65	0.50
1:w:2015:A:H8	1:w:2015:A:P	2.35	0.50
1:w:2032:G:OP2	1:w:2454:G:O2'	2.30	0.50
1:w:2080:G:C2	1:w:2081:C:N3	2.77	0.50
1:w:2113:U:C2'	1:w:2114:A:C8	2.74	0.50
1:w:2120:G:H21	1:w:2121:G:C1'	2.25	0.50
1:w:2279:G:O6	23:U:11:LYS:HB2	2.12	0.50
1:w:2321:G:H21	1:w:2322:A:C1'	2.23	0.50
1:w:2419:U:C5'	29:a:32:LEU:HB2	2.42	0.50
1:w:2462:U:H6	1:w:2462:U:O5'	1.94	0.50
1:w:2462:U:C4	1:w:2463:C:C6	3.00	0.50
1:w:2517:C:H2'	1:w:2519:U:H5	1.73	0.50
1:w:2549:G:N2	1:w:2560:C:C4	2.80	0.50
1:w:2579:C:H6	1:w:2579:C:O5'	1.93	0.50
1:w:2718:G:H21	1:w:2847:U:H5'	1.77	0.50
1:w:2774:C:H2'	1:w:2775:A:O4'	2.11	0.50
2:x:100:G:O2'	2:x:101:A:H5'	2.11	0.50
3:A:42:VAL:CG1	3:A:43:GLU:N	2.74	0.50
4:B:248:SER:CB	4:B:249:PRO:HD2	2.36	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:5:LEU:HD12	5:C:5:LEU:N	2.16	0.50
6:D:30:GLU:OE2	12:J:13:ASN:ND2	2.44	0.50
7:E:79:ASN:HB2	7:E:86:MET:HE2	1.93	0.50
7:E:106:LEU:HD12	7:E:107:LEU:HG	1.92	0.50
7:E:153:ARG:CG	7:E:154:GLY:H	2.25	0.50
7:E:176:LEU:N	7:E:176:LEU:HD23	2.26	0.50
8:F:8:PRO:O	8:F:9:ILE:CB	2.43	0.50
8:F:53:GLU:HG3	8:F:54:ARG:H	1.75	0.50
8:F:86:GLU:C	8:F:87:LEU:HD13	2.37	0.50
9:G:33:ARG:HH21	9:G:33:ARG:CB	2.25	0.50
9:G:41:GLU:HA	9:G:44:LEU:HB3	1.93	0.50
9:G:77:LEU:O	9:G:78:THR:HG23	2.11	0.50
9:G:101:LEU:CD2	9:G:109:ILE:HD12	2.41	0.50
9:G:109:ILE:CD1	9:G:109:ILE:N	2.75	0.50
10:H:36:TRP:HB2	10:H:156:GLN:CG	2.41	0.50
10:H:72:GLY:C	10:H:73:ASP:OD2	2.54	0.50
11:I:16:ALA:N	11:I:17:ARG:NH1	2.60	0.50
11:I:64:ARG:HD3	11:I:102:VAL:HG13	1.89	0.50
12:J:35:HIS:O	12:J:36:LYS:CD	2.60	0.50
12:J:115:LEU:CG	12:J:116:GLY:H	2.23	0.50
12:J:148:LEU:HD22	12:J:149:GLU:N	2.27	0.50
14:L:78:LYS:C	14:L:80:PHE:H	2.19	0.50
16:N:4:GLY:N	16:N:7:ILE:HG12	2.27	0.50
16:N:50:ILE:N	16:N:63:VAL:HA	2.22	0.50
17:O:114:LYS:O	17:O:116:ALA:N	2.44	0.50
31:y:38:G:H2'	31:y:38:G:N3	2.26	0.50
31:y:44:G:H5'	49:q:12:LYS:HE2	1.93	0.50
31:y:216:G:H3'	31:y:217:C:C6	2.46	0.50
31:y:232:G:O2'	31:y:233:C:H5'	2.12	0.50
31:y:237:C:O2	31:y:238:G:N7	2.45	0.50
31:y:296:U:O2'	31:y:556:C:O2'	2.16	0.50
31:y:310:G:N3	31:y:311:C:C6	2.79	0.50
31:y:399:G:C5	31:y:400:C:C4	3.00	0.50
31:y:401:C:C2'	31:y:402:G:O5'	2.60	0.50
31:y:506:G:C5	31:y:507:C:C4	3.00	0.50
31:y:506:G:C5	31:y:507:C:N4	2.79	0.50
31:y:541:G:C4	31:y:542:G:C8	2.99	0.50
31:y:781:A:OP2	31:y:800:G:N2	2.44	0.50
31:y:829:G:O2'	31:y:830:G:H5'	2.11	0.50
31:y:975:A:C4'	31:y:976:G:H5''	2.41	0.50
31:y:1082:G:N7	31:y:1083:U:C5	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1196:U:P	31:y:1197:G:C5'	2.93	0.50
31:y:1220:G:C6	31:y:1221:G:O6	2.65	0.50
31:y:1292:U:H2'	31:y:1293:G:H8	1.62	0.50
31:y:1313:U:OP1	52:t:6:LYS:HG3	2.12	0.50
31:y:1323:G:H3'	31:y:1324:A:C8	2.45	0.50
31:y:1397:C:OP1	31:y:1397:C:H3'	2.12	0.50
31:y:1497:G:C8	31:y:1497:G:C5'	2.90	0.50
31:y:1516:G:N3	31:y:1518:MA6:H5''	2.26	0.50
31:y:1524:C:O5'	31:y:1524:C:C6	2.65	0.50
35:c:50:GLU:CD	35:c:51:LEU:N	2.69	0.50
36:d:55:VAL:CA	36:d:68:VAL:HG13	2.36	0.50
36:d:66:VAL:HB	36:d:101:LEU:HB2	1.94	0.50
36:d:90:GLU:C	36:d:93:LYS:HD2	2.36	0.50
37:e:9:CYS:SG	37:e:25:ARG:HB3	2.52	0.50
37:e:51:PRO:C	37:e:52:SER:O	2.55	0.50
37:e:96:LEU:HD12	37:e:97:LEU:N	2.26	0.50
37:e:112:VAL:O	37:e:113:SER:CB	2.60	0.50
38:f:39:GLY:N	38:f:71:LEU:HD11	2.27	0.50
39:g:91:VAL:CG2	39:g:92:LYS:N	2.74	0.50
40:h:119:ARG:CG	40:h:120:ILE:N	2.75	0.50
41:i:91:ARG:HA	50:r:34:LYS:HD3	1.93	0.50
42:j:93:ARG:NH2	42:j:102:LEU:HB3	2.26	0.50
43:k:31:GLY:C	43:k:78:ASN:HD21	2.19	0.50
45:m:42:VAL:CG1	45:m:54:VAL:HG11	2.30	0.50
46:n:29:ARG:NH2	46:n:64:TRP:CD1	2.80	0.50
46:n:44:ARG:HB3	46:n:47:ASP:OD1	2.12	0.50
50:r:17:LYS:HB2	50:r:45:HIS:CD2	2.47	0.50
50:r:41:LYS:CG	50:r:42:TYR:N	2.68	0.50
51:s:42:ARG:HH11	51:s:42:ARG:CB	2.08	0.50
53:u:66:ALA:O	53:u:67:ALA:C	2.54	0.50
1:w:77:C:H41	1:w:78:A:H62	1.55	0.50
1:w:189:G:OP2	24:V:18:ILE:HG21	2.12	0.50
1:w:216:A:C8	1:w:431:U:N3	2.71	0.50
1:w:270(G):U:H2'	1:w:270(H):C:H6	1.67	0.50
1:w:324:A:H62	1:w:338:G:C2'	2.23	0.50
1:w:333:G:HO2'	1:w:334:C:P	2.35	0.50
1:w:376:C:C2	1:w:399:G:C2	2.99	0.50
1:w:376:C:C2	1:w:399:G:N2	2.79	0.50
1:w:458:G:C5'	28:Z:40:TRP:NE1	2.63	0.50
1:w:595:C:C6	1:w:595:C:OP2	2.65	0.50
1:w:597:U:H2'	1:w:598:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:631:A:N3	1:w:2415:G:O2'	2.42	0.50
1:w:634:C:N3	1:w:635:C:N4	2.60	0.50
1:w:648:G:H5''	1:w:2352:A:H5'	1.94	0.50
1:w:670:A:C5'	1:w:671:C:C5'	2.82	0.50
1:w:709:U:C4	1:w:710:G:C6	2.99	0.50
1:w:744:G:OP1	5:C:132:HIS:HB3	2.11	0.50
1:w:802:A:H3'	1:w:803:U:C5	2.35	0.50
1:w:827:U:H4'	1:w:828:U:C2	2.46	0.50
1:w:870:A:N6	1:w:871:U:C4	2.80	0.50
1:w:874:G:O2'	22:T:170:THR:OG1	2.07	0.50
1:w:898:C:C3'	1:w:899:A:C5'	2.68	0.50
1:w:997:G:C2	1:w:1159:U:N3	2.80	0.50
1:w:1071:G:H3'	1:w:1072:C:H5	1.77	0.50
1:w:1209:G:H4'	1:w:1212:G:H4'	1.94	0.50
1:w:1218:C:C4	1:w:1219:G:N7	2.80	0.50
1:w:1263:U:H2'	1:w:1264:G:C5	2.46	0.50
1:w:1276:A:O2'	14:L:12:ARG:CZ	2.59	0.50
1:w:1381:G:H2'	1:w:1382:G:C5'	2.42	0.50
1:w:1441:G:C2'	1:w:1442:G:C5'	2.89	0.50
1:w:1570:A:C2'	1:w:1571:A:O4'	2.60	0.50
1:w:1576:U:H2'	1:w:1577:C:C5	2.47	0.50
1:w:2023:G:OP2	1:w:2617:C:C5'	2.59	0.50
1:w:2025:C:N3	1:w:2026:C:N4	2.60	0.50
1:w:2063:C:O2	1:w:2450:A:N1	2.45	0.50
1:w:2064:C:H2'	1:w:2065:C:C5	2.40	0.50
1:w:2094:G:H2'	1:w:2095:C:N1	2.27	0.50
1:w:2141:G:C5	1:w:2142:C:C4	3.00	0.50
1:w:2320:A:C2	1:w:2333:A:N7	2.80	0.50
1:w:2353:G:O2'	23:U:32:ARG:O	2.30	0.50
1:w:2360:A:C2'	1:w:2361:A:OP1	2.57	0.50
1:w:2394:C:OP1	12:J:62:LEU:CB	2.46	0.50
1:w:2417:C:C2'	1:w:2418:A:C5'	2.90	0.50
1:w:2502:G:H5'	1:w:2503:A:H5''	1.94	0.50
1:w:2783:G:O2'	5:C:42:ASP:HA	2.12	0.50
2:x:26:A:H2'	2:x:27:C:C6	2.47	0.50
2:x:55:U:H2'	2:x:56:G:H8	1.77	0.50
2:x:70:C:O2'	2:x:71:C:O4'	2.15	0.50
4:B:31:LYS:CE	4:B:32:SER:O	2.59	0.50
6:D:135:LEU:HG	6:D:138:ALA:HB3	1.94	0.50
6:D:164:ASN:O	6:D:166:PRO:CD	2.58	0.50
7:E:43:LEU:HD12	7:E:153:ARG:HD3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:87:LEU:HD12	8:F:164:TYR:HA	1.93	0.50
10:H:81:ASP:CG	10:H:147:ALA:HB1	2.36	0.50
11:I:24:VAL:CG2	11:I:25:LEU:N	2.60	0.50
13:K:13:GLN:HA	13:K:14:ARG:CZ	2.42	0.50
13:K:22:LYS:N	13:K:22:LYS:HD3	2.27	0.50
13:K:43:THR:O	13:K:44:ALA:C	2.55	0.50
14:L:24:GLN:O	14:L:28:LEU:CB	2.60	0.50
15:M:98:VAL:O	15:M:101:LEU:N	2.45	0.50
16:N:105:LEU:O	16:N:107:ASP:OD1	2.29	0.50
16:N:118:ARG:HD2	31:y:1446:A:O5'	2.12	0.50
16:N:119:LYS:H	16:N:119:LYS:CD	2.16	0.50
18:P:40:LEU:HD13	18:P:41:GLY:C	2.37	0.50
19:Q:23:LEU:HD11	27:Y:27:PRO:HB3	1.94	0.50
19:Q:34:ASN:O	19:Q:35:ILE:C	2.55	0.50
19:Q:76:VAL:CA	19:Q:103:ILE:HD12	2.42	0.50
20:R:5:TYR:OH	20:R:46:ALA:HB2	2.11	0.50
20:R:17:ALA:HA	20:R:26:TYR:CA	2.42	0.50
21:S:54:LYS:HG3	21:S:55:TYR:H	1.75	0.50
22:T:18:LEU:HD13	22:T:38:TYR:HD1	1.77	0.50
22:T:150:LEU:CD2	22:T:154:ASP:CB	2.90	0.50
23:U:51:VAL:HG22	23:U:79:VAL:CG2	2.41	0.50
24:V:58:ILE:HG21	24:V:82:LEU:HG	1.94	0.50
29:a:9:GLY:CA	29:a:12:LYS:HZ3	2.25	0.50
29:a:32:LEU:HD21	29:a:35:GLN:C	2.36	0.50
29:a:32:LEU:C	29:a:34:TRP:N	2.65	0.50
31:y:65:U:O2	31:y:199:G:N3	2.45	0.50
31:y:102:G:N2	31:y:103:C:N3	2.60	0.50
31:y:158:G:C6	31:y:159:G:C4	3.00	0.50
31:y:167:G:H8	31:y:167:G:O5'	1.95	0.50
31:y:186(A):C:C4'	53:u:81:LYS:HB2	2.42	0.50
31:y:209:U:O2'	31:y:210:U:C5	2.41	0.50
31:y:263:A:H3'	31:y:263:A:N3	2.27	0.50
31:y:267:C:C4	31:y:268:C:C5	2.99	0.50
31:y:385:C:O2'	31:y:386:C:O4'	2.30	0.50
31:y:419:C:C4	31:y:420:U:C4	3.00	0.50
31:y:475:G:H2'	31:y:476:G:O5'	2.10	0.50
31:y:834:C:H3'	31:y:835:U:C6	2.47	0.50
31:y:901:A:O2'	31:y:902:G:OP1	2.27	0.50
31:y:932:C:C2	31:y:1386:G:N2	2.80	0.50
31:y:1013:G:C1'	31:y:1016:A:C2	2.90	0.50
31:y:102(B):C:H3'	31:y:102(C):C:H5''	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1089:G:C2'	31:y:1090:U:H5'	2.32	0.50
31:y:1203:C:C2	31:y:1204:A:C8	3.00	0.50
31:y:1236:A:H2'	31:y:1237:C:O4'	2.12	0.50
31:y:1261:A:OP2	31:y:1262:C:C5	2.65	0.50
31:y:1280:A:C5'	43:k:43:ARG:NH2	2.70	0.50
31:y:1320:C:C1'	52:t:72:GLY:HA3	2.42	0.50
31:y:1348:U:C5'	42:j:120:ARG:CD	2.86	0.50
31:y:1405:G:H21	31:y:1518:MA6:H1'	1.76	0.50
31:y:1413:A:N3	31:y:1414:U:C6	2.80	0.50
32:z:45:U:P	32:z:46:7MG:OP2	2.70	0.50
32:z:58:A:H4'	32:z:59:U:OP1	2.12	0.50
33:0:24:G:C4	33:0:25:C:N1	2.79	0.50
33:0:60:C:H5''	33:0:61:C:OP2	2.12	0.50
35:c:110:GLN:N	35:c:110:GLN:NE2	2.60	0.50
36:d:42:LEU:CD2	36:d:46:GLU:HB3	2.42	0.50
36:d:50:ALA:O	36:d:71:ALA:HB3	2.11	0.50
36:d:68:VAL:N	36:d:103:VAL:HG12	2.26	0.50
36:d:115:LEU:HA	36:d:118:GLN:CD	2.37	0.50
36:d:137:ALA:HB2	36:d:140:ARG:HH22	1.77	0.50
37:e:8:VAL:HG21	37:e:115:ARG:HG3	1.94	0.50
37:e:33:MET:HG2	37:e:34:GLU:H	1.77	0.50
37:e:100:ARG:CZ	37:e:137:SER:CB	2.90	0.50
37:e:156:GLU:C	37:e:158:ILE:N	2.68	0.50
38:f:15:ARG:HA	38:f:28:PHE:CE2	2.47	0.50
38:f:106:PRO:HA	38:f:109:ILE:HB	1.92	0.50
38:f:147:ASP:HA	38:f:150:ARG:CD	2.41	0.50
41:i:56:LYS:H	41:i:56:LYS:CD	2.17	0.50
41:i:80:ILE:HG23	41:i:82:HIS:O	2.11	0.50
42:j:96:LEU:HD12	42:j:96:LEU:N	2.27	0.50
46:n:12:ASN:C	46:n:13:LYS:CG	2.84	0.50
50:r:4:LYS:O	50:r:61:GLU:HB2	2.11	0.50
51:s:26:LEU:CD2	51:s:29:PHE:HE2	2.22	0.50
1:w:120:U:C5'	1:w:121:G:OP1	2.53	0.49
1:w:123:G:C6	1:w:124:G:N3	2.80	0.49
1:w:216:A:C6	1:w:217:G:N1	2.81	0.49
1:w:220:G:H2'	1:w:221:A:N7	2.27	0.49
1:w:533:G:O3'	17:O:24:TYR:CE2	2.65	0.49
1:w:559:G:C8	1:w:560:C:C5	2.99	0.49
1:w:592:G:N3	1:w:592:G:C2'	2.69	0.49
1:w:684:G:H2'	1:w:684:G:N3	2.27	0.49
1:w:685:A:H5''	1:w:686:G:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:760:G:H8	1:w:760:G:O5'	1.94	0.49
1:w:837:C:C6	1:w:837:C:O5'	2.64	0.49
1:w:861:A:H2'	1:w:862:G:O4'	2.12	0.49
1:w:945:A:C2	1:w:2448:A:C6	3.00	0.49
1:w:994:C:C2	1:w:996:A:C8	3.01	0.49
1:w:1130:U:O4	1:w:2026:C:OP2	2.30	0.49
1:w:1131:G:N7	1:w:2025:C:H1'	2.25	0.49
1:w:1135:C:N4	1:w:1138:G:OP2	2.45	0.49
1:w:1139:G:C2	1:w:1140:C:N3	2.80	0.49
1:w:1364:G:C3'	24:V:8:SER:N	2.67	0.49
1:w:149(B):A:C4	1:w:1529:A:C2	3.00	0.49
1:w:1496:A:H8	1:w:1496:A:O5'	1.94	0.49
1:w:1563:G:C2	1:w:1564:C:N1	2.79	0.49
1:w:1572:A:H2'	1:w:1573:G:H8	1.76	0.49
1:w:1593:G:C5	1:w:1594:G:N7	2.80	0.49
1:w:1620:G:C5	1:w:1621:U:C5	3.00	0.49
1:w:1674:G:N2	1:w:1677:A:H2	2.08	0.49
1:w:1709:U:C1'	1:w:2860:A:H1'	2.39	0.49
1:w:1725:G:N2	1:w:1741:C:C1'	2.75	0.49
1:w:1763:G:H2'	1:w:1764:G:H4'	1.94	0.49
1:w:1791:A:N6	1:w:1828:G:HO2'	2.02	0.49
1:w:1823:G:N2	4:B:254:THR:OG1	2.45	0.49
1:w:1936:A:C5	1:w:1945:G:C5	3.00	0.49
1:w:1967:C:C2'	1:w:1968:G:H5'	2.28	0.49
1:w:2063:C:H2'	1:w:2064:C:C5'	2.39	0.49
1:w:2081:C:OP2	1:w:2237:G:N2	2.35	0.49
1:w:2105:C:C5	1:w:2106:G:N7	2.80	0.49
1:w:2121:G:C2	1:w:2178:C:H1'	2.47	0.49
1:w:2234:G:C2	1:w:2235:G:C5	3.00	0.49
1:w:2239:G:O5'	4:B:232:PRO:CG	2.60	0.49
1:w:2241:A:N3	1:w:2241:A:C2'	2.74	0.49
1:w:2314:C:H2'	1:w:2315:G:C8	2.47	0.49
1:w:2345:G:C5	1:w:2347:C:C4	3.00	0.49
1:w:2353:G:O2'	23:U:34:GLY:N	2.45	0.49
1:w:2373:G:C5	1:w:2374:C:N4	2.79	0.49
1:w:2458:G:N9	1:w:2490:G:C6	2.79	0.49
1:w:2459:A:C2'	1:w:2460:U:H6	2.24	0.49
1:w:2512:C:N4	1:w:2513:G:N7	2.60	0.49
1:w:2584:U:C2'	1:w:2585:U:H5'	2.40	0.49
1:w:2654:A:O2'	1:w:2655:G:OP2	2.29	0.49
1:w:2736:G:C3'	1:w:2737:G:H8	2.24	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2784:C:C2'	1:w:2785:C:C5'	2.87	0.49
2:x:15:A:H5'	2:x:109:G:C5'	2.24	0.49
2:x:17:C:C6	2:x:17:C:C3'	2.95	0.49
2:x:73:A:C5	2:x:74:U:C2	2.99	0.49
2:x:88:C:C3'	2:x:89(A):G:H8	2.24	0.49
2:x:98:G:H8	2:x:98:G:O5'	1.95	0.49
4:B:73:VAL:CG1	4:B:120:GLY:HA2	2.37	0.49
4:B:262:ARG:C	4:B:264:LYS:H	2.19	0.49
4:B:267:SER:OG	4:B:268:ARG:N	2.42	0.49
5:C:44:TYR:CE2	5:C:46:ALA:CB	2.90	0.49
5:C:59:VAL:O	5:C:60:ASN:CG	2.55	0.49
6:D:94:TYR:N	6:D:94:TYR:HD2	2.10	0.49
6:D:150:LEU:CD1	6:D:169:VAL:HA	2.32	0.49
6:D:182:VAL:CG2	6:D:183:ARG:N	2.75	0.49
6:D:190:ASP:O	6:D:191:LEU:O	2.30	0.49
7:E:13:GLU:HA	7:E:16:ARG:CZ	2.42	0.49
7:E:74:LYS:O	7:E:75:LYS:CB	2.60	0.49
7:E:77:ILE:CG2	7:E:78:SER:N	2.74	0.49
7:E:78:SER:HB3	32:z:56:C:O2	2.12	0.49
7:E:78:SER:HA	7:E:83:ARG:CG	2.39	0.49
7:E:128:ARG:C	7:E:130:ASN:H	2.19	0.49
8:F:156:ALA:O	8:F:171:LEU:HA	2.11	0.49
10:H:24:VAL:C	10:H:25:LYS:HD2	2.36	0.49
10:H:45:THR:HG22	10:H:48:ARG:CG	2.41	0.49
11:I:14:THR:N	11:I:17:ARG:HH12	2.10	0.49
11:I:46:ALA:O	11:I:48:PRO:HD3	2.12	0.49
12:J:50:ARG:NH1	12:J:53:GLY:HA3	2.26	0.49
13:K:134:ARG:HD2	13:K:135:ASP:C	2.37	0.49
17:O:35:ALA:O	17:O:39:LEU:HG	2.12	0.49
18:P:36:PRO:HD2	18:P:60:GLU:OE2	2.12	0.49
22:T:24:LEU:CG	22:T:40:ASP:C	2.77	0.49
23:U:27:GLU:CD	23:U:69:PHE:HB3	2.36	0.49
24:V:26:ARG:C	24:V:27:GLU:OE1	2.55	0.49
24:V:85:LEU:HD13	24:V:87:PRO:N	2.26	0.49
24:V:86:SER:HB2	24:V:87:PRO:HD3	1.93	0.49
25:W:22:GLU:CD	25:W:22:GLU:C	2.79	0.49
30:b:34:GLN:O	30:b:35:ARG:HG3	2.12	0.49
31:y:44:G:H2'	31:y:45:U:H5'	1.92	0.49
31:y:121:C:H41	31:y:235:C:C3'	2.15	0.49
31:y:157:G:C2	31:y:158:G:N9	2.80	0.49
31:y:227:G:H2'	31:y:228:A:H5'	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:276:G:C6	31:y:277:C:C6	2.99	0.49
31:y:376:G:C5	31:y:377:G:C8	3.00	0.49
31:y:411:A:OP2	31:y:429:U:C6	2.64	0.49
31:y:414:A:C2	31:y:415:A:N9	2.80	0.49
31:y:427:U:C4	31:y:428:G:O6	2.65	0.49
31:y:505:G:H5'	31:y:534:U:H2'	1.94	0.49
31:y:546:G:C1'	31:y:548:G:O2'	2.60	0.49
31:y:564:C:C5	50:r:32:TYR:CZ	3.00	0.49
31:y:564:C:N4	50:r:31:LEU:HD21	2.27	0.49
31:y:765:G:C5	31:y:812:C:C5	3.00	0.49
31:y:775:G:C2	31:y:776:G:H1'	2.46	0.49
31:y:882:C:H2'	31:y:883:C:C6	2.47	0.49
31:y:102(C):C:C4	31:y:1029:G:C5	3.00	0.49
31:y:1029:G:H5''	31:y:1030:C:OP2	2.12	0.49
31:y:1061:G:C4	31:y:1062:U:C4	3.00	0.49
31:y:1206:G:N7	31:y:1207:2MG:C1'	2.74	0.49
31:y:1281:U:P	31:y:1282:C:N4	2.85	0.49
31:y:1357:A:N1	31:y:1365:G:O6	2.45	0.49
32:z:9:A:C6	32:z:46:7MG:N2	2.79	0.49
32:z:30:G:H1	32:z:40:C:H42	1.58	0.49
32:z:39:PSU:H2'	32:z:40:C:H6	1.77	0.49
32:z:70:G:C4	32:z:71:G:C8	3.00	0.49
33:0:9:A:N3	33:0:46:G:C2	2.79	0.49
33:0:47:U:H2'	33:0:50:U:OP1	2.12	0.49
33:0:67:A:H2'	33:0:68:U:C6	2.47	0.49
36:d:10:PHE:HD2	36:d:11:ARG:HG2	1.77	0.49
36:d:127:ARG:HG3	36:d:128:PHE:N	2.26	0.49
36:d:156:ARG:CA	36:d:160:ALA:HB3	2.42	0.49
36:d:172:ARG:HH11	36:d:172:ARG:CB	2.25	0.49
38:f:92:LYS:O	38:f:93:PRO:C	2.54	0.49
40:h:147:ALA:HB1	40:h:149:ARG:NH1	2.26	0.49
41:i:91:ARG:NH1	41:i:92:ARG:N	2.60	0.49
48:p:66:LEU:HD12	48:p:66:LEU:N	2.27	0.49
48:p:70:LEU:O	48:p:73:GLU:CB	2.51	0.49
48:p:70:LEU:HD12	48:p:78:TYR:CE2	2.46	0.49
49:q:15:PRO:HG2	49:q:16:HIS:H	1.75	0.49
53:u:81:LYS:C	53:u:85:MET:HB3	2.33	0.49
1:w:13:A:C3'	1:w:15:G:N7	2.75	0.49
1:w:261:G:C2	1:w:262:A:C8	3.00	0.49
1:w:287:C:N1	1:w:288:C:C5	2.80	0.49
1:w:450:G:N2	1:w:451:C:C5	2.79	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:471:A:O2'	1:w:472:A:H5'	2.12	0.49
1:w:547:A:C6	1:w:548:A:C2	3.00	0.49
1:w:648:G:H4'	1:w:2351:G:C4'	2.25	0.49
1:w:664:C:H2'	1:w:665:C:O4'	2.11	0.49
1:w:684:G:N1	1:w:794:G:C6	2.80	0.49
1:w:762:U:C4'	1:w:763:G:O5'	2.59	0.49
1:w:763:G:C8	1:w:763:G:C3'	2.95	0.49
1:w:812:C:H4'	17:O:13:LYS:NZ	2.27	0.49
1:w:870:A:C6	1:w:871:U:C4	3.00	0.49
1:w:909:A:C1'	13:K:69:PHE:CZ	2.95	0.49
1:w:1007:C:O5'	1:w:1007:C:H6	1.96	0.49
1:w:1074:G:H2'	1:w:1075:C:C5	2.47	0.49
1:w:1159:U:H2'	1:w:1160:G:O4'	2.12	0.49
1:w:1169:G:C8	1:w:1170:G:C1'	2.94	0.49
1:w:1189:A:H2'	1:w:1190:G:C5'	2.42	0.49
1:w:1192:G:H5''	1:w:1192:G:C8	2.47	0.49
1:w:1422:G:N1	1:w:1423:G:C5	2.80	0.49
1:w:1428:C:O2'	1:w:1429:G:OP1	2.30	0.49
1:w:1469:A:H2'	1:w:1470:G:O5'	2.12	0.49
1:w:1593:G:C4	1:w:1594:G:C8	3.00	0.49
1:w:1594:G:C4	1:w:1595:G:C8	3.00	0.49
1:w:1665:A:O2'	11:I:1:MET:SD	2.66	0.49
1:w:1753:G:C1'	1:w:1755:A:OP2	2.60	0.49
1:w:1782:C:H5'	1:w:2609:U:N3	2.23	0.49
1:w:1858:G:C3'	1:w:1883:G:H22	2.24	0.49
1:w:1944:U:C2'	1:w:1945:G:C5'	2.83	0.49
1:w:2240:C:N3	1:w:2241:A:C8	2.80	0.49
1:w:2261:C:N4	23:U:11:LYS:HB2	2.15	0.49
1:w:2286:A:C4'	1:w:2287:A:O4'	2.60	0.49
1:w:2296:U:O2	1:w:2333:A:C2	2.65	0.49
1:w:2336:A:H1'	1:w:2385:C:O4'	2.13	0.49
1:w:2357:U:H2'	1:w:2359:C:OP1	2.12	0.49
1:w:2468:G:C6	1:w:2481:G:N3	2.79	0.49
1:w:2523:G:H5'	1:w:2523:G:C8	2.42	0.49
1:w:2528:U:O3'	1:w:2529:G:H3'	2.12	0.49
1:w:2588:G:N1	1:w:2589:A:C4	2.80	0.49
1:w:712(B):A:O2'	14:L:13:HIS:NE2	2.44	0.49
1:w:2743:C:C4	1:w:2744:G:N7	2.80	0.49
1:w:2767:C:O2'	10:H:107:LYS:NZ	2.45	0.49
1:w:2795:G:C2	1:w:2799:A:P	3.05	0.49
1:w:2819:G:OP1	14:L:8:ARG:NH2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:13:A:O3'	2:x:15:A:OP2	2.29	0.49
2:x:23:G:O6	2:x:61:G:C6	2.65	0.49
2:x:47:C:N4	2:x:48:A:H62	2.10	0.49
3:A:60:ARG:O	3:A:164:PHE:CZ	2.64	0.49
3:A:209:PHE:O	3:A:210:LEU:O	2.30	0.49
4:B:37:LEU:HD23	4:B:62:TYR:HB3	1.94	0.49
4:B:57:GLY:H	4:B:216:GLY:N	2.10	0.49
4:B:105:ILE:HG12	4:B:106:ILE:HG12	1.93	0.49
4:B:106:ILE:O	4:B:106:ILE:CG1	2.54	0.49
4:B:109:ASP:CB	4:B:199:ALA:HB3	2.43	0.49
4:B:126:GLN:O	4:B:127:VAL:C	2.55	0.49
5:C:43:GLY:C	5:C:44:TYR:HD1	2.20	0.49
5:C:144:ARG:C	5:C:146:THR:N	2.70	0.49
6:D:28:LEU:HD11	6:D:107:MET:HE2	1.94	0.49
6:D:46:THR:HG21	6:D:88:LYS:HG3	1.93	0.49
7:E:170:ARG:HB2	7:E:173:LEU:HD22	1.93	0.49
8:F:43:VAL:HG21	8:F:51:ARG:O	2.12	0.49
8:F:152:ARG:O	8:F:153:LYS:C	2.55	0.49
10:H:37:VAL:HG22	10:H:158:PRO:HG2	1.95	0.49
10:H:127:LYS:CA	10:H:130:LEU:HG	2.42	0.49
11:I:4:PRO:O	11:I:5:GLN:CB	2.60	0.49
11:I:15:GLY:HA3	11:I:52:VAL:O	2.12	0.49
11:I:34:THR:O	11:I:37:ASP:HB2	2.12	0.49
11:I:38:VAL:HG11	11:I:59:LYS:HD3	1.94	0.49
11:I:59:LYS:HD3	11:I:87:ILE:HB	1.95	0.49
12:J:46:LYS:HB3	12:J:51:PHE:CD2	2.47	0.49
13:K:11:LYS:CE	13:K:12:GLN:H	2.24	0.49
13:K:133:ARG:HE	13:K:134:ARG:C	2.19	0.49
14:L:60:LEU:O	14:L:61:HIS:C	2.55	0.49
15:M:61:ASN:C	15:M:62:LYS:CG	2.85	0.49
15:M:71:ARG:CB	15:M:108:GLY:HA3	2.43	0.49
16:N:91:ARG:HH21	16:N:115:ARG:HA	1.77	0.49
17:O:90:VAL:O	17:O:91:ASP:HB3	2.12	0.49
18:P:7:THR:O	18:P:10:LYS:NZ	2.44	0.49
21:S:71:LYS:CG	21:S:96:ILE:HD11	2.42	0.49
22:T:77:ASP:OD2	22:T:80:ARG:NH1	2.45	0.49
22:T:119:GLU:O	22:T:120:ILE:C	2.54	0.49
22:T:155:LEU:HD13	22:T:156:LYS:N	2.07	0.49
23:U:45:PHE:CD1	23:U:77:ARG:HB2	2.47	0.49
25:W:13:ALA:C	25:W:15:LYS:N	2.70	0.49
25:W:35:LEU:C	25:W:37:PHE:H	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:38:ALA:HA	27:Y:48:GLU:HB3	1.94	0.49
29:a:9:GLY:HA2	29:a:12:LYS:HG3	1.92	0.49
30:b:13:LYS:C	30:b:27:CYS:HA	2.36	0.49
30:b:33:LYS:CE	30:b:35:ARG:HH21	2.25	0.49
31:y:19:C:H2'	31:y:20:U:H6	1.77	0.49
31:y:33:A:O4'	31:y:363:A:C2	2.65	0.49
31:y:96:G:C4	31:y:97:U:C6	3.00	0.49
31:y:96:G:C5	31:y:97:U:C5	3.00	0.49
31:y:186(G):C:H3'	31:y:187:C:C5	2.47	0.49
31:y:433:C:C4	31:y:434:U:C4	3.00	0.49
31:y:575:G:H4'	31:y:576:G:H5'	0.63	0.49
31:y:599:C:N3	31:y:640:A:N1	2.60	0.49
31:y:609:A:C2	31:y:610:G:H1'	2.47	0.49
31:y:651:C:H2'	31:y:652:U:C6	2.47	0.49
31:y:667:G:N2	31:y:739:C:O2	2.37	0.49
31:y:676:A:H2	31:y:714:G:H22	1.60	0.49
31:y:741:G:C5'	48:p:35:ARG:HH21	2.25	0.49
31:y:755:G:C5	31:y:756:C:N4	2.80	0.49
31:y:772:U:N3	31:y:773:G:C5	2.80	0.49
31:y:920:U:H2'	31:y:921:U:H6	1.77	0.49
31:y:976:G:C8	31:y:1358:U:C2'	2.89	0.49
31:y:1034:G:N2	31:y:1035:A:N1	2.60	0.49
31:y:1076:C:H5''	35:c:175:ARG:NH1	2.27	0.49
31:y:1163:C:C2	31:y:1164:G:C8	3.00	0.49
31:y:1306:A:H2'	31:y:1307:U:C4'	2.37	0.49
31:y:1516:G:C2	31:y:1518:MA6:C5'	2.95	0.49
33:0:11:C:H6	33:0:11:C:O5'	1.95	0.49
36:d:95:THR:O	36:d:97:LYS:N	2.42	0.49
36:d:152:ILE:CB	36:d:199:LYS:HB2	2.41	0.49
37:e:11:LEU:HD22	37:e:14:ARG:HB2	1.94	0.49
37:e:173:TRP:HZ3	37:e:194:LEU:CD2	2.16	0.49
38:f:142:LEU:HA	38:f:143:ARG:NE	2.25	0.49
39:g:90:VAL:CG2	39:g:91:VAL:N	2.74	0.49
40:h:40:ALA:HA	40:h:43:PHE:HD2	1.74	0.49
43:k:50:ILE:CG2	43:k:51:ARG:N	2.75	0.49
47:o:29:ARG:HH21	47:o:42:ILE:HG13	1.74	0.49
50:r:61:GLU:CD	50:r:62:SER:H	2.20	0.49
1:w:15:G:N3	1:w:16:G:C8	2.80	0.49
1:w:55:G:C2'	1:w:56:A:H8	2.09	0.49
1:w:77:C:H5''	25:W:53:LEU:HB2	1.94	0.49
1:w:107:C:H3'	1:w:108:U:H5	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:270(R):C:H2'	1:w:270(S):G:O4'	2.12	0.49
1:w:276:A:C2'	1:w:277:C:H5'	2.42	0.49
1:w:288:C:H3'	1:w:289:A:C5'	2.32	0.49
1:w:404:C:C5'	1:w:405:U:OP1	2.60	0.49
1:w:413:C:N3	1:w:414:C:C5	2.81	0.49
1:w:516:C:H1'	1:w:1261:C:O2'	2.12	0.49
1:w:563:G:C3'	1:w:564:C:H5'	2.42	0.49
1:w:583:G:C6	1:w:584:C:C4	3.00	0.49
1:w:633:A:H8	1:w:633:A:C5'	2.25	0.49
1:w:674:G:C4'	6:D:71:GLY:N	2.56	0.49
1:w:675:A:O4'	6:D:69:ARG:NH1	2.45	0.49
1:w:686:G:N7	28:Z:5:TRP:HH2	2.09	0.49
1:w:751:A:H62	1:w:1614:A:H2	1.58	0.49
1:w:764:A:OP2	4:B:214:TRP:CZ2	2.66	0.49
1:w:786:C:C4	1:w:787:U:H5	2.29	0.49
1:w:995:C:C2	10:H:25:LYS:HD3	2.47	0.49
1:w:1076:C:H2'	1:w:1077:A:H8	1.77	0.49
1:w:1176:G:N2	1:w:1177:A:N9	2.60	0.49
1:w:1219:G:N1	1:w:1231:G:C6	2.80	0.49
1:w:1298:C:C2'	1:w:1299:G:H5'	2.41	0.49
1:w:1326:U:C6	1:w:1326:U:H3'	2.47	0.49
1:w:1527:G:C5	1:w:1542:G:C6	3.00	0.49
1:w:1562:A:N1	1:w:1563:G:C5	2.80	0.49
1:w:1594:G:H2'	1:w:1595:G:O4'	2.12	0.49
1:w:1637:A:C4	1:w:1638:C:C5	2.99	0.49
1:w:1657:C:N3	1:w:1658:C:C5	2.80	0.49
1:w:1676:A:C3'	1:w:1677:A:C8	2.96	0.49
1:w:1785:A:O2'	1:w:1786:A:H2'	2.13	0.49
1:w:1818:U:H3'	4:B:155:LEU:CD2	2.33	0.49
1:w:1934:C:C6	1:w:1934:C:H5''	2.47	0.49
1:w:1959:G:C5	1:w:1960:A:C8	3.00	0.49
1:w:2018:G:C2'	1:w:2019:A:C5'	2.90	0.49
1:w:2061:G:H8	1:w:2501:C:O2'	1.95	0.49
1:w:2127:G:N3	1:w:2127:G:H2'	2.26	0.49
1:w:2270:G:N2	1:w:2271:G:N9	2.60	0.49
1:w:2383:G:P	29:a:39:LYS:HD3	2.51	0.49
1:w:2448:A:OP2	1:w:2499:C:OP2	2.30	0.49
1:w:2519:U:N3	1:w:2542:A:C8	2.80	0.49
1:w:2583:G:H3'	1:w:2584:U:H5	1.76	0.49
1:w:2583:G:C6	1:w:2584:U:C2	3.01	0.49
1:w:2659:G:N2	1:w:2662:A:OP2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2679:A:C5	1:w:2680:C:C5	3.00	0.49
1:w:2712:U:H4'	1:w:712(B):A:OP1	2.12	0.49
1:w:2795:G:C2	1:w:2802:G:C2	3.01	0.49
1:w:2822:G:P	14:L:2:ARG:HB2	2.51	0.49
1:w:2840:C:H1'	14:L:91:GLN:HE22	1.76	0.49
1:w:2883:A:H2'	1:w:2883:A:N3	2.27	0.49
2:x:77:U:H2'	2:x:78:A:C8	2.47	0.49
5:C:61:ARG:CD	5:C:62:PRO:HD3	2.43	0.49
7:E:43:LEU:HD23	7:E:44:GLY:N	2.27	0.49
7:E:74:LYS:O	7:E:75:LYS:HB3	2.11	0.49
7:E:84:LYS:O	7:E:85:GLY:C	2.55	0.49
7:E:96:ARG:O	7:E:99:MET:HE2	2.12	0.49
8:F:95:ARG:HB2	8:F:107:VAL:HG12	1.93	0.49
9:G:5:LEU:C	9:G:37:VAL:HG23	2.38	0.49
9:G:77:LEU:C	9:G:78:THR:HG23	2.37	0.49
9:G:109:ILE:HG12	9:G:111:PRO:HD3	1.94	0.49
11:I:88:ASN:HA	11:I:94:ARG:CZ	2.42	0.49
13:K:132:VAL:O	13:K:133:ARG:HB3	2.12	0.49
15:M:51:ALA:CB	15:M:73:LEU:HD21	2.31	0.49
15:M:71:ARG:HD3	15:M:71:ARG:H	1.77	0.49
16:N:24:PRO:CG	16:N:96:ARG:O	2.57	0.49
16:N:25:GLY:CA	16:N:91:ARG:H	2.25	0.49
16:N:30:VAL:N	16:N:44:ASP:OD1	2.46	0.49
17:O:40:PHE:HB3	18:P:78:LYS:CG	2.42	0.49
17:O:83:LEU:O	17:O:86:ALA:CB	2.52	0.49
18:P:71:LEU:N	18:P:71:LEU:HD22	2.27	0.49
19:Q:74:ALA:HB1	19:Q:104:THR:O	2.12	0.49
19:Q:88:ARG:HG2	19:Q:92:ARG:H	1.77	0.49
21:S:55:TYR:CD1	21:S:56:PRO:CD	2.95	0.49
23:U:40:GLN:CD	23:U:41:ARG:N	2.70	0.49
25:W:50:ILE:O	25:W:51:ARG:CB	2.54	0.49
29:a:30:ARG:O	29:a:30:ARG:HG2	2.11	0.49
29:a:53:PRO:O	29:a:54:GLU:C	2.55	0.49
31:y:23:C:C4	31:y:24:U:C5	2.99	0.49
31:y:49:U:C4	31:y:364:A:N1	2.80	0.49
31:y:73:G:C2	31:y:74:C:H1'	2.46	0.49
31:y:89:U:C2'	31:y:90:C:H6	2.15	0.49
31:y:147:G:C2	31:y:148:G:N3	2.80	0.49
31:y:319:G:O2'	31:y:1434:A:N1	2.30	0.49
31:y:327:A:O2'	31:y:328:C:O4'	2.13	0.49
31:y:396:G:C2'	31:y:398:C:OP1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:399:G:H2'	31:y:400:C:H6	1.74	0.49
31:y:425:G:H2'	31:y:426:G:C5'	2.42	0.49
31:y:479:C:C2'	31:y:480:U:C6	2.95	0.49
31:y:545:C:C5'	37:e:72:GLU:HG2	2.34	0.49
31:y:580:U:C4	31:y:581:G:N7	2.80	0.49
31:y:584:G:N3	31:y:585:G:N9	2.60	0.49
31:y:700:G:O2'	31:y:701:C:H5'	2.12	0.49
31:y:780:A:H8	31:y:780:A:P	2.35	0.49
31:y:782:A:C5	31:y:783:C:C5	3.00	0.49
31:y:907:A:N1	31:y:908:A:C4	2.80	0.49
31:y:971:G:H5''	31:y:972:C:C5'	2.42	0.49
31:y:1074:G:H2'	31:y:1075:C:H6	1.76	0.49
31:y:1084:G:H5'	31:y:1102:A:P	2.53	0.49
31:y:1305:G:OP2	54:v:5:ASP:OD1	2.31	0.49
31:y:1375:A:H2'	31:y:1376:U:H6	1.76	0.49
31:y:1422:G:O2'	31:y:1423:G:C5'	2.46	0.49
31:y:1436:U:C2'	31:y:1437:C:O4'	2.60	0.49
36:d:37:GLN:O	36:d:38:ARG:C	2.55	0.49
36:d:110:ASN:CB	36:d:141:VAL:HA	2.42	0.49
38:f:55:VAL:HG23	38:f:56:GLN:N	2.26	0.49
38:f:70:PRO:O	38:f:71:LEU:CG	2.61	0.49
38:f:111:GLU:C	38:f:113:ALA:H	2.20	0.49
39:g:98:LEU:N	39:g:98:LEU:CD1	2.75	0.49
40:h:119:ARG:HH11	40:h:119:ARG:CB	2.26	0.49
45:m:38:VAL:O	45:m:55:ALA:HA	2.11	0.49
46:n:12:ASN:HB3	46:n:13:LYS:HE3	1.94	0.49
48:p:57:LEU:O	48:p:57:LEU:CD1	2.56	0.49
49:q:69:THR:C	49:q:71:ARG:H	2.19	0.49
50:r:34:LYS:CE	50:r:35:VAL:HG12	2.40	0.49
51:s:65:ILE:HG22	51:s:69:THR:HG23	1.94	0.49
52:t:64:GLU:OE2	52:t:67:VAL:HG22	2.12	0.49
1:w:71:A:OP2	1:w:113:G:H4'	2.12	0.49
1:w:109:G:C4	1:w:110:G:C8	3.01	0.49
1:w:187:G:N1	1:w:188:G:C4	2.80	0.49
1:w:223:A:O2'	1:w:420:C:O2	2.29	0.49
1:w:297:C:H2'	1:w:298:G:C4'	2.41	0.49
1:w:592:G:C3'	1:w:593:G:H8	2.24	0.49
1:w:609(A):A:C5	1:w:609(B):G:C8	3.01	0.49
1:w:708:C:H6	1:w:708:C:O5'	1.95	0.49
1:w:763:G:C6	1:w:765:G:C6	3.00	0.49
1:w:1160:G:C8	1:w:1160:G:OP2	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1202:C:HO2'	1:w:1203:G:H5'	1.76	0.49
1:w:1287:A:OP2	14:L:105:ARG:NH1	2.46	0.49
1:w:1319:G:C2	1:w:1334:G:O6	2.66	0.49
1:w:1458:C:C6	1:w:1459:G:C6	3.01	0.49
1:w:1459:G:C2	1:w:1461:G:C8	3.00	0.49
1:w:1471:A:OP2	1:w:1521:G:N1	2.45	0.49
1:w:1517:G:C2	1:w:1518:C:C2	3.01	0.49
1:w:1649:G:C6	1:w:1650:G:C8	3.00	0.49
1:w:1649:G:N2	1:w:2008:C:O2	2.32	0.49
1:w:1812:A:C1'	4:B:46:GLN:HB2	2.42	0.49
1:w:1892:C:O2'	1:w:1893:C:H5'	2.13	0.49
1:w:1993:U:HO2'	5:C:129:HIS:CD2	2.26	0.49
1:w:2012:G:OP1	19:Q:98:LYS:HE3	2.12	0.49
1:w:2015:A:H3'	1:w:2016:U:C6	2.47	0.49
1:w:2046:G:N3	1:w:2046:G:H2'	2.27	0.49
1:w:2206:C:N3	1:w:2207:C:C5	2.81	0.49
1:w:2286:A:C1'	1:w:2287:A:C5	2.93	0.49
1:w:2309:A:C8	1:w:2310:A:C8	3.00	0.49
1:w:2372:G:C2	1:w:2373:G:C6	3.01	0.49
1:w:2433:A:O2'	1:w:2434:A:OP2	2.30	0.49
1:w:2589:A:N1	1:w:2590:A:N7	2.61	0.49
1:w:2678:C:H42	1:w:2679:A:H62	1.60	0.49
1:w:2721:A:C4	1:w:2873:A:N1	2.80	0.49
3:A:167:ASP:O	3:A:171:ALA:CA	2.60	0.49
4:B:131:LEU:HD23	4:B:132:PRO:N	2.27	0.49
7:E:19:LEU:O	7:E:25:TYR:HE1	1.95	0.49
7:E:47:LYS:HB2	7:E:72:ARG:HH22	1.76	0.49
8:F:17:VAL:CA	8:F:26:VAL:HG22	2.07	0.49
8:F:49:VAL:HG11	8:F:51:ARG:HH22	1.76	0.49
9:G:44:LEU:HD22	9:G:44:LEU:C	2.37	0.49
10:H:93:LYS:HD2	10:H:93:LYS:C	2.37	0.49
11:I:16:ALA:CB	11:I:43:VAL:HG13	2.42	0.49
11:I:61:VAL:O	11:I:84:ALA:CA	2.61	0.49
11:I:75:SER:N	16:N:77:PRO:HD3	2.28	0.49
12:J:114:ILE:CG1	12:J:130:PHE:HB3	2.41	0.49
14:L:38:VAL:HG13	14:L:39:PRO:CD	2.42	0.49
14:L:46:GLY:O	14:L:47:PHE:C	2.55	0.49
14:L:50:HIS:O	14:L:53:HIS:ND1	2.45	0.49
16:N:31:SER:HB3	16:N:43:GLN:O	2.10	0.49
18:P:17:GLY:CA	18:P:98:GLU:HG3	2.37	0.49
21:S:12:THR:O	21:S:71:LYS:HA	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:99:TYR:CE2	22:T:124:ILE:HD12	2.47	0.49
23:U:33:ALA:O	23:U:60:PHE:CE2	2.65	0.49
24:V:88:LYS:O	24:V:89:GLU:C	2.55	0.49
25:W:3:LEU:HD23	25:W:4:SER:CA	2.42	0.49
27:Y:8:LYS:HB2	27:Y:8:LYS:HZ3	1.77	0.49
27:Y:16:ARG:CZ	27:Y:17:ASP:HB2	2.42	0.49
31:y:14:U:H1'	31:y:16:A:N7	2.26	0.49
31:y:103:C:H3'	31:y:104:G:C5'	2.42	0.49
31:y:111:G:N2	31:y:389:A:O4'	2.42	0.49
31:y:346:G:C3'	31:y:347:G:C5'	2.85	0.49
31:y:347:G:H5'	31:y:347:G:C8	2.46	0.49
31:y:361:G:N7	31:y:362:G:C5	2.80	0.49
31:y:375:U:O4	31:y:376:G:O6	2.29	0.49
31:y:425:G:O2'	31:y:426:G:H5'	2.13	0.49
31:y:503:C:H2'	31:y:504:C:C6	2.43	0.49
31:y:505:G:C6	31:y:506:G:C6	3.00	0.49
31:y:575:G:N1	31:y:821:G:C8	2.80	0.49
31:y:629:G:H8	31:y:629:G:OP2	1.95	0.49
31:y:717:C:C2	31:y:734:G:C8	3.00	0.49
31:y:910:C:N3	31:y:911:U:C4	2.81	0.49
31:y:979:C:C6	31:y:979:C:C3'	2.95	0.49
31:y:1011:G:C4	31:y:1012:U:C5	3.00	0.49
31:y:1014:A:O5'	31:y:1014:A:C8	2.65	0.49
31:y:1129:C:H1'	31:y:1130:A:N6	2.28	0.49
31:y:1190:G:OP1	36:d:5:ILE:N	2.45	0.49
31:y:1196:U:H3'	31:y:1197:G:H5''	1.94	0.49
31:y:1233:G:N2	31:y:1364:U:N3	2.60	0.49
31:y:1268:A:HO2'	54:v:20:LYS:N	2.09	0.49
31:y:1301:U:C6	31:y:1301:U:H5''	2.48	0.49
31:y:1347:G:N9	31:y:1348:U:H5	2.09	0.49
31:y:1378:C:OP2	40:h:5:ARG:NE	2.45	0.49
31:y:1521:G:C2'	31:y:1522:U:C5'	2.81	0.49
36:d:18:TRP:HZ2	47:o:56:VAL:H	1.60	0.49
36:d:32:LEU:HD13	36:d:32:LEU:C	2.38	0.49
37:e:32:ALA:CB	37:e:33:MET:HE3	2.37	0.49
37:e:100:ARG:HH22	37:e:137:SER:HB3	1.74	0.49
38:f:147:ASP:HA	38:f:150:ARG:HG2	1.94	0.49
39:g:18:GLN:O	39:g:22:GLU:HG2	2.12	0.49
41:i:40:ALA:C	41:i:42:GLU:H	2.20	0.49
42:j:79:LEU:HD13	42:j:79:LEU:O	2.13	0.49
45:m:5:THR:C	45:m:7:ASN:N	2.69	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:83:LEU:HD13	45:m:104:TYR:CZ	2.46	0.49
49:q:27:LYS:CG	49:q:28:ARG:H	2.14	0.49
53:u:14:LYS:C	53:u:17:ARG:HB3	2.37	0.49
53:u:36:LEU:H	53:u:36:LEU:CD2	2.26	0.49
53:u:100:ILE:CG2	53:u:101:GLY:N	2.75	0.49
54:v:21:TYR:HD2	54:v:21:TYR:N	2.09	0.49
1:w:15:G:O4'	27:Y:21:SER:HB3	2.12	0.49
1:w:84:A:H2'	1:w:98:G:H21	1.77	0.49
1:w:126:A:OP1	28:Z:19:ARG:CD	2.57	0.49
1:w:234:C:H2'	1:w:235:U:O5'	2.12	0.49
1:w:247:G:C6	1:w:249:C:H1'	2.48	0.49
1:w:270(J):G:OP2	1:w:270(J):G:C8	2.63	0.49
1:w:311:A:C2	1:w:332:A:H8	2.29	0.49
1:w:411:G:OP2	1:w:2407:G:OP2	2.30	0.49
1:w:414:C:H1'	1:w:1864:U:O2'	2.13	0.49
1:w:470:A:H2'	1:w:471:A:C8	2.47	0.49
1:w:487:C:O2'	19:Q:52:GLU:HG2	2.13	0.49
1:w:639:U:O5'	1:w:639:U:H6	1.95	0.49
1:w:667:U:P	12:J:47:ASP:CG	2.95	0.49
1:w:697:C:C4	1:w:698:C:C5	3.00	0.49
1:w:710:G:C2	1:w:711:G:C4	3.00	0.49
1:w:769:G:N3	1:w:770:G:C8	2.81	0.49
1:w:838:C:O5'	1:w:838:C:C6	2.65	0.49
1:w:848:G:OP2	1:w:929:G:N1	2.46	0.49
1:w:887:A:C4	1:w:887:A:C3'	2.95	0.49
1:w:910:A:H62	13:K:15:GLY:C	2.20	0.49
1:w:948:G:O2'	1:w:949:C:H5'	2.11	0.49
1:w:1042:G:C2	1:w:1114:G:C5	3.01	0.49
1:w:1139:G:C2'	1:w:1140:C:O5'	2.60	0.49
1:w:1227:G:C6	1:w:1228:G:N7	2.81	0.49
1:w:1263:U:O3'	27:Y:11:THR:HG21	2.13	0.49
1:w:1305:C:C5'	1:w:1305:C:H6	2.21	0.49
1:w:1385:G:C2'	1:w:1386:C:O4'	2.61	0.49
1:w:1388:G:H2'	1:w:1389:G:H8	1.77	0.49
1:w:1530:G:O6	1:w:1540:G:C4	2.65	0.49
1:w:1548:C:C4	1:w:1549:C:C5	3.00	0.49
1:w:1698:A:H8	1:w:1698:A:O5'	1.96	0.49
1:w:1799:G:C4'	1:w:1799:G:OP1	2.60	0.49
1:w:1824:G:H5'	1:w:1825:A:OP2	2.13	0.49
1:w:1912:A:H2	31:y:1494:G:H22	1.59	0.49
1:w:1920:C:C5'	31:y:1517:G:N9	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2090:G:N2	24:V:47:GLN:NE2	2.45	0.49
1:w:2098:U:C3'	1:w:2099:U:C6	2.94	0.49
1:w:2141:G:C4	1:w:2142:C:C6	3.00	0.49
1:w:2155:G:C6	1:w:2156:G:C4	2.99	0.49
1:w:2297:C:H2'	1:w:2298:A:O4'	2.12	0.49
1:w:2319:G:C1'	1:w:2320:A:N7	2.46	0.49
1:w:2341:G:C2	1:w:2342:C:C4	3.01	0.49
1:w:2380:C:N4	1:w:2381:C:N3	2.60	0.49
1:w:2400:G:H3'	1:w:2401:U:C5	2.48	0.49
1:w:2513:G:C5	1:w:2574:G:C6	3.00	0.49
1:w:2620:C:C2	1:w:2621:A:N7	2.80	0.49
1:w:2658:C:C4	1:w:2659:G:C5	3.00	0.49
1:w:2712:U:H3'	1:w:2712:U:P	2.52	0.49
1:w:2730:C:H4'	5:C:169:ASN:O	2.13	0.49
1:w:2746:U:C5	1:w:2747:G:C8	3.00	0.49
1:w:2776:A:HO2'	1:w:2781:A:C1'	2.24	0.49
1:w:2783:G:H3'	1:w:2784:C:H5	1.77	0.49
1:w:2842:G:N3	1:w:2876:G:C2	2.80	0.49
1:w:2887:U:O4	1:w:2888:C:N4	2.45	0.49
2:x:42:C:H1'	7:E:92:VAL:CB	2.43	0.49
3:A:195:ARG:CG	3:A:196:ALA:N	2.75	0.49
3:A:216:THR:O	3:A:217:THR:OG1	2.27	0.49
4:B:10:THR:HG23	4:B:13:ARG:H	1.77	0.49
4:B:142:VAL:HG23	4:B:193:VAL:CA	2.43	0.49
4:B:247:ALA:HB1	4:B:251:GLY:CA	2.42	0.49
4:B:247:ALA:O	4:B:248:SER:HB3	2.12	0.49
5:C:15:PHE:O	5:C:21:VAL:HG22	2.13	0.49
6:D:149:VAL:HB	6:D:186:ARG:O	2.12	0.49
7:E:22:ARG:O	7:E:23:PHE:HB2	2.12	0.49
7:E:124:SER:C	7:E:131:TYR:HE2	2.15	0.49
8:F:28:GLY:C	8:F:30:LYS:N	2.70	0.49
10:H:118:PRO:HA	10:H:121:VAL:CG2	2.42	0.49
11:I:20:MET:CG	11:I:21:CYS:N	2.75	0.49
11:I:90:GLN:OE1	11:I:92:GLU:CB	2.57	0.49
13:K:53:ALA:O	13:K:54:MET:C	2.56	0.49
16:N:29:ARG:HG2	16:N:86:ILE:CB	2.43	0.49
16:N:48:ILE:HG23	16:N:49:VAL:H	1.76	0.49
16:N:48:ILE:HD12	16:N:48:ILE:N	2.26	0.49
17:O:79:PHE:O	17:O:80:ILE:C	2.55	0.49
18:P:92:THR:OG1	18:P:93:GLU:N	2.46	0.49
19:Q:58:ALA:C	19:Q:62:HIS:HB2	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:51:VAL:C	20:R:52:VAL:HG23	2.37	0.49
21:S:101:LYS:HG2	21:S:101:LYS:O	2.12	0.49
22:T:152:ALA:O	22:T:153:SER:C	2.56	0.49
23:U:27:GLU:OE1	23:U:69:PHE:HB3	2.13	0.49
23:U:37:LEU:CG	23:U:38:VAL:H	2.25	0.49
24:V:77:ALA:O	24:V:78:LYS:HB3	2.13	0.49
25:W:3:LEU:HG	25:W:7:ARG:CB	2.43	0.49
26:X:7:LYS:HB2	26:X:55:ARG:CB	2.43	0.49
28:Z:17:GLY:O	28:Z:18:PHE:C	2.56	0.49
31:y:11:G:H8	31:y:11:G:O5'	1.95	0.49
31:y:16:A:C2	31:y:17:U:C4	3.00	0.49
31:y:36:C:C5'	45:m:120:GLY:CA	2.63	0.49
31:y:190:G:O5'	31:y:190:G:C8	2.65	0.49
31:y:243:A:HO2'	31:y:244:U:P	2.22	0.49
31:y:266:G:C6	31:y:270:A:N6	2.81	0.49
31:y:267:C:OP2	50:r:67:LYS:CD	2.53	0.49
31:y:292:G:C2	31:y:309:G:C5	3.00	0.49
31:y:307:C:H5	31:y:308:C:C5	2.25	0.49
31:y:324:G:C2	31:y:327:A:C8	3.00	0.49
31:y:332:G:C2'	31:y:333:G:H5'	2.43	0.49
31:y:363:A:C5'	45:m:32:ARG:C	2.74	0.49
31:y:396:G:C5'	31:y:397:A:OP2	2.60	0.49
31:y:404:U:N3	31:y:405:U:C6	2.78	0.49
31:y:424:G:C4	31:y:425:G:C8	3.00	0.49
31:y:563:A:N3	31:y:563:A:H2'	2.27	0.49
31:y:580:U:O2'	31:y:581:G:H5'	2.13	0.49
31:y:625:G:C2'	31:y:626:U:C6	2.75	0.49
31:y:674:G:C2'	31:y:675:A:C8	2.95	0.49
31:y:719:C:OP2	31:y:720:C:C5	2.65	0.49
31:y:728:A:C2'	31:y:729:A:H8	2.19	0.49
31:y:896:C:H5'	50:r:100:LYS:CE	2.43	0.49
31:y:955:U:H3'	31:y:956:U:O4'	2.13	0.49
31:y:973:G:O5'	31:y:973:G:H8	1.96	0.49
31:y:978:A:N3	31:y:1319:A:N3	2.60	0.49
31:y:988:G:O6	31:y:1218:C:N4	2.46	0.49
31:y:990:C:C5'	31:y:1018:C:OP1	2.60	0.49
31:y:1076:C:C2'	31:y:1077:G:H5'	2.42	0.49
31:y:1165:C:C3'	31:y:1166:G:H8	2.25	0.49
31:y:1245:A:H2'	31:y:1246:C:C6	2.48	0.49
31:y:1365:G:C2'	31:y:1366:C:C6	2.92	0.49
31:y:1421:G:C6	31:y:1422:G:N7	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1431:C:H2'	31:y:1432:G:O4'	2.12	0.49
31:y:1441:G:H2'	31:y:1460:A:H61	1.77	0.49
31:y:1512:U:C2	31:y:1513:A:N7	2.79	0.49
32:z:25:C:C2	32:z:26:A:C8	3.00	0.49
33:0:59:U:O2	33:0:59:U:C2'	2.59	0.49
35:c:108:ILE:CG2	35:c:109:SER:N	2.75	0.49
36:d:118:GLN:H	36:d:187:ALA:HB2	1.74	0.49
36:d:182:ILE:HD11	36:d:203:PHE:HB2	1.95	0.49
37:e:74:GLN:O	37:e:75:PHE:C	2.54	0.49
37:e:127:THR:OG1	37:e:131:ARG:N	2.45	0.49
37:e:207:TYR:HD1	37:e:207:TYR:H	1.58	0.49
38:f:17:ALA:HA	38:f:18:ARG:CZ	2.42	0.49
38:f:135:THR:O	38:f:138:ALA:HB3	2.11	0.49
40:h:74:GLU:O	40:h:75:VAL:HG13	2.13	0.49
40:h:127:ALA:CA	40:h:135:VAL:CG2	2.79	0.49
41:i:98:LYS:N	41:i:98:LYS:CD	2.75	0.49
45:m:95:VAL:HG12	45:m:97:TYR:N	2.20	0.49
46:n:67:GLU:CA	46:n:70:LEU:HG	2.42	0.49
47:o:29:ARG:NH1	47:o:40:CYS:HB3	2.26	0.49
47:o:56:VAL:HG13	47:o:56:VAL:O	2.11	0.49
48:p:54:ARG:NH1	48:p:55:GLY:CA	2.73	0.49
48:p:81:LEU:HD23	48:p:84:LYS:NZ	2.27	0.49
51:s:82:THR:CG2	51:s:83:GLU:N	2.57	0.49
1:w:78:A:N7	1:w:79:G:N7	2.60	0.49
1:w:80:G:C2	1:w:81:G:H1'	2.47	0.49
1:w:137(A):C:C2'	1:w:137(B):G:H8	2.03	0.49
1:w:254:G:O2'	1:w:255:A:O4'	2.23	0.49
1:w:558:G:C3'	1:w:559:G:C5'	2.86	0.49
1:w:583:G:N1	1:w:584:C:C4	2.81	0.49
1:w:668:G:C2'	1:w:670:A:N7	2.69	0.49
1:w:710:G:N3	1:w:711:G:C8	2.80	0.49
1:w:779:U:OP1	4:B:49:ILE:CG1	2.61	0.49
1:w:811:U:H4'	1:w:1252:G:OP1	2.12	0.49
1:w:824:A:C6	1:w:825:C:N4	2.81	0.49
1:w:851:U:O3'	26:X:45:GLY:CA	2.56	0.49
1:w:869:G:N2	1:w:909:A:N7	2.61	0.49
1:w:926:A:H3'	1:w:928:G:OP2	2.12	0.49
1:w:980:A:C5	1:w:1136:G:C5'	2.93	0.49
1:w:1080:C:H2'	1:w:1081:U:H5'	1.92	0.49
1:w:1132:A:C2	1:w:1133:U:C2	3.00	0.49
1:w:1303:G:O4'	1:w:1642:G:H1'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1310:G:N7	1:w:1311:G:C8	2.80	0.49
1:w:1321:A:H4'	19:Q:11:ARG:CZ	2.41	0.49
1:w:1381:G:N9	1:w:1382:G:C8	2.80	0.49
1:w:1390:U:O2'	1:w:1391:U:H5'	2.12	0.49
1:w:1427:A:C1'	1:w:1428:C:C5	2.95	0.49
1:w:1434:A:C6	1:w:1435:G:H1'	2.47	0.49
1:w:1456:G:C6	1:w:1457:A:C5	3.00	0.49
1:w:1472:A:C2'	1:w:1473:G:O4'	2.50	0.49
1:w:1530:G:H2'	1:w:1530:G:N3	2.28	0.49
1:w:1568:G:OP2	4:B:63:ARG:CZ	2.60	0.49
1:w:1717:G:N3	1:w:1718:G:H1'	2.22	0.49
1:w:1910:G:H2'	1:w:1911:U:H5'	1.94	0.49
1:w:1918:A:C8	1:w:1918:A:P	3.00	0.49
1:w:2037:G:C6	1:w:2038:G:N1	2.81	0.49
1:w:2106:G:C6	1:w:2184:G:O6	2.66	0.49
1:w:2545:G:N2	1:w:2565:A:H2	2.10	0.49
1:w:2697:G:C6	1:w:2711:A:C6	3.01	0.49
1:w:2740:A:C2	1:w:2764:A:N3	2.80	0.49
1:w:2755:C:H1'	30:b:19:ARG:NH1	2.28	0.49
1:w:2762:G:H5'	1:w:2763:G:OP2	2.12	0.49
1:w:2788:C:O5'	1:w:2788:C:C6	2.57	0.49
1:w:2797:U:C5'	1:w:2798:C:OP1	2.58	0.49
1:w:2821:A:C8	14:L:2:ARG:CA	2.85	0.49
1:w:2841:C:H2'	1:w:2842:G:C5'	2.43	0.49
1:w:2856:C:N4	1:w:2861:G:H1	2.10	0.49
4:B:60:ARG:NE	4:B:60:ARG:HA	2.26	0.49
4:B:78:LYS:NZ	4:B:113:VAL:HG12	2.28	0.49
4:B:108:PRO:HA	4:B:197:GLY:CA	2.41	0.49
4:B:133:LEU:HD22	4:B:136:ILE:HG21	1.95	0.49
5:C:7:VAL:CG1	5:C:76:ARG:NH2	2.76	0.49
5:C:109:LYS:C	5:C:161:GLY:HA3	2.37	0.49
6:D:35:GLN:CD	6:D:35:GLN:O	2.55	0.49
6:D:72:ASP:C	6:D:74:GLY:H	2.21	0.49
7:E:68:PRO:HG2	7:E:90:LEU:HD23	1.93	0.49
7:E:72:ARG:HD2	7:E:87:PRO:HB3	1.93	0.49
8:F:19:VAL:H	8:F:24:VAL:HG13	1.78	0.49
9:G:44:LEU:HA	9:G:47:LEU:HD23	1.94	0.49
9:G:91:SER:HB3	9:G:121:LYS:HZ1	1.76	0.49
10:H:100:GLY:HA2	10:H:104:GLY:O	2.12	0.49
11:I:16:ALA:HA	11:I:46:ALA:HA	1.94	0.49
11:I:59:LYS:NZ	11:I:87:ILE:O	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:106:LEU:HD12	11:I:106:LEU:H	1.76	0.49
12:J:95:VAL:O	12:J:125:VAL:CA	2.55	0.49
13:K:132:VAL:CG2	13:K:133:ARG:N	2.64	0.49
16:N:67:SER:C	16:N:69:GLY:H	2.21	0.49
16:N:90:GLN:NE2	16:N:120:ARG:NE	2.60	0.49
16:N:107:ASP:CA	16:N:111:ARG:CZ	2.89	0.49
17:O:97:ASP:O	17:O:99:ALA:N	2.41	0.49
18:P:75:PHE:O	18:P:76:LYS:HB2	2.12	0.49
19:Q:29:LEU:HD11	19:Q:67:ASP:N	2.20	0.49
20:R:5:TYR:O	20:R:7:VAL:N	2.46	0.49
20:R:16:LYS:O	20:R:19:ALA:HB3	2.13	0.49
22:T:75:ASN:HB2	22:T:85:HIS:O	2.12	0.49
26:X:40:THR:O	26:X:44:ARG:HD3	2.09	0.49
27:Y:30:LEU:HD22	27:Y:31:VAL:O	2.12	0.49
31:y:73:G:C4	31:y:74:C:C6	3.01	0.49
31:y:136:C:H1'	49:q:63:GLY:HA2	1.95	0.49
31:y:185:A:N1	31:y:192:U:O4	2.45	0.49
31:y:227:G:O2'	31:y:228:A:H5'	2.12	0.49
31:y:242:C:H3'	31:y:242:C:H6	1.77	0.49
31:y:259:G:H2'	31:y:260:G:H8	1.70	0.49
31:y:318:G:C5	31:y:319:G:N7	2.80	0.49
31:y:356:A:H5''	31:y:367:U:C5	2.47	0.49
31:y:492:G:H2'	31:y:492:G:N3	2.26	0.49
31:y:519:C:C5'	45:m:50:ALA:CB	2.74	0.49
31:y:523:A:N1	45:m:90:LYS:HB2	2.28	0.49
31:y:596:C:C2	31:y:597:G:N7	2.81	0.49
31:y:704:A:C2'	31:y:705:U:H5'	2.43	0.49
31:y:788:U:O5'	31:y:789:U:OP2	2.31	0.49
31:y:918:A:C2	31:y:919:A:C4	3.01	0.49
31:y:951:G:H21	31:y:970:C:H2'	1.78	0.49
31:y:102(C):C:C2	31:y:1029:G:H1'	2.45	0.49
31:y:1043:C:N3	31:y:1044:A:N7	2.60	0.49
31:y:1128:C:O2'	31:y:1148:U:H1'	2.12	0.49
31:y:1160:G:O2'	31:y:1161:C:H5'	2.12	0.49
31:y:1272:G:C8	31:y:1273:G:N7	2.80	0.49
31:y:1372:U:O5'	31:y:1372:U:H6	1.96	0.49
32:z:2:C:N4	32:z:72:C:N3	2.61	0.49
33:0:41:U:O4'	40:h:144:MET:SD	2.70	0.49
35:c:223:ILE:C	35:c:225:ALA:N	2.71	0.49
36:d:44:GLU:HA	36:d:48:TYR:HB2	1.92	0.49
36:d:153:VAL:HG13	36:d:166:GLU:CB	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:49:PRO:O	38:f:50:GLU:C	2.56	0.49
38:f:51:VAL:O	38:f:52:PRO:C	2.55	0.49
40:h:12:LEU:CG	40:h:13:GLN:N	2.28	0.49
40:h:69:VAL:HG22	40:h:135:VAL:CG2	2.37	0.49
40:h:123:GLU:O	40:h:126:ASP:CB	2.57	0.49
42:j:97:LYS:HE2	42:j:98:PRO:HD3	1.95	0.49
45:m:116:ARG:HD2	45:m:121:THR:CB	2.42	0.49
46:n:27:LYS:O	46:n:30:ALA:HB3	2.12	0.49
50:r:87:LYS:HZ3	50:r:88:TYR:HA	1.78	0.49
53:u:39:LYS:HD2	53:u:42:GLN:HE21	1.75	0.49
1:w:33:U:O5'	1:w:33:U:H6	1.96	0.49
1:w:33:U:O2'	1:w:34:C:H5'	2.13	0.49
1:w:83:G:H1	1:w:102:G:C2'	2.26	0.49
1:w:116:C:C4'	1:w:127:A:H1'	2.43	0.49
1:w:125:G:H1'	28:Z:13:ALA:O	2.12	0.49
1:w:137(B):G:H2'	1:w:138:G:C1'	2.42	0.49
1:w:197:A:C2	1:w:198:C:H1'	2.48	0.49
1:w:209:C:C2	1:w:210:C:C5	3.00	0.49
1:w:281:G:C1'	1:w:359:A:N6	2.74	0.49
1:w:321:G:C2	1:w:341:G:C4'	2.75	0.49
1:w:592:G:O2'	29:a:3:LYS:C	2.55	0.49
1:w:616:A:C8	1:w:616:A:H3'	2.47	0.49
1:w:788:A:C5'	1:w:789:A:OP1	2.53	0.49
1:w:924:C:H3'	1:w:924:C:C6	2.48	0.49
1:w:949:C:H2'	1:w:950:G:H8	1.77	0.49
1:w:971:C:OP1	1:w:974(A):G:C8	2.65	0.49
1:w:974(B):C:O2	1:w:974(B):C:C2'	2.60	0.49
1:w:987:G:C2'	1:w:1000:A:H2	2.26	0.49
1:w:994:C:H3'	17:O:54:LYS:CE	2.43	0.49
1:w:1006:C:H1'	10:H:129:MET:HE3	1.95	0.49
1:w:1055:G:C6	1:w:1056:G:C6	3.01	0.49
1:w:1078:U:O5'	1:w:1078:U:C6	2.64	0.49
1:w:1083:U:H1'	1:w:1086:A:H61	1.77	0.49
1:w:1185:C:O5'	1:w:1185:C:H6	1.95	0.49
1:w:1204:A:H4'	1:w:1206:G:N7	2.28	0.49
1:w:1206:G:C4	1:w:1207:C:C6	3.00	0.49
1:w:1221:C:O2'	1:w:122(A):C:H5'	2.13	0.49
1:w:1260:G:C2	1:w:1261:C:C2	3.01	0.49
1:w:1274:A:O2'	1:w:1275:A:OP2	2.31	0.49
1:w:1381:G:C2	1:w:1382:G:H1'	2.48	0.49
1:w:1423:G:C2	1:w:1424:G:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1423:G:N1	1:w:1424:G:C6	2.81	0.49
1:w:1427:A:N6	1:w:1571:A:C8	2.77	0.49
1:w:1438:U:H5'	1:w:1519:G:O5'	2.12	0.49
1:w:1550:C:H2'	1:w:1551:C:H6	1.78	0.49
1:w:1665:A:H2'	1:w:1666:G:C5'	2.34	0.49
1:w:1769:G:C6	1:w:1984:G:C6	3.01	0.49
1:w:1815:A:O4'	1:w:1817:G:C8	2.64	0.49
1:w:1825:A:OP1	4:B:249:PRO:HD3	2.12	0.49
1:w:1870:C:O2	1:w:1871:A:C4	2.65	0.49
1:w:1915:U:H2'	1:w:1916:A:C1'	2.43	0.49
1:w:1924:C:C4	1:w:1925:C:C4	3.00	0.49
1:w:1944:U:H6	1:w:1955:U:C1'	2.25	0.49
1:w:1948:G:H2'	1:w:1949:G:H5'	1.94	0.49
1:w:1967:C:H2'	1:w:1968:G:C5'	2.27	0.49
1:w:1974:C:C2	1:w:1975:G:C8	3.00	0.49
1:w:2034:U:C2'	1:w:2035:G:H5''	2.41	0.49
1:w:2080:G:C2	1:w:2241:A:C1'	2.85	0.49
1:w:2080:G:N1	1:w:2241:A:C4	2.80	0.49
1:w:2083:G:N3	1:w:2084:C:C5	2.80	0.49
1:w:2155:G:N7	1:w:2156:G:C5	2.80	0.49
1:w:2186:G:C3'	1:w:2187:G:C8	2.95	0.49
1:w:2307:G:O4'	1:w:2311:A:C6	2.66	0.49
1:w:2400:G:H5'	1:w:2401:U:P	2.53	0.49
1:w:2556:C:C2'	1:w:2557:G:H5'	2.41	0.49
1:w:2588:G:H2'	1:w:2589:A:C4'	2.33	0.49
1:w:2588:G:C8	1:w:2588:G:C4'	2.96	0.49
1:w:2643:G:C2'	1:w:2644:G:C8	2.95	0.49
1:w:2741:A:H2'	1:w:2742:C:C5'	2.33	0.49
1:w:2759:G:C5	1:w:2760:C:C5	3.00	0.49
2:x:9:G:C6	2:x:10:C:C4	3.01	0.49
2:x:19:G:N2	2:x:20:C:H1'	2.27	0.49
2:x:52:A:C2	2:x:53:A:H1'	2.46	0.49
2:x:99:A:C3'	2:x:100:G:C8	2.96	0.49
3:A:22:THR:CA	3:A:225:ILE:HG23	2.42	0.49
4:B:17:THR:HG22	4:B:18:VAL:N	2.26	0.49
4:B:58:HIS:O	4:B:58:HIS:CD2	2.66	0.49
4:B:65:ILE:HG22	4:B:104:TYR:CB	2.42	0.49
4:B:267:SER:O	4:B:268:ARG:HB2	2.13	0.49
5:C:67:PHE:O	5:C:69:LYS:N	2.46	0.49
5:C:94:GLU:O	5:C:95:ILE:C	2.55	0.49
5:C:184:VAL:CG2	5:C:185:LYS:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:188:VAL:CG2	5:C:189:PRO:CD	2.65	0.49
6:D:69:ARG:HD3	6:D:70:HIS:N	2.22	0.49
6:D:112:ARG:O	6:D:117:LYS:NZ	2.46	0.49
6:D:119:LEU:HB2	6:D:188:VAL:C	2.38	0.49
6:D:147:GLU:H	6:D:167:TRP:HZ2	1.58	0.49
6:D:149:VAL:CG1	6:D:186:ARG:HB2	2.43	0.49
6:D:151:LEU:HD13	6:D:188:VAL:C	2.37	0.49
7:E:103:LEU:HA	7:E:106:LEU:HD21	1.93	0.49
7:E:103:LEU:HD12	7:E:104:GLU:N	2.27	0.49
7:E:155:MET:SD	7:E:155:MET:N	2.85	0.49
9:G:4:ILE:N	9:G:4:ILE:CD1	2.75	0.49
9:G:6:LEU:HB3	9:G:35:LEU:O	2.11	0.49
9:G:26:ALA:C	9:G:31:LEU:HB3	2.37	0.49
9:G:97:ILE:CD1	9:G:98:ALA:N	2.60	0.49
9:G:126:TYR:CE1	9:G:127:VAL:CG2	2.96	0.49
10:H:71:MET:SD	10:H:71:MET:N	2.71	0.49
10:H:121:VAL:O	10:H:122:LEU:C	2.55	0.49
11:I:12:ASP:CG	11:I:13:ASN:H	2.21	0.49
11:I:13:ASN:HB2	11:I:17:ARG:CD	2.43	0.49
12:J:39:LYS:NZ	12:J:39:LYS:HA	2.28	0.49
12:J:79:ARG:CG	12:J:81:GLN:HE22	2.25	0.49
12:J:85:LEU:N	12:J:85:LEU:CD2	2.69	0.49
14:L:96:ARG:HG3	14:L:117:VAL:HG23	1.94	0.49
14:L:100:LEU:CG	14:L:112:ALA:HA	2.28	0.49
15:M:42:ASP:O	15:M:43:GLU:C	2.56	0.49
16:N:82:LEU:N	16:N:82:LEU:CD1	2.73	0.49
16:N:92:GLY:N	16:N:116:ALA:N	2.59	0.49
18:P:2:PHE:N	18:P:2:PHE:CD1	2.80	0.49
18:P:40:LEU:HD13	18:P:41:GLY:CA	2.42	0.49
18:P:64:HIS:HA	18:P:96:ILE:HG21	1.89	0.49
18:P:81:TYR:H	18:P:83:ARG:NH2	2.10	0.49
20:R:77:LYS:HE3	20:R:77:LYS:HA	1.94	0.49
21:S:38:ILE:O	21:S:39:VAL:C	2.56	0.49
23:U:29:GLN:HG3	23:U:30:VAL:H	1.78	0.49
23:U:79:VAL:HG23	23:U:81:VAL:CG2	2.42	0.49
24:V:23:LYS:O	24:V:24:ALA:HB2	2.13	0.49
24:V:90:ILE:CG2	24:V:94:LEU:HD11	2.42	0.49
25:W:5:GLU:OE1	25:W:9:GLN:HA	2.13	0.49
27:Y:40:LYS:NZ	27:Y:46:CYS:H	2.11	0.49
28:Z:13:ALA:CA	28:Z:17:GLY:HA3	2.37	0.49
29:a:7:HIS:CE1	29:a:9:GLY:N	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:37:U:H4'	45:m:116:ARG:HH22	1.73	0.49
31:y:49:U:C3'	31:y:50:A:H5'	2.39	0.49
31:y:245:C:C2'	31:y:246:A:H5''	2.36	0.49
31:y:250:A:O2'	31:y:251:G:O5'	2.31	0.49
31:y:256:U:C4	31:y:270:A:N1	2.80	0.49
31:y:400:C:H2'	31:y:401:C:O5'	2.13	0.49
31:y:425:G:H2'	31:y:426:G:H5'	1.95	0.49
31:y:520:A:H3'	31:y:521:G:O4'	2.13	0.49
31:y:546:G:H4'	31:y:548:G:H4'	0.63	0.49
31:y:558:G:C3'	31:y:559:A:N3	2.73	0.49
31:y:584:G:C5	31:y:585:G:C8	3.00	0.49
31:y:674:G:C2	31:y:675:A:C5	3.00	0.49
31:y:699:C:C2'	31:y:700:G:H8	2.23	0.49
31:y:767:A:C2'	31:y:768:A:C5'	2.77	0.49
31:y:786:G:H2'	31:y:787:A:O4'	2.13	0.49
31:y:817:C:O4'	31:y:819:A:H5'	2.11	0.49
31:y:909:A:H3'	31:y:910:C:C6	2.48	0.49
31:y:1045:C:H2'	31:y:1045:C:O2	2.12	0.49
31:y:1066:C:C5'	31:y:1067:A:OP2	2.61	0.49
31:y:1072:G:C5	31:y:1073:U:C4	3.00	0.49
31:y:1197:G:N3	31:y:1198:G:C8	2.81	0.49
31:y:1202:G:H1'	47:o:29:ARG:HH21	1.77	0.49
31:y:1269:A:O4'	31:y:1326:C:C4'	2.60	0.49
31:y:1292:U:C4	31:y:1293:G:O6	2.65	0.49
31:y:1320:C:N1	52:t:72:GLY:HA2	2.28	0.49
31:y:1440:C:C4	31:y:1441:G:C8	3.01	0.49
32:z:11:C:H2'	32:z:12:U:H5	1.73	0.49
33:0:22:G:H5''	33:0:46:G:H1	1.78	0.49
33:0:23:A:C2'	33:0:24:G:H5'	2.42	0.49
35:c:25:ASN:ND2	35:c:192:SER:H	2.10	0.49
35:c:178:ARG:NE	41:i:71:GLY:O	2.45	0.49
36:d:77:ILE:HG12	36:d:81:GLY:HA2	1.94	0.49
36:d:83:ARG:O	36:d:87:LEU:HD23	2.11	0.49
37:e:82:ALA:CB	37:e:93:PHE:CG	2.96	0.49
37:e:126:ILE:CG2	37:e:148:VAL:HA	2.43	0.49
38:f:143:ARG:CG	38:f:147:ASP:OD1	2.61	0.49
39:g:74:ASP:O	39:g:77:ARG:CB	2.60	0.49
40:h:38:LEU:HD12	40:h:38:LEU:N	2.27	0.49
41:i:12:ARG:C	41:i:13:ILE:HD12	2.38	0.49
41:i:90:GLY:C	50:r:34:LYS:HE2	2.37	0.49
41:i:120:THR:OG1	41:i:121:ASP:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:12:ARG:O	44:l:14:VAL:N	2.46	0.49
44:l:30:VAL:HG21	44:l:64:ALA:HB1	1.94	0.49
44:l:63:LEU:C	44:l:65:ALA:N	2.69	0.49
44:l:113:PRO:O	44:l:114:VAL:HG23	2.12	0.49
45:m:53:LYS:O	45:m:68:TYR:HE1	1.95	0.49
46:n:16:ASP:OD2	46:n:41:PRO:CB	2.61	0.49
48:p:82:ILE:N	48:p:82:ILE:CD1	2.75	0.49
49:q:18:ARG:HA	49:q:39:TYR:HB3	1.95	0.49
49:q:28:ARG:C	49:q:30:GLY:H	2.21	0.49
52:t:40:ILE:HG23	52:t:44:MET:HE2	1.95	0.49
53:u:30:LYS:O	53:u:31:SER:C	2.55	0.49
54:v:9:ARG:NH2	54:v:21:TYR:HB3	2.27	0.49
1:w:96:G:O2'	25:W:41:ILE:HG21	2.13	0.49
1:w:126:A:H5''	28:Z:18:PHE:CD2	2.48	0.49
1:w:216:A:C5	1:w:217:G:C6	3.01	0.49
1:w:243:U:OP1	29:a:63:PRO:HB3	2.12	0.49
1:w:270(Y):G:H3'	1:w:270(Z):G:N7	2.28	0.49
1:w:372:G:H22	1:w:400:G:C2'	2.23	0.49
1:w:440:G:H3'	1:w:441:U:H6	1.76	0.49
1:w:464:U:O2	1:w:465:G:C4	2.66	0.49
1:w:464:U:O3'	28:Z:12:ARG:NH1	2.43	0.49
1:w:500:G:H1'	1:w:505:A:H62	1.78	0.49
1:w:568:U:O4	1:w:973:A:P	2.71	0.49
1:w:589:C:O2'	1:w:590:A:C8	2.61	0.49
1:w:628:G:C2'	1:w:629:G:O4'	2.61	0.49
1:w:702:G:O6	1:w:730:C:N4	2.40	0.49
1:w:949:C:O2	1:w:950:G:C8	2.66	0.49
1:w:1019:U:O2'	1:w:1021:A:C2	2.60	0.49
1:w:1256:G:H2'	1:w:1257:C:O5'	2.13	0.49
1:w:1272:A:C5'	1:w:1646:C:O2	2.61	0.49
1:w:1365:A:N3	1:w:1366:A:C8	2.80	0.49
1:w:1514:U:H3'	1:w:1515:C:C6	2.47	0.49
1:w:1518:C:H2'	1:w:1519:G:C5'	2.40	0.49
1:w:1542:G:N3	1:w:1543:A:N6	2.61	0.49
1:w:1582:C:O2'	1:w:1583:A:H5'	2.13	0.49
1:w:1750:G:H2'	1:w:1751:C:C6	2.47	0.49
1:w:1829:A:C8	1:w:1830:C:C4	3.00	0.49
1:w:1860:G:O3'	3:A:206:LYS:O	2.31	0.49
1:w:1861:G:N2	1:w:1882:C:C2	2.81	0.49
1:w:1944:U:H1'	1:w:1955:U:H4'	1.94	0.49
1:w:1967:C:C4	1:w:1968:G:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2017:U:OP1	27:Y:8:LYS:HG3	2.12	0.49
1:w:2124:G:C1'	3:A:43:GLU:HG2	2.38	0.49
1:w:2125:G:H4'	3:A:41:THR:CG2	2.42	0.49
1:w:2359:C:C2	1:w:2360:A:N9	2.80	0.49
1:w:2418:A:C8	1:w:2419:U:C5	3.01	0.49
1:w:2491:U:O3'	1:w:2570:G:OP1	2.30	0.49
1:w:2512:C:C1'	5:C:141:ILE:HA	2.30	0.49
1:w:2512:C:O4'	5:C:141:ILE:HG22	2.13	0.49
1:w:2636:U:C2'	1:w:2637:U:C6	2.92	0.49
1:w:2661:G:C6	1:w:2662:A:C2	3.01	0.49
1:w:2773:C:H5''	5:C:164:ARG:HG2	1.93	0.49
2:x:82:G:C6	2:x:83:G:C6	3.01	0.49
3:A:44:VAL:HG23	3:A:175:PRO:C	2.37	0.49
3:A:165:ARG:O	3:A:171:ALA:CB	2.60	0.49
4:B:6:PHE:CD2	4:B:16:MET:HB2	2.47	0.49
4:B:68:LYS:HB2	4:B:68:LYS:NZ	2.28	0.49
4:B:147:LEU:HG	4:B:148:GLU:H	1.77	0.49
5:C:192:ASN:OD1	16:N:4:GLY:HA3	2.12	0.49
6:D:48:THR:CA	6:D:52:VAL:HB	2.42	0.49
6:D:120:LEU:C	6:D:122:GLU:H	2.20	0.49
6:D:125:ALA:O	6:D:133:GLU:HG2	2.12	0.49
6:D:127:VAL:H	6:D:133:GLU:CD	2.15	0.49
6:D:148:SER:C	6:D:149:VAL:CG1	2.86	0.49
6:D:191:LEU:HD22	6:D:193:ALA:HB3	1.95	0.49
6:D:192:ASP:O	6:D:192:ASP:OD2	2.31	0.49
7:E:25:TYR:HD2	7:E:31:VAL:HG22	1.78	0.49
7:E:54:GLU:HA	7:E:57:ALA:CB	2.42	0.49
8:F:72:ILE:CD1	8:F:72:ILE:N	2.64	0.49
8:F:89:ILE:H	8:F:129:THR:CG2	2.25	0.49
9:G:7:GLU:O	9:G:12:LEU:HA	2.13	0.49
9:G:130:TYR:HE2	9:G:132:PRO:HG3	1.75	0.49
10:H:65:TRP:CZ3	10:H:67:PRO:HA	2.47	0.49
11:I:70:LYS:CA	11:I:76:ALA:HA	2.42	0.49
13:K:76:LYS:O	13:K:78:PRO:HD3	2.13	0.49
14:L:34:ILE:CG2	14:L:35:THR:N	2.50	0.49
15:M:39:ILE:CD1	15:M:49:VAL:HG13	2.39	0.49
15:M:68:GLN:CA	15:M:71:ARG:HH11	2.15	0.49
16:N:50:ILE:CG2	16:N:62:THR:HG23	2.43	0.49
16:N:135:VAL:CG1	16:N:136:GLN:H	2.09	0.49
19:Q:70:TYR:CZ	19:Q:108:GLY:HA3	2.48	0.49
22:T:150:LEU:HD12	22:T:171:ILE:HD13	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:161:VAL:HG12	22:T:162:GLU:H	1.76	0.49
24:V:27:GLU:HA	33:0:74:C:C5'	2.43	0.49
28:Z:15:THR:O	28:Z:16:HIS:ND1	2.46	0.49
31:y:60:A:O2'	31:y:61:G:OP2	2.21	0.49
31:y:111:G:N2	31:y:389:A:H4'	2.27	0.49
31:y:136:C:C2'	49:q:1:MET:N	2.76	0.49
31:y:152:A:C2'	31:y:153:C:H5'	2.42	0.49
31:y:191(C):G:H2'	31:y:191(D):U:O4'	2.13	0.49
31:y:253:U:N3	31:y:254:G:N7	2.61	0.49
31:y:268:C:C4	31:y:269:C:N4	2.81	0.49
31:y:374:A:H2'	31:y:375:U:H5'	1.93	0.49
31:y:557:G:H2'	31:y:558:G:C1'	2.43	0.49
31:y:602:A:C8	31:y:602:A:OP2	2.65	0.49
31:y:607:A:C2	49:q:32:TYR:CE1	3.00	0.49
31:y:616:G:N2	31:y:625:G:C8	2.81	0.49
31:y:637:G:H2'	31:y:638:G:O4'	2.12	0.49
31:y:650:G:HO2'	31:y:651:C:H5'	1.75	0.49
31:y:666:G:H22	48:p:52:SER:CB	2.24	0.49
31:y:673:G:H2'	31:y:674:G:C1'	2.43	0.49
31:y:709:G:H2'	31:y:710:G:O4'	2.13	0.49
31:y:729:A:C2	31:y:730:G:C8	3.00	0.49
31:y:750:G:H1'	48:p:22:THR:CG2	2.43	0.49
31:y:880:C:O5'	45:m:8:GLN:OE1	2.31	0.49
31:y:881:G:C2	31:y:882:C:C6	3.01	0.49
31:y:907:A:C2	31:y:908:A:C1'	2.95	0.49
31:y:922:G:O2'	38:f:21:ALA:N	2.46	0.49
31:y:1005:A:N7	31:y:1025:U:O2	2.45	0.49
31:y:1077:G:N2	31:y:1080:A:H62	2.07	0.49
31:y:1081:G:O2'	31:y:1082:G:H5'	2.13	0.49
31:y:1112:C:H42	36:d:176:HIS:C	2.19	0.49
31:y:1121:U:O2	31:y:1152:A:H2	1.96	0.49
31:y:1130:A:C8	31:y:1147:C:O2	2.65	0.49
31:y:1139:G:H5'	31:y:1140:C:P	2.52	0.49
31:y:1252:A:H2'	31:y:1253:G:H5''	1.95	0.49
31:y:1253:G:C2'	31:y:1254:C:O4'	2.51	0.49
31:y:1359:C:H2'	31:y:1360:A:C5'	2.43	0.49
31:y:1371:G:C6	31:y:1372:U:C5	3.00	0.49
31:y:1396:A:C5'	31:y:1398:A:C5'	2.85	0.49
31:y:1433:A:C6	31:y:1468:A:C4	3.01	0.49
31:y:1448:C:N4	31:y:1449:C:N4	2.61	0.49
35:c:52:GLU:O	35:c:55:PHE:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:31:CYS:H	37:e:34:GLU:HB3	1.78	0.49
37:e:57:ARG:HG3	37:e:206:PHE:HD1	1.76	0.49
37:e:128:VAL:HG12	37:e:132:ARG:N	2.28	0.49
38:f:35:GLY:O	38:f:112:LEU:HD11	2.12	0.49
38:f:71:LEU:C	38:f:73:ASN:H	2.21	0.49
38:f:88:LYS:O	38:f:123:LEU:O	2.31	0.49
39:g:6:VAL:HG22	39:g:63:TYR:CA	2.42	0.49
39:g:11:ASN:HB2	39:g:55:ASP:OD2	2.13	0.49
41:i:68:ARG:HG3	41:i:74:PRO:CG	2.43	0.49
44:l:63:LEU:H	44:l:63:LEU:CD2	2.24	0.49
45:m:14:ARG:NE	45:m:14:ARG:C	2.71	0.49
45:m:23:VAL:O	45:m:24:PRO:O	2.31	0.49
47:o:29:ARG:HB3	47:o:40:CYS:CB	2.41	0.49
50:r:90:ILE:CG1	50:r:91:ARG:N	2.69	0.49
52:t:69:HIS:HB3	52:t:73:GLU:OE1	2.12	0.49
53:u:44:ALA:O	53:u:91:LEU:HB2	2.13	0.49
53:u:104:LEU:CD1	53:u:105:SER:N	2.75	0.49
1:w:3:U:C2'	1:w:4:C:H5'	2.43	0.49
1:w:28:A:C6	1:w:513:A:C4	3.01	0.49
1:w:79:G:H1	1:w:107:C:H42	1.60	0.49
1:w:95:G:O5'	25:W:38:GLN:HB3	2.13	0.49
1:w:147:U:H2'	1:w:148:C:C6	2.48	0.49
1:w:270(X):G:C8	1:w:270(Y):G:N7	2.80	0.49
1:w:382:G:H2'	1:w:383:U:O4'	2.13	0.49
1:w:450:G:O6	1:w:453:C:OP1	2.30	0.49
1:w:528:A:H2	1:w:2043:C:O5'	1.92	0.49
1:w:590:A:C2'	1:w:591:C:H6	2.15	0.49
1:w:660:G:H5''	6:D:94:TYR:HD1	1.78	0.49
1:w:660:G:H2'	1:w:661:C:C6	2.48	0.49
1:w:753:C:H2'	1:w:754:C:H6	1.78	0.49
1:w:941:A:H2	1:w:942:G:C4	2.31	0.49
1:w:995:C:H1'	17:O:61:TRP:CZ2	2.46	0.49
1:w:1160:G:N2	18:P:9:GLY:HA3	2.28	0.49
1:w:1534:G:H1'	1:w:1538:G:N2	2.27	0.49
1:w:1544:C:O2'	1:w:1545:A:C8	2.58	0.49
1:w:1686:C:C3'	1:w:1687:G:C5'	2.91	0.49
1:w:1797:C:H3'	1:w:1798:U:C6	2.47	0.49
1:w:1885:A:C4	1:w:1886:C:C5	3.01	0.49
1:w:2023:G:OP2	1:w:2617:C:C4'	2.59	0.49
1:w:2105:C:C2	1:w:2106:G:C8	3.01	0.49
1:w:2128:C:OP2	3:A:37:LYS:HD3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2141:G:C5	1:w:2142:C:C5	3.01	0.49
1:w:2355:C:O5'	1:w:2355:C:H6	1.95	0.49
1:w:2484:G:H1'	13:K:49:ALA:CB	2.43	0.49
1:w:2513:G:C6	1:w:2574:G:C6	3.01	0.49
1:w:2521:C:C2	1:w:2545:G:C2	3.01	0.49
1:w:2589:A:H5''	4:B:237:GLU:HB3	1.95	0.49
1:w:2625:G:C5	1:w:2626:C:N4	2.81	0.49
1:w:2638:G:H1'	1:w:2778:A:H61	1.78	0.49
1:w:2659:G:C2'	1:w:2660:A:N7	2.76	0.49
1:w:2744:G:C2'	1:w:2745:C:H5'	2.43	0.49
1:w:2746:U:O4	1:w:2747:G:C5	2.65	0.49
1:w:2783:G:C3'	1:w:2784:C:C5	2.95	0.49
1:w:2853:C:C2	1:w:2854:G:C8	3.00	0.49
3:A:27:ALA:O	3:A:183:PRO:HB3	2.12	0.49
3:A:217:THR:O	3:A:218:THR:C	2.55	0.49
4:B:16:MET:HA	4:B:205:VAL:HG12	1.95	0.49
4:B:233:HIS:CE1	4:B:242:ARG:HA	2.48	0.49
6:D:35:GLN:O	6:D:36:LEU:C	2.56	0.49
8:F:95:ARG:HH11	8:F:107:VAL:CB	2.25	0.49
9:G:66:GLU:OE1	9:G:69:LYS:HB3	2.13	0.49
10:H:40:ASP:HA	10:H:44:LYS:HG3	1.95	0.49
10:H:113:MET:SD	10:H:116:THR:CG2	2.95	0.49
11:I:19:ILE:HD12	11:I:42:SER:C	2.38	0.49
12:J:132:LYS:O	12:J:135:LEU:HB3	2.12	0.49
13:K:34:LEU:CD1	13:K:34:LEU:C	2.86	0.49
16:N:92:GLY:HA3	16:N:114:LEU:CD2	2.43	0.49
16:N:99:LEU:HD13	16:N:102:ILE:CD1	2.37	0.49
16:N:128:GLU:C	16:N:130:ALA:H	2.21	0.49
19:Q:30:GLU:C	19:Q:34:ASN:OD1	2.54	0.49
19:Q:72:LYS:O	19:Q:73:ALA:HB2	2.13	0.49
22:T:52:SER:O	22:T:98:MET:HE1	2.13	0.49
23:U:26:TYR:O	23:U:27:GLU:C	2.56	0.49
25:W:13:ALA:O	25:W:14:ARG:HG2	2.13	0.49
25:W:20:GLU:O	25:W:24:LEU:HD13	2.13	0.49
31:y:190:G:O2'	31:y:191(A):G:P	2.70	0.49
31:y:324:G:H22	31:y:327:A:P	2.33	0.49
31:y:399:G:C2'	31:y:400:C:O5'	2.60	0.49
31:y:409:G:C5	31:y:410:G:C4	3.01	0.49
31:y:560:U:H5'	31:y:562:C:H5''	1.94	0.49
31:y:560:U:O2'	31:y:561:U:H5''	2.13	0.49
31:y:584:G:C5	31:y:585:G:N7	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:654:G:C6	31:y:655:A:C5	3.01	0.49
31:y:692:U:O2	31:y:694:A:H5'	2.12	0.49
31:y:713:G:H21	31:y:777:A:H1'	1.78	0.49
31:y:842:C:H5''	31:y:848:C:N3	2.28	0.49
31:y:874:G:H21	41:i:11:THR:HG22	1.78	0.49
31:y:888:G:N2	31:y:909:A:H62	2.07	0.49
31:y:955:U:OP2	31:y:955:U:C5	2.66	0.49
31:y:957:U:O2'	31:y:959:A:C5	2.65	0.49
31:y:972:C:O5'	43:k:57:LYS:CD	2.60	0.49
31:y:102(C):C:C6	31:y:1029:G:C8	3.00	0.49
31:y:1074:G:C4'	35:c:103:THR:O	2.59	0.49
31:y:1211:U:O2'	31:y:1213:A:C4	2.65	0.49
31:y:1299:A:C3'	31:y:1299:A:N3	2.69	0.49
31:y:1300:G:C3'	31:y:1301:U:H5	2.26	0.49
31:y:1328:C:O2'	31:y:1329:A:H5'	2.13	0.49
31:y:1342:C:H1'	42:j:124:GLN:HB2	1.93	0.49
31:y:1376:U:O2	31:y:1377:A:C5	2.66	0.49
31:y:1506:U:C2'	31:y:1507:A:C5'	2.91	0.49
32:z:2:C:O5'	32:z:2:C:C6	2.47	0.49
33:0:44:A:H2'	33:0:45:G:H5'	1.94	0.49
35:c:92:TYR:CD1	35:c:92:TYR:C	2.91	0.49
35:c:214:ILE:CG1	35:c:215:LEU:H	2.22	0.49
36:d:29:TYR:CD1	36:d:33:LEU:CD2	2.96	0.49
36:d:46:GLU:O	36:d:47:LEU:HB2	2.13	0.49
36:d:175:LEU:HD13	36:d:176:HIS:CD2	2.48	0.49
37:e:63:LYS:CA	37:e:66:ARG:HG2	2.41	0.49
37:e:96:LEU:O	37:e:99:SER:N	2.45	0.49
39:g:62:TRP:O	39:g:63:TYR:CD1	2.66	0.49
41:i:69:ARG:CG	41:i:70:GLN:N	2.57	0.49
41:i:118:VAL:O	41:i:119:LEU:CD2	2.61	0.49
43:k:11:PHE:HA	43:k:67:THR:HA	1.95	0.49
44:l:51:LYS:HD2	44:l:51:LYS:H	1.75	0.49
45:m:87:GLY:O	45:m:97:TYR:HA	2.13	0.49
48:p:42:HIS:O	48:p:43:LEU:HD13	2.12	0.49
50:r:67:LYS:O	50:r:68:ARG:C	2.56	0.49
52:t:53:ASN:OD1	52:t:53:ASN:O	2.31	0.49
1:w:6:A:HO2'	10:H:153:HIS:HB2	1.71	0.49
1:w:39:C:C4	1:w:40:C:C4	3.00	0.49
1:w:260:G:C6	1:w:261:G:N7	2.81	0.49
1:w:314:A:H8	1:w:314:A:P	2.36	0.49
1:w:319:C:O2'	1:w:320:A:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:358:U:H5'	1:w:359:A:P	2.53	0.49
1:w:621:A:H2'	1:w:622:G:H8	1.78	0.49
1:w:675:A:H8	1:w:675:A:O5'	1.96	0.49
1:w:719:C:O2	1:w:720:C:C6	2.65	0.49
1:w:755:C:N4	1:w:756:C:H41	2.11	0.49
1:w:765:G:N9	1:w:766:C:C6	2.81	0.49
1:w:784:A:HO2'	1:w:785:G:H8	1.60	0.49
1:w:811:U:C2	12:J:24:GLY:O	2.66	0.49
1:w:874:G:C6	1:w:875:G:O6	2.65	0.49
1:w:942:G:C2'	1:w:943:U:H5'	2.42	0.49
1:w:1266:G:C1'	1:w:1267:U:OP2	2.61	0.49
1:w:1294:U:H5'	14:L:26:LYS:HZ2	1.77	0.49
1:w:1338:G:C6	1:w:1339:G:C6	3.01	0.49
1:w:1458:C:C1'	1:w:1459:G:N2	2.59	0.49
1:w:1547:C:N3	1:w:1548:C:C4	2.81	0.49
1:w:1614:A:H3'	1:w:1615:C:H6	1.78	0.49
1:w:1616:A:C3'	1:w:1617:C:C5'	2.91	0.49
1:w:1651:G:C2	1:w:2007:C:N4	2.80	0.49
1:w:1666:G:N7	1:w:1667:G:C2	2.80	0.49
1:w:1668:A:H61	1:w:1676:A:N6	2.11	0.49
1:w:1672:C:H3'	1:w:1672:C:C6	2.47	0.49
1:w:1675:C:C3'	1:w:1676:A:H5'	2.43	0.49
1:w:1676:A:C2	1:w:1677:A:C4	3.00	0.49
1:w:1751:C:C6	1:w:1751:C:C3'	2.96	0.49
1:w:1753:G:O2'	1:w:1754:C:H3'	2.13	0.49
1:w:1777:U:C2'	1:w:1778:U:C5'	2.91	0.49
1:w:1788:C:C6	1:w:1788:C:H3'	2.48	0.49
1:w:1797:C:C2'	1:w:1798:U:C6	2.96	0.49
1:w:1807:G:C2	1:w:1809:A:C5'	2.94	0.49
1:w:1807:G:N2	1:w:1810:A:OP2	2.46	0.49
1:w:1897:G:H2'	1:w:1898:U:O4'	2.12	0.49
1:w:1976:U:O3'	1:w:1977:A:H8	1.96	0.49
1:w:2055:C:OP1	1:w:2056:G:C4'	2.61	0.49
1:w:2167:U:H2'	1:w:2168:G:C1'	2.38	0.49
1:w:2308:G:H5''	1:w:2310:A:N6	2.25	0.49
1:w:2333:A:O4'	1:w:2335:A:N7	2.45	0.49
1:w:2354:G:C2	1:w:2355:C:C4	3.01	0.49
1:w:2519:U:C4	1:w:2542:A:N7	2.81	0.49
1:w:2530:A:C3'	1:w:2531:A:H5''	2.43	0.49
1:w:2819:G:O2'	1:w:2820:A:P	2.71	0.49
2:x:17:C:O2'	2:x:18:G:H5'	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:24:G:N7	2:x:24:G:OP2	2.46	0.49
4:B:20:ASP:HB2	4:B:91:ARG:NH2	2.27	0.49
4:B:43:ARG:HG2	4:B:54:ARG:O	2.13	0.49
4:B:118:VAL:HG12	4:B:129:ASN:ND2	2.28	0.49
4:B:235:GLY:CA	4:B:240:ALA:HB3	2.37	0.49
5:C:8:LYS:HE2	5:C:192:ASN:N	2.28	0.49
5:C:51:PHE:CB	5:C:76:ARG:NE	2.70	0.49
6:D:15:LEU:O	6:D:19:LEU:HD22	2.13	0.49
6:D:36:LEU:O	6:D:39:ARG:HG2	2.13	0.49
6:D:124:PHE:CZ	6:D:126:GLY:O	2.66	0.49
6:D:133:GLU:O	6:D:136:ALA:HB3	2.13	0.49
7:E:19:LEU:C	7:E:25:TYR:CE1	2.91	0.49
7:E:41:GLN:NE2	7:E:154:GLY:O	2.46	0.49
9:G:123:LEU:H	9:G:123:LEU:CD2	2.22	0.49
10:H:45:THR:HB	10:H:49:LEU:HD11	1.95	0.49
10:H:64:ASP:N	10:H:64:ASP:OD2	2.45	0.49
10:H:97:ARG:HH22	10:H:127:LYS:HB3	1.78	0.49
10:H:112:LYS:C	10:H:112:LYS:CE	2.86	0.49
11:I:39:ILE:CD1	11:I:62:VAL:HG23	2.43	0.49
12:J:41:ARG:NH2	12:J:45:LEU:CD1	2.68	0.49
13:K:59:ARG:C	13:K:61:GLY:N	2.71	0.49
13:K:115:MET:O	13:K:119:ARG:CD	2.60	0.49
14:L:29:LEU:HD23	14:L:75:LEU:HD13	1.94	0.49
14:L:36:THR:HB	14:L:40:LYS:NZ	2.28	0.49
16:N:64:ARG:CG	16:N:65:LYS:N	2.65	0.49
16:N:92:GLY:HA3	16:N:114:LEU:CB	2.42	0.49
16:N:105:LEU:O	16:N:110:ILE:HD13	2.13	0.49
18:P:24:LYS:C	18:P:25:LEU:HG	2.38	0.49
18:P:38:LEU:HD12	18:P:55:ALA:CA	2.43	0.49
19:Q:21:VAL:C	19:Q:25:ARG:CG	2.85	0.49
19:Q:30:GLU:O	19:Q:31:GLU:C	2.56	0.49
19:Q:85:VAL:CG2	19:Q:95:ILE:HG12	2.43	0.49
22:T:57:ILE:HG13	22:T:58:VAL:H	1.77	0.49
22:T:164:ALA:O	22:T:165:VAL:HG13	2.12	0.49
24:V:37:ILE:HG23	24:V:38:SER:H	1.76	0.49
31:y:36:C:C1'	31:y:37:U:C5	2.96	0.49
31:y:62:U:C2'	31:y:63:C:H6	2.18	0.49
31:y:63:C:P	31:y:384:G:N2	2.85	0.49
31:y:130:A:O4'	31:y:130:A:OP1	2.30	0.49
31:y:139:G:OP2	31:y:139:G:H8	1.93	0.49
31:y:300:A:OP2	31:y:300:A:C8	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:303:A:H8	31:y:303:A:O5'	1.94	0.49
31:y:334:C:O2'	31:y:1434:A:O2'	2.30	0.49
31:y:369:C:H2'	31:y:370:C:H5'	1.95	0.49
31:y:417:C:H2'	31:y:418:C:H6	1.78	0.49
31:y:575:G:C6	31:y:821:G:C8	3.01	0.49
31:y:718:G:C3'	31:y:720:C:N4	2.59	0.49
31:y:797:C:O2'	31:y:798:G:H5'	2.13	0.49
31:y:860:A:HO2'	31:y:861:G:H5'	1.72	0.49
31:y:899:C:C3'	31:y:900:A:C8	2.85	0.49
31:y:917:G:N1	31:y:918:A:C5	2.81	0.49
31:y:937:A:H1'	31:y:1382:C:N4	2.28	0.49
31:y:975:A:O2'	31:y:1358:U:H4'	2.12	0.49
31:y:1053:G:H3'	31:y:1198:G:OP2	2.13	0.49
31:y:1061:G:C6	31:y:1197:G:N1	2.81	0.49
31:y:1079:G:C6	31:y:1080:A:N1	2.80	0.49
31:y:1304:G:H1'	31:y:1333:A:N6	2.27	0.49
31:y:1316:G:H22	31:y:1319:A:C4'	2.26	0.49
31:y:1431:C:H2'	31:y:1432:G:H8	1.76	0.49
32:z:10:G:OP2	32:z:11:C:OP2	2.31	0.49
32:z:40:C:C2'	32:z:41:C:C5'	2.90	0.49
35:c:7:VAL:HG23	35:c:217:ARG:HD3	1.94	0.49
35:c:82:ARG:NH1	35:c:92:TYR:HE1	2.11	0.49
36:d:108:ASN:ND2	36:d:111:LEU:HD12	2.27	0.49
37:e:18:LYS:HG2	37:e:20:TYR:HE2	1.77	0.49
38:f:141:GLN:O	38:f:143:ARG:CZ	2.60	0.49
39:g:59:TYR:CD2	39:g:61:LEU:HD22	2.48	0.49
40:h:54:THR:O	40:h:56:GLN:N	2.44	0.49
41:i:82:HIS:C	41:i:83:ILE:HG13	2.37	0.49
41:i:133:LEU:C	41:i:134:ILE:HD12	2.38	0.49
42:j:32:ASP:C	42:j:34:ASN:N	2.70	0.49
42:j:36:TYR:O	42:j:37:PHE:CB	2.43	0.49
42:j:114:TYR:CZ	43:k:60:ARG:HG2	2.46	0.49
43:k:40:LEU:HD11	43:k:69:ASN:HB3	1.95	0.49
43:k:82:ILE:HD13	43:k:82:ILE:C	2.38	0.49
48:p:12:ILE:HD12	48:p:12:ILE:N	2.27	0.49
52:t:7:LYS:HD2	52:t:7:LYS:H	1.78	0.49
53:u:102:GLY:C	53:u:104:LEU:H	2.21	0.49
1:w:28:A:H8	1:w:28:A:OP2	1.96	0.48
1:w:115:C:O2'	1:w:116:C:H5'	2.13	0.48
1:w:149:A:C2	1:w:150:C:H1'	2.48	0.48
1:w:180:G:N2	1:w:215:G:O6	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:270(B):A:H61	1:w:270(Z):G:C1'	2.21	0.48
1:w:299:A:H2'	1:w:300:A:C6	2.47	0.48
1:w:389:G:H3'	1:w:389:G:N3	2.28	0.48
1:w:463:G:C6	1:w:467:G:O6	2.66	0.48
1:w:537:C:H2'	1:w:539:G:H5'	1.94	0.48
1:w:580:C:N3	1:w:581:C:N4	2.60	0.48
1:w:627:A:C2	1:w:637:A:H1'	2.48	0.48
1:w:691:C:N3	1:w:692:C:C5	2.81	0.48
1:w:718:A:C4	1:w:719:C:H1'	2.48	0.48
1:w:804:A:C8	1:w:804:A:OP2	2.66	0.48
1:w:845:G:H8	1:w:845:G:OP2	1.96	0.48
1:w:858:U:C2'	1:w:2268:A:O2'	2.61	0.48
1:w:996:A:C4	1:w:1160:G:C2	3.01	0.48
1:w:1319:G:N3	1:w:1320:C:C5	2.80	0.48
1:w:1373:A:H2'	1:w:1374:G:C1'	2.43	0.48
1:w:1436:G:C4	1:w:1437:C:C6	3.01	0.48
1:w:1459:G:C2	1:w:1461:G:N7	2.81	0.48
1:w:1500:G:N2	4:B:100:GLY:HA2	2.19	0.48
1:w:1500:G:O3'	4:B:102:LYS:HE3	2.13	0.48
1:w:1535:U:C2'	1:w:1536:A:H5'	2.42	0.48
1:w:1681:G:O2'	1:w:1762:A:O2'	2.29	0.48
1:w:1786:A:O2'	1:w:1787:A:P	2.71	0.48
1:w:1797:C:C3'	1:w:1798:U:H6	2.25	0.48
1:w:1810:A:C8	1:w:1810:A:C3'	2.95	0.48
1:w:1815:A:C5'	1:w:1817:G:H1'	2.39	0.48
1:w:1851:U:C5'	33:0:4:G:C5'	2.91	0.48
1:w:1869:G:H2'	1:w:1871:A:OP2	2.13	0.48
1:w:1945:G:C2'	1:w:1946:U:C5'	2.90	0.48
1:w:2017:U:H5''	27:Y:8:LYS:HG2	1.94	0.48
1:w:2020:A:N6	1:w:2035:G:C6	2.81	0.48
1:w:2024:G:C5	1:w:2025:C:C4	3.01	0.48
1:w:2117:A:N3	1:w:2117:A:H2'	2.28	0.48
1:w:2145:C:H2'	1:w:2146:C:N3	2.28	0.48
1:w:2181:G:H2'	1:w:2181:G:N3	2.27	0.48
1:w:2193:G:C6	1:w:2194:G:C5	3.01	0.48
1:w:2306:C:C3'	1:w:2311:A:N6	2.51	0.48
1:w:2333:A:H5''	1:w:2335:A:O5'	2.13	0.48
1:w:2377:A:H2'	1:w:2378:A:C4	2.48	0.48
1:w:2461:C:O2'	1:w:2462:U:C5'	2.61	0.48
1:w:2485:G:H2'	1:w:2486:G:H5'	1.94	0.48
1:w:2494:G:C5	1:w:2495:G:N7	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2574:G:OP2	1:w:2574:G:H3'	2.13	0.48
1:w:2624:G:C6	1:w:2625:G:C5	3.01	0.48
1:w:2679:A:N6	1:w:2729:G:C6	2.81	0.48
1:w:2747:G:N2	1:w:2748:A:C6	2.81	0.48
1:w:2811:G:H2'	1:w:2812:G:C5'	2.43	0.48
1:w:2818:G:N1	1:w:2819:G:C5	2.81	0.48
1:w:2835:A:H62	1:w:2878:U:C2'	2.13	0.48
2:x:17:C:C6	2:x:17:C:H3'	2.48	0.48
2:x:42:C:C4	2:x:43:C:C4	3.01	0.48
2:x:67:G:C6	2:x:68:C:N4	2.81	0.48
2:x:80:U:O2	2:x:97:G:C6	2.66	0.48
3:A:216:THR:OG1	3:A:217:THR:N	2.45	0.48
4:B:75:ILE:O	4:B:76:PRO:C	2.56	0.48
5:C:20:ALA:C	5:C:21:VAL:HG13	2.38	0.48
6:D:22:GLU:HA	6:D:107:MET:SD	2.52	0.48
6:D:60:TRP:CB	6:D:61:PRO:CD	2.90	0.48
6:D:135:LEU:HA	6:D:138:ALA:HB2	1.95	0.48
6:D:146:SER:C	6:D:167:TRP:HE1	2.21	0.48
7:E:72:ARG:O	7:E:73:ALA:CB	2.61	0.48
9:G:6:LEU:H	9:G:36:ALA:HA	1.77	0.48
9:G:69:LYS:HA	9:G:138:ILE:HD13	1.95	0.48
9:G:94:ALA:HA	9:G:97:ILE:HG23	1.93	0.48
10:H:112:LYS:NZ	10:H:115:ALA:CB	2.64	0.48
10:H:113:MET:HG3	10:H:121:VAL:HG22	1.94	0.48
11:I:15:GLY:HA2	11:I:50:GLY:HA3	1.94	0.48
11:I:80:ASP:H	16:N:70:VAL:CG1	2.26	0.48
12:J:83:VAL:CG1	12:J:114:ILE:HG22	2.41	0.48
13:K:134:ARG:NE	13:K:136:ALA:HA	2.28	0.48
14:L:20:LEU:HD22	14:L:21:TYR:CD1	2.48	0.48
15:M:10:ARG:HH21	15:M:11:LYS:HZ1	1.45	0.48
15:M:35:ILE:O	15:M:35:ILE:HG23	2.13	0.48
15:M:72:ALA:C	15:M:74:ALA:H	2.20	0.48
16:N:92:GLY:C	16:N:114:LEU:HD22	2.38	0.48
18:P:66:ARG:HD3	18:P:96:ILE:HD11	1.94	0.48
19:Q:69:LEU:HA	19:Q:108:GLY:O	2.12	0.48
20:R:64:LYS:H	20:R:64:LYS:CD	2.07	0.48
22:T:10:ARG:HG3	22:T:37:VAL:HA	1.94	0.48
22:T:69:THR:HB	22:T:88:PHE:CZ	2.47	0.48
22:T:110:GLY:HA2	22:T:146:ILE:HD12	1.93	0.48
22:T:117:LEU:HG	22:T:118:GLN:N	2.26	0.48
23:U:28:GLY:N	23:U:67:VAL:HG13	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:81:ARG:HG2	24:V:81:ARG:NH2	2.28	0.48
26:X:28:LEU:CD1	26:X:35:ARG:CG	2.81	0.48
27:Y:34:PRO:CB	27:Y:52:TYR:CE2	2.94	0.48
27:Y:56:LYS:H	27:Y:56:LYS:CD	2.26	0.48
29:a:9:GLY:O	29:a:10:ALA:C	2.56	0.48
31:y:8:A:N3	38:f:103:GLY:HA2	2.27	0.48
31:y:37:U:H1'	31:y:500:G:C4'	2.29	0.48
31:y:108:G:O6	53:u:15:ARG:HD2	2.12	0.48
31:y:159:G:O2'	31:y:162:A:C6	2.65	0.48
31:y:243:A:H1'	31:y:245:C:H3'	1.94	0.48
31:y:255:G:HO2'	31:y:256:U:H5'	1.78	0.48
31:y:375:U:O2'	49:q:6:LEU:HD11	2.13	0.48
31:y:391:G:H8	31:y:391:G:OP2	1.96	0.48
31:y:464:G:N3	31:y:464:G:H2'	2.28	0.48
31:y:582:U:C6	31:y:582:U:H3'	2.48	0.48
31:y:652:U:HO2'	31:y:653:A:H5''	1.73	0.48
31:y:667:G:H5''	48:p:51:HIS:CG	2.42	0.48
31:y:687:A:C2	31:y:704:A:C6	3.01	0.48
31:y:697:U:O5'	31:y:697:U:C6	2.65	0.48
31:y:745:C:C4'	31:y:851:G:H1'	2.42	0.48
31:y:779:C:H2'	31:y:780:A:C8	2.47	0.48
31:y:829:G:C2'	31:y:830:G:H5'	2.43	0.48
31:y:904:C:C6	31:y:904:C:C3'	2.96	0.48
31:y:1045:C:C2'	31:y:1046:A:H5'	2.43	0.48
31:y:1061:G:H3'	31:y:1062:U:H5	1.78	0.48
31:y:1111:A:H61	36:d:176:HIS:CB	2.26	0.48
31:y:1121:U:O2	31:y:1152:A:C2	2.66	0.48
31:y:1228:C:H41	46:n:104:ARG:HD2	1.78	0.48
31:y:1363:A:H1'	31:y:1365:G:C5	2.46	0.48
31:y:1372:U:C2'	31:y:1373:G:O4'	2.40	0.48
33:0:13:C:H5''	33:0:13:C:C6	2.46	0.48
35:c:121:LEU:HA	35:c:126:GLU:HG2	1.92	0.48
35:c:215:LEU:HD12	35:c:215:LEU:C	2.38	0.48
37:e:126:ILE:HG22	37:e:148:VAL:HA	1.95	0.48
39:g:48:LEU:HD21	39:g:60:PHE:HZ	1.77	0.48
41:i:43:GLY:HA2	41:i:64:LYS:NZ	2.28	0.48
41:i:69:ARG:O	41:i:70:GLN:CG	2.58	0.48
42:j:114:TYR:CD2	43:k:60:ARG:HG2	2.47	0.48
43:k:67:THR:HG22	43:k:68:HIS:H	1.66	0.48
44:l:121:PRO:O	44:l:122:LYS:CE	2.60	0.48
46:n:67:GLU:OE2	46:n:67:GLU:CA	2.55	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:s:47:THR:HG22	51:s:83:GLU:N	2.28	0.48
51:s:76:LEU:HD12	51:s:78:LEU:HD22	1.95	0.48
1:w:7:G:C5	1:w:8:A:C4	3.01	0.48
1:w:74:A:H5''	1:w:75:G:OP1	2.12	0.48
1:w:108:U:O5'	1:w:108:U:C6	2.61	0.48
1:w:128:C:H5''	1:w:128:C:C6	2.28	0.48
1:w:251:A:H2'	1:w:252:G:O4'	2.12	0.48
1:w:261:G:C3'	1:w:609(A):A:H2	2.25	0.48
1:w:531:C:C1'	17:O:28:ARG:NH2	2.77	0.48
1:w:749:C:C1'	1:w:1618:A:OP1	2.58	0.48
1:w:831:G:H8	1:w:831:G:O5'	1.96	0.48
1:w:847:U:H5''	1:w:929:G:O6	2.12	0.48
1:w:850:C:O2'	26:X:22:ALA:HB2	2.13	0.48
1:w:906:G:O2'	13:K:29:PHE:CE1	2.53	0.48
1:w:941:A:H1'	1:w:1190:G:O2'	2.12	0.48
1:w:947:G:N3	1:w:948:G:C8	2.81	0.48
1:w:962:G:H3'	1:w:963:U:C5'	2.43	0.48
1:w:974(A):G:C4	1:w:1186:G:C6	3.02	0.48
1:w:1066:U:C2	1:w:1069:A:OP2	2.66	0.48
1:w:1139:G:C2	1:w:1140:C:C2	3.01	0.48
1:w:1152:C:H1'	17:O:77:SER:HB3	1.89	0.48
1:w:1204:A:C2	1:w:1240:U:C2	3.01	0.48
1:w:1232:G:H2'	1:w:1233:C:C5	2.48	0.48
1:w:1369:G:C4	1:w:1809:A:N6	2.71	0.48
1:w:1382:G:C3'	1:w:1383:C:C6	2.96	0.48
1:w:1413:G:OP2	1:w:1413:G:C8	2.65	0.48
1:w:1424:G:O6	1:w:1425:G:C6	2.66	0.48
1:w:1446:C:C5	1:w:1466:G:N2	2.81	0.48
1:w:1506:C:H3'	1:w:1508:A:P	2.51	0.48
1:w:1539:G:C3'	1:w:1540:G:C5'	2.84	0.48
1:w:1663:C:H6	1:w:1663:C:O5'	1.96	0.48
1:w:1769:G:O2'	1:w:1958:C:OP1	2.19	0.48
1:w:1872:A:H3'	1:w:1878:G:O4'	2.13	0.48
1:w:1937:A:C2'	1:w:1938:A:H5'	2.43	0.48
1:w:1993:U:O2'	1:w:1994:C:H5'	2.13	0.48
1:w:2017:U:OP1	27:Y:8:LYS:CE	2.60	0.48
1:w:2025:C:N3	1:w:2026:C:C4	2.81	0.48
1:w:2077:A:C2	1:w:2244:U:N3	2.82	0.48
1:w:2176:A:C5'	1:w:2176:A:H8	2.17	0.48
1:w:2264:C:H2'	1:w:2265:U:O4'	2.13	0.48
1:w:2294:C:N3	1:w:2338:G:N1	2.57	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2298:A:C4	1:w:2321:G:N2	2.81	0.48
1:w:2320:A:C5	1:w:2333:A:C4	3.01	0.48
1:w:2512:C:H5'	1:w:2512:C:C6	2.48	0.48
1:w:2518:A:O2'	1:w:2519:U:P	2.71	0.48
1:w:2650:U:C2	1:w:2651:C:C6	3.01	0.48
1:w:2652:C:OP2	1:w:2654:A:C2	2.66	0.48
1:w:2666:C:OP2	1:w:2666:C:C5	2.67	0.48
1:w:2712:U:OP1	1:w:2714:G:C4'	2.60	0.48
1:w:712(B):A:OP1	1:w:2713:A:H5''	2.11	0.48
3:A:62:THR:O	3:A:63:VAL:C	2.56	0.48
4:B:19:ALA:O	4:B:21:PHE:N	2.45	0.48
4:B:34:VAL:CG1	4:B:35:LYS:HZ3	2.26	0.48
4:B:73:VAL:CG1	4:B:121:PRO:CD	2.90	0.48
5:C:10:GLY:C	5:C:25:VAL:HB	2.37	0.48
5:C:51:PHE:C	5:C:53:PRO:CD	2.86	0.48
5:C:112:GLY:H	14:L:2:ARG:HD2	1.77	0.48
6:D:24:ASN:O	6:D:28:LEU:CD2	2.61	0.48
6:D:112:ARG:NE	12:J:5:ASP:HA	2.29	0.48
7:E:6:ALA:C	7:E:10:LYS:HB2	2.39	0.48
7:E:7:LEU:HA	7:E:10:LYS:HB3	1.95	0.48
7:E:56:ALA:C	7:E:60:LEU:HD11	2.38	0.48
11:I:15:GLY:H	11:I:17:ARG:HH22	1.62	0.48
11:I:108:GLU:HB2	11:I:109:LYS:HZ1	1.78	0.48
13:K:37:LEU:CG	13:K:128:LYS:N	2.65	0.48
13:K:55:VAL:O	13:K:58:PHE:CA	2.61	0.48
13:K:100:GLY:O	13:K:101:ARG:C	2.55	0.48
16:N:102:ILE:CG1	16:N:103:ARG:N	2.55	0.48
18:P:82:ARG:HD3	18:P:82:ARG:C	2.39	0.48
19:Q:88:ARG:CG	19:Q:92:ARG:HB2	2.43	0.48
21:S:47:LYS:O	21:S:56:PRO:CA	2.61	0.48
22:T:28:MET:SD	22:T:28:MET:C	2.96	0.48
22:T:41:LEU:HD12	22:T:41:LEU:N	2.28	0.48
23:U:29:GLN:HG3	23:U:30:VAL:N	2.28	0.48
23:U:37:LEU:CG	23:U:38:VAL:N	2.76	0.48
23:U:40:GLN:HG2	23:U:41:ARG:H	1.77	0.48
25:W:26:ARG:CD	25:W:29:LYS:HD3	2.44	0.48
25:W:34:GLU:O	25:W:37:PHE:CD2	2.66	0.48
31:y:34:C:C4	31:y:35:G:N7	2.81	0.48
31:y:36:C:C4'	45:m:116:ARG:O	2.58	0.48
31:y:125:U:H2'	31:y:126:G:O4'	2.13	0.48
31:y:129(B):G:N1	31:y:188:U:O4'	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:234:C:C4	31:y:235:C:N4	2.81	0.48
31:y:303:A:H1'	31:y:555:C:O2'	2.13	0.48
31:y:368:U:H6	31:y:368:U:H5''	1.77	0.48
31:y:417:C:C2	31:y:418:C:C5	3.01	0.48
31:y:448:A:N7	31:y:486:U:O2	2.46	0.48
31:y:477:G:C2	31:y:478:A:C4	3.01	0.48
31:y:636:U:C2	31:y:637:G:C8	3.01	0.48
31:y:773:G:C2	31:y:774:G:C8	3.01	0.48
31:y:815:A:C2	31:y:1527:C:O2'	2.61	0.48
31:y:874:G:H2'	31:y:875:C:O4'	2.14	0.48
31:y:1030:C:H6	31:y:1030:C:O5'	1.95	0.48
31:y:1198:G:C6	31:y:1199:U:C4	3.01	0.48
31:y:1315:U:O5'	31:y:1315:U:H6	1.96	0.48
31:y:1376:U:O5'	31:y:1376:U:C6	2.64	0.48
31:y:1440:C:C6	31:y:1440:C:O5'	2.66	0.48
31:y:1502:A:H2'	31:y:1502:A:N3	2.28	0.48
32:z:6:G:N3	32:z:68:C:C2	2.81	0.48
32:z:71:G:C2'	32:z:72:C:H5''	2.41	0.48
33:0:27:C:C4	33:0:28:C:N4	2.82	0.48
36:d:14:ILE:CG2	47:o:57:ARG:HH22	2.26	0.48
36:d:120:VAL:HG11	36:d:134:ILE:CA	2.43	0.48
37:e:9:CYS:SG	37:e:25:ARG:CB	3.01	0.48
37:e:76:ARG:O	37:e:77:ASN:C	2.56	0.48
37:e:124:GLY:O	37:e:134:ASP:HA	2.13	0.48
37:e:197:PRO:O	37:e:198:VAL:CG1	2.52	0.48
37:e:204:ILE:CG1	37:e:205:GLU:H	2.15	0.48
38:f:79:GLU:CD	38:f:93:PRO:HD2	2.39	0.48
38:f:133:TYR:O	38:f:134:ALA:C	2.56	0.48
39:g:9:VAL:HG23	39:g:87:ARG:O	2.13	0.48
42:j:78:LYS:O	42:j:81:ILE:HG12	2.13	0.48
42:j:85:LEU:C	42:j:85:LEU:HD22	2.38	0.48
45:m:7:ASN:OD1	45:m:11:ARG:HB2	2.13	0.48
46:n:91:ARG:HH12	46:n:97:PRO:C	2.21	0.48
47:o:6:LEU:HA	47:o:23:ARG:HH12	1.66	0.48
47:o:49:HIS:O	47:o:50:LYS:O	2.32	0.48
50:r:41:LYS:C	50:r:42:TYR:CD1	2.91	0.48
50:r:45:HIS:O	50:r:46:ASP:CB	2.61	0.48
1:w:27:G:H2'	1:w:28:A:OP2	2.13	0.48
1:w:53:A:OP1	1:w:54:G:OP2	2.32	0.48
1:w:142:G:O6	1:w:143:C:N4	2.47	0.48
1:w:188:G:OP1	24:V:18:ILE:HD13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:201:C:O5'	1:w:201:C:H6	1.95	0.48
1:w:248:G:H5'	1:w:250:G:N7	2.29	0.48
1:w:269:U:O2'	1:w:270(A):A:H5'	2.14	0.48
1:w:270(T):G:C5	1:w:270(U):G:C8	3.01	0.48
1:w:293:U:H5''	1:w:294:A:OP2	2.12	0.48
1:w:439:G:C2'	1:w:440:G:H5'	2.44	0.48
1:w:446:G:N2	1:w:454:A:H61	2.10	0.48
1:w:463:G:C2	1:w:467:G:N7	2.82	0.48
1:w:519:U:C2	1:w:520:G:H1'	2.49	0.48
1:w:563:G:C2'	1:w:564:C:C5'	2.79	0.48
1:w:601:C:H1'	6:D:99:LYS:NZ	2.28	0.48
1:w:666:G:H2'	1:w:667:U:C6	2.48	0.48
1:w:670:A:H5'	1:w:671:C:H5'	1.87	0.48
1:w:729:G:H4'	1:w:763:G:O5'	2.13	0.48
1:w:794:G:C4	1:w:795:C:C5	3.02	0.48
1:w:796:C:HO2'	1:w:797:C:C4'	2.26	0.48
1:w:805:G:OP1	12:J:42:SER:HB2	2.13	0.48
1:w:858:U:C2'	1:w:2268:A:HO2'	2.22	0.48
1:w:974(A):G:C1'	1:w:989:G:N2	2.60	0.48
1:w:979:G:O5'	1:w:980:A:H5''	2.13	0.48
1:w:996:A:H4'	17:O:92:ARG:NH1	2.29	0.48
1:w:1044:G:H8	1:w:1044:G:O5'	1.95	0.48
1:w:1164:G:H2'	1:w:1165:U:C5	2.48	0.48
1:w:1227:G:C2	1:w:1228:G:N9	2.82	0.48
1:w:1274:A:C2'	1:w:1275:A:OP2	2.59	0.48
1:w:1284:A:H2'	1:w:1285:G:O4'	2.13	0.48
1:w:1286:A:N1	1:w:1329:U:C2'	2.76	0.48
1:w:1378:A:C4	1:w:1380:G:C4	3.01	0.48
1:w:1416:G:O2'	1:w:1417:C:H6	1.92	0.48
1:w:1469:A:H61	1:w:1523:U:H3	1.60	0.48
1:w:1478:G:C2	1:w:1479:G:C5	3.01	0.48
1:w:1508:A:H2	1:w:1510:A:N7	2.11	0.48
1:w:1535:U:H5	1:w:1536:A:N3	2.11	0.48
1:w:1651:G:C2	1:w:1652:A:C4	3.01	0.48
1:w:1746:G:C6	1:w:1747:G:N9	2.81	0.48
1:w:1750:G:HO2'	1:w:2860:A:H2	1.62	0.48
1:w:1751:C:C2'	1:w:1752:C:H6	2.24	0.48
1:w:1788:C:H2'	1:w:1789:A:C5'	2.43	0.48
1:w:1822:G:H8	1:w:1822:G:H5''	1.78	0.48
1:w:1833:U:C2	1:w:1973:G:N2	2.81	0.48
1:w:2076:U:C5'	1:w:2238:G:H22	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2105:C:C4	1:w:2106:G:C5	3.02	0.48
1:w:2138:C:H2'	1:w:2139:C:C6	2.48	0.48
1:w:2240:C:O2'	1:w:2241:A:H5'	2.11	0.48
1:w:2304:G:O2'	7:E:132:ASN:C	2.55	0.48
1:w:2418:A:N7	1:w:2419:U:C4	2.82	0.48
1:w:2443:C:H6	1:w:2443:C:O5'	1.95	0.48
1:w:2498:C:O2'	1:w:2499:C:H5'	2.13	0.48
1:w:2576:G:N3	1:w:2576:G:C3'	2.73	0.48
1:w:2625:G:C2'	1:w:2626:C:C6	2.83	0.48
1:w:2746:U:O4	1:w:2755:C:H4'	2.13	0.48
1:w:2747:G:O6	1:w:2754:U:N1	2.46	0.48
1:w:2839:G:C4	1:w:2840:C:C5	3.01	0.48
2:x:43:C:N4	2:x:45:A:N6	2.61	0.48
2:x:115:G:C2	2:x:116:G:C5	3.02	0.48
3:A:14:LYS:O	3:A:16:ASP:N	2.47	0.48
3:A:15:VAL:O	3:A:16:ASP:C	2.56	0.48
4:B:34:VAL:HG13	4:B:34:VAL:O	2.13	0.48
4:B:131:LEU:N	4:B:190:TYR:CD1	2.82	0.48
4:B:228:PRO:HD3	4:B:236:GLY:CA	2.43	0.48
5:C:8:LYS:CA	5:C:26:ILE:HD12	2.41	0.48
5:C:52:LEU:N	5:C:53:PRO:HD3	2.28	0.48
5:C:126:PRO:O	5:C:128:SER:N	2.47	0.48
6:D:181:ILE:C	6:D:184:THR:HG1	2.20	0.48
7:E:122:PRO:HG2	7:E:123:ASN:ND2	2.28	0.48
7:E:139:LEU:HA	7:E:144:ILE:O	2.14	0.48
7:E:152:LEU:O	7:E:153:ARG:HB2	2.13	0.48
12:J:55:ARG:O	12:J:57:THR:N	2.46	0.48
12:J:56:SER:O	12:J:57:THR:HG22	2.12	0.48
12:J:101:VAL:HG13	12:J:102:ARG:N	2.13	0.48
13:K:133:ARG:HB3	22:T:81:ARG:CZ	2.43	0.48
14:L:20:LEU:HD23	14:L:24:GLN:HG2	1.95	0.48
15:M:26:LEU:CD2	15:M:39:ILE:HA	2.43	0.48
15:M:110:LEU:H	15:M:110:LEU:CD1	2.26	0.48
16:N:29:ARG:HB3	16:N:86:ILE:N	2.28	0.48
19:Q:109:GLU:O	19:Q:110:LYS:HB3	2.13	0.48
21:S:67:LEU:C	21:S:68:HIS:CG	2.91	0.48
22:T:17:ALA:CA	22:T:20:ARG:HH21	2.26	0.48
24:V:71:TYR:O	24:V:72:GLU:C	2.56	0.48
30:b:16:VAL:HA	30:b:25:VAL:CA	2.43	0.48
30:b:24:TYR:HB3	30:b:35:ARG:CB	2.44	0.48
31:y:15:G:P	31:y:1396:A:HO2'	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:56:U:H2'	31:y:57:G:H8	1.76	0.48
31:y:65:U:C1'	31:y:199:G:O2'	2.60	0.48
31:y:143:A:C6	31:y:221:C:C4	3.01	0.48
31:y:167:G:C5	31:y:168:G:C8	3.01	0.48
31:y:191(A):G:C6	31:y:191(B):G:C5	3.01	0.48
31:y:271:C:C4	31:y:272:C:C5	3.01	0.48
31:y:319:G:N3	31:y:1434:A:C2	2.80	0.48
31:y:445:G:C5	31:y:446:G:N7	2.82	0.48
31:y:565:U:O5'	31:y:566:G:H2'	2.13	0.48
31:y:584:G:C8	31:y:584:G:P	3.03	0.48
31:y:586:C:HO2'	31:y:587:G:H5'	1.78	0.48
31:y:628:G:N7	31:y:629:G:C5	2.80	0.48
31:y:753:A:O4'	31:y:754:C:C4	2.66	0.48
31:y:833:U:H3'	31:y:834:C:C5	2.48	0.48
31:y:833:U:N3	31:y:854:G:C6	2.82	0.48
31:y:947:G:C1'	31:y:1332:A:H2	2.26	0.48
31:y:951:G:O6	31:y:1231:G:C6	2.67	0.48
31:y:1025:U:C2	31:y:1026:G:C5	3.02	0.48
31:y:1043:C:H2'	31:y:1044:A:H8	1.78	0.48
31:y:1123:A:O3'	31:y:1124:G:C8	2.66	0.48
31:y:1239:A:C2	31:y:1297:C:H4'	2.49	0.48
31:y:1253:G:H2'	31:y:1254:C:C1'	2.44	0.48
31:y:1291:G:C2	31:y:1292:U:C2	3.01	0.48
31:y:1344:C:O3'	42:j:120:ARG:HA	2.14	0.48
31:y:1380:U:P	40:h:4:ARG:HG2	2.53	0.48
31:y:1424:C:OP2	31:y:1424:C:C6	2.65	0.48
32:z:3:C:C4	32:z:4:C:N4	2.80	0.48
32:z:31:A:C2	32:z:39:PSU:N3	2.76	0.48
33:0:16:U:C3'	33:0:17:U:H5'	2.43	0.48
35:c:211:ILE:HA	35:c:214:ILE:HD11	1.90	0.48
36:d:67:THR:HA	36:d:102:ASN:C	2.36	0.48
37:e:23:GLY:H	37:e:113:SER:HB2	1.77	0.48
37:e:147:ALA:O	37:e:148:VAL:O	2.31	0.48
38:f:13:ILE:HD11	38:f:28:PHE:CB	2.43	0.48
39:g:52:ILE:HD12	39:g:52:ILE:N	2.28	0.48
40:h:149:ARG:HB2	44:l:59:TYR:CB	2.43	0.48
41:i:20:TYR:HE1	41:i:65:TYR:CB	2.27	0.48
41:i:86:ILE:CB	41:i:133:LEU:CD2	2.90	0.48
41:i:128:GLY:C	41:i:129:VAL:HG13	2.39	0.48
42:j:28:VAL:HG12	42:j:36:TYR:CE2	2.48	0.48
45:m:23:VAL:HG12	45:m:26:LEU:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:p:32:LEU:C	48:p:63:ARG:HH21	2.21	0.48
50:r:48:GLU:C	50:r:50:LYS:H	2.20	0.48
1:w:116:C:H1'	1:w:127:A:N3	2.28	0.48
1:w:141(B):C:H2'	1:w:142:G:C1'	2.43	0.48
1:w:223:A:H2	1:w:407:G:HO2'	1.61	0.48
1:w:347:A:H2'	1:w:348:G:H5'	1.91	0.48
1:w:545:G:O2'	1:w:548:A:N6	2.45	0.48
1:w:579:G:C4	1:w:580:C:C4	3.01	0.48
1:w:600:G:H4'	6:D:103:LYS:NZ	2.28	0.48
1:w:708:C:N4	1:w:709:U:C4	2.82	0.48
1:w:723:G:C6	1:w:724:U:C4	3.02	0.48
1:w:814:C:H5'	18:P:86:GLY:O	2.13	0.48
1:w:997:G:C5	1:w:998:C:N4	2.80	0.48
1:w:1042:G:C4	1:w:1114:G:C2	3.01	0.48
1:w:1131:G:N3	1:w:1132:A:N7	2.62	0.48
1:w:1133:U:O2'	1:w:1137:G:OP1	2.27	0.48
1:w:1147:C:N4	1:w:1148:A:N6	2.60	0.48
1:w:1175:U:C3'	1:w:1176:G:C8	2.95	0.48
1:w:1453:A:HO2'	1:w:1454:U:H5	1.61	0.48
1:w:1534:G:H1'	1:w:1538:G:H1	1.77	0.48
1:w:1569:A:C2'	1:w:1570:A:O5'	2.61	0.48
1:w:1681:G:H8	1:w:1681:G:OP2	1.97	0.48
1:w:1687:G:O2'	1:w:1702:G:C2	2.63	0.48
1:w:1707:G:C2	1:w:1708:C:O2	2.66	0.48
1:w:1872:A:OP2	1:w:1878:G:N7	2.47	0.48
1:w:1995:U:H3'	1:w:1996:C:H2'	1.94	0.48
1:w:2017:U:H5'	27:Y:8:LYS:CA	2.43	0.48
1:w:2021:C:OP2	27:Y:15:ARG:NH1	2.42	0.48
1:w:2207:C:O2'	1:w:2208:U:H5'	2.13	0.48
1:w:2224:G:H5''	1:w:2225:A:OP1	2.12	0.48
1:w:2244:U:C2	1:w:2245:U:C6	3.01	0.48
1:w:2272:U:OP2	23:U:20:ARG:NH2	2.46	0.48
1:w:2294:C:C2	1:w:2338:G:N2	2.63	0.48
1:w:2333:A:N9	1:w:2335:A:C6	2.82	0.48
1:w:2345:G:C2	1:w:2381:C:C2'	2.83	0.48
1:w:2362:G:C2	1:w:2363:C:C2	3.01	0.48
1:w:2373:G:C2'	1:w:2374:C:C5	2.88	0.48
1:w:2544:G:N1	1:w:2545:G:C5	2.81	0.48
1:w:2564:A:C3'	1:w:2565:A:C8	2.96	0.48
1:w:2574:G:C4	1:w:2575:C:C5	3.02	0.48
1:w:2580:U:H3'	1:w:2581:G:N2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2675:A:H4'	11:I:31:LYS:HE3	1.94	0.48
1:w:2717:G:C6	1:w:2718:G:C6	3.01	0.48
1:w:2731:G:O3'	1:w:2732:G:O4'	2.30	0.48
1:w:2840:C:C2'	14:L:91:GLN:HE22	2.26	0.48
1:w:2892:A:H2'	1:w:2893:G:O5'	2.13	0.48
2:x:17:C:C6	2:x:18:G:C8	3.01	0.48
2:x:66:A:N6	2:x:108:C:O4'	2.46	0.48
2:x:97:G:H2'	2:x:97:G:N3	2.29	0.48
3:A:8:TYR:HA	3:A:11:LEU:HD22	1.96	0.48
4:B:27:THR:HG23	4:B:83:GLU:CG	2.43	0.48
4:B:108:PRO:HB3	4:B:195:ALA:O	2.13	0.48
4:B:183:ARG:HG2	4:B:184:LYS:H	1.78	0.48
6:D:78:PHE:CE2	6:D:81:GLY:CA	2.96	0.48
6:D:181:ILE:HD13	6:D:184:THR:OG1	2.12	0.48
7:E:49:ASP:O	7:E:50:ALA:HB3	2.13	0.48
7:E:74:LYS:HG3	7:E:86:MET:O	2.13	0.48
7:E:140:ILE:CD1	46:n:7:VAL:HG12	2.43	0.48
8:F:41:MET:HA	8:F:54:ARG:N	2.27	0.48
8:F:111:HIS:CB	8:F:112:PRO:CD	2.91	0.48
10:H:41:ALA:C	10:H:43:GLY:N	2.72	0.48
10:H:143:LEU:HD22	10:H:143:LEU:C	2.39	0.48
11:I:20:MET:HG2	11:I:21:CYS:H	1.77	0.48
11:I:86:ILE:O	11:I:88:ASN:N	2.46	0.48
13:K:1:MET:O	13:K:2:LEU:CB	2.61	0.48
13:K:104:PHE:C	13:K:105:GLU:HG3	2.38	0.48
14:L:21:TYR:CA	14:L:24:GLN:HG2	2.39	0.48
14:L:35:THR:C	14:L:36:THR:CG2	2.86	0.48
15:M:21:THR:CG2	15:M:23:ARG:HH11	2.26	0.48
15:M:47:THR:O	15:M:47:THR:HG23	2.12	0.48
15:M:67:ARG:N	15:M:101:LEU:HG	2.28	0.48
15:M:71:ARG:HG2	15:M:104:GLY:C	2.35	0.48
16:N:26:ASP:OD1	16:N:89:VAL:N	2.38	0.48
22:T:4:ARG:HG3	22:T:58:VAL:CG1	2.42	0.48
22:T:58:VAL:CG1	22:T:67:LEU:H	2.27	0.48
22:T:80:ARG:HH11	22:T:80:ARG:HG2	1.77	0.48
22:T:97:GLU:OE1	22:T:125:LEU:HG	2.13	0.48
24:V:91:LYS:HE3	24:V:91:LYS:CA	2.43	0.48
26:X:7:LYS:HG2	26:X:34:GLU:HB2	1.94	0.48
29:a:54:GLU:HA	29:a:57:ARG:CZ	2.43	0.48
31:y:97:U:C5	31:y:99:C:C5	3.01	0.48
31:y:155:C:C2'	31:y:156:G:C8	2.84	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:262:A:OP1	53:u:72:LEU:HD22	2.12	0.48
31:y:271:C:N4	31:y:272:C:N4	2.62	0.48
31:y:366:C:N4	31:y:367:U:C4	2.81	0.48
31:y:382:A:H2'	31:y:383:A:H5'	1.96	0.48
31:y:419:C:N3	31:y:425:G:N1	2.61	0.48
31:y:527:7MG:HM72	45:m:90:LYS:HE2	1.95	0.48
31:y:653:A:C2	41:i:56:LYS:CB	2.96	0.48
31:y:715:A:H5'	31:y:777:A:N6	2.29	0.48
31:y:777:A:C2	31:y:778:G:C5	3.01	0.48
31:y:779:C:H5''	44:l:122:LYS:NZ	2.27	0.48
31:y:833:U:C3'	31:y:834:C:C5	2.96	0.48
31:y:947:G:O4'	31:y:1332:A:C2	2.55	0.48
31:y:1082:G:C8	31:y:1083:U:C5	3.02	0.48
31:y:1102:A:C6	31:y:1103:C:C4	3.00	0.48
31:y:1112:C:O5'	31:y:1112:C:H6	1.96	0.48
31:y:1126:U:H3	31:y:1280:A:C2'	2.26	0.48
31:y:1148:U:N3	31:y:1149:C:N4	2.62	0.48
31:y:1187:G:HO2'	47:o:61:TRP:HE3	1.60	0.48
31:y:1277:C:O2'	31:y:1281:U:OP1	2.30	0.48
31:y:1305:G:OP2	54:v:5:ASP:CG	2.57	0.48
31:y:1460:A:C2'	31:y:1461:G:H5'	2.43	0.48
31:y:1469:G:H2'	31:y:1470:G:O4'	2.13	0.48
31:y:1523:G:H2'	31:y:1524:C:H5'	1.95	0.48
35:c:46:LYS:O	35:c:47:THR:C	2.56	0.48
36:d:102:ASN:C	36:d:103:VAL:HG13	2.39	0.48
37:e:57:ARG:HH21	38:f:107:ARG:CB	2.26	0.48
38:f:12:LEU:C	38:f:12:LEU:CD2	2.85	0.48
40:h:16:LEU:HD23	40:h:16:LEU:H	1.77	0.48
41:i:40:ALA:CB	41:i:45:ILE:HG21	2.43	0.48
41:i:46:LYS:CD	41:i:63:LEU:O	2.61	0.48
41:i:85:ARG:HA	41:i:135:CYS:HB3	1.94	0.48
42:j:40:LEU:C	42:j:41:VAL:O	2.55	0.48
42:j:93:ARG:NH1	42:j:97:LYS:HD2	2.28	0.48
47:o:15:LYS:CG	47:o:19:ARG:HG2	2.43	0.48
47:o:24:CYS:HB3	47:o:28:GLY:C	2.36	0.48
48:p:56:LEU:HD12	48:p:56:LEU:C	2.39	0.48
53:u:70:SER:C	53:u:73:HIS:HE1	2.22	0.48
1:w:106:C:C2'	1:w:107:C:O5'	2.61	0.48
1:w:133:C:N3	1:w:146:G:N1	2.45	0.48
1:w:182:A:C3'	1:w:183:C:H6	2.21	0.48
1:w:283:A:C5	1:w:284:U:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:301:G:H2'	1:w:302:C:O4'	2.12	0.48
1:w:450:G:H3'	1:w:451:C:H5''	1.94	0.48
1:w:466:A:C1'	1:w:683:C:O2'	2.61	0.48
1:w:489:G:C2	1:w:491:G:N7	2.82	0.48
1:w:506:G:C4'	1:w:509:C:O2	2.49	0.48
1:w:528:A:C2	1:w:2043:C:P	2.98	0.48
1:w:571:A:C8	1:w:573:G:C8	3.02	0.48
1:w:637:A:OP2	12:J:115:LEU:HD12	2.14	0.48
1:w:645:C:OP2	1:w:646:A:N7	2.47	0.48
1:w:667:U:OP1	12:J:47:ASP:CG	2.56	0.48
1:w:718:A:H3'	1:w:718:A:P	2.53	0.48
1:w:798:G:C2'	1:w:799:G:O5'	2.61	0.48
1:w:872:A:C2	1:w:905:U:C2	2.86	0.48
1:w:952:G:C2	1:w:966:G:C2	3.02	0.48
1:w:1021:A:HO2'	1:w:1123:C:H5''	1.65	0.48
1:w:1027:A:H3'	1:w:1126:A:H61	1.79	0.48
1:w:1123:C:O2	1:w:1124:C:C5	2.67	0.48
1:w:1141:U:H1'	1:w:114(B):A:C5	2.49	0.48
1:w:1244:G:C1'	12:J:7:ARG:HH22	2.24	0.48
1:w:1252:G:H2'	1:w:1253:A:C4	2.49	0.48
1:w:1326:U:C6	1:w:1326:U:C3'	2.96	0.48
1:w:1424:G:C5	1:w:1425:G:N7	2.81	0.48
1:w:1760:A:C2	1:w:1761:C:H1'	2.47	0.48
1:w:1956:U:C2	1:w:1957:C:C6	3.01	0.48
1:w:2027:G:C6	1:w:2037:G:C6	3.01	0.48
1:w:2130:U:C4	1:w:2159:G:C4	3.02	0.48
1:w:2134:A:C2	1:w:2135:A:N9	2.81	0.48
1:w:2140:C:H2'	1:w:2141:G:N7	2.29	0.48
1:w:2263:C:H2'	1:w:2264:C:C5'	2.43	0.48
1:w:2297:C:C4	1:w:2320:A:C8	3.01	0.48
1:w:2485:G:HO2'	13:K:126:PRO:CA	2.26	0.48
1:w:2488:A:C2	1:w:2489:G:N3	2.81	0.48
1:w:2623:G:O2'	1:w:2825:G:H1'	2.14	0.48
1:w:2668:G:C6	1:w:2669:G:O6	2.67	0.48
1:w:2680:C:H4'	5:C:188:VAL:O	2.14	0.48
1:w:2784:C:H1'	5:C:37:ARG:NH1	2.27	0.48
2:x:76:G:C2	2:x:77:U:H1'	2.48	0.48
2:x:114:G:N2	15:M:38:GLN:NE2	2.61	0.48
6:D:33:ARG:O	6:D:36:LEU:HB2	2.14	0.48
7:E:106:LEU:HD11	7:E:107:LEU:HG	1.95	0.48
8:F:58:GLU:HG2	8:F:61:HIS:HD2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:33:ARG:HH21	9:G:33:ARG:C	2.21	0.48
9:G:62:LYS:CD	9:G:133:HIS:HD2	2.26	0.48
9:G:126:TYR:O	9:G:141:LYS:HE3	2.13	0.48
9:G:127:VAL:HG12	9:G:141:LYS:NZ	2.27	0.48
10:H:60:LYS:HZ3	17:O:63:VAL:CG1	2.25	0.48
10:H:83:ILE:O	10:H:85:VAL:N	2.46	0.48
10:H:83:ILE:CG2	10:H:84:ARG:N	2.76	0.48
10:H:148:GLY:HA3	10:H:149:PRO:C	2.38	0.48
11:I:81:ASP:C	11:I:82:ASN:CG	2.81	0.48
14:L:36:THR:OG1	14:L:40:LYS:CG	2.62	0.48
14:L:63:ARG:O	14:L:65:LEU:N	2.46	0.48
16:N:33:LYS:HE3	16:N:41:ARG:HE	1.78	0.48
17:O:5:LYS:CG	17:O:6:THR:H	2.21	0.48
19:Q:18:ARG:CD	19:Q:76:VAL:HB	2.44	0.48
20:R:8:ILE:CG2	20:R:30:VAL:HG22	2.36	0.48
22:T:19:ARG:C	22:T:21:ALA:N	2.68	0.48
24:V:69:LYS:C	24:V:72:GLU:HB3	2.39	0.48
24:V:91:LYS:H	24:V:91:LYS:HD2	1.78	0.48
25:W:29:LYS:HE3	25:W:30:ARG:HB3	1.95	0.48
25:W:41:ILE:O	25:W:42:GLY:C	2.56	0.48
25:W:54:LYS:C	25:W:55:ARG:CD	2.86	0.48
27:Y:51:TYR:O	27:Y:52:TYR:HB3	2.13	0.48
28:Z:19:ARG:HA	28:Z:22:MET:HB3	1.94	0.48
31:y:8:A:O2'	31:y:9:G:C4'	2.61	0.48
31:y:331:G:OP1	31:y:332:G:O4'	2.31	0.48
31:y:342:C:C4	31:y:348:G:N2	2.82	0.48
31:y:355:C:H1'	31:y:388:G:H1'	1.94	0.48
31:y:490:G:H3'	31:y:491:G:O4'	2.13	0.48
31:y:635:G:H8	31:y:635:G:O5'	1.95	0.48
31:y:665:A:N3	31:y:733:A:C5'	2.75	0.48
31:y:701:C:OP1	31:y:702:A:C8	2.67	0.48
31:y:714:G:O2'	31:y:715:A:H5'	2.12	0.48
31:y:729:A:N3	31:y:729:A:C2'	2.77	0.48
31:y:742:G:C8	31:y:742:G:O5'	2.67	0.48
31:y:746:A:H2'	31:y:747:C:C6	2.48	0.48
31:y:749:C:O3'	31:y:750:G:C8	2.66	0.48
31:y:782:A:H4'	31:y:1515:C:C4'	2.43	0.48
31:y:792:A:H2'	31:y:794:A:C6	2.49	0.48
31:y:881:G:C5	31:y:882:C:C5	3.01	0.48
31:y:967:5MC:C2'	31:y:968:A:C8	2.92	0.48
31:y:1137:C:O2'	31:y:1138:G:H5''	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1167:A:N7	31:y:1169:A:N7	2.61	0.48
31:y:1187:G:O2'	47:o:61:TRP:CE3	2.66	0.48
31:y:1199:U:O4'	43:k:54:PHE:CE2	2.66	0.48
31:y:1204:A:C5	31:y:1205:U:C4	3.01	0.48
31:y:1259:C:O2	31:y:1283:G:O4'	2.31	0.48
31:y:1384:C:O5'	31:y:1384:C:C6	2.57	0.48
31:y:1443:G:C2	31:y:1447:G:H5''	2.48	0.48
31:y:1473:A:H2'	31:y:1474:G:C5'	2.44	0.48
31:y:1508:G:N3	31:y:1509:C:C5	2.81	0.48
32:z:54:5MU:C3'	32:z:55:PSU:C5'	2.89	0.48
32:z:73:A:H8	32:z:73:A:O5'	1.96	0.48
33:0:18:G:N2	33:0:58:A:C5'	2.71	0.48
33:0:18:G:N1	33:0:57:G:C2	2.81	0.48
34:1:2:U:C6	34:1:2:U:H5''	2.48	0.48
35:c:29:ALA:O	35:c:32:ILE:CG1	2.61	0.48
35:c:46:LYS:HE3	35:c:46:LYS:N	2.26	0.48
35:c:124:SER:C	35:c:126:GLU:N	2.72	0.48
35:c:133:LYS:HG3	35:c:134:GLU:N	2.27	0.48
35:c:200:ILE:O	35:c:201:ILE:HD12	2.13	0.48
37:e:33:MET:C	37:e:37:PRO:HG3	2.38	0.48
37:e:93:PHE:O	37:e:97:LEU:HG	2.12	0.48
38:f:43:LEU:HD22	38:f:43:LEU:C	2.37	0.48
38:f:79:GLU:CG	41:i:104:ARG:HH11	2.27	0.48
39:g:3:ARG:C	39:g:4:TYR:CG	2.92	0.48
39:g:82:ARG:HB2	39:g:85:VAL:HG13	1.94	0.48
40:h:88:PRO:CD	40:h:151:TYR:CD1	2.96	0.48
41:i:67:PRO:O	41:i:68:ARG:O	2.31	0.48
44:l:13:GLN:O	44:l:13:GLN:CG	2.60	0.48
45:m:37:THR:CB	45:m:56:LYS:C	2.85	0.48
45:m:38:VAL:O	45:m:55:ALA:CB	2.60	0.48
50:r:9:VAL:C	50:r:21:VAL:HG13	2.38	0.48
53:u:73:HIS:O	53:u:74:LYS:CB	2.62	0.48
1:w:55:G:N2	1:w:56:A:C6	2.81	0.48
1:w:69:C:H4'	1:w:75:G:C8	2.48	0.48
1:w:84:A:OP1	21:S:7:VAL:HG12	2.14	0.48
1:w:261:G:C1'	1:w:609(A):A:C2	2.97	0.48
1:w:270(E):C:C2'	1:w:270(F):G:C8	2.84	0.48
1:w:344:G:H2'	1:w:345:A:C5'	2.42	0.48
1:w:460:A:P	1:w:461:C:H5	2.36	0.48
1:w:492:A:H8	1:w:492:A:O5'	1.96	0.48
1:w:579:G:C2	1:w:1262:A:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:585:G:N1	1:w:1256:G:C6	2.81	0.48
1:w:603:A:H2	1:w:656:G:HO2'	1.60	0.48
1:w:634:C:H3'	12:J:80:TYR:OH	2.13	0.48
1:w:646:A:H2'	1:w:647:G:OP1	2.14	0.48
1:w:655:A:H3'	1:w:655:A:P	2.53	0.48
1:w:702:G:C3'	1:w:703:U:C6	2.97	0.48
1:w:708:C:C2	1:w:709:U:C6	3.02	0.48
1:w:765:G:C8	1:w:766:C:C6	3.01	0.48
1:w:808:G:C2'	1:w:1254:A:HO2'	2.25	0.48
1:w:811:U:C1'	1:w:1251:C:H4'	2.24	0.48
1:w:848:G:H5'	1:w:929:G:C2	2.48	0.48
1:w:889:C:O2'	1:w:890:A:C5	2.67	0.48
1:w:921:G:C5'	1:w:2269:A:C8	2.96	0.48
1:w:961:C:H5	1:w:2456:C:C4'	2.27	0.48
1:w:1006:C:O2	10:H:129:MET:HB2	2.13	0.48
1:w:1021:A:H1'	1:w:1122:G:HO2'	1.73	0.48
1:w:1037:G:H2'	1:w:1038:C:H6	1.70	0.48
1:w:1196:C:H2'	1:w:1197:G:O4'	2.13	0.48
1:w:1272:A:H2'	1:w:1274:A:OP1	2.14	0.48
1:w:1308:A:N1	1:w:1608:A:N1	2.61	0.48
1:w:1338:G:N2	1:w:1393:A:H2	2.03	0.48
1:w:1426:G:C3'	1:w:1427:A:C5'	2.85	0.48
1:w:1532:C:N4	1:w:1538:G:O6	2.47	0.48
1:w:1658:C:N4	1:w:2002:G:H1	2.12	0.48
1:w:1731:G:H2'	1:w:1732:A:N7	2.29	0.48
1:w:1775:U:OP2	1:w:1776:G:C8	2.67	0.48
1:w:2197:U:H6	1:w:2197:U:C5'	2.26	0.48
1:w:2227:A:H2'	1:w:2228:G:O4'	2.13	0.48
1:w:2234:G:C4	1:w:2235:G:C8	3.02	0.48
1:w:2345:G:C1'	1:w:2347:C:C6	2.97	0.48
1:w:2359:C:H42	12:J:55:ARG:HH12	1.54	0.48
1:w:2468:G:N7	1:w:2481:G:N1	2.62	0.48
1:w:2602:A:N6	32:z:76:A:C4'	2.77	0.48
1:w:2610:C:H1'	1:w:2611:U:H5''	1.96	0.48
1:w:2637:U:H3	1:w:2776:A:H62	1.60	0.48
1:w:2767:C:N4	1:w:2768:C:N4	2.62	0.48
1:w:2772:C:H5'	5:C:166:THR:HG21	1.94	0.48
1:w:2832:U:C6	1:w:2883:A:C6	3.02	0.48
1:w:2866:U:H1'	1:w:2868:A:H1'	1.96	0.48
2:x:8:U:C3'	2:x:9:G:H8	2.26	0.48
3:A:193:PHE:CZ	3:A:197:LEU:HD22	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:4:LYS:HB2	4:B:18:VAL:HB	1.96	0.48
4:B:155:LEU:CD2	4:B:157:ARG:HD3	2.43	0.48
4:B:201:HIS:CB	4:B:204:ILE:HG23	2.42	0.48
4:B:266:SER:O	4:B:270:ILE:CG1	2.61	0.48
5:C:196:VAL:C	5:C:197:ILE:HG23	2.38	0.48
6:D:112:ARG:HH21	6:D:112:ARG:HB3	1.69	0.48
7:E:16:ARG:HE	7:E:17:PRO:HD3	1.79	0.48
10:H:51:THR:HG23	10:H:52:LYS:HG3	1.96	0.48
10:H:79:ASN:C	10:H:147:ALA:HA	2.37	0.48
11:I:88:ASN:O	11:I:90:GLN:N	2.47	0.48
12:J:35:HIS:O	12:J:36:LYS:HD3	2.13	0.48
12:J:125:VAL:O	12:J:145:PRO:HG3	2.14	0.48
12:J:128:HIS:O	12:J:129:ALA:CB	2.61	0.48
13:K:11:LYS:HG2	13:K:13:GLN:N	2.21	0.48
15:M:56:LEU:N	15:M:56:LEU:CD1	2.77	0.48
16:N:33:LYS:HD3	16:N:42:ILE:N	2.28	0.48
16:N:50:ILE:CD1	16:N:73:GLU:OE1	2.58	0.48
16:N:93:ARG:CA	16:N:117:ASP:HB2	2.19	0.48
17:O:62:ILE:HG22	17:O:63:VAL:N	2.28	0.48
17:O:76:TYR:C	17:O:79:PHE:HB3	2.39	0.48
17:O:94:ASN:ND2	17:O:95:LEU:N	2.60	0.48
17:O:106:PHE:O	17:O:107:ALA:C	2.57	0.48
18:P:22:VAL:C	18:P:23:GLU:CG	2.86	0.48
19:Q:21:VAL:HA	19:Q:24:ILE:CD1	2.43	0.48
19:Q:66:GLU:O	19:Q:68:ARG:N	2.43	0.48
19:Q:68:ARG:HG2	19:Q:110:LYS:N	2.28	0.48
19:Q:75:TYR:C	19:Q:75:TYR:HD1	2.21	0.48
20:R:10:ALA:O	20:R:29:TRP:CB	2.58	0.48
20:R:13:LEU:O	20:R:14:SER:C	2.56	0.48
24:V:84:GLY:C	24:V:86:SER:H	2.21	0.48
27:Y:24:ALA:O	27:Y:25:LEU:C	2.57	0.48
30:b:14:CYS:HA	30:b:26:ILE:C	2.39	0.48
31:y:9:G:C3'	38:f:126:ARG:HD3	2.42	0.48
31:y:101:A:H2'	31:y:102:G:H8	1.79	0.48
31:y:186(F):C:O2	31:y:186(G):C:C6	2.67	0.48
31:y:254:G:C6	31:y:273:A:N1	2.81	0.48
31:y:265:G:H2'	31:y:267:C:C6	2.48	0.48
31:y:289:G:H8	31:y:289:G:H5'	1.79	0.48
31:y:517:G:O2'	31:y:531:U:C5'	2.50	0.48
31:y:605:U:C5	31:y:606:G:C5	3.01	0.48
31:y:639:G:O2'	31:y:640:A:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:652:U:C3'	31:y:653:A:H5''	2.42	0.48
31:y:653:A:H2	41:i:56:LYS:CG	2.22	0.48
31:y:688:G:H2'	31:y:689:C:H6	1.75	0.48
31:y:789:U:O2	31:y:792:A:H8	1.95	0.48
31:y:1060:C:N3	31:y:1061:G:C8	2.82	0.48
31:y:1162:C:N4	31:y:1163:C:N4	2.61	0.48
31:y:1207:2MG:C2'	31:y:1208:C:C6	2.94	0.48
31:y:1217:C:H2'	31:y:1218:C:H6	1.79	0.48
31:y:1220:G:H8	31:y:1220:G:OP2	1.97	0.48
31:y:1471:G:C2	31:y:1472:U:C2	3.02	0.48
31:y:1494:G:H2'	31:y:1495:U:O5'	2.13	0.48
33:0:4:G:C6	33:0:5:A:C5	3.01	0.48
35:c:8:LYS:O	35:c:9:GLU:C	2.56	0.48
35:c:99:GLY:C	35:c:101:MET:H	2.22	0.48
35:c:114:ARG:O	35:c:116:GLU:N	2.47	0.48
36:d:125:GLU:HG2	36:d:126:ARG:H	1.79	0.48
37:e:35:ARG:HG3	37:e:35:ARG:NH1	2.25	0.48
37:e:86:LYS:HE3	37:e:86:LYS:HA	1.96	0.48
37:e:173:TRP:HA	37:e:187:ARG:HB2	1.94	0.48
38:f:77:PRO:CG	38:f:91:LEU:HD21	2.41	0.48
39:g:41:GLU:HB3	39:g:62:TRP:CE3	2.48	0.48
40:h:136:LYS:O	40:h:139:GLU:HB2	2.12	0.48
41:i:9:MET:C	41:i:11:THR:N	2.70	0.48
41:i:17:THR:HG23	41:i:18:ARG:N	2.27	0.48
41:i:43:GLY:O	41:i:64:LYS:HD2	2.13	0.48
41:i:58:TYR:C	41:i:60:ARG:H	2.21	0.48
41:i:68:ARG:CA	41:i:76:PRO:HG2	2.43	0.48
42:j:118:LYS:C	42:j:121:ARG:HG3	2.39	0.48
44:l:71:LYS:C	44:l:75:TYR:CE1	2.92	0.48
44:l:109:VAL:HG12	44:l:110:ASP:N	2.27	0.48
45:m:52:ARG:HB2	45:m:52:ARG:HH11	1.78	0.48
45:m:85:ARG:HE	45:m:98:HIS:HE1	1.61	0.48
46:n:62:ASN:C	46:n:63:THR:HG22	2.39	0.48
47:o:26:ARG:HB2	47:o:39:LEU:HD22	1.94	0.48
48:p:54:ARG:HH11	48:p:55:GLY:H	1.60	0.48
49:q:11:SER:HB2	49:q:14:ASN:HD22	1.78	0.48
49:q:72:ARG:HH11	49:q:73:LEU:CD1	2.23	0.48
51:s:39:VAL:O	51:s:42:ARG:HB3	2.14	0.48
51:s:82:THR:O	51:s:83:GLU:HB2	2.13	0.48
52:t:18:LYS:HA	52:t:21:GLU:OE1	2.13	0.48
53:u:14:LYS:HA	53:u:17:ARG:NE	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:u:51:GLU:HA	53:u:54:LYS:NZ	2.28	0.48
54:v:12:LYS:CD	54:v:17:THR:OG1	2.59	0.48
1:w:13:A:N3	1:w:526:A:C6	2.81	0.48
1:w:37:C:O2	1:w:37:C:C2'	2.60	0.48
1:w:217:G:C4	1:w:218:A:C8	3.02	0.48
1:w:245:G:C4'	12:J:71:VAL:O	2.61	0.48
1:w:265:A:C2	1:w:428:A:C2	3.01	0.48
1:w:322:A:C4'	1:w:340:A:C8	2.96	0.48
1:w:357:A:H5''	1:w:358:U:OP1	2.13	0.48
1:w:363(B):A:C2'	1:w:363(C):G:O4'	2.62	0.48
1:w:394:A:C8	1:w:394:A:P	3.06	0.48
1:w:425:G:N3	1:w:426:C:C5	2.82	0.48
1:w:584:C:O2'	1:w:585:G:H5'	2.13	0.48
1:w:593:G:N1	1:w:664:C:N3	2.55	0.48
1:w:676:A:C8	1:w:2443:C:H1'	2.49	0.48
1:w:691:C:O2'	1:w:692:C:H5'	2.13	0.48
1:w:978:G:C2'	1:w:979:G:H8	2.26	0.48
1:w:1042:G:N3	1:w:1114:G:C2	2.82	0.48
1:w:1120:G:C8	1:w:1120:G:OP2	2.66	0.48
1:w:1165:U:O2	1:w:1166:C:C5	2.67	0.48
1:w:1197:G:N9	1:w:1250:G:N2	2.61	0.48
1:w:1335:U:H3'	1:w:1336:A:H8	1.78	0.48
1:w:1335:U:C2'	1:w:1336:A:C8	2.97	0.48
1:w:1363:C:C2	1:w:1809:A:C2	3.01	0.48
1:w:1363:C:C1'	1:w:1809:A:H2	2.22	0.48
1:w:1380:G:C6	1:w:1381:G:N7	2.82	0.48
1:w:1527:G:C8	1:w:1527:G:C3'	2.96	0.48
1:w:1616:A:O2'	1:w:1617:C:P	2.72	0.48
1:w:1650:G:N3	1:w:1651:G:H1'	2.29	0.48
1:w:1655:A:N7	1:w:2005:A:H2	2.11	0.48
1:w:1830:C:C2'	1:w:1831:G:C5'	2.91	0.48
1:w:1857:G:C1'	1:w:1885:A:H61	2.25	0.48
1:w:1943:U:O2'	1:w:1944:U:OP2	2.23	0.48
1:w:2079:U:O3'	24:V:37:ILE:HG13	2.13	0.48
1:w:2093:G:H1'	1:w:2198:A:C6	2.43	0.48
1:w:2168:G:H8	1:w:2168:G:OP2	1.97	0.48
1:w:2205:C:N4	1:w:2206:C:N4	2.61	0.48
1:w:2235:G:H2'	1:w:2236:C:H5'	1.94	0.48
1:w:2359:C:OP2	1:w:2359:C:C6	2.61	0.48
1:w:2359:C:N3	1:w:2360:A:C8	2.80	0.48
1:w:2522:U:H3'	1:w:2522:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2655:G:H1'	1:w:2656:U:O4	2.14	0.48
1:w:2736:G:H2'	1:w:2737:G:O4'	2.13	0.48
1:w:2746:U:C4	1:w:2756:U:H5	2.32	0.48
1:w:2805:G:H5'	1:w:2807:G:OP1	2.13	0.48
2:x:14:U:OP1	2:x:70:C:O2'	2.32	0.48
2:x:46:A:C2'	2:x:47:C:C5'	2.86	0.48
2:x:109:G:C2	2:x:110:G:C4	3.01	0.48
4:B:20:ASP:C	4:B:22:SER:H	2.22	0.48
4:B:56:GLY:HA3	4:B:216:GLY:HA2	1.96	0.48
4:B:97:TYR:C	4:B:98:VAL:CG2	2.87	0.48
5:C:3:GLY:HA2	5:C:198:VAL:CB	2.38	0.48
5:C:8:LYS:HD2	5:C:9:VAL:N	2.27	0.48
5:C:109:LYS:HB3	14:L:3:HIS:CD2	2.48	0.48
7:E:115:ARG:O	7:E:116:ASP:CG	2.56	0.48
7:E:115:ARG:HD3	46:n:7:VAL:HG21	1.96	0.48
7:E:139:LEU:O	7:E:145:THR:HA	2.14	0.48
7:E:162:THR:O	7:E:163:ALA:C	2.56	0.48
8:F:49:VAL:HG11	8:F:51:ARG:NH2	2.28	0.48
9:G:43:ASN:N	9:G:43:ASN:HD22	2.10	0.48
9:G:101:LEU:HD23	9:G:109:ILE:CD1	2.42	0.48
9:G:107:ILE:O	9:G:107:ILE:HG23	2.14	0.48
11:I:43:VAL:HB	11:I:54:GLU:CA	2.44	0.48
13:K:8:LYS:CE	13:K:70:PRO:HG2	2.40	0.48
13:K:114:ALA:O	13:K:118:LEU:HD13	2.14	0.48
14:L:3:HIS:CE1	14:L:4:LEU:CD1	2.97	0.48
14:L:49:ASP:CA	14:L:94:TYR:HE1	2.14	0.48
15:M:75:GLU:C	15:M:78:LEU:HG	2.38	0.48
18:P:85:LYS:NZ	18:P:85:LYS:HB3	2.28	0.48
19:Q:88:ARG:CZ	19:Q:92:ARG:O	2.61	0.48
20:R:62:LYS:HE3	20:R:62:LYS:C	2.38	0.48
21:S:32:PRO:O	21:S:33:LYS:CB	2.60	0.48
21:S:40:GLU:OE1	21:S:42:VAL:CG2	2.60	0.48
22:T:69:THR:HG22	22:T:88:PHE:CE1	2.49	0.48
22:T:146:ILE:HG22	22:T:174:VAL:HG12	1.95	0.48
24:V:25:LYS:HG3	24:V:37:ILE:HG21	1.95	0.48
24:V:40:ARG:HG2	24:V:41:ARG:H	1.79	0.48
26:X:8:LEU:HD21	26:X:33:GLN:HB3	1.94	0.48
26:X:50:VAL:CA	26:X:53:LEU:HD21	2.39	0.48
29:a:44:LYS:NZ	29:a:44:LYS:CB	2.76	0.48
31:y:36:C:N1	31:y:37:U:H5	2.12	0.48
31:y:136:C:C2	31:y:137:C:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:194:C:H3'	31:y:195:A:H5''	1.95	0.48
31:y:267:C:OP2	50:r:67:LYS:CB	2.61	0.48
31:y:294:U:O2	31:y:303:A:N1	2.47	0.48
31:y:311:C:H2'	31:y:312:C:H6	1.74	0.48
31:y:376:G:H2'	31:y:377:G:C8	2.49	0.48
31:y:438:G:H5'	37:e:123:HIS:CE1	2.49	0.48
31:y:482:A:N3	31:y:482:A:H2'	2.28	0.48
31:y:564:C:C2'	31:y:565:U:C5'	2.91	0.48
31:y:598:U:C2'	31:y:599:C:H5'	2.43	0.48
31:y:623:C:C2	31:y:624:C:C6	3.02	0.48
31:y:674:G:O3'	31:y:675:A:C8	2.66	0.48
31:y:1065:U:H4'	31:y:1066:C:O5'	2.13	0.48
31:y:1144:G:N3	31:y:1144:G:H2'	2.28	0.48
31:y:1167:A:N6	31:y:1169:A:C6	2.82	0.48
31:y:1195:C:N3	31:y:1197:G:C8	2.82	0.48
31:y:1277:C:C2'	31:y:1279:A:H1'	2.44	0.48
31:y:1283:G:H2'	31:y:1284:C:C6	2.49	0.48
31:y:1423:G:H3'	31:y:1424:C:C5	2.48	0.48
31:y:1424:C:OP2	31:y:1424:C:H5	1.94	0.48
31:y:1435:G:C5	31:y:1436:U:O4	2.67	0.48
31:y:1487:G:C4	31:y:1488:G:C8	3.02	0.48
31:y:1523:G:C2'	31:y:1524:C:H5'	2.44	0.48
33:0:4:G:H2'	33:0:5:A:O4'	2.13	0.48
35:c:66:GLY:O	35:c:68:ILE:HD11	2.13	0.48
35:c:146:GLN:HA	35:c:149:LEU:O	2.13	0.48
35:c:194:PRO:C	35:c:196:LEU:H	2.20	0.48
36:d:59:ARG:NH2	36:d:99:VAL:CG1	2.76	0.48
36:d:141:VAL:HG22	36:d:146:ALA:HB3	1.94	0.48
37:e:32:ALA:O	37:e:33:MET:C	2.56	0.48
37:e:148:VAL:HG23	37:e:149:ALA:N	2.27	0.48
37:e:180:GLY:O	37:e:181:MET:CB	2.61	0.48
41:i:85:ARG:HH11	41:i:85:ARG:CB	2.27	0.48
44:l:88:GLY:O	44:l:91:ARG:HG2	2.14	0.48
45:m:34:GLY:N	45:m:84:ILE:HD12	2.29	0.48
45:m:64:GLU:O	45:m:65:VAL:O	2.32	0.48
46:n:59:TYR:CD2	46:n:60:VAL:CG1	2.95	0.48
46:n:90:LEU:O	46:n:96:LEU:HD12	2.14	0.48
48:p:4:THR:C	48:p:6:GLU:H	2.22	0.48
49:q:21:VAL:C	49:q:22:THR:HG23	2.38	0.48
51:s:52:PRO:O	51:s:54:ARG:N	2.46	0.48
1:w:14:A:H3'	1:w:15:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:89:G:OP2	1:w:90:U:H5	1.95	0.48
1:w:149:A:H2'	1:w:150:C:O4'	2.14	0.48
1:w:270(H):C:H2'	1:w:270(I):C:C6	2.44	0.48
1:w:300:A:H8	1:w:300:A:O5'	1.96	0.48
1:w:340:A:H2'	1:w:341:G:O4'	2.13	0.48
1:w:353:G:C5	1:w:354:G:C5	3.02	0.48
1:w:515:A:N6	1:w:1260:G:HO2'	2.12	0.48
1:w:751:A:N6	1:w:789:A:H61	2.12	0.48
1:w:784:A:H3'	1:w:792:G:N7	2.28	0.48
1:w:870:A:H4'	13:K:6:ARG:HH12	1.72	0.48
1:w:922:U:C4	1:w:923:C:C4	3.01	0.48
1:w:950:G:C6	1:w:951:C:N4	2.82	0.48
1:w:950:G:C6	1:w:968:G:C6	3.01	0.48
1:w:1014:U:C4	1:w:1015:G:C8	3.01	0.48
1:w:1363:C:O4'	1:w:1810:A:C4'	2.62	0.48
1:w:1473:G:P	1:w:1473:G:H8	2.36	0.48
1:w:1640:C:H3'	1:w:1641:A:C8	2.48	0.48
1:w:1657:C:N4	1:w:1658:C:H41	2.10	0.48
1:w:1680:U:O2	1:w:1763:G:H3'	2.13	0.48
1:w:1692:U:H5'	1:w:1977:A:H1'	1.95	0.48
1:w:1796:U:C2'	4:B:255:LYS:HA	2.43	0.48
1:w:1916:A:H8	1:w:1916:A:P	2.37	0.48
1:w:2158:A:C2	1:w:2159:G:C1'	2.85	0.48
1:w:2282:G:H1'	1:w:2390:U:C2	2.48	0.48
1:w:2573:C:C6	1:w:2573:C:O5'	2.66	0.48
1:w:2900:A:C5	1:w:2901:C:C5	3.01	0.48
2:x:93:C:N3	2:x:94:C:C4	2.82	0.48
2:x:110:G:C2'	2:x:111:U:C5'	2.61	0.48
3:A:16:ASP:O	3:A:19:LYS:HB2	2.14	0.48
3:A:52:PRO:HG2	3:A:53:ARG:HE	1.78	0.48
4:B:34:VAL:O	4:B:35:LYS:CD	2.61	0.48
4:B:97:TYR:O	4:B:98:VAL:HG22	2.13	0.48
6:D:35:GLN:CD	6:D:35:GLN:C	2.81	0.48
6:D:96:LEU:HB3	6:D:97:PRO:HD3	1.94	0.48
6:D:159:ARG:CD	6:D:172:ALA:HB1	2.44	0.48
7:E:34:LEU:HG	7:E:35:GLU:N	2.29	0.48
8:F:89:ILE:HG12	8:F:93:GLY:O	2.14	0.48
9:G:66:GLU:C	9:G:68:LEU:N	2.70	0.48
9:G:68:LEU:C	9:G:70:GLU:H	2.22	0.48
11:I:9:GLU:OE1	11:I:10:VAL:N	2.47	0.48
11:I:11:ALA:O	11:I:99:PHE:HD2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:23:ARG:HG3	11:I:24:VAL:N	2.29	0.48
11:I:59:LYS:HZ1	11:I:89:ASN:HA	1.78	0.48
13:K:58:PHE:HA	13:K:113:GLN:OE1	2.14	0.48
14:L:13:HIS:HD2	14:L:16:HIS:H	1.56	0.48
14:L:28:LEU:C	14:L:32:GLY:HA2	2.38	0.48
14:L:37:THR:N	14:L:40:LYS:CE	2.68	0.48
20:R:60:ARG:HB2	20:R:74:PRO:HD2	1.96	0.48
21:S:19:LYS:O	21:S:20:TYR:CB	2.60	0.48
22:T:45:ASP:CG	22:T:49:ARG:HH21	2.22	0.48
22:T:99:TYR:HB3	22:T:123:ASP:CB	2.44	0.48
26:X:19:GLN:O	26:X:22:ALA:HB3	2.14	0.48
26:X:20:LYS:C	26:X:22:ALA:N	2.71	0.48
28:Z:31:LEU:HD23	28:Z:31:LEU:H	1.79	0.48
29:a:58:ILE:C	29:a:60:LEU:N	2.70	0.48
31:y:38:G:N1	31:y:397:A:C5'	2.75	0.48
31:y:145:G:H2'	31:y:145:G:N3	2.28	0.48
31:y:166:G:C6	31:y:167:G:O6	2.67	0.48
31:y:173:U:H5	31:y:198:G:O2'	1.95	0.48
31:y:186(F):C:N3	31:y:186(G):C:C5	2.81	0.48
31:y:187:C:C2'	31:y:188:U:O5'	2.62	0.48
31:y:230:G:N9	49:q:25:ARG:NH2	2.62	0.48
31:y:366:C:H2'	31:y:367:U:C5'	2.29	0.48
31:y:517:G:H5''	31:y:531:U:C4	2.49	0.48
31:y:602:A:C2	31:y:603:U:C6	3.02	0.48
31:y:636:U:O4	31:y:637:G:O6	2.31	0.48
31:y:707:C:C2'	31:y:708:C:O5'	2.62	0.48
31:y:715:A:C4'	31:y:777:A:N1	2.77	0.48
31:y:886:G:O6	31:y:887:G:C6	2.67	0.48
31:y:934:C:H6	31:y:1345:U:OP2	1.96	0.48
31:y:979:C:O5'	31:y:979:C:H6	1.95	0.48
31:y:1096:C:O2'	31:y:1097:C:H5'	2.14	0.48
31:y:1108:G:C6	31:y:1109:C:C6	3.01	0.48
31:y:1316:G:O3'	47:o:18:VAL:HG11	2.13	0.48
31:y:1325:C:H5''	54:v:15:ARG:NH2	2.28	0.48
31:y:1400:5MC:N4	32:z:34:G:O4'	2.47	0.48
31:y:1484:C:N4	31:y:1485:U:C4	2.82	0.48
32:z:9:A:C2	32:z:46:7MG:N1	2.81	0.48
32:z:48:C:O5'	32:z:48:C:H6	1.97	0.48
35:c:152:PHE:C	35:c:154:LEU:N	2.71	0.48
36:d:165:THR:HG22	36:d:166:GLU:N	2.28	0.48
38:f:74:GLY:O	38:f:116:THR:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:1:MET:CG	41:i:2:LEU:H	2.23	0.48
41:i:86:ILE:HB	41:i:134:ILE:O	2.14	0.48
41:i:93:VAL:CG1	41:i:95:VAL:CG1	2.92	0.48
41:i:123:GLU:H	41:i:123:GLU:CD	2.21	0.48
42:j:8:GLY:O	42:j:76:ALA:HB1	2.14	0.48
42:j:89:ASN:HD22	42:j:90:PRO:HD2	1.79	0.48
44:l:69:ALA:O	44:l:71:LYS:N	2.47	0.48
46:n:60:VAL:O	46:n:60:VAL:HG23	2.13	0.48
46:n:91:ARG:HA	46:n:96:LEU:CD1	2.35	0.48
46:n:94:ARG:CZ	52:t:81:ARG:NH2	2.76	0.48
48:p:49:ASP:O	48:p:50:HIS:CB	2.61	0.48
52:t:70:LYS:HD2	52:t:72:GLY:H	1.78	0.48
53:u:16:HIS:C	53:u:18:GLN:N	2.70	0.48
53:u:50:GLU:HG2	53:u:54:LYS:NZ	2.29	0.48
1:w:14:A:C2	1:w:15:G:C1'	2.82	0.48
1:w:14:A:C5	1:w:15:G:H1'	2.48	0.48
1:w:89:G:H2'	1:w:90:U:C6	2.48	0.48
1:w:137(A):C:N3	1:w:137(B):G:N7	2.62	0.48
1:w:310:A:H1'	1:w:330:A:C6	2.49	0.48
1:w:317:G:N2	1:w:318:C:C1'	2.75	0.48
1:w:374:A:H61	1:w:400:G:H1'	1.78	0.48
1:w:489:G:C2	1:w:491:G:C5	3.01	0.48
1:w:508:G:O2'	1:w:509:C:OP2	2.29	0.48
1:w:570:G:O3'	1:w:974(B):C:N4	2.38	0.48
1:w:652:U:H5'	1:w:654:U:O2	2.13	0.48
1:w:682:G:C8	1:w:682:G:O5'	2.67	0.48
1:w:789:A:P	1:w:790:C:C5	3.07	0.48
1:w:858:U:P	23:U:77:ARG:HH12	2.37	0.48
1:w:1033:U:HO2'	1:w:1034:G:P	2.33	0.48
1:w:1138:G:C3'	1:w:1139:G:C5'	2.92	0.48
1:w:1194:A:C2	1:w:1195:G:C5	3.02	0.48
1:w:1211:U:O2'	1:w:1212:G:P	2.71	0.48
1:w:1227:G:C2	1:w:1228:G:C8	3.02	0.48
1:w:1391:U:N3	1:w:1394:U:C4	2.81	0.48
1:w:1461:G:H3'	1:w:1462:C:H5	1.79	0.48
1:w:1463:C:C4	1:w:1464:C:C4	3.02	0.48
1:w:1567:A:C5'	4:B:58:HIS:CE1	2.96	0.48
1:w:1616:A:H3'	1:w:1617:C:H5'	1.95	0.48
1:w:1620:G:N7	1:w:1621:U:C5	2.82	0.48
1:w:1690:A:N6	1:w:1697:G:C2'	2.72	0.48
1:w:1707:G:C8	1:w:1756:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1799:G:N2	1:w:1818:U:O3'	2.46	0.48
1:w:1831:G:H3'	1:w:1832:C:H5	1.79	0.48
1:w:1913:A:H62	31:y:1494:G:C1'	2.19	0.48
1:w:1945:G:H2'	1:w:1946:U:H6	1.79	0.48
1:w:2024:G:C5	1:w:2025:C:N4	2.82	0.48
1:w:2083:G:C8	1:w:2083:G:O5'	2.65	0.48
1:w:2114:A:P	1:w:2114:A:H8	2.37	0.48
1:w:2462:U:C1'	1:w:2491:U:C4	2.97	0.48
1:w:2570:G:H2'	1:w:2571:C:C6	2.49	0.48
1:w:2588:G:C6	1:w:2607:G:N1	2.82	0.48
1:w:2639:A:N9	1:w:2778:A:N1	2.62	0.48
1:w:2644:G:N9	1:w:2645:G:N7	2.62	0.48
1:w:2651:C:N4	1:w:2670:A:C6	2.82	0.48
1:w:2722:G:H2'	1:w:2722:G:N3	2.29	0.48
1:w:2788:C:H1'	1:w:2810:A:H1'	1.95	0.48
1:w:2801:A:OP2	1:w:2801:A:C8	2.67	0.48
1:w:2825:G:N3	1:w:2826:A:H1'	2.29	0.48
1:w:2849:U:C5	1:w:2867:G:C2	3.00	0.48
2:x:62:C:H2'	2:x:63:G:H8	1.70	0.48
4:B:76:PRO:HG2	4:B:118:VAL:CA	2.43	0.48
5:C:77:ILE:CG2	5:C:78:LEU:N	2.42	0.48
6:D:34:TRP:HZ2	6:D:94:TYR:CD1	2.31	0.48
8:F:86:GLU:O	8:F:87:LEU:HD13	2.13	0.48
10:H:98:TYR:O	10:H:105:LEU:HB3	2.12	0.48
10:H:123:GLU:C	10:H:127:LYS:HG3	2.38	0.48
11:I:78:ARG:O	16:N:71:GLY:O	2.32	0.48
11:I:85:VAL:CG1	11:I:86:ILE:H	2.24	0.48
12:J:71:VAL:CB	12:J:72:PRO:CD	2.79	0.48
12:J:147:LEU:HD13	12:J:148:LEU:N	2.29	0.48
12:J:148:LEU:HD22	12:J:149:GLU:OE1	2.14	0.48
13:K:54:MET:O	13:K:58:PHE:CG	2.67	0.48
13:K:135:ASP:OD1	22:T:76:LEU:HD13	2.13	0.48
14:L:66:VAL:HG11	14:L:80:PHE:CZ	2.48	0.48
15:M:13:ARG:CD	15:M:91:PRO:HA	2.44	0.48
16:N:30:VAL:O	16:N:30:VAL:HG23	2.13	0.48
16:N:35:LYS:O	16:N:36:GLU:C	2.56	0.48
16:N:51:ARG:HH21	16:N:53:ARG:HG3	1.78	0.48
16:N:66:VAL:CG2	16:N:71:GLY:HA2	2.43	0.48
17:O:81:HIS:O	17:O:84:LYS:N	2.46	0.48
18:P:54:GLY:C	18:P:56:SER:N	2.71	0.48
19:Q:78:GLU:O	19:Q:102:HIS:CD2	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:2:PRO:C	26:X:3:ARG:HD2	2.39	0.48
28:Z:10:ARG:HD3	28:Z:14:LYS:CE	2.44	0.48
29:a:44:LYS:HD3	29:a:45:GLY:N	2.24	0.48
30:b:29:ASN:HB3	30:b:32:HIS:ND1	2.29	0.48
31:y:62:U:OP1	31:y:385:C:O2'	2.31	0.48
31:y:97:U:C5	31:y:99:C:N4	2.82	0.48
31:y:113:G:C2'	31:y:114:U:H6	2.15	0.48
31:y:279:A:H1'	31:y:281:G:H1'	1.96	0.48
31:y:300:A:H2	31:y:560:U:OP2	1.97	0.48
31:y:345:C:O4'	31:y:346:G:N1	2.47	0.48
31:y:402:G:C6	31:y:403:C:C4	3.02	0.48
31:y:581:G:H3'	31:y:758:G:H1	1.79	0.48
31:y:622:A:H3'	31:y:622:A:C8	2.49	0.48
31:y:741:G:C1'	48:p:52:SER:OG	2.59	0.48
31:y:810:C:C2'	31:y:811:C:C6	2.89	0.48
31:y:815:A:N6	31:y:1509:C:H1'	2.29	0.48
31:y:831:U:H2'	31:y:832:C:H5'	1.96	0.48
31:y:898:G:H2'	31:y:900:A:OP2	2.14	0.48
31:y:1044:A:H2'	31:y:1045:C:O4'	2.14	0.48
31:y:1053:G:O2'	31:y:1054:C:P	2.72	0.48
31:y:1111:A:N6	36:d:176:HIS:HB3	2.28	0.48
31:y:1112:C:H42	36:d:177:THR:CA	2.17	0.48
31:y:1154:G:C6	31:y:1155:G:C6	3.02	0.48
31:y:1243:C:OP2	54:v:10:ARG:NH1	2.46	0.48
31:y:1399:C:C5'	31:y:1400:5MC:H5'	2.43	0.48
31:y:1417:G:H1'	31:y:1483:A:H62	1.79	0.48
31:y:1435:G:C4	31:y:1436:U:C4	3.02	0.48
31:y:1461:G:N3	31:y:1462:G:N7	2.62	0.48
31:y:1525:G:N1	31:y:1526:G:C6	2.82	0.48
35:c:52:GLU:HB3	35:c:56:ARG:CZ	2.44	0.48
35:c:121:LEU:HD23	35:c:126:GLU:CG	2.34	0.48
36:d:53:ALA:HB3	36:d:69:HIS:CB	2.44	0.48
36:d:122:GLU:HA	36:d:125:GLU:OE1	2.14	0.48
36:d:156:ARG:N	36:d:160:ALA:CB	2.62	0.48
38:f:94:ALA:HB2	38:f:118:ILE:HA	1.96	0.48
39:g:35:ALA:HB1	39:g:65:VAL:CG1	2.44	0.48
40:h:8:GLU:HG3	40:h:9:VAL:H	1.77	0.48
41:i:21:LYS:HD2	41:i:24:THR:HA	1.95	0.48
41:i:36:LEU:HD13	41:i:48:TYR:HB2	1.96	0.48
41:i:88:LYS:C	41:i:90:GLY:H	2.22	0.48
41:i:109:ILE:HD12	41:i:137:VAL:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:22:HIS:CD2	44:l:23:ALA:N	2.82	0.48
44:l:115:PRO:O	44:l:116:HIS:C	2.57	0.48
45:m:32:ARG:HG3	45:m:32:ARG:HH11	1.79	0.48
45:m:68:TYR:CD1	45:m:69:ILE:N	2.82	0.48
46:n:49:THR:HG22	46:n:51:ALA:H	1.79	0.48
46:n:109:THR:O	46:n:110:ARG:NH2	2.47	0.48
53:u:39:LYS:NZ	53:u:39:LYS:CB	2.75	0.48
53:u:75:ASN:HB2	53:u:79:ARG:CZ	2.41	0.48
1:w:8:A:HO2'	1:w:9:U:H5'	1.72	0.48
1:w:107:C:H3'	1:w:108:U:C5	2.49	0.48
1:w:238:C:C2	1:w:260:G:C2	3.02	0.48
1:w:244:A:C2	1:w:255:A:C4	3.02	0.48
1:w:273(D):C:O2'	1:w:273(E):C:H5'	2.14	0.48
1:w:301:G:C5	1:w:317:G:C6	3.02	0.48
1:w:349:G:C2	1:w:350:U:H1'	2.48	0.48
1:w:433:C:O2	1:w:433:C:H2'	2.13	0.48
1:w:613:U:H5'	1:w:616:A:N6	2.29	0.48
1:w:613:U:O4'	1:w:616:A:C5	2.67	0.48
1:w:643:A:O2'	1:w:644:A:H5'	2.14	0.48
1:w:750:A:H4'	1:w:1613:G:H21	1.79	0.48
1:w:812:C:C1'	1:w:1250:G:N2	2.74	0.48
1:w:819:A:H2	1:w:942:G:H1'	1.78	0.48
1:w:853:G:N2	1:w:854:G:H1'	2.28	0.48
1:w:917:A:N7	1:w:2268:A:N6	2.62	0.48
1:w:935:C:C4	1:w:936:C:N4	2.82	0.48
1:w:1114:G:O6	1:w:1115:G:C6	2.66	0.48
1:w:1215:G:C6	1:w:1235:G:H1'	2.49	0.48
1:w:1287:A:C2	1:w:1288:U:H1'	2.48	0.48
1:w:1301:A:N7	1:w:1303:G:C5	2.81	0.48
1:w:1337:G:O6	1:w:1338:G:O6	2.31	0.48
1:w:1353:A:C2	1:w:1378:A:C5	3.01	0.48
1:w:1366:A:N3	1:w:1366:A:C2'	2.74	0.48
1:w:1401:G:C2'	1:w:1402:C:C6	2.80	0.48
1:w:1593:G:C5	1:w:1594:G:C8	3.01	0.48
1:w:1670:C:O2'	1:w:1994:C:H4'	2.14	0.48
1:w:1682:G:H2'	1:w:1683:C:C5	2.49	0.48
1:w:1718:G:N2	1:w:1742:C:C2	2.82	0.48
1:w:1819:A:OP1	4:B:158:ALA:HB2	2.14	0.48
1:w:1843:C:OP2	1:w:1843:C:C6	2.67	0.48
1:w:1847:A:C3'	1:w:1847:A:P	3.00	0.48
1:w:2043:C:H2'	1:w:2043:C:O2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2094:G:H3'	1:w:2095:C:H6	1.78	0.48
1:w:2268:A:H3'	1:w:2268:A:P	2.54	0.48
1:w:2359:C:C1'	29:a:52:LYS:CD	2.92	0.48
1:w:2373:G:N3	1:w:2374:C:C6	2.82	0.48
1:w:2376:A:C2	15:M:102:ALA:HB1	2.49	0.48
1:w:2522:U:C6	1:w:2522:U:C3'	2.97	0.48
1:w:2552:U:H5''	1:w:2552:U:C6	2.30	0.48
1:w:2574:G:O2'	5:C:144:ARG:CD	2.62	0.48
1:w:2574:G:H2'	1:w:2575:C:H6	1.79	0.48
1:w:2627:G:H21	1:w:2781:A:H2	1.56	0.48
1:w:2658:C:N4	1:w:2659:G:C6	2.82	0.48
1:w:2737:G:C2	1:w:2738:A:C8	3.02	0.48
2:x:99:A:C6	2:x:100:G:C6	3.01	0.48
4:B:6:PHE:HE1	4:B:17:THR:C	2.21	0.48
5:C:15:PHE:O	5:C:16:ARG:CB	2.50	0.48
6:D:4:ILE:HB	6:D:120:LEU:HA	1.96	0.48
6:D:113:ALA:HA	6:D:117:LYS:HG2	1.96	0.48
7:E:5:LEU:N	7:E:100:TRP:HH2	2.12	0.48
7:E:100:TRP:O	7:E:103:LEU:CD1	2.62	0.48
7:E:106:LEU:HB3	7:E:141:PHE:CE1	2.49	0.48
7:E:141:PHE:CG	7:E:142:PRO:HD2	2.44	0.48
8:F:172:LYS:NZ	8:F:172:LYS:CA	2.70	0.48
9:G:44:LEU:HA	9:G:47:LEU:CG	2.44	0.48
9:G:87:LYS:HA	9:G:121:LYS:HB2	1.95	0.48
9:G:88:ILE:HG23	9:G:121:LYS:HG2	1.88	0.48
10:H:46:LEU:HD22	10:H:122:LEU:HG	1.96	0.48
11:I:49:ARG:N	11:I:49:ARG:CD	2.75	0.48
11:I:70:LYS:N	11:I:76:ALA:HA	2.29	0.48
12:J:81:GLN:HE21	12:J:81:GLN:N	2.11	0.48
13:K:33:GLY:O	13:K:118:LEU:HD21	2.14	0.48
14:L:24:GLN:OE1	14:L:24:GLN:HA	2.13	0.48
14:L:56:LYS:HB3	14:L:84:ALA:HA	1.95	0.48
14:L:83:ILE:HA	14:L:86:ARG:CG	2.43	0.48
15:M:67:ARG:NH1	15:M:68:GLN:HE21	2.11	0.48
15:M:86:ALA:O	15:M:87:PHE:CB	2.62	0.48
16:N:79:HIS:O	16:N:80:SER:C	2.57	0.48
17:O:59:ARG:HA	17:O:62:ILE:CG1	2.43	0.48
17:O:112:ARG:CZ	18:P:50:PRO:HD2	2.44	0.48
18:P:36:PRO:HD2	18:P:60:GLU:CD	2.39	0.48
18:P:46:VAL:O	18:P:47:VAL:CB	2.53	0.48
19:Q:18:ARG:HD2	19:Q:76:VAL:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:57:LEU:HD21	20:R:76:ARG:NH2	2.28	0.48
21:S:9:LYS:HG3	21:S:10:GLY:N	2.28	0.48
22:T:77:ASP:HB2	22:T:82:ARG:O	2.13	0.48
22:T:138:GLU:CG	22:T:139:VAL:N	2.77	0.48
22:T:151:HIS:HB3	22:T:170:THR:N	2.29	0.48
23:U:32:ARG:HA	23:U:64:ASP:OD2	2.14	0.48
24:V:78:LYS:HD3	24:V:80:LEU:HG	1.96	0.48
26:X:28:LEU:CD2	26:X:35:ARG:CG	2.92	0.48
28:Z:3:ARG:HG2	28:Z:3:ARG:NH1	2.28	0.48
28:Z:10:ARG:HB2	28:Z:14:LYS:HE2	1.94	0.48
30:b:3:VAL:HB	30:b:34:GLN:HB3	1.96	0.48
31:y:27:G:C6	31:y:28:G:N7	2.82	0.48
31:y:97:U:C2'	31:y:99:C:H6	2.22	0.48
31:y:129(B):G:O6	31:y:187:C:O2'	2.31	0.48
31:y:136:C:N3	31:y:137:C:C4	2.82	0.48
31:y:152:A:H2'	31:y:153:C:H5'	1.96	0.48
31:y:162:A:H3'	31:y:163:C:H6	1.79	0.48
31:y:265:G:N2	31:y:267:C:C4'	2.76	0.48
31:y:280:C:H5'	31:y:280:C:H6	1.79	0.48
31:y:303:A:N3	31:y:304:U:C6	2.82	0.48
31:y:380:G:N2	31:y:382:A:H3'	2.29	0.48
31:y:391:G:N1	31:y:392:G:C8	2.82	0.48
31:y:406:G:C8	31:y:495:A:C2'	2.97	0.48
31:y:475:G:H2'	31:y:476:G:H8	1.79	0.48
31:y:491:G:H2'	31:y:492:G:C8	2.48	0.48
31:y:582:U:C6	31:y:582:U:C3'	2.97	0.48
31:y:583:A:H2'	31:y:584:G:N9	2.29	0.48
31:y:587:G:C6	31:y:755:G:C6	3.02	0.48
31:y:643:C:H2'	31:y:644:G:H8	1.79	0.48
31:y:691:G:C6	44:l:55:LYS:NZ	2.81	0.48
31:y:720:C:H2'	31:y:721:G:C8	2.44	0.48
31:y:791:G:H8	31:y:791:G:P	2.36	0.48
31:y:812:C:O2'	31:y:813:U:O5'	2.31	0.48
31:y:833:U:C2	31:y:854:G:N1	2.81	0.48
31:y:972:C:C5'	43:k:57:LYS:HD3	2.44	0.48
31:y:973:G:O3'	47:o:41:ARG:NH2	2.46	0.48
31:y:981:U:H3'	31:y:982:U:C5'	2.42	0.48
31:y:1003:G:C2	31:y:1004:A:O2'	2.66	0.48
31:y:1114:C:C2	31:y:1115:C:C6	3.02	0.48
31:y:1299:A:C5'	31:y:1300:G:OP2	2.62	0.48
31:y:1312:G:H5''	52:t:2:PRO:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1371:G:H4'	42:j:68:GLY:C	2.38	0.48
31:y:1396:A:C5'	31:y:1398:A:O4'	2.62	0.48
31:y:1439:C:C5	31:y:1440:C:N4	2.82	0.48
33:0:10:G:O6	33:0:26:G:C6	2.67	0.48
35:c:114:ARG:O	35:c:118:LEU:CD2	2.62	0.48
35:c:124:SER:O	35:c:128:GLU:HG2	2.14	0.48
35:c:137:ARG:HH11	35:c:137:ARG:CB	2.22	0.48
35:c:177:ALA:O	35:c:180:LEU:N	2.47	0.48
35:c:189:ASP:C	35:c:191:ASP:N	2.61	0.48
35:c:214:ILE:CG1	35:c:215:LEU:N	2.76	0.48
36:d:15:THR:HG22	36:d:180:ALA:HB3	1.95	0.48
36:d:87:LEU:HD11	36:d:88:ARG:HG2	1.95	0.48
36:d:131:ARG:C	36:d:135:LYS:HZ2	2.22	0.48
37:e:61:LYS:HG2	37:e:206:PHE:CE2	2.49	0.48
38:f:116:THR:O	38:f:118:ILE:CD1	2.62	0.48
38:f:147:ASP:O	38:f:150:ARG:CG	2.62	0.48
40:h:76:ARG:O	40:h:86:GLN:HA	2.13	0.48
41:i:91:ARG:CA	50:r:34:LYS:HD3	2.44	0.48
41:i:123:GLU:HA	41:i:126:LYS:HB3	1.95	0.48
42:j:4:TYR:CD1	42:j:20:ARG:HD3	2.49	0.48
42:j:37:PHE:HA	42:j:40:LEU:CD1	2.41	0.48
45:m:32:ARG:O	45:m:83:LEU:HD12	2.14	0.48
45:m:74:HIS:CG	45:m:75:ASN:N	2.74	0.48
45:m:121:THR:C	45:m:122:LYS:HD2	2.39	0.48
47:o:13:THR:O	47:o:14:PRO:C	2.57	0.48
48:p:57:LEU:O	48:p:57:LEU:CD2	2.59	0.48
50:r:22:LEU:CB	50:r:41:LYS:HG3	2.43	0.48
51:s:51:LEU:O	51:s:52:PRO:C	2.57	0.48
51:s:79:LEU:HD23	51:s:79:LEU:C	2.38	0.48
52:t:48:THR:O	52:t:49:ILE:HG23	2.14	0.48
1:w:7:G:O6	1:w:2896:C:N4	2.44	0.47
1:w:13:A:N1	1:w:15:G:N2	2.61	0.47
1:w:20:C:C2	1:w:521:G:N1	2.82	0.47
1:w:110:G:N2	1:w:111:A:N7	2.61	0.47
1:w:132:G:C2'	1:w:133:C:C6	2.97	0.47
1:w:271(C):G:C5	1:w:271(D):U:C5	2.98	0.47
1:w:321:G:H1'	6:D:160:ARG:HG2	1.96	0.47
1:w:349:G:C2'	1:w:350:U:H6	2.27	0.47
1:w:359:A:H3'	1:w:360:G:N7	2.29	0.47
1:w:465:G:C6	1:w:466:A:C2	3.02	0.47
1:w:519:U:O2	1:w:520:G:H1'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:532:A:C4	1:w:2021:C:C4	3.02	0.47
1:w:668:G:C2	1:w:670:A:C5	3.02	0.47
1:w:684:G:N2	1:w:775:G:N7	2.60	0.47
1:w:783:A:C5'	1:w:2588:G:O2'	2.56	0.47
1:w:812:C:C2'	1:w:813:U:C5'	2.92	0.47
1:w:823:G:O6	1:w:824:A:N6	2.47	0.47
1:w:843:G:H3'	1:w:844:C:C5	2.49	0.47
1:w:845:G:O2'	1:w:847:U:N3	2.47	0.47
1:w:987:G:H3'	1:w:988:A:C8	2.45	0.47
1:w:990:A:C5	1:w:1186:G:H1'	2.49	0.47
1:w:1039:G:H2'	1:w:1040:C:C6	2.49	0.47
1:w:1042:G:C4	1:w:1114:G:N1	2.82	0.47
1:w:1047:G:O2'	1:w:1048:A:OP2	2.32	0.47
1:w:1136:G:N3	1:w:2038:G:C4'	2.73	0.47
1:w:1160:G:OP2	1:w:1160:G:H8	1.96	0.47
1:w:1323:U:OP1	19:Q:84:ARG:NE	2.47	0.47
1:w:1469:A:N7	1:w:1470:G:C6	2.81	0.47
1:w:1480:G:C6	1:w:1481:U:C5	3.01	0.47
1:w:1560:G:C2	1:w:1561:G:C8	3.02	0.47
1:w:1618:A:O2'	1:w:1619:G:P	2.72	0.47
1:w:1668:A:N3	1:w:1674:G:N7	2.62	0.47
1:w:1669:A:C5'	1:w:1671:U:O4	2.56	0.47
1:w:1752:C:O2	1:w:1752:C:H2'	2.13	0.47
1:w:1883:G:O3'	1:w:1884:A:H8	1.96	0.47
1:w:1943:U:HO2'	1:w:1944:U:P	2.35	0.47
1:w:1978:A:O2'	1:w:1979:C:C5'	2.62	0.47
1:w:2094:G:C8	1:w:2095:C:C5	3.02	0.47
1:w:2210:G:C6	1:w:2212:A:C5'	2.86	0.47
1:w:2306:C:N4	7:E:43:LEU:O	2.46	0.47
1:w:2375:G:H2'	1:w:2376:A:O5'	2.14	0.47
1:w:2396:G:C3'	24:V:31:GLY:HA2	2.44	0.47
1:w:2419:U:H2'	1:w:2420:C:O4'	2.14	0.47
1:w:2461:C:C2	1:w:2462:U:C5	3.02	0.47
1:w:2517:C:C2'	1:w:2519:U:H5	2.27	0.47
1:w:2569:G:C2	1:w:2570:G:C5	3.02	0.47
1:w:2586:C:C2'	1:w:2587:A:H5'	2.44	0.47
1:w:2619:C:H2'	1:w:2620:C:C4'	2.42	0.47
1:w:2634:G:C6	1:w:2635:C:N4	2.82	0.47
1:w:2840:C:OP1	14:L:50:HIS:HA	2.13	0.47
2:x:55:U:H4'	7:E:29:TRP:CH2	2.42	0.47
3:A:8:TYR:CD1	3:A:8:TYR:N	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:105:ILE:C	4:B:106:ILE:CG2	2.86	0.47
4:B:131:LEU:CA	4:B:190:TYR:HD1	2.26	0.47
4:B:143:HIS:O	4:B:144:ALA:HB3	2.13	0.47
4:B:146:GLU:OE1	4:B:147:LEU:N	2.47	0.47
6:D:4:ILE:N	6:D:5:PRO:HD3	2.29	0.47
6:D:26:HIS:CB	12:J:13:ASN:HB3	2.44	0.47
6:D:85:PHE:N	6:D:85:PHE:CD1	2.82	0.47
7:E:78:SER:O	7:E:83:ARG:HA	2.14	0.47
8:F:28:GLY:O	8:F:30:LYS:N	2.42	0.47
8:F:49:VAL:O	8:F:50:VAL:CG2	2.62	0.47
9:G:122:GLU:OE1	9:G:126:TYR:HB3	2.14	0.47
10:H:37:VAL:HG13	10:H:158:PRO:O	2.14	0.47
12:J:70:GLN:O	12:J:71:VAL:HB	2.14	0.47
13:K:57:HIS:O	13:K:58:PHE:CD2	2.64	0.47
13:K:111:GLU:C	13:K:115:MET:HG2	2.39	0.47
14:L:1:MET:CE	14:L:2:ARG:HH12	2.26	0.47
14:L:104:ARG:NH2	14:L:107:ASP:HB2	2.21	0.47
15:M:66:ALA:O	15:M:67:ARG:C	2.57	0.47
15:M:98:VAL:O	15:M:99:LYS:C	2.57	0.47
16:N:5:ALA:O	16:N:7:ILE:N	2.47	0.47
17:O:74:LEU:HD23	17:O:110:VAL:HG13	1.95	0.47
18:P:76:LYS:HD3	18:P:83:ARG:HB3	1.96	0.47
19:Q:88:ARG:HD2	19:Q:92:ARG:N	2.29	0.47
22:T:3:TYR:O	22:T:57:ILE:CA	2.62	0.47
22:T:15:PRO:O	22:T:16:SER:C	2.57	0.47
22:T:146:ILE:CB	22:T:176:PRO:CD	2.90	0.47
23:U:57:PHE:O	23:U:58:THR:C	2.56	0.47
23:U:84:LEU:CG	23:U:85:ALA:H	2.16	0.47
25:W:43:GLN:C	25:W:45:SER:N	2.72	0.47
30:b:24:TYR:CA	30:b:35:ARG:HA	2.44	0.47
31:y:104:G:C3'	31:y:105:G:H5'	2.43	0.47
31:y:232:G:H2'	31:y:233:C:H5'	1.96	0.47
31:y:323:U:O3'	53:u:22:ARG:HB3	2.14	0.47
31:y:509:A:OP1	37:e:55:ALA:HB2	2.14	0.47
31:y:593:G:N1	31:y:594:G:C5	2.81	0.47
31:y:611:A:C2'	31:y:612:C:H5'	2.44	0.47
31:y:612:C:N4	31:y:629:G:H22	2.11	0.47
31:y:619:U:O2	37:e:134:ASP:OD1	2.32	0.47
31:y:663:A:C2	31:y:742:G:N1	2.79	0.47
31:y:856:C:N3	31:y:857:C:C5	2.82	0.47
31:y:888:G:O6	31:y:889:A:C6	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:901:A:C8	31:y:901:A:O5'	2.67	0.47
31:y:936:C:H2'	31:y:1382:C:N4	2.29	0.47
31:y:1069:C:H3'	31:y:1069:C:C6	2.49	0.47
31:y:1267:C:O2	31:y:1267:C:C2'	2.61	0.47
31:y:1343:G:O5'	31:y:1343:G:C8	2.58	0.47
31:y:1390:U:C2	31:y:1391:U:C5	3.02	0.47
31:y:1453:G:N3	31:y:1453:G:H3'	2.29	0.47
32:z:5:G:N3	32:z:69:G:C2	2.82	0.47
32:z:18:G:C2'	32:z:60:U:O4	2.62	0.47
33:0:7:U:H5'	33:0:7:U:H6	1.79	0.47
35:c:121:LEU:CB	35:c:127:ILE:HG23	2.43	0.47
35:c:132:LYS:O	35:c:135:GLN:N	2.44	0.47
35:c:132:LYS:HB3	35:c:135:GLN:HE21	1.79	0.47
37:e:22:LYS:O	37:e:25:ARG:CB	2.61	0.47
38:f:79:GLU:HB2	41:i:104:ARG:HH11	1.72	0.47
39:g:40:VAL:O	39:g:41:GLU:HB2	2.14	0.47
41:i:85:ARG:NH1	41:i:86:ILE:H	2.12	0.47
43:k:38:ILE:HD12	43:k:71:LEU:HB3	1.96	0.47
43:k:42:THR:HA	43:k:68:HIS:CE1	2.49	0.47
45:m:59:LEU:CD1	45:m:61:SER:CA	2.91	0.47
45:m:88:ARG:HG2	45:m:96:ARG:CA	2.42	0.47
49:q:3:LYS:CA	49:q:65:GLN:HB3	2.44	0.47
49:q:15:PRO:HG2	49:q:41:PRO:HG2	1.96	0.47
50:r:9:VAL:CG1	50:r:85:VAL:HG13	2.43	0.47
52:t:65:ASN:O	52:t:67:VAL:HG23	2.14	0.47
1:w:8:A:C5'	10:H:74:PHE:HZ	2.21	0.47
1:w:33:U:C6	1:w:33:U:C3'	2.97	0.47
1:w:270(Q):C:C4	1:w:270(R):C:N4	2.82	0.47
1:w:278:A:C6	1:w:279:C:C4	3.02	0.47
1:w:288:C:OP2	1:w:289:A:C2	2.66	0.47
1:w:388:G:C4	1:w:390:A:C5	3.01	0.47
1:w:545:G:C2'	1:w:548:A:N6	2.77	0.47
1:w:722:A:H3'	1:w:723:G:H8	1.79	0.47
1:w:810:U:O2'	12:J:24:GLY:HA3	2.14	0.47
1:w:850:C:O5'	1:w:850:C:H6	1.97	0.47
1:w:878:A:H2'	1:w:879:G:N7	2.29	0.47
1:w:985:C:O2'	1:w:986:C:H5'	2.14	0.47
1:w:1053:C:H6	1:w:1053:C:O5'	1.97	0.47
1:w:1070:A:H8	1:w:1096:A:HO2'	1.48	0.47
1:w:1131:G:C6	1:w:2025:C:H1'	2.48	0.47
1:w:1231:G:H2'	1:w:1232:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1338:G:C5	1:w:1339:G:N7	2.82	0.47
1:w:1436:G:C2	1:w:1437:C:C1'	2.97	0.47
1:w:1516:U:O2	1:w:1557:C:C4'	2.57	0.47
1:w:1534:G:O2'	1:w:1538:G:C2	2.67	0.47
1:w:1753:G:C2'	1:w:1755:A:OP2	2.61	0.47
1:w:1800:C:O2'	1:w:1801:G:OP1	2.30	0.47
1:w:1824:G:H2'	1:w:1825:A:O4'	2.14	0.47
1:w:1910:G:C6	1:w:1921:G:N3	2.83	0.47
1:w:1920:C:H2'	1:w:1921:G:O4'	2.14	0.47
1:w:1936:A:N3	1:w:1942:C:N4	2.58	0.47
1:w:2077:A:C3'	1:w:2078:C:C6	2.97	0.47
1:w:2081:C:O2	1:w:2240:C:O2	2.31	0.47
1:w:2094:G:C4	1:w:2095:C:C2	3.02	0.47
1:w:2185:C:C2	1:w:2186:G:C8	3.02	0.47
1:w:2240:C:C3'	1:w:2241:A:H5'	2.42	0.47
1:w:2300:G:H2'	1:w:2301:C:O5'	2.14	0.47
1:w:2354:G:N3	23:U:36:ILE:HG12	2.29	0.47
1:w:2417:C:O2'	1:w:2418:A:C5'	2.43	0.47
1:w:2511:U:H3'	1:w:2511:U:C6	2.49	0.47
1:w:2516:G:N3	1:w:2569:G:C2	2.82	0.47
1:w:2590:A:C6	1:w:2605:U:C4	3.02	0.47
1:w:2595:G:C6	1:w:2597:G:OP2	2.67	0.47
1:w:2619:C:O2'	5:C:154:LYS:O	2.33	0.47
1:w:2622:C:H2'	1:w:2622:C:O2	2.13	0.47
1:w:2676:C:C2	1:w:2677:G:C8	3.02	0.47
1:w:2726:U:O2'	1:w:2727:G:C5'	2.62	0.47
4:B:262:ARG:CB	4:B:263:ARG:HH21	2.27	0.47
5:C:30:PRO:HA	5:C:91:VAL:O	2.15	0.47
6:D:88:LYS:C	6:D:90:ARG:H	2.21	0.47
6:D:179:TYR:CA	6:D:182:VAL:HG13	2.44	0.47
7:E:41:GLN:HG2	7:E:155:MET:CB	2.43	0.47
7:E:66:GLN:HG3	7:E:94:LEU:HD11	1.96	0.47
8:F:90:LYS:HZ2	8:F:165:ALA:C	2.22	0.47
10:H:36:TRP:C	10:H:158:PRO:HD2	2.39	0.47
11:I:69:VAL:HG12	11:I:77:ILE:HG22	1.95	0.47
11:I:85:VAL:O	11:I:86:ILE:HG13	2.14	0.47
12:J:50:ARG:HD3	12:J:51:PHE:CA	2.44	0.47
12:J:61:ARG:N	12:J:61:ARG:NE	2.57	0.47
13:K:34:LEU:N	13:K:104:PHE:O	2.37	0.47
14:L:27:SER:O	14:L:29:LEU:N	2.47	0.47
16:N:10:VAL:O	16:N:10:VAL:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:50:ILE:HB	16:N:64:ARG:N	2.29	0.47
17:O:44:ASN:CG	18:P:78:LYS:HD2	2.40	0.47
19:Q:75:TYR:H	19:Q:104:THR:H	1.60	0.47
21:S:43:ASN:HA	21:S:59:GLY:O	2.14	0.47
22:T:12:GLY:O	22:T:13:GLU:C	2.57	0.47
22:T:100:VAL:HB	22:T:101:PRO:CD	2.43	0.47
25:W:29:LYS:HE3	25:W:30:ARG:CA	2.44	0.47
26:X:58:VAL:CG1	26:X:60:GLU:OE2	2.59	0.47
28:Z:28:ARG:HA	28:Z:31:LEU:HD23	1.96	0.47
29:a:47:LYS:HG3	29:a:48:PHE:N	2.29	0.47
30:b:19:ARG:CG	30:b:20:HIS:H	2.26	0.47
31:y:44:G:C6	31:y:399:G:C6	3.02	0.47
31:y:329:A:C2	31:y:332:G:C8	3.01	0.47
31:y:362:G:C8	31:y:362:G:H3'	2.49	0.47
31:y:391:G:C6	31:y:392:G:C8	3.03	0.47
31:y:423:G:C2'	31:y:423:G:N3	2.76	0.47
31:y:439:A:N6	31:y:496:A:C2	2.82	0.47
31:y:495:A:O4'	31:y:496:A:N7	2.47	0.47
31:y:506:G:C2'	31:y:507:C:C6	2.96	0.47
31:y:509:A:C2	31:y:510:A:C4	3.01	0.47
31:y:556:C:H5'	31:y:556:C:H6	1.79	0.47
31:y:600:C:OP1	41:i:98:LYS:NZ	2.47	0.47
31:y:675:A:C2	44:l:115:PRO:HB3	2.46	0.47
31:y:838:G:C3'	31:y:841:U:H5''	2.44	0.47
31:y:848:C:O5'	31:y:848:C:H6	1.97	0.47
31:y:864:A:H2'	31:y:865:A:C8	2.49	0.47
31:y:1035:A:C2	31:y:1036:G:C2	3.02	0.47
31:y:1037:C:N3	31:y:1038:C:C5	2.82	0.47
31:y:1139:G:H1'	31:y:1141:C:H5	1.79	0.47
31:y:1188:A:C1'	47:o:60:SER:OG	2.61	0.47
31:y:1271:G:H2'	31:y:1272:G:H8	1.79	0.47
31:y:1348:U:O2'	31:y:1349:A:C5'	2.51	0.47
31:y:1435:G:C2'	31:y:1436:U:C5	2.89	0.47
31:y:1472:U:C3'	31:y:1473:A:H8	2.27	0.47
32:z:5:G:C2	32:z:69:G:C6	3.01	0.47
33:0:16:U:H3'	33:0:17:U:C5'	2.43	0.47
33:0:36:A:H2'	33:0:37:A:H5'	1.96	0.47
35:c:8:LYS:HE3	35:c:10:LEU:HG	1.95	0.47
35:c:32:ILE:CG2	35:c:41:ILE:O	2.62	0.47
35:c:73:THR:O	35:c:78:GLN:OE1	2.32	0.47
35:c:76:GLN:HG3	35:c:206:ASP:HB3	1.94	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:110:GLN:C	35:c:112:VAL:N	2.72	0.47
35:c:137:ARG:HG2	35:c:141:GLU:OE1	2.14	0.47
36:d:5:ILE:HG23	36:d:10:PHE:CG	2.49	0.47
36:d:125:GLU:CD	36:d:190:ARG:HB3	2.39	0.47
36:d:199:LYS:O	36:d:200:ALA:HB2	2.13	0.47
37:e:159:ARG:O	37:e:162:LEU:HB3	2.13	0.47
39:g:6:VAL:O	39:g:7:ASN:ND2	2.46	0.47
40:h:66:VAL:HG13	40:h:70:LYS:HE3	1.95	0.47
41:i:19:VAL:O	41:i:20:TYR:CB	2.61	0.47
44:l:109:VAL:HA	51:s:88:LYS:HB2	1.95	0.47
46:n:67:GLU:HA	46:n:70:LEU:CD1	2.43	0.47
47:o:26:ARG:H	47:o:39:LEU:HD22	1.75	0.47
49:q:4:ILE:CG2	49:q:5:ARG:H	2.28	0.47
50:r:43:LEU:C	50:r:43:LEU:CD1	2.83	0.47
52:t:41:VAL:HB	52:t:42:PRO:CD	2.44	0.47
1:w:191:A:H2'	1:w:192:C:C6	2.48	0.47
1:w:270(H):C:C2	1:w:270(I):C:C6	3.01	0.47
1:w:287:C:N3	1:w:288:C:C5	2.81	0.47
1:w:590:A:OP1	6:D:92:TYR:CD1	2.68	0.47
1:w:591:C:C2	1:w:592:G:N7	2.82	0.47
1:w:664:C:H5''	1:w:941:A:OP1	2.15	0.47
1:w:667:U:C5'	12:J:49:ARG:HH12	2.27	0.47
1:w:669:G:C4	1:w:801:G:N1	2.82	0.47
1:w:718:A:H2'	1:w:719:C:C4'	2.43	0.47
1:w:724:U:C4	1:w:725:G:C6	3.02	0.47
1:w:813:U:C4	1:w:814:C:C4	3.02	0.47
1:w:892:G:C6	1:w:893:C:N3	2.82	0.47
1:w:978:G:C8	1:w:979:G:C5	3.02	0.47
1:w:1077:A:N1	1:w:1089:G:OP1	2.47	0.47
1:w:1101:U:C2	1:w:1102:C:C5	3.00	0.47
1:w:1152:C:O2'	17:O:76:TYR:CZ	2.64	0.47
1:w:1163:G:N3	1:w:1163:G:C2'	2.77	0.47
1:w:1182:A:H8	1:w:1182:A:P	2.36	0.47
1:w:1212:G:H1'	1:w:1237:A:N6	2.28	0.47
1:w:1223:G:O6	18:P:88:ARG:NH1	2.47	0.47
1:w:1246:A:OP1	12:J:18:ARG:CZ	2.62	0.47
1:w:1262:A:H5'	1:w:1263:U:OP2	2.15	0.47
1:w:1295:C:O2	1:w:1295:C:C2'	2.60	0.47
1:w:1357:U:C4	1:w:1358:G:C4	3.02	0.47
1:w:1364:G:C8	24:V:8:SER:CA	2.96	0.47
1:w:1539:G:O6	1:w:1540:G:C5	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1620:G:C8	1:w:1621:U:C5	3.02	0.47
1:w:1805:U:O2	4:B:50:THR:OG1	2.32	0.47
1:w:1869:G:N1	1:w:1871:A:C5'	2.78	0.47
1:w:1870:C:N3	1:w:1871:A:N6	2.61	0.47
1:w:2046:G:C3'	1:w:2047:U:C6	2.97	0.47
1:w:2075:U:C4	1:w:2238:G:C8	3.01	0.47
1:w:2266:A:H5'	1:w:2267:A:C5	2.49	0.47
1:w:2355:C:N3	1:w:2356:C:H1'	2.29	0.47
1:w:2391:G:H1	1:w:2425:A:H5''	1.79	0.47
1:w:2447:G:N7	1:w:2500:U:H3'	2.29	0.47
1:w:2514:U:C3'	1:w:2515:C:H6	2.26	0.47
1:w:2590:A:N1	1:w:2605:U:C4	2.83	0.47
1:w:2640:G:H2'	1:w:2641:G:C8	2.49	0.47
1:w:2698:U:H2'	1:w:2699:C:C6	2.50	0.47
1:w:2742:C:C2'	1:w:2743:C:C5'	2.91	0.47
1:w:2744:G:O2'	8:F:146:ALA:HB1	2.14	0.47
1:w:2877:G:C8	1:w:2878:U:C5	3.03	0.47
1:w:2880:C:O5'	1:w:2880:C:C6	2.67	0.47
1:w:2901:C:C2	1:w:2902:C:C6	3.03	0.47
2:x:108:C:O2	2:x:108:C:C2'	2.61	0.47
3:A:29:LEU:CD1	3:A:32:GLU:OE2	2.61	0.47
3:A:167:ASP:HB2	3:A:168:LYS:HZ2	1.79	0.47
4:B:21:PHE:CG	4:B:24:ILE:HD12	2.49	0.47
4:B:70:TRP:HH2	4:B:146:GLU:HG2	1.77	0.47
4:B:78:LYS:HA	4:B:115:GLN:O	2.13	0.47
4:B:257:LEU:HD12	4:B:259:THR:HG1	1.80	0.47
5:C:93:VAL:HG12	5:C:182:LEU:HB2	1.95	0.47
6:D:4:ILE:CD1	6:D:119:LEU:N	2.74	0.47
6:D:47:LYS:O	6:D:48:THR:CB	2.62	0.47
6:D:139:LYS:C	6:D:141:ALA:N	2.71	0.47
7:E:120:LEU:O	7:E:181:ARG:CB	2.62	0.47
7:E:120:LEU:HD13	7:E:120:LEU:C	2.39	0.47
7:E:120:LEU:HB3	7:E:179:PRO:C	2.39	0.47
8:F:171:LEU:N	8:F:171:LEU:CD1	2.76	0.47
10:H:36:TRP:C	10:H:37:VAL:HG23	2.37	0.47
10:H:48:ARG:O	10:H:52:LYS:HE2	2.13	0.47
10:H:63:PRO:O	17:O:64:ARG:CD	2.54	0.47
10:H:77:VAL:HG12	10:H:80:ALA:CB	2.35	0.47
10:H:134:PRO:HA	10:H:137:ARG:CD	2.43	0.47
11:I:28:SER:C	11:I:30:ALA:N	2.71	0.47
12:J:30:THR:O	12:J:31:ALA:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:48:PRO:HA	12:J:51:PHE:CD2	2.48	0.47
13:K:82:ARG:HE	13:K:82:ARG:C	2.18	0.47
14:L:53:HIS:HA	14:L:56:LYS:CE	2.44	0.47
15:M:38:GLN:O	15:M:39:ILE:C	2.56	0.47
15:M:43:GLU:HG3	15:M:44:LYS:N	2.29	0.47
15:M:67:ARG:HH11	15:M:68:GLN:HE21	1.62	0.47
16:N:17:THR:O	16:N:19:LEU:HG	2.14	0.47
16:N:91:ARG:HA	16:N:116:ALA:HA	1.96	0.47
16:N:107:ASP:O	16:N:111:ARG:CG	2.55	0.47
19:Q:6:ILE:O	19:Q:105:VAL:CG2	2.61	0.47
20:R:57:LEU:HD22	20:R:76:ARG:HB2	1.96	0.47
21:S:54:LYS:HE2	21:S:54:LYS:HA	1.94	0.47
22:T:7:ALA:C	22:T:8:TYR:CD2	2.91	0.47
22:T:80:ARG:NH1	22:T:80:ARG:HG2	2.29	0.47
22:T:150:LEU:CD1	22:T:171:ILE:CD1	2.88	0.47
25:W:5:GLU:C	25:W:5:GLU:OE1	2.57	0.47
25:W:40:SER:C	25:W:44:LEU:HG	2.39	0.47
31:y:96:G:O2'	31:y:97:U:H5'	2.13	0.47
31:y:122:G:H2'	31:y:123:C:O4'	2.14	0.47
31:y:186(A):C:O2'	53:u:81:LYS:O	2.31	0.47
31:y:194:C:C3'	31:y:195:A:H5''	2.44	0.47
31:y:247:G:N1	31:y:278:G:C2	2.81	0.47
31:y:493:G:OP2	31:y:493:G:H3'	2.14	0.47
31:y:501:C:O2'	31:y:502:G:H5'	2.13	0.47
31:y:520:A:OP1	45:m:51:LEU:C	2.56	0.47
31:y:546:G:C8	31:y:546:G:C3'	2.97	0.47
31:y:562:C:H5''	31:y:563:A:P	2.54	0.47
31:y:703:G:OP2	31:y:703:G:C3'	2.56	0.47
31:y:919:A:N1	31:y:920:U:C4	2.82	0.47
31:y:958:A:N9	31:y:959:A:C8	2.83	0.47
31:y:1201:A:O2'	31:y:1202:G:C5'	2.54	0.47
31:y:1344:C:OP2	31:y:1344:C:C5	2.67	0.47
31:y:1399:C:C3'	31:y:1400:5MC:H5'	2.43	0.47
31:y:1517:G:C8	31:y:1517:G:C3'	2.96	0.47
32:z:4:C:C2	32:z:5:G:N7	2.81	0.47
33:0:16:U:O2	33:0:16:U:C2'	2.62	0.47
33:0:48:C:H4'	33:0:49:C:C5'	2.44	0.47
35:c:20:GLU:O	35:c:39:ILE:HB	2.15	0.47
35:c:27:LYS:HG2	35:c:194:PRO:HD3	1.84	0.47
37:e:88:VAL:C	37:e:90:GLY:H	2.22	0.47
37:e:173:TRP:HB2	37:e:187:ARG:C	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:g:44:GLY:O	39:g:45:LEU:O	2.32	0.47
39:g:99:ALA:N	51:s:31:LEU:HD11	2.30	0.47
41:i:39:LEU:HD23	41:i:39:LEU:H	1.78	0.47
41:i:51:VAL:CB	41:i:60:ARG:HH21	2.27	0.47
41:i:86:ILE:HD12	41:i:86:ILE:N	2.29	0.47
42:j:14:VAL:HG12	42:j:15:ALA:H	1.80	0.47
44:l:71:LYS:C	44:l:73:MET:H	2.22	0.47
44:l:76:GLY:C	44:l:78:GLN:HE21	2.23	0.47
44:l:95:ILE:HA	44:l:98:LEU:HG	1.95	0.47
45:m:24:PRO:C	45:m:26:LEU:H	2.22	0.47
45:m:35:VAL:HB	45:m:58:ARG:HB2	1.94	0.47
45:m:44:PRO:O	45:m:45:LYS:HB3	2.15	0.47
45:m:52:ARG:HH22	45:m:54:VAL:CG1	2.27	0.47
46:n:109:THR:C	46:n:110:ARG:HE	2.22	0.47
51:s:38:GLU:O	51:s:42:ARG:NH1	2.47	0.47
53:u:50:GLU:HG2	53:u:54:LYS:HZ1	1.79	0.47
1:w:13:A:C6	1:w:15:G:C2	3.03	0.47
1:w:54:G:C1'	28:Z:35:ARG:HH12	2.28	0.47
1:w:55:G:H21	1:w:116:C:H1'	1.78	0.47
1:w:116:C:C4	1:w:117:G:C8	3.02	0.47
1:w:297:C:C3'	1:w:298:G:C5'	2.79	0.47
1:w:307:G:N2	1:w:309:G:C8	2.81	0.47
1:w:321:G:N2	1:w:341:G:C5'	2.76	0.47
1:w:426:C:C2	1:w:427:U:C5	3.02	0.47
1:w:479:A:C2'	1:w:481:G:C8	2.97	0.47
1:w:497:A:C8	1:w:497:A:H3'	2.48	0.47
1:w:519:U:C6	1:w:520:G:C8	3.02	0.47
1:w:540:G:C4	1:w:541:C:C5	3.02	0.47
1:w:626:U:OP2	1:w:627:A:H5'	2.14	0.47
1:w:751:A:N6	1:w:1614:A:N3	2.62	0.47
1:w:752:A:C8	1:w:1781:C:C6	3.03	0.47
1:w:812:C:H3'	12:J:27:HIS:HB3	1.95	0.47
1:w:963:U:C2'	1:w:964:C:H5'	2.45	0.47
1:w:965:C:C5	1:w:966:G:N7	2.82	0.47
1:w:1041:C:O2'	1:w:1042:G:H5'	2.14	0.47
1:w:1129:A:C2	1:w:2569:G:N3	2.82	0.47
1:w:1177:A:OP2	1:w:1177:A:C8	2.66	0.47
1:w:1207:C:H2'	1:w:1208:C:C5	2.49	0.47
1:w:1226:A:N7	1:w:1227:G:H1'	2.28	0.47
1:w:1431:U:C2'	1:w:1432:C:C5'	2.84	0.47
1:w:1435:G:H3'	1:w:1436:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1442:G:C6	1:w:1443:G:C6	3.03	0.47
1:w:1445:C:C2	1:w:1446:C:C5	3.02	0.47
1:w:1504:C:O5'	1:w:1504:C:H6	1.97	0.47
1:w:1516:U:H2'	1:w:1517:G:H8	1.75	0.47
1:w:1743:G:C4	1:w:1746:G:N7	2.82	0.47
1:w:1818:U:C3'	4:B:155:LEU:HD11	2.44	0.47
1:w:1870:C:O2	1:w:1870:C:C2'	2.63	0.47
1:w:2016:U:H4'	1:w:2057:A:O3'	2.14	0.47
1:w:2117:A:H5'	1:w:2118:U:H5'	1.91	0.47
1:w:2120:G:H2'	1:w:2121:G:H5'	1.97	0.47
1:w:2218:G:H4'	4:B:149:PRO:CG	2.45	0.47
1:w:2283:C:C4	1:w:2284:C:C4	3.02	0.47
1:w:2331:G:H2'	1:w:2332:U:O4'	2.13	0.47
1:w:2343:C:C4'	1:w:2374:C:H5'	2.45	0.47
1:w:2349:G:O5'	29:a:42:ARG:NH2	2.47	0.47
1:w:2514:U:H2'	1:w:2515:C:H6	1.76	0.47
1:w:2514:U:O4	1:w:2515:C:N4	2.48	0.47
1:w:2556:C:H6	1:w:2556:C:C4'	2.28	0.47
1:w:2625:G:C4	1:w:2626:C:C5	3.02	0.47
1:w:2638:G:C5	1:w:2775:A:N6	2.83	0.47
1:w:2641:G:C5	1:w:2642:G:C5	3.02	0.47
1:w:2686:G:O6	1:w:2724:C:N4	2.48	0.47
1:w:2724:C:O2	1:w:2724:C:C2'	2.54	0.47
1:w:2840:C:C2	1:w:2841:C:C6	3.02	0.47
1:w:2850:A:OP2	1:w:2866:U:C4	2.68	0.47
1:w:2851:A:H5''	1:w:2852:G:OP2	2.14	0.47
2:x:9:G:C2	2:x:112:G:N3	2.83	0.47
2:x:77:U:C2	2:x:78:A:N9	2.82	0.47
4:B:45:ASN:OD1	4:B:48:ARG:N	2.48	0.47
4:B:94:LEU:O	4:B:94:LEU:HD22	2.14	0.47
4:B:116:GLN:C	4:B:117:VAL:HG23	2.39	0.47
4:B:155:LEU:O	4:B:156:ALA:HB3	2.13	0.47
4:B:183:ARG:HG3	4:B:269:PHE:C	2.39	0.47
5:C:51:PHE:CD1	5:C:76:ARG:NH2	2.82	0.47
6:D:75:ALA:O	6:D:77:ILE:N	2.41	0.47
7:E:35:GLU:O	7:E:36:LYS:HG2	2.14	0.47
7:E:79:ASN:HB3	7:E:82:LEU:O	2.14	0.47
8:F:29:PRO:CD	8:F:79:VAL:HB	2.43	0.47
10:H:73:ASP:O	10:H:142:ARG:NH1	2.40	0.47
10:H:113:MET:CG	10:H:121:VAL:HG13	2.25	0.47
12:J:85:LEU:HD23	12:J:86:LYS:HG2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:17:ALA:CB	20:R:26:TYR:CB	2.91	0.47
21:S:88:LYS:CG	21:S:89:PHE:CD1	2.93	0.47
22:T:129:SER:HB2	22:T:132:ASN:HB2	1.97	0.47
23:U:57:PHE:O	23:U:59:LEU:CD1	2.63	0.47
31:y:49:U:C2'	31:y:50:A:C5'	2.93	0.47
31:y:95:G:C6	31:y:96:G:C6	3.03	0.47
31:y:122:G:C2'	31:y:123:C:H5'	2.44	0.47
31:y:134:A:C2	31:y:135:C:O4'	2.68	0.47
31:y:147:G:C6	31:y:148:G:C6	3.03	0.47
31:y:243:A:H1'	31:y:245:C:H5''	1.96	0.47
31:y:340:U:O5'	31:y:340:U:H6	1.97	0.47
31:y:357:G:OP1	31:y:367:U:H2'	2.14	0.47
31:y:382:A:O2'	31:y:383:A:H5'	2.13	0.47
31:y:485:G:O2'	31:y:486:U:P	2.72	0.47
31:y:656:C:O2'	31:y:657:G:C4'	2.62	0.47
31:y:662:G:O2'	31:y:836:G:O5'	2.31	0.47
31:y:697:U:H1'	31:y:786:G:H5'	1.95	0.47
31:y:728:A:C2	31:y:729:A:C5	3.00	0.47
31:y:775:G:N3	31:y:776:G:C8	2.82	0.47
31:y:991:U:N3	31:y:1213:A:C8	2.65	0.47
31:y:1130:A:H8	31:y:1147:C:O2	1.97	0.47
31:y:1226:C:P	46:n:103:THR:HB	2.54	0.47
31:y:1450:U:H1'	31:y:1454:G:C2	2.49	0.47
31:y:1462:G:N7	31:y:1463:C:C5	2.82	0.47
32:z:24:G:N3	32:z:25:C:C1'	2.76	0.47
33:0:5:A:H2'	33:0:6:U:O4'	2.13	0.47
35:c:166:ASP:O	35:c:170:GLU:HB2	2.14	0.47
36:d:78:GLY:CA	36:d:82:GLU:HG2	2.43	0.47
36:d:130:VAL:O	36:d:131:ARG:C	2.57	0.47
36:d:175:LEU:O	36:d:177:THR:O	2.32	0.47
39:g:46:ARG:HB3	39:g:60:PHE:CE1	2.50	0.47
40:h:31:MET:HG3	40:h:36:LYS:CB	2.27	0.47
40:h:123:GLU:HA	40:h:126:ASP:HB2	1.95	0.47
40:h:139:GLU:HA	40:h:142:GLU:OE2	2.14	0.47
44:l:20:TYR:CE1	44:l:33:THR:HG23	2.50	0.47
45:m:95:VAL:CG1	45:m:96:ARG:N	2.77	0.47
45:m:110:LYS:O	45:m:111:ASP:C	2.57	0.47
46:n:22:ILE:CD1	46:n:25:ILE:HD12	2.44	0.47
46:n:125:ARG:NH1	46:n:125:ARG:HB2	2.29	0.47
47:o:29:ARG:HE	47:o:42:ILE:HG13	1.77	0.47
48:p:29:VAL:O	48:p:30:ALA:C	2.58	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:p:44:LYS:C	48:p:45:VAL:HG23	2.39	0.47
49:q:9:PHE:CD2	49:q:18:ARG:HD2	2.49	0.47
50:r:25:ARG:NH1	50:r:25:ARG:CG	2.71	0.47
51:s:65:ILE:HG22	51:s:65:ILE:O	2.14	0.47
53:u:53:LEU:HG	53:u:100:ILE:CG2	2.44	0.47
1:w:16:G:C2	1:w:524:U:O2	2.67	0.47
1:w:106:C:HO2'	1:w:293:U:C4'	2.28	0.47
1:w:190:A:C2	1:w:679:C:H1'	2.49	0.47
1:w:291:C:H2'	1:w:292:C:C6	2.50	0.47
1:w:307:G:H2'	1:w:309:G:C5	2.48	0.47
1:w:396:G:H4'	24:V:46:LEU:CD2	2.42	0.47
1:w:479:A:H5''	1:w:480:A:OP1	2.14	0.47
1:w:497:A:C8	1:w:497:A:C3'	2.97	0.47
1:w:509:C:C3'	1:w:510:C:C5'	2.92	0.47
1:w:519:U:C6	1:w:519:U:O5'	2.67	0.47
1:w:578:A:C2	1:w:2018:G:C1'	2.97	0.47
1:w:589:C:C5'	6:D:92:TYR:HH	2.28	0.47
1:w:596:G:C6	1:w:597:U:C4	3.03	0.47
1:w:719:C:H2'	1:w:720:C:H6	1.79	0.47
1:w:805:G:C4'	12:J:39:LYS:HB3	2.23	0.47
1:w:814:C:C4'	18:P:87:HIS:NE2	2.67	0.47
1:w:1003:G:N2	1:w:1153:C:C2	2.83	0.47
1:w:1130:U:H3	1:w:2025:C:C4'	2.27	0.47
1:w:1194:A:H3'	1:w:1195:G:H8	1.79	0.47
1:w:1224:C:C2'	1:w:1225:G:H5'	2.44	0.47
1:w:1249:U:H6	1:w:1249:U:O5'	1.97	0.47
1:w:1296:G:HO2'	1:w:1297:C:H5'	1.79	0.47
1:w:1300:U:C5	1:w:1626:G:H2'	2.49	0.47
1:w:1303:G:H5'	1:w:1642:G:N3	2.29	0.47
1:w:1448:G:C8	1:w:1448:G:OP2	2.67	0.47
1:w:154(B):C:O2'	1:w:1547:C:P	2.73	0.47
1:w:1637:A:C6	1:w:1638:C:C4	3.03	0.47
1:w:1751:C:N4	1:w:1752:C:H41	2.12	0.47
1:w:1764:G:H2'	1:w:1765:C:H6	1.79	0.47
1:w:1789:A:C5'	4:B:221:VAL:HA	2.44	0.47
1:w:1813:G:H5'	4:B:40:THR:HG21	1.95	0.47
1:w:1944:U:H5	1:w:1955:U:C6	2.32	0.47
1:w:1959:G:C6	1:w:1960:A:C4	3.03	0.47
1:w:1986:A:H2'	1:w:1987:G:C5'	2.37	0.47
1:w:1987:G:C6	1:w:1988:C:C4	3.03	0.47
1:w:2056:G:C2'	1:w:2057:A:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2101:G:C2	1:w:2189:U:C2	3.02	0.47
1:w:2205:C:C4	1:w:2206:C:C5	3.02	0.47
1:w:2256:G:H2'	1:w:2257:U:H6	1.80	0.47
1:w:2302:G:C2	1:w:2303:G:C4	3.03	0.47
1:w:2349:G:H3'	29:a:42:ARG:NH2	2.20	0.47
1:w:2364:C:H2'	1:w:2365:G:C1'	2.45	0.47
1:w:2393:A:H2'	1:w:2394:C:H6	1.66	0.47
1:w:2474:C:H2'	1:w:2475:C:C5'	2.41	0.47
1:w:2572:A:OP2	1:w:2572:A:H8	1.97	0.47
1:w:2588:G:N1	1:w:2589:A:N3	2.63	0.47
1:w:2840:C:O2'	1:w:2841:C:O5'	2.33	0.47
1:w:2901:C:N3	1:w:2902:C:C4	2.82	0.47
3:A:220:GLY:HA2	3:A:221:PRO:HD3	1.75	0.47
4:B:105:ILE:O	4:B:106:ILE:HG22	2.14	0.47
5:C:20:ALA:O	5:C:21:VAL:CG1	2.63	0.47
5:C:47:VAL:O	5:C:48:GLN:CG	2.63	0.47
5:C:64:LYS:C	5:C:66:HIS:H	2.23	0.47
7:E:145:THR:O	7:E:147:ASP:OD2	2.33	0.47
8:F:19:VAL:CA	8:F:24:VAL:HG22	2.43	0.47
8:F:88:LEU:CD2	8:F:165:ALA:HA	2.44	0.47
8:F:172:LYS:HA	8:F:172:LYS:CE	2.44	0.47
9:G:23:PRO:HB2	9:G:27:ARG:CD	2.43	0.47
10:H:82:LYS:O	10:H:82:LYS:CG	2.59	0.47
10:H:89:LYS:O	10:H:110:LEU:HD23	2.11	0.47
11:I:59:LYS:CD	11:I:87:ILE:HB	2.44	0.47
12:J:148:LEU:O	12:J:149:GLU:HB2	2.15	0.47
13:K:32:PHE:HA	13:K:132:VAL:HG12	1.96	0.47
13:K:73:PRO:HD3	13:K:93:TYR:CE1	2.49	0.47
13:K:116:GLU:HB3	13:K:120:ILE:HD11	1.97	0.47
14:L:36:THR:HB	14:L:40:LYS:HZ2	1.79	0.47
14:L:43:GLU:OE1	14:L:43:GLU:CA	2.58	0.47
14:L:63:ARG:NH2	14:L:73:VAL:HG23	2.29	0.47
15:M:46:VAL:HG12	15:M:47:THR:N	2.28	0.47
16:N:17:THR:C	16:N:19:LEU:H	2.22	0.47
17:O:103:PRO:O	17:O:105:VAL:N	2.47	0.47
18:P:83:ARG:O	18:P:85:LYS:N	2.47	0.47
22:T:68:PRO:O	22:T:69:THR:OG1	2.33	0.47
22:T:69:THR:HA	22:T:91:LEU:HG	1.96	0.47
23:U:17:GLN:O	23:U:17:GLN:HG3	2.15	0.47
23:U:27:GLU:CA	23:U:69:PHE:HD2	2.27	0.47
23:U:36:ILE:HG21	23:U:39:ARG:NH2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:39:ARG:NH1	23:U:58:THR:HG21	2.29	0.47
23:U:50:ASN:O	23:U:62:LEU:HB3	2.15	0.47
24:V:81:ARG:O	24:V:82:LEU:CB	2.63	0.47
29:a:4:MET:O	29:a:62:LEU:HD12	2.15	0.47
29:a:32:LEU:HD21	29:a:35:GLN:CA	2.45	0.47
29:a:49:VAL:HG11	29:a:52:LYS:HB2	1.96	0.47
31:y:14:U:C6	31:y:14:U:P	3.08	0.47
31:y:265:G:H2'	31:y:267:C:C5	2.49	0.47
31:y:421:U:H6	31:y:421:U:H5''	1.80	0.47
31:y:455:C:C4	31:y:456:C:N4	2.82	0.47
31:y:477:G:H2'	31:y:478:A:H8	1.79	0.47
31:y:510:A:N3	31:y:543:C:H1'	2.29	0.47
31:y:934:C:O2'	31:y:1344:C:C5	2.64	0.47
31:y:1006:C:O5'	31:y:1006:C:C6	2.67	0.47
31:y:1057:G:C5	31:y:1058:G:C5	3.03	0.47
31:y:1160:G:H2'	31:y:1161:C:C4'	2.44	0.47
31:y:1230:C:H5'	32:z:30:G:O3'	2.14	0.47
31:y:1308:U:O2	31:y:1329:A:C2	2.60	0.47
31:y:1314:C:H41	52:t:4:SER:HB3	1.79	0.47
31:y:1378:C:O2'	40:h:156:TRP:CZ3	2.64	0.47
33:0:41:U:C6	33:0:41:U:C3'	2.98	0.47
35:c:100:GLY:CA	35:c:104:ASN:CB	2.93	0.47
35:c:110:GLN:CD	35:c:110:GLN:H	2.22	0.47
35:c:193:ASP:OD1	35:c:196:LEU:HB2	2.14	0.47
36:d:6:HIS:O	36:d:10:PHE:CB	2.63	0.47
36:d:170:GLN:CG	36:d:171:GLY:N	2.67	0.47
36:d:180:ALA:O	36:d:182:ILE:HG13	2.14	0.47
38:f:144:THR:O	38:f:148:VAL:HG23	2.15	0.47
39:g:35:ALA:HA	39:g:66:GLU:O	2.14	0.47
40:h:3:ARG:O	40:h:4:ARG:CB	2.61	0.47
40:h:20:ASP:CB	40:h:22:LEU:HD21	2.44	0.47
40:h:32:ARG:O	40:h:32:ARG:HG2	2.14	0.47
41:i:49:GLU:C	41:i:51:VAL:N	2.72	0.47
44:l:108:ILE:HG22	51:s:88:LYS:CG	2.45	0.47
45:m:8:GLN:CA	45:m:11:ARG:HH11	2.25	0.47
45:m:84:ILE:C	45:m:100:VAL:HG12	2.39	0.47
45:m:86:GLY:HA2	45:m:97:TYR:CB	2.40	0.47
45:m:102:GLY:C	45:m:103:VAL:CG2	2.80	0.47
46:n:14:ARG:O	46:n:15:VAL:C	2.57	0.47
47:o:47:LEU:CD2	47:o:47:LEU:N	2.75	0.47
48:p:30:ALA:HA	48:p:33:THR:OG1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:p:34:LEU:O	48:p:35:ARG:C	2.57	0.47
49:q:19:ILE:HB	49:q:37:GLY:CA	2.45	0.47
49:q:76:GLN:O	49:q:78:GLY:N	2.48	0.47
50:r:30:PRO:O	50:r:31:LEU:C	2.57	0.47
50:r:88:TYR:HD2	50:r:89:LEU:HD12	1.74	0.47
52:t:2:PRO:O	52:t:3:ARG:C	2.57	0.47
52:t:53:ASN:O	52:t:54:GLY:C	2.56	0.47
1:w:47:C:C4	1:w:179:G:C2	3.03	0.47
1:w:184:C:O2	1:w:217:G:O2'	2.30	0.47
1:w:322:A:O2'	1:w:339:U:N3	2.47	0.47
1:w:328:U:O2'	21:S:66:PRO:HB2	2.15	0.47
1:w:359:A:C2'	1:w:360:G:C8	2.93	0.47
1:w:374:A:H2'	1:w:375:C:H6	1.78	0.47
1:w:381:G:C2	1:w:394:A:C2	3.03	0.47
1:w:598:G:O2'	1:w:599:G:H5'	2.10	0.47
1:w:602:G:H4'	1:w:604:G:O2'	2.15	0.47
1:w:811:U:N3	1:w:1250:G:H5'	2.24	0.47
1:w:824:A:C5	1:w:825:C:C4	3.02	0.47
1:w:825:C:O2'	1:w:2428:G:H2'	2.15	0.47
1:w:952:G:N3	1:w:2267:A:N7	2.63	0.47
1:w:974(A):G:C5	1:w:1186:G:O6	2.67	0.47
1:w:1022:G:C2	1:w:1140:C:C4	3.03	0.47
1:w:1030:G:P	13:K:126:PRO:O	2.73	0.47
1:w:1189:A:O2'	1:w:1190:G:H5'	2.14	0.47
1:w:1194:A:P	12:J:17:LYS:HE2	2.55	0.47
1:w:1241:A:H2'	1:w:1242:A:C8	2.48	0.47
1:w:1305:C:C4	1:w:1624:G:N1	2.83	0.47
1:w:1328:G:H4'	1:w:1329:U:C5	2.49	0.47
1:w:1335:U:OP2	1:w:1335:U:C6	2.68	0.47
1:w:1598:C:H4'	20:R:37:THR:CB	2.43	0.47
1:w:1668:A:C4	1:w:1674:G:C5	3.03	0.47
1:w:1703:G:N7	1:w:1704:G:C8	2.83	0.47
1:w:1703:G:O2'	31:y:1428:A:O2'	2.28	0.47
1:w:1823:G:C5	1:w:1824:G:C5	3.03	0.47
1:w:1914:C:H2'	1:w:1915:U:C1'	2.43	0.47
1:w:1937:A:HO2'	1:w:1938:A:P	2.37	0.47
1:w:1975:G:O6	1:w:1976:U:C4	2.67	0.47
1:w:2095:C:H2'	1:w:2096:U:C6	2.49	0.47
1:w:2128:C:H1'	1:w:2173:A:C2'	2.44	0.47
1:w:2248:C:H2'	1:w:2249:U:C5'	2.44	0.47
1:w:2266:A:C4'	1:w:2267:A:O5'	2.60	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2391:G:O6	1:w:2425:A:C5'	2.62	0.47
1:w:2556:C:C4	1:w:2557:G:N7	2.82	0.47
1:w:2709:G:H2'	1:w:2710:C:O4'	2.14	0.47
1:w:2720:U:C2	1:w:2721:A:N7	2.82	0.47
1:w:2728:U:N3	1:w:2729:G:C5	2.83	0.47
1:w:2797:U:OP2	1:w:2798:C:OP1	2.32	0.47
1:w:2809:A:OP2	1:w:2891:G:N1	2.30	0.47
1:w:2835:A:O2'	1:w:2836:U:C5	2.61	0.47
1:w:2857:G:H22	1:w:2860:A:P	2.34	0.47
2:x:21:G:C2'	2:x:22:U:H6	2.15	0.47
2:x:73:A:C6	2:x:104:A:N3	2.83	0.47
2:x:78:A:C2	2:x:99:A:N7	2.82	0.47
2:x:82:G:N1	2:x:83:G:C6	2.82	0.47
2:x:92:G:H2'	2:x:93:C:H6	1.78	0.47
3:A:23:ILE:O	3:A:187:ALA:HB1	2.15	0.47
4:B:2:ALA:O	4:B:3:VAL:HB	2.14	0.47
4:B:3:VAL:HA	4:B:17:THR:HG23	1.96	0.47
4:B:6:PHE:CE1	4:B:17:THR:C	2.93	0.47
4:B:14:ARG:O	4:B:15:PHE:CB	2.63	0.47
4:B:248:SER:O	4:B:249:PRO:C	2.56	0.47
5:C:61:ARG:CG	5:C:62:PRO:CD	2.86	0.47
6:D:24:ASN:C	6:D:26:HIS:CD2	2.92	0.47
8:F:89:ILE:HD12	8:F:90:LYS:O	2.13	0.47
9:G:52:ARG:O	9:G:54:GLN:N	2.47	0.47
9:G:64:GLU:O	9:G:67:ARG:CB	2.63	0.47
9:G:78:THR:C	9:G:145:VAL:HG23	2.39	0.47
10:H:32:VAL:HG12	10:H:35:ARG:HH12	1.74	0.47
10:H:45:THR:C	10:H:49:LEU:HD22	2.39	0.47
10:H:88:LYS:O	10:H:88:LYS:HD3	2.15	0.47
10:H:154:GLN:HG2	10:H:155:ALA:N	2.30	0.47
11:I:69:VAL:O	11:I:70:LYS:CB	2.63	0.47
14:L:87:TYR:HD1	14:L:87:TYR:N	2.12	0.47
15:M:61:ASN:OD1	15:M:62:LYS:HG3	2.15	0.47
15:M:84:GLN:HE22	15:M:86:ALA:N	2.12	0.47
17:O:11:ARG:CG	17:O:12:ARG:N	2.78	0.47
18:P:63:GLY:O	18:P:96:ILE:CG2	2.63	0.47
19:Q:85:VAL:CG1	19:Q:86:LEU:N	2.78	0.47
23:U:41:ARG:HD3	23:U:42:GLY:CA	2.44	0.47
23:U:59:LEU:HD12	23:U:59:LEU:H	1.79	0.47
29:a:51:ALA:N	29:a:53:PRO:HD2	2.29	0.47
29:a:52:LYS:C	29:a:56:GLU:OE1	2.56	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:41:G:N3	31:y:42:G:C8	2.82	0.47
31:y:76:G:H2'	31:y:77:C:H5'	1.97	0.47
31:y:122:G:C5	31:y:123:C:C4	3.02	0.47
31:y:122:G:O6	31:y:239:U:C2	2.67	0.47
31:y:126:G:C2	31:y:127:G:C4	3.01	0.47
31:y:140:A:H2	31:y:223:U:O2	1.97	0.47
31:y:159:G:C1'	31:y:162:A:H61	2.27	0.47
31:y:186(B):C:N3	53:u:105:SER:OG	2.47	0.47
31:y:229:U:H5'	49:q:59:TRP:HH2	1.77	0.47
31:y:297:G:H1'	31:y:557:G:H4'	1.97	0.47
31:y:363:A:C6	31:y:364:A:N3	2.82	0.47
31:y:485:G:C1'	31:y:486:U:H5	2.27	0.47
31:y:504:C:N1	31:y:542:G:N2	2.62	0.47
31:y:521:G:OP1	45:m:72:GLU:HG2	2.15	0.47
31:y:584:G:C2	31:y:585:G:C1'	2.98	0.47
31:y:643:C:O2	41:i:132:GLU:OE1	2.32	0.47
31:y:785:G:C6	31:y:798:G:C6	3.03	0.47
31:y:797:C:C4	31:y:798:G:N7	2.83	0.47
31:y:833:U:C2'	31:y:834:C:H5	2.26	0.47
31:y:947:G:H5''	46:n:108:ARG:HB2	1.96	0.47
31:y:980:C:C5	31:y:981:U:H1'	2.50	0.47
31:y:1039:C:H2'	31:y:1040:U:C6	2.49	0.47
31:y:1088:G:C5	31:y:1089:G:N7	2.83	0.47
31:y:1112:C:N3	36:d:178:LEU:HD13	2.24	0.47
31:y:1117:G:C5'	42:j:104:ARG:HH12	2.28	0.47
31:y:1206:G:H5'	36:d:193:TYR:C	2.39	0.47
31:y:1228:C:H5'	46:n:114:ARG:HE	1.79	0.47
31:y:1256:A:H5'	31:y:1257:U:P	2.54	0.47
31:y:1281:U:OP1	31:y:1282:C:C5	2.68	0.47
31:y:1319:A:H2'	31:y:1323:G:N7	2.29	0.47
31:y:1345:U:O2	31:y:1377:A:C6	2.68	0.47
31:y:1469:G:N1	31:y:1470:G:C6	2.82	0.47
31:y:1509:C:C4	31:y:1510:U:C2	3.03	0.47
31:y:1518:MA6:H102	31:y:1519:MA6:C10	2.44	0.47
32:z:22:G:H2'	32:z:23:A:C8	2.50	0.47
33:0:13:C:H6	33:0:13:C:C5'	2.27	0.47
33:0:31:A:C2	33:0:39:U:N3	2.80	0.47
36:d:123:GLN:NE2	36:d:133:ALA:CB	2.57	0.47
37:e:151:LYS:O	37:e:152:SER:CB	2.62	0.47
38:f:15:ARG:HD3	38:f:28:PHE:CZ	2.49	0.47
38:f:34:VAL:C	38:f:112:LEU:HG	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:76:ILE:HD12	38:f:119:LEU:H	1.80	0.47
38:f:129:ILE:H	38:f:129:ILE:CD1	2.27	0.47
40:h:140:ASP:O	40:h:143:ARG:HB3	2.14	0.47
41:i:80:ILE:N	41:i:80:ILE:CD1	2.77	0.47
44:l:17:GLY:C	44:l:18:ARG:CD	2.82	0.47
45:m:92:LEU:N	45:m:93:PRO:HD3	2.29	0.47
46:n:18:ALA:C	46:n:19:LEU:HD23	2.40	0.47
46:n:71:ARG:O	46:n:74:VAL:CB	2.62	0.47
48:p:54:ARG:C	48:p:57:LEU:HB3	2.39	0.47
48:p:64:ARG:HA	48:p:67:LEU:HD12	1.95	0.47
49:q:39:TYR:CE2	49:q:41:PRO:N	2.83	0.47
52:t:29:ARG:O	52:t:47:HIS:HE1	1.98	0.47
52:t:42:PRO:O	52:t:44:MET:N	2.48	0.47
1:w:23:G:C2	1:w:517:C:O2	2.67	0.47
1:w:35:G:C1'	1:w:454:A:C1'	2.92	0.47
1:w:80:G:C1'	1:w:347:A:C6	2.77	0.47
1:w:116:C:O2'	1:w:127:A:C4	2.67	0.47
1:w:116:C:H2'	1:w:117:G:C4'	2.45	0.47
1:w:116:C:C2'	1:w:126:A:N3	2.77	0.47
1:w:123:G:C2	1:w:124:G:H1'	2.49	0.47
1:w:123:G:C2'	1:w:124:G:C8	2.97	0.47
1:w:124:G:C2	28:Z:19:ARG:NH2	2.82	0.47
1:w:135:G:C6	1:w:145:G:C6	3.03	0.47
1:w:141(B):C:C2'	1:w:142:G:O4'	2.60	0.47
1:w:146:G:H3'	1:w:147:U:C5	2.50	0.47
1:w:188:G:HO2'	1:w:1365:A:H61	1.50	0.47
1:w:270(S):G:O2'	24:V:77:ALA:HB3	2.14	0.47
1:w:287:C:N4	1:w:288:C:N4	2.61	0.47
1:w:288:C:O5'	1:w:289:A:C2	2.52	0.47
1:w:300:A:O5'	1:w:300:A:C8	2.68	0.47
1:w:342:G:O2'	1:w:343:C:H5'	2.14	0.47
1:w:371:A:O2'	1:w:372:G:H4'	2.14	0.47
1:w:399:G:H2'	1:w:400:G:O4'	2.15	0.47
1:w:450:G:O6	1:w:453:C:O5'	2.31	0.47
1:w:465:G:N2	1:w:684:G:C2'	2.77	0.47
1:w:471:A:H2'	1:w:472:A:C5'	2.45	0.47
1:w:480:A:H5''	1:w:481:G:C5'	2.44	0.47
1:w:503:A:C4'	1:w:505:A:H5''	2.39	0.47
1:w:557:U:C2'	1:w:558:G:O4'	2.62	0.47
1:w:590:A:C5	1:w:668:G:N2	2.82	0.47
1:w:618(A):G:N2	1:w:618(B):C:C2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:660:G:C5'	6:D:34:TRP:NE1	2.78	0.47
1:w:663:G:C8	1:w:664:C:C6	3.03	0.47
1:w:671:C:H42	12:J:33:ARG:NH2	2.13	0.47
1:w:707:G:N2	1:w:724:U:O2	2.45	0.47
1:w:718:A:H3'	1:w:718:A:OP1	2.13	0.47
1:w:735:A:H2'	1:w:736:C:C5'	2.44	0.47
1:w:747:U:C2	1:w:2013:A:H2	2.33	0.47
1:w:748:G:O2'	1:w:749:C:C5	2.66	0.47
1:w:788:A:H4'	1:w:789:A:O5'	2.13	0.47
1:w:802:A:C3'	1:w:803:U:O4'	2.63	0.47
1:w:812:C:C2'	1:w:813:U:H5'	2.38	0.47
1:w:819:A:C2	1:w:942:G:H1'	2.50	0.47
1:w:859:G:O2'	1:w:860:U:C6	2.67	0.47
1:w:860:U:C5	1:w:916:G:N2	2.82	0.47
1:w:870:A:C5	1:w:871:U:C5	3.03	0.47
1:w:918:A:H1'	2:x:80:U:O2'	2.14	0.47
1:w:1022:G:N2	1:w:1023:U:C5	2.83	0.47
1:w:1025:G:H1'	1:w:1135:C:C5'	2.41	0.47
1:w:1042:G:C2	1:w:1114:G:C6	3.03	0.47
1:w:1135:C:C5'	1:w:1136:G:OP2	2.62	0.47
1:w:1153:C:C2'	1:w:1154:G:C5'	2.83	0.47
1:w:1171:G:N7	1:w:1173:G:N7	2.62	0.47
1:w:1194:A:C5	1:w:1195:G:C8	2.99	0.47
1:w:1216:G:H2'	1:w:1217:C:C6	2.49	0.47
1:w:1236:G:O5'	1:w:1236:G:C8	2.67	0.47
1:w:1251:C:C2'	17:O:10:ARG:NH2	2.61	0.47
1:w:1270:C:H6	1:w:1270:C:P	2.38	0.47
1:w:1319:G:H5'	1:w:1320:C:P	2.55	0.47
1:w:1323:U:C2'	1:w:1324:G:C5'	2.80	0.47
1:w:1353:A:N6	1:w:1377:G:H2'	2.30	0.47
1:w:1412:A:C2	1:w:1590:U:N3	2.80	0.47
1:w:1545:A:C5	1:w:1546:A:C4	3.03	0.47
1:w:1565:C:H2'	1:w:1566:A:H2'	1.96	0.47
1:w:1606:G:H4'	1:w:1608:A:C4	2.48	0.47
1:w:1607:C:C6	1:w:1607:C:O5'	2.68	0.47
1:w:1657:C:C5	1:w:1658:C:H5	2.32	0.47
1:w:1669:A:C5'	1:w:1671:U:N3	2.76	0.47
1:w:1670:C:O5'	1:w:1671:U:OP2	2.32	0.47
1:w:1675:C:C4	1:w:1676:A:H8	2.29	0.47
1:w:1782:C:OP1	1:w:1783:A:OP2	2.33	0.47
1:w:1782:C:P	1:w:1782:C:H3'	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1798:U:H5''	4:B:260:ARG:N	2.29	0.47
1:w:1803:A:C2'	1:w:1804:C:H5'	2.44	0.47
1:w:1824:G:C5'	1:w:1825:A:OP2	2.62	0.47
1:w:1843:C:H4'	4:B:257:LEU:HD22	1.96	0.47
1:w:1857:G:C2'	1:w:1885:A:N6	2.78	0.47
1:w:1860:G:C5'	3:A:207:GLY:HA2	2.44	0.47
1:w:1871:A:C5	1:w:1872:A:C5	3.02	0.47
1:w:1915:U:H2'	1:w:1916:A:H1'	1.97	0.47
1:w:1917:U:O3'	1:w:1918:A:O4'	2.32	0.47
1:w:1971:A:H5'	1:w:1972:A:H4'	1.96	0.47
1:w:1975:G:H5''	1:w:1975:G:H8	1.80	0.47
1:w:2018:G:H2'	1:w:2019:A:C5'	2.44	0.47
1:w:2023:G:C4	1:w:2024:G:C8	3.03	0.47
1:w:2051:A:H5'	1:w:2578:G:O5'	2.14	0.47
1:w:2051:A:H5'	1:w:2578:G:P	2.55	0.47
1:w:2055:C:C4'	1:w:2056:G:C5'	2.83	0.47
1:w:2091:U:P	1:w:2092:U:H3'	2.53	0.47
1:w:2100:G:C6	1:w:2101:G:C5	3.03	0.47
1:w:2230:G:C6	1:w:2231:C:C4	3.02	0.47
1:w:2244:U:H2'	1:w:2245:U:O4'	2.14	0.47
1:w:2250:G:N7	1:w:2496:C:H5''	2.29	0.47
1:w:2253:G:O2'	1:w:2254:C:H5'	2.14	0.47
1:w:2353:G:H1'	23:U:34:GLY:HA3	1.95	0.47
1:w:2354:G:C2'	23:U:36:ILE:HD13	2.44	0.47
1:w:2355:C:O2'	23:U:17:GLN:HG3	2.14	0.47
1:w:2357:U:O2'	1:w:2360:A:N7	2.48	0.47
1:w:2370:G:C2'	1:w:2371:G:H5'	2.45	0.47
1:w:2415:G:H5''	12:J:66:GLY:CA	2.44	0.47
1:w:2466:C:HO2'	1:w:2467:C:H5'	1.77	0.47
1:w:2485:G:O2'	13:K:126:PRO:CA	2.62	0.47
1:w:2549:G:N2	1:w:2560:C:N3	2.63	0.47
1:w:2572:A:OP2	5:C:144:ARG:CD	2.62	0.47
1:w:2585:U:H5''	32:z:76:A:OP2	2.09	0.47
1:w:2653:U:H5'	1:w:2654:A:H5''	1.96	0.47
1:w:2676:C:C6	1:w:2676:C:C3'	2.97	0.47
1:w:2677:G:N7	1:w:2678:C:C4	2.82	0.47
1:w:2681:C:O2'	1:w:2683:C:OP2	2.27	0.47
1:w:2745:C:O2'	8:F:142:GLY:CA	2.62	0.47
1:w:2755:C:H6	1:w:2755:C:H3'	1.80	0.47
1:w:2812:G:O6	1:w:2813:A:N6	2.48	0.47
1:w:2816:C:O2	1:w:2816:C:H2'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2819:G:C6	1:w:2828:C:N4	2.83	0.47
2:x:9:G:C2	2:x:112:G:C2	3.03	0.47
2:x:73:A:H2'	2:x:74:U:C5'	2.44	0.47
2:x:93:C:H3'	2:x:94:C:C6	2.49	0.47
2:x:96:G:N1	2:x:97:G:C5	2.83	0.47
2:x:114:G:C1'	15:M:50:SER:OG	2.61	0.47
2:x:117:G:N3	2:x:117:G:C2'	2.72	0.47
4:B:168:ARG:HA	4:B:173:VAL:HA	1.96	0.47
4:B:206:LEU:N	4:B:206:LEU:HD22	2.30	0.47
4:B:227:ASN:HD21	4:B:237:GLU:CG	2.27	0.47
5:C:38:THR:CG2	5:C:39:PRO:HD2	2.45	0.47
5:C:154:LYS:CE	5:C:155:LYS:H	2.26	0.47
5:C:181:LEU:N	5:C:181:LEU:CD2	2.73	0.47
6:D:4:ILE:HD13	6:D:118:LEU:HD22	1.97	0.47
6:D:56:GLY:CA	6:D:73:ILE:HD13	2.43	0.47
6:D:132:LYS:HB2	6:D:132:LYS:NZ	2.28	0.47
6:D:165:LEU:HD22	6:D:165:LEU:C	2.38	0.47
6:D:166:PRO:C	6:D:168:VAL:N	2.73	0.47
6:D:177:ASN:HB3	6:D:180:ASP:CG	2.39	0.47
7:E:8:LYS:HB2	7:E:100:TRP:HZ2	1.79	0.47
7:E:62:LEU:HD12	7:E:62:LEU:C	2.39	0.47
7:E:82:LEU:CG	7:E:84:LYS:HE2	2.39	0.47
7:E:124:SER:CB	7:E:133:LEU:HD11	2.44	0.47
7:E:139:LEU:CB	7:E:146:TYR:O	2.60	0.47
8:F:89:ILE:HG12	8:F:93:GLY:C	2.39	0.47
8:F:95:ARG:HB2	8:F:107:VAL:HG13	1.95	0.47
8:F:125:VAL:HG13	8:F:131:VAL:HG11	1.96	0.47
8:F:139:GLN:C	8:F:141:VAL:N	2.70	0.47
9:G:44:LEU:CA	9:G:47:LEU:HG	2.44	0.47
9:G:81:VAL:HG21	9:G:144:VAL:CG1	2.45	0.47
9:G:87:LYS:HG3	9:G:88:ILE:N	2.29	0.47
9:G:98:ALA:HA	9:G:109:ILE:HD13	1.87	0.47
10:H:81:ASP:HA	10:H:118:PRO:CB	2.41	0.47
11:I:23:ARG:HG2	11:I:23:ARG:HH11	1.79	0.47
11:I:86:ILE:O	11:I:94:ARG:CD	2.63	0.47
11:I:87:ILE:CA	11:I:93:PRO:HA	2.44	0.47
12:J:39:LYS:HZ2	12:J:40:SER:N	2.12	0.47
12:J:114:ILE:HG12	12:J:130:PHE:HB3	1.96	0.47
13:K:114:ALA:O	13:K:117:ALA:HB3	2.15	0.47
14:L:40:LYS:H	14:L:40:LYS:CD	1.93	0.47
14:L:74:LYS:O	14:L:77:ARG:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:84:GLN:NE2	15:M:86:ALA:N	2.63	0.47
16:N:61:PHE:O	16:N:62:THR:HB	2.15	0.47
17:O:47:TYR:CG	17:O:48:ALA:N	2.82	0.47
17:O:49:HIS:O	17:O:52:ARG:HB2	2.15	0.47
17:O:84:LYS:HE2	17:O:84:LYS:N	2.30	0.47
18:P:16:PRO:O	18:P:99:ILE:O	2.32	0.47
18:P:82:ARG:HG2	18:P:82:ARG:NH1	2.28	0.47
19:Q:10:VAL:C	19:Q:100:THR:HB	2.39	0.47
19:Q:21:VAL:HA	19:Q:24:ILE:HD11	1.96	0.47
19:Q:23:LEU:HB2	27:Y:25:LEU:CB	2.45	0.47
19:Q:65:LEU:HD23	19:Q:68:ARG:NH1	2.30	0.47
19:Q:97:LYS:CD	19:Q:98:LYS:N	2.76	0.47
20:R:63:LYS:CD	20:R:64:LYS:N	2.77	0.47
21:S:47:LYS:O	21:S:56:PRO:CB	2.63	0.47
22:T:55:HIS:C	22:T:70:LEU:HD11	2.31	0.47
23:U:45:PHE:CD2	23:U:78:TYR:CA	2.98	0.47
24:V:26:ARG:HG3	24:V:35:THR:H	1.79	0.47
25:W:3:LEU:HD11	25:W:8:LYS:NZ	2.30	0.47
25:W:10:LEU:HD12	25:W:10:LEU:C	2.40	0.47
25:W:27:GLU:C	25:W:30:ARG:HG2	2.40	0.47
25:W:57:ILE:O	25:W:57:ILE:HG13	2.15	0.47
26:X:15:TYR:N	26:X:15:TYR:CD1	2.83	0.47
26:X:45:GLY:CA	26:X:48:GLU:CG	2.92	0.47
26:X:49:LYS:HE3	26:X:49:LYS:CA	2.28	0.47
26:X:50:VAL:O	26:X:51:ALA:C	2.57	0.47
29:a:32:LEU:O	29:a:33:ASN:C	2.58	0.47
31:y:7:G:C2'	31:y:8:A:OP1	2.63	0.47
31:y:32:A:N6	31:y:551:U:O4	2.48	0.47
31:y:75:C:O5'	31:y:75:C:C6	2.67	0.47
31:y:106:C:C6	53:u:15:ARG:NH2	2.82	0.47
31:y:116:A:C2'	31:y:117:G:C8	2.97	0.47
31:y:321:A:H2'	31:y:322:C:C6	2.49	0.47
31:y:332:G:O2'	53:u:16:HIS:CD2	2.68	0.47
31:y:340:U:H2'	31:y:341:C:O4'	2.14	0.47
31:y:407:G:C4'	37:e:119:GLN:HB2	2.44	0.47
31:y:419:C:O3'	31:y:513:C:H5'	2.14	0.47
31:y:419:C:OP1	31:y:513:C:H1'	2.14	0.47
31:y:426:G:C2	31:y:427:U:C4	3.03	0.47
31:y:440:A:N6	31:y:493:G:H1'	2.30	0.47
31:y:540:G:C5	31:y:541:G:C5	3.03	0.47
31:y:554:C:O5'	31:y:554:C:H6	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:574:A:H2	31:y:882:C:O2	1.95	0.47
31:y:618:C:C5'	31:y:619:U:H5''	2.42	0.47
31:y:651:C:H3'	31:y:652:U:C6	2.50	0.47
31:y:719:C:C5	31:y:720:C:N3	2.82	0.47
31:y:748:C:O2'	31:y:749:C:P	2.73	0.47
31:y:808:C:H6	31:y:808:C:O5'	1.98	0.47
31:y:833:U:H1'	31:y:854:G:N2	2.30	0.47
31:y:880:C:OP2	45:m:5:THR:CG2	2.63	0.47
31:y:896:C:H4'	50:r:101:ARG:HD2	1.88	0.47
31:y:937:A:C1'	31:y:1382:C:H42	2.28	0.47
31:y:958:A:H2'	31:y:959:A:O5'	2.14	0.47
31:y:975:A:H4'	31:y:1363:A:N6	2.29	0.47
31:y:992:U:C4	31:y:1043:C:C5	3.03	0.47
31:y:1157:A:C3'	31:y:1158:C:H5'	2.44	0.47
31:y:1175:G:N2	31:y:1176:A:C5	2.83	0.47
31:y:1208:C:O5'	31:y:1208:C:C6	2.58	0.47
31:y:1212:U:O2'	31:y:1213:A:C4'	2.58	0.47
31:y:1220:G:C2	31:y:1221:G:N7	2.83	0.47
31:y:1255:G:H1	31:y:1282:C:N4	2.12	0.47
31:y:1266:G:H2'	31:y:1268:A:P	2.52	0.47
31:y:1270:C:H2'	31:y:1271:G:C5'	2.44	0.47
31:y:1276:G:HO2'	31:y:1282:C:C1'	2.27	0.47
31:y:1416:G:O6	31:y:1417:G:C2	2.67	0.47
31:y:1461:G:N1	31:y:1462:G:O6	2.47	0.47
31:y:1487:G:H2'	31:y:1488:G:H8	1.80	0.47
31:y:1519:MA6:H2'	31:y:1520:G:O4'	2.14	0.47
31:y:1526:G:N7	31:y:1527:C:C4	2.83	0.47
32:z:6:G:C2	32:z:68:C:C2	3.03	0.47
33:0:20:G:H2'	33:0:21:A:O5'	2.15	0.47
35:c:100:GLY:HA3	35:c:104:ASN:CB	2.45	0.47
35:c:173:ALA:O	35:c:175:ARG:N	2.47	0.47
36:d:92:ALA:C	36:d:98:ASN:HA	2.40	0.47
36:d:120:VAL:HG11	36:d:134:ILE:N	2.30	0.47
36:d:120:VAL:CA	36:d:123:GLN:HE22	2.27	0.47
37:e:13:ARG:CB	37:e:33:MET:HB3	2.43	0.47
37:e:100:ARG:O	37:e:103:ASN:OD1	2.33	0.47
37:e:108:LEU:CB	37:e:110:PHE:CD1	2.97	0.47
37:e:117:ALA:O	37:e:120:LEU:CD1	2.63	0.47
37:e:130:GLY:O	37:e:131:ARG:HG3	2.15	0.47
37:e:171:GLY:N	37:e:174:LEU:HD12	2.30	0.47
38:f:36:ASP:O	38:f:37:ARG:CB	2.59	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:g:7:ASN:O	39:g:8:ILE:HD12	2.13	0.47
39:g:61:LEU:HD23	39:g:61:LEU:N	2.30	0.47
39:g:89:MET:HG3	39:g:90:VAL:N	2.28	0.47
40:h:137:LYS:NZ	40:h:137:LYS:CB	2.74	0.47
40:h:150:ALA:N	44:l:59:TYR:HB3	2.29	0.47
41:i:36:LEU:HD21	41:i:61:VAL:HG12	1.91	0.47
41:i:94:TYR:N	41:i:94:TYR:CD2	2.83	0.47
42:j:56:LEU:C	42:j:58:ARG:H	2.23	0.47
43:k:11:PHE:O	43:k:68:HIS:HD2	1.98	0.47
43:k:87:THR:CG2	43:k:88:LEU:N	2.78	0.47
46:n:4:ILE:HG13	46:n:57:ARG:N	2.29	0.47
46:n:89:GLY:HA2	46:n:92:HIS:CE1	2.50	0.47
49:q:58:TYR:O	49:q:61:SER:HB3	2.14	0.47
50:r:25:ARG:O	50:r:38:ARG:O	2.32	0.47
50:r:84:LEU:HD22	50:r:87:LYS:HB3	1.96	0.47
52:t:12:ASP:CA	52:t:15:LEU:HD11	2.44	0.47
52:t:12:ASP:HB3	52:t:14:HIS:CE1	2.50	0.47
52:t:68:GLY:O	52:t:69:HIS:O	2.32	0.47
53:u:92:LEU:CB	53:u:98:PRO:HA	2.37	0.47
53:u:98:PRO:O	53:u:99:LEU:CB	2.63	0.47
1:w:142:G:O6	1:w:143:C:C4	2.67	0.47
1:w:268:C:O5'	1:w:268:C:H6	1.97	0.47
1:w:281:G:H21	1:w:358:U:H3'	1.76	0.47
1:w:288:C:P	1:w:289:A:C2	3.08	0.47
1:w:414:C:N4	1:w:2410:G:N1	2.63	0.47
1:w:439:G:H2'	1:w:440:G:H8	1.78	0.47
1:w:449:A:H3'	1:w:450:G:H8	1.79	0.47
1:w:542:C:O2	1:w:542:C:H2'	2.15	0.47
1:w:582:G:N1	1:w:1259:G:C6	2.83	0.47
1:w:596:G:C5	1:w:597:U:C5	3.03	0.47
1:w:675:A:C2	1:w:2444:G:H1'	2.50	0.47
1:w:682:G:C2	1:w:796:C:N3	2.83	0.47
1:w:801:G:O4'	6:D:50:GLY:HA2	2.15	0.47
1:w:813:U:C2	1:w:1195:G:C2	3.03	0.47
1:w:828:U:H4'	1:w:831:G:H1	1.75	0.47
1:w:832:G:P	12:J:38:GLN:HA	2.55	0.47
1:w:835:A:H61	1:w:944:G:H21	1.63	0.47
1:w:846:C:O2'	1:w:929:G:O6	2.32	0.47
1:w:925:C:H3'	1:w:925:C:H6	1.77	0.47
1:w:996:A:C5	1:w:1160:G:N1	2.83	0.47
1:w:1025:G:C5	1:w:1135:C:H1'	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1041:C:N3	1:w:1042:G:C8	2.83	0.47
1:w:1047:G:C1'	1:w:1111:A:N6	2.78	0.47
1:w:1153:C:O5'	1:w:1153:C:C6	2.68	0.47
1:w:1164:G:H3'	1:w:1165:U:C5	2.49	0.47
1:w:1187:G:H8	1:w:1187:G:O5'	1.98	0.47
1:w:1225:G:H5''	18:P:88:ARG:CG	2.43	0.47
1:w:1225:G:O2'	18:P:86:GLY:CA	2.63	0.47
1:w:1301:A:C2	1:w:1641:A:C6	3.02	0.47
1:w:1326:U:H2'	1:w:1327:C:H6	1.79	0.47
1:w:1364:G:OP2	1:w:1364:G:H8	1.98	0.47
1:w:1388:G:C2	1:w:1400:G:C2	3.03	0.47
1:w:1405:U:C2	1:w:1406:U:C6	3.03	0.47
1:w:1431:U:C2'	1:w:1432:C:O5'	2.63	0.47
1:w:1440:G:H1	1:w:1551:C:H42	1.62	0.47
1:w:1547:C:H5'	1:w:1547:C:H6	1.79	0.47
1:w:1574:C:C4	1:w:1575:C:N4	2.83	0.47
1:w:1615:C:H2'	1:w:1617:C:C6	2.50	0.47
1:w:1619:G:N3	28:Z:1:MET:N	2.49	0.47
1:w:1626:G:H8	1:w:1626:G:O5'	1.96	0.47
1:w:1642:G:C6	1:w:1643:G:C5	3.02	0.47
1:w:1687:G:O2'	1:w:1702:G:N2	2.48	0.47
1:w:1707:G:C5	1:w:1756:G:C6	3.03	0.47
1:w:1761:C:O5'	1:w:1761:C:C6	2.55	0.47
1:w:1779:U:H5	1:w:1784:A:C5	2.33	0.47
1:w:1801:G:OP2	1:w:1801:G:C8	2.68	0.47
1:w:1841:U:C2	1:w:1901:A:N1	2.82	0.47
1:w:1967:C:C4	1:w:1968:G:N9	2.83	0.47
1:w:2041:U:H6	1:w:2041:U:OP2	1.95	0.47
1:w:2072:G:N2	1:w:2438:U:C2	2.83	0.47
1:w:2077:A:C3'	1:w:2078:C:H6	2.28	0.47
1:w:2087:G:C5	1:w:2088:G:C8	3.03	0.47
1:w:2105:C:N4	1:w:2106:G:C6	2.83	0.47
1:w:2303:G:H3'	1:w:2304:G:H8	1.78	0.47
1:w:2371:G:C2	1:w:2372:G:C6	3.03	0.47
1:w:2420:C:H2'	1:w:2421:G:C8	2.50	0.47
1:w:2584:U:OP2	1:w:2584:U:H3'	2.15	0.47
1:w:2584:U:HO2'	1:w:2585:U:H5'	1.80	0.47
1:w:2619:C:C5'	5:C:152:LYS:HA	2.45	0.47
1:w:2682:U:H2'	1:w:2682:U:O2	2.15	0.47
1:w:2684:U:H5''	16:N:51:ARG:HH12	1.79	0.47
1:w:2713:A:H3'	1:w:2714:G:C5'	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2717:G:O6	1:w:2718:G:C6	2.67	0.47
1:w:2813:A:N6	1:w:2888:C:H42	2.12	0.47
1:w:2839:G:H2'	1:w:2840:C:C6	2.50	0.47
2:x:8:U:C2'	2:x:9:G:C8	2.93	0.47
2:x:52:A:N3	2:x:53:A:H1'	2.30	0.47
3:A:57:GLN:HG2	3:A:202:PRO:HG3	1.95	0.47
3:A:59:VAL:HG22	3:A:166:ASN:HB3	1.97	0.47
3:A:163:GLU:OE2	3:A:164:PHE:O	2.32	0.47
4:B:24:ILE:HG13	4:B:91:ARG:NH1	2.26	0.47
4:B:93:ALA:O	4:B:104:TYR:HA	2.15	0.47
4:B:260:ARG:NH1	4:B:262:ARG:CA	2.64	0.47
5:C:4:ILE:HD13	5:C:29:GLY:H	1.78	0.47
5:C:14:ILE:O	5:C:21:VAL:HG22	2.15	0.47
5:C:102:VAL:HA	5:C:201:THR:CB	2.45	0.47
6:D:30:GLU:HA	6:D:33:ARG:CD	2.45	0.47
7:E:79:ASN:HD22	7:E:86:MET:CG	2.28	0.47
8:F:10:PRO:HG2	8:F:12:PRO:HG3	1.96	0.47
8:F:124:GLU:OE2	8:F:134:SER:CB	2.63	0.47
8:F:145:ALA:O	8:F:149:ARG:HG2	2.15	0.47
10:H:38:LEU:O	10:H:39:ILE:HB	2.15	0.47
11:I:29:ASN:ND2	11:I:29:ASN:C	2.72	0.47
11:I:65:THR:HG22	11:I:82:ASN:HD22	1.79	0.47
12:J:88:LEU:O	12:J:90:ARG:N	2.48	0.47
13:K:75:THR:HG22	13:K:76:LYS:H	1.77	0.47
14:L:56:LYS:CB	14:L:84:ALA:HA	2.44	0.47
15:M:35:ILE:CD1	15:M:65:VAL:O	2.62	0.47
16:N:27:THR:CG2	16:N:63:VAL:HG11	2.45	0.47
16:N:107:ASP:OD2	31:y:1431:C:C5'	2.63	0.47
17:O:61:TRP:C	17:O:65:ILE:HD12	2.40	0.47
19:Q:39:THR:HG21	27:Y:28:PRO:HD3	1.97	0.47
19:Q:43:GLY:O	19:Q:47:VAL:HG22	2.14	0.47
22:T:17:ALA:O	22:T:18:LEU:C	2.58	0.47
22:T:115:GLY:HA2	22:T:176:PRO:CB	2.44	0.47
23:U:24:LYS:C	23:U:25:ARG:HG2	2.40	0.47
23:U:45:PHE:CZ	23:U:77:ARG:HB3	2.50	0.47
24:V:76:ARG:NH1	24:V:94:LEU:HD11	2.30	0.47
25:W:22:GLU:C	25:W:22:GLU:OE1	2.58	0.47
27:Y:34:PRO:CG	27:Y:52:TYR:HE2	2.28	0.47
28:Z:30:VAL:O	28:Z:33:ARG:CB	2.61	0.47
29:a:6:THR:CB	29:a:63:PRO:HG3	2.44	0.47
30:b:3:VAL:CB	30:b:34:GLN:HB3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:52:G:C5	31:y:53:A:N7	2.82	0.47
31:y:377:G:OP1	49:q:3:LYS:CE	2.63	0.47
31:y:413:G:H22	31:y:428:G:HO2'	1.49	0.47
31:y:558:G:C3'	31:y:559:A:C2	2.98	0.47
31:y:637:G:N1	31:y:638:G:C5	2.83	0.47
31:y:668:G:C2'	31:y:669:U:H5'	2.44	0.47
31:y:694:A:N1	31:y:788:U:H5'	2.30	0.47
31:y:695:A:H2'	31:y:696:A:C8	2.50	0.47
31:y:716:A:C2'	31:y:717:C:C5'	2.89	0.47
31:y:718:G:C6	51:s:81:PHE:CD2	3.03	0.47
31:y:880:C:N3	31:y:881:G:C8	2.83	0.47
31:y:959:A:C6	31:y:960:U:C6	3.03	0.47
31:y:1014:A:C2'	31:y:1015:A:O4'	2.52	0.47
31:y:1080:A:H4'	38:f:16:THR:OG1	2.15	0.47
31:y:1088:G:C4	31:y:1089:G:N7	2.83	0.47
31:y:1106:G:H5''	36:d:172:ARG:HD3	1.89	0.47
31:y:1235:U:OP1	54:v:3:LYS:CG	2.62	0.47
31:y:1243:C:P	54:v:10:ARG:HH12	2.37	0.47
31:y:1380:U:OP2	40:h:4:ARG:CD	2.63	0.47
31:y:1392:G:H21	31:y:1502:A:C1'	2.27	0.47
31:y:1500:A:C4'	31:y:1509:C:OP1	2.63	0.47
32:z:70:G:H2'	32:z:71:G:H8	1.74	0.47
33:0:8:U:O2'	33:0:9:A:H5''	2.14	0.47
33:0:65:G:C8	33:0:65:G:P	3.06	0.47
35:c:21:ARG:CB	35:c:23:ARG:HH12	2.28	0.47
35:c:37:ASN:HB2	35:c:39:ILE:HG12	1.96	0.47
35:c:184:VAL:CG2	35:c:198:ASP:OD1	2.63	0.47
35:c:187:LEU:HD22	35:c:188:ALA:N	2.22	0.47
36:d:132:ARG:C	36:d:134:ILE:N	2.72	0.47
36:d:184:TYR:CZ	36:d:201:TYR:CD2	3.02	0.47
37:e:12:CYS:SG	37:e:19:LEU:O	2.73	0.47
37:e:35:ARG:HA	37:e:35:ARG:HD2	1.62	0.47
37:e:57:ARG:HH21	38:f:107:ARG:HB3	1.79	0.47
37:e:126:ILE:HD13	37:e:146:ILE:HD12	1.97	0.47
38:f:28:PHE:O	38:f:48:ALA:O	2.33	0.47
39:g:8:ILE:CG2	39:g:9:VAL:N	2.77	0.47
39:g:93:SER:C	39:g:95:GLU:H	2.22	0.47
40:h:26:PHE:CE1	40:h:101:LEU:HB3	2.48	0.47
41:i:119:LEU:HD13	41:i:127:LEU:HG	1.97	0.47
43:k:78:ASN:HD22	43:k:78:ASN:N	2.08	0.47
43:k:82:ILE:HA	43:k:85:LEU:HD21	1.91	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:n:71:ARG:O	46:n:74:VAL:CG2	2.62	0.47
47:o:9:LYS:HD3	47:o:10:ALA:CA	2.45	0.47
48:p:3:ILE:HG13	48:p:4:THR:N	2.29	0.47
49:q:40:ASP:HB3	49:q:48:TRP:HB2	1.96	0.47
51:s:61:LYS:HD3	51:s:64:ARG:CD	2.45	0.47
51:s:66:LEU:CD2	51:s:66:LEU:C	2.87	0.47
52:t:43:GLU:O	52:t:44:MET:CB	2.63	0.47
53:u:34:LYS:O	53:u:38:LYS:HG3	2.15	0.47
1:w:48:G:H2'	1:w:49:A:N1	2.30	0.47
1:w:50:U:O5'	1:w:50:U:C6	2.63	0.47
1:w:101:G:N3	1:w:101:G:C2'	2.78	0.47
1:w:120:U:C5	1:w:149:A:N6	2.83	0.47
1:w:146:G:C5	1:w:147:U:C4	3.03	0.47
1:w:187:G:C2	1:w:210:C:C2	3.03	0.47
1:w:220:G:C4'	1:w:234:C:H4'	2.45	0.47
1:w:221:A:C2'	1:w:222:A:OP2	2.62	0.47
1:w:388:G:P	24:V:34:THR:H	2.38	0.47
1:w:406:G:C4	1:w:407:G:C8	3.03	0.47
1:w:411:G:P	1:w:2407:G:OP2	2.72	0.47
1:w:440:G:C3'	1:w:441:U:C6	2.98	0.47
1:w:464:U:C2	1:w:465:G:C8	3.03	0.47
1:w:477:A:C3'	1:w:478:A:H8	2.22	0.47
1:w:481:G:C2'	1:w:482:A:OP2	2.62	0.47
1:w:506:G:H4'	1:w:509:C:H1'	1.97	0.47
1:w:521:G:H3'	1:w:522:G:H8	1.80	0.47
1:w:548:A:OP2	1:w:548:A:C8	2.67	0.47
1:w:568:U:C4	1:w:570:G:OP1	2.67	0.47
1:w:609(B):G:O6	1:w:618(B):C:N4	2.44	0.47
1:w:621:A:C4	1:w:622:G:C8	3.03	0.47
1:w:743:G:OP2	1:w:743:G:N7	2.48	0.47
1:w:776:G:C4'	1:w:777:A:O5'	2.63	0.47
1:w:794:G:H2'	1:w:795:C:H6	1.78	0.47
1:w:917:A:C2	2:x:79:C:H1'	2.50	0.47
1:w:947:G:N1	1:w:948:G:C6	2.83	0.47
1:w:978:G:C2'	1:w:979:G:C8	2.97	0.47
1:w:1032:A:C2'	1:w:1033:U:H5'	2.44	0.47
1:w:1157:G:N3	1:w:1157:G:C2'	2.77	0.47
1:w:1164:G:C5	1:w:1165:U:O4	2.68	0.47
1:w:1222:C:C2	1:w:1228:G:N2	2.83	0.47
1:w:1292:U:H2'	1:w:1293:C:H6	1.78	0.47
1:w:1405:U:O5'	1:w:1405:U:H6	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1438:U:C2	1:w:1553:A:N7	2.83	0.47
1:w:1471:A:N1	1:w:1472:A:C5	2.83	0.47
1:w:1616:A:O2'	1:w:1617:C:O5'	2.33	0.47
1:w:1674:G:C6	1:w:1990:C:N3	2.83	0.47
1:w:1703:G:C5	1:w:1704:G:C8	3.03	0.47
1:w:1831:G:C6	1:w:1832:C:N4	2.83	0.47
1:w:1850:G:C4	1:w:1851:U:C5	3.02	0.47
1:w:1863:G:O2'	1:w:1864:U:C4'	2.59	0.47
1:w:1931:U:O2'	1:w:1932:A:H5'	2.14	0.47
1:w:1971:A:C2'	1:w:1971:A:N3	2.76	0.47
1:w:2005:A:C8	1:w:2006:C:H5	2.32	0.47
1:w:2010:G:OP1	19:Q:42:ARG:CB	2.63	0.47
1:w:2015:A:C2'	1:w:2016:U:H6	2.26	0.47
1:w:2020:A:P	17:O:27:LEU:HG	2.55	0.47
1:w:2073:C:C2'	1:w:2074:U:H6	2.11	0.47
1:w:2095:C:C5	1:w:2096:U:C5	3.02	0.47
1:w:2104:G:C2	1:w:2186:G:C4	3.03	0.47
1:w:2336:A:H5''	1:w:2337:G:H8	1.76	0.47
1:w:2341:G:C4	1:w:2342:C:C5	3.03	0.47
1:w:2356:C:H2'	1:w:2357:U:O5'	2.14	0.47
1:w:2467:C:C4	1:w:2468:G:C6	3.02	0.47
1:w:2736:G:C5	1:w:2737:G:N7	2.83	0.47
1:w:2746:U:H2'	1:w:2747:G:C5'	2.38	0.47
1:w:2765:A:H5''	1:w:2766:G:H8	1.79	0.47
1:w:2783:G:C2'	1:w:2784:C:H6	2.23	0.47
1:w:2799:A:OP2	1:w:2799:A:O4'	2.33	0.47
2:x:42:C:C1'	7:E:68:PRO:HA	2.45	0.47
2:x:45:A:C2	2:x:46:A:O4'	2.68	0.47
2:x:97:G:C4	2:x:98:G:N7	2.83	0.47
3:A:167:ASP:HB2	3:A:168:LYS:NZ	2.30	0.47
5:C:8:LYS:HE2	5:C:191:PRO:C	2.40	0.47
5:C:47:VAL:O	5:C:48:GLN:HG2	2.15	0.47
5:C:117:MET:HA	5:C:121:ASN:CA	2.45	0.47
6:D:79:VAL:O	6:D:79:VAL:CG1	2.56	0.47
7:E:54:GLU:C	7:E:57:ALA:HB3	2.40	0.47
8:F:139:GLN:C	8:F:141:VAL:H	2.22	0.47
10:H:54:ALA:C	10:H:56:LEU:N	2.72	0.47
10:H:62:ARG:HG3	10:H:71:MET:HG2	1.94	0.47
10:H:112:LYS:CA	10:H:112:LYS:CE	2.85	0.47
11:I:34:THR:HG23	11:I:35:VAL:O	2.15	0.47
11:I:35:VAL:CA	11:I:62:VAL:CG1	2.85	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:109:LYS:N	11:I:109:LYS:HZ2	2.13	0.47
11:I:114:ILE:O	11:I:115:VAL:C	2.58	0.47
15:M:71:ARG:HB3	15:M:108:GLY:C	2.40	0.47
15:M:71:ARG:HB2	15:M:108:GLY:HA3	1.97	0.47
19:Q:14:PRO:HG3	19:Q:101:SER:HA	1.96	0.47
21:S:67:LEU:O	21:S:68:HIS:HB2	2.15	0.47
22:T:58:VAL:HG13	22:T:67:LEU:C	2.40	0.47
25:W:12:GLU:O	25:W:13:ALA:C	2.58	0.47
25:W:47:ASN:O	25:W:51:ARG:NH1	2.41	0.47
26:X:10:LYS:CG	26:X:53:LEU:CA	2.77	0.47
26:X:11:SER:OG	26:X:12:PRO:CD	2.63	0.47
26:X:21:ALA:HA	26:X:24:LYS:CE	2.45	0.47
26:X:23:LEU:HA	26:X:26:LEU:HD12	1.97	0.47
26:X:30:ARG:O	26:X:30:ARG:HG2	2.14	0.47
31:y:38:G:N3	31:y:397:A:C6	2.83	0.47
31:y:124:G:C6	31:y:125:U:O2	2.68	0.47
31:y:258:G:N1	31:y:259:G:C6	2.82	0.47
31:y:290:C:H42	31:y:291:C:H41	1.61	0.47
31:y:291:C:N3	31:y:310:G:C2	2.83	0.47
31:y:315:A:H1'	31:y:353:A:C2	2.50	0.47
31:y:362:G:C8	31:y:362:G:O5'	2.66	0.47
31:y:374:A:H2'	31:y:375:U:C5'	2.45	0.47
31:y:531:U:H6	31:y:531:U:C5'	2.25	0.47
31:y:540:G:N7	31:y:541:G:N7	2.61	0.47
31:y:550:G:C6	31:y:551:U:C4	3.03	0.47
31:y:561:U:C2'	31:y:562:C:OP2	2.63	0.47
31:y:567:G:C5	31:y:568:G:C8	3.02	0.47
31:y:573:A:N9	31:y:574:A:C8	2.82	0.47
31:y:578:C:O2'	31:y:728:A:H2	1.94	0.47
31:y:583:A:O2'	50:r:91:ARG:NH1	2.45	0.47
31:y:686:U:C1'	31:y:687:A:C5'	2.84	0.47
31:y:826:C:C1'	41:i:12:ARG:HB2	2.45	0.47
31:y:928:G:H2'	31:y:929:G:H8	1.80	0.47
31:y:932:C:P	40:h:3:ARG:HD3	2.55	0.47
31:y:932:C:N3	31:y:1386:G:C2	2.83	0.47
31:y:951:G:C4	31:y:1231:G:N2	2.83	0.47
31:y:1179:A:C8	31:y:1180:A:N7	2.83	0.47
31:y:1259:C:O2	31:y:1283:G:C1'	2.62	0.47
31:y:1348:U:N3	31:y:1374:A:H8	1.97	0.47
31:y:1350:A:C6	31:y:1351:U:C4	3.02	0.47
31:y:1371:G:O2'	42:j:70:LYS:HE2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1375:A:C2'	31:y:1376:U:C5'	2.93	0.47
31:y:1386:G:N1	31:y:1387:G:C6	2.83	0.47
31:y:1410:G:C4	31:y:1491:G:C6	3.03	0.47
31:y:1443:G:N9	31:y:1447:G:OP1	2.48	0.47
31:y:1454:G:N3	31:y:1455:G:C8	2.83	0.47
31:y:1489:G:C2	31:y:1490:C:N3	2.83	0.47
31:y:1510:U:C3'	31:y:1511:G:C8	2.97	0.47
36:d:32:LEU:HD13	36:d:33:LEU:N	2.30	0.47
36:d:113:ALA:HB1	36:d:185:GLY:N	2.29	0.47
36:d:137:ALA:HA	36:d:140:ARG:CZ	2.44	0.47
36:d:194:GLY:O	36:d:195:VAL:HG22	2.15	0.47
38:f:7:GLU:HG2	38:f:112:LEU:HD13	1.97	0.47
38:f:82:VAL:CG2	38:f:138:ALA:HB2	2.43	0.47
39:g:5:GLU:HG2	39:g:64:GLN:CG	2.44	0.47
39:g:74:ASP:HA	39:g:77:ARG:CG	2.45	0.47
40:h:62:PHE:CD1	40:h:65:ALA:HB3	2.50	0.47
41:i:11:THR:O	41:i:15:ASN:HB3	2.15	0.47
41:i:74:PRO:O	41:i:76:PRO:CD	2.45	0.47
41:i:87:SER:CB	41:i:133:LEU:O	2.63	0.47
44:l:93:GLN:HE21	44:l:93:GLN:N	2.04	0.47
46:n:59:TYR:CD2	46:n:60:VAL:HG13	2.42	0.47
47:o:21:TYR:O	47:o:22:THR:HB	2.14	0.47
47:o:47:LEU:CD1	47:o:50:LYS:HZ1	2.27	0.47
48:p:69:TYR:HD2	48:p:69:TYR:O	1.94	0.47
50:r:11:VAL:HG22	50:r:20:THR:O	2.15	0.47
50:r:92:ARG:C	50:r:94:ASN:N	2.72	0.47
52:t:50:ALA:O	52:t:51:VAL:HG23	2.14	0.47
1:w:10:G:C2	1:w:2629:A:N6	2.83	0.47
1:w:182:A:C4	1:w:183:C:C5	3.03	0.47
1:w:281:G:H22	1:w:358:U:H3'	1.78	0.47
1:w:281:G:C4	1:w:358:U:C5	3.03	0.47
1:w:376:C:H42	1:w:398:G:H1	1.63	0.47
1:w:380:U:C2	1:w:394:A:H2	2.33	0.47
1:w:456:C:N3	20:R:66:LEU:CG	2.77	0.47
1:w:499:U:O4	1:w:503:A:N7	2.48	0.47
1:w:533:G:OP1	17:O:28:ARG:HD2	2.15	0.47
1:w:535:C:C2	1:w:559:G:N1	2.83	0.47
1:w:563:G:C6	1:w:564:C:C4	3.03	0.47
1:w:569:U:O2	1:w:984:A:N1	2.48	0.47
1:w:585:G:C2'	1:w:586:A:N7	2.74	0.47
1:w:669:G:N9	1:w:801:G:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:695:G:C6	1:w:768:G:O6	2.68	0.47
1:w:739:G:C5'	1:w:740:U:OP1	2.62	0.47
1:w:775:G:N2	1:w:787:U:O4	2.48	0.47
1:w:851:U:H2'	1:w:852:G:N7	2.30	0.47
1:w:902:C:C5	1:w:903:C:N4	2.83	0.47
1:w:1000:A:N6	1:w:1001:A:C5	2.82	0.47
1:w:1021:A:O2'	1:w:1022:G:OP1	2.32	0.47
1:w:1047:G:H1'	1:w:1111:A:H62	1.80	0.47
1:w:1309:G:H4'	28:Z:7:PRO:CB	2.45	0.47
1:w:1355:G:O2'	1:w:1356:G:H5'	2.15	0.47
1:w:1374:G:H3'	1:w:1375:C:H6	1.74	0.47
1:w:1419:A:C8	1:w:1578:U:O4	2.68	0.47
1:w:1436:G:C6	1:w:1437:C:C5	3.03	0.47
1:w:1501:C:C5'	4:B:102:LYS:HZ2	2.00	0.47
1:w:1633:G:H8	1:w:1633:G:P	2.37	0.47
1:w:1640:C:H2'	1:w:1641:A:O4'	2.14	0.47
1:w:1657:C:C2'	1:w:1658:C:C5'	2.92	0.47
1:w:1668:A:C6	1:w:1674:G:C4	3.03	0.47
1:w:1674:G:C2	1:w:1676:A:N6	2.74	0.47
1:w:1769:G:H2'	1:w:1770:G:H5'	1.97	0.47
1:w:1796:U:O2'	4:B:255:LYS:CA	2.63	0.47
1:w:1803:A:C8	1:w:1803:A:H3'	2.50	0.47
1:w:1882:C:H2'	1:w:1883:G:O4'	2.15	0.47
1:w:1932:A:H2'	1:w:1933:G:H5'	1.97	0.47
1:w:1999:C:OP1	5:C:118:LYS:CE	2.63	0.47
1:w:2015:A:H2'	1:w:2016:U:C6	2.46	0.47
1:w:2023:G:N3	1:w:2024:G:C8	2.83	0.47
1:w:2081:C:C6	1:w:2081:C:C3'	2.98	0.47
1:w:2087:G:C6	1:w:2088:G:C5	3.03	0.47
1:w:2090:G:H2'	1:w:2091:U:O4'	2.14	0.47
1:w:2113:U:H2'	1:w:2114:A:H8	1.64	0.47
1:w:2114:A:H5''	1:w:2115:G:OP2	2.15	0.47
1:w:2206:C:C4	1:w:2207:C:C4	3.02	0.47
1:w:2210:G:N1	1:w:2212:A:H5''	2.29	0.47
1:w:2218:G:C4	1:w:2219:G:C8	3.03	0.47
1:w:2285:C:C4'	1:w:2288:A:N6	2.78	0.47
1:w:2407:G:OP1	1:w:2408:U:OP2	2.33	0.47
1:w:2437:U:O2'	1:w:2438:U:H6	1.97	0.47
1:w:2601:C:H5'	32:z:74:C:O2'	2.15	0.47
1:w:2653:U:OP2	1:w:2653:U:C6	2.67	0.47
1:w:712(B):A:O2'	14:L:13:HIS:CG	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2756:U:C3'	30:b:19:ARG:HG3	2.37	0.47
1:w:2820:A:H4'	5:C:109:LYS:HZ1	1.73	0.47
2:x:48:A:H3'	15:M:95:HIS:CE1	2.50	0.47
2:x:93:C:H2'	2:x:94:C:N1	2.30	0.47
2:x:107:U:H2'	2:x:108:C:H6	1.79	0.47
4:B:36:PRO:CG	4:B:61:LEU:HB3	2.44	0.47
4:B:95:LEU:H	4:B:95:LEU:CD2	2.17	0.47
4:B:113:VAL:HG12	4:B:114:GLY:N	2.30	0.47
4:B:245:PRO:HB2	4:B:246:PRO:CD	2.45	0.47
5:C:20:ALA:HB3	11:I:73:ASP:CA	2.45	0.47
5:C:51:PHE:CD1	5:C:76:ARG:NE	2.83	0.47
5:C:66:HIS:HD2	5:C:66:HIS:H	1.61	0.47
5:C:102:VAL:O	5:C:170:LEU:CD1	2.62	0.47
6:D:180:ASP:OD2	6:D:180:ASP:N	2.30	0.47
7:E:54:GLU:HA	7:E:57:ALA:HB3	1.96	0.47
8:F:49:VAL:CG1	8:F:50:VAL:N	2.74	0.47
8:F:127:GLU:CG	8:F:130:ARG:HG3	2.45	0.47
9:G:39:ALA:O	9:G:40:THR:C	2.58	0.47
10:H:60:LYS:HE2	17:O:67:ALA:CB	2.45	0.47
10:H:113:MET:CE	10:H:120:ARG:HD3	2.45	0.47
11:I:67:LYS:O	11:I:68:GLU:CG	2.59	0.47
11:I:69:VAL:HG13	11:I:76:ALA:HA	1.97	0.47
11:I:104:ARG:HD3	11:I:105:GLU:CD	2.40	0.47
13:K:8:LYS:CB	13:K:12:GLN:HE21	2.28	0.47
13:K:10:ARG:NE	13:K:10:ARG:HA	2.29	0.47
14:L:3:HIS:HE1	14:L:4:LEU:CD1	2.28	0.47
15:M:73:LEU:H	15:M:73:LEU:HD12	1.79	0.47
16:N:69:GLY:O	16:N:70:VAL:HG23	2.15	0.47
18:P:15:GLU:HB2	18:P:16:PRO:HD2	1.88	0.47
19:Q:74:ALA:CB	19:Q:104:THR:O	2.63	0.47
20:R:17:ALA:HB1	20:R:26:TYR:CB	2.43	0.47
20:R:27:THR:HG22	20:R:28:PHE:N	2.30	0.47
22:T:10:ARG:HG2	22:T:37:VAL:C	2.39	0.47
22:T:17:ALA:O	22:T:20:ARG:N	2.47	0.47
22:T:23:LYS:C	22:T:24:LEU:HD23	2.40	0.47
22:T:92:SER:O	22:T:93:ASP:C	2.57	0.47
28:Z:11:LYS:HA	28:Z:14:LYS:HD3	1.97	0.47
29:a:42:ARG:O	29:a:43:GLN:C	2.57	0.47
31:y:102:G:C3'	31:y:103:C:C5	2.96	0.47
31:y:136:C:C1'	49:q:63:GLY:HA2	2.45	0.47
31:y:138:G:C4	31:y:226:G:N2	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:253:U:O2'	31:y:254:G:O4'	2.32	0.47
31:y:292:G:C2	31:y:309:G:C6	3.03	0.47
31:y:298:A:N6	31:y:558:G:OP1	2.47	0.47
31:y:310:G:N2	31:y:311:C:C6	2.82	0.47
31:y:360:A:C6	31:y:361:G:C5	3.03	0.47
31:y:362:G:H4'	45:m:32:ARG:NH2	2.30	0.47
31:y:363:A:O5'	45:m:32:ARG:HG3	2.14	0.47
31:y:404:U:H3'	37:e:2:GLY:N	2.30	0.47
31:y:405:U:OP2	37:e:3:ARG:CG	2.62	0.47
31:y:485:G:H1'	31:y:486:U:H5	1.80	0.47
31:y:514:C:H5''	31:y:514:C:C6	2.49	0.47
31:y:579:G:C6	31:y:761:G:O6	2.68	0.47
31:y:581:G:H5''	48:p:65:ARG:NE	2.29	0.47
31:y:714:G:H21	31:y:777:A:C1'	2.28	0.47
31:y:725:G:OP1	31:y:854:G:C1'	2.62	0.47
31:y:757:U:H3'	31:y:758:G:N9	2.28	0.47
31:y:874:G:O2'	31:y:875:C:O4'	2.26	0.47
31:y:1007:C:C2'	31:y:1008:C:O4'	2.61	0.47
31:y:1015:A:C2	31:y:1218:C:H1'	2.50	0.47
31:y:1112:C:O2	36:d:178:LEU:CB	2.61	0.47
31:y:1269:A:C4'	31:y:1326:C:C4'	2.93	0.47
31:y:1333:A:N3	31:y:1333:A:H2'	2.29	0.47
31:y:1406:U:O4	31:y:1407:5MC:C4	2.68	0.47
31:y:1439:C:N4	31:y:1440:C:C4	2.83	0.47
32:z:9:A:H8	32:z:11:C:H41	1.50	0.47
32:z:50:U:C4	32:z:51:U:C4	3.03	0.47
33:0:19:G:C6	33:0:57:G:C2	3.03	0.47
35:c:59:GLU:O	35:c:60:ASP:C	2.58	0.47
35:c:73:THR:C	35:c:78:GLN:OE1	2.58	0.47
35:c:115:LEU:CA	35:c:118:LEU:HD23	2.45	0.47
35:c:131:PRO:O	35:c:135:GLN:HG3	2.15	0.47
36:d:123:GLN:HA	36:d:126:ARG:HH12	1.80	0.47
37:e:11:LEU:C	37:e:14:ARG:H	2.23	0.47
37:e:13:ARG:NH2	37:e:36:ARG:CG	2.78	0.47
37:e:170:VAL:CG2	37:e:171:GLY:N	2.65	0.47
38:f:11:ILE:HG21	38:f:105:VAL:CG2	2.45	0.47
38:f:111:GLU:OE1	38:f:111:GLU:HA	2.15	0.47
39:g:74:ASP:HA	39:g:77:ARG:HG2	1.97	0.47
40:h:123:GLU:C	40:h:126:ASP:H	2.23	0.47
40:h:126:ASP:HB3	40:h:131:LYS:C	2.40	0.47
50:r:60:ILE:CG2	50:r:73:VAL:O	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:s:47:THR:O	51:s:49:LYS:N	2.48	0.47
1:w:14:A:O5'	1:w:15:G:H8	1.96	0.46
1:w:108:U:C2	1:w:109:G:N7	2.83	0.46
1:w:288:C:C3'	1:w:289:A:H5''	2.33	0.46
1:w:379:G:H1	1:w:395:U:H3	1.62	0.46
1:w:398:G:C2	1:w:399:G:C4	3.03	0.46
1:w:430:G:H8	1:w:430:G:O5'	1.98	0.46
1:w:557:U:O2'	1:w:558:G:C5'	2.57	0.46
1:w:579:G:H1'	1:w:2017:U:N3	2.30	0.46
1:w:603:A:H4'	1:w:604:G:C5'	2.44	0.46
1:w:760:G:C8	1:w:760:G:O5'	2.68	0.46
1:w:760:G:C5	1:w:761:A:C5	3.02	0.46
1:w:777:A:H3'	1:w:777:A:C8	2.51	0.46
1:w:788:A:H5''	1:w:790:C:N4	2.21	0.46
1:w:854:G:C2	1:w:855:G:N7	2.83	0.46
1:w:918:A:H2	2:x:81:G:H5'	1.80	0.46
1:w:937:U:C3'	1:w:938:G:C8	2.91	0.46
1:w:996:A:C6	1:w:1160:G:N1	2.83	0.46
1:w:1001:A:H2'	1:w:1002:G:H5'	1.97	0.46
1:w:1010:A:H4'	17:O:76:TYR:HB3	1.97	0.46
1:w:1024:G:C4	1:w:1025:G:C6	3.03	0.46
1:w:1029:A:O3'	13:K:126:PRO:O	2.32	0.46
1:w:1030:G:C2'	1:w:1031:G:O5'	2.63	0.46
1:w:1071:G:OP1	1:w:1097:U:OP1	2.34	0.46
1:w:1109:C:O5'	1:w:1109:C:H6	1.98	0.46
1:w:1159:U:C6	1:w:1159:U:H5''	2.50	0.46
1:w:1164:G:H2'	1:w:1165:U:C6	2.50	0.46
1:w:1175:U:C2'	1:w:1176:G:C8	2.87	0.46
1:w:1212:G:C2	1:w:1236:G:C2	3.03	0.46
1:w:1214:A:N6	1:w:1235:G:HO2'	2.13	0.46
1:w:1263:U:C2	1:w:1264:G:C2	3.04	0.46
1:w:1268:A:N9	1:w:1269:A:C8	2.83	0.46
1:w:1285:G:N2	1:w:1329:U:C6	2.83	0.46
1:w:1339:G:C2	1:w:1340:U:C5	3.03	0.46
1:w:1444:G:C6	1:w:1466:G:N1	2.82	0.46
1:w:1501:C:OP2	1:w:1501:C:C5	2.68	0.46
1:w:1542:G:H2'	1:w:1543:A:N9	2.30	0.46
1:w:1550:C:C6	1:w:1550:C:O5'	2.68	0.46
1:w:1692:U:H4'	1:w:1977:A:H1'	1.97	0.46
1:w:1797:C:C4	1:w:1798:U:C4	3.04	0.46
1:w:1840:G:N2	1:w:1841:U:O4'	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1843:C:H6	1:w:1843:C:H5''	1.76	0.46
1:w:2022:U:O2	1:w:2022:U:H2'	2.14	0.46
1:w:2024:G:C4'	5:C:149:ARG:NH1	2.67	0.46
1:w:2030:A:C4'	1:w:2031:A:H8	2.26	0.46
1:w:2037:G:C5	1:w:2038:G:C5	3.03	0.46
1:w:2063:C:C4	1:w:2064:C:C6	3.03	0.46
1:w:2278:A:N6	23:U:11:LYS:O	2.49	0.46
1:w:2297:C:H3'	1:w:2298:A:H8	1.79	0.46
1:w:2322:A:H2'	1:w:2323:G:H5'	1.96	0.46
1:w:2351:G:C2'	1:w:2366:A:H61	2.19	0.46
1:w:2362:G:H2'	1:w:2363:C:C6	2.50	0.46
1:w:2394:C:N4	33:O:76:A:C2	2.83	0.46
1:w:2396:G:C4	1:w:2397:G:C8	3.03	0.46
1:w:2548:G:C2'	1:w:2549:G:C5'	2.70	0.46
1:w:2587:A:C2'	1:w:2588:G:H5''	2.38	0.46
1:w:2652:C:OP2	1:w:2654:A:N3	2.47	0.46
1:w:2679:A:OP1	5:C:160:TYR:CE1	2.68	0.46
1:w:712(B):A:O3'	1:w:2713:A:H4'	2.15	0.46
1:w:2730:C:C2'	1:w:2731:G:C5'	2.94	0.46
1:w:2772:C:C2	1:w:2773:C:C5	3.03	0.46
1:w:2786:U:O2	5:C:62:PRO:HB2	2.13	0.46
1:w:2792:G:H8	1:w:2792:G:OP2	1.98	0.46
1:w:2814:C:H3'	1:w:2815:C:C5	2.50	0.46
2:x:104:A:C5'	22:T:72:ARG:HH21	2.23	0.46
4:B:44:ASN:HB2	4:B:48:ARG:C	2.40	0.46
4:B:181:GLU:HB2	4:B:273:ARG:HA	1.97	0.46
5:C:72:VAL:O	5:C:73:GLU:HB2	2.15	0.46
5:C:86:PRO:HG2	5:C:88:GLY:H	1.80	0.46
6:D:13:ARG:HG2	6:D:13:ARG:HH21	1.78	0.46
6:D:15:LEU:O	6:D:19:LEU:CD2	2.63	0.46
6:D:58:LYS:C	6:D:59:ILE:HG13	2.40	0.46
6:D:189:MET:SD	6:D:192:ASP:HA	2.55	0.46
7:E:94:LEU:HD13	7:E:98:ARG:HB2	1.96	0.46
7:E:148:MET:N	7:E:148:MET:SD	2.88	0.46
8:F:30:LYS:CG	8:F:31:GLY:H	2.19	0.46
8:F:41:MET:SD	8:F:41:MET:N	2.87	0.46
8:F:72:ILE:O	8:F:73:ALA:C	2.58	0.46
8:F:101:ARG:O	8:F:101:ARG:NH2	2.39	0.46
8:F:125:VAL:HG12	8:F:128:PRO:C	2.39	0.46
8:F:141:VAL:HA	8:F:144:VAL:CB	2.45	0.46
9:G:6:LEU:HD23	9:G:7:GLU:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:91:SER:HB3	9:G:121:LYS:NZ	2.30	0.46
10:H:32:VAL:CG2	10:H:62:ARG:HD2	2.45	0.46
11:I:63:VAL:HG23	11:I:83:ALA:O	2.16	0.46
11:I:78:ARG:CA	16:N:73:GLU:HB2	2.44	0.46
11:I:104:ARG:HH11	11:I:104:ARG:CG	2.28	0.46
12:J:98:GLU:O	12:J:100:LEU:O	2.33	0.46
13:K:48:GLU:HA	13:K:51:ARG:CZ	2.42	0.46
13:K:98:LYS:HD2	13:K:101:ARG:NE	2.29	0.46
13:K:126:PRO:HG2	13:K:127:ILE:CG2	2.45	0.46
14:L:9:LYS:HD3	14:L:10:LEU:N	2.30	0.46
15:M:39:ILE:H	15:M:39:ILE:CD1	2.21	0.46
15:M:112:PHE:CD2	15:M:112:PHE:N	2.82	0.46
18:P:93:GLU:O	18:P:93:GLU:CD	2.58	0.46
19:Q:78:GLU:O	19:Q:102:HIS:HD2	1.98	0.46
22:T:5:LEU:HD13	22:T:6:LYS:CA	2.43	0.46
22:T:150:LEU:HD22	22:T:154:ASP:OD1	2.16	0.46
23:U:15:ASP:HB3	23:U:20:ARG:CD	2.44	0.46
23:U:29:GLN:N	23:U:67:VAL:HG13	2.30	0.46
23:U:31:VAL:CG2	23:U:61:ALA:HA	2.41	0.46
24:V:71:TYR:C	24:V:73:LEU:N	2.69	0.46
25:W:51:ARG:O	25:W:55:ARG:NH1	2.48	0.46
26:X:50:VAL:HG21	26:X:54:VAL:HG11	1.96	0.46
27:Y:16:ARG:CA	27:Y:20:ARG:CZ	2.87	0.46
30:b:30:PRO:O	30:b:33:LYS:HG2	2.15	0.46
31:y:6:G:O6	41:i:102:ARG:NH2	2.48	0.46
31:y:102:G:H2'	31:y:103:C:C5	2.49	0.46
31:y:158:G:C5	31:y:159:G:C4	3.03	0.46
31:y:227:G:N1	31:y:228:A:C5	2.83	0.46
31:y:283:C:N4	31:y:284:G:C5	2.83	0.46
31:y:382:A:C2'	31:y:383:A:H5'	2.45	0.46
31:y:404:U:C2	37:e:2:GLY:N	2.83	0.46
31:y:405:U:C4	31:y:498:A:N7	2.83	0.46
31:y:518:C:O2'	31:y:530:G:N2	2.39	0.46
31:y:666:G:C6	31:y:667:G:C8	3.03	0.46
31:y:668:G:N2	31:y:739:C:C2	2.83	0.46
31:y:718:G:N2	51:s:49:LYS:HZ3	2.13	0.46
31:y:727:G:H3'	31:y:727:G:C8	2.50	0.46
31:y:741:G:OP1	48:p:39:LEU:HD22	2.14	0.46
31:y:791:G:C5'	31:y:792:A:OP2	2.60	0.46
31:y:815:A:H4'	31:y:817:C:H5	1.80	0.46
31:y:884:U:O5'	31:y:884:U:C6	2.61	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:958:A:C8	31:y:958:A:O5'	2.65	0.46
31:y:102(C):C:C4	31:y:103(C):G:O6	2.68	0.46
31:y:103(A):A:H2'	31:y:103(B):G:H5'	1.96	0.46
31:y:1093:A:H2	31:y:1109:C:H1'	1.78	0.46
31:y:1142:G:C8	31:y:1143:G:C8	3.03	0.46
31:y:1325:C:O2	31:y:1326:C:C5	2.68	0.46
31:y:1376:U:N3	31:y:1377:A:N6	2.48	0.46
31:y:1379:G:O5'	40:h:156:TRP:HZ3	1.98	0.46
31:y:1388:C:H42	31:y:1389:C:N4	2.11	0.46
31:y:1470:G:C6	31:y:1471:G:C5	3.02	0.46
31:y:1522:U:C4	31:y:1523:G:N7	2.83	0.46
32:z:35:A:H2'	32:z:36:A:O4'	2.15	0.46
32:z:66:U:O5'	32:z:66:U:C6	2.67	0.46
33:0:58:A:O2'	33:0:59:U:OP2	2.29	0.46
35:c:27:LYS:CG	35:c:194:PRO:CG	2.92	0.46
35:c:189:ASP:OD1	35:c:189:ASP:N	2.48	0.46
36:d:35:GLU:C	36:d:37:GLN:N	2.73	0.46
37:e:25:ARG:CA	37:e:30:LYS:HB2	2.32	0.46
37:e:89:THR:CA	37:e:93:PHE:CD2	2.85	0.46
39:g:35:ALA:HB2	39:g:67:MET:HB3	1.97	0.46
42:j:93:ARG:HH11	42:j:97:LYS:CD	2.29	0.46
43:k:84:GLN:NE2	43:k:87:THR:HG21	2.29	0.46
45:m:8:GLN:O	45:m:11:ARG:HG2	2.15	0.46
45:m:42:VAL:N	45:m:52:ARG:HH21	2.11	0.46
45:m:64:GLU:OE1	45:m:64:GLU:N	2.44	0.46
46:n:109:THR:CG2	46:n:110:ARG:HE	2.19	0.46
46:n:114:ARG:HG3	46:n:114:ARG:HH11	1.80	0.46
47:o:3:ARG:O	47:o:5:ALA:N	2.45	0.46
47:o:21:TYR:N	47:o:21:TYR:HD1	2.11	0.46
48:p:32:LEU:HA	48:p:35:ARG:HB2	1.95	0.46
48:p:32:LEU:HD12	48:p:32:LEU:N	2.29	0.46
48:p:63:ARG:HH11	48:p:63:ARG:CG	2.28	0.46
49:q:7:ALA:O	49:q:17:TYR:HA	2.15	0.46
49:q:26:ARG:NH1	49:q:26:ARG:CB	2.75	0.46
50:r:55:ASP:CB	50:r:76:LEU:HD11	2.44	0.46
51:s:60:ALA:O	51:s:63:GLN:CG	2.39	0.46
51:s:61:LYS:CB	51:s:64:ARG:HD2	2.46	0.46
53:u:53:LEU:H	53:u:53:LEU:CD2	2.28	0.46
1:w:9:U:O3'	1:w:10:G:O4'	2.33	0.46
1:w:26:G:N1	1:w:27:G:C2	2.83	0.46
1:w:77:C:N3	1:w:109:G:N2	2.57	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:84:A:C5'	1:w:85:G:OP1	2.53	0.46
1:w:106:C:O2'	1:w:293:U:C4'	2.63	0.46
1:w:204:A:OP1	1:w:206:U:H1'	2.15	0.46
1:w:236:C:C2	1:w:237:C:C5	3.04	0.46
1:w:270(J):G:N3	1:w:270(K):G:N7	2.63	0.46
1:w:324:A:H61	1:w:338:G:H1'	1.69	0.46
1:w:398:G:H2'	1:w:399:G:O4'	2.14	0.46
1:w:521:G:C4	1:w:522:G:N7	2.83	0.46
1:w:566:U:C6	1:w:566:U:C4'	2.98	0.46
1:w:691:C:C1'	4:B:43:ARG:CZ	2.93	0.46
1:w:768:G:C6	1:w:769:G:C5	3.02	0.46
1:w:769:G:C8	1:w:769:G:OP2	2.68	0.46
1:w:813:U:C4	1:w:814:C:C5	3.03	0.46
1:w:884:C:C2	1:w:885:C:H4'	2.50	0.46
1:w:919:G:C2	1:w:920:G:C8	3.03	0.46
1:w:936:C:C4	1:w:937:U:C5	3.04	0.46
1:w:999:U:C5	1:w:1154:G:O6	2.68	0.46
1:w:1003:G:H21	1:w:1153:C:C1'	2.29	0.46
1:w:1068:G:N2	1:w:1095:A:O2'	2.49	0.46
1:w:1166:C:H2'	1:w:1166:C:O2	2.15	0.46
1:w:1187:G:C5'	18:P:82:ARG:NH2	2.78	0.46
1:w:1275:A:H2	1:w:1645:G:N3	2.13	0.46
1:w:1301:A:C2	1:w:1641:A:N1	2.83	0.46
1:w:1303:G:O2'	1:w:1304:C:C5'	2.62	0.46
1:w:1337:G:N1	1:w:1338:G:C5	2.83	0.46
1:w:1344:G:C2	1:w:1385:G:C5	3.03	0.46
1:w:1479:G:O6	1:w:1514:U:C2	2.68	0.46
1:w:1535:U:H2'	1:w:1536:A:O4'	2.14	0.46
1:w:1566:A:OP1	1:w:1566:A:C8	2.66	0.46
1:w:1668:A:O4'	1:w:1669:A:C4	2.68	0.46
1:w:1676:A:N1	1:w:1677:A:N3	2.63	0.46
1:w:1802:A:OP2	1:w:1815:A:N6	2.47	0.46
1:w:1958:C:C2	1:w:1959:G:N7	2.82	0.46
1:w:2052:G:OP2	5:C:140:SER:CB	2.63	0.46
1:w:2320:A:N1	1:w:2333:A:C2'	2.60	0.46
1:w:2340:G:O5'	1:w:2340:G:C8	2.66	0.46
1:w:2358:G:C2	1:w:2359:C:C5	3.02	0.46
1:w:2380:C:C4	1:w:2381:C:N3	2.84	0.46
1:w:2484:G:C2'	1:w:2485:G:H5'	2.46	0.46
1:w:2650:U:C2	1:w:2651:C:C5	3.03	0.46
2:x:2:C:C4	2:x:119:A:N1	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:82:G:C2	2:x:95:U:N3	2.84	0.46
4:B:79:VAL:CG2	4:B:111:LEU:CG	2.81	0.46
4:B:106:ILE:HB	4:B:197:GLY:HA3	1.95	0.46
4:B:136:ILE:CG2	4:B:137:PRO:HD2	2.44	0.46
5:C:51:PHE:O	5:C:53:PRO:N	2.48	0.46
5:C:120:TRP:HZ2	5:C:156:MET:C	2.23	0.46
6:D:5:PRO:HG3	6:D:120:LEU:CG	2.45	0.46
6:D:11:GLY:O	6:D:12:ARG:HG3	2.15	0.46
7:E:117:PHE:O	7:E:118:ARG:CB	2.62	0.46
7:E:176:LEU:C	7:E:178:PHE:CE1	2.93	0.46
8:F:101:ARG:NH2	8:F:121:ILE:HG23	2.28	0.46
8:F:140:LYS:CE	8:F:141:VAL:CG2	2.93	0.46
9:G:62:LYS:NZ	9:G:133:HIS:CD2	2.83	0.46
11:I:21:CYS:HA	11:I:41:ALA:CB	2.45	0.46
11:I:25:LEU:O	11:I:26:LYS:HB3	2.16	0.46
12:J:35:HIS:N	12:J:36:LYS:HD2	2.31	0.46
12:J:61:ARG:CD	12:J:62:LEU:N	2.79	0.46
12:J:111:ARG:NH2	12:J:148:LEU:HG	2.31	0.46
13:K:109:VAL:CB	13:K:113:GLN:HB2	2.46	0.46
13:K:134:ARG:HG2	13:K:134:ARG:NH2	2.29	0.46
15:M:57:LYS:CG	15:M:58:LEU:N	2.69	0.46
16:N:47:GLY:HA3	16:N:64:ARG:C	2.39	0.46
16:N:78:LEU:N	16:N:78:LEU:CD2	2.77	0.46
17:O:32:PHE:HD1	17:O:33:ARG:N	2.14	0.46
17:O:38:THR:O	17:O:39:LEU:C	2.57	0.46
17:O:88:ILE:O	17:O:89:GLU:HG3	2.15	0.46
18:P:35:LEU:HD13	18:P:61:VAL:HA	1.97	0.46
18:P:71:LEU:HD23	18:P:93:GLU:HB3	1.96	0.46
19:Q:72:LYS:HE3	19:Q:107:LEU:C	2.40	0.46
20:R:54:VAL:CG2	20:R:77:LYS:CE	2.87	0.46
21:S:30:VAL:O	21:S:31:LEU:C	2.58	0.46
23:U:15:ASP:HB3	23:U:20:ARG:HH11	1.78	0.46
27:Y:33:CYS:SG	27:Y:49:CYS:HB3	2.55	0.46
31:y:73:G:N1	31:y:74:C:C2	2.82	0.46
31:y:209:U:H4'	31:y:210:U:C6	2.50	0.46
31:y:253:U:H3'	31:y:253:U:C6	2.51	0.46
31:y:297:G:O6	31:y:299:G:OP2	2.33	0.46
31:y:376:G:O4'	49:q:28:ARG:NH1	2.48	0.46
31:y:397:A:H5'	31:y:398:C:OP2	2.15	0.46
31:y:419:C:C2	31:y:425:G:N2	2.83	0.46
31:y:505:G:C5	31:y:506:G:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:529:G:N1	45:m:48:ASN:OD1	2.46	0.46
31:y:585:G:HO2'	31:y:879:C:C3'	2.19	0.46
31:y:619:U:H3'	31:y:619:U:OP1	2.16	0.46
31:y:623:C:C3'	31:y:624:C:H6	2.27	0.46
31:y:662:G:O2'	31:y:836:G:C4'	2.62	0.46
31:y:668:G:C2'	31:y:669:U:C6	2.95	0.46
31:y:756:C:H4'	31:y:823:G:C1'	2.45	0.46
31:y:833:U:O2	31:y:834:C:C5	2.68	0.46
31:y:874:G:H21	41:i:11:THR:CG2	2.26	0.46
31:y:939:G:OP1	31:y:939:G:C4'	2.63	0.46
31:y:964:A:H4'	31:y:1198:G:H4'	1.98	0.46
31:y:985:C:H2'	31:y:986:A:C5'	2.43	0.46
31:y:1057:G:C6	31:y:1058:G:C5	3.03	0.46
31:y:1120:G:N1	31:y:1154:G:C2	2.83	0.46
31:y:1157:A:N3	31:y:1181:G:C5	2.83	0.46
31:y:1245:A:N7	31:y:1246:C:C5	2.83	0.46
31:y:1280:A:HO2'	31:y:1281:U:P	2.37	0.46
31:y:1316:G:C2'	31:y:1318:A:H62	2.27	0.46
31:y:1354:C:H2'	31:y:1355:G:C8	2.50	0.46
32:z:10:G:C2	32:z:26:A:H1'	2.50	0.46
35:c:11:LEU:HG	35:c:12:GLU:N	2.25	0.46
35:c:76:GLN:HG3	35:c:206:ASP:CG	2.40	0.46
35:c:97:TRP:CB	35:c:172:ILE:HG21	2.45	0.46
36:d:117:ALA:HB1	36:d:187:ALA:CB	2.45	0.46
36:d:182:ILE:HG12	36:d:203:PHE:HB2	1.97	0.46
37:e:16:GLY:O	37:e:17:VAL:C	2.59	0.46
37:e:200:GLU:HG2	37:e:201:GLN:H	1.80	0.46
38:f:142:LEU:HA	38:f:143:ARG:NH2	2.30	0.46
39:g:50:TYR:CZ	51:s:77:GLY:HA2	2.51	0.46
39:g:50:TYR:OH	51:s:77:GLY:HA2	2.16	0.46
43:k:7:LYS:O	43:k:8:LEU:HB3	2.14	0.46
44:l:23:ALA:CA	44:l:28:THR:HG23	2.38	0.46
44:l:29:ILE:HG12	44:l:30:VAL:N	2.28	0.46
46:n:5:ALA:O	46:n:6:GLY:C	2.58	0.46
46:n:13:LYS:HG2	46:n:17:VAL:HG11	1.97	0.46
48:p:55:GLY:O	48:p:57:LEU:N	2.49	0.46
49:q:4:ILE:HB	49:q:66:PRO:HA	1.96	0.46
1:w:15:G:C2	1:w:16:G:C4	3.03	0.46
1:w:20:C:O2	1:w:521:G:C2	2.69	0.46
1:w:36:G:O3'	1:w:451:C:O2	2.34	0.46
1:w:244:A:H2'	1:w:245:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:307:G:N3	1:w:309:G:C8	2.84	0.46
1:w:447:A:H2'	1:w:473:G:C8	2.50	0.46
1:w:503:A:O4'	1:w:505:A:H8	1.98	0.46
1:w:503:A:C6	1:w:506:G:C5	3.03	0.46
1:w:576:U:O2'	1:w:2502:G:C4	2.67	0.46
1:w:580:C:OP1	1:w:2018:G:H4'	2.15	0.46
1:w:608:A:C5	1:w:609(A):A:N7	2.83	0.46
1:w:648:G:O2'	1:w:649:G:O4'	2.32	0.46
1:w:662:G:H5''	12:J:18:ARG:O	2.16	0.46
1:w:669:G:O6	1:w:670:A:C6	2.68	0.46
1:w:718:A:C2'	1:w:719:C:C4'	2.93	0.46
1:w:745:G:OP2	1:w:745:G:C8	2.67	0.46
1:w:886:C:P	1:w:890:A:N6	2.88	0.46
1:w:957:A:OP2	13:K:76:LYS:HA	2.15	0.46
1:w:964:C:O2'	1:w:2274:A:O4'	2.22	0.46
1:w:996:A:H4'	17:O:92:ARG:CZ	2.45	0.46
1:w:1000:A:N7	1:w:1154:G:N2	2.63	0.46
1:w:1021:A:H62	1:w:1141:U:H3	0.69	0.46
1:w:1047:G:C2'	1:w:1110:G:H1	2.26	0.46
1:w:1124:C:C5	1:w:1125:G:C6	3.03	0.46
1:w:1186:G:H2'	1:w:1187:G:H5'	1.96	0.46
1:w:1229:G:C8	1:w:1230:C:C5	3.04	0.46
1:w:1258:C:C2	1:w:1259:G:N7	2.84	0.46
1:w:1264:G:H3'	1:w:1265:A:H5''	1.97	0.46
1:w:1286:A:N1	1:w:1329:U:O2'	2.48	0.46
1:w:1294:U:H4'	14:L:26:LYS:CD	2.45	0.46
1:w:1319:G:C2	1:w:1320:C:C4	3.03	0.46
1:w:1363:C:H6	1:w:1363:C:O5'	1.97	0.46
1:w:1416:G:N3	1:w:1417:C:C4	2.83	0.46
1:w:1436:G:N2	1:w:1477:A:O2'	2.49	0.46
1:w:1500:G:O2'	4:B:100:GLY:O	2.32	0.46
1:w:1696:G:N2	1:w:1977:A:O2'	2.48	0.46
1:w:1755:A:N6	1:w:2694:G:O2'	2.38	0.46
1:w:1763:G:OP1	1:w:1763:G:C4'	2.63	0.46
1:w:1776:G:N3	1:w:1789:A:C2	2.83	0.46
1:w:1823:G:O6	1:w:1824:G:C6	2.68	0.46
1:w:1870:C:C2	1:w:1871:A:C5	3.04	0.46
1:w:2114:A:C5	1:w:2115:G:C5	3.04	0.46
1:w:2227:A:H2'	1:w:2228:G:C5'	2.46	0.46
1:w:2235:G:C6	1:w:2236:C:C5	3.04	0.46
1:w:2263:C:O5'	1:w:2263:C:H6	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2277:G:C2'	1:w:2278:A:O5'	2.62	0.46
1:w:2332:U:O4'	1:w:2336:A:C6	2.69	0.46
1:w:2336:A:OP1	15:M:15:ARG:NH1	2.45	0.46
1:w:2507:C:C5	1:w:2508:G:C8	3.03	0.46
1:w:2657:A:C2'	1:w:2657:A:N3	2.78	0.46
1:w:2747:G:N2	1:w:2748:A:H62	2.12	0.46
2:x:97:G:C4	2:x:98:G:C8	3.03	0.46
2:x:114:G:N3	15:M:38:GLN:CD	2.72	0.46
3:A:49:GLY:O	3:A:50:ILE:HG23	2.15	0.46
4:B:42:GLY:C	4:B:44:ASN:H	2.23	0.46
4:B:80:ALA:O	4:B:81:ALA:HB2	2.15	0.46
4:B:249:PRO:C	4:B:251:GLY:N	2.72	0.46
4:B:258:LYS:O	4:B:258:LYS:HG3	2.16	0.46
5:C:7:VAL:HG21	5:C:27:LEU:CD2	2.45	0.46
5:C:182:LEU:HD12	5:C:182:LEU:HA	1.74	0.46
6:D:60:TRP:CE3	6:D:60:TRP:CA	2.98	0.46
6:D:148:SER:O	6:D:149:VAL:HG12	2.15	0.46
6:D:177:ASN:O	6:D:180:ASP:CG	2.58	0.46
7:E:111:LEU:O	7:E:114:ILE:HB	2.16	0.46
7:E:123:ASN:N	7:E:123:ASN:ND2	2.62	0.46
8:F:114:VAL:O	8:F:115:VAL:CG2	2.64	0.46
8:F:124:GLU:C	8:F:131:VAL:HA	2.36	0.46
9:G:122:GLU:O	9:G:144:VAL:HG21	2.16	0.46
10:H:49:LEU:N	10:H:49:LEU:CD1	2.78	0.46
10:H:65:TRP:CD1	17:O:64:ARG:HE	2.33	0.46
10:H:140:PHE:O	10:H:141:LYS:C	2.59	0.46
12:J:29:LYS:O	12:J:29:LYS:HG2	2.14	0.46
12:J:96:THR:O	12:J:97:PRO:O	2.34	0.46
13:K:23:GLY:N	13:K:99:PRO:CD	2.57	0.46
13:K:23:GLY:HA2	13:K:99:PRO:N	2.31	0.46
13:K:69:PHE:O	13:K:69:PHE:CD2	2.68	0.46
14:L:5:LYS:HG3	14:L:8:ARG:HH22	1.80	0.46
14:L:60:LEU:HD12	14:L:61:HIS:N	2.29	0.46
14:L:108:GLY:O	14:L:110:PRO:CD	2.63	0.46
15:M:27:SER:C	15:M:28:VAL:HG23	2.39	0.46
16:N:46:GLU:O	16:N:63:VAL:HG21	2.15	0.46
16:N:97:ALA:O	16:N:98:LYS:HD2	2.16	0.46
18:P:25:LEU:HD12	18:P:94:LEU:HD12	1.97	0.46
18:P:82:ARG:C	18:P:82:ARG:CD	2.88	0.46
19:Q:14:PRO:O	19:Q:18:ARG:NH1	2.49	0.46
22:T:10:ARG:NH1	22:T:36:LYS:HD3	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:45:PHE:CD2	23:U:77:ARG:C	2.93	0.46
24:V:76:ARG:NH1	24:V:90:ILE:HG23	2.21	0.46
27:Y:57:VAL:HG23	27:Y:58:LEU:N	2.30	0.46
31:y:53:A:C6	31:y:54:C:C4	3.04	0.46
31:y:139:G:H2'	31:y:140:A:C8	2.51	0.46
31:y:243:A:C4	31:y:245:C:C5	3.03	0.46
31:y:245:C:C4	31:y:284:G:C6	2.98	0.46
31:y:302:G:C5	31:y:303:A:C5	3.03	0.46
31:y:502:G:H4'	31:y:550:G:O4'	2.14	0.46
31:y:833:U:C3'	31:y:834:C:H5	2.28	0.46
31:y:867:G:N3	31:y:873:A:H2	2.13	0.46
31:y:933:G:H22	31:y:935:A:H1'	1.80	0.46
31:y:1098:C:H2'	31:y:1099:G:H8	1.81	0.46
31:y:1103:C:C2'	31:y:1104:G:C8	2.95	0.46
31:y:1104:G:C4	31:y:1105:A:N7	2.83	0.46
31:y:1109:C:C3'	31:y:1110:A:H8	2.07	0.46
31:y:1221:G:C6	31:y:1222:G:C4	3.04	0.46
31:y:1306:A:C8	31:y:1307:U:N1	2.83	0.46
31:y:1312:G:C2	31:y:1313:U:N1	2.83	0.46
31:y:1316:G:C5'	31:y:1360:A:C2	2.98	0.46
31:y:1327:C:OP2	54:v:12:LYS:NZ	2.47	0.46
31:y:1422:G:N1	31:y:1423:G:C5	2.84	0.46
31:y:1475:G:C4	31:y:1476:G:C8	3.03	0.46
32:z:9:A:C5'	32:z:46:7MG:H1'	2.41	0.46
32:z:16:H2U:O3'	32:z:17:C:O4'	2.34	0.46
32:z:55:PSU:O2	32:z:58:A:OP2	2.33	0.46
33:0:7:U:O2	33:0:66:A:H2	1.97	0.46
35:c:139:LYS:HD3	35:c:139:LYS:C	2.41	0.46
35:c:163:PHE:HD1	35:c:186:ALA:HA	1.67	0.46
36:d:8:ILE:CG2	47:o:50:LYS:O	2.63	0.46
36:d:59:ARG:NH1	36:d:97:LYS:HE3	2.31	0.46
38:f:78:HIS:HA	41:i:104:ARG:HG3	1.97	0.46
38:f:129:ILE:N	38:f:129:ILE:CD1	2.78	0.46
43:k:39:PRO:O	43:k:40:LEU:CB	2.59	0.46
43:k:40:LEU:HG	43:k:41:PRO:CD	2.46	0.46
44:l:29:ILE:HD11	44:l:31:THR:OG1	2.16	0.46
44:l:67:ASP:OD1	44:l:70:LYS:NZ	2.37	0.46
45:m:70:PRO:CD	45:m:99:ILE:HG22	2.45	0.46
46:n:13:LYS:HG2	46:n:17:VAL:CG1	2.44	0.46
46:n:26:GLY:C	46:n:28:ALA:H	2.24	0.46
50:r:10:VAL:HB	50:r:52:LYS:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:48:GLU:O	50:r:49:GLU:CB	2.62	0.46
50:r:59:ILE:HG22	50:r:60:ILE:N	2.29	0.46
53:u:76:ALA:C	53:u:78:ALA:H	2.23	0.46
1:w:172:C:C4	1:w:173:G:C5	3.03	0.46
1:w:182:A:C6	1:w:183:C:C4	3.03	0.46
1:w:241:A:O3'	1:w:242:G:H4'	2.15	0.46
1:w:382:G:C6	1:w:383:U:C4	3.03	0.46
1:w:612:G:H2'	1:w:616:A:H62	1.81	0.46
1:w:664:C:C2	1:w:665:C:C6	3.04	0.46
1:w:682:G:C4	1:w:683:C:C5	3.04	0.46
1:w:709:U:H3'	1:w:710:G:H8	1.81	0.46
1:w:731:C:C2	1:w:732:C:H5	2.32	0.46
1:w:786:C:C2	1:w:787:U:C6	3.03	0.46
1:w:801:G:H3'	1:w:802:A:C5'	2.46	0.46
1:w:815:C:H2'	1:w:816:C:C5	2.50	0.46
1:w:854:G:C2'	1:w:855:G:O4'	2.63	0.46
1:w:855:G:N2	23:U:27:GLU:CB	2.57	0.46
1:w:954:G:H2'	1:w:955:C:H5'	1.98	0.46
1:w:1080:C:H3'	1:w:1081:U:H6	1.80	0.46
1:w:1138:G:N3	1:w:1139:G:H5''	2.30	0.46
1:w:1148:A:C4	1:w:1149:G:N7	2.83	0.46
1:w:1181:C:H2'	1:w:1182:A:C8	2.51	0.46
1:w:1189:A:H5''	12:J:32:THR:CG2	2.45	0.46
1:w:1197:G:C2	1:w:1250:G:N3	2.83	0.46
1:w:122(A):C:H2'	1:w:1222:C:H6	1.79	0.46
1:w:1225:G:N7	1:w:1226:A:C5	2.83	0.46
1:w:1242:A:H61	6:D:183:ARG:NH1	2.13	0.46
1:w:1253:A:O2'	1:w:1254:A:P	2.72	0.46
1:w:1260:G:C4	1:w:1261:C:C5	3.04	0.46
1:w:1264:G:C2'	1:w:1265:A:C8	2.97	0.46
1:w:1378:A:C6	1:w:1570:A:H2	2.32	0.46
1:w:1428:C:HO2'	1:w:1429:G:P	2.39	0.46
1:w:1484:G:C2	1:w:1485:G:N7	2.83	0.46
1:w:1541:U:C4	1:w:1542:G:N1	2.83	0.46
1:w:1560:G:C4	1:w:1561:G:N7	2.83	0.46
1:w:1637:A:C4	1:w:1638:C:C6	3.04	0.46
1:w:1700:A:H8	1:w:1700:A:P	2.36	0.46
1:w:1799:G:H22	1:w:1819:A:P	2.39	0.46
1:w:1836:C:H4'	31:y:784:C:OP1	2.16	0.46
1:w:1862:G:C2	1:w:1881:C:O2	2.65	0.46
1:w:2024:G:C4	1:w:2025:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2108:C:O2	1:w:2108:C:C2'	2.61	0.46
1:w:2130:U:C5	1:w:2159:G:N1	2.84	0.46
1:w:2206:C:C2	1:w:2207:C:C6	3.04	0.46
1:w:2268:A:HO2'	1:w:2269:A:H5''	1.79	0.46
1:w:2305:A:C2'	1:w:2306:C:C5'	2.86	0.46
1:w:2333:A:N3	1:w:2335:A:N6	2.63	0.46
1:w:2367:G:C3'	1:w:2368:C:H5''	2.39	0.46
1:w:2415:G:H2'	1:w:2416:C:O4'	2.15	0.46
1:w:2428:G:H8	1:w:2428:G:H5'	1.79	0.46
1:w:2432:A:H2'	1:w:2433:A:C5'	2.45	0.46
1:w:2489:G:C5	1:w:2490:G:C5	3.04	0.46
1:w:2556:C:C5	1:w:2557:G:N7	2.84	0.46
1:w:2559:C:C2	1:w:2560:C:H5	2.33	0.46
1:w:2562:U:O2'	11:I:23:ARG:NH1	2.48	0.46
1:w:2575:C:H5''	5:C:144:ARG:CZ	2.46	0.46
1:w:2576:G:H4'	1:w:2578:G:C8	2.51	0.46
1:w:2649:U:C6	1:w:2649:U:C3'	2.98	0.46
1:w:2676:C:C2	1:w:2677:G:N7	2.83	0.46
1:w:2729:G:C6	1:w:2730:C:N4	2.84	0.46
1:w:2743:C:C3'	1:w:2744:G:C5'	2.80	0.46
1:w:2785:C:C2'	1:w:2786:U:C6	2.96	0.46
1:w:2789:C:O2	1:w:2892:A:N3	2.47	0.46
1:w:2804:C:C6	1:w:2804:C:C3'	2.98	0.46
1:w:2864:G:H3'	1:w:2864:G:C8	2.51	0.46
2:x:22:U:O2	2:x:23:G:N7	2.48	0.46
2:x:43:C:C2'	2:x:43:C:O2	2.64	0.46
2:x:64:C:C5	2:x:65:C:C5	3.03	0.46
2:x:114:G:H8	2:x:114:G:OP2	1.98	0.46
3:A:20:ILE:CB	3:A:224:ARG:HB3	2.45	0.46
3:A:22:THR:O	3:A:225:ILE:CG2	2.63	0.46
3:A:224:ARG:NE	3:A:225:ILE:H	2.13	0.46
4:B:111:LEU:CD1	4:B:111:LEU:C	2.89	0.46
4:B:164:GLN:C	4:B:164:GLN:CD	2.83	0.46
4:B:260:ARG:HH12	4:B:262:ARG:CA	2.22	0.46
5:C:120:TRP:CG	5:C:155:LYS:HB3	2.50	0.46
6:D:30:GLU:CA	6:D:33:ARG:CZ	2.91	0.46
6:D:36:LEU:HD13	6:D:39:ARG:NH2	2.31	0.46
6:D:164:ASN:CG	6:D:166:PRO:HD3	2.41	0.46
7:E:16:ARG:N	7:E:17:PRO:HD2	2.31	0.46
7:E:79:ASN:ND2	7:E:86:MET:CG	2.78	0.46
7:E:146:TYR:CD1	7:E:147:ASP:N	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:92:ILE:O	8:F:92:ILE:CG1	2.62	0.46
9:G:29:TYR:N	9:G:32:PRO:HD2	2.31	0.46
9:G:81:VAL:CG2	9:G:82:ARG:H	2.24	0.46
9:G:133:HIS:CD2	9:G:136:VAL:HB	2.47	0.46
10:H:84:ARG:C	10:H:84:ARG:HE	2.24	0.46
10:H:112:LYS:HD3	10:H:116:THR:CG2	2.45	0.46
12:J:86:LYS:HG2	12:J:118:GLY:HA3	1.98	0.46
12:J:123:LEU:HD23	12:J:124:LYS:O	2.16	0.46
14:L:103:ARG:HG3	19:Q:40:ASN:OD1	2.14	0.46
15:M:25:ARG:HH21	15:M:40:ILE:CG2	2.29	0.46
15:M:43:GLU:CG	15:M:44:LYS:HD3	2.44	0.46
17:O:40:PHE:N	17:O:40:PHE:CD2	2.81	0.46
19:Q:18:ARG:H	19:Q:18:ARG:HD3	1.80	0.46
19:Q:18:ARG:HD2	19:Q:76:VAL:CB	2.46	0.46
19:Q:48:ALA:O	19:Q:50:VAL:N	2.48	0.46
22:T:69:THR:HB	22:T:88:PHE:HZ	1.81	0.46
22:T:102:LEU:HD13	22:T:124:ILE:N	2.30	0.46
24:V:62:VAL:CG2	24:V:63:ALA:N	2.78	0.46
24:V:73:LEU:O	24:V:75:GLU:N	2.49	0.46
25:W:34:GLU:C	25:W:36:ARG:H	2.23	0.46
29:a:3:LYS:HE2	29:a:3:LYS:HA	1.97	0.46
29:a:57:ARG:H	29:a:57:ARG:HG3	1.50	0.46
30:b:24:TYR:CB	30:b:35:ARG:HG2	2.44	0.46
31:y:10:A:C2'	31:y:507:C:O2'	2.63	0.46
31:y:166:G:H2'	31:y:167:G:N7	2.24	0.46
31:y:322:C:O2	53:u:16:HIS:CE1	2.64	0.46
31:y:337:C:O2'	31:y:338:A:H5'	2.16	0.46
31:y:444:C:N4	31:y:491:G:C6	2.84	0.46
31:y:477:G:H2'	31:y:478:A:O4'	2.16	0.46
31:y:502:G:N2	31:y:503:C:H1'	2.31	0.46
31:y:520:A:N6	31:y:529:G:C2	2.79	0.46
31:y:578:C:HO2'	31:y:728:A:H2	1.52	0.46
31:y:858:G:N1	31:y:870:U:OP2	2.49	0.46
31:y:891:U:C6	31:y:891:U:O5'	2.69	0.46
31:y:956:U:H3'	31:y:957:U:H6	1.78	0.46
31:y:972:C:H4'	43:k:57:LYS:HB3	1.97	0.46
31:y:989:C:O2'	31:y:1017:G:H4'	2.15	0.46
31:y:1109:C:H3'	31:y:1110:A:O4'	2.15	0.46
31:y:1357:A:C5'	43:k:47:PHE:HE2	2.27	0.46
31:y:1410:G:C6	31:y:1411:C:N4	2.84	0.46
31:y:1514:C:O2'	31:y:1515:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:0:62:A:C2'	33:0:63:C:C6	2.83	0.46
35:c:132:LYS:CD	35:c:133:LYS:N	2.71	0.46
35:c:145:LEU:O	35:c:149:LEU:HG	2.15	0.46
35:c:178:ARG:HD2	35:c:184:VAL:HG11	1.97	0.46
36:d:184:TYR:CZ	36:d:201:TYR:HD2	2.33	0.46
37:e:10:ARG:HA	37:e:32:ALA:CB	2.46	0.46
37:e:88:VAL:HA	38:f:97:GLY:HA2	1.97	0.46
37:e:110:PHE:HD1	37:e:110:PHE:H	1.62	0.46
38:f:51:VAL:O	38:f:54:ALA:HB3	2.16	0.46
38:f:78:HIS:HE1	38:f:142:LEU:HG	1.69	0.46
40:h:49:ILE:C	40:h:51:GLN:N	2.71	0.46
41:i:100:ILE:HD11	41:i:112:LEU:HD13	1.97	0.46
44:l:42:TRP:HZ3	44:l:47:VAL:HG11	1.71	0.46
44:l:68:ALA:O	44:l:71:LYS:CB	2.61	0.46
46:n:49:THR:C	46:n:53:VAL:HG23	2.39	0.46
49:q:1:MET:CG	49:q:65:GLN:OE1	2.53	0.46
49:q:21:VAL:O	49:q:22:THR:CG2	2.63	0.46
50:r:22:LEU:HG	50:r:23:VAL:H	1.78	0.46
50:r:29:HIS:HD2	50:r:30:PRO:CG	2.28	0.46
51:s:66:LEU:C	51:s:66:LEU:HD23	2.39	0.46
52:t:28:LYS:HB3	52:t:29:ARG:H	1.49	0.46
52:t:71:LEU:O	52:t:75:ALA:HB2	2.16	0.46
54:v:21:TYR:O	54:v:22:ARG:HG3	2.15	0.46
1:w:58:G:OP1	20:R:72:LYS:C	2.58	0.46
1:w:76:C:O2'	1:w:77:C:C5'	2.55	0.46
1:w:104:U:H3'	1:w:105:C:H6	1.81	0.46
1:w:116:C:C2'	1:w:126:A:C4	2.99	0.46
1:w:149:A:C6	1:w:150:C:C2	3.04	0.46
1:w:199:A:N3	1:w:2433:A:C2	2.84	0.46
1:w:271(D):U:C2'	1:w:271:G:C5'	2.88	0.46
1:w:301:G:H8	1:w:301:G:H3'	1.81	0.46
1:w:347:A:H2'	1:w:348:G:C5'	2.46	0.46
1:w:534:U:H5'	17:O:42:ALA:HB1	1.97	0.46
1:w:579:G:C5'	1:w:2017:U:H3'	2.45	0.46
1:w:602:G:O2'	1:w:655:A:H2	1.93	0.46
1:w:603:A:H61	1:w:655:A:C5'	2.29	0.46
1:w:653:C:H5'	1:w:654:U:H5'	1.96	0.46
1:w:699:A:N7	1:w:734:A:C5	2.84	0.46
1:w:712:G:N3	1:w:720:C:C2	2.83	0.46
1:w:720:C:H2'	1:w:721:C:C6	2.50	0.46
1:w:775:G:O4'	1:w:777:A:C4	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:776:G:C6	1:w:793:A:N7	2.83	0.46
1:w:802:A:OP1	1:w:803:U:H5	1.96	0.46
1:w:813:U:H2'	1:w:814:C:C6	2.51	0.46
1:w:814:C:H5'	18:P:86:GLY:C	2.41	0.46
1:w:869:G:N2	1:w:909:A:C8	2.84	0.46
1:w:942:G:H5''	12:J:35:HIS:HA	1.97	0.46
1:w:974(B):C:C5	1:w:983:A:C8	3.04	0.46
1:w:1145:C:C4	1:w:1146:C:N4	2.84	0.46
1:w:1217:C:N4	1:w:1218:C:C5	2.83	0.46
1:w:1249:U:H2'	1:w:1250:G:O4'	2.15	0.46
1:w:1303:G:H5'	1:w:1642:G:N2	2.30	0.46
1:w:1375:C:H2'	1:w:1376:C:H5	1.80	0.46
1:w:1390:U:H2'	1:w:1391:U:O4'	2.15	0.46
1:w:1468:C:H42	1:w:1524:G:H1	1.63	0.46
1:w:1532:C:H3'	1:w:1533:C:H6	1.73	0.46
1:w:1536:A:H62	1:w:1538:G:N2	2.07	0.46
1:w:1555:G:O5'	1:w:1555:G:C8	2.68	0.46
1:w:1607:C:H5''	1:w:1608:A:O5'	2.15	0.46
1:w:1614:A:H3'	1:w:1615:C:C6	2.51	0.46
1:w:1650:G:C2	1:w:1651:G:C4	3.04	0.46
1:w:1651:G:H5''	14:L:10:LEU:HD11	1.96	0.46
1:w:1692:U:C4'	1:w:1977:A:H1'	2.46	0.46
1:w:1693:U:O2'	1:w:1694:C:P	2.73	0.46
1:w:1798:U:O2'	1:w:1802:A:C1'	2.64	0.46
1:w:2017:U:H4'	27:Y:9:LYS:CA	2.45	0.46
1:w:2027:G:N2	1:w:2037:G:C5	2.83	0.46
1:w:2030:A:C4'	1:w:2031:A:C8	2.99	0.46
1:w:2060:A:P	6:D:64:HIS:CA	2.93	0.46
1:w:2067:G:O2'	1:w:2069:G:O4'	2.34	0.46
1:w:2108:C:C2	1:w:2182:G:C2	3.04	0.46
1:w:2361:A:OP1	1:w:2361:A:H4'	2.15	0.46
1:w:2441:C:OP2	1:w:2587:A:H4'	2.15	0.46
1:w:2493:U:H2'	1:w:2494:G:O4'	2.15	0.46
1:w:2552:U:C6	1:w:2552:U:C4'	2.98	0.46
1:w:2601:C:C4'	32:z:74:C:O3'	2.36	0.46
1:w:2632:A:N3	5:C:61:ARG:NH2	2.64	0.46
1:w:2758:A:C4	1:w:2759:G:O4'	2.68	0.46
1:w:2772:C:H4'	5:C:166:THR:HG1	1.80	0.46
1:w:2813:A:H61	1:w:2887:U:H3	1.63	0.46
1:w:2853:C:O2'	1:w:2854:G:H5'	2.15	0.46
2:x:44:G:C8	2:x:44:G:P	3.08	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:135:PHE:CD1	4:B:135:PHE:N	2.83	0.46
4:B:144:ALA:CB	4:B:192:THR:HG22	2.43	0.46
4:B:192:THR:O	4:B:192:THR:HG23	2.15	0.46
6:D:75:ALA:O	6:D:78:PHE:CE2	2.69	0.46
6:D:130:LYS:HG3	6:D:132:LYS:HG3	1.96	0.46
8:F:88:LEU:HB3	8:F:130:ARG:HA	1.96	0.46
8:F:89:ILE:CG1	8:F:94:TYR:CD1	2.99	0.46
8:F:118:PRO:CG	8:F:121:ILE:HB	2.45	0.46
10:H:25:LYS:N	10:H:25:LYS:CD	2.78	0.46
10:H:38:LEU:O	10:H:159:GLU:HB2	2.16	0.46
11:I:15:GLY:C	11:I:52:VAL:O	2.59	0.46
12:J:27:HIS:O	12:J:28:GLY:O	2.33	0.46
12:J:35:HIS:O	12:J:36:LYS:HB2	2.15	0.46
12:J:39:LYS:HZ2	12:J:39:LYS:CA	2.28	0.46
12:J:115:LEU:HG	12:J:116:GLY:N	2.29	0.46
12:J:122:PRO:CB	12:J:142:GLY:HA2	2.27	0.46
13:K:55:VAL:O	13:K:58:PHE:O	2.33	0.46
14:L:79:LEU:HD23	14:L:82:GLU:OE2	2.16	0.46
15:M:82:ILE:CG2	15:M:85:VAL:HG11	2.44	0.46
16:N:50:ILE:HG23	16:N:62:THR:HG23	1.98	0.46
16:N:100:TYR:C	16:N:103:ARG:NH1	2.73	0.46
17:O:81:HIS:O	17:O:82:GLY:C	2.58	0.46
17:O:81:HIS:C	17:O:83:LEU:N	2.72	0.46
19:Q:106:ILE:C	19:Q:107:LEU:HD23	2.40	0.46
20:R:12:VAL:HG11	20:R:27:THR:HB	1.96	0.46
20:R:77:LYS:HE3	20:R:77:LYS:CA	2.46	0.46
22:T:56:VAL:HG12	22:T:70:LEU:HG	1.98	0.46
22:T:121:HIS:C	22:T:123:ASP:H	2.23	0.46
23:U:14:ARG:HE	23:U:14:ARG:HA	1.80	0.46
24:V:11:ARG:HH22	24:V:60:PHE:CB	2.29	0.46
24:V:40:ARG:CG	24:V:41:ARG:N	2.78	0.46
25:W:4:SER:HB2	25:W:6:VAL:CG2	2.45	0.46
26:X:17:LYS:O	26:X:20:LYS:HB2	2.16	0.46
29:a:32:LEU:HA	29:a:41:ILE:HG21	1.97	0.46
31:y:14:U:C6	31:y:14:U:H3'	2.50	0.46
31:y:27:G:H2'	31:y:28:G:O4'	2.16	0.46
31:y:68:G:C4	31:y:102:G:C2	3.03	0.46
31:y:220:G:C2	31:y:221:C:C6	3.03	0.46
31:y:232:G:C4	31:y:233:C:C6	3.03	0.46
31:y:283:C:N4	31:y:284:G:C6	2.84	0.46
31:y:294:U:O2	31:y:303:A:H2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:417:C:H2'	31:y:418:C:C6	2.50	0.46
31:y:477:G:C6	31:y:478:A:C6	3.03	0.46
31:y:541:G:C5	31:y:542:G:C8	3.04	0.46
31:y:628:G:C5	31:y:629:G:C4	3.04	0.46
31:y:666:G:C2	31:y:741:G:C2	3.04	0.46
31:y:880:C:OP2	45:m:5:THR:HG21	2.15	0.46
31:y:918:A:N6	31:y:919:A:C6	2.83	0.46
31:y:1027:C:H2'	31:y:1027:C:O2	2.14	0.46
31:y:1096:C:N4	31:y:1097:C:C4	2.84	0.46
31:y:1108:G:C6	31:y:1109:C:C5	3.03	0.46
31:y:1139:G:N2	31:y:1142:G:C5	2.82	0.46
31:y:1235:U:H2'	31:y:1236:A:O5'	2.15	0.46
31:y:1253:G:H1'	31:y:1355:G:HO2'	1.74	0.46
31:y:1299:A:H5''	31:y:1300:G:OP2	2.15	0.46
31:y:1323:G:H5'	31:y:136(B):C:H41	1.79	0.46
31:y:1346:A:H4'	42:j:120:ARG:NH2	2.30	0.46
32:z:18:G:C1'	32:z:60:U:C4	2.98	0.46
33:0:41:U:C6	33:0:41:U:H3'	2.50	0.46
35:c:42:ILE:CD1	35:c:43:ASP:H	1.99	0.46
36:d:8:ILE:C	36:d:10:PHE:N	2.74	0.46
36:d:50:ALA:HA	36:d:72:LYS:HD2	1.97	0.46
36:d:76:VAL:C	36:d:78:GLY:N	2.74	0.46
36:d:93:LYS:C	36:d:93:LYS:HZ2	2.24	0.46
36:d:124:ILE:CD1	36:d:128:PHE:C	2.88	0.46
37:e:17:VAL:CG1	37:e:19:LEU:HD23	2.45	0.46
40:h:77:SER:HA	40:h:86:GLN:HA	1.96	0.46
41:i:117:GLY:C	41:i:118:VAL:HG23	2.40	0.46
42:j:26:VAL:HG21	42:j:33:PHE:HB2	1.98	0.46
44:l:108:ILE:HG22	51:s:88:LYS:CB	2.42	0.46
46:n:75:ALA:O	46:n:76:ALA:C	2.57	0.46
49:q:18:ARG:HA	49:q:39:TYR:CB	2.45	0.46
50:r:12:SER:HB3	50:r:20:THR:H	1.81	0.46
51:s:36:ASN:HB3	51:s:39:VAL:CB	2.45	0.46
53:u:34:LYS:HD3	53:u:34:LYS:C	2.41	0.46
1:w:102:G:H5'	1:w:103:A:OP1	2.15	0.46
1:w:149:A:N7	1:w:150:C:C6	2.83	0.46
1:w:155:C:O2	1:w:155:C:C2'	2.63	0.46
1:w:215:G:N2	1:w:432:A:H2	2.12	0.46
1:w:245:G:N3	1:w:245:G:H2'	2.30	0.46
1:w:273(D):C:H2'	1:w:273(E):C:C5'	2.45	0.46
1:w:321:G:N2	6:D:160:ARG:CZ	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:371:A:O2'	1:w:372:G:O5'	2.32	0.46
1:w:463:G:N1	1:w:467:G:O6	2.49	0.46
1:w:483:A:H2'	1:w:484:C:O4'	2.16	0.46
1:w:495:G:H1'	19:Q:57:ASN:ND2	2.31	0.46
1:w:508:G:O2'	1:w:509:C:P	2.74	0.46
1:w:558:G:N2	1:w:559:G:C4	2.84	0.46
1:w:571:A:C2	1:w:2030:A:N1	2.83	0.46
1:w:597:U:O3'	12:J:15:ARG:HD3	2.14	0.46
1:w:714:U:H2'	1:w:716:A:OP2	2.15	0.46
1:w:788:A:H4'	1:w:789:A:H5'	1.98	0.46
1:w:820:A:N3	1:w:943:U:H4'	2.31	0.46
1:w:822:U:O2'	1:w:823:G:H5'	2.16	0.46
1:w:850:C:C4	1:w:851:U:C5	3.04	0.46
1:w:906:G:C2'	1:w:907:U:C5'	2.78	0.46
1:w:1109:C:H3'	1:w:1109:C:C6	2.51	0.46
1:w:1128:A:O2'	1:w:1129:A:P	2.73	0.46
1:w:1197:G:C5	1:w:1250:G:N1	2.84	0.46
1:w:1282:U:C2	1:w:1283:G:C1'	2.86	0.46
1:w:1362:C:C5'	1:w:1362:C:C6	2.98	0.46
1:w:149(B):A:N9	1:w:1529:A:H2	2.12	0.46
1:w:1459:G:N1	1:w:1461:G:C5	2.84	0.46
1:w:1476:C:N3	1:w:1477:A:N7	2.63	0.46
1:w:1535:U:H2'	1:w:1536:A:H5'	1.98	0.46
1:w:1562:A:N6	1:w:1563:G:O6	2.49	0.46
1:w:1604:C:C6	1:w:1604:C:C3'	2.99	0.46
1:w:1670:C:C5	1:w:1671:U:N1	2.84	0.46
1:w:1691:C:N4	1:w:1697:G:N2	2.64	0.46
1:w:1851:U:OP1	33:0:4:G:H5''	2.15	0.46
1:w:1917:U:N3	1:w:1918:A:C2	2.83	0.46
1:w:1920:C:H5'	31:y:1517:G:N3	2.31	0.46
1:w:1930:G:O2'	1:w:1931:U:H5	1.98	0.46
1:w:2008:C:O5'	1:w:2008:C:C6	2.68	0.46
1:w:2017:U:H5'	27:Y:8:LYS:CG	2.43	0.46
1:w:2074:U:O2'	1:w:2597:G:O2'	2.16	0.46
1:w:2080:G:H2'	1:w:2081:C:C5	2.51	0.46
1:w:2125:G:H5''	3:A:41:THR:CG2	2.46	0.46
1:w:2130:U:P	3:A:7:ARG:HD2	2.56	0.46
1:w:2205:C:H5''	24:V:52:ARG:HH12	1.80	0.46
1:w:2243:U:H2'	1:w:2244:U:O5'	2.15	0.46
1:w:2322:A:N7	1:w:2323:G:N9	2.63	0.46
1:w:2393:A:C4'	12:J:62:LEU:HB3	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2396:G:C2	1:w:2397:G:C8	3.04	0.46
1:w:2415:G:C5'	12:J:66:GLY:O	2.62	0.46
1:w:2451:A:H2	32:z:76:A:HO3'	1.57	0.46
1:w:2461:C:O2'	1:w:2462:U:H5'	2.16	0.46
1:w:2473:U:O5'	1:w:2473:U:C6	2.69	0.46
1:w:2517:C:H3'	1:w:2519:U:C5	2.42	0.46
1:w:2567:G:O2'	1:w:2568:C:H5'	2.16	0.46
1:w:2582:G:N2	1:w:2583:G:C8	2.84	0.46
1:w:2595:G:H21	1:w:2598:A:H62	1.64	0.46
1:w:2633:G:H2'	1:w:2634:G:O5'	2.16	0.46
1:w:2680:C:O5'	5:C:189:PRO:CD	2.64	0.46
1:w:2686:G:C6	1:w:2687:U:C5	3.04	0.46
1:w:2823:A:OP2	5:C:112:GLY:CA	2.62	0.46
1:w:2834:G:C5'	1:w:2835:A:OP2	2.59	0.46
1:w:2888:C:H3'	1:w:2889:C:H6	1.80	0.46
2:x:14:U:C4'	2:x:107:U:H1'	2.46	0.46
2:x:94:C:C2'	2:x:95:U:H5	2.25	0.46
3:A:201:LYS:CG	3:A:209:PHE:HZ	2.29	0.46
4:B:126:GLN:O	4:B:126:GLN:HG3	2.14	0.46
5:C:5:LEU:HD22	5:C:76:ARG:HD2	1.98	0.46
5:C:78:LEU:CA	5:C:79:ARG:HE	2.28	0.46
5:C:192:ASN:ND2	5:C:193:GLY:N	2.54	0.46
6:D:5:PRO:CB	6:D:9:PRO:HG2	2.46	0.46
8:F:172:LYS:HZ1	8:F:173:PRO:HD2	1.80	0.46
9:G:41:GLU:C	9:G:44:LEU:H	2.23	0.46
9:G:55:ALA:C	9:G:58:LEU:HB3	2.40	0.46
9:G:125:GLU:CG	9:G:126:TYR:H	2.17	0.46
10:H:35:ARG:HB2	10:H:73:ASP:OD2	2.15	0.46
10:H:71:MET:HG2	10:H:72:GLY:H	1.80	0.46
11:I:94:ARG:HD2	11:I:94:ARG:N	2.24	0.46
11:I:98:VAL:HG21	11:I:118:ALA:HA	1.98	0.46
12:J:125:VAL:O	12:J:145:PRO:CG	2.64	0.46
12:J:139:LYS:C	12:J:141:ALA:N	2.64	0.46
14:L:54:LEU:HD22	14:L:61:HIS:CG	2.51	0.46
14:L:66:VAL:CB	14:L:70:LEU:HD12	2.45	0.46
14:L:86:ARG:NE	14:L:87:TYR:HE1	2.13	0.46
17:O:81:HIS:HE1	17:O:85:LYS:HB2	1.77	0.46
17:O:90:VAL:HG11	18:P:39:LEU:HD21	1.97	0.46
18:P:19:LYS:HD2	18:P:20:LEU:N	2.30	0.46
19:Q:4:LYS:HZ1	19:Q:62:HIS:HE1	1.64	0.46
19:Q:33:ARG:HG3	19:Q:34:ASN:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:44:ALA:C	19:Q:46:PHE:N	2.69	0.46
19:Q:70:TYR:CE2	19:Q:72:LYS:HG2	2.50	0.46
19:Q:79:GLY:CA	19:Q:102:HIS:CD2	2.98	0.46
20:R:12:VAL:O	20:R:13:LEU:HB3	2.16	0.46
22:T:108:PRO:HG3	22:T:141:VAL:CG1	2.32	0.46
23:U:19:LYS:O	23:U:20:ARG:O	2.34	0.46
23:U:77:ARG:C	23:U:78:TYR:CD1	2.93	0.46
24:V:23:LYS:HG2	24:V:38:SER:O	2.16	0.46
24:V:73:LEU:O	24:V:74:VAL:C	2.58	0.46
25:W:53:LEU:O	25:W:54:LYS:CB	2.62	0.46
29:a:5:LYS:O	29:a:6:THR:C	2.57	0.46
31:y:13:U:O3'	31:y:14:U:C6	2.68	0.46
31:y:68:G:O6	31:y:101:A:N1	2.49	0.46
31:y:109:A:H5''	31:y:109:A:N3	2.31	0.46
31:y:355:C:O5'	31:y:355:C:H6	1.98	0.46
31:y:507:C:C2	31:y:508:C:C5	2.93	0.46
31:y:556:C:C2'	31:y:557:G:O5'	2.63	0.46
31:y:609:A:C3'	31:y:610:G:H8	2.28	0.46
31:y:750:G:H8	31:y:750:G:OP2	1.96	0.46
31:y:948:C:O2	31:y:948:C:C2'	2.62	0.46
31:y:957:U:H4'	31:y:960:U:C5	2.51	0.46
31:y:962:C:C4	31:y:963:G:N7	2.83	0.46
31:y:969:A:OP1	31:y:969:A:H4'	2.15	0.46
31:y:103(A):A:C2'	31:y:103(B):G:H5'	2.45	0.46
31:y:1040:U:H6	31:y:1040:U:O5'	1.98	0.46
31:y:1103:C:H2'	31:y:1104:G:H1'	1.89	0.46
31:y:1342:C:O2'	42:j:124:GLN:CA	2.63	0.46
31:y:1358:U:H3'	47:o:35:ARG:NH2	2.30	0.46
31:y:1423:G:C3'	31:y:1424:C:C6	2.99	0.46
31:y:1494:G:C2'	31:y:1495:U:O5'	2.64	0.46
32:z:25:C:H2'	32:z:26:A:C5'	2.46	0.46
33:0:27:C:N3	33:0:28:C:N4	2.64	0.46
33:0:64:A:H3'	33:0:65:G:C8	2.50	0.46
35:c:23:ARG:HE	35:c:24:TRP:CA	2.28	0.46
36:d:23:TYR:HB2	43:k:11:PHE:HE1	1.80	0.46
36:d:64:VAL:CB	36:d:99:VAL:HG12	2.36	0.46
36:d:166:GLU:HG3	36:d:167:TRP:H	1.80	0.46
37:e:5:ILE:CD1	37:e:118:ARG:HH22	2.18	0.46
37:e:35:ARG:CB	37:e:36:ARG:HH21	2.28	0.46
37:e:78:LEU:CD1	37:e:78:LEU:N	2.77	0.46
37:e:93:PHE:CD2	37:e:94:LEU:HD12	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:5:ARG:CG	40:h:5:ARG:NH1	2.79	0.46
40:h:23:VAL:CG2	40:h:62:PHE:HE2	2.18	0.46
40:h:152:ALA:O	40:h:154:TYR:N	2.49	0.46
41:i:27:PRO:HA	41:i:58:TYR:HA	1.96	0.46
41:i:36:LEU:HD13	41:i:48:TYR:CG	2.51	0.46
41:i:122:ARG:CG	41:i:123:GLU:H	1.97	0.46
43:k:30:SER:CA	43:k:84:GLN:HB3	2.44	0.46
44:l:77:MET:N	44:l:77:MET:SD	2.89	0.46
51:s:23:LYS:HA	51:s:23:LYS:CE	2.36	0.46
51:s:84:LYS:O	51:s:85:LEU:HB2	2.16	0.46
52:t:39:THR:CA	52:t:70:LYS:HG3	2.37	0.46
53:u:16:HIS:C	53:u:18:GLN:H	2.23	0.46
54:v:18:TYR:CA	54:v:22:ARG:HD2	2.35	0.46
1:w:33:U:C2'	1:w:34:C:H5'	2.46	0.46
1:w:80:G:O5'	1:w:80:G:H8	1.99	0.46
1:w:153:C:H4'	24:V:92:LYS:HE2	1.98	0.46
1:w:204:A:OP1	1:w:204:A:H8	1.98	0.46
1:w:219:G:O6	1:w:428:A:OP1	2.34	0.46
1:w:328:U:H2'	21:S:68:HIS:CE1	2.51	0.46
1:w:353:G:C4	1:w:354:G:C8	3.04	0.46
1:w:357:A:C2'	1:w:358:U:H6	2.25	0.46
1:w:363(F):U:C3'	1:w:363(G):A:C8	2.74	0.46
1:w:451:C:H1'	1:w:453:C:N4	2.31	0.46
1:w:601:C:H1'	6:D:99:LYS:HZ3	1.80	0.46
1:w:660:G:H5''	6:D:34:TRP:NE1	2.31	0.46
1:w:772:C:H2'	1:w:773:U:O4'	2.16	0.46
1:w:773:U:O2'	4:B:48:ARG:NH2	2.49	0.46
1:w:783:A:H4'	1:w:2588:G:O2'	2.15	0.46
1:w:843:G:C6	1:w:844:C:C4	3.04	0.46
1:w:859:G:C2'	1:w:860:U:OP2	2.64	0.46
1:w:936:C:C6	1:w:936:C:C3'	2.99	0.46
1:w:949:C:H2'	1:w:950:G:C8	2.50	0.46
1:w:997:G:H3'	1:w:998:C:H5	1.80	0.46
1:w:1000:A:N6	1:w:1155:A:N3	2.64	0.46
1:w:1018:C:O2	1:w:1018:C:C2'	2.64	0.46
1:w:1046:A:H3'	1:w:1047:G:H5''	1.98	0.46
1:w:1101:U:H2'	1:w:1102:C:H6	1.81	0.46
1:w:1121:C:O2	1:w:1121:C:H2'	2.16	0.46
1:w:1176:G:N2	1:w:1177:A:C4	2.83	0.46
1:w:1255:U:P	1:w:1256:G:H5''	2.53	0.46
1:w:1268:A:N7	1:w:1269:A:N7	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1442:G:OP1	1:w:1628:G:C4'	2.60	0.46
1:w:1619:G:N2	28:Z:2:LYS:H	2.02	0.46
1:w:1841:U:H2'	1:w:1842:G:H8	1.80	0.46
1:w:1862:G:N2	1:w:1881:C:C1'	2.78	0.46
1:w:1948:G:C6	1:w:1959:G:C6	3.04	0.46
1:w:1958:C:H2'	1:w:1959:G:H8	1.81	0.46
1:w:1992:G:O4'	1:w:1994:C:N4	2.48	0.46
1:w:2019:A:C5'	17:O:27:LEU:HD11	2.45	0.46
1:w:2083:G:N7	1:w:2083:G:OP2	2.49	0.46
1:w:2084:C:N3	1:w:2085:C:C5	2.82	0.46
1:w:2100:G:N1	1:w:2101:G:C5	2.83	0.46
1:w:2114:A:N6	1:w:2115:G:N1	2.64	0.46
1:w:2218:G:C5	1:w:2219:G:N7	2.84	0.46
1:w:2230:G:H4'	24:V:45:ASN:HB2	1.98	0.46
1:w:2330:G:H2'	1:w:2331:G:O5'	2.15	0.46
1:w:2406:U:N3	12:J:73:GLY:HA3	2.27	0.46
1:w:2417:C:H2'	1:w:2418:A:O5'	2.15	0.46
1:w:2643:G:C3'	1:w:2644:G:C8	2.98	0.46
1:w:2776:A:C5'	1:w:2777:G:OP1	2.51	0.46
1:w:2795:G:N3	1:w:2799:A:P	2.88	0.46
1:w:2876:G:H2'	1:w:2877:G:C8	2.50	0.46
1:w:2901:C:N3	1:w:2902:C:C5	2.84	0.46
2:x:18:G:H2'	2:x:19:G:N7	2.31	0.46
2:x:57:A:H61	7:E:29:TRP:HB2	1.72	0.46
2:x:85:G:H2'	2:x:86:G:O4'	2.16	0.46
4:B:17:THR:CB	4:B:204:ILE:HA	2.45	0.46
4:B:53:PHE:CB	4:B:218:ARG:HB3	2.46	0.46
4:B:70:TRP:CZ3	4:B:190:TYR:CB	2.99	0.46
4:B:266:SER:O	4:B:270:ILE:HG12	2.16	0.46
5:C:67:PHE:C	5:C:69:LYS:N	2.72	0.46
5:C:81:ILE:HD12	5:C:81:ILE:H	1.72	0.46
5:C:109:LYS:HD2	5:C:191:PRO:HD3	1.97	0.46
6:D:105:LEU:HD21	6:D:109:VAL:HG13	1.97	0.46
6:D:131:THR:OG1	6:D:163:ARG:HD3	2.16	0.46
6:D:183:ARG:NH1	12:J:7:ARG:HB3	2.30	0.46
6:D:196:VAL:C	6:D:197:PHE:CD1	2.94	0.46
7:E:78:SER:O	7:E:79:ASN:HB3	2.15	0.46
7:E:93:THR:CG2	7:E:94:LEU:H	2.27	0.46
8:F:140:LYS:HE3	8:F:141:VAL:CG2	2.45	0.46
8:F:141:VAL:HA	8:F:144:VAL:HB	1.97	0.46
9:G:7:GLU:H	9:G:8:PRO:CD	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:94:ALA:CA	9:G:97:ILE:HG23	2.46	0.46
10:H:44:LYS:C	10:H:84:ARG:HB2	2.37	0.46
10:H:84:ARG:C	10:H:84:ARG:NE	2.74	0.46
10:H:138:ARG:C	10:H:140:PHE:H	2.24	0.46
10:H:146:TYR:CE2	10:H:148:GLY:N	2.84	0.46
11:I:6:THR:CG2	11:I:7:TYR:N	2.59	0.46
11:I:10:VAL:O	11:I:11:ALA:C	2.59	0.46
11:I:120:GLU:OE1	11:I:120:GLU:HA	2.16	0.46
12:J:50:ARG:CD	12:J:51:PHE:N	2.70	0.46
12:J:135:LEU:C	12:J:135:LEU:HD13	2.41	0.46
13:K:8:LYS:CE	13:K:70:PRO:HB2	2.45	0.46
13:K:25:ASP:CB	13:K:102:VAL:H	2.28	0.46
14:L:23:ASN:HA	14:L:26:LYS:HB3	1.97	0.46
14:L:35:THR:O	14:L:36:THR:CG2	2.64	0.46
14:L:117:VAL:CG1	14:L:118:GLU:N	2.78	0.46
15:M:30:ARG:HD2	15:M:30:ARG:C	2.40	0.46
16:N:3:ARG:HB3	16:N:7:ILE:HD13	1.96	0.46
17:O:61:TRP:O	17:O:62:ILE:C	2.58	0.46
18:P:2:PHE:N	18:P:2:PHE:HD1	2.13	0.46
18:P:14:VAL:C	18:P:15:GLU:HG3	2.40	0.46
19:Q:47:VAL:O	19:Q:51:LEU:CD1	2.64	0.46
21:S:46:LYS:N	21:S:57:GLN:H	2.13	0.46
22:T:10:ARG:HG3	22:T:37:VAL:N	2.30	0.46
22:T:59:LEU:HD22	22:T:59:LEU:N	2.31	0.46
22:T:132:ASN:O	22:T:134:PRO:CD	2.63	0.46
23:U:22:GLY:H	23:U:39:ARG:HB3	1.81	0.46
23:U:54:GLY:O	23:U:55:ARG:C	2.59	0.46
24:V:68:PRO:C	24:V:70:VAL:H	2.24	0.46
24:V:90:ILE:HB	24:V:91:LYS:HE3	1.97	0.46
26:X:17:LYS:HE3	26:X:21:ALA:HB2	1.98	0.46
30:b:25:VAL:O	30:b:26:ILE:CG1	2.63	0.46
31:y:34:C:N3	31:y:35:G:N7	2.63	0.46
31:y:60:A:H2	31:y:107:G:H21	1.55	0.46
31:y:73:G:H2'	31:y:74:C:C6	2.50	0.46
31:y:266:G:O2'	31:y:267:C:P	2.73	0.46
31:y:303:A:C4	31:y:304:U:C5	2.95	0.46
31:y:357:G:C1'	31:y:368:U:O2	2.61	0.46
31:y:370:C:C2	31:y:392:G:C2	3.04	0.46
31:y:507:C:C6	31:y:508:C:C5	3.03	0.46
31:y:701:C:OP1	31:y:702:A:H8	1.98	0.46
31:y:757:U:C3'	31:y:758:G:C1'	2.94	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:870:U:H5''	31:y:870:U:C6	2.50	0.46
31:y:933:G:H22	31:y:935:A:C1'	2.26	0.46
31:y:935:A:O2'	31:y:1384:C:O2	2.32	0.46
31:y:1074:G:C5	31:y:1102:A:N6	2.83	0.46
31:y:1117:G:H5'	42:j:104:ARG:HH12	1.81	0.46
31:y:1139:G:H1'	31:y:1141:C:C5	2.50	0.46
31:y:1199:U:C4'	43:k:54:PHE:CE2	2.99	0.46
31:y:1347:G:C5	42:j:107:ARG:HD2	2.50	0.46
31:y:1379:G:H2'	31:y:1381:U:C5	2.40	0.46
31:y:1386:G:C2	31:y:1387:G:C5	3.03	0.46
31:y:1449:C:C2'	31:y:1450:U:H5'	2.46	0.46
31:y:1455:G:H2'	31:y:1459:C:C5	2.42	0.46
31:y:1455:G:C4	31:y:1459:C:C5	3.04	0.46
31:y:1469:G:O2'	31:y:1470:G:H5'	2.16	0.46
31:y:1502:A:C2	31:y:1505:G:N1	2.83	0.46
33:0:23:A:C5	33:0:24:G:N7	2.84	0.46
35:c:97:TRP:HB3	35:c:172:ILE:CG2	2.46	0.46
35:c:163:PHE:HB2	35:c:185:ILE:CG1	2.43	0.46
36:d:11:ARG:HG3	36:d:180:ALA:CB	2.46	0.46
36:d:138:VAL:HG21	36:d:169:ALA:N	2.30	0.46
37:e:81:GLU:O	37:e:84:LYS:HG3	2.15	0.46
37:e:201:GLN:O	37:e:203:VAL:N	2.49	0.46
38:f:94:ALA:HB1	38:f:118:ILE:HA	1.97	0.46
40:h:102:ARG:O	40:h:105:VAL:HB	2.16	0.46
40:h:149:ARG:C	44:l:59:TYR:CB	2.77	0.46
40:h:150:ALA:CA	44:l:59:TYR:HB3	2.45	0.46
41:i:15:ASN:O	41:i:17:THR:N	2.48	0.46
41:i:20:TYR:CE1	41:i:65:TYR:CG	3.04	0.46
43:k:24:VAL:HG13	43:k:28:ARG:NE	2.31	0.46
44:l:34:ASP:OD2	44:l:38:ASN:HB2	2.15	0.46
44:l:76:GLY:CA	44:l:78:GLN:HE21	2.29	0.46
45:m:59:LEU:HD11	45:m:61:SER:H	1.78	0.46
46:n:4:ILE:HG23	46:n:57:ARG:C	2.40	0.46
50:r:21:VAL:C	50:r:41:LYS:HG3	2.41	0.46
50:r:56:VAL:HB	50:r:78:GLU:H	1.80	0.46
51:s:41:LYS:HD3	51:s:41:LYS:C	2.40	0.46
51:s:63:GLN:CA	51:s:66:LEU:CB	2.86	0.46
52:t:12:ASP:HB2	52:t:15:LEU:HG	1.95	0.46
53:u:31:SER:HA	53:u:34:LYS:HD2	1.96	0.46
53:u:51:GLU:CD	53:u:51:GLU:N	2.68	0.46
1:w:15:G:C6	1:w:16:G:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:128:C:C6	1:w:128:C:H3'	2.51	0.46
1:w:132:G:C5	1:w:133:C:C5	3.03	0.46
1:w:137(A):C:O2'	1:w:137(B):G:C5'	2.61	0.46
1:w:216:A:H8	1:w:431:U:H3	1.51	0.46
1:w:270(K):G:C8	1:w:270(K):G:O5'	2.68	0.46
1:w:270(K):G:C2'	1:w:270(L):C:H5'	2.46	0.46
1:w:270(L):C:O2	1:w:270(Q):C:N3	2.49	0.46
1:w:281:G:C2	1:w:358:U:C5	3.04	0.46
1:w:352:G:N2	1:w:353:G:C5	2.83	0.46
1:w:565:C:H5''	18:P:81:TYR:CZ	2.48	0.46
1:w:618(A):G:OP1	6:D:101:ARG:NE	2.48	0.46
1:w:637:A:N6	1:w:654:U:H3	2.07	0.46
1:w:667:U:C2	1:w:668:G:H1'	2.51	0.46
1:w:670:A:C4'	1:w:671:C:H5'	2.44	0.46
1:w:701:G:N2	1:w:731:C:O2	2.39	0.46
1:w:814:C:C5'	18:P:85:LYS:O	2.58	0.46
1:w:936:C:H2'	1:w:937:U:C5'	2.46	0.46
1:w:947:G:C2'	1:w:948:G:C8	2.95	0.46
1:w:957:A:H4'	13:K:74:TYR:HE2	1.81	0.46
1:w:1015:G:C5	1:w:1016:G:C6	3.03	0.46
1:w:1021:A:C2'	1:w:1022:G:OP1	2.64	0.46
1:w:1115:G:C2'	1:w:1116:C:C6	2.91	0.46
1:w:1120:G:P	1:w:1120:G:H8	2.39	0.46
1:w:1138:G:C4'	10:H:128:GLY:CA	2.72	0.46
1:w:1191:G:C8	12:J:29:LYS:NZ	2.79	0.46
1:w:1266:G:C2'	1:w:1267:U:OP2	2.63	0.46
1:w:1272:A:P	1:w:1647:G:OP1	2.74	0.46
1:w:1423:G:C4	1:w:1424:G:N7	2.83	0.46
1:w:1427:A:H1'	1:w:1428:C:C4	2.51	0.46
1:w:1442:G:C5	1:w:1443:G:N7	2.84	0.46
1:w:1487:G:H2'	1:w:1488:G:C1'	2.45	0.46
1:w:1548:C:O5'	1:w:1548:C:H6	1.98	0.46
1:w:1663:C:H4'	1:w:1664:A:H5'	1.98	0.46
1:w:1728:G:N1	1:w:1731:G:N7	2.64	0.46
1:w:1798:U:P	4:B:258:LYS:HA	2.55	0.46
1:w:1810:A:C8	1:w:1810:A:P	3.09	0.46
1:w:1812:A:C4	1:w:1813:G:C8	3.04	0.46
1:w:1824:G:O2'	4:B:254:THR:HB	2.16	0.46
1:w:1891:G:H2'	1:w:1892:C:C6	2.50	0.46
1:w:1936:A:C6	1:w:1945:G:C4	3.04	0.46
1:w:1975:G:C2'	1:w:1976:U:O5'	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2002:G:N1	1:w:2003:G:O6	2.49	0.46
1:w:2033:A:C6	1:w:2036:C:C6	3.04	0.46
1:w:2077:A:C2	1:w:2244:U:C2	3.03	0.46
1:w:2114:A:H8	1:w:2114:A:O5'	1.99	0.46
1:w:2134:A:C4	1:w:2135:A:C8	3.04	0.46
1:w:2213:U:OP1	1:w:2215:G:C5	2.68	0.46
1:w:2235:G:C2'	1:w:2236:C:H5'	2.46	0.46
1:w:2297:C:H1'	1:w:2322:A:N3	2.31	0.46
1:w:2335:A:C8	1:w:2337:G:C4	3.03	0.46
1:w:2342:C:H6	1:w:2342:C:O5'	1.99	0.46
1:w:2419:U:C2	1:w:2420:C:C5	3.03	0.46
1:w:2451:A:H8	1:w:2451:A:C5'	2.25	0.46
1:w:2468:G:C6	1:w:2481:G:C5	3.03	0.46
1:w:2579:C:H4'	5:C:134:ILE:HD11	1.96	0.46
1:w:2652:C:C4	1:w:2653:U:C5	3.04	0.46
1:w:2718:G:H21	1:w:2847:U:C5'	2.28	0.46
1:w:2760:C:C2	1:w:2761:G:C8	3.04	0.46
1:w:2838:G:H2'	1:w:2839:G:O5'	2.16	0.46
1:w:2856:C:H42	1:w:2861:G:H1	1.64	0.46
2:x:77:U:H2'	2:x:78:A:H8	1.79	0.46
2:x:99:A:C2	2:x:100:G:N3	2.84	0.46
3:A:165:ARG:NH2	3:A:172:ILE:HD12	2.30	0.46
4:B:62:TYR:O	4:B:62:TYR:CD1	2.67	0.46
4:B:161:THR:O	4:B:196:VAL:HG23	2.16	0.46
6:D:105:LEU:HD11	6:D:109:VAL:HG21	1.97	0.46
6:D:110:ALA:HB1	6:D:114:ARG:NH1	2.31	0.46
7:E:34:LEU:O	7:E:35:GLU:HG3	2.16	0.46
7:E:140:ILE:CD1	46:n:7:VAL:CG1	2.90	0.46
8:F:8:PRO:HA	8:F:49:VAL:HG13	1.98	0.46
8:F:116:GLU:CD	8:F:117:PRO:HD2	2.40	0.46
9:G:97:ILE:O	9:G:100:ALA:HB3	2.16	0.46
9:G:115:ALA:CB	9:G:129:THR:O	2.52	0.46
10:H:57:LEU:HD12	10:H:139:LEU:HB3	1.98	0.46
11:I:11:ALA:O	11:I:99:PHE:CD2	2.68	0.46
11:I:87:ILE:HD11	11:I:114:ILE:HG21	1.98	0.46
12:J:82:GLY:C	12:J:113:LYS:O	2.59	0.46
13:K:103:MET:CB	13:K:104:PHE:CD1	2.99	0.46
15:M:30:ARG:HD3	15:M:32:LEU:HA	1.97	0.46
16:N:104:ASN:N	16:N:104:ASN:OD1	2.49	0.46
16:N:135:VAL:CG1	16:N:136:GLN:N	2.70	0.46
18:P:78:LYS:C	18:P:79:VAL:HG23	2.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:25:LYS:CG	20:R:26:TYR:N	2.79	0.46
20:R:32:PRO:HG3	20:R:72:LYS:NZ	2.31	0.46
21:S:71:LYS:HG3	21:S:96:ILE:HD11	1.97	0.46
23:U:34:GLY:C	23:U:35:ASN:HD22	2.24	0.46
23:U:67:VAL:CG2	23:U:79:VAL:HG11	2.45	0.46
24:V:26:ARG:HB3	24:V:35:THR:N	2.31	0.46
24:V:54:ALA:HA	24:V:58:ILE:HG13	1.97	0.46
26:X:55:ARG:HG3	26:X:56:VAL:N	2.30	0.46
31:y:147:G:C3'	31:y:148:G:C8	2.97	0.46
31:y:304:U:O2'	31:y:305:G:H5'	2.16	0.46
31:y:320:C:H2'	31:y:321:A:C1'	2.46	0.46
31:y:389:A:C3'	31:y:390:C:H6	2.25	0.46
31:y:564:C:P	50:r:32:TYR:HE1	2.39	0.46
31:y:575:G:C5	31:y:881:G:N1	2.84	0.46
31:y:691:G:H8	44:l:26:ASN:HD21	1.64	0.46
31:y:758:G:C8	31:y:758:G:P	2.96	0.46
31:y:783:C:C2'	31:y:784:C:O5'	2.64	0.46
31:y:934:C:H5''	31:y:1345:U:OP2	2.15	0.46
31:y:990:C:H2'	31:y:991:U:C4'	2.46	0.46
31:y:1043:C:C2	31:y:1044:A:N7	2.83	0.46
31:y:1053:G:C6	31:y:1199:U:C5	3.04	0.46
31:y:1236:A:H4'	31:y:1304:G:H4'	1.97	0.46
31:y:1326:C:C3'	54:v:19:GLY:HA3	2.45	0.46
31:y:1339:A:C2	32:z:31:A:H1'	2.51	0.46
33:0:31:A:H2	33:0:39:U:C2	2.33	0.46
35:c:119:GLU:OE2	35:c:119:GLU:HA	2.16	0.46
36:d:19:GLU:HG2	36:d:20:SER:H	1.81	0.46
36:d:34:LEU:CD2	36:d:38:ARG:NH2	2.64	0.46
36:d:125:GLU:CG	36:d:126:ARG:N	2.79	0.46
36:d:155:GLY:O	36:d:156:ARG:HB2	2.14	0.46
37:e:72:GLU:O	37:e:73:ARG:C	2.59	0.46
38:f:137:GLU:C	38:f:139:LEU:N	2.72	0.46
39:g:30:LEU:HB3	39:g:35:ALA:HB3	1.98	0.46
40:h:47:CYS:CB	40:h:58:PRO:HB3	2.46	0.46
40:h:111:ARG:HD3	40:h:122:HIS:HB2	1.98	0.46
41:i:88:LYS:CB	41:i:89:PRO:HD2	2.44	0.46
43:k:62:HIS:C	43:k:63:PHE:CG	2.94	0.46
44:l:13:GLN:O	44:l:13:GLN:HG2	2.16	0.46
44:l:47:VAL:HG23	44:l:48:ILE:N	2.31	0.46
45:m:40:ARG:CZ	45:m:41:THR:C	2.89	0.46
45:m:109:VAL:CB	45:m:112:ARG:HG2	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:n:50:GLU:O	46:n:54:VAL:HG13	2.16	0.46
49:q:4:ILE:CB	49:q:66:PRO:HA	2.46	0.46
49:q:75:ARG:CA	49:q:80:PHE:HD2	2.25	0.46
51:s:34:TYR:CD1	51:s:35:ARG:N	2.83	0.46
1:w:101:G:C4'	1:w:102:G:H8	2.23	0.46
1:w:128:C:C6	1:w:128:C:C3'	2.99	0.46
1:w:180:G:OP1	28:Z:32:LYS:HE3	2.15	0.46
1:w:227:A:P	12:J:76:LYS:NZ	2.89	0.46
1:w:236:C:N3	1:w:237:C:C5	2.84	0.46
1:w:288:C:O5'	1:w:288:C:C6	2.69	0.46
1:w:302:C:H41	1:w:314:A:N6	2.11	0.46
1:w:379:G:N2	1:w:396:G:C4	2.82	0.46
1:w:392:C:C2	1:w:393:C:C6	3.04	0.46
1:w:432:A:C4	1:w:433:C:C6	3.04	0.46
1:w:483:A:C4'	21:S:56:PRO:CB	2.69	0.46
1:w:603:A:H5'	1:w:604:G:O5'	2.16	0.46
1:w:635:C:O2	1:w:639:U:H5''	2.16	0.46
1:w:694:U:N3	1:w:695:G:N7	2.64	0.46
1:w:716:A:H2'	1:w:717:G:C1'	2.46	0.46
1:w:724:U:C6	1:w:725:G:C8	3.04	0.46
1:w:752:A:C8	1:w:1781:C:C4	3.04	0.46
1:w:828:U:O2	1:w:828:U:H2'	2.15	0.46
1:w:847:U:C4	1:w:933:A:C2	3.03	0.46
1:w:855:G:H5''	1:w:856:C:C5	2.48	0.46
1:w:870:A:H5'	13:K:6:ARG:HH12	1.81	0.46
1:w:914:C:O2	1:w:914:C:H2'	2.15	0.46
1:w:1013:C:N4	1:w:1014:U:C4	2.84	0.46
1:w:1197:G:C8	1:w:1197:G:OP2	2.69	0.46
1:w:1201:C:H6	1:w:1201:C:H5'	1.81	0.46
1:w:1271:G:N2	1:w:1615:C:O2	2.41	0.46
1:w:1309:G:H3'	1:w:1310:G:H5''	1.96	0.46
1:w:1351:C:O2	1:w:1571:A:C2	2.64	0.46
1:w:1358:G:C5	1:w:1371:G:C5	3.04	0.46
1:w:1412:A:C3'	1:w:1413:G:C8	2.99	0.46
1:w:1412:A:O3'	1:w:1413:G:C8	2.69	0.46
1:w:1459:G:C5	1:w:1461:G:H1'	2.51	0.46
1:w:1519:G:H2'	1:w:1520:U:C4'	2.46	0.46
1:w:1559:G:OP2	1:w:1560:G:H5''	2.15	0.46
1:w:1561:G:C2	1:w:1562:A:C8	3.04	0.46
1:w:1573:G:OP2	1:w:1574:C:H5	1.98	0.46
1:w:1594:G:C5	1:w:1595:G:C8	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1614:A:OP1	28:Z:3:ARG:NE	2.45	0.46
1:w:1676:A:N3	1:w:1677:A:N9	2.63	0.46
1:w:1676:A:H3'	1:w:1677:A:H8	1.78	0.46
1:w:1725:G:C2	1:w:1726:G:N7	2.84	0.46
1:w:1832:C:H5'	31:y:900:A:C1'	2.44	0.46
1:w:1920:C:O2'	1:w:1921:G:H5'	2.16	0.46
1:w:2075:U:O4	1:w:2238:G:N7	2.46	0.46
1:w:2146:C:N3	1:w:2147:G:N7	2.64	0.46
1:w:2244:U:C4	1:w:2245:U:C5	3.04	0.46
1:w:2411:A:O5'	1:w:2411:A:H8	1.98	0.46
1:w:2532:G:H1	1:w:2663:G:H2'	1.80	0.46
1:w:2565:A:C3'	1:w:2566:A:O4'	2.64	0.46
1:w:2619:C:C1'	5:C:156:MET:HG3	2.43	0.46
1:w:2622:C:C2'	1:w:2825:G:H22	2.29	0.46
1:w:2631:G:H4'	1:w:2892:A:C5'	2.45	0.46
1:w:2653:U:H5''	1:w:2654:A:O5'	2.12	0.46
1:w:2776:A:C1'	1:w:2781:A:H4'	2.45	0.46
1:w:2824:C:N3	1:w:2825:G:C6	2.84	0.46
1:w:2888:C:O2	1:w:2889:C:H1'	2.16	0.46
2:x:18:G:C2'	2:x:19:G:C8	2.99	0.46
2:x:83:G:H5''	26:X:52:HIS:CG	2.51	0.46
3:A:49:GLY:O	3:A:50:ILE:CG2	2.64	0.46
4:B:67:PHE:O	4:B:153:ALA:CB	2.64	0.46
4:B:103:ARG:HA	4:B:103:ARG:HE	1.81	0.46
4:B:231:HIS:C	4:B:233:HIS:N	2.60	0.46
5:C:102:VAL:N	5:C:201:THR:OG1	2.48	0.46
5:C:117:MET:CA	5:C:121:ASN:HA	2.46	0.46
5:C:117:MET:HB3	5:C:136:ARG:HH21	1.72	0.46
6:D:15:LEU:C	6:D:19:LEU:HD21	2.41	0.46
6:D:62:GLN:O	6:D:63:LYS:C	2.58	0.46
6:D:131:THR:O	6:D:132:LYS:C	2.58	0.46
7:E:14:GLU:O	7:E:17:PRO:HG2	2.15	0.46
7:E:41:GLN:CD	7:E:42:GLY:N	2.74	0.46
7:E:79:ASN:CG	7:E:82:LEU:O	2.59	0.46
7:E:85:GLY:O	7:E:86:MET:CB	2.60	0.46
7:E:120:LEU:HG	7:E:179:PRO:CD	2.46	0.46
8:F:20:ALA:H	8:F:23:ARG:C	2.24	0.46
9:G:1:MET:O	9:G:3:VAL:HG23	2.16	0.46
9:G:4:ILE:HD11	9:G:18:VAL:HG13	1.96	0.46
10:H:116:THR:O	10:H:117:HIS:C	2.59	0.46
13:K:32:PHE:HA	13:K:132:VAL:CG1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:51:ARG:NH1	13:K:52:VAL:H	2.10	0.46
13:K:125:LEU:HD13	13:K:126:PRO:CG	2.46	0.46
14:L:22:ARG:O	14:L:26:LYS:CB	2.54	0.46
14:L:87:TYR:HE2	14:L:116:LEU:HB3	1.80	0.46
14:L:104:ARG:HH21	14:L:107:ASP:CB	2.22	0.46
15:M:103:GLU:HG2	15:M:104:GLY:H	1.81	0.46
16:N:19:LEU:HD12	16:N:79:HIS:CD2	2.51	0.46
16:N:129:ARG:HD2	16:N:129:ARG:HA	1.68	0.46
17:O:15:LYS:HA	17:O:18:LEU:CD1	2.45	0.46
18:P:20:LEU:HD12	18:P:20:LEU:N	2.31	0.46
20:R:62:LYS:HE3	20:R:62:LYS:CA	2.46	0.46
21:S:9:LYS:HB2	21:S:9:LYS:HZ2	1.81	0.46
22:T:5:LEU:HB2	22:T:57:ILE:HG12	1.96	0.46
22:T:15:PRO:C	22:T:19:ARG:CZ	2.89	0.46
22:T:97:GLU:O	22:T:97:GLU:HG3	2.16	0.46
22:T:150:LEU:HD13	22:T:151:HIS:N	2.30	0.46
22:T:151:HIS:HB3	22:T:170:THR:CA	2.46	0.46
23:U:16:SER:O	23:U:20:ARG:CA	2.63	0.46
24:V:50:ARG:HG3	24:V:60:PHE:O	2.14	0.46
24:V:51:VAL:HG21	24:V:60:PHE:CB	2.28	0.46
24:V:58:ILE:CG2	24:V:86:SER:CB	2.89	0.46
24:V:70:VAL:HG12	24:V:71:TYR:H	1.80	0.46
28:Z:39:ARG:CG	28:Z:39:ARG:HH11	2.28	0.46
29:a:49:VAL:HB	29:a:53:PRO:CB	2.46	0.46
31:y:59:A:H4'	31:y:388:G:OP1	2.16	0.46
31:y:243:A:O2'	31:y:244:U:H5''	2.15	0.46
31:y:271:C:H6	31:y:271:C:P	2.38	0.46
31:y:275:G:N3	31:y:276:G:N7	2.63	0.46
31:y:279:A:OP1	31:y:279:A:C4'	2.57	0.46
31:y:300:A:H8	31:y:300:A:O5'	1.99	0.46
31:y:353:A:H2'	31:y:353:A:N3	2.29	0.46
31:y:356:A:H1'	31:y:368:U:O2'	2.15	0.46
31:y:363:A:C4	45:m:31:PHE:CD2	3.04	0.46
31:y:408:A:C2	31:y:434:U:N3	2.79	0.46
31:y:509:A:O5'	31:y:509:A:C8	2.51	0.46
31:y:584:G:N3	31:y:585:G:C1'	2.79	0.46
31:y:762:C:H2'	31:y:763:G:C5'	2.45	0.46
31:y:778:G:C6	31:y:779:C:N3	2.84	0.46
31:y:858:G:O6	31:y:869:G:C8	2.69	0.46
31:y:889:A:C2	31:y:907:A:H5''	2.48	0.46
31:y:969:A:N3	31:y:969:A:C2'	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1103:C:C2'	31:y:1104:G:O4'	2.64	0.46
31:y:1133:G:H2'	31:y:1134:G:O4'	2.15	0.46
31:y:1176:A:N6	31:y:1177:G:N1	2.63	0.46
31:y:1184:G:C2'	31:y:1185:G:O4'	2.64	0.46
31:y:1187:G:O2'	47:o:61:TRP:CZ3	2.69	0.46
31:y:1280:A:H5''	43:k:43:ARG:NH1	2.31	0.46
31:y:1378:C:P	40:h:5:ARG:CD	3.03	0.46
31:y:1379:G:H4'	40:h:156:TRP:CZ3	2.51	0.46
31:y:1391:U:H2'	31:y:1392:G:H8	1.78	0.46
31:y:1394:A:C4	31:y:1501:C:H4'	2.51	0.46
31:y:1509:C:C4	31:y:1510:U:N3	2.84	0.46
33:0:20:G:H3'	33:0:20:G:C8	2.50	0.46
35:c:71:VAL:HG22	35:c:72:GLY:N	2.31	0.46
35:c:97:TRP:CG	35:c:172:ILE:HD12	2.45	0.46
36:d:18:TRP:CH2	47:o:57:ARG:HB2	2.50	0.46
37:e:70:ILE:N	37:e:75:PHE:HZ	2.14	0.46
38:f:79:GLU:CB	41:i:104:ARG:HH11	2.28	0.46
38:f:84:PHE:O	38:f:87:SER:OG	2.32	0.46
38:f:116:THR:O	38:f:118:ILE:HG12	2.16	0.46
40:h:23:VAL:HG13	40:h:62:PHE:CE2	2.51	0.46
41:i:36:LEU:HD13	41:i:48:TYR:CB	2.46	0.46
41:i:48:TYR:CD1	41:i:48:TYR:C	2.94	0.46
44:l:44:SER:HB3	44:l:47:VAL:HG13	1.98	0.46
44:l:110:ASP:CB	51:s:88:LYS:HD3	2.46	0.46
45:m:87:GLY:CA	45:m:97:TYR:HD2	2.28	0.46
46:n:20:THR:O	46:n:25:ILE:HG13	2.16	0.46
51:s:38:GLU:CA	51:s:41:LYS:CD	2.65	0.46
1:w:23:G:N1	1:w:517:C:N3	2.63	0.46
1:w:99:U:H4'	1:w:101:G:H5''	1.96	0.46
1:w:210:C:C1'	1:w:1366:A:C2	2.98	0.46
1:w:335:C:H2'	1:w:336:C:C5	2.51	0.46
1:w:340:A:H2'	1:w:341:G:C4'	2.45	0.46
1:w:380:U:OP1	24:V:21:ARG:HA	2.15	0.46
1:w:399:G:C5	1:w:400:G:C5	3.04	0.46
1:w:624:C:C4	1:w:625:G:N7	2.84	0.46
1:w:714:U:O5'	1:w:714:U:H6	1.99	0.46
1:w:722:A:C5	1:w:723:G:C8	3.04	0.46
1:w:821:A:H4'	1:w:944:G:H4'	1.98	0.46
1:w:821:A:C2'	1:w:946:G:H5''	2.46	0.46
1:w:835:A:H5''	1:w:836:G:OP2	2.16	0.46
1:w:874:G:C2'	1:w:875:G:H8	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:904:C:H2'	1:w:905:U:H5'	1.94	0.46
1:w:1042:G:C2	1:w:1113:U:O2	2.69	0.46
1:w:1184:G:O2'	1:w:1185:C:H5''	2.08	0.46
1:w:1259:G:C4	1:w:1260:G:N7	2.84	0.46
1:w:1302:A:H2	1:w:1643:G:H21	0.64	0.46
1:w:1443:G:N1	1:w:1444:G:C6	2.83	0.46
1:w:1494:A:C6	1:w:1495:A:C5	3.04	0.46
1:w:1501:C:P	4:B:102:LYS:HE3	2.56	0.46
1:w:1563:G:C2'	1:w:1564:C:H6	2.25	0.46
1:w:1657:C:OP1	5:C:134:ILE:CA	2.55	0.46
1:w:1701:A:C2'	1:w:1702:G:C5'	2.89	0.46
1:w:1755:A:H61	1:w:2695:C:C5'	2.27	0.46
1:w:1907:G:N1	1:w:1924:C:N4	2.63	0.46
1:w:1934:C:O3'	1:w:1935:G:H8	1.99	0.46
1:w:1937:A:O2'	1:w:1938:A:C5'	2.65	0.46
1:w:2005:A:O5'	1:w:2005:A:H8	1.99	0.46
1:w:2066:C:C4	1:w:2067:G:C6	3.03	0.46
1:w:2106:G:N1	1:w:2184:G:C6	2.85	0.46
1:w:2194:G:C2'	1:w:2195:C:C6	2.94	0.46
1:w:2206:C:C2'	1:w:2207:C:H5'	2.44	0.46
1:w:2210:G:N2	1:w:2212:A:N3	2.63	0.46
1:w:2225:A:H4'	1:w:2226:C:O4'	2.15	0.46
1:w:2286:A:H4'	1:w:2287:A:O4'	2.16	0.46
1:w:2351:G:N2	1:w:2365:G:H2'	2.31	0.46
1:w:2366:A:C4'	23:U:62:LEU:HD21	2.43	0.46
1:w:2398:U:C2	1:w:2399:G:C8	3.04	0.46
1:w:2436:G:H2'	1:w:2437:U:C6	2.51	0.46
1:w:2442:C:H2'	1:w:2443:C:O4'	2.16	0.46
1:w:2521:C:O2	1:w:2545:G:N2	2.48	0.46
1:w:2556:C:H2'	1:w:2557:G:O4'	2.16	0.46
1:w:2578:G:C8	5:C:140:SER:CB	2.94	0.46
1:w:2589:A:C5	1:w:2590:A:C8	3.04	0.46
1:w:2675:A:OP2	11:I:31:LYS:HB2	2.16	0.46
1:w:2743:C:C2	1:w:2744:G:C8	3.04	0.46
1:w:2825:G:N7	1:w:2825:G:OP2	2.49	0.46
2:x:21:G:C2	2:x:22:U:C2	3.04	0.46
2:x:108:C:H5''	2:x:109:G:C5'	2.46	0.46
2:x:110:G:C6	2:x:111:U:C2	3.03	0.46
3:A:10:ALA:C	3:A:12:LEU:N	2.74	0.46
3:A:20:ILE:HG12	3:A:21:TYR:N	2.31	0.46
4:B:38:LYS:O	4:B:39:LYS:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:65:ILE:HD13	4:B:105:ILE:CA	2.39	0.46
4:B:263:ARG:O	4:B:265:PRO:HD3	2.16	0.46
5:C:4:ILE:H	5:C:198:VAL:HB	1.80	0.46
5:C:52:LEU:H	5:C:76:ARG:HB2	1.81	0.46
5:C:63:LEU:HD23	5:C:63:LEU:C	2.41	0.46
5:C:174:ASP:OD1	5:C:176:ILE:HD12	2.16	0.46
6:D:69:ARG:CD	6:D:70:HIS:N	2.78	0.46
7:E:82:LEU:CD1	7:E:84:LYS:HG2	2.43	0.46
7:E:101:ILE:HA	7:E:104:GLU:HG3	1.97	0.46
9:G:76:THR:HG22	9:G:77:LEU:N	2.30	0.46
9:G:139:GLN:N	9:G:139:GLN:OE1	2.49	0.46
10:H:36:TRP:HB3	10:H:156:GLN:HG2	1.98	0.46
10:H:39:ILE:CG1	10:H:40:ASP:H	2.15	0.46
12:J:39:LYS:NZ	12:J:39:LYS:CA	2.79	0.46
13:K:106:VAL:HG11	13:K:114:ALA:HB1	1.97	0.46
13:K:116:GLU:HA	13:K:116:GLU:OE1	2.15	0.46
15:M:34:HIS:HB2	15:M:36:TYR:CE1	2.51	0.46
15:M:94:TYR:CE2	15:M:99:LYS:HG2	2.50	0.46
16:N:61:PHE:CZ	16:N:78:LEU:HB3	2.51	0.46
19:Q:3:ALA:HB3	19:Q:108:GLY:HA2	1.97	0.46
19:Q:3:ALA:CB	19:Q:107:LEU:O	2.62	0.46
19:Q:12:ILE:O	19:Q:99:ARG:O	2.34	0.46
19:Q:47:VAL:O	19:Q:51:LEU:HD13	2.16	0.46
24:V:26:ARG:HB3	24:V:35:THR:O	2.16	0.46
24:V:53:VAL:O	24:V:58:ILE:C	2.59	0.46
24:V:71:TYR:O	24:V:74:VAL:HB	2.16	0.46
27:Y:40:LYS:HE2	27:Y:46:CYS:N	2.31	0.46
29:a:35:GLN:O	29:a:36:LYS:C	2.58	0.46
29:a:35:GLN:HE21	29:a:35:GLN:HA	1.81	0.46
30:b:14:CYS:SG	30:b:27:CYS:CB	3.02	0.46
31:y:73:G:C6	31:y:74:C:C2	3.04	0.46
31:y:74:C:C2	31:y:75:C:C4	3.04	0.46
31:y:140:A:H2	31:y:223:U:C2	2.34	0.46
31:y:230:G:C1'	49:q:25:ARG:NH2	2.73	0.46
31:y:250:A:C2'	31:y:251:G:OP2	2.63	0.46
31:y:278:G:C8	31:y:278:G:H3'	2.51	0.46
31:y:329:A:C2'	31:y:330:C:H5'	2.42	0.46
31:y:408:A:C2	31:y:435:C:C4	3.03	0.46
31:y:474:G:P	49:q:75:ARG:NE	2.89	0.46
31:y:502:G:P	45:m:117:SER:HB3	2.56	0.46
31:y:517:G:N9	31:y:531:U:O4'	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:674:G:N3	31:y:674:G:C2'	2.78	0.46
31:y:712:A:C2'	31:y:713:G:C8	2.97	0.46
31:y:766:A:H2	31:y:1525:G:HO2'	1.61	0.46
31:y:815:A:O2'	31:y:816:A:P	2.74	0.46
31:y:889:A:C4'	31:y:891:U:C5	2.99	0.46
31:y:924:C:C2'	31:y:925:G:H5'	2.44	0.46
31:y:1075:C:H2'	31:y:1076:C:C5'	2.46	0.46
31:y:1095:U:C5'	31:y:1109:C:O2	2.59	0.46
31:y:1160:G:H8	31:y:1160:G:H5'	1.80	0.46
31:y:1296:C:H1'	31:y:1302:U:C4	2.49	0.46
31:y:1316:G:C8	31:y:1318:A:OP2	2.68	0.46
31:y:1347:G:N7	42:j:107:ARG:CB	2.69	0.46
31:y:1504:G:O2'	31:y:1505:G:P	2.72	0.46
32:z:56:C:C2	32:z:57:G:C8	3.04	0.46
33:0:15:G:H8	33:0:15:G:H3'	1.80	0.46
33:0:24:G:H3'	33:0:25:C:H6	1.77	0.46
35:c:57:PHE:HA	35:c:60:ASP:HB2	1.98	0.46
36:d:58:GLU:O	36:d:64:VAL:CG1	2.56	0.46
36:d:87:LEU:CG	36:d:88:ARG:N	2.78	0.46
36:d:92:ALA:HB1	36:d:98:ASN:HB2	1.98	0.46
37:e:156:GLU:O	37:e:157:LEU:C	2.59	0.46
37:e:199:ASN:HB3	37:e:202:LEU:CD1	2.46	0.46
38:f:106:PRO:HG2	38:f:122:GLU:OE1	2.16	0.46
39:g:90:VAL:HG22	39:g:91:VAL:H	1.77	0.46
40:h:38:LEU:HB3	40:h:42:ILE:HD12	1.98	0.46
40:h:51:GLN:OE1	40:h:56:GLN:C	2.59	0.46
41:i:43:GLY:HA2	41:i:64:LYS:HZ1	1.80	0.46
45:m:36:CYS:SG	45:m:76:LEU:CD2	2.99	0.46
45:m:36:CYS:HB2	45:m:81:VAL:C	2.41	0.46
45:m:118:LYS:O	45:m:119:TYR:CD2	2.69	0.46
47:o:24:CYS:SG	47:o:39:LEU:HB3	2.56	0.46
50:r:79:SER:O	50:r:81:ARG:HG3	2.16	0.46
52:t:16:LEU:C	52:t:18:LYS:N	2.73	0.46
52:t:45:VAL:C	52:t:47:HIS:N	2.74	0.46
1:w:80:G:O2'	1:w:81:G:H5'	2.16	0.45
1:w:89:G:C2'	1:w:90:U:C6	2.99	0.45
1:w:154:G:C5	1:w:155:C:C6	3.05	0.45
1:w:187:G:C2	1:w:188:G:H1'	2.51	0.45
1:w:270(I):C:C2	1:w:270(T):G:N2	2.84	0.45
1:w:271(C):G:HO2'	1:w:271(D):U:P	2.39	0.45
1:w:374:A:C2'	1:w:375:C:C6	2.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:414:C:H6	1:w:414:C:C5'	2.23	0.45
1:w:467:G:H5''	1:w:796:C:HO2'	1.80	0.45
1:w:476:G:C4	1:w:478:A:OP2	2.70	0.45
1:w:488:G:C2	1:w:491:G:P	3.09	0.45
1:w:595:C:C5	1:w:595:C:OP2	2.69	0.45
1:w:596:G:C5	1:w:597:U:C4	3.04	0.45
1:w:609(B):G:C4	1:w:610:C:C4	3.04	0.45
1:w:612:G:C4	1:w:617:G:N1	2.84	0.45
1:w:675:A:O3'	6:D:62:GLN:HG3	2.16	0.45
1:w:705:A:N6	1:w:726:G:O2'	2.49	0.45
1:w:711:G:C5	1:w:712:G:N7	2.84	0.45
1:w:716:A:OP2	1:w:716:A:N7	2.49	0.45
1:w:789:A:H3'	1:w:790:C:C6	2.51	0.45
1:w:804:A:H8	1:w:804:A:P	2.39	0.45
1:w:867:C:C4	1:w:912:C:O2'	2.57	0.45
1:w:1047:G:P	1:w:1047:G:C3'	3.04	0.45
1:w:1128:A:H61	1:w:2518:A:N6	2.02	0.45
1:w:1177:A:H3'	1:w:1178:C:C6	2.51	0.45
1:w:1206:G:C2'	1:w:1207:C:C6	2.86	0.45
1:w:1218:C:C2'	1:w:1219:G:H5'	2.46	0.45
1:w:1303:G:H5'	1:w:1642:G:H21	1.81	0.45
1:w:1315:C:H1'	1:w:1393:A:N3	2.31	0.45
1:w:1370:C:C5	1:w:1371:G:O6	2.69	0.45
1:w:1386:C:C2	1:w:1387:C:C5	3.04	0.45
1:w:1443:G:C2'	1:w:1444:G:C8	2.64	0.45
1:w:1530:G:N1	1:w:1540:G:C2	2.85	0.45
1:w:1532:C:C3'	1:w:1533:C:C6	2.91	0.45
1:w:1604:C:O2'	1:w:1605:C:H5'	2.15	0.45
1:w:1656:C:O2'	1:w:1657:C:C5'	2.56	0.45
1:w:1685:C:N3	1:w:1686:C:C5	2.85	0.45
1:w:1827:C:O5'	1:w:1827:C:H6	1.99	0.45
1:w:1832:C:O5'	1:w:1832:C:H6	1.99	0.45
1:w:1862:G:N1	1:w:1881:C:N3	2.65	0.45
1:w:1936:A:H2	1:w:1942:C:N4	2.00	0.45
1:w:1977:A:N6	1:w:1978:A:C5	2.84	0.45
1:w:2032:G:C2	1:w:2572:A:C5	3.04	0.45
1:w:2262:U:H1'	1:w:2328:A:H1'	1.98	0.45
1:w:2286:A:C2	1:w:2286:A:P	3.09	0.45
1:w:2308:G:C5'	1:w:2310:A:H62	2.26	0.45
1:w:2335:A:H1'	1:w:2337:G:C8	2.51	0.45
1:w:2335:A:H3'	15:M:15:ARG:NH1	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2345:G:N2	1:w:2381:C:H3'	2.31	0.45
1:w:2353:G:C2'	23:U:34:GLY:CA	2.94	0.45
1:w:2373:G:C2'	1:w:2374:C:O5'	2.64	0.45
1:w:2396:G:C5	1:w:2397:G:N7	2.83	0.45
1:w:2419:U:C2	1:w:2420:C:C6	3.04	0.45
1:w:2543:G:O2'	1:w:2544:G:H5'	2.15	0.45
1:w:2558:C:C2	1:w:2559:C:C4	3.03	0.45
1:w:2563:U:H1'	1:w:2566:A:C6	2.50	0.45
1:w:2591:C:OP1	4:B:239:ARG:HG2	2.16	0.45
1:w:2607:G:C6	1:w:2608:G:C2	3.04	0.45
3:A:23:ILE:O	3:A:187:ALA:CB	2.64	0.45
4:B:172:TYR:OH	4:B:186:HIS:ND1	2.46	0.45
5:C:34:VAL:HA	5:C:67:PHE:CE1	2.51	0.45
6:D:151:LEU:HD13	6:D:188:VAL:HG12	1.97	0.45
6:D:151:LEU:CD1	6:D:188:VAL:O	2.63	0.45
7:E:128:ARG:HA	7:E:163:ALA:O	2.16	0.45
8:F:38:SER:CB	8:F:39:PRO:HD2	2.41	0.45
8:F:108:GLY:O	8:F:113:VAL:HG21	2.14	0.45
8:F:149:ARG:O	8:F:151:ILE:N	2.49	0.45
9:G:31:LEU:O	9:G:33:ARG:N	2.48	0.45
10:H:65:TRP:CZ2	10:H:67:PRO:HA	2.50	0.45
10:H:71:MET:CG	10:H:72:GLY:N	2.76	0.45
11:I:87:ILE:O	11:I:88:ASN:O	2.33	0.45
11:I:102:VAL:O	11:I:122:LEU:C	2.56	0.45
12:J:35:HIS:H	12:J:36:LYS:HD2	1.81	0.45
12:J:90:ARG:CZ	12:J:91:PHE:HB3	2.46	0.45
12:J:103:ALA:O	12:J:105:LEU:N	2.44	0.45
12:J:107:LYS:O	12:J:108:LYS:O	2.33	0.45
13:K:67:ARG:O	13:K:68:ILE:CB	2.64	0.45
16:N:109:GLU:O	16:N:112:ARG:HB3	2.16	0.45
17:O:88:ILE:HD13	18:P:53:GLU:CA	2.34	0.45
17:O:112:ARG:HH21	18:P:50:PRO:HD2	1.78	0.45
18:P:76:LYS:HD2	18:P:77:ALA:C	2.41	0.45
18:P:78:LYS:C	18:P:78:LYS:CD	2.82	0.45
19:Q:29:LEU:CD1	19:Q:67:ASP:N	2.74	0.45
20:R:25:LYS:CE	20:R:26:TYR:CZ	2.99	0.45
20:R:78:LYS:CD	20:R:79:ALA:N	2.77	0.45
21:S:48:ALA:HA	21:S:56:PRO:HD3	1.98	0.45
22:T:14:LYS:NZ	22:T:16:SER:HB3	2.31	0.45
22:T:17:ALA:HA	22:T:20:ARG:NH2	2.30	0.45
23:U:51:VAL:HG22	23:U:81:VAL:HG23	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:71:TYR:O	24:V:74:VAL:N	2.49	0.45
26:X:4:LEU:HA	26:X:58:VAL:HA	1.97	0.45
29:a:52:LYS:C	29:a:56:GLU:OE2	2.59	0.45
31:y:42:G:C5	31:y:43:C:N4	2.84	0.45
31:y:44:G:C5	31:y:399:G:C6	3.04	0.45
31:y:81:G:C3'	31:y:82:U:H5''	2.46	0.45
31:y:118:U:H3'	31:y:288:A:N6	2.26	0.45
31:y:121:C:H4'	31:y:122:G:C8	2.51	0.45
31:y:128:G:H2'	31:y:129(A):U:H5'	1.97	0.45
31:y:143:A:N6	31:y:221:C:C4	2.83	0.45
31:y:160:A:C4	31:y:161:A:C5	3.04	0.45
31:y:259:G:C6	31:y:268:C:N4	2.83	0.45
31:y:265:G:H4'	50:r:66:SER:HA	1.98	0.45
31:y:291:C:N4	31:y:310:G:C6	2.83	0.45
31:y:323:U:O2	31:y:327:A:N7	2.49	0.45
31:y:375:U:C4	31:y:376:G:C6	3.04	0.45
31:y:490:G:H2'	31:y:491:G:O4'	2.16	0.45
31:y:509:A:H2'	31:y:510:A:O4'	2.15	0.45
31:y:513:C:N4	31:y:539:A:N1	2.64	0.45
31:y:523:A:C5	31:y:527:7MG:O6	2.69	0.45
31:y:552:U:O5'	31:y:552:U:H6	1.99	0.45
31:y:570:G:O5'	31:y:820:U:O4'	2.34	0.45
31:y:674:G:H2'	31:y:675:A:N7	2.30	0.45
31:y:718:G:C8	44:l:116:HIS:CD2	3.04	0.45
31:y:743:U:OP2	31:y:743:U:H5	1.99	0.45
31:y:920:U:O2'	31:y:1081:G:O2'	1.94	0.45
31:y:978:A:N1	31:y:1319:A:C4	2.84	0.45
31:y:1093:A:N1	31:y:1109:C:O2	2.49	0.45
31:y:1112:C:N4	36:d:176:HIS:O	2.48	0.45
31:y:1166:G:C2	31:y:1171:G:N1	2.83	0.45
31:y:1231:G:H2'	31:y:1232:U:O4'	2.15	0.45
31:y:1286:A:C8	31:y:1287:A:C1'	2.99	0.45
31:y:1307:U:C5	31:y:1307:U:OP2	2.68	0.45
31:y:1318:A:H2'	52:t:37:ARG:HH22	1.80	0.45
31:y:1401:G:H2'	31:y:1402:4OC:H4'	1.98	0.45
32:z:49:C:H2'	32:z:50:U:H6	1.77	0.45
33:0:15:G:C8	33:0:15:G:H3'	2.51	0.45
35:c:97:TRP:CB	35:c:172:ILE:CG1	2.93	0.45
35:c:97:TRP:CG	35:c:172:ILE:CB	2.96	0.45
36:d:120:VAL:C	36:d:123:GLN:OE1	2.58	0.45
36:d:125:GLU:CG	36:d:126:ARG:H	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:187:ALA:O	36:d:198:VAL:O	2.34	0.45
37:e:10:ARG:N	37:e:22:LYS:HZ1	2.12	0.45
37:e:27:TYR:CD1	37:e:112:VAL:HB	2.51	0.45
37:e:173:TRP:CD1	37:e:173:TRP:C	2.93	0.45
38:f:95:ALA:C	38:f:97:GLY:H	2.23	0.45
38:f:116:THR:O	38:f:118:ILE:HD13	2.16	0.45
39:g:44:GLY:CA	39:g:59:TYR:CE1	2.98	0.45
40:h:3:ARG:O	40:h:3:ARG:HG2	2.16	0.45
41:i:27:PRO:HA	41:i:57:PRO:O	2.16	0.45
41:i:121:ASP:OD1	41:i:125:ARG:NH2	2.49	0.45
42:j:41:VAL:HG23	42:j:42:ARG:HG2	1.97	0.45
42:j:65:VAL:O	42:j:66:ARG:CG	2.54	0.45
42:j:97:LYS:CB	42:j:98:PRO:CD	2.90	0.45
43:k:53:PRO:HG2	43:k:54:PHE:H	1.81	0.45
44:l:94:ALA:O	44:l:98:LEU:CD2	2.64	0.45
45:m:9:LEU:C	45:m:9:LEU:HD23	2.41	0.45
45:m:34:GLY:N	45:m:84:ILE:CD1	2.79	0.45
45:m:37:THR:O	45:m:78:GLU:O	2.34	0.45
45:m:41:THR:HA	45:m:54:VAL:CG1	2.34	0.45
45:m:62:GLY:C	45:m:63:TYR:HD2	2.21	0.45
45:m:78:GLU:CG	45:m:79:HIS:N	2.77	0.45
46:n:87:TYR:C	46:n:87:TYR:CD1	2.94	0.45
47:o:24:CYS:HB3	47:o:28:GLY:N	2.27	0.45
48:p:35:ARG:HD3	48:p:39:LEU:HD11	1.97	0.45
49:q:18:ARG:CZ	49:q:35:LYS:HG3	2.46	0.45
49:q:21:VAL:HG21	49:q:33:ILE:HG22	1.97	0.45
49:q:79:VAL:O	49:q:80:PHE:HB2	2.16	0.45
51:s:74:ARG:CZ	51:s:79:LEU:HD22	2.44	0.45
1:w:64:A:C6	1:w:65:C:N4	2.84	0.45
1:w:80:G:C8	1:w:80:G:OP2	2.69	0.45
1:w:143:C:H4'	20:R:36:LYS:CD	2.47	0.45
1:w:181:A:C2	1:w:182:A:C5	3.04	0.45
1:w:254:G:C5	29:a:5:LYS:HD2	2.50	0.45
1:w:436:C:C2'	1:w:438:G:H5'	2.45	0.45
1:w:492:A:H5''	1:w:493:G:OP2	2.16	0.45
1:w:533:G:H5'	17:O:24:TYR:CD2	2.51	0.45
1:w:534:U:C2	1:w:535:C:C5	3.04	0.45
1:w:558:G:C5	1:w:559:G:C8	3.05	0.45
1:w:593:G:N3	1:w:594:U:C6	2.84	0.45
1:w:618(B):C:C3'	1:w:619:G:H8	2.20	0.45
1:w:670:A:C4'	1:w:671:C:C5'	2.90	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:711:G:C4	1:w:712:G:C8	3.04	0.45
1:w:729:G:H4'	1:w:763:G:C5'	2.47	0.45
1:w:813:U:C2	1:w:1195:G:N2	2.84	0.45
1:w:823:G:O2'	1:w:824:A:H5'	2.15	0.45
1:w:865:C:H2'	1:w:866:A:OP2	2.16	0.45
1:w:873:G:C2	1:w:874:G:C5	3.04	0.45
1:w:897:C:H2'	1:w:898:C:C6	2.51	0.45
1:w:942:G:H5''	12:J:35:HIS:CA	2.46	0.45
1:w:1223:G:H2'	1:w:1226:A:N6	2.31	0.45
1:w:1236:G:C8	1:w:1236:G:P	3.09	0.45
1:w:1313:U:C2'	1:w:1314:C:H5'	2.46	0.45
1:w:1313:U:C2'	1:w:1314:C:O5'	2.64	0.45
1:w:1374:G:C3'	1:w:1375:C:C6	3.00	0.45
1:w:1391:U:N3	1:w:1394:U:C5	2.78	0.45
1:w:1496:A:O5'	1:w:1496:A:C8	2.69	0.45
1:w:1508:A:C2'	1:w:1510:A:C6	2.94	0.45
1:w:1530:G:O6	1:w:1540:G:C5	2.69	0.45
1:w:1623:G:C6	1:w:1624:G:C8	3.04	0.45
1:w:1658:C:OP1	5:C:132:HIS:CE1	2.70	0.45
1:w:1666:G:C5	1:w:1667:G:N3	2.85	0.45
1:w:1843:C:C6	1:w:1843:C:C4'	3.00	0.45
1:w:1858:G:H2'	1:w:1859:A:N7	2.31	0.45
1:w:2024:G:C2	1:w:2025:C:N3	2.85	0.45
1:w:2075:U:C2	1:w:2238:G:O6	2.69	0.45
1:w:2100:G:C6	1:w:2190:G:C4	3.05	0.45
1:w:2111:C:H4'	1:w:2118:U:C2	2.50	0.45
1:w:2159:G:H2'	1:w:2160:G:C4'	2.45	0.45
1:w:2230:G:C4	1:w:2231:C:C6	3.05	0.45
1:w:2258:C:C2	1:w:2426:A:O4'	2.69	0.45
1:w:2299:G:N2	1:w:2317:C:N3	2.62	0.45
1:w:2320:A:C5	1:w:2333:A:C5	3.04	0.45
1:w:2432:A:C5	1:w:2433:A:N7	2.85	0.45
1:w:2527:C:C4	1:w:2528:U:C4	3.04	0.45
1:w:2530:A:H3'	1:w:2531:A:H5''	1.99	0.45
1:w:2532:G:N7	1:w:2533:A:C5	2.85	0.45
1:w:2591:C:H2'	1:w:2592:G:O4'	2.17	0.45
1:w:2619:C:HO2'	1:w:2620:C:H5'	1.73	0.45
1:w:2723:C:N3	1:w:2724:C:C6	2.83	0.45
1:w:2811:G:H2'	1:w:2812:G:O5'	2.17	0.45
1:w:2822:G:O2'	1:w:2824:C:OP2	2.23	0.45
1:w:2835:A:N7	1:w:2879:C:O5'	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2857:G:H3'	1:w:2858:C:C5'	2.46	0.45
1:w:2892:A:C6	1:w:2893:G:N3	2.84	0.45
2:x:17:C:C2'	2:x:18:G:C5'	2.64	0.45
2:x:110:G:C6	2:x:111:U:C5	3.05	0.45
3:A:183:PRO:HG2	3:A:184:GLU:OE2	2.16	0.45
3:A:206:LYS:HB3	3:A:207:GLY:H	1.60	0.45
3:A:223:VAL:O	3:A:224:ARG:CB	2.64	0.45
5:C:195:LEU:HD12	5:C:196:VAL:N	2.31	0.45
5:C:199:ARG:HG3	5:C:199:ARG:HH11	1.81	0.45
6:D:7:LEU:HD12	6:D:7:LEU:H	1.82	0.45
6:D:27:LEU:HD23	6:D:28:LEU:HD23	1.98	0.45
6:D:76:PRO:CB	6:D:82:GLY:O	2.64	0.45
7:E:11:TYR:O	7:E:16:ARG:HG3	2.16	0.45
7:E:93:THR:O	7:E:94:LEU:HG	2.16	0.45
8:F:89:ILE:HG12	8:F:94:TYR:HA	1.97	0.45
8:F:105:LEU:HD11	8:F:107:VAL:CG2	2.31	0.45
8:F:117:PRO:CB	8:F:121:ILE:HG21	2.47	0.45
8:F:148:ILE:O	8:F:148:ILE:HG23	2.16	0.45
9:G:65:ALA:HB3	9:G:133:HIS:CE1	2.50	0.45
10:H:30:LYS:O	10:H:31:GLN:CB	2.64	0.45
10:H:40:ASP:HB2	10:H:77:VAL:CG1	2.39	0.45
12:J:95:VAL:O	12:J:125:VAL:HG23	2.17	0.45
13:K:37:LEU:HG	13:K:128:LYS:CA	2.46	0.45
14:L:86:ARG:CD	14:L:87:TYR:HE1	2.29	0.45
14:L:113:LEU:HD22	14:L:114:VAL:N	2.30	0.45
16:N:33:LYS:HD3	16:N:41:ARG:CB	2.30	0.45
16:N:64:ARG:O	16:N:65:LYS:CB	2.64	0.45
16:N:106:SER:HA	16:N:110:ILE:HG12	1.98	0.45
16:N:123:LYS:CB	16:N:123:LYS:HZ3	2.23	0.45
17:O:56:ASP:O	17:O:58:ARG:N	2.50	0.45
18:P:26:ASP:O	18:P:27:ALA:HB2	2.15	0.45
18:P:52:VAL:O	18:P:52:VAL:CG2	2.60	0.45
19:Q:57:ASN:C	19:Q:59:VAL:N	2.73	0.45
21:S:97:ARG:HD3	21:S:99:CYS:CA	2.46	0.45
22:T:150:LEU:O	22:T:170:THR:HA	2.17	0.45
23:U:22:GLY:HA3	23:U:24:LYS:NZ	2.28	0.45
23:U:32:ARG:N	23:U:61:ALA:CB	2.74	0.45
23:U:59:LEU:HD12	23:U:59:LEU:N	2.30	0.45
26:X:45:GLY:CA	26:X:48:GLU:HG2	2.46	0.45
31:y:133:U:O2'	31:y:134:A:C5	2.67	0.45
31:y:138:G:C6	31:y:226:G:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:247:G:N2	31:y:278:G:C2	2.82	0.45
31:y:282:A:H3'	31:y:283:C:H5	1.80	0.45
31:y:308:C:H2'	31:y:308:C:O2	2.16	0.45
31:y:341:C:C2	31:y:342:C:C4	3.03	0.45
31:y:389:A:H5''	31:y:390:C:H5	1.82	0.45
31:y:402:G:H4'	31:y:620:C:C4	2.50	0.45
31:y:404:U:C4	37:e:2:GLY:CA	3.00	0.45
31:y:422:C:C3'	31:y:423:G:H5''	2.40	0.45
31:y:437:U:H2'	31:y:438:G:O4'	2.16	0.45
31:y:443:C:H42	31:y:491:G:H1	1.64	0.45
31:y:468:A:H5''	49:q:80:PHE:HB3	1.98	0.45
31:y:565:U:N1	31:y:566:G:C8	2.83	0.45
31:y:739:C:C2'	31:y:740:U:C5'	2.85	0.45
31:y:760:G:H1	50:r:105:ALA:C	2.23	0.45
31:y:778:G:C5	31:y:779:C:C5	3.04	0.45
31:y:879:C:C2'	31:y:880:C:H5'	2.47	0.45
31:y:912:C:C6	31:y:912:C:P	3.09	0.45
31:y:960:U:C5	31:y:1225:A:C4	3.04	0.45
31:y:1005:A:H3'	31:y:1006:C:C6	2.52	0.45
31:y:102(C):C:C2	31:y:103(C):G:N1	2.85	0.45
31:y:102(C):C:H3'	31:y:1029:G:H8	1.81	0.45
31:y:1152:A:C6	31:y:1153:C:C4	3.04	0.45
31:y:1204:A:C8	31:y:1205:U:C5	3.05	0.45
31:y:1213:A:C2'	31:y:1215:G:C8	2.97	0.45
31:y:1292:U:HO2'	31:y:1293:G:H5'	1.79	0.45
31:y:1360:A:C5	31:y:1361:G:C6	3.04	0.45
31:y:1381:U:O2	31:y:1382:C:C6	2.69	0.45
31:y:1419:G:H2'	31:y:1420:C:O5'	2.16	0.45
31:y:1422:G:C6	31:y:1423:G:C6	3.04	0.45
31:y:1433:A:N6	31:y:1468:A:N7	2.63	0.45
31:y:1472:U:C2'	31:y:1473:A:C8	2.96	0.45
31:y:1477:C:C2	31:y:1478:C:C5	3.04	0.45
31:y:1488:G:C4	31:y:1489:G:N7	2.84	0.45
31:y:1489:G:C2'	31:y:1490:C:C5	2.94	0.45
33:0:24:G:C3'	33:0:25:C:C6	3.00	0.45
36:d:20:SER:HB3	47:o:54:PRO:HB3	1.96	0.45
36:d:115:LEU:O	36:d:119:ARG:HB3	2.16	0.45
37:e:170:VAL:HG12	37:e:176:LEU:HD13	1.97	0.45
38:f:12:LEU:CD2	38:f:13:ILE:O	2.64	0.45
38:f:135:THR:O	38:f:136:MET:C	2.59	0.45
40:h:149:ARG:HB2	44:l:59:TYR:CG	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:36:LEU:CD2	41:i:61:VAL:CG1	2.84	0.45
44:l:21:ILE:HD12	44:l:84:VAL:HG12	1.97	0.45
46:n:22:ILE:H	46:n:22:ILE:HG13	1.63	0.45
47:o:58:LYS:O	47:o:60:SER:N	2.48	0.45
50:r:16:GLN:C	50:r:18:THR:N	2.74	0.45
50:r:46:ASP:CG	50:r:51:TYR:HB2	2.40	0.45
1:w:20:C:O2'	1:w:21:A:O4'	2.30	0.45
1:w:55:G:C4	1:w:56:A:N7	2.84	0.45
1:w:183:C:H3'	1:w:184:C:C5'	2.41	0.45
1:w:266:G:C2'	1:w:267:C:O5'	2.60	0.45
1:w:299:A:N6	1:w:339:U:N3	2.41	0.45
1:w:439:G:HO2'	1:w:440:G:C4'	2.30	0.45
1:w:534:U:H4'	17:O:46:ALA:HB2	1.99	0.45
1:w:557:U:C4	1:w:558:G:N7	2.84	0.45
1:w:590:A:H5''	6:D:92:TYR:HD1	1.82	0.45
1:w:594:U:C5'	29:a:61:LEU:CD1	2.66	0.45
1:w:600:G:C2'	1:w:601:C:H6	2.04	0.45
1:w:813:U:C2'	1:w:814:C:O4'	2.51	0.45
1:w:842:G:N7	1:w:843:G:N7	2.64	0.45
1:w:987:G:O3'	26:X:11:SER:CB	2.60	0.45
1:w:1024:G:C8	1:w:1025:G:C8	3.05	0.45
1:w:1025:G:C2	1:w:1135:C:C6	3.04	0.45
1:w:1059:G:N7	1:w:1060:U:H2'	2.31	0.45
1:w:1120:G:C3'	1:w:1121:C:C6	2.99	0.45
1:w:1157:G:C2	1:w:1158:C:C5	3.05	0.45
1:w:1202:C:H2'	1:w:1203:G:C4'	2.46	0.45
1:w:1224:C:O2	1:w:1224:C:C3'	2.64	0.45
1:w:1279:G:C4	1:w:1280:G:H1'	2.51	0.45
1:w:1338:G:C2	1:w:1339:G:C4	3.04	0.45
1:w:1355:G:C6	1:w:1356:G:C5	3.05	0.45
1:w:1359:A:H5'	1:w:1359:A:C8	2.41	0.45
1:w:1364:G:H5''	1:w:1365:A:OP2	2.16	0.45
1:w:1418:G:H22	1:w:1579:A:H3'	1.82	0.45
1:w:1567:A:C1'	1:w:1568:G:N1	2.80	0.45
1:w:1702:G:H3'	1:w:1703:G:C5'	2.37	0.45
1:w:1793:C:H6	1:w:1793:C:H3'	1.78	0.45
1:w:2125:G:C4'	3:A:41:THR:HG21	2.46	0.45
1:w:2334:G:H5'	15:M:11:LYS:HB3	1.98	0.45
1:w:2439:A:C8	1:w:2586:C:O3'	2.69	0.45
1:w:2459:A:C2'	1:w:2460:U:C6	2.99	0.45
1:w:2514:U:C2	1:w:2515:C:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2574:G:O2'	5:C:143:ASN:HB3	2.16	0.45
1:w:2604:U:C2'	1:w:2605:U:H5'	2.44	0.45
1:w:2619:C:H5''	5:C:152:LYS:HA	1.97	0.45
1:w:2646:C:C2'	1:w:2647:U:OP1	2.65	0.45
1:w:2810:A:O3'	5:C:61:ARG:HG2	2.17	0.45
1:w:2814:C:H3'	1:w:2815:C:H5	1.81	0.45
1:w:2821:A:H2'	1:w:2822:G:C5'	2.46	0.45
1:w:2838:G:C4	1:w:2839:G:C8	3.05	0.45
2:x:23:G:C5	2:x:61:G:N1	2.84	0.45
2:x:66:A:N1	2:x:69:G:C6	2.84	0.45
2:x:88:C:O2'	2:x:89(A):G:C8	2.70	0.45
3:A:172:ILE:CG1	3:A:173:HIS:N	2.80	0.45
4:B:79:VAL:HB	4:B:111:LEU:HD12	1.91	0.45
4:B:82:ILE:HG21	4:B:91:ARG:NH1	2.31	0.45
4:B:150:LYS:N	4:B:150:LYS:HD3	2.30	0.45
6:D:56:GLY:O	6:D:57:ARG:O	2.35	0.45
6:D:149:VAL:N	6:D:184:THR:HB	2.31	0.45
6:D:183:ARG:CZ	12:J:7:ARG:CB	2.89	0.45
7:E:103:LEU:O	7:E:104:GLU:C	2.58	0.45
8:F:41:MET:HA	8:F:54:ARG:CA	2.46	0.45
8:F:99:VAL:HG22	8:F:104:GLU:HB2	1.97	0.45
8:F:149:ARG:C	8:F:151:ILE:H	2.24	0.45
8:F:167:GLU:HA	8:F:168:PRO:HD2	1.84	0.45
11:I:75:SER:O	16:N:74:ARG:NH1	2.49	0.45
12:J:18:ARG:O	12:J:20:GLY:N	2.49	0.45
13:K:72:LYS:HD3	13:K:73:PRO:N	2.31	0.45
14:L:20:LEU:HD23	14:L:24:GLN:CG	2.47	0.45
15:M:17:ARG:HH11	15:M:89:ARG:NE	2.13	0.45
15:M:66:ALA:C	15:M:101:LEU:CG	2.89	0.45
15:M:105:ALA:O	15:M:108:GLY:O	2.34	0.45
18:P:71:LEU:CD2	18:P:71:LEU:N	2.80	0.45
20:R:28:PHE:CE1	20:R:78:LYS:HB2	2.50	0.45
22:T:11:GLU:CG	22:T:12:GLY:N	2.78	0.45
24:V:23:LYS:CB	24:V:38:SER:O	2.64	0.45
25:W:8:LYS:O	25:W:9:GLN:O	2.34	0.45
25:W:14:ARG:HB3	25:W:54:LYS:HZ1	1.76	0.45
25:W:38:GLN:O	25:W:40:SER:N	2.48	0.45
28:Z:16:HIS:O	28:Z:17:GLY:C	2.60	0.45
31:y:259:G:C5	31:y:260:G:C5	3.05	0.45
31:y:298:A:C8	31:y:298:A:OP1	2.70	0.45
31:y:397:A:C2	31:y:548:G:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:423:G:N3	31:y:423:G:C3'	2.79	0.45
31:y:502:G:C2'	31:y:503:C:H5'	2.47	0.45
31:y:526:C:OP1	31:y:527:7MG:OP2	2.33	0.45
31:y:538:G:H3'	45:m:114:LYS:CE	2.44	0.45
31:y:542:G:N1	31:y:543:C:N4	2.64	0.45
31:y:560:U:C2'	31:y:561:U:OP2	2.64	0.45
31:y:564:C:O5'	50:r:32:TYR:HE1	1.99	0.45
31:y:580:U:C2'	31:y:581:G:H5'	2.47	0.45
31:y:625:G:H5''	49:q:16:HIS:CB	2.46	0.45
31:y:706:A:C2	31:y:707:C:C5	3.03	0.45
31:y:713:G:C8	31:y:713:G:OP2	2.68	0.45
31:y:885:G:O2'	31:y:886:G:C5'	2.55	0.45
31:y:912:C:H6	31:y:912:C:P	2.39	0.45
31:y:930:C:C2	31:y:931:C:C5	3.04	0.45
31:y:959:A:O2'	31:y:984:C:O2	2.32	0.45
31:y:975:A:H1'	31:y:1357:A:N3	2.31	0.45
31:y:1012:U:C3'	31:y:1013:G:H5'	2.46	0.45
31:y:102(B):C:N4	31:y:102(C):C:C5	2.85	0.45
31:y:1064:G:C1'	31:y:1065:U:C5'	2.90	0.45
31:y:1088:G:C6	31:y:1089:G:O6	2.70	0.45
31:y:1109:C:C3'	31:y:1110:A:C8	2.88	0.45
31:y:1175:G:C2	31:y:1176:A:C5	3.05	0.45
31:y:1369:C:OP2	42:j:112:LYS:CA	2.64	0.45
31:y:1422:G:C5	31:y:1423:G:N7	2.84	0.45
31:y:1441:G:O5'	31:y:1442:G:H5'	2.15	0.45
31:y:1449:C:N3	31:y:1450:U:C6	2.84	0.45
31:y:1508:G:C5	31:y:1509:C:N4	2.85	0.45
32:z:2:C:N3	32:z:3:C:C4	2.85	0.45
33:0:46:G:C5'	33:0:46:G:C8	2.99	0.45
35:c:117:GLU:HG3	35:c:121:LEU:HD12	1.99	0.45
35:c:145:LEU:HD22	35:c:149:LEU:HD11	1.98	0.45
35:c:146:GLN:O	35:c:150:SER:OG	2.31	0.45
35:c:200:ILE:N	35:c:200:ILE:CD1	2.79	0.45
35:c:222:ILE:C	35:c:222:ILE:HD12	2.41	0.45
36:d:135:LYS:CA	36:d:138:VAL:CG2	2.86	0.45
37:e:8:VAL:HG23	37:e:22:LYS:CG	2.42	0.45
37:e:18:LYS:O	37:e:31:CYS:SG	2.74	0.45
37:e:60:GLU:O	37:e:61:LYS:C	2.57	0.45
37:e:163:GLU:O	37:e:165:MET:N	2.49	0.45
38:f:101:ILE:HG22	38:f:120:THR:O	2.16	0.45
39:g:14:LEU:HB2	39:g:18:GLN:CB	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:101:LEU:CA	40:h:104:LEU:HD23	2.36	0.45
41:i:33:GLU:HG3	41:i:36:LEU:HD12	1.98	0.45
41:i:69:ARG:HB3	41:i:76:PRO:HG3	1.98	0.45
42:j:93:ARG:HH21	42:j:102:LEU:HB3	1.81	0.45
43:k:63:PHE:HD2	47:o:57:ARG:O	1.99	0.45
45:m:36:CYS:HB3	45:m:80:SER:N	2.31	0.45
46:n:22:ILE:HB	46:n:25:ILE:CG1	2.35	0.45
47:o:24:CYS:CA	47:o:28:GLY:HA2	2.45	0.45
49:q:39:TYR:CE2	49:q:41:PRO:CA	2.99	0.45
50:r:6:LEU:N	50:r:6:LEU:CD2	2.79	0.45
50:r:46:ASP:O	50:r:47:PRO:C	2.59	0.45
1:w:106:C:O2'	1:w:293:U:C5'	2.65	0.45
1:w:270(W):G:H2'	1:w:270(X):G:H8	1.81	0.45
1:w:304:G:C5	1:w:305:U:O4	2.70	0.45
1:w:393:C:N3	1:w:394:A:C6	2.85	0.45
1:w:404:C:C1'	1:w:406:G:C8	2.99	0.45
1:w:465:G:C8	1:w:466:A:C5	3.05	0.45
1:w:527:C:N4	1:w:2779:U:OP2	2.49	0.45
1:w:531:C:C2	1:w:2019:A:C2	3.04	0.45
1:w:559:G:N7	1:w:560:C:C4	2.85	0.45
1:w:570:G:OP2	1:w:570:G:H8	1.99	0.45
1:w:593:G:C5	1:w:594:U:C4	3.05	0.45
1:w:607:U:H3	1:w:620:G:H1'	1.81	0.45
1:w:634:C:O2'	1:w:635:C:H6	1.98	0.45
1:w:670:A:H4'	1:w:671:C:O5'	2.16	0.45
1:w:676:A:H8	1:w:2069:G:N2	2.13	0.45
1:w:688:U:H2'	1:w:689:A:C5'	2.36	0.45
1:w:722:A:C5	1:w:723:G:N7	2.84	0.45
1:w:832:G:H5''	12:J:52:GLU:OE2	2.16	0.45
1:w:874:G:O2'	22:T:170:THR:HG21	2.16	0.45
1:w:1047:G:C4	1:w:1110:G:C6	3.05	0.45
1:w:1130:U:H3	1:w:2025:C:C3'	2.30	0.45
1:w:1171:G:OP2	1:w:1173:G:N7	2.49	0.45
1:w:1214:A:N6	1:w:1235:G:H1'	2.22	0.45
1:w:1287:A:H2'	1:w:1287:A:N3	2.31	0.45
1:w:1334:G:H2'	1:w:1335:U:C6	2.51	0.45
1:w:1338:G:H8	1:w:1338:G:O5'	1.99	0.45
1:w:1461:G:N3	1:w:1462:C:C5	2.84	0.45
1:w:1462:C:O4'	1:w:2703:C:H5'	2.16	0.45
1:w:1551:C:H3'	1:w:1552:G:C8	2.49	0.45
1:w:1619:G:O2'	1:w:1620:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1668:A:O4'	1:w:1669:A:C5	2.70	0.45
1:w:1760:A:C2	1:w:1761:C:N1	2.84	0.45
1:w:1785:A:O2'	1:w:1786:A:H5'	2.16	0.45
1:w:1788:C:N3	1:w:1789:A:C8	2.84	0.45
1:w:1793:C:O5'	1:w:1793:C:C6	2.63	0.45
1:w:1797:C:C2	1:w:1823:G:C2	3.05	0.45
1:w:1823:G:C5	1:w:1824:G:C4	3.05	0.45
1:w:1842:G:O6	1:w:1898:U:O2	2.33	0.45
1:w:1869:G:C4	1:w:1871:A:P	3.09	0.45
1:w:1964:G:O2'	1:w:1967:C:P	2.74	0.45
1:w:2049:G:C5	1:w:2050:C:C4	3.03	0.45
1:w:2110:G:C8	1:w:2110:G:OP2	2.70	0.45
1:w:2232:U:C2'	1:w:2233:U:H5'	2.45	0.45
1:w:2352:A:C4	1:w:2366:A:C2	3.04	0.45
1:w:2355:C:O2	23:U:17:GLN:OE1	2.34	0.45
1:w:2486:G:O5'	1:w:2486:G:C8	2.61	0.45
1:w:2497:A:C8	1:w:2497:A:OP2	2.70	0.45
1:w:2562:U:C2'	1:w:2563:U:O5'	2.65	0.45
1:w:2634:G:C4	1:w:2635:C:C4	3.04	0.45
1:w:2698:U:O2'	1:w:2699:C:H5'	2.15	0.45
1:w:2706:G:H2'	1:w:2707:G:C8	2.52	0.45
1:w:2716:U:C2'	1:w:2717:G:H5'	2.45	0.45
1:w:2721:A:C8	1:w:2722:G:N7	2.85	0.45
1:w:2835:A:N6	1:w:2878:U:C2	2.85	0.45
1:w:2855:C:H6	1:w:2855:C:O5'	2.00	0.45
2:x:26:A:C2'	2:x:27:C:C6	2.99	0.45
2:x:81:G:C5	2:x:96:G:N1	2.84	0.45
2:x:96:G:C2	2:x:97:G:N7	2.85	0.45
2:x:113:C:O2	2:x:113:C:C2'	2.63	0.45
3:A:44:VAL:C	3:A:45:HIS:HD2	2.24	0.45
3:A:49:GLY:C	3:A:50:ILE:HG23	2.42	0.45
3:A:201:LYS:NZ	3:A:203:GLU:HA	2.23	0.45
4:B:44:ASN:CG	4:B:45:ASN:N	2.63	0.45
4:B:142:VAL:HG23	4:B:193:VAL:HA	1.99	0.45
6:D:24:ASN:O	6:D:27:LEU:HD22	2.17	0.45
6:D:41:ARG:CD	6:D:43:THR:HG23	2.47	0.45
6:D:64:HIS:O	6:D:65:THR:HG22	2.16	0.45
6:D:159:ARG:HG2	6:D:172:ALA:CB	2.40	0.45
6:D:178:VAL:HG23	6:D:179:TYR:H	1.82	0.45
7:E:8:LYS:O	7:E:12:TYR:CD2	2.69	0.45
7:E:46:ALA:CB	7:E:85:GLY:N	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:60:LEU:H	7:E:60:LEU:HD23	1.80	0.45
8:F:17:VAL:CG2	8:F:44:VAL:HG23	2.41	0.45
8:F:19:VAL:N	8:F:24:VAL:HA	2.32	0.45
9:G:52:ARG:O	9:G:53:ALA:C	2.59	0.45
10:H:79:ASN:N	10:H:148:GLY:N	2.64	0.45
10:H:80:ALA:H	10:H:147:ALA:CA	2.27	0.45
10:H:112:LYS:NZ	10:H:112:LYS:O	2.47	0.45
11:I:77:ILE:HG12	16:N:74:ARG:HA	1.97	0.45
12:J:41:ARG:CD	12:J:45:LEU:HD12	2.46	0.45
12:J:90:ARG:HG2	12:J:91:PHE:N	2.31	0.45
13:K:59:ARG:O	22:T:184:ALA:CB	2.61	0.45
14:L:54:LEU:HD23	14:L:57:ARG:HH11	1.82	0.45
15:M:27:SER:OG	15:M:89:ARG:NH2	2.50	0.45
15:M:62:LYS:HB3	15:M:62:LYS:NZ	2.31	0.45
15:M:66:ALA:C	15:M:101:LEU:HD11	2.42	0.45
15:M:94:TYR:CE2	15:M:99:LYS:CA	2.97	0.45
16:N:25:GLY:C	16:N:48:ILE:HG13	2.42	0.45
16:N:92:GLY:O	16:N:93:ARG:CB	2.64	0.45
17:O:83:LEU:CD2	17:O:84:LYS:HZ3	2.28	0.45
17:O:105:VAL:HG22	18:P:43:GLU:O	2.16	0.45
20:R:8:ILE:HD13	25:W:26:ARG:NH2	2.30	0.45
22:T:67:LEU:CD1	22:T:69:THR:OG1	2.65	0.45
22:T:75:ASN:O	22:T:84:GLU:HG2	2.16	0.45
22:T:103:ARG:HD2	22:T:136:PHE:CD1	2.51	0.45
22:T:166:SER:OG	22:T:169:GLU:HB2	2.17	0.45
22:T:174:VAL:O	22:T:175:VAL:CG2	2.58	0.45
23:U:41:ARG:HG3	23:U:41:ARG:HH11	1.82	0.45
25:W:22:GLU:C	25:W:25:VAL:HG13	2.41	0.45
28:Z:19:ARG:O	28:Z:20:ALA:C	2.60	0.45
29:a:16:ILE:HG13	29:a:20:GLY:HA2	1.99	0.45
30:b:11:CYS:SG	30:b:27:CYS:CB	3.05	0.45
31:y:50:A:N6	31:y:361:G:H5'	2.31	0.45
31:y:126:G:N2	31:y:235:C:N3	2.62	0.45
31:y:344:A:C2'	31:y:346:G:O6	2.64	0.45
31:y:358:U:C4	31:y:359:U:C4	3.04	0.45
31:y:399:G:O2'	31:y:400:C:C5'	2.65	0.45
31:y:424:G:C2	31:y:425:G:N9	2.85	0.45
31:y:505:G:H2'	31:y:506:G:H8	1.81	0.45
31:y:681:C:C2'	31:y:682:G:H5'	2.46	0.45
31:y:681:C:H2'	31:y:682:G:O4'	2.16	0.45
31:y:707:C:O2	44:l:39:PRO:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:738:C:N4	31:y:739:C:N4	2.64	0.45
31:y:815:A:H1'	31:y:817:C:N4	2.30	0.45
31:y:815:A:OP2	31:y:816:A:N7	2.49	0.45
31:y:861:G:C8	31:y:862:C:C5	3.04	0.45
31:y:901:A:HO2'	31:y:902:G:P	2.39	0.45
31:y:932:C:N3	31:y:1386:G:N2	2.64	0.45
31:y:985:C:H6	31:y:985:C:O5'	2.00	0.45
31:y:1066:C:C3'	31:y:1067:A:H8	2.24	0.45
31:y:1075:C:C5'	31:y:1101:A:N6	2.77	0.45
31:y:1105:A:H2'	31:y:1106:G:H8	1.82	0.45
31:y:1111:A:N6	36:d:176:HIS:CB	2.79	0.45
31:y:1166:G:C2	31:y:1171:G:C2	3.05	0.45
31:y:1252:A:H2	31:y:1355:G:O4'	1.98	0.45
31:y:1308:U:C2	31:y:1329:A:H2	2.33	0.45
31:y:1375:A:C5'	40:h:29:LYS:HG2	2.40	0.45
31:y:1399:C:H5''	31:y:1400:5MC:H5'	1.99	0.45
31:y:1439:C:C5	31:y:1440:C:C5	3.05	0.45
31:y:1501:C:N4	31:y:1504:G:N2	2.64	0.45
31:y:1509:C:H3'	31:y:1510:U:C5	2.51	0.45
35:c:50:GLU:O	35:c:50:GLU:OE2	2.35	0.45
36:d:59:ARG:HG2	36:d:60:ALA:N	2.32	0.45
36:d:137:ALA:N	36:d:140:ARG:NH2	2.64	0.45
36:d:177:THR:C	36:d:179:ARG:H	2.23	0.45
40:h:84:ASN:H	40:h:84:ASN:ND2	2.07	0.45
41:i:85:ARG:HB3	41:i:85:ARG:CZ	2.45	0.45
42:j:120:ARG:HD2	42:j:120:ARG:N	2.32	0.45
43:k:82:ILE:CA	43:k:85:LEU:HG	2.45	0.45
44:l:78:GLN:C	44:l:80:VAL:N	2.74	0.45
45:m:51:LEU:C	45:m:52:ARG:CG	2.89	0.45
45:m:115:SER:O	45:m:118:LYS:HG2	2.17	0.45
49:q:59:TRP:HA	49:q:59:TRP:HE3	1.77	0.45
50:r:47:PRO:CD	50:r:73:VAL:HG21	2.41	0.45
50:r:75:ARG:CZ	50:r:77:VAL:HA	2.46	0.45
52:t:45:VAL:HG13	52:t:46:GLY:H	1.81	0.45
1:w:48:G:C2	1:w:178:G:O6	2.70	0.45
1:w:54:G:N2	1:w:126:A:N1	2.64	0.45
1:w:115:C:C2	1:w:116:C:H6	2.34	0.45
1:w:144:C:H2'	1:w:145:G:O4'	2.17	0.45
1:w:188:G:H4'	1:w:1365:A:N6	2.32	0.45
1:w:209:C:C2	1:w:210:C:C6	3.05	0.45
1:w:270(J):G:N3	1:w:270(J):G:C2'	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:363(F):U:C6	1:w:363(G):A:N7	2.84	0.45
1:w:445:C:O3'	17:O:3:ARG:CD	2.64	0.45
1:w:464:U:C2	1:w:788:A:C5	3.03	0.45
1:w:534:U:P	17:O:24:TYR:HE2	2.39	0.45
1:w:562:U:HO2'	1:w:563:G:P	2.39	0.45
1:w:601:C:C2'	6:D:99:LYS:HZ1	2.29	0.45
1:w:621:A:N3	1:w:621:A:H2'	2.32	0.45
1:w:666:G:H2'	1:w:667:U:O5'	2.16	0.45
1:w:675:A:N3	1:w:2444:G:H1'	2.32	0.45
1:w:714:U:O2	1:w:717:G:OP2	2.35	0.45
1:w:748:G:HO2'	1:w:749:C:H5	1.56	0.45
1:w:751:A:N7	1:w:1614:A:C2	2.84	0.45
1:w:878:A:O5'	1:w:878:A:C8	2.66	0.45
1:w:919:G:C6	1:w:2268:A:C6	3.05	0.45
1:w:952:G:O2'	1:w:2267:A:H1'	2.17	0.45
1:w:986:C:O2'	1:w:987:G:H5'	2.17	0.45
1:w:1041:C:C2	1:w:1115:G:N2	2.85	0.45
1:w:1043:C:H2'	1:w:1044:G:H8	1.79	0.45
1:w:1158:C:O5'	1:w:1158:C:C6	2.67	0.45
1:w:1196:C:H1'	1:w:1226:A:H1'	1.99	0.45
1:w:1206:G:N3	1:w:1207:C:C6	2.85	0.45
1:w:1214:A:N1	1:w:1235:G:O2'	2.48	0.45
1:w:1223:G:H2'	1:w:1226:A:H62	1.82	0.45
1:w:1224:C:N3	1:w:1225:G:C2	2.85	0.45
1:w:1264:G:C8	1:w:1264:G:OP2	2.69	0.45
1:w:1354:A:H62	1:w:1377:G:N2	2.15	0.45
1:w:1355:G:C2'	1:w:1356:G:H5'	2.47	0.45
1:w:1454:U:O4	1:w:2702:U:C4	2.69	0.45
1:w:1613:G:C4	1:w:1617:C:C2	3.04	0.45
1:w:1747:G:C6	1:w:1748:G:C5	3.05	0.45
1:w:1851:U:H3	1:w:1891:G:H1	1.65	0.45
1:w:1911:U:C2	1:w:1919:A:C6	3.02	0.45
1:w:1944:U:H6	1:w:1955:U:O4'	1.88	0.45
1:w:2077:A:C2	1:w:2078:C:C2	3.05	0.45
1:w:2129:C:C2'	1:w:2130:U:O5'	2.62	0.45
1:w:2158:A:H2'	1:w:2159:G:C4'	2.46	0.45
1:w:2190:G:H8	1:w:2190:G:H5'	1.81	0.45
1:w:2240:C:H2'	1:w:2241:A:C4'	2.45	0.45
1:w:2270:G:O2'	23:U:19:LYS:HB3	2.17	0.45
1:w:2419:U:C5	29:a:31:HIS:CG	3.04	0.45
1:w:2549:G:C6	1:w:2560:C:N4	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2572:A:OP2	5:C:144:ARG:HD3	2.16	0.45
1:w:2619:C:O2	5:C:156:MET:CG	2.63	0.45
1:w:2636:U:O2	1:w:2636:U:C2'	2.65	0.45
1:w:2642:G:N2	1:w:2772:C:O2	2.45	0.45
1:w:2647:U:H2'	1:w:2648:C:C6	2.51	0.45
1:w:2694:G:C2'	1:w:2695:C:H5'	2.27	0.45
1:w:2794:C:O2	1:w:2794:C:C2'	2.63	0.45
2:x:50:G:OP1	15:M:62:LYS:HA	2.16	0.45
2:x:95:U:C2'	2:x:96:G:C8	2.95	0.45
3:A:7:ARG:C	3:A:8:TYR:CG	2.95	0.45
3:A:168:LYS:C	3:A:170:GLY:H	2.24	0.45
4:B:21:PHE:CA	4:B:24:ILE:CB	2.69	0.45
4:B:92:ILE:HA	4:B:105:ILE:C	2.42	0.45
4:B:227:ASN:HD21	4:B:237:GLU:CD	2.25	0.45
5:C:7:VAL:O	5:C:26:ILE:HD12	2.17	0.45
5:C:34:VAL:O	5:C:35:GLN:CB	2.58	0.45
5:C:94:GLU:C	5:C:96:PHE:N	2.71	0.45
5:C:101:ARG:NH2	5:C:169:ASN:HB3	2.32	0.45
5:C:109:LYS:HZ3	14:L:4:LEU:CD2	2.30	0.45
5:C:176:ILE:HD12	5:C:176:ILE:N	2.32	0.45
6:D:166:PRO:O	6:D:168:VAL:N	2.50	0.45
7:E:3:LEU:HD12	7:E:3:LEU:N	2.30	0.45
7:E:124:SER:HB3	7:E:133:LEU:CD1	2.47	0.45
7:E:138:GLN:OE1	7:E:152:LEU:HA	2.16	0.45
7:E:139:LEU:HD13	7:E:139:LEU:N	2.28	0.45
10:H:79:ASN:CA	10:H:147:ALA:CA	2.80	0.45
10:H:138:ARG:C	10:H:140:PHE:N	2.74	0.45
11:I:87:ILE:HA	11:I:93:PRO:CA	2.47	0.45
11:I:88:ASN:CB	11:I:90:GLN:NE2	2.78	0.45
12:J:122:PRO:CG	12:J:141:ALA:O	2.63	0.45
13:K:50:ALA:C	13:K:52:VAL:N	2.72	0.45
13:K:124:LYS:O	13:K:124:LYS:CE	2.65	0.45
14:L:68:ARG:O	14:L:69:ASP:OD2	2.35	0.45
15:M:75:GLU:CA	15:M:78:LEU:HD12	2.35	0.45
16:N:30:VAL:O	16:N:85:LYS:CG	2.61	0.45
17:O:37:GLU:HA	17:O:40:PHE:CE1	2.51	0.45
17:O:109:LEU:H	17:O:109:LEU:CD2	2.29	0.45
19:Q:55:ALA:O	19:Q:59:VAL:HB	2.17	0.45
19:Q:88:ARG:CD	19:Q:92:ARG:N	2.80	0.45
20:R:32:PRO:HA	20:R:75:ASP:HB3	1.97	0.45
22:T:101:PRO:HB2	22:T:136:PHE:HB2	1.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:102:LEU:HD11	22:T:124:ILE:HB	1.97	0.45
24:V:85:LEU:CD1	24:V:86:SER:H	2.24	0.45
26:X:3:ARG:C	26:X:58:VAL:HG13	2.34	0.45
29:a:24:ALA:O	29:a:46:ARG:HB3	2.16	0.45
30:b:10:ILE:HB	30:b:14:CYS:SG	2.57	0.45
31:y:68:G:C6	31:y:101:A:N1	2.84	0.45
31:y:186(G):C:C6	31:y:187:C:C5	3.05	0.45
31:y:242:C:C6	31:y:242:C:C3'	3.00	0.45
31:y:297:G:C8	31:y:297:G:H3'	2.51	0.45
31:y:319:G:N3	31:y:319:G:H2'	2.32	0.45
31:y:326:G:C2'	31:y:327:A:H5''	2.45	0.45
31:y:355:C:C4	31:y:356:A:C8	3.05	0.45
31:y:362:G:H2'	31:y:364:A:C8	2.48	0.45
31:y:413:G:H1'	31:y:428:G:H21	1.81	0.45
31:y:495:A:C6	31:y:496:A:N6	2.85	0.45
31:y:514:C:H6	31:y:514:C:C5'	2.30	0.45
31:y:588:G:OP1	41:i:3:THR:HA	2.15	0.45
31:y:601:C:H3'	31:y:602:A:C8	2.46	0.45
31:y:614:A:N3	31:y:627:G:C2	2.85	0.45
31:y:625:G:H5'	49:q:16:HIS:CD2	2.51	0.45
31:y:730:G:H8	31:y:730:G:O5'	2.00	0.45
31:y:751:U:C1'	48:p:24:SER:HA	2.32	0.45
31:y:825:G:C5	31:y:826:C:N4	2.84	0.45
31:y:934:C:C5	31:y:1345:U:H5''	2.44	0.45
31:y:981:U:O5'	31:y:981:U:H6	2.00	0.45
31:y:1016:A:OP2	31:y:1016:A:C5	2.69	0.45
31:y:1100:C:O2'	31:y:1101:A:H4'	2.17	0.45
31:y:1115:C:N3	31:y:1186:G:N2	2.64	0.45
31:y:1162:C:C2'	31:y:1163:C:C6	2.98	0.45
31:y:1179:A:C8	31:y:1180:A:C8	3.04	0.45
31:y:1202:G:H21	47:o:26:ARG:CZ	2.30	0.45
31:y:1315:U:C4	31:y:1316:G:N7	2.84	0.45
31:y:1361:G:C8	31:y:1361:G:OP2	2.70	0.45
31:y:1425:U:O2	31:y:1426:C:C5	2.69	0.45
31:y:1470:G:C6	31:y:1471:G:N7	2.84	0.45
31:y:1486:G:C6	31:y:1487:G:C5	3.04	0.45
35:c:60:ASP:OD2	35:c:61:LEU:HD22	2.16	0.45
36:d:40:ARG:HD2	36:d:43:LEU:HD23	1.98	0.45
36:d:86:VAL:HG23	36:d:87:LEU:N	2.31	0.45
37:e:100:ARG:HG2	37:e:102:ASP:H	1.82	0.45
38:f:147:ASP:O	38:f:150:ARG:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:47:CYS:HA	40:h:50:ILE:CG1	2.45	0.45
40:h:54:THR:HG23	40:h:56:GLN:H	1.82	0.45
41:i:103:VAL:CG1	41:i:109:ILE:HA	2.47	0.45
41:i:112:LEU:CD1	41:i:124:ALA:HB1	2.47	0.45
44:l:83:ILE:HD13	51:s:84:LYS:HZ3	1.77	0.45
44:l:99:GLN:HG2	44:l:100:ALA:N	2.31	0.45
44:l:108:ILE:CB	51:s:88:LYS:HB3	2.47	0.45
45:m:36:CYS:HB3	45:m:80:SER:CA	2.46	0.45
46:n:66:LEU:O	46:n:68:GLY:N	2.49	0.45
46:n:122:LYS:O	46:n:124:PRO:HD3	2.16	0.45
50:r:45:HIS:CG	50:r:46:ASP:N	2.83	0.45
53:u:13:LEU:C	53:u:13:LEU:CD2	2.89	0.45
53:u:15:ARG:O	53:u:18:GLN:HB2	2.15	0.45
53:u:20:LEU:HD12	53:u:20:LEU:C	2.34	0.45
53:u:52:ALA:O	53:u:55:ILE:HG22	2.16	0.45
54:v:19:GLY:C	54:v:21:TYR:H	2.24	0.45
1:w:55:G:C6	1:w:56:A:N6	2.84	0.45
1:w:126:A:C8	28:Z:18:PHE:CE2	3.04	0.45
1:w:141(B):C:O5'	1:w:141(B):C:H6	1.99	0.45
1:w:213:A:C2'	1:w:214:G:H5'	2.45	0.45
1:w:265:A:C4	1:w:428:A:C6	3.04	0.45
1:w:278:A:C5	1:w:279:C:C5	3.05	0.45
1:w:360:G:N3	1:w:360:G:C2'	2.77	0.45
1:w:392:C:H2'	1:w:393:C:H6	1.81	0.45
1:w:452:G:O2'	1:w:457:A:H2	1.95	0.45
1:w:479:A:C4'	1:w:480:A:H5''	2.31	0.45
1:w:531:C:H5'	1:w:532:A:C5	2.52	0.45
1:w:562:U:C4	1:w:2036:C:H4'	2.52	0.45
1:w:588:U:O2'	1:w:589:C:C5'	2.63	0.45
1:w:591:C:O2	29:a:2:PRO:CB	2.41	0.45
1:w:603:A:H1'	1:w:604:G:H1'	1.98	0.45
1:w:607:U:N3	1:w:620:G:C1'	2.80	0.45
1:w:608:A:N6	1:w:609(A):A:C6	2.85	0.45
1:w:720:C:C2	1:w:721:C:C5	3.04	0.45
1:w:734:A:C6	1:w:735:A:C4	3.05	0.45
1:w:803:U:H3'	1:w:804:A:N7	2.29	0.45
1:w:841:A:C6	1:w:842:G:C6	3.05	0.45
1:w:868:U:C2	1:w:909:A:N1	2.84	0.45
1:w:929:G:H2'	1:w:930:U:C2	2.48	0.45
1:w:952:G:H2'	1:w:953:A:O4'	2.17	0.45
1:w:954:G:N3	1:w:954:G:C2'	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:989:G:OP1	26:X:31:LEU:CD2	2.53	0.45
1:w:1026:U:O2	1:w:1026:U:H2'	2.16	0.45
1:w:1047:G:H2'	1:w:1047:G:OP2	2.17	0.45
1:w:1194:A:N1	1:w:1195:G:C6	2.85	0.45
1:w:1223:G:H2'	1:w:1223:G:N3	2.31	0.45
1:w:1224:C:N3	1:w:1225:G:C4	2.85	0.45
1:w:1227:G:C6	1:w:1228:G:C5	3.05	0.45
1:w:1319:G:C5	1:w:1320:C:N4	2.83	0.45
1:w:1343:G:N2	1:w:1405:U:C4	2.85	0.45
1:w:1367:A:C2'	1:w:1368:G:C5'	2.94	0.45
1:w:1368:G:H2'	1:w:1369:G:C8	2.52	0.45
1:w:1368:G:H2'	1:w:1369:G:H8	1.82	0.45
1:w:1417:C:C4	1:w:1418:G:C8	3.04	0.45
1:w:1439:A:C2'	1:w:1440:G:H5'	2.45	0.45
1:w:1473:G:H8	1:w:1473:G:OP2	1.99	0.45
1:w:1541:U:C2	1:w:1542:G:C2	3.04	0.45
1:w:1581:G:C2	1:w:1582:C:O2	2.69	0.45
1:w:1667:G:O2'	1:w:1991:U:O4	2.35	0.45
1:w:1689:A:H2'	1:w:1690:A:O4'	2.17	0.45
1:w:1698:A:H8	1:w:1698:A:P	2.39	0.45
1:w:1776:G:C2	1:w:1777:U:C4	3.03	0.45
1:w:1797:C:OP2	1:w:1798:U:H5	1.99	0.45
1:w:1914:C:N3	1:w:1915:U:C4	2.85	0.45
1:w:1993:U:O5'	1:w:1993:U:H6	1.99	0.45
1:w:2048:G:C2'	1:w:2049:G:O5'	2.65	0.45
1:w:2065:C:C2	1:w:2066:C:H6	2.34	0.45
1:w:2073:C:H4'	4:B:229:VAL:HA	1.99	0.45
1:w:2134:A:N3	1:w:2158:A:C2	2.85	0.45
1:w:2157:G:O2'	1:w:2158:A:C8	2.59	0.45
1:w:2168:G:H2'	1:w:2170:A:N7	2.32	0.45
1:w:2205:C:H5''	24:V:52:ARG:NH1	2.31	0.45
1:w:2230:G:C5	1:w:2231:C:C4	3.04	0.45
1:w:2342:C:C2	1:w:2343:C:C6	3.05	0.45
1:w:2431:U:N1	1:w:2433:A:OP2	2.50	0.45
1:w:2479:G:C2'	1:w:2480:C:O5'	2.61	0.45
1:w:2511:U:C6	1:w:2511:U:C3'	3.00	0.45
1:w:2515:C:C2	1:w:2570:G:N1	2.84	0.45
1:w:2556:C:C5	1:w:2556:C:OP2	2.70	0.45
1:w:2634:G:N2	1:w:2785:C:C2	2.85	0.45
1:w:712(B):A:N3	1:w:712(B):A:C3'	2.80	0.45
1:w:2733:A:C2'	1:w:2734:A:C5'	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2736:G:H3'	1:w:2737:G:H8	1.81	0.45
1:w:2744:G:H2'	1:w:2745:C:O4'	2.17	0.45
1:w:2823:A:H2'	1:w:2824:C:C6	2.51	0.45
2:x:17:C:C4	2:x:18:G:C4	3.05	0.45
2:x:47:C:N3	2:x:48:A:C5	2.85	0.45
3:A:182:PRO:C	3:A:184:GLU:N	2.74	0.45
4:B:130:ALA:CB	4:B:190:TYR:CE1	2.98	0.45
4:B:131:LEU:CA	4:B:190:TYR:CD1	3.00	0.45
5:C:13:ARG:HA	5:C:23:VAL:HG23	1.88	0.45
5:C:24:THR:CB	5:C:186:GLY:CA	2.79	0.45
5:C:115:GLY:O	5:C:118:LYS:HB2	2.17	0.45
5:C:117:MET:CA	5:C:122:PHE:N	2.55	0.45
5:C:145:LYS:CA	5:C:148:GLY:CA	2.94	0.45
6:D:120:LEU:CD1	6:D:123:ALA:CB	2.83	0.45
7:E:107:LEU:HD22	7:E:111:LEU:HD21	1.98	0.45
7:E:117:PHE:O	7:E:118:ARG:HB3	2.16	0.45
7:E:124:SER:CB	7:E:133:LEU:CD1	2.94	0.45
8:F:23:ARG:O	8:F:25:LYS:N	2.49	0.45
8:F:39:PRO:O	8:F:40:GLU:HB2	2.17	0.45
8:F:121:ILE:O	8:F:123:PHE:HE1	1.99	0.45
10:H:69:VAL:HG22	10:H:70:ALA:N	2.32	0.45
12:J:86:LYS:HD3	12:J:118:GLY:HA3	1.98	0.45
12:J:105:LEU:O	12:J:106:LEU:CB	2.64	0.45
13:K:44:ALA:O	13:K:47:ILE:HB	2.16	0.45
13:K:50:ALA:O	13:K:52:VAL:N	2.50	0.45
13:K:67:ARG:O	13:K:68:ILE:HG23	2.15	0.45
15:M:67:ARG:H	15:M:100:ALA:HB1	1.82	0.45
16:N:41:ARG:NH2	16:N:43:GLN:HG2	2.32	0.45
16:N:89:VAL:O	16:N:90:GLN:NE2	2.50	0.45
21:S:93:GLY:O	21:S:94:LYS:CG	2.65	0.45
29:a:29:LYS:HG3	29:a:41:ILE:CG2	2.42	0.45
31:y:24:U:O2'	31:y:524:G:O2'	1.80	0.45
31:y:41:G:C2	31:y:402:G:C4	3.05	0.45
31:y:116:A:H2'	31:y:117:G:H8	1.82	0.45
31:y:135:C:N4	31:y:228:A:N6	2.35	0.45
31:y:248:C:N3	31:y:277:C:C2	2.84	0.45
31:y:253:U:N3	31:y:254:G:C5	2.85	0.45
31:y:315:A:O4'	31:y:353:A:N1	2.49	0.45
31:y:437:U:C2'	31:y:438:G:H5'	2.46	0.45
31:y:596:C:O2	31:y:596:C:C2'	2.58	0.45
31:y:675:A:H2'	31:y:676:A:H5'	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:686:U:H4'	44:l:42:TRP:NE1	2.30	0.45
31:y:727:G:H2'	31:y:728:A:O5'	2.17	0.45
31:y:791:G:H22	31:y:1497:G:C4'	2.26	0.45
31:y:872:A:HO2'	31:y:873:A:C3'	2.21	0.45
31:y:986:A:C4	31:y:1220:G:N2	2.85	0.45
31:y:1053:G:N7	31:y:1199:U:C5	2.83	0.45
31:y:1055:A:H62	31:y:1200:C:H42	1.64	0.45
31:y:1056:U:C2'	31:y:1057:G:H5'	2.46	0.45
31:y:1067:A:O2'	31:y:1068:G:P	2.75	0.45
31:y:1104:G:C2	31:y:1105:A:C8	3.04	0.45
31:y:1188:A:N7	31:y:1189:C:C6	2.84	0.45
31:y:1209:C:HO2'	31:y:1210:C:H5'	1.78	0.45
31:y:1324:A:C4'	31:y:136(A):C:H4'	2.47	0.45
31:y:1324:A:O4'	31:y:136(A):C:H4'	2.17	0.45
31:y:1347:G:C4'	31:y:1348:U:OP1	2.48	0.45
31:y:1377:A:C2'	40:h:5:ARG:HH21	2.30	0.45
31:y:1400:5MC:H4'	31:y:1401:G:OP2	2.16	0.45
31:y:1443:G:C4'	31:y:1446:A:C5'	2.59	0.45
33:0:33:U:C5	33:0:35:A:OP2	2.69	0.45
35:c:57:PHE:HA	35:c:60:ASP:CB	2.46	0.45
36:d:77:ILE:HA	36:d:84:ILE:CG2	2.46	0.45
37:e:14:ARG:HD3	37:e:14:ARG:O	2.16	0.45
37:e:26:CYS:O	37:e:31:CYS:HB2	2.16	0.45
37:e:89:THR:CG2	38:f:97:GLY:O	2.59	0.45
38:f:74:GLY:O	38:f:118:ILE:HD11	2.17	0.45
38:f:137:GLU:O	38:f:139:LEU:N	2.50	0.45
42:j:104:ARG:HB3	42:j:105:ASP:H	1.49	0.45
45:m:32:ARG:CD	45:m:60:THR:HG21	2.47	0.45
45:m:41:THR:HA	45:m:54:VAL:HG22	1.98	0.45
45:m:52:ARG:CZ	45:m:52:ARG:O	2.64	0.45
46:n:4:ILE:N	46:n:4:ILE:CD1	2.80	0.45
47:o:37:PHE:HB3	47:o:39:LEU:HD12	1.98	0.45
52:t:16:LEU:O	52:t:19:VAL:HG12	2.15	0.45
1:w:37:C:C2'	1:w:38:A:H8	2.29	0.45
1:w:128:C:OP2	20:R:73:ARG:NH2	2.50	0.45
1:w:163:U:OP2	1:w:165:U:C4	2.70	0.45
1:w:237:C:H2'	1:w:238:C:O5'	2.17	0.45
1:w:243:U:OP2	29:a:8:LYS:NZ	2.49	0.45
1:w:270(V):C:N4	1:w:270(W):G:C6	2.85	0.45
1:w:396:G:H2'	1:w:397:G:O5'	2.17	0.45
1:w:440:G:C3'	1:w:441:U:H6	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:481:G:C6	1:w:507:A:C2	3.04	0.45
1:w:484:C:H5'	21:S:56:PRO:CG	2.46	0.45
1:w:587:C:C2	1:w:671:C:C6	3.05	0.45
1:w:607:U:C2	1:w:620:G:H1'	2.50	0.45
1:w:609(A):A:N6	1:w:609(B):G:C5	2.85	0.45
1:w:617:G:N3	1:w:618(A):G:H1'	2.30	0.45
1:w:625:G:C4	1:w:626:U:C6	3.04	0.45
1:w:631:A:O2'	12:J:67:MET:HG2	2.17	0.45
1:w:752:A:C5	1:w:1781:C:C1'	3.00	0.45
1:w:787:U:C2'	1:w:791:C:N4	2.79	0.45
1:w:796:C:C2	1:w:797:C:C6	3.04	0.45
1:w:935:C:C2'	1:w:936:C:O5'	2.65	0.45
1:w:1056:G:N2	1:w:1103:A:C5	2.85	0.45
1:w:1138:G:C2'	1:w:1139:G:H5'	2.46	0.45
1:w:1226:A:OP1	17:O:16:LYS:NZ	2.49	0.45
1:w:1232:G:C4	1:w:1233:C:C5	3.04	0.45
1:w:1313:U:H2'	1:w:1314:C:C5'	2.47	0.45
1:w:1326:U:C5	1:w:1327:C:C5	3.05	0.45
1:w:1364:G:H2'	1:w:1367:A:H62	1.82	0.45
1:w:1425:G:C2	1:w:1574:C:C4	3.04	0.45
1:w:1527:G:C4	1:w:1543:A:N6	2.84	0.45
1:w:1540:G:C2'	1:w:1541:U:C6	3.00	0.45
1:w:1679:U:C5	1:w:1680:U:C5	3.04	0.45
1:w:1732:A:C8	1:w:1732:A:O5'	2.69	0.45
1:w:1827:C:O5'	1:w:1827:C:C6	2.70	0.45
1:w:1839:G:C8	1:w:1839:G:H3'	2.51	0.45
1:w:1858:G:C2'	1:w:1884:A:N6	2.79	0.45
1:w:1885:A:C8	1:w:1886:C:C5	3.05	0.45
1:w:1999:C:C4'	1:w:2723:C:O2	2.63	0.45
1:w:2102:U:C3'	1:w:2103:C:C6	3.00	0.45
1:w:2192:G:N1	1:w:2193:G:C5	2.85	0.45
1:w:2193:G:C3'	1:w:2194:G:C5'	2.91	0.45
1:w:2304:G:O2'	7:E:133:LEU:N	2.48	0.45
1:w:2359:C:H5'	29:a:50:LEU:C	2.41	0.45
1:w:2397:G:H2'	1:w:2398:U:H6	1.75	0.45
1:w:2414:G:N1	1:w:2415:G:C5	2.85	0.45
1:w:2512:C:H4'	5:C:122:PHE:CE2	2.51	0.45
1:w:2520:C:H2'	1:w:2521:C:C6	2.52	0.45
1:w:2542:A:H5''	1:w:2542:A:C8	2.48	0.45
1:w:2558:C:C4	1:w:2559:C:N4	2.85	0.45
1:w:2634:G:C6	1:w:2635:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2634:G:C2	1:w:2785:C:C2	3.04	0.45
1:w:2639:A:C1'	1:w:2778:A:N1	2.80	0.45
1:w:2651:C:N4	1:w:2670:A:H61	2.14	0.45
1:w:2711:A:OP1	1:w:2712:U:O4'	2.35	0.45
1:w:2895:U:O2	1:w:2896:C:C5	2.69	0.45
2:x:10:C:OP2	2:x:10:C:H3'	2.16	0.45
4:B:206:LEU:H	4:B:206:LEU:HD22	1.81	0.45
4:B:223:GLY:C	4:B:225:ALA:H	2.22	0.45
5:C:103:ASP:CG	5:C:202:LYS:HE3	2.41	0.45
5:C:175:VAL:HA	5:C:181:LEU:O	2.17	0.45
6:D:46:THR:O	6:D:47:LYS:HG3	2.17	0.45
6:D:151:LEU:H	6:D:169:VAL:CB	2.29	0.45
7:E:96:ARG:CZ	7:E:97:ASP:HB2	2.47	0.45
7:E:101:ILE:HG13	7:E:104:GLU:OE1	2.15	0.45
8:F:40:GLU:OE2	8:F:55:PRO:HB3	2.17	0.45
8:F:147:ASN:O	8:F:150:ALA:HB3	2.17	0.45
9:G:73:GLU:C	9:G:75:LEU:N	2.72	0.45
10:H:88:LYS:HG3	10:H:92:GLN:HG3	1.98	0.45
11:I:10:VAL:C	11:I:12:ASP:N	2.74	0.45
12:J:84:ASN:CB	12:J:116:GLY:HA3	2.47	0.45
13:K:116:GLU:HB3	13:K:120:ILE:HD12	1.97	0.45
13:K:134:ARG:NE	13:K:137:TYR:H	2.15	0.45
14:L:60:LEU:C	14:L:64:ARG:HD3	2.42	0.45
16:N:12:SER:HA	16:N:15:VAL:CG2	2.47	0.45
16:N:29:ARG:HG3	16:N:84:GLN:O	2.16	0.45
17:O:92:ARG:CD	18:P:11:GLN:HG2	2.47	0.45
19:Q:87:PRO:C	19:Q:88:ARG:NE	2.74	0.45
20:R:39:ILE:C	20:R:41:ASN:H	2.25	0.45
21:S:55:TYR:CG	21:S:56:PRO:CD	2.87	0.45
22:T:47:VAL:C	22:T:49:ARG:N	2.74	0.45
24:V:26:ARG:HD3	24:V:26:ARG:N	2.31	0.45
28:Z:47:ARG:O	28:Z:48:LYS:HB3	2.16	0.45
31:y:44:G:N2	31:y:45:U:H1'	2.32	0.45
31:y:109:A:C6	31:y:326:G:C6	3.05	0.45
31:y:268:C:N4	31:y:269:C:N4	2.65	0.45
31:y:287:U:H6	31:y:287:U:O5'	1.98	0.45
31:y:357:G:P	31:y:367:U:H2'	2.57	0.45
31:y:416:G:C2	31:y:417:C:H1'	2.51	0.45
31:y:546:G:C2'	31:y:547:A:O4'	2.61	0.45
31:y:573:A:N7	31:y:574:A:N7	2.65	0.45
31:y:582:U:H6	31:y:582:U:C5'	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:600:C:C2	31:y:639:G:C2	3.05	0.45
31:y:608:A:O4'	49:q:32:TYR:CZ	2.70	0.45
31:y:707:C:C2	31:y:708:C:C5	3.04	0.45
31:y:750:G:OP2	31:y:750:G:C8	2.69	0.45
31:y:801:U:N3	31:y:802:A:N7	2.64	0.45
31:y:817:C:H4'	31:y:818:G:H3'	1.94	0.45
31:y:934:C:N3	31:y:938:A:N6	2.62	0.45
31:y:950:U:C2'	31:y:951:G:O5'	2.64	0.45
31:y:1106:G:O2'	31:y:1107:C:H5'	2.17	0.45
31:y:1234:C:O4'	31:y:1364:U:C2	2.70	0.45
31:y:1307:U:OP2	31:y:1307:U:H5	2.00	0.45
31:y:1320:C:H1'	52:t:72:GLY:C	2.42	0.45
31:y:1324:A:H5'	31:y:136(A):C:O2'	2.16	0.45
31:y:1338:G:O2'	32:z:41:C:C4'	2.57	0.45
31:y:1347:G:C2'	42:j:107:ARG:O	2.57	0.45
31:y:1400:5MC:N4	32:z:34:G:C1'	2.79	0.45
31:y:1439:C:C6	31:y:1440:C:C5	3.04	0.45
33:0:1:G:C6	33:0:73:A:N1	2.84	0.45
37:e:53:ASP:O	37:e:56:VAL:CG2	2.64	0.45
38:f:143:ARG:HG2	38:f:144:THR:N	2.32	0.45
41:i:57:PRO:O	41:i:58:TYR:CD2	2.60	0.45
47:o:9:LYS:CD	47:o:10:ALA:N	2.74	0.45
49:q:27:LYS:CB	49:q:27:LYS:NZ	2.80	0.45
49:q:43:LYS:HA	49:q:48:TRP:CD1	2.52	0.45
50:r:59:ILE:HD13	50:r:59:ILE:N	2.31	0.45
1:w:76:C:H5'	25:W:49:LYS:HG3	1.98	0.45
1:w:88:G:H2'	1:w:89:G:H8	1.77	0.45
1:w:234:C:C2'	1:w:235:U:O5'	2.64	0.45
1:w:270(D):C:N4	1:w:270(E):C:C2	2.85	0.45
1:w:270(E):C:N3	1:w:270(F):G:O6	2.50	0.45
1:w:321:G:N2	1:w:341:G:C4'	2.80	0.45
1:w:371:A:O2'	1:w:372:G:C4'	2.65	0.45
1:w:388:G:OP2	24:V:33:LYS:CB	2.56	0.45
1:w:613:U:H2'	1:w:615:G:P	2.57	0.45
1:w:686:G:C2	1:w:788:A:N1	2.85	0.45
1:w:708:C:O2'	1:w:709:U:H5'	2.12	0.45
1:w:713:G:H1'	1:w:718:A:H62	1.76	0.45
1:w:781:A:O2'	1:w:1789:A:O4'	2.35	0.45
1:w:814:C:OP1	18:P:84:LYS:HE3	2.17	0.45
1:w:832:G:OP2	12:J:38:GLN:CA	2.64	0.45
1:w:999:U:H3'	1:w:1154:G:O6	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1041:C:N4	1:w:1115:G:N1	2.65	0.45
1:w:1080:C:H2'	1:w:1081:U:C5'	2.46	0.45
1:w:1135:C:C6	1:w:1137:G:OP1	2.70	0.45
1:w:1229:G:C4	1:w:1230:C:C6	3.05	0.45
1:w:1292:U:C2	1:w:1293:C:C6	3.04	0.45
1:w:1422:G:C6	1:w:1423:G:C5	3.05	0.45
1:w:1501:C:C5'	4:B:102:LYS:CE	2.91	0.45
1:w:1603:A:C2'	1:w:1604:C:O5'	2.65	0.45
1:w:1767:C:C4	1:w:1768:U:C5	3.05	0.45
1:w:1775:U:H2'	1:w:1776:G:O4'	2.16	0.45
1:w:1782:C:C2	1:w:2608:G:O2'	2.58	0.45
1:w:1830:C:N3	1:w:1831:G:N7	2.64	0.45
1:w:1857:G:N2	1:w:1884:A:OP2	2.31	0.45
1:w:1923:U:C2'	1:w:1924:C:C5	2.93	0.45
1:w:1974:C:N3	1:w:1975:G:N7	2.65	0.45
1:w:2051:A:C2	1:w:2052:G:O6	2.61	0.45
1:w:2087:G:N1	1:w:2233:U:C2	2.85	0.45
1:w:2218:G:C6	1:w:2219:G:N7	2.84	0.45
1:w:2345:G:N9	1:w:2347:C:C6	2.85	0.45
1:w:2359:C:O2	12:J:58:THR:CG2	2.65	0.45
1:w:2373:G:N2	1:w:2374:C:C2	2.84	0.45
1:w:2483:C:H6	1:w:2483:C:H3'	1.75	0.45
1:w:2511:U:HO2'	1:w:2512:C:H5''	1.80	0.45
1:w:2526:G:H4'	30:b:35:ARG:HH22	1.82	0.45
1:w:2528:U:O2'	1:w:2529:G:H3'	2.17	0.45
1:w:2565:A:P	1:w:2565:A:C8	3.02	0.45
1:w:2567:G:C2'	1:w:2568:C:H5'	2.47	0.45
1:w:2586:C:O2'	1:w:2587:A:H5'	2.16	0.45
1:w:2623:G:N1	1:w:2624:G:C6	2.84	0.45
1:w:2653:U:P	1:w:2654:A:C2'	3.04	0.45
1:w:2698:U:C4	1:w:2699:C:N4	2.85	0.45
1:w:2701:C:H6	1:w:2701:C:O5'	1.99	0.45
1:w:2743:C:C2	1:w:2762:G:C2	3.05	0.45
1:w:2776:A:OP1	1:w:2776:A:H3'	2.17	0.45
1:w:2794:C:N3	1:w:2795:G:C6	2.85	0.45
1:w:2821:A:P	14:L:2:ARG:O	2.74	0.45
1:w:2850:A:C8	1:w:2866:U:C5	3.05	0.45
2:x:29:A:C2	2:x:56:G:C4	3.05	0.45
2:x:100:G:C2	2:x:101:A:H1'	2.52	0.45
3:A:20:ILE:C	3:A:21:TYR:CD2	2.94	0.45
3:A:185:LYS:O	3:A:185:LYS:CD	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:226:ASN:C	3:A:228:HIS:N	2.75	0.45
4:B:33:LEU:O	4:B:34:VAL:C	2.57	0.45
4:B:209:ALA:O	4:B:212:SER:N	2.49	0.45
7:E:170:ARG:CA	7:E:173:LEU:HB2	2.46	0.45
8:F:53:GLU:CG	8:F:54:ARG:N	2.78	0.45
8:F:58:GLU:O	8:F:59:ARG:C	2.59	0.45
8:F:156:ALA:HB2	8:F:169:VAL:HG21	1.96	0.45
8:F:163:TYR:HB3	8:F:167:GLU:OE1	2.17	0.45
8:F:171:LEU:H	8:F:171:LEU:CD1	2.29	0.45
9:G:6:LEU:O	9:G:14:ASP:HB3	2.15	0.45
9:G:113:ARG:CZ	9:G:132:PRO:CB	2.95	0.45
12:J:64:LYS:O	12:J:66:GLY:N	2.50	0.45
13:K:30:GLY:HA3	13:K:65:PHE:CE1	2.52	0.45
19:Q:18:ARG:HH22	19:Q:78:GLU:HG3	1.82	0.45
19:Q:65:LEU:C	19:Q:66:GLU:O	2.59	0.45
19:Q:88:ARG:CD	19:Q:92:ARG:H	2.30	0.45
22:T:115:GLY:CA	22:T:176:PRO:HB3	2.47	0.45
24:V:50:ARG:NH1	24:V:61:ARG:HB2	2.31	0.45
24:V:54:ALA:HA	24:V:58:ILE:CG1	2.47	0.45
30:b:32:HIS:C	30:b:34:GLN:NE2	2.75	0.45
31:y:117:G:C2'	31:y:118:U:H6	2.11	0.45
31:y:158:G:C2	31:y:159:G:H1'	2.52	0.45
31:y:158:G:C6	31:y:164:U:C2	3.05	0.45
31:y:160:A:C2	31:y:344:A:N7	2.85	0.45
31:y:160:A:N1	31:y:161:A:C2	2.85	0.45
31:y:167:G:C2'	31:y:168:G:H5'	2.47	0.45
31:y:248:C:O2	31:y:277:C:H1'	2.16	0.45
31:y:323:U:C2	31:y:327:A:N7	2.84	0.45
31:y:506:G:C8	31:y:507:C:C5	3.04	0.45
31:y:515:G:C6	31:y:516:PSU:C6	3.05	0.45
31:y:518:C:C2'	31:y:530:G:N3	2.76	0.45
31:y:519:C:C5	31:y:520:A:C4	3.04	0.45
31:y:540:G:N7	31:y:541:G:C5	2.85	0.45
31:y:554:C:H2'	31:y:555:C:C6	2.52	0.45
31:y:579:G:O6	31:y:761:G:O6	2.35	0.45
31:y:585:G:O2'	31:y:879:C:H5''	2.16	0.45
31:y:585:G:C2'	31:y:879:C:H4'	2.42	0.45
31:y:597:G:C5	31:y:644:G:C6	3.04	0.45
31:y:602:A:N1	31:y:637:G:C6	2.85	0.45
31:y:660:G:C6	31:y:661:G:C4	3.05	0.45
31:y:682:G:C4	31:y:683:G:N7	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:692:U:H3'	31:y:692:U:H6	1.79	0.45
31:y:714:G:O2'	31:y:777:A:N7	2.45	0.45
31:y:892:A:C4	31:y:893:C:C5	3.05	0.45
31:y:958:A:C4	52:t:55:LYS:HD2	2.52	0.45
31:y:1245:A:H2'	31:y:1246:C:H6	1.81	0.45
31:y:1267:C:O2	54:v:20:LYS:CE	2.64	0.45
31:y:1269:A:C4'	31:y:1326:C:O4'	2.65	0.45
31:y:1335:C:O2'	31:y:1336:C:C5	2.68	0.45
31:y:1416:G:C2'	31:y:1417:G:C5'	2.93	0.45
33:0:40:C:O2	33:0:40:C:H2'	2.17	0.45
35:c:218:ALA:O	35:c:221:LEU:CB	2.48	0.45
37:e:11:LEU:CD2	37:e:14:ARG:HB2	2.47	0.45
40:h:46:ALA:O	40:h:50:ILE:N	2.50	0.45
40:h:54:THR:O	40:h:54:THR:HG23	2.17	0.45
41:i:65:TYR:CD1	41:i:65:TYR:N	2.85	0.45
41:i:119:LEU:HB2	41:i:124:ALA:HA	1.99	0.45
42:j:85:LEU:CD1	42:j:86:VAL:N	2.67	0.45
45:m:7:ASN:C	45:m:11:ARG:HB3	2.42	0.45
46:n:24:GLY:HA3	46:n:70:LEU:HD11	1.98	0.45
46:n:87:TYR:CD1	46:n:88:ARG:N	2.84	0.45
47:o:29:ARG:CB	47:o:29:ARG:NH1	2.75	0.45
51:s:78:LEU:N	51:s:78:LEU:HD13	2.32	0.45
53:u:57:ARG:NH2	53:u:102:GLY:HA3	2.30	0.45
1:w:26:G:H21	1:w:514:A:N6	2.06	0.45
1:w:54:G:C2	1:w:55:G:C1'	2.99	0.45
1:w:75:G:N3	1:w:75:G:H2'	2.31	0.45
1:w:164:U:H3'	1:w:165:U:C5'	2.47	0.45
1:w:257:A:C2'	1:w:258:G:H5'	2.47	0.45
1:w:261:G:O4'	1:w:609(A):A:C2	2.70	0.45
1:w:270(M):U:H3	9:G:50:ARG:HB3	1.82	0.45
1:w:293:U:H2'	1:w:294:A:O2'	2.15	0.45
1:w:344:G:C2'	1:w:345:A:H5'	2.46	0.45
1:w:374:A:C2	1:w:375:C:H1'	2.51	0.45
1:w:439:G:H2'	1:w:440:G:C8	2.52	0.45
1:w:520:G:N2	1:w:521:G:C4	2.85	0.45
1:w:553:U:C2'	1:w:554:U:C5'	2.93	0.45
1:w:669:G:C8	1:w:669:G:OP1	2.69	0.45
1:w:711:G:C2	1:w:712:G:N9	2.85	0.45
1:w:751:A:P	1:w:1614:A:H61	2.40	0.45
1:w:872:A:H2'	1:w:873:G:C8	2.51	0.45
1:w:875:G:C8	1:w:875:G:P	3.10	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:898:C:H2'	1:w:899:A:O4'	2.17	0.45
1:w:937:U:C2	1:w:938:G:C8	3.05	0.45
1:w:1017:G:C2'	1:w:1018:C:C6	2.90	0.45
1:w:1152:C:O2	1:w:1152:C:H2'	2.16	0.45
1:w:1196:C:C4'	1:w:1226:A:C2	3.00	0.45
1:w:1208:C:N3	1:w:1209:G:C5	2.85	0.45
1:w:1209:G:N2	1:w:1238:G:C6	2.85	0.45
1:w:1272:A:C2'	1:w:1646:C:H42	2.29	0.45
1:w:1275:A:C2	1:w:1645:G:N3	2.85	0.45
1:w:1319:G:N3	1:w:1334:G:C6	2.85	0.45
1:w:1323:U:O5'	1:w:1323:U:C6	2.52	0.45
1:w:1356:G:C2'	1:w:1357:U:C6	2.86	0.45
1:w:1367:A:C2'	1:w:1368:G:O4'	2.50	0.45
1:w:1370:C:C3'	1:w:1371:G:C8	3.00	0.45
1:w:1448:G:N2	1:w:149(B):A:N6	2.65	0.45
1:w:1458:C:C1'	1:w:1459:G:N1	2.76	0.45
1:w:1458:C:O2	1:w:1458:C:C2'	2.59	0.45
1:w:1577:C:HO2'	1:w:1578:U:C5'	2.22	0.45
1:w:1625:C:H2'	1:w:1626:G:H5'	1.99	0.45
1:w:1790:C:OP2	4:B:220:HIS:O	2.35	0.45
1:w:1818:U:C3'	4:B:155:LEU:CD2	2.91	0.45
1:w:1830:C:C2	1:w:1831:G:H8	2.29	0.45
1:w:1832:C:H2'	1:w:1833:U:O4'	2.17	0.45
1:w:1870:C:H42	1:w:1871:A:N6	2.13	0.45
1:w:1910:G:O6	1:w:1921:G:C4	2.70	0.45
1:w:1957:C:H2'	1:w:1958:C:H5'	1.98	0.45
1:w:2023:G:C2'	1:w:2024:G:O5'	2.65	0.45
1:w:2037:G:H2'	1:w:2038:G:N9	2.31	0.45
1:w:2320:A:C2'	1:w:2333:A:H62	2.29	0.45
1:w:2396:G:H3'	1:w:2396:G:C8	2.51	0.45
1:w:2528:U:C4	1:w:2530:A:C4	3.05	0.45
1:w:2730:C:H2'	1:w:2731:G:C5'	2.47	0.45
1:w:2754:U:H6	1:w:2754:U:H3'	1.82	0.45
1:w:2824:C:C2'	1:w:2825:G:C8	2.94	0.45
1:w:2886:G:C8	1:w:2886:G:C3'	2.99	0.45
2:x:23:G:N1	2:x:61:G:C5	2.85	0.45
2:x:78:A:N1	2:x:99:A:C5	2.85	0.45
4:B:166:GLN:CG	31:y:712:A:C5'	2.95	0.45
4:B:249:PRO:HB2	4:B:252:TRP:CH2	2.52	0.45
5:C:20:ALA:HB3	11:I:73:ASP:HA	1.99	0.45
6:D:105:LEU:HD11	6:D:109:VAL:CG1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:19:LEU:CB	7:E:25:TYR:CZ	2.97	0.45
7:E:117:PHE:CD1	7:E:118:ARG:N	2.75	0.45
9:G:41:GLU:O	9:G:44:LEU:CB	2.58	0.45
10:H:30:LYS:C	10:H:31:GLN:CD	2.85	0.45
10:H:61:HIS:O	10:H:63:PRO:CD	2.62	0.45
10:H:106:LYS:CG	10:H:107:LYS:H	2.21	0.45
10:H:123:GLU:HB3	10:H:127:LYS:NZ	2.32	0.45
11:I:52:VAL:HG13	11:I:56:ASP:CB	2.46	0.45
11:I:65:THR:N	11:I:79:PHE:CG	2.84	0.45
13:K:8:LYS:N	13:K:8:LYS:CD	2.80	0.45
13:K:126:PRO:HG2	13:K:127:ILE:HG23	1.99	0.45
14:L:20:LEU:C	14:L:24:GLN:HG2	2.42	0.45
14:L:48:VAL:O	14:L:51:LEU:HG	2.17	0.45
15:M:44:LYS:C	15:M:46:VAL:N	2.74	0.45
17:O:103:PRO:O	17:O:104:GLN:C	2.60	0.45
18:P:80:GLN:C	18:P:80:GLN:CD	2.85	0.45
19:Q:23:LEU:HD13	27:Y:25:LEU:C	2.41	0.45
23:U:40:GLN:CG	23:U:41:ARG:N	2.75	0.45
27:Y:38:ALA:CA	27:Y:48:GLU:HB3	2.47	0.45
31:y:59:A:O2'	31:y:388:G:H2'	2.17	0.45
31:y:186(G):C:C4	31:y:187:C:N3	2.85	0.45
31:y:268:C:N3	31:y:269:C:C4	2.85	0.45
31:y:275:G:C2	31:y:276:G:C5	3.05	0.45
31:y:298:A:C2	31:y:299:G:N1	2.83	0.45
31:y:310:G:C2'	31:y:311:C:C5'	2.93	0.45
31:y:325:A:N6	31:y:326:G:N1	2.64	0.45
31:y:343:U:O2	31:y:347:G:C2	2.69	0.45
31:y:347:G:O6	31:y:348:G:C6	2.70	0.45
31:y:376:G:C2'	31:y:377:G:C5'	2.94	0.45
31:y:538:G:C2'	31:y:539:A:H5'	2.47	0.45
31:y:612:C:H42	31:y:629:G:N2	2.15	0.45
31:y:633:G:C6	31:y:634:C:N4	2.85	0.45
31:y:677:U:O2	31:y:713:G:N2	2.42	0.45
31:y:717:C:O2'	31:y:718:G:P	2.75	0.45
31:y:718:G:C6	51:s:81:PHE:HD2	2.34	0.45
31:y:777:A:H2'	31:y:778:G:C8	2.50	0.45
31:y:1053:G:C6	31:y:1199:U:C6	3.05	0.45
31:y:1077:G:C5	31:y:1079:G:H5''	2.49	0.45
31:y:1091:U:C2	31:y:1093:A:OP2	2.70	0.45
31:y:1173:G:H2'	31:y:1174:G:H8	1.79	0.45
31:y:1184:G:O2'	31:y:1185:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1280:A:C5'	43:k:43:ARG:NH1	2.80	0.45
31:y:1305:G:O6	31:y:1331:G:C4	2.69	0.45
31:y:1322:C:O3'	31:y:136(B):C:N4	2.49	0.45
31:y:1342:C:O3'	42:j:125:TYR:HE2	1.99	0.45
31:y:1367:C:O2'	31:y:1368:G:H5'	2.17	0.45
31:y:1378:C:OP1	40:h:7:ALA:CA	2.65	0.45
31:y:1380:U:C5'	40:h:4:ARG:CG	2.92	0.45
31:y:1422:G:C6	31:y:1423:G:C5	3.05	0.45
35:c:102:LEU:HB3	35:c:176:GLU:HB3	1.98	0.45
35:c:145:LEU:C	35:c:149:LEU:HG	2.42	0.45
35:c:170:GLU:C	35:c:172:ILE:HG12	2.37	0.45
36:d:32:LEU:O	36:d:34:LEU:N	2.49	0.45
36:d:119:ARG:HG3	36:d:120:VAL:N	2.32	0.45
37:e:93:PHE:CD2	37:e:94:LEU:CD1	3.00	0.45
37:e:102:ASP:O	37:e:105:VAL:HB	2.17	0.45
37:e:201:GLN:NE2	38:f:116:THR:OG1	2.50	0.45
40:h:136:LYS:O	40:h:139:GLU:N	2.50	0.45
41:i:11:THR:O	41:i:12:ARG:C	2.60	0.45
41:i:24:THR:O	41:i:25:ASP:O	2.35	0.45
41:i:89:PRO:HA	41:i:92:ARG:HH22	1.82	0.45
41:i:112:LEU:HG	41:i:114:THR:HG23	1.98	0.45
42:j:11:LYS:C	42:j:12:GLU:OE2	2.60	0.45
42:j:100:GLY:HA2	42:j:103:THR:HB	1.99	0.45
44:l:63:LEU:C	44:l:65:ALA:H	2.24	0.45
44:l:74:ALA:HB3	44:l:75:TYR:CE2	2.52	0.45
45:m:30:PRO:O	45:m:31:PHE:HD1	1.99	0.45
45:m:44:PRO:CG	45:m:52:ARG:HD2	2.46	0.45
46:n:87:TYR:C	46:n:89:GLY:H	2.22	0.45
47:o:34:TYR:HD2	47:o:37:PHE:HD1	1.63	0.45
49:q:19:ILE:HD12	49:q:19:ILE:N	2.30	0.45
52:t:6:LYS:HD3	52:t:6:LYS:H	1.82	0.45
1:w:46:C:OP2	1:w:46:C:C6	2.66	0.45
1:w:49:A:N6	1:w:177:G:C6	2.74	0.45
1:w:59:U:OP2	1:w:59:U:C6	2.70	0.45
1:w:86:C:O2'	1:w:104:U:H4'	2.17	0.45
1:w:216:A:N7	1:w:432:A:N7	2.65	0.45
1:w:353:G:C2'	1:w:354:G:C8	2.85	0.45
1:w:398:G:C2'	1:w:399:G:H5'	2.47	0.45
1:w:426:C:C2	1:w:427:U:C6	3.05	0.45
1:w:529:A:O2'	1:w:530:G:P	2.74	0.45
1:w:559:G:H1	17:O:49:HIS:CD2	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:562:U:C3'	1:w:563:G:H5''	2.47	0.45
1:w:612:G:N1	1:w:617:G:C6	2.84	0.45
1:w:768:G:N1	1:w:769:G:C6	2.85	0.45
1:w:848:G:C6	1:w:933:A:H1'	2.52	0.45
1:w:850:C:O2'	1:w:851:U:H5'	2.17	0.45
1:w:964:C:O2	1:w:2273:A:N1	2.44	0.45
1:w:995:C:C1'	17:O:61:TRP:HZ2	2.28	0.45
1:w:1026:U:C2'	1:w:1027:A:H5'	2.47	0.45
1:w:1033:U:H5''	1:w:1033:U:H6	1.81	0.45
1:w:1109:C:H2'	1:w:1110:G:O4'	2.17	0.45
1:w:1171:G:C5	1:w:1173:G:C8	3.05	0.45
1:w:1213:A:C2'	1:w:1214:A:C5'	2.94	0.45
1:w:1260:G:H3'	1:w:1261:C:C5	2.52	0.45
1:w:1262:A:C2	27:Y:10:LYS:CE	3.00	0.45
1:w:1321:A:O2'	19:Q:11:ARG:NH1	2.50	0.45
1:w:1413:G:N9	1:w:1414:G:C8	2.85	0.45
1:w:1431:U:N3	1:w:1432:C:C5	2.85	0.45
1:w:1560:G:H2'	1:w:1561:G:H5'	1.96	0.45
1:w:1563:G:H3'	1:w:1564:C:C5	2.52	0.45
1:w:1568:G:H5''	4:B:61:LEU:HD13	1.99	0.45
1:w:1637:A:O2'	1:w:1638:C:H5'	2.17	0.45
1:w:1702:G:C3'	1:w:1703:G:C5'	2.85	0.45
1:w:1769:G:C5	1:w:1770:G:N7	2.85	0.45
1:w:1794:U:O4'	1:w:1900:A:N1	2.49	0.45
1:w:1804:C:O5'	1:w:1804:C:C6	2.68	0.45
1:w:1817:G:C2	1:w:1818:U:O2	2.70	0.45
1:w:1961:C:H5'	31:y:1484:C:O2'	2.17	0.45
1:w:2014:A:C3'	1:w:2015:A:C8	3.00	0.45
1:w:2027:G:N2	1:w:2037:G:C4	2.85	0.45
1:w:2096:U:C2	1:w:2097:C:C5	3.04	0.45
1:w:2100:G:O2'	1:w:2101:G:H5'	2.17	0.45
1:w:2124:G:N2	3:A:218:THR:CG2	2.78	0.45
1:w:2259:G:O4'	1:w:2427:C:H2'	2.16	0.45
1:w:2342:C:O2'	1:w:2374:C:H5''	2.18	0.45
1:w:2347:C:C5	1:w:2382:G:O4'	2.70	0.45
1:w:2364:C:H4'	23:U:58:THR:CG2	2.46	0.45
1:w:2376:A:N1	1:w:2377:A:C2	2.85	0.45
1:w:2383:G:O2'	1:w:2384:G:H5'	2.17	0.45
1:w:2444:G:C8	1:w:2444:G:O5'	2.70	0.45
1:w:2519:U:H6	1:w:2519:U:H5'	1.82	0.45
1:w:2622:C:H2'	1:w:2825:G:N2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2677:G:C6	1:w:2678:C:N3	2.85	0.45
1:w:2690:C:HO2'	1:w:2691:C:C5'	2.30	0.45
1:w:2730:C:C4	1:w:2731:G:C8	3.02	0.45
1:w:2747:G:C6	1:w:2754:U:H2'	2.33	0.45
1:w:2791:C:N4	1:w:2893:G:C5	2.85	0.45
1:w:2840:C:C1'	14:L:91:GLN:HE22	2.30	0.45
1:w:2884:U:O5'	1:w:2884:U:H6	2.00	0.45
2:x:21:G:C5	2:x:22:U:C4	3.05	0.45
3:A:21:TYR:HE1	3:A:223:VAL:HG13	1.82	0.45
3:A:53:ARG:NE	3:A:53:ARG:CA	2.80	0.45
3:A:178:LYS:O	3:A:179:ALA:C	2.60	0.45
4:B:21:PHE:CD2	4:B:24:ILE:CD1	2.99	0.45
4:B:83:GLU:O	4:B:91:ARG:HB3	2.16	0.45
4:B:94:LEU:CD2	4:B:94:LEU:C	2.90	0.45
4:B:172:TYR:HD2	4:B:184:LYS:HZ2	1.63	0.45
5:C:132:HIS:CE1	5:C:135:HIS:NE2	2.85	0.45
5:C:166:THR:HG22	5:C:167:VAL:N	2.32	0.45
5:C:186:GLY:O	5:C:187:ALA:HB3	2.16	0.45
7:E:71:THR:HG23	7:E:89:GLY:C	2.41	0.45
7:E:157:ILE:HG13	7:E:158:ALA:N	2.31	0.45
8:F:18:GLU:H	8:F:24:VAL:HG13	1.82	0.45
8:F:88:LEU:HD23	8:F:88:LEU:H	1.82	0.45
8:F:102:ALA:HB2	8:F:117:PRO:HD3	1.99	0.45
9:G:97:ILE:C	9:G:99:GLU:N	2.72	0.45
9:G:122:GLU:CD	9:G:126:TYR:CB	2.90	0.45
9:G:126:TYR:O	9:G:141:LYS:HB3	2.15	0.45
9:G:128:LEU:HB3	9:G:129:THR:H	1.68	0.45
9:G:132:PRO:CG	9:G:138:ILE:CG2	2.95	0.45
10:H:32:VAL:HG13	10:H:62:ARG:HH11	1.81	0.45
10:H:66:THR:O	10:H:69:VAL:HG12	2.17	0.45
10:H:91:GLU:N	10:H:110:LEU:HD23	2.31	0.45
13:K:50:ALA:HB2	13:K:124:LYS:CG	2.47	0.45
13:K:69:PHE:HB2	13:K:70:PRO:HD2	1.98	0.45
14:L:113:LEU:HD11	14:L:115:GLU:CG	2.34	0.45
16:N:12:SER:HA	16:N:15:VAL:HG13	1.99	0.45
16:N:60:THR:HG22	16:N:61:PHE:N	2.32	0.45
17:O:72:HIS:N	17:O:72:HIS:CD2	2.84	0.45
19:Q:7:ALA:O	19:Q:102:HIS:HA	2.16	0.45
22:T:16:SER:N	22:T:19:ARG:NH1	2.64	0.45
22:T:128:VAL:HG13	22:T:133:ILE:HD13	1.99	0.45
22:T:182:LYS:O	22:T:184:ALA:N	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:49:LYS:HZ1	23:U:80:HIS:HB3	1.82	0.45
26:X:29:ARG:O	26:X:30:ARG:HB3	2.17	0.45
31:y:74:C:H2'	31:y:75:C:C6	2.52	0.45
31:y:190:G:P	31:y:190:G:C8	3.04	0.45
31:y:272:C:N4	31:y:273:A:N6	2.65	0.45
31:y:376:G:C2	31:y:377:G:N9	2.85	0.45
31:y:451:A:N7	31:y:481:G:C6	2.85	0.45
31:y:565:U:H6	31:y:566:G:H2'	1.82	0.45
31:y:682:G:N3	31:y:683:G:N7	2.65	0.45
31:y:692:U:H2'	31:y:694:A:P	2.53	0.45
31:y:749:C:O5'	31:y:750:G:OP2	2.35	0.45
31:y:761:G:O2'	50:r:104:LYS:C	2.60	0.45
31:y:859:A:C2'	31:y:860:A:O5'	2.64	0.45
31:y:925:G:C2	31:y:927:G:C8	3.05	0.45
31:y:944:G:H5''	31:y:945:G:OP2	2.16	0.45
31:y:978:A:H2	31:y:1319:A:C1'	2.30	0.45
31:y:1015:A:C2'	31:y:1016:A:O4'	2.54	0.45
31:y:1076:C:C5'	35:c:175:ARG:HH12	2.30	0.45
31:y:1102:A:C5	31:y:1103:C:N4	2.84	0.45
31:y:1130:A:N3	31:y:1130:A:C2'	2.80	0.45
31:y:1282:C:O2	31:y:1282:C:H2'	2.17	0.45
31:y:1312:G:C6	31:y:1313:U:C5	3.05	0.45
31:y:1379:G:H3'	31:y:1380:U:C5'	2.37	0.45
31:y:1525:G:N2	31:y:1526:G:C5	2.85	0.45
32:z:5:G:N2	32:z:6:G:H1'	2.33	0.45
35:c:20:GLU:HG3	35:c:23:ARG:NH1	2.32	0.45
35:c:68:ILE:HD12	35:c:68:ILE:N	2.32	0.45
35:c:114:ARG:C	35:c:118:LEU:HD23	2.42	0.45
35:c:187:LEU:HD21	35:c:203:GLY:CA	2.46	0.45
36:d:33:LEU:HD22	36:d:33:LEU:N	2.32	0.45
36:d:149:ALA:CB	36:d:201:TYR:O	2.65	0.45
36:d:180:ALA:O	36:d:181:ASN:C	2.60	0.45
37:e:122:ARG:O	37:e:124:GLY:N	2.50	0.45
38:f:100:VAL:HG11	38:f:115:VAL:O	2.17	0.45
40:h:70:LYS:C	40:h:72:ARG:HH11	2.14	0.45
41:i:85:ARG:HB3	41:i:85:ARG:HH11	1.81	0.45
42:j:11:LYS:HG3	42:j:11:LYS:O	2.17	0.45
42:j:53:VAL:HG21	42:j:58:ARG:HH22	1.82	0.45
42:j:93:ARG:NH1	42:j:97:LYS:CG	2.78	0.45
43:k:56:HIS:C	43:k:58:ASP:N	2.75	0.45
45:m:5:THR:HG23	45:m:8:GLN:OE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:6:ILE:O	45:m:10:VAL:HG12	2.17	0.45
45:m:85:ARG:HD2	45:m:85:ARG:C	2.42	0.45
45:m:95:VAL:CG1	45:m:97:TYR:H	2.22	0.45
46:n:62:ASN:O	46:n:64:TRP:N	2.42	0.45
47:o:32:SER:HB3	47:o:41:ARG:HH11	1.81	0.45
48:p:80:ALA:O	48:p:82:ILE:N	2.50	0.45
49:q:28:ARG:HG3	49:q:29:ASP:H	1.81	0.45
49:q:60:LEU:CA	49:q:64:ALA:HB3	2.35	0.45
54:v:23:PRO:O	54:v:24:ARG:HG3	2.16	0.45
1:w:15:G:C2	1:w:16:G:N9	2.86	0.44
1:w:80:G:N3	1:w:347:A:N6	2.64	0.44
1:w:125:G:H21	28:Z:14:LYS:HZ1	1.64	0.44
1:w:163:U:OP2	1:w:165:U:C5	2.71	0.44
1:w:301:G:H3'	1:w:301:G:C8	2.52	0.44
1:w:346:A:C3'	1:w:347:A:H5'	2.47	0.44
1:w:358:U:H5'	1:w:359:A:OP2	2.17	0.44
1:w:363(G):A:N3	1:w:364:C:C4	2.83	0.44
1:w:384:U:H2'	1:w:385:C:C5'	2.46	0.44
1:w:439:G:O2'	1:w:440:G:O4'	2.34	0.44
1:w:514:A:N6	1:w:515:A:H62	2.15	0.44
1:w:616:A:C2	6:D:173:PRO:HB2	2.51	0.44
1:w:673:C:O2'	1:w:674:G:H5'	2.17	0.44
1:w:760:G:H3'	1:w:761:A:N7	2.32	0.44
1:w:765:G:H2'	1:w:766:C:C6	2.52	0.44
1:w:774:A:O2'	1:w:777:A:N3	2.35	0.44
1:w:818:G:O6	1:w:1187:G:H8	1.97	0.44
1:w:845:G:H21	1:w:933:A:H62	1.64	0.44
1:w:991:C:O2	1:w:992:C:H5''	2.17	0.44
1:w:999:U:C6	1:w:1154:G:O6	2.70	0.44
1:w:1022:G:C2	1:w:1023:U:C5	3.05	0.44
1:w:1025:G:H5''	1:w:1026:U:C5'	2.23	0.44
1:w:1109:C:C4	1:w:1110:G:C5	3.05	0.44
1:w:1129:A:O2'	1:w:2515:C:C2'	2.65	0.44
1:w:1194:A:H2'	1:w:1195:G:O4'	2.17	0.44
1:w:1216:G:C2	1:w:1234:U:N3	2.85	0.44
1:w:1287:A:C2	1:w:1288:U:C2	3.05	0.44
1:w:1413:G:C2'	1:w:1414:G:H8	2.27	0.44
1:w:1435:G:C2	1:w:1436:G:C6	3.05	0.44
1:w:1460:A:H2'	1:w:1461:G:OP1	2.16	0.44
1:w:1488:G:OP2	1:w:1488:G:O4'	2.34	0.44
1:w:1530:G:C6	1:w:1540:G:N1	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1568:G:H5'	4:B:61:LEU:HD13	1.99	0.44
1:w:1623:G:C5	1:w:1624:G:N7	2.85	0.44
1:w:1815:A:C8	1:w:1817:G:N7	2.84	0.44
1:w:1857:G:C2	1:w:1858:G:N3	2.84	0.44
1:w:1932:A:H8	1:w:1932:A:O5'	1.98	0.44
1:w:2019:A:O3'	17:O:27:LEU:CD1	2.64	0.44
1:w:2060:A:O2'	1:w:2061:G:P	2.72	0.44
1:w:2279:G:N2	1:w:2280:G:H1'	2.33	0.44
1:w:2362:G:C2'	1:w:2363:C:O4'	2.60	0.44
1:w:2436:G:C4	1:w:2437:U:C5	3.06	0.44
1:w:2512:C:C5'	1:w:2512:C:H6	2.30	0.44
1:w:2536:G:H2'	1:w:2537:U:O4'	2.16	0.44
1:w:2559:C:O2	1:w:2560:C:C5	2.70	0.44
1:w:2618:G:H2'	5:C:150:VAL:CB	2.42	0.44
1:w:2643:G:H3'	1:w:2644:G:C8	2.52	0.44
1:w:2644:G:N7	1:w:2645:G:O6	2.51	0.44
1:w:2656:U:C2'	1:w:2657:A:C1'	2.94	0.44
1:w:2680:C:C5'	5:C:189:PRO:CA	2.95	0.44
1:w:2736:G:H3'	1:w:2737:G:C8	2.51	0.44
1:w:2842:G:C2	1:w:2843:G:C5	3.05	0.44
1:w:2850:A:N1	1:w:2851:A:N3	2.64	0.44
2:x:3:C:C2	2:x:118:G:C2	3.06	0.44
2:x:27:C:C2	2:x:28:C:C5	3.05	0.44
2:x:58:A:C4	2:x:59:A:N7	2.84	0.44
2:x:58:A:C5	2:x:59:A:C8	3.04	0.44
2:x:89(A):G:C6	2:x:89(B):A:C2	3.05	0.44
2:x:102:G:C2'	2:x:103:U:C5'	2.88	0.44
3:A:186:LEU:O	3:A:190:ILE:N	2.50	0.44
3:A:195:ARG:CG	3:A:196:ALA:H	2.30	0.44
4:B:136:ILE:CG1	4:B:137:PRO:HD2	2.43	0.44
4:B:143:HIS:CE1	4:B:192:THR:HG23	2.52	0.44
4:B:262:ARG:HD3	4:B:262:ARG:O	2.17	0.44
5:C:71:GLY:C	5:C:73:GLU:N	2.74	0.44
6:D:29:TRP:O	6:D:30:GLU:C	2.59	0.44
6:D:75:ALA:HB1	6:D:77:ILE:CD1	2.44	0.44
6:D:151:LEU:HD12	6:D:152:VAL:N	2.27	0.44
6:D:178:VAL:O	6:D:181:ILE:N	2.50	0.44
6:D:182:VAL:O	12:J:5:ASP:O	2.35	0.44
7:E:69:ALA:HB3	7:E:91:ARG:NH1	2.32	0.44
8:F:88:LEU:HD23	8:F:88:LEU:N	2.31	0.44
8:F:126:PRO:HD3	8:F:131:VAL:CA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:15:VAL:O	9:G:15:VAL:CG2	2.64	0.44
11:I:29:ASN:C	11:I:29:ASN:HD22	2.24	0.44
12:J:39:LYS:HZ2	12:J:39:LYS:CB	2.31	0.44
13:K:14:ARG:N	13:K:14:ARG:NE	2.65	0.44
15:M:67:ARG:HA	15:M:100:ALA:O	2.18	0.44
16:N:108:ARG:NH2	31:y:1432:G:OP2	2.50	0.44
18:P:37:VAL:HB	18:P:38:LEU:H	1.71	0.44
18:P:85:LYS:CE	18:P:86:GLY:H	2.31	0.44
20:R:25:LYS:NZ	20:R:26:TYR:CZ	2.85	0.44
20:R:25:LYS:NZ	20:R:87:GLN:HA	2.31	0.44
22:T:151:HIS:HA	22:T:169:GLU:C	2.42	0.44
23:U:14:ARG:O	23:U:15:ASP:HB2	2.15	0.44
24:V:82:LEU:O	24:V:83:GLU:C	2.60	0.44
27:Y:14:ALA:C	27:Y:16:ARG:N	2.74	0.44
28:Z:23:ARG:C	28:Z:24:THR:HG22	2.42	0.44
31:y:5:U:N3	38:f:97:GLY:C	2.76	0.44
31:y:50:A:N3	31:y:52:G:C1'	2.80	0.44
31:y:73:G:C2	31:y:74:C:C2	3.05	0.44
31:y:247:G:H2'	31:y:248:C:H5'	1.99	0.44
31:y:412:A:H1'	31:y:413:G:N7	2.30	0.44
31:y:508:C:C2	31:y:509:A:N6	2.81	0.44
31:y:518:C:C6	31:y:529:G:N7	2.85	0.44
31:y:557:G:C5	31:y:558:G:C4	3.05	0.44
31:y:673:G:N3	31:y:674:G:C5	2.85	0.44
31:y:682:G:N1	31:y:683:G:C6	2.84	0.44
31:y:692:U:C1'	31:y:695:A:N7	2.79	0.44
31:y:725:G:N2	31:y:726:C:C4	2.84	0.44
31:y:757:U:O3'	31:y:758:G:O4'	2.35	0.44
31:y:760:G:N2	50:r:105:ALA:C	2.74	0.44
31:y:772:U:C5	31:y:773:G:N7	2.85	0.44
31:y:895:G:O2'	50:r:100:LYS:HB2	2.16	0.44
31:y:1104:G:C2	31:y:1105:A:N7	2.86	0.44
31:y:1306:A:N3	31:y:1332:A:C8	2.85	0.44
31:y:1343:G:H3'	31:y:1344:C:C6	2.52	0.44
31:y:1375:A:C2'	31:y:1376:U:H5'	2.48	0.44
31:y:1400:5MC:C2	32:z:34:G:N3	2.85	0.44
31:y:1451:A:O5'	31:y:1452:C:C5	2.70	0.44
31:y:1465:C:H2'	31:y:1466:C:C6	2.53	0.44
31:y:1501:C:C5	31:y:1504:G:N1	2.85	0.44
35:c:69:LEU:CD2	35:c:70:PHE:N	2.69	0.44
35:c:87:ARG:O	35:c:89:GLY:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:59:ARG:CG	36:d:60:ALA:N	2.79	0.44
36:d:151:VAL:O	36:d:199:LYS:C	2.60	0.44
37:e:30:LYS:C	37:e:32:ALA:N	2.74	0.44
37:e:78:LEU:HD23	37:e:97:LEU:HD22	1.98	0.44
37:e:133:VAL:CG1	37:e:134:ASP:N	2.72	0.44
38:f:76:ILE:H	38:f:94:ALA:HB3	1.77	0.44
38:f:106:PRO:O	38:f:109:ILE:HB	2.16	0.44
39:g:60:PHE:N	39:g:60:PHE:CD1	2.84	0.44
40:h:120:ILE:CG2	40:h:124:LEU:CD2	2.80	0.44
40:h:121:ALA:HA	40:h:124:LEU:HG	1.99	0.44
40:h:127:ALA:HA	40:h:135:VAL:HG22	1.93	0.44
41:i:117:GLY:O	41:i:118:VAL:HG23	2.17	0.44
42:j:63:ILE:HD12	42:j:63:ILE:N	2.32	0.44
44:l:51:LYS:HB2	44:l:52:GLY:H	1.55	0.44
45:m:53:LYS:HD2	45:m:53:LYS:N	2.32	0.44
49:q:52:ASP:O	49:q:54:GLU:N	2.50	0.44
52:t:31:ILE:CG2	52:t:32:LYS:H	2.14	0.44
53:u:104:LEU:HD13	53:u:105:SER:N	2.32	0.44
54:v:9:ARG:NH2	54:v:21:TYR:O	2.49	0.44
1:w:65:C:H4'	20:R:67:GLY:HA3	1.99	0.44
1:w:99:U:C5'	1:w:102:G:C8	3.00	0.44
1:w:162:U:C6	1:w:162:U:C3'	2.99	0.44
1:w:215:G:HO2'	1:w:432:A:H61	1.64	0.44
1:w:244:A:OP2	29:a:8:LYS:NZ	2.50	0.44
1:w:270(K):G:N3	1:w:270(L):C:C1'	2.78	0.44
1:w:466:A:C3'	1:w:467:G:C5'	2.91	0.44
1:w:519:U:O5'	1:w:519:U:H6	2.00	0.44
1:w:527:C:H1'	1:w:528:A:C5	2.51	0.44
1:w:583:G:C2	1:w:584:C:C4	3.05	0.44
1:w:712:G:N2	1:w:720:C:C2	2.85	0.44
1:w:761:A:H5''	1:w:762:U:OP1	2.17	0.44
1:w:824:A:H2'	1:w:825:C:H6	1.79	0.44
1:w:832:G:O3'	12:J:52:GLU:CD	2.60	0.44
1:w:844:C:H3'	1:w:845:G:C8	2.52	0.44
1:w:855:G:H21	23:U:27:GLU:N	2.06	0.44
1:w:889:C:O2'	1:w:890:A:C4	2.70	0.44
1:w:906:G:C3'	1:w:907:U:H5''	2.47	0.44
1:w:937:U:H2'	1:w:938:G:N9	2.31	0.44
1:w:1223:G:C5	1:w:1227:G:N1	2.85	0.44
1:w:1286:A:N6	1:w:1329:U:O2'	2.50	0.44
1:w:1336:A:H2'	1:w:1336:A:N3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1378:A:C2	1:w:1380:G:H1'	2.52	0.44
1:w:1395:A:C2	1:w:1398:C:C5	3.05	0.44
1:w:1429:G:H1'	1:w:1568:G:C2	2.51	0.44
1:w:1500:G:H2'	4:B:100:GLY:C	2.42	0.44
1:w:1502:C:OP2	1:w:1502:C:H6	2.00	0.44
1:w:1508:A:H2'	1:w:1508:A:N3	2.32	0.44
1:w:1653:G:C2'	14:L:9:LYS:NZ	2.68	0.44
1:w:1686:C:N3	1:w:1687:G:C1'	2.77	0.44
1:w:1716:U:OP2	1:w:1716:U:H6	1.98	0.44
1:w:1728:G:C8	1:w:1728:G:C3'	3.00	0.44
1:w:1790:C:H3'	1:w:1828:G:N2	2.32	0.44
1:w:1838:C:C4	1:w:1898:U:H2'	2.23	0.44
1:w:1843:C:O2'	4:B:257:LEU:N	2.50	0.44
1:w:1920:C:H4'	31:y:1517:G:C4	2.52	0.44
1:w:1945:G:C5	1:w:1946:U:C5	3.04	0.44
1:w:2024:G:O3'	5:C:149:ARG:NH1	2.50	0.44
1:w:2052:G:C6	1:w:2617:C:N3	2.84	0.44
1:w:2083:G:O6	1:w:2084:C:N4	2.45	0.44
1:w:2190:G:O2'	1:w:2191:G:O4'	2.29	0.44
1:w:2294:C:C6	1:w:2294:C:C3'	3.00	0.44
1:w:2439:A:C1'	1:w:2587:A:H5''	2.46	0.44
1:w:2440:C:H5''	1:w:2588:G:OP2	2.17	0.44
1:w:2472:G:N1	1:w:2477:C:H5'	2.32	0.44
1:w:2512:C:H2'	1:w:2513:G:H4'	1.99	0.44
1:w:2583:G:H2'	1:w:2584:U:O5'	2.17	0.44
1:w:2620:C:C2	1:w:2621:A:C8	3.04	0.44
1:w:2892:A:C2'	1:w:2893:G:O5'	2.65	0.44
2:x:114:G:O6	2:x:115:G:O6	2.35	0.44
3:A:28:HIS:C	3:A:30:VAL:H	2.24	0.44
5:C:19:ARG:HH11	5:C:21:VAL:HG13	1.79	0.44
5:C:37:ARG:HG3	5:C:44:TYR:CZ	2.51	0.44
5:C:45:THR:CG2	5:C:85:ASN:HB2	2.46	0.44
5:C:177:PRO:CG	5:C:178:GLU:H	2.26	0.44
6:D:23:ILE:C	6:D:25:PRO:CD	2.90	0.44
7:E:43:LEU:HD13	7:E:45:GLU:HG2	1.99	0.44
7:E:99:MET:HE3	7:E:100:TRP:N	2.32	0.44
7:E:122:PRO:CD	7:E:181:ARG:H	2.30	0.44
7:E:135:LEU:HG	7:E:155:MET:C	2.43	0.44
8:F:54:ARG:HB3	8:F:65:HIS:CE1	2.52	0.44
8:F:95:ARG:HH11	8:F:107:VAL:HA	1.81	0.44
10:H:38:LEU:CB	10:H:157:ARG:HD3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:110:LEU:CD2	10:H:110:LEU:H	2.29	0.44
11:I:13:ASN:CA	11:I:17:ARG:HH11	2.30	0.44
11:I:28:SER:O	11:I:30:ALA:N	2.49	0.44
11:I:99:PHE:HB3	11:I:100:GLY:H	1.58	0.44
12:J:91:PHE:CD1	12:J:91:PHE:C	2.91	0.44
12:J:110:TYR:HE2	12:J:111:ARG:NE	2.15	0.44
13:K:7:MET:CB	13:K:8:LYS:HZ3	2.25	0.44
14:L:116:LEU:O	14:L:117:VAL:HB	2.16	0.44
15:M:24:LEU:HG	15:M:85:VAL:HA	1.99	0.44
15:M:26:LEU:HD21	15:M:39:ILE:CB	2.46	0.44
16:N:3:ARG:O	16:N:5:ALA:N	2.50	0.44
16:N:45:PHE:HZ	16:N:65:LYS:N	2.14	0.44
16:N:61:PHE:O	16:N:75:ILE:HA	2.17	0.44
18:P:98:GLU:C	18:P:99:ILE:HG12	2.42	0.44
19:Q:82:LEU:HD13	19:Q:82:LEU:C	2.42	0.44
21:S:46:LYS:HB2	21:S:56:PRO:HA	1.99	0.44
21:S:52:SER:C	21:S:54:LYS:N	2.73	0.44
21:S:93:GLY:O	21:S:94:LYS:HG3	2.17	0.44
22:T:11:GLU:CG	22:T:12:GLY:H	2.30	0.44
22:T:38:TYR:O	22:T:39:VAL:HG23	2.18	0.44
22:T:84:GLU:CG	22:T:85:HIS:N	2.80	0.44
26:X:28:LEU:HD21	26:X:35:ARG:CG	2.47	0.44
26:X:31:LEU:H	26:X:31:LEU:CD2	2.30	0.44
31:y:59:A:H5''	31:y:60:A:H5''	1.97	0.44
31:y:102:G:C4	31:y:103:C:C4	3.05	0.44
31:y:315:A:H1'	31:y:353:A:H2	1.83	0.44
31:y:361:G:O6	31:y:362:G:N2	2.50	0.44
31:y:391:G:OP2	31:y:391:G:C8	2.70	0.44
31:y:564:C:C2'	31:y:565:U:H5'	2.47	0.44
31:y:583:A:C3'	31:y:584:G:H8	2.24	0.44
31:y:652:U:C2	31:y:753:A:N6	2.83	0.44
31:y:687:A:H5''	44:l:42:TRP:CH2	2.46	0.44
31:y:892:A:C2	31:y:907:A:C6	3.05	0.44
31:y:1109:C:C3'	31:y:1110:A:O4'	2.66	0.44
31:y:1122:U:O4	31:y:1123:A:N6	2.51	0.44
31:y:1276:G:N7	31:y:1277:C:C4	2.85	0.44
31:y:1425:U:C2	31:y:1426:C:C5	3.05	0.44
31:y:1435:G:C4	31:y:1436:U:H5	2.31	0.44
31:y:1442:G:N3	31:y:1442:G:O5'	2.50	0.44
31:y:1477:C:C2	31:y:1478:C:C6	3.05	0.44
31:y:1513:A:N6	31:y:1523:G:O6	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:z:18:G:H4'	32:z:60:U:O4	2.17	0.44
32:z:64:A:H3'	32:z:65:G:H8	1.82	0.44
33:0:18:G:C6	33:0:57:G:C6	3.05	0.44
35:c:15:VAL:O	35:c:15:VAL:HG12	2.18	0.44
35:c:133:LYS:O	35:c:133:LYS:NZ	2.50	0.44
35:c:138:LEU:HD23	35:c:138:LEU:C	2.42	0.44
36:d:11:ARG:O	36:d:12:LEU:C	2.59	0.44
36:d:77:ILE:HG12	36:d:77:ILE:O	2.18	0.44
37:e:88:VAL:HA	38:f:97:GLY:HA3	2.00	0.44
37:e:98:GLU:OE1	37:e:103:ASN:ND2	2.50	0.44
38:f:133:TYR:C	38:f:135:THR:N	2.72	0.44
41:i:15:ASN:O	41:i:19:VAL:HB	2.17	0.44
44:l:57:THR:HG22	44:l:60:ALA:HB3	2.00	0.44
46:n:88:ARG:HG2	46:n:98:VAL:HG12	1.98	0.44
49:q:9:PHE:HB2	49:q:16:HIS:O	2.17	0.44
52:t:63:THR:HG22	52:t:64:GLU:N	2.22	0.44
52:t:69:HIS:N	52:t:69:HIS:CD2	2.85	0.44
1:w:1:G:C5	1:w:2:G:N7	2.86	0.44
1:w:4:C:C2	1:w:5:A:N7	2.85	0.44
1:w:183:C:H5''	1:w:184:C:OP2	2.17	0.44
1:w:210:C:O2'	1:w:1366:A:N3	2.42	0.44
1:w:290:G:O2'	1:w:291:C:H5'	2.17	0.44
1:w:460:A:H62	1:w:469:G:H21	1.64	0.44
1:w:600:G:C4	1:w:601:C:C4	3.05	0.44
1:w:714:U:H3'	1:w:715:G:H5''	1.99	0.44
1:w:748:G:OP2	19:Q:88:ARG:HA	2.17	0.44
1:w:775:G:C2	1:w:787:U:C4	3.05	0.44
1:w:856:C:H1'	23:U:27:GLU:CB	2.46	0.44
1:w:1000:A:C5	1:w:1155:A:C6	3.06	0.44
1:w:1136:G:O2'	1:w:1137:G:C8	2.64	0.44
1:w:1159:U:H5''	1:w:1159:U:H6	1.81	0.44
1:w:1223:G:O2'	1:w:1226:A:N6	2.50	0.44
1:w:1264:G:C5	1:w:1265:A:C6	3.05	0.44
1:w:1308:A:O5'	1:w:1308:A:C8	2.69	0.44
1:w:1326:U:H2'	1:w:1327:C:C4'	2.44	0.44
1:w:1327:C:N3	1:w:1328:G:C5	2.85	0.44
1:w:1357:U:H2'	1:w:1358:G:C1'	2.47	0.44
1:w:1388:G:C2'	1:w:1389:G:H5'	2.46	0.44
1:w:1500:G:N3	4:B:100:GLY:CA	2.80	0.44
1:w:1501:C:H5'	4:B:102:LYS:HZ1	1.70	0.44
1:w:1516:U:HO2'	1:w:1517:G:C1'	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1637:A:C5	1:w:1638:C:C5	3.05	0.44
1:w:1651:G:H22	1:w:2007:C:N4	2.14	0.44
1:w:1707:G:N3	1:w:1708:C:C2	2.85	0.44
1:w:1792:G:O2'	1:w:1793:C:C5'	2.62	0.44
1:w:1886:C:C2'	1:w:1887:C:C6	2.85	0.44
1:w:1889:A:OP2	1:w:1889:A:H8	1.96	0.44
1:w:1889:A:H3'	1:w:1890:A:H8	1.80	0.44
1:w:1910:G:C6	1:w:1911:U:C2	3.05	0.44
1:w:1987:G:C8	1:w:1987:G:C4'	3.00	0.44
1:w:2056:G:N2	27:Y:5:PRO:CB	2.80	0.44
1:w:2298:A:H2'	1:w:2298:A:N3	2.32	0.44
1:w:2322:A:C8	1:w:2323:G:C8	3.04	0.44
1:w:2343:C:O2	1:w:2343:C:C2'	2.59	0.44
1:w:2354:G:H1'	23:U:36:ILE:H	1.82	0.44
1:w:2357:U:C6	1:w:2357:U:H3'	2.53	0.44
1:w:2358:G:C2	1:w:2359:C:N4	2.84	0.44
1:w:2359:C:C5	1:w:2359:C:P	3.08	0.44
1:w:2364:C:H2'	1:w:2365:G:O4'	2.18	0.44
1:w:2485:G:H4'	13:K:125:LEU:HD23	1.97	0.44
1:w:2636:U:C4'	5:C:80:GLU:CD	2.90	0.44
1:w:2652:C:C2'	1:w:2653:U:C6	3.00	0.44
1:w:2710:C:N3	1:w:2711:A:C8	2.85	0.44
1:w:2746:U:O2'	8:F:139:GLN:CD	2.59	0.44
1:w:2822:G:OP2	14:L:2:ARG:CB	2.52	0.44
1:w:2851:A:N6	1:w:2866:U:C2	2.86	0.44
2:x:83:G:N2	2:x:94:C:O2	2.50	0.44
4:B:257:LEU:O	4:B:258:LYS:C	2.60	0.44
4:B:257:LEU:C	4:B:257:LEU:HD13	2.41	0.44
5:C:9:VAL:HG23	5:C:25:VAL:C	2.42	0.44
5:C:112:GLY:N	14:L:2:ARG:HD2	2.32	0.44
6:D:159:ARG:CD	6:D:172:ALA:CB	2.95	0.44
7:E:15:VAL:CG1	7:E:19:LEU:HD11	2.29	0.44
7:E:68:PRO:CB	7:E:92:VAL:HB	2.47	0.44
7:E:120:LEU:C	7:E:122:PRO:HD3	2.40	0.44
7:E:128:ARG:O	7:E:130:ASN:N	2.42	0.44
9:G:6:LEU:CD1	9:G:35:LEU:HD13	2.44	0.44
9:G:77:LEU:HD12	9:G:142:VAL:HG21	1.99	0.44
9:G:122:GLU:CD	9:G:126:TYR:HB3	2.43	0.44
11:I:16:ALA:HB2	11:I:43:VAL:HG13	1.98	0.44
11:I:49:ARG:H	11:I:49:ARG:CD	2.28	0.44
11:I:49:ARG:C	11:I:51:ALA:N	2.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:8:LYS:NZ	13:K:93:TYR:CZ	2.84	0.44
13:K:43:THR:O	13:K:47:ILE:HG13	2.17	0.44
14:L:2:ARG:HH11	14:L:2:ARG:HG2	1.82	0.44
15:M:87:PHE:CD1	15:M:88:ASP:N	2.82	0.44
17:O:50:ARG:HH21	17:O:50:ARG:CG	2.25	0.44
18:P:77:ALA:O	18:P:78:LYS:CB	2.66	0.44
19:Q:65:LEU:O	19:Q:68:ARG:HD3	2.16	0.44
19:Q:86:LEU:HB3	19:Q:94:ASP:CB	2.46	0.44
20:R:7:VAL:O	20:R:7:VAL:HG12	2.17	0.44
24:V:12:PRO:HB2	24:V:66:HIS:CE1	2.52	0.44
24:V:78:LYS:CD	24:V:79:GLY:N	2.76	0.44
26:X:17:LYS:HD3	26:X:18:ASP:N	2.32	0.44
27:Y:30:LEU:HD23	27:Y:40:LYS:O	2.18	0.44
29:a:9:GLY:CA	29:a:12:LYS:HG3	2.47	0.44
30:b:24:TYR:CB	30:b:35:ARG:CA	2.86	0.44
31:y:44:G:H5'	49:q:12:LYS:HE2	2.00	0.44
31:y:58:C:H1'	31:y:388:G:C6	2.52	0.44
31:y:249:U:O2'	31:y:252:U:H5'	2.18	0.44
31:y:251:G:C6	31:y:266:G:C2	3.05	0.44
31:y:272:C:C4	31:y:273:A:N7	2.84	0.44
31:y:329:A:N6	31:y:332:G:N3	2.64	0.44
31:y:451:A:H4'	31:y:452:A:O5'	2.17	0.44
31:y:542:G:H2'	31:y:542:G:N3	2.32	0.44
31:y:629:G:O2'	31:y:630:G:H5'	2.17	0.44
31:y:635:G:C6	31:y:636:U:C6	3.06	0.44
31:y:724:G:C2	31:y:725:G:C8	3.05	0.44
31:y:749:C:O2	31:y:749:C:H2'	2.15	0.44
31:y:750:G:P	31:y:750:G:C8	2.93	0.44
31:y:770:C:H2'	31:y:771:G:C5'	2.34	0.44
31:y:919:A:H2'	31:y:920:U:C6	2.53	0.44
31:y:946:A:C8	31:y:946:A:OP2	2.70	0.44
31:y:979:C:OP1	31:y:982:U:O4	2.35	0.44
31:y:996:A:O2'	31:y:997:U:H5'	2.17	0.44
31:y:1053:G:C3'	31:y:1198:G:OP2	2.66	0.44
31:y:1081:G:C4	31:y:1082:G:C8	3.05	0.44
31:y:1108:G:H2'	31:y:1109:C:H4'	2.00	0.44
31:y:1177:G:H8	31:y:1177:G:P	2.40	0.44
31:y:1221:G:H3'	31:y:1222:G:H8	1.78	0.44
31:y:1259:C:O2'	31:y:1283:G:H1'	2.17	0.44
31:y:1308:U:O2'	31:y:1309:G:H5'	2.17	0.44
31:y:1322:C:O2'	31:y:1323:G:P	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1422:G:C2	31:y:1423:G:C5	3.06	0.44
31:y:1487:G:C6	31:y:1488:G:N7	2.85	0.44
32:z:24:G:C4	32:z:25:C:N1	2.85	0.44
35:c:23:ARG:HH21	35:c:24:TRP:HA	1.82	0.44
35:c:25:ASN:OD1	35:c:27:LYS:HB2	2.17	0.44
36:d:147:LYS:NZ	36:d:203:PHE:CG	2.86	0.44
38:f:76:ILE:HG23	38:f:91:LEU:CD1	2.47	0.44
40:h:40:ALA:O	40:h:41:ARG:C	2.60	0.44
41:i:21:LYS:HE2	41:i:23:SER:HB3	2.00	0.44
43:k:40:LEU:HB2	43:k:41:PRO:HD2	1.99	0.44
44:l:34:ASP:C	44:l:36:ASP:H	2.25	0.44
45:m:31:PHE:CD1	45:m:31:PHE:N	2.85	0.44
46:n:121:LYS:HD2	46:n:121:LYS:N	2.31	0.44
49:q:5:ARG:NE	49:q:22:THR:HG21	2.32	0.44
49:q:17:TYR:HB2	49:q:39:TYR:CE2	2.49	0.44
53:u:57:ARG:HG2	53:u:57:ARG:NH1	2.30	0.44
1:w:13:A:N7	1:w:525:U:C2	2.85	0.44
1:w:26:G:C2'	1:w:27:G:O5'	2.66	0.44
1:w:28:A:N6	1:w:513:A:C8	2.85	0.44
1:w:123:G:H3'	1:w:124:G:H8	1.83	0.44
1:w:164:U:O5'	1:w:165:U:C6	2.69	0.44
1:w:164:U:O5'	1:w:165:U:H6	2.00	0.44
1:w:181:A:C3'	1:w:182:A:C8	2.97	0.44
1:w:276:A:H8	1:w:276:A:O5'	2.01	0.44
1:w:326:G:C5	1:w:327:G:C8	3.06	0.44
1:w:331:A:OP2	1:w:1210:A:N6	2.50	0.44
1:w:347:A:H2'	1:w:348:G:C4'	2.46	0.44
1:w:463:G:N2	28:Z:34:ARG:NH1	2.66	0.44
1:w:479:A:N3	1:w:481:G:O4'	2.51	0.44
1:w:522:G:N3	1:w:523:C:C5	2.86	0.44
1:w:585:G:C3'	1:w:586:A:C8	3.00	0.44
1:w:627:A:H2	1:w:637:A:H1'	1.82	0.44
1:w:710:G:N2	1:w:711:G:C4	2.86	0.44
1:w:751:A:N7	1:w:1614:A:H2	2.14	0.44
1:w:768:G:N3	1:w:769:G:C8	2.86	0.44
1:w:777:A:C5	1:w:778:G:C8	3.05	0.44
1:w:794:G:C6	1:w:795:C:N4	2.85	0.44
1:w:968:G:C6	1:w:969:U:N3	2.85	0.44
1:w:1225:G:N7	1:w:1226:A:C6	2.85	0.44
1:w:1232:G:C6	1:w:1233:C:N4	2.85	0.44
1:w:1283:G:C2'	1:w:1285:G:O6	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1303:G:OP1	1:w:1303:G:H3'	2.16	0.44
1:w:1314:C:N3	1:w:1315:C:C5	2.86	0.44
1:w:1534:G:H1'	1:w:1538:G:C2	2.52	0.44
1:w:1570:A:H8	1:w:1570:A:H3'	1.82	0.44
1:w:1711:C:C2'	1:w:1712:C:H5'	2.48	0.44
1:w:1782:C:O4'	1:w:2609:U:C6	2.70	0.44
1:w:1798:U:H5''	4:B:260:ARG:CA	2.47	0.44
1:w:1813:G:H5''	4:B:40:THR:CG2	2.47	0.44
1:w:1822:G:C6	1:w:1823:G:N7	2.85	0.44
1:w:1838:C:H4'	1:w:1839:G:H8	1.81	0.44
1:w:2045:C:N3	1:w:2046:G:C8	2.85	0.44
1:w:2055:C:H5'	1:w:2056:G:C5'	2.48	0.44
1:w:2056:G:H22	27:Y:5:PRO:CA	2.29	0.44
1:w:2074:U:H5''	4:B:232:PRO:HA	1.98	0.44
1:w:2135:A:H61	1:w:2156:G:C1'	2.29	0.44
1:w:2370:G:H2'	1:w:2371:G:O4'	2.18	0.44
1:w:2393:A:C2'	1:w:2394:C:O4'	2.66	0.44
1:w:2457:U:C4	1:w:2458:G:N2	2.85	0.44
1:w:2497:A:HO2'	1:w:2498:C:P	2.39	0.44
1:w:2556:C:C4	1:w:2557:G:C5	3.06	0.44
1:w:2594:C:C6	1:w:2594:C:O5'	2.71	0.44
1:w:2651:C:N3	1:w:2670:A:N1	2.66	0.44
1:w:2677:G:C5	1:w:2678:C:N3	2.85	0.44
1:w:2696:U:C2'	1:w:2697:G:H5'	2.48	0.44
1:w:2721:A:C2	1:w:2873:A:C6	3.04	0.44
1:w:2748:A:C6	1:w:2749:A:C2	3.04	0.44
1:w:2763:G:H3'	1:w:2763:G:C8	2.53	0.44
2:x:19:G:H21	2:x:20:C:C1'	2.31	0.44
2:x:73:A:C8	2:x:104:A:C6	3.05	0.44
2:x:116:G:N3	2:x:116:G:H2'	2.33	0.44
3:A:8:TYR:CB	3:A:11:LEU:HD22	2.44	0.44
3:A:51:ASP:C	3:A:53:ARG:H	2.26	0.44
3:A:201:LYS:HZ2	3:A:203:GLU:CA	2.21	0.44
3:A:215:VAL:H	3:A:223:VAL:HB	1.82	0.44
4:B:16:MET:HG2	4:B:211:ARG:HH22	1.82	0.44
4:B:52:ARG:NH2	4:B:220:HIS:ND1	2.66	0.44
4:B:131:LEU:C	4:B:190:TYR:HA	2.43	0.44
4:B:136:ILE:HG12	4:B:137:PRO:HD3	1.95	0.44
4:B:262:ARG:C	4:B:264:LYS:N	2.74	0.44
5:C:5:LEU:HD11	5:C:91:VAL:HG21	1.98	0.44
5:C:192:ASN:HD22	5:C:193:GLY:H	1.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:177:ASN:O	6:D:180:ASP:OD2	2.35	0.44
6:D:183:ARG:NH1	12:J:7:ARG:CB	2.81	0.44
7:E:10:LYS:NZ	7:E:14:GLU:HB2	2.33	0.44
7:E:120:LEU:O	7:E:181:ARG:CA	2.66	0.44
8:F:163:TYR:O	8:F:164:TYR:C	2.60	0.44
9:G:27:ARG:HB2	9:G:27:ARG:CZ	2.47	0.44
10:H:58:ARG:HA	10:H:139:LEU:CD1	2.46	0.44
10:H:84:ARG:C	10:H:86:THR:N	2.74	0.44
10:H:107:LYS:C	10:H:108:ILE:HG12	2.43	0.44
11:I:15:GLY:C	11:I:17:ARG:NH2	2.75	0.44
11:I:65:THR:O	11:I:79:PHE:HD1	1.94	0.44
11:I:70:LYS:HA	11:I:76:ALA:N	2.32	0.44
12:J:137:LYS:HD3	12:J:137:LYS:N	2.31	0.44
13:K:11:LYS:HE2	13:K:12:GLN:CA	2.46	0.44
13:K:55:VAL:C	13:K:58:PHE:HB2	2.39	0.44
14:L:30:THR:HG22	14:L:75:LEU:CD1	2.47	0.44
14:L:30:THR:OG1	14:L:31:HIS:CE1	2.70	0.44
14:L:53:HIS:HA	14:L:56:LYS:CD	2.48	0.44
19:Q:80:PRO:CD	19:Q:100:THR:OG1	2.65	0.44
20:R:16:LYS:H	20:R:16:LYS:HG3	1.56	0.44
20:R:21:PHE:CZ	20:R:90:GLU:HA	2.53	0.44
21:S:42:VAL:CB	21:S:61:ILE:HG22	2.44	0.44
22:T:58:VAL:HG13	22:T:67:LEU:O	2.16	0.44
23:U:51:VAL:HG22	23:U:81:VAL:HG21	1.98	0.44
26:X:3:ARG:HG3	26:X:36:VAL:O	2.17	0.44
26:X:12:PRO:O	26:X:15:TYR:HD1	2.01	0.44
26:X:58:VAL:CG1	26:X:59:VAL:N	2.79	0.44
31:y:41:G:C2	31:y:402:G:C5	3.06	0.44
31:y:127:G:N2	31:y:234:C:N3	2.64	0.44
31:y:161:A:C2'	31:y:162:A:C5'	2.96	0.44
31:y:162:A:OP2	31:y:163:C:C4	2.71	0.44
31:y:186(A):C:H2'	31:y:186(B):C:O4'	2.16	0.44
31:y:194:C:C5'	53:u:65:LYS:HZ1	2.19	0.44
31:y:276:G:H1'	50:r:68:ARG:HH12	1.81	0.44
31:y:282:A:OP2	31:y:282:A:C8	2.70	0.44
31:y:392:G:C3'	31:y:393:A:H8	2.26	0.44
31:y:411:A:C4	31:y:429:U:C5	3.05	0.44
31:y:422:C:C5'	31:y:423:G:C4	2.92	0.44
31:y:495:A:N3	31:y:496:A:C6	2.85	0.44
31:y:605:U:O4	31:y:606:G:C6	2.70	0.44
31:y:644:G:C5	31:y:645:C:C5	2.95	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:651:C:C2	31:y:652:U:C5	3.05	0.44
31:y:684:A:H2	31:y:706:A:H61	1.65	0.44
31:y:783:C:C2'	31:y:784:C:C5'	2.95	0.44
31:y:792:A:H2'	31:y:794:A:C5	2.52	0.44
31:y:836:G:C6	31:y:851:G:C5	3.05	0.44
31:y:851:G:C4	31:y:852:G:C8	3.04	0.44
31:y:879:C:H3'	31:y:879:C:C6	2.53	0.44
31:y:889:A:O4'	31:y:891:U:C4	2.69	0.44
31:y:907:A:N6	31:y:908:A:C4	2.85	0.44
31:y:929:G:H2'	31:y:930:C:H5'	1.99	0.44
31:y:1013:G:C1'	31:y:1016:A:H2	2.26	0.44
31:y:1160:G:C4	31:y:1161:C:O4'	2.71	0.44
31:y:1165:C:H2'	31:y:1166:G:O4'	2.17	0.44
31:y:1283:G:H2'	31:y:1284:C:H6	1.82	0.44
31:y:1408:A:N1	31:y:1494:G:C6	2.85	0.44
31:y:1416:G:C6	31:y:1417:G:C4	3.06	0.44
31:y:1439:C:N3	31:y:1440:C:N3	2.64	0.44
31:y:1494:G:C5	31:y:1495:U:C5	3.05	0.44
31:y:1528:U:H4'	31:y:1529:G:OP1	2.16	0.44
32:z:4:C:N3	32:z:5:G:N7	2.65	0.44
33:0:33:U:N3	33:0:36:A:OP1	2.51	0.44
35:c:97:TRP:HZ2	35:c:102:LEU:CG	2.27	0.44
35:c:130:ARG:HE	35:c:131:PRO:CD	2.30	0.44
36:d:121:ALA:C	36:d:125:GLU:OE2	2.61	0.44
36:d:160:ALA:CB	36:d:164:ARG:HH11	2.29	0.44
37:e:93:PHE:CD1	37:e:97:LEU:HD21	2.52	0.44
37:e:121:VAL:O	37:e:136:PRO:CG	2.65	0.44
37:e:159:ARG:HD2	37:e:160:GLN:CG	2.48	0.44
39:g:23:LYS:O	39:g:26:ILE:CG1	2.49	0.44
40:h:80:VAL:HG12	40:h:81:GLY:N	2.31	0.44
40:h:149:ARG:HB2	44:l:59:TYR:CD1	2.52	0.44
41:i:11:THR:CA	41:i:14:ARG:HH11	2.30	0.44
41:i:40:ALA:HB2	41:i:45:ILE:HG21	2.00	0.44
41:i:91:ARG:CZ	41:i:92:ARG:O	2.65	0.44
42:j:85:LEU:HD22	42:j:86:VAL:N	2.32	0.44
44:l:39:PRO:C	44:l:40:ILE:HG12	2.42	0.44
44:l:95:ILE:HG22	44:l:95:ILE:O	2.17	0.44
45:m:114:LYS:O	45:m:116:ARG:N	2.49	0.44
46:n:85:GLY:C	52:t:74:PHE:CE2	2.94	0.44
47:o:24:CYS:SG	47:o:39:LEU:HD22	2.58	0.44
48:p:42:HIS:O	48:p:46:HIS:CB	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:48:GLU:OE1	50:r:48:GLU:N	2.40	0.44
1:w:19:C:C2	1:w:20:C:H5'	2.53	0.44
1:w:25:U:C4	1:w:26:G:C6	3.06	0.44
1:w:35:G:C6	1:w:36:G:C4	3.03	0.44
1:w:35:G:C1'	1:w:454:A:C4	3.01	0.44
1:w:35:G:N1	1:w:36:G:C4	2.85	0.44
1:w:64:A:O2'	1:w:65:C:C5'	2.66	0.44
1:w:64:A:C4	1:w:65:C:C4	3.05	0.44
1:w:84:A:N6	1:w:102:G:N3	2.64	0.44
1:w:141(B):C:C4	1:w:142:G:C5	3.06	0.44
1:w:220:G:C6	1:w:427:U:H3'	2.53	0.44
1:w:224:G:O5'	1:w:224:G:H8	1.99	0.44
1:w:299:A:H2'	1:w:300:A:C4	2.52	0.44
1:w:301:G:C2	1:w:317:G:N7	2.85	0.44
1:w:381:G:H4'	24:V:20:ARG:CZ	2.48	0.44
1:w:381:G:H4'	24:V:20:ARG:NH2	2.33	0.44
1:w:451:C:C1'	1:w:453:C:C5	3.00	0.44
1:w:460:A:N3	1:w:461:C:C1'	2.79	0.44
1:w:534:U:H2'	1:w:535:C:H6	1.80	0.44
1:w:563:G:C6	1:w:2018:G:C6	3.05	0.44
1:w:616:A:C5	1:w:617:G:H1'	2.52	0.44
1:w:623:G:O2'	1:w:624:C:H5'	2.17	0.44
1:w:667:U:O4	1:w:668:G:C6	2.71	0.44
1:w:691:C:H4'	4:B:55:GLY:HA3	1.99	0.44
1:w:703:U:C5	1:w:704:G:N7	2.86	0.44
1:w:743:G:O2'	1:w:1659:U:OP1	2.33	0.44
1:w:798:G:O2'	1:w:799:G:C5'	2.65	0.44
1:w:812:C:N1	1:w:1250:G:C2	2.85	0.44
1:w:933:A:O2'	1:w:934:G:C5'	2.53	0.44
1:w:961:C:C5	1:w:2456:C:H4'	2.49	0.44
1:w:1125:G:O2'	1:w:1126:A:OP1	2.35	0.44
1:w:1135:C:H3'	1:w:1137:G:OP2	2.17	0.44
1:w:1176:G:N2	1:w:1177:A:C8	2.85	0.44
1:w:1224:C:O2'	18:P:88:ARG:CA	2.65	0.44
1:w:1295:C:C3'	1:w:1296:G:C8	2.98	0.44
1:w:1313:U:H2'	1:w:1314:C:O5'	2.18	0.44
1:w:1319:G:N3	1:w:1319:G:H2'	2.32	0.44
1:w:1419:A:O2'	1:w:1420:U:C5	2.70	0.44
1:w:1442:G:C6	1:w:1443:G:C5	3.06	0.44
1:w:1472:A:H62	1:w:1521:G:H21	1.65	0.44
1:w:1567:A:C2	4:B:84:TYR:HB3	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1571:A:H2'	1:w:1572:A:C8	2.52	0.44
1:w:1627:G:O2'	1:w:1628:G:C8	2.43	0.44
1:w:1668:A:OP2	1:w:1990:C:N4	2.48	0.44
1:w:1822:G:OP1	1:w:1822:G:C4'	2.66	0.44
1:w:1829:A:H3'	1:w:1830:C:H6	1.79	0.44
1:w:1840:G:N3	1:w:1840:G:H2'	2.33	0.44
1:w:1992:G:N1	1:w:1997:G:C2	2.86	0.44
1:w:2032:G:O6	1:w:2454:G:O4'	2.35	0.44
1:w:2080:G:C6	1:w:2241:A:C4	3.06	0.44
1:w:2081:C:C6	1:w:2081:C:C4'	3.00	0.44
1:w:2088:G:C6	1:w:2232:U:O4	2.71	0.44
1:w:2094:G:O6	1:w:2195:C:N4	2.46	0.44
1:w:2138:C:H3'	1:w:2139:C:C5	2.52	0.44
1:w:2193:G:C2	1:w:2194:G:C4	3.04	0.44
1:w:2352:A:C4	1:w:2353:G:C1'	3.01	0.44
1:w:2373:G:C4	1:w:2374:C:C4	3.06	0.44
1:w:2482:G:O2'	1:w:2483:C:H5'	2.17	0.44
1:w:2497:A:OP2	1:w:2497:A:H8	2.00	0.44
1:w:2516:G:C6	1:w:2517:C:N4	2.86	0.44
1:w:2601:C:H5''	32:z:75:C:H5''	1.83	0.44
1:w:2635:C:C6	1:w:2635:C:O5'	2.62	0.44
1:w:2702:U:O2'	1:w:2703:C:H5	2.00	0.44
1:w:2761:G:C6	1:w:2762:G:C5	3.05	0.44
1:w:2781:A:P	1:w:2781:A:C8	3.10	0.44
1:w:2821:A:C2'	1:w:2822:G:C5'	2.95	0.44
1:w:2840:C:H1'	14:L:91:GLN:NE2	2.32	0.44
1:w:2877:G:H3'	1:w:2878:U:C5	2.52	0.44
3:A:15:VAL:O	3:A:15:VAL:HG22	2.15	0.44
3:A:19:LYS:O	3:A:21:TYR:CZ	2.71	0.44
4:B:4:LYS:O	4:B:5:LYS:C	2.60	0.44
4:B:181:GLU:HG3	4:B:271:ILE:O	2.18	0.44
4:B:256:GLY:O	4:B:257:LEU:C	2.60	0.44
4:B:267:SER:O	4:B:269:PHE:CZ	2.70	0.44
5:C:16:ARG:HB3	5:C:19:ARG:CD	2.46	0.44
5:C:38:THR:HA	5:C:44:TYR:C	2.39	0.44
5:C:52:LEU:O	5:C:75:VAL:HG23	2.18	0.44
6:D:174:GLU:HG2	6:D:174:GLU:O	2.17	0.44
7:E:31:VAL:CG2	7:E:32:PRO:HD2	2.41	0.44
9:G:6:LEU:HD22	9:G:7:GLU:HB3	1.99	0.44
9:G:48:GLU:HA	9:G:51:ILE:CD1	2.43	0.44
10:H:118:PRO:HA	10:H:121:VAL:HG23	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:124:HIS:CE1	10:H:127:LYS:HZ2	2.36	0.44
10:H:141:LYS:O	10:H:143:LEU:HD13	2.17	0.44
11:I:59:LYS:O	11:I:94:ARG:NH1	2.51	0.44
12:J:109:GLY:O	12:J:110:TYR:C	2.60	0.44
12:J:114:ILE:HD11	12:J:130:PHE:HB3	2.00	0.44
12:J:125:VAL:O	12:J:126:VAL:C	2.60	0.44
13:K:11:LYS:CB	13:K:14:ARG:HH12	2.31	0.44
13:K:28:ALA:HB1	13:K:105:GLU:OE1	2.17	0.44
13:K:65:PHE:O	13:K:104:PHE:HA	2.17	0.44
15:M:9:ARG:CZ	15:M:9:ARG:HA	2.48	0.44
15:M:75:GLU:OE2	15:M:75:GLU:C	2.61	0.44
17:O:76:TYR:O	17:O:77:SER:C	2.61	0.44
18:P:34:GLU:N	18:P:64:HIS:CE1	2.82	0.44
18:P:35:LEU:HD23	18:P:35:LEU:N	2.33	0.44
19:Q:8:ARG:O	19:Q:9:TYR:HB3	2.18	0.44
20:R:11:PRO:C	20:R:28:PHE:HA	2.41	0.44
20:R:38:GLU:O	20:R:38:GLU:HG2	2.18	0.44
21:S:24:VAL:CG2	21:S:25:GLY:N	2.79	0.44
21:S:80:GLY:C	21:S:81:LYS:HG3	2.42	0.44
22:T:115:GLY:HA2	22:T:176:PRO:HG3	1.98	0.44
24:V:51:VAL:HG13	24:V:53:VAL:H	1.83	0.44
25:W:6:VAL:HG23	25:W:7:ARG:H	1.80	0.44
25:W:13:ALA:C	25:W:14:ARG:CG	2.90	0.44
25:W:17:SER:HB3	25:W:21:LEU:CD1	2.47	0.44
27:Y:40:LYS:CE	27:Y:46:CYS:H	2.30	0.44
28:Z:1:MET:O	28:Z:1:MET:HG2	2.16	0.44
31:y:6:G:O3'	31:y:7:G:H8	2.00	0.44
31:y:54:C:H2'	31:y:352:C:H41	1.83	0.44
31:y:126:G:C2	31:y:127:G:C5	3.05	0.44
31:y:191(A):G:P	31:y:191(A):G:H3'	2.58	0.44
31:y:191(C):G:C5	31:y:191(D):U:C6	3.05	0.44
31:y:228:A:O2'	49:q:62:VAL:HG23	2.17	0.44
31:y:234:C:C2'	31:y:235:C:H6	2.14	0.44
31:y:279:A:H1'	31:y:281:G:C1'	2.48	0.44
31:y:282:A:C5	31:y:283:C:C4	3.05	0.44
31:y:333:G:H2'	31:y:334:C:H6	1.82	0.44
31:y:391:G:H2'	31:y:392:G:C5'	2.42	0.44
31:y:411:A:C8	31:y:411:A:O5'	2.71	0.44
31:y:509:A:C2	31:y:510:A:C2	3.06	0.44
31:y:518:C:C6	31:y:530:G:O4'	2.70	0.44
31:y:599:C:N3	31:y:640:A:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:613:C:H2'	31:y:614:A:H5'	1.97	0.44
31:y:719:C:C6	31:y:720:C:C5	3.05	0.44
31:y:784:C:N3	31:y:785:G:C8	2.86	0.44
31:y:855:G:C3'	31:y:856:C:C6	3.00	0.44
31:y:908:A:HO2'	31:y:909:A:H8	1.64	0.44
31:y:1055:A:O2'	36:d:161:GLU:HB2	2.18	0.44
31:y:1086:U:O2	31:y:1099:G:C2	2.70	0.44
31:y:1119:C:N3	31:y:1120:G:N7	2.66	0.44
31:y:1202:G:N3	47:o:42:ILE:HG21	2.31	0.44
31:y:1237:C:H5'	31:y:1238:A:C5'	2.48	0.44
31:y:1297:C:O2	31:y:1297:C:H2'	2.17	0.44
31:y:1373:G:OP2	31:y:1373:G:H8	2.01	0.44
31:y:1406:U:O4	31:y:1407:5MC:N4	2.51	0.44
31:y:1469:G:C2	31:y:1470:G:C5	3.05	0.44
31:y:1475:G:C5	31:y:1476:G:N7	2.86	0.44
31:y:1506:U:OP2	31:y:1506:U:H4'	2.18	0.44
35:c:10:LEU:HD13	35:c:11:LEU:H	1.74	0.44
35:c:53:ARG:HG2	35:c:54:THR:N	2.29	0.44
35:c:54:THR:O	35:c:58:ILE:CG1	2.49	0.44
36:d:131:ARG:HA	36:d:134:ILE:HD11	1.99	0.44
37:e:9:CYS:N	37:e:12:CYS:SG	2.90	0.44
37:e:14:ARG:HA	37:e:40:PRO:CG	2.47	0.44
37:e:199:ASN:ND2	37:e:202:LEU:CD2	2.81	0.44
38:f:11:ILE:CG1	38:f:32:VAL:HA	2.44	0.44
38:f:60:TYR:C	38:f:62:ALA:N	2.75	0.44
38:f:89:ILE:HA	38:f:123:LEU:CD2	2.32	0.44
40:h:69:VAL:O	40:h:69:VAL:HG12	2.17	0.44
40:h:111:ARG:HD2	40:h:123:GLU:HB2	1.99	0.44
41:i:15:ASN:O	41:i:19:VAL:HG12	2.16	0.44
41:i:17:THR:OG1	41:i:78:GLN:CD	2.60	0.44
41:i:36:LEU:HD22	41:i:48:TYR:HB3	1.99	0.44
45:m:44:PRO:CD	45:m:52:ARG:CD	2.96	0.44
46:n:8:GLU:OE1	46:n:8:GLU:HA	2.18	0.44
46:n:84:ILE:HD12	52:t:65:ASN:ND2	2.28	0.44
48:p:14:GLU:OE2	48:p:14:GLU:HA	2.17	0.44
48:p:35:ARG:O	48:p:39:LEU:CG	2.52	0.44
49:q:3:LYS:CB	49:q:3:LYS:HZ2	2.29	0.44
50:r:46:ASP:OD1	50:r:51:TYR:HB2	2.17	0.44
51:s:61:LYS:CD	51:s:64:ARG:CD	2.96	0.44
52:t:52:TYR:HD1	52:t:57:HIS:N	2.15	0.44
1:w:7:G:O6	1:w:8:A:N1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:63:U:H4'	1:w:64:A:OP1	2.18	0.44
1:w:138:G:C3'	1:w:139:G:C5'	2.91	0.44
1:w:153:C:O2	1:w:154:G:C8	2.71	0.44
1:w:217:G:O6	1:w:431:U:C2	2.71	0.44
1:w:241:A:H1'	1:w:243:U:C5	2.53	0.44
1:w:314:A:C5	1:w:315:G:O6	2.70	0.44
1:w:324:A:H2'	1:w:325:G:O4'	2.18	0.44
1:w:408:G:H2'	1:w:409:C:C6	2.52	0.44
1:w:579:G:C2'	27:Y:10:LYS:HZ2	2.28	0.44
1:w:675:A:OP2	1:w:803:U:O4	2.35	0.44
1:w:710:G:C4	1:w:711:G:N7	2.86	0.44
1:w:809:G:O4'	1:w:1254:A:N3	2.50	0.44
1:w:812:C:C6	1:w:1250:G:C2	3.05	0.44
1:w:817:C:C5'	1:w:932:G:N1	2.70	0.44
1:w:887:A:N3	1:w:887:A:C5'	2.73	0.44
1:w:1064:C:OP2	1:w:1064:C:C5	2.67	0.44
1:w:1140:C:H4'	10:H:48:ARG:NE	2.33	0.44
1:w:1141:U:O2'	1:w:114(B):A:C8	2.66	0.44
1:w:1279:G:C5	1:w:1280:G:C4	3.05	0.44
1:w:1299:G:O2'	1:w:1300:U:P	2.75	0.44
1:w:1327:C:OP2	1:w:1327:C:H5	1.98	0.44
1:w:1465:G:C8	1:w:1465:G:H3'	2.53	0.44
1:w:1500:G:H2'	1:w:1500:G:N3	2.33	0.44
1:w:1569:A:H2'	1:w:1570:A:O5'	2.17	0.44
1:w:1625:C:C4	1:w:1626:G:C6	3.06	0.44
1:w:1799:G:O6	4:B:179:SER:N	2.51	0.44
1:w:1800:C:HO2'	1:w:1801:G:P	2.41	0.44
1:w:1912:A:N6	1:w:1918:A:C2	2.86	0.44
1:w:1945:G:P	1:w:1945:G:N7	2.90	0.44
1:w:1992:G:C6	1:w:1997:G:C2	3.06	0.44
1:w:2023:G:H2'	1:w:2024:G:C8	2.52	0.44
1:w:2027:G:N1	1:w:2037:G:C5	2.86	0.44
1:w:2081:C:C2'	1:w:2082:A:H5'	2.47	0.44
1:w:2316:C:H2'	1:w:2317:C:O4'	2.17	0.44
1:w:2347:C:N3	1:w:2348:U:C5	2.86	0.44
1:w:2377:A:N7	1:w:2378:A:C6	2.86	0.44
1:w:2426:A:O2'	1:w:2427:C:OP1	2.29	0.44
1:w:2447:G:C4	1:w:2501:C:C4	3.04	0.44
1:w:2489:G:C6	1:w:2490:G:C6	3.05	0.44
1:w:2511:U:O5'	1:w:2511:U:H6	2.00	0.44
1:w:2520:C:H2'	1:w:2521:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2562:U:O2	1:w:2563:U:O4'	2.36	0.44
1:w:2574:G:C6	1:w:2575:C:N4	2.86	0.44
1:w:2658:C:C5'	8:F:158:HIS:HE2	2.20	0.44
2:x:22:U:C2	2:x:23:G:N7	2.86	0.44
2:x:37:C:H2'	2:x:38:C:H6	1.83	0.44
3:A:201:LYS:CG	3:A:209:PHE:CZ	2.94	0.44
4:B:79:VAL:HG13	4:B:93:ALA:HB1	2.00	0.44
4:B:175:LEU:HD13	4:B:185:VAL:CG2	2.47	0.44
5:C:38:THR:CG2	5:C:40:GLU:HG3	2.47	0.44
5:C:203:LYS:HB2	5:C:203:LYS:HZ2	1.80	0.44
7:E:97:ASP:C	7:E:100:TRP:H	2.26	0.44
8:F:9:ILE:HG22	8:F:10:PRO:O	2.16	0.44
8:F:54:ARG:NH1	8:F:61:HIS:CB	2.77	0.44
8:F:89:ILE:HD12	8:F:89:ILE:C	2.43	0.44
9:G:7:GLU:CG	9:G:35:LEU:HD11	2.48	0.44
10:H:71:MET:N	10:H:71:MET:HE3	2.33	0.44
10:H:90:LEU:HD12	10:H:111:GLU:N	2.32	0.44
11:I:26:LYS:HD2	11:I:30:ALA:HA	2.00	0.44
11:I:46:ALA:HB2	11:I:54:GLU:H	1.83	0.44
11:I:47:ILE:HG23	11:I:49:ARG:CZ	2.48	0.44
11:I:98:VAL:CG2	11:I:99:PHE:N	2.48	0.44
12:J:85:LEU:HD23	12:J:86:LYS:CG	2.48	0.44
14:L:2:ARG:HG2	14:L:3:HIS:H	1.76	0.44
15:M:17:ARG:CZ	15:M:89:ARG:HD2	2.47	0.44
15:M:66:ALA:C	15:M:68:GLN:H	2.24	0.44
18:P:3:ALA:O	18:P:4:ILE:CG1	2.65	0.44
19:Q:5:ALA:CB	19:Q:54:ALA:HB2	2.46	0.44
19:Q:18:ARG:HD2	19:Q:76:VAL:CG1	2.48	0.44
20:R:7:VAL:O	20:R:30:VAL:CG1	2.64	0.44
20:R:55:ASN:N	20:R:77:LYS:CD	2.79	0.44
22:T:10:ARG:HG3	22:T:36:LYS:O	2.18	0.44
22:T:28:MET:CE	22:T:34:ASN:HA	2.48	0.44
22:T:104:PHE:HA	22:T:139:VAL:CB	2.46	0.44
22:T:176:PRO:CB	22:T:177:PRO:CD	2.96	0.44
24:V:11:ARG:N	24:V:12:PRO:HD2	2.27	0.44
24:V:58:ILE:CG2	24:V:82:LEU:HG	2.48	0.44
25:W:5:GLU:OE1	25:W:9:GLN:N	2.51	0.44
25:W:57:ILE:O	25:W:58:ALA:HB3	2.18	0.44
28:Z:11:LYS:O	28:Z:11:LYS:HD2	2.18	0.44
31:y:30:U:HO2'	31:y:31:G:P	2.28	0.44
31:y:137:C:C6	31:y:137:C:O5'	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:149:A:H61	31:y:172:A:N6	2.09	0.44
31:y:247:G:N2	31:y:248:C:O4'	2.51	0.44
31:y:257:G:C8	31:y:257:G:H3'	2.53	0.44
31:y:303:A:N7	31:y:304:U:C5	2.85	0.44
31:y:344:A:H3'	31:y:346:G:C6	2.51	0.44
31:y:356:A:N3	31:y:368:U:O2'	2.36	0.44
31:y:435:C:N4	31:y:436:C:N4	2.66	0.44
31:y:558:G:N9	31:y:559:A:C2	2.86	0.44
31:y:579:G:H5'	31:y:728:A:C4	2.53	0.44
31:y:727:G:C2	31:y:729:A:OP1	2.71	0.44
31:y:739:C:N3	31:y:740:U:C5	2.86	0.44
31:y:756:C:H4'	31:y:823:G:O4'	2.18	0.44
31:y:904:C:H3'	31:y:904:C:H6	1.82	0.44
31:y:1053:G:C8	31:y:1199:U:OP2	2.69	0.44
31:y:1086:U:H3'	31:y:1086:U:C6	2.52	0.44
31:y:1095:U:H2'	31:y:1096:C:H5'	2.00	0.44
31:y:1249:C:O2'	42:j:68:GLY:N	2.51	0.44
31:y:1371:G:O6	31:y:1372:U:C4	2.71	0.44
31:y:1428:A:C4	31:y:1429:C:C5	3.06	0.44
31:y:1428:A:C6	31:y:1429:C:N4	2.85	0.44
32:z:17:C:H6	32:z:17:C:H3'	1.81	0.44
33:0:20:G:H3'	33:0:20:G:H8	1.82	0.44
35:c:93:VAL:CG2	35:c:94:ASN:H	2.29	0.44
35:c:184:VAL:HG23	35:c:197:VAL:HB	2.00	0.44
37:e:9:CYS:O	37:e:10:ARG:C	2.61	0.44
37:e:156:GLU:CA	37:e:158:ILE:HD13	2.47	0.44
40:h:70:LYS:HG3	40:h:71:PRO:HD2	2.00	0.44
41:i:82:HIS:HD2	41:i:83:ILE:H	1.57	0.44
41:i:119:LEU:CB	41:i:124:ALA:HB2	2.43	0.44
43:k:85:LEU:CD1	43:k:86:MET:N	2.73	0.44
44:l:74:ALA:O	44:l:75:TYR:CD2	2.59	0.44
45:m:39:VAL:CG2	45:m:76:LEU:CD1	2.95	0.44
45:m:76:LEU:HD22	45:m:80:SER:OG	2.13	0.44
45:m:101:ARG:HH21	45:m:107:ALA:HB3	1.82	0.44
45:m:120:GLY:O	45:m:121:THR:OG1	2.33	0.44
50:r:55:ASP:HB3	50:r:76:LEU:HD21	1.99	0.44
50:r:90:ILE:HG13	50:r:91:ARG:H	1.80	0.44
50:r:97:SER:O	50:r:98:LEU:C	2.60	0.44
53:u:24:LEU:O	53:u:27:LYS:HB3	2.17	0.44
53:u:39:LYS:HA	53:u:42:GLN:HE21	1.82	0.44
54:v:6:ARG:CG	54:v:7:ARG:H	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:64:A:C5	1:w:65:C:C4	3.05	0.44
1:w:184:C:H6	1:w:184:C:H5'	1.82	0.44
1:w:187:G:C8	1:w:187:G:O5'	2.70	0.44
1:w:207:A:HO2'	1:w:799:G:C4'	2.30	0.44
1:w:223:A:H2	1:w:407:G:O2'	2.01	0.44
1:w:240:G:H2'	1:w:241:A:C8	2.52	0.44
1:w:406:G:C5	1:w:407:G:C8	3.06	0.44
1:w:513:A:C2	1:w:514:A:C8	3.06	0.44
1:w:561:G:HO2'	17:O:45:TYR:HE1	1.61	0.44
1:w:581:C:C2'	1:w:582:G:H8	2.27	0.44
1:w:610:C:H6	1:w:610:C:C5'	2.31	0.44
1:w:689:A:O2'	1:w:690:G:H5'	2.17	0.44
1:w:836:G:C2'	1:w:837:C:C5	2.98	0.44
1:w:930:U:H1'	1:w:931:G:C2	2.53	0.44
1:w:941:A:C2	1:w:942:G:C4	3.05	0.44
1:w:952:G:O6	1:w:953:A:N6	2.51	0.44
1:w:969:U:H5''	26:X:15:TYR:O	2.17	0.44
1:w:1132:A:H61	1:w:2038:G:N2	2.15	0.44
1:w:1212:G:H5''	1:w:1212:G:H8	1.81	0.44
1:w:1335:U:OP2	1:w:1335:U:C5	2.71	0.44
1:w:1424:G:C8	1:w:1424:G:OP2	2.71	0.44
1:w:1591:G:H2'	1:w:1592:C:H6	1.80	0.44
1:w:1696:G:N3	1:w:1978:A:H5'	2.33	0.44
1:w:1729:A:N7	1:w:1731:G:N7	2.66	0.44
1:w:1753:G:H2'	1:w:1754:C:H3'	1.99	0.44
1:w:1924:C:H2'	1:w:1925:C:C6	2.52	0.44
1:w:2100:G:C8	1:w:2100:G:OP2	2.71	0.44
1:w:2159:G:N2	1:w:2160:G:H1'	2.32	0.44
1:w:2176:A:C1'	3:A:45:HIS:ND1	2.69	0.44
1:w:2186:G:H2'	1:w:2187:G:N7	2.21	0.44
1:w:2250:G:N3	13:K:82:ARG:CZ	2.80	0.44
1:w:2285:C:C3'	1:w:2286:A:C2	2.99	0.44
1:w:2429:G:OP2	1:w:2429:G:H2'	2.18	0.44
1:w:2625:G:C4	1:w:2626:C:C4	3.05	0.44
1:w:2763:G:H3'	1:w:2763:G:H8	1.82	0.44
2:x:73:A:N3	2:x:104:A:C2	2.84	0.44
2:x:78:A:C2	2:x:99:A:N6	2.85	0.44
2:x:96:G:C2	2:x:97:G:C4	3.06	0.44
3:A:22:THR:HG22	3:A:226:ASN:HB3	1.99	0.44
3:A:61:GLY:HA3	3:A:164:PHE:HE2	1.80	0.44
4:B:48:ARG:HD2	4:B:49:ILE:HG13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:88:ARG:NH1	4:B:88:ARG:CG	2.78	0.44
4:B:106:ILE:HD12	4:B:197:GLY:N	2.33	0.44
4:B:137:PRO:CB	4:B:140:THR:CG2	2.82	0.44
5:C:93:VAL:HG12	5:C:182:LEU:CG	2.48	0.44
5:C:116:VAL:HG23	5:C:120:TRP:CD1	2.53	0.44
5:C:172:VAL:CG1	5:C:173:VAL:N	2.80	0.44
6:D:90:ARG:C	6:D:92:TYR:N	2.73	0.44
8:F:46:GLU:O	8:F:46:GLU:HG2	2.16	0.44
13:K:9:TYR:OH	13:K:11:LYS:NZ	2.50	0.44
13:K:48:GLU:O	13:K:51:ARG:CZ	2.66	0.44
13:K:50:ALA:O	13:K:51:ARG:C	2.59	0.44
14:L:63:ARG:NH2	14:L:77:ARG:HA	2.33	0.44
15:M:9:ARG:C	15:M:11:LYS:N	2.75	0.44
16:N:61:PHE:HZ	16:N:78:LEU:HD13	1.82	0.44
16:N:108:ARG:NH1	31:y:1431:C:OP2	2.51	0.44
18:P:23:GLU:OE2	18:P:25:LEU:CD1	2.64	0.44
20:R:52:VAL:HG23	20:R:81:VAL:O	2.17	0.44
20:R:54:VAL:CG2	20:R:78:LYS:N	2.60	0.44
20:R:82:GLN:CG	20:R:83:VAL:N	2.59	0.44
22:T:165:VAL:HB	22:T:166:SER:H	1.53	0.44
22:T:171:ILE:HD13	22:T:171:ILE:N	2.31	0.44
23:U:23:VAL:HA	23:U:38:VAL:CB	2.47	0.44
24:V:10:LYS:HB2	24:V:11:ARG:H	1.71	0.44
25:W:13:ALA:O	25:W:15:LYS:N	2.50	0.44
26:X:3:ARG:NH1	26:X:38:GLU:HA	2.32	0.44
26:X:40:THR:HB	26:X:41:PRO:CD	2.44	0.44
26:X:45:GLY:O	26:X:48:GLU:HB2	2.18	0.44
29:a:9:GLY:CA	29:a:12:LYS:NZ	2.80	0.44
31:y:32:A:H5'	31:y:398:C:HO2'	1.80	0.44
31:y:181:G:N1	31:y:195:A:O4'	2.50	0.44
31:y:191(D):U:H2'	31:y:191(E):G:C8	2.52	0.44
31:y:272:C:H42	31:y:273:A:N6	2.15	0.44
31:y:276:G:H2'	31:y:276:G:N3	2.33	0.44
31:y:492:G:C6	31:y:493:G:C2	3.06	0.44
31:y:508:C:H1'	31:y:509:A:N7	2.32	0.44
31:y:515:G:N1	31:y:516:PSU:H1'	2.32	0.44
31:y:519:C:C4'	45:m:50:ALA:CB	2.94	0.44
31:y:637:G:C6	31:y:638:G:C5	3.05	0.44
31:y:654:G:H2'	31:y:655:A:C8	2.48	0.44
31:y:656:C:H2'	31:y:657:G:H8	1.83	0.44
31:y:657:G:C2'	48:p:23:GLY:HA2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:658:G:OP1	48:p:31:LEU:HD21	2.17	0.44
31:y:719:C:C6	31:y:720:C:C6	3.06	0.44
31:y:952:U:O2	46:n:126:LYS:HA	2.17	0.44
31:y:1150:U:O2'	43:k:40:LEU:C	2.61	0.44
31:y:1301:U:H6	31:y:1301:U:H5''	1.81	0.44
31:y:1377:A:N3	40:h:5:ARG:NH2	2.66	0.44
31:y:1486:G:C6	31:y:1487:G:C6	3.06	0.44
33:0:30:G:H21	40:h:144:MET:HE2	1.77	0.44
33:0:43:G:C2	33:0:44:A:C5	3.05	0.44
35:c:55:PHE:HD1	35:c:56:ARG:N	2.16	0.44
36:d:11:ARG:HG3	36:d:180:ALA:HB2	2.00	0.44
36:d:110:ASN:HD22	36:d:141:VAL:N	2.16	0.44
36:d:126:ARG:HD3	36:d:126:ARG:N	2.33	0.44
36:d:138:VAL:CG2	36:d:169:ALA:CB	2.77	0.44
36:d:150:LYS:HD2	36:d:168:ALA:O	2.18	0.44
37:e:111:ALA:CB	37:e:116:GLN:HG3	2.46	0.44
37:e:117:ALA:O	37:e:121:VAL:CG2	2.64	0.44
38:f:106:PRO:HA	38:f:109:ILE:CB	2.48	0.44
38:f:107:ARG:HA	38:f:110:LEU:HD22	1.99	0.44
40:h:77:SER:CB	40:h:86:GLN:HG2	2.47	0.44
41:i:4:ASP:O	41:i:5:PRO:C	2.61	0.44
41:i:105:ARG:HG3	41:i:105:ARG:NH1	2.31	0.44
43:k:26:ALA:O	43:k:81:THR:HG23	2.18	0.44
43:k:95:GLU:C	43:k:96:ILE:HD12	2.43	0.44
46:n:34:LEU:CA	46:n:38:GLY:HA2	2.46	0.44
47:o:57:ARG:HG2	47:o:58:LYS:N	2.32	0.44
48:p:53:HIS:C	48:p:55:GLY:N	2.74	0.44
50:r:14:LYS:H	50:r:15:MET:CE	2.31	0.44
50:r:103:GLY:O	50:r:104:LYS:HD2	2.17	0.44
51:s:74:ARG:HG2	51:s:79:LEU:O	2.18	0.44
51:s:74:ARG:CG	51:s:79:LEU:HB3	2.41	0.44
52:t:29:ARG:HD2	52:t:29:ARG:N	2.33	0.44
52:t:45:VAL:CG1	52:t:46:GLY:H	2.31	0.44
53:u:45:GLN:OE1	53:u:46:GLU:HG3	2.18	0.44
1:w:35:G:N7	1:w:36:G:N7	2.66	0.44
1:w:62:C:H3'	1:w:63:U:H5	1.83	0.44
1:w:151:C:H2'	1:w:152:G:C8	2.53	0.44
1:w:164:U:OP2	1:w:164:U:C5	2.71	0.44
1:w:445:C:H1'	1:w:450:G:H4'	2.00	0.44
1:w:460:A:C5	1:w:461:C:C2	3.05	0.44
1:w:549:G:C6	1:w:550:G:N7	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:579:G:C2'	1:w:580:C:H6	2.06	0.44
1:w:584:C:H6	1:w:584:C:P	2.40	0.44
1:w:600:G:C5	1:w:601:C:C5	3.06	0.44
1:w:808:G:P	1:w:808:G:H8	2.40	0.44
1:w:821:A:O2'	1:w:944:G:H5''	2.18	0.44
1:w:849:A:O5'	1:w:849:A:C8	2.62	0.44
1:w:851:U:H4'	26:X:46:ASN:N	2.33	0.44
1:w:874:G:H5'	1:w:896:A:C6	2.53	0.44
1:w:886:C:O2	1:w:886:C:C2'	2.66	0.44
1:w:937:U:C3'	1:w:938:G:O4'	2.66	0.44
1:w:949:C:C6	1:w:949:C:O5'	2.70	0.44
1:w:1033:U:O2'	1:w:1034:G:P	2.74	0.44
1:w:1058:G:H2'	1:w:1059:G:H5''	1.98	0.44
1:w:1285:G:C2	1:w:1329:U:C6	3.05	0.44
1:w:1320:C:O2'	1:w:1322:A:N7	2.51	0.44
1:w:1373:A:C8	1:w:1374:G:N7	2.86	0.44
1:w:1397:U:O2	1:w:1397:U:C2'	2.66	0.44
1:w:1421:G:C2	1:w:1422:G:C5	3.06	0.44
1:w:1447:G:H2'	1:w:1448:G:N7	2.32	0.44
1:w:1471:A:N1	1:w:1472:A:C4	2.86	0.44
1:w:1500:G:O2'	4:B:101:GLU:CA	2.55	0.44
1:w:1517:G:C6	1:w:1518:C:C4	3.05	0.44
1:w:1531:C:H2'	1:w:1532:C:H6	1.82	0.44
1:w:1533:C:H6	1:w:1533:C:O5'	2.00	0.44
1:w:1638:C:H5''	1:w:2710:C:O2	2.18	0.44
1:w:1641:A:O5'	1:w:1641:A:H8	2.01	0.44
1:w:1769:G:C4	1:w:1770:G:C8	3.06	0.44
1:w:1800:C:O2'	1:w:1801:G:P	2.75	0.44
1:w:1812:A:H2'	1:w:1813:G:C5'	2.48	0.44
1:w:1861:G:C8	1:w:1861:G:O5'	2.70	0.44
1:w:1869:G:N1	1:w:1871:A:H5''	2.33	0.44
1:w:1886:C:C4	1:w:1887:C:C4	3.06	0.44
1:w:1918:A:C2'	1:w:1919:A:C8	2.98	0.44
1:w:1967:C:C4	1:w:1968:G:C8	3.05	0.44
1:w:2013:A:H4'	19:Q:96:ILE:HG23	1.98	0.44
1:w:2051:A:H5''	1:w:2578:G:OP1	2.18	0.44
1:w:2052:G:O6	1:w:2617:C:N3	2.50	0.44
1:w:2075:U:H5'	1:w:2597:G:H1'	2.00	0.44
1:w:2145:C:H2'	1:w:2146:C:C5	2.51	0.44
1:w:2150:U:N3	1:w:2151:G:N7	2.65	0.44
1:w:2285:C:O4'	1:w:2288:A:C5	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2289:G:C2'	1:w:2290:G:H5''	2.46	0.44
1:w:2305:A:O2'	7:E:136:ARG:CZ	2.66	0.44
1:w:2436:G:O2'	1:w:2598:A:N1	2.49	0.44
1:w:2563:U:C2	1:w:2565:A:O5'	2.71	0.44
1:w:2574:G:H2'	1:w:2575:C:C6	2.52	0.44
1:w:2588:G:C5	1:w:2589:A:C8	3.06	0.44
1:w:2697:G:C2	1:w:2711:A:N3	2.86	0.44
2:x:17:C:N4	2:x:18:G:C5	2.85	0.44
2:x:108:C:H5''	2:x:109:G:H5''	1.99	0.44
3:A:43:GLU:HA	3:A:175:PRO:CA	2.46	0.44
3:A:201:LYS:NZ	3:A:203:GLU:HG3	2.33	0.44
4:B:40:THR:O	4:B:42:GLY:N	2.51	0.44
4:B:78:LYS:O	4:B:95:LEU:CA	2.65	0.44
4:B:157:ARG:O	4:B:158:ALA:HB3	2.16	0.44
4:B:261:LYS:HD2	4:B:261:LYS:N	2.32	0.44
5:C:28:ALA:HB2	5:C:93:VAL:HG13	0.71	0.44
6:D:143:LEU:HD21	6:D:186:ARG:HH21	1.83	0.44
7:E:16:ARG:HG3	7:E:16:ARG:H	1.50	0.44
7:E:19:LEU:CA	7:E:25:TYR:OH	2.65	0.44
7:E:42:GLY:HA2	7:E:88:ILE:O	2.18	0.44
7:E:53:LEU:H	7:E:53:LEU:CD2	2.24	0.44
7:E:59:GLU:C	7:E:63:ILE:HG12	2.42	0.44
7:E:141:PHE:HB3	7:E:144:ILE:HB	2.00	0.44
8:F:49:VAL:C	8:F:50:VAL:HG23	2.43	0.44
8:F:88:LEU:HD23	8:F:164:TYR:O	2.18	0.44
8:F:126:PRO:CD	8:F:130:ARG:C	2.90	0.44
9:G:82:ARG:HD2	9:G:89:TYR:CE1	2.52	0.44
9:G:90:GLY:O	9:G:91:SER:OG	2.36	0.44
9:G:125:GLU:O	9:G:142:VAL:O	2.36	0.44
10:H:35:ARG:HG2	10:H:61:HIS:NE2	2.33	0.44
10:H:93:LYS:O	10:H:110:LEU:CD2	2.66	0.44
11:I:38:VAL:CG1	11:I:59:LYS:HG2	2.48	0.44
11:I:71:ARG:O	11:I:72:PRO:C	2.61	0.44
12:J:86:LYS:HG3	12:J:118:GLY:HA3	1.97	0.44
13:K:9:TYR:HE1	13:K:12:GLN:CD	2.26	0.44
13:K:11:LYS:O	13:K:12:GLN:CB	2.61	0.44
13:K:89:ASN:HB2	13:K:90:VAL:H	1.57	0.44
14:L:31:HIS:C	14:L:33:ARG:N	2.63	0.44
14:L:64:ARG:NH1	14:L:64:ARG:CB	2.80	0.44
14:L:66:VAL:O	14:L:70:LEU:HG	2.18	0.44
15:M:28:VAL:HG22	15:M:37:ALA:CA	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:23:LEU:HD22	27:Y:25:LEU:CB	2.45	0.44
22:T:10:ARG:HG3	22:T:37:VAL:CA	2.48	0.44
22:T:23:LYS:C	22:T:25:PRO:HD3	2.42	0.44
22:T:38:TYR:O	22:T:39:VAL:CG2	2.66	0.44
22:T:38:TYR:C	22:T:39:VAL:HG23	2.42	0.44
23:U:45:PHE:CD2	23:U:78:TYR:C	2.82	0.44
31:y:23:C:N4	31:y:24:U:O4	2.51	0.44
31:y:38:G:N2	31:y:397:A:O5'	2.51	0.44
31:y:113:G:H2'	31:y:114:U:C5	2.39	0.44
31:y:123:C:H42	31:y:238:G:H1	1.66	0.44
31:y:190:G:OP2	31:y:190:G:H8	2.01	0.44
31:y:228:A:C3'	31:y:229:U:C5	2.99	0.44
31:y:262:A:H2'	31:y:263:A:C5	2.53	0.44
31:y:312:C:C6	31:y:312:C:H3'	2.53	0.44
31:y:329:A:C5	31:y:332:G:C6	3.06	0.44
31:y:352:C:H3'	31:y:352:C:C6	2.53	0.44
31:y:405:U:O4	31:y:498:A:N7	2.51	0.44
31:y:516:PSU:C2	31:y:536:C:N4	2.85	0.44
31:y:542:G:C2	31:y:543:C:C5	3.06	0.44
31:y:691:G:O6	44:l:53:SER:N	2.51	0.44
31:y:691:G:H1	44:l:52:GLY:HA2	1.83	0.44
31:y:691:G:HO2'	31:y:692:U:C5'	2.31	0.44
31:y:758:G:H4'	31:y:880:C:H4'	2.00	0.44
31:y:775:G:C2'	31:y:776:G:H8	2.31	0.44
31:y:807:A:C6	31:y:808:C:N4	2.86	0.44
31:y:815:A:C6	31:y:1509:C:O2	2.71	0.44
31:y:841:U:O2'	31:y:842:C:P	2.75	0.44
31:y:895:G:H2'	31:y:896:C:C6	2.53	0.44
31:y:950:U:O2	31:y:951:G:C8	2.71	0.44
31:y:966:M2G:HO2'	31:y:967:5MC:C5'	2.22	0.44
31:y:974:A:OP1	47:o:31:ARG:HG2	2.17	0.44
31:y:975:A:H4'	31:y:976:G:H5''	1.98	0.44
31:y:1067:A:C8	31:y:1067:A:OP2	2.71	0.44
31:y:1102:A:N7	31:y:1103:C:N4	2.66	0.44
31:y:1176:A:C5	31:y:1177:G:C5	3.06	0.44
31:y:1304:G:O2'	31:y:1333:A:C6	2.71	0.44
31:y:1395:C:O2'	31:y:1396:A:C5'	2.66	0.44
31:y:1411:C:N4	31:y:1412:C:N4	2.66	0.44
31:y:1422:G:C2'	31:y:1423:G:C5'	2.92	0.44
31:y:1487:G:C6	31:y:1488:G:C5	3.06	0.44
31:y:1499:A:C2	31:y:1500:A:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1518:MA6:C9	31:y:1519:MA6:C9	2.89	0.44
33:0:34:G:OP1	33:0:34:G:C8	2.71	0.44
35:c:23:ARG:HE	35:c:24:TRP:HA	1.83	0.44
36:d:11:ARG:HD2	36:d:175:LEU:O	2.18	0.44
36:d:22:TRP:CH2	47:o:54:PRO:HG3	2.53	0.44
36:d:32:LEU:C	36:d:34:LEU:N	2.73	0.44
37:e:12:CYS:HB3	37:e:19:LEU:CA	2.45	0.44
37:e:63:LYS:HA	37:e:66:ARG:CG	2.48	0.44
37:e:68:TYR:CZ	37:e:103:ASN:HB3	2.52	0.44
37:e:93:PHE:CD1	37:e:93:PHE:C	2.94	0.44
37:e:136:PRO:C	37:e:138:TYR:H	2.25	0.44
38:f:33:VAL:HG21	38:f:109:ILE:HA	2.00	0.44
38:f:151:LEU:C	38:f:153:LYS:N	2.69	0.44
39:g:60:PHE:O	39:g:61:LEU:HD22	2.17	0.44
41:i:3:THR:HG21	41:i:89:PRO:CG	2.45	0.44
41:i:49:GLU:C	41:i:59:LEU:HA	2.43	0.44
43:k:23:ILE:HG22	43:k:23:ILE:O	2.18	0.44
45:m:101:ARG:HB2	45:m:119:TYR:CZ	2.53	0.44
49:q:66:PRO:HB2	49:q:67:THR:H	1.54	0.44
50:r:7:THR:O	50:r:23:VAL:HG22	2.18	0.44
50:r:17:LYS:O	50:r:45:HIS:C	2.61	0.44
50:r:28:PRO:C	50:r:34:LYS:O	2.57	0.44
51:s:45:SER:HB3	51:s:50:ILE:C	2.42	0.44
53:u:77:ALA:O	53:u:81:LYS:HD3	2.17	0.44
1:w:7:G:N7	1:w:8:A:C5	2.86	0.44
1:w:8:A:C5'	10:H:74:PHE:CZ	3.00	0.44
1:w:31:C:H5''	1:w:1239:G:OP1	2.17	0.44
1:w:134:C:O5'	1:w:134:C:C6	2.71	0.44
1:w:153:C:H2'	1:w:154:G:C8	2.52	0.44
1:w:210:C:H1'	1:w:1366:A:C2	2.53	0.44
1:w:227:A:P	12:J:76:LYS:HZ3	2.41	0.44
1:w:299:A:N9	1:w:322:A:C2	2.86	0.44
1:w:307:G:C2	1:w:309:G:H8	2.30	0.44
1:w:316:C:O2	1:w:316:C:C2'	2.65	0.44
1:w:396:G:H1'	24:V:44:PRO:HB2	2.00	0.44
1:w:587:C:C2	1:w:671:C:C1'	3.00	0.44
1:w:662:G:C6	1:w:663:G:N7	2.86	0.44
1:w:683:C:C5'	28:Z:21:ARG:NH1	2.80	0.44
1:w:706:A:C5	1:w:707:G:C4	3.06	0.44
1:w:760:G:C4	1:w:761:A:N7	2.86	0.44
1:w:813:U:C4	1:w:1195:G:N1	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:903:C:H2'	1:w:904:C:C6	2.52	0.44
1:w:1049:C:O2	1:w:1049:C:C2'	2.66	0.44
1:w:1184:G:H2'	1:w:1185:C:O5'	2.18	0.44
1:w:1198:U:H2'	1:w:1199:U:C6	2.52	0.44
1:w:1223:G:N1	1:w:1227:G:C5	2.86	0.44
1:w:1228:G:C5	1:w:1229:G:C8	3.05	0.44
1:w:1262:A:H2	27:Y:10:LYS:CE	2.30	0.44
1:w:1263:U:O4	1:w:2014:A:OP2	2.36	0.44
1:w:1270:C:OP2	1:w:1270:C:H6	1.97	0.44
1:w:1432:C:C4	1:w:1562:A:N6	2.86	0.44
1:w:1436:G:N3	1:w:1477:A:O2'	2.47	0.44
1:w:1471:A:N1	1:w:1472:A:N7	2.66	0.44
1:w:1666:G:N7	1:w:1667:G:N3	2.66	0.44
1:w:1717:G:H2'	1:w:1718:G:H4'	1.99	0.44
1:w:1743:G:C5	1:w:1746:G:N7	2.86	0.44
1:w:1746:G:C2	1:w:1747:G:H1'	2.53	0.44
1:w:1753:G:C2'	1:w:1754:C:H3'	2.47	0.44
1:w:1780:A:P	1:w:1781:C:H3'	2.58	0.44
1:w:1796:U:O4'	4:B:255:LYS:HA	2.18	0.44
1:w:1836:C:H5'	31:y:783:C:O2'	2.17	0.44
1:w:1851:U:H5'	33:0:4:G:C5'	2.48	0.44
1:w:1912:A:O2'	31:y:1494:G:O2'	2.33	0.44
1:w:1925:C:C2'	1:w:1926:U:C5'	2.95	0.44
1:w:1991:U:C2'	1:w:1992:G:C5'	2.61	0.44
1:w:1993:U:H2'	1:w:1994:C:O4'	2.18	0.44
1:w:1997:G:OP2	5:C:123:ALA:O	2.36	0.44
1:w:2011:U:O4	1:w:2012:G:C5	2.70	0.44
1:w:2076:U:C5'	1:w:2238:G:N1	2.67	0.44
1:w:2155:G:C5	1:w:2156:G:C4	3.06	0.44
1:w:2298:A:H1'	1:w:2322:A:C1'	2.42	0.44
1:w:2320:A:N9	1:w:2333:A:C6	2.86	0.44
1:w:2359:C:O2	12:J:58:THR:HG23	2.17	0.44
1:w:2378:A:C8	1:w:2378:A:P	3.11	0.44
1:w:2459:A:C8	1:w:2460:U:C5	3.05	0.44
1:w:2516:G:C2	1:w:2569:G:C4	3.05	0.44
1:w:2556:C:C6	1:w:2557:G:N7	2.85	0.44
1:w:2563:U:C2	1:w:2565:A:P	3.11	0.44
1:w:2615:U:C4	27:Y:7:PRO:HG3	2.52	0.44
1:w:2659:G:C4	1:w:2661:G:OP2	2.70	0.44
1:w:2679:A:O3'	5:C:189:PRO:CD	2.62	0.44
2:x:7:G:N2	15:M:47:THR:HG1	1.96	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:83:G:O2'	2:x:84:C:H5'	2.18	0.44
3:A:182:PRO:O	3:A:184:GLU:N	2.51	0.44
4:B:17:THR:CG2	4:B:204:ILE:HA	2.48	0.44
4:B:21:PHE:O	4:B:24:ILE:CG2	2.66	0.44
4:B:176:ARG:O	4:B:178:PRO:HD3	2.17	0.44
5:C:22:PRO:O	5:C:23:VAL:HG13	2.18	0.44
6:D:105:LEU:HD22	6:D:108:ALA:HB3	1.99	0.44
6:D:121:VAL:C	6:D:189:MET:O	2.61	0.44
7:E:7:LEU:HG	7:E:12:TYR:CE2	2.53	0.44
7:E:72:ARG:HA	7:E:87:PRO:HA	2.00	0.44
7:E:79:ASN:ND2	7:E:86:MET:SD	2.77	0.44
9:G:123:LEU:O	9:G:144:VAL:HB	2.18	0.44
10:H:117:HIS:O	10:H:118:PRO:C	2.61	0.44
11:I:92:GLU:HA	11:I:93:PRO:HD2	1.77	0.44
12:J:99:LEU:HA	12:J:102:ARG:NH1	2.33	0.44
13:K:54:MET:O	13:K:58:PHE:CD2	2.70	0.44
13:K:73:PRO:HB2	13:K:74:TYR:H	1.63	0.44
13:K:112:GLU:N	13:K:112:GLU:OE2	2.50	0.44
13:K:117:ALA:HB3	13:K:118:LEU:HD12	2.00	0.44
15:M:16:ASN:O	15:M:17:ARG:C	2.61	0.44
15:M:65:VAL:HA	15:M:68:GLN:CG	2.48	0.44
16:N:102:ILE:O	16:N:104:ASN:N	2.51	0.44
18:P:16:PRO:CG	18:P:17:GLY:H	2.30	0.44
18:P:50:PRO:CG	18:P:51:VAL:H	2.27	0.44
20:R:65:ARG:O	20:R:66:LEU:HB2	2.18	0.44
21:S:33:LYS:HB3	21:S:65:ALA:HB1	1.92	0.44
21:S:34:LYS:HA	21:S:64:GLU:O	2.18	0.44
22:T:14:LYS:HA	22:T:15:PRO:HD3	1.72	0.44
22:T:131:ARG:C	22:T:133:ILE:H	2.26	0.44
24:V:19:GLN:N	24:V:44:PRO:CD	2.81	0.44
24:V:69:LYS:O	24:V:70:VAL:C	2.61	0.44
25:W:3:LEU:CD2	25:W:4:SER:N	2.73	0.44
27:Y:13:LYS:C	27:Y:16:ARG:HB3	2.28	0.44
29:a:3:LYS:HA	29:a:3:LYS:CE	2.47	0.44
29:a:41:ILE:HD12	29:a:41:ILE:N	2.33	0.44
31:y:136:C:H1'	49:q:63:GLY:CA	2.47	0.44
31:y:276:G:C1'	50:r:68:ARG:NH1	2.79	0.44
31:y:279:A:O2'	31:y:280:C:OP2	2.36	0.44
31:y:327:A:HO2'	31:y:329:A:H5'	1.83	0.44
31:y:433:C:O2'	31:y:434:U:H5'	2.18	0.44
31:y:502:G:O6	31:y:503:C:C4	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:577:G:H8	31:y:577:G:O5'	2.01	0.44
31:y:601:C:O2	31:y:638:G:N2	2.51	0.44
31:y:896:C:C2'	31:y:897:C:H5'	2.46	0.44
31:y:910:C:H5''	45:m:96:ARG:HH22	0.62	0.44
31:y:956:U:C2'	31:y:957:U:H5'	2.47	0.44
31:y:962:C:N3	31:y:963:G:N7	2.66	0.44
31:y:977:A:N1	31:y:1224:G:OP1	2.50	0.44
31:y:1004:A:O2'	31:y:1005:A:P	2.75	0.44
31:y:1005:A:OP2	31:y:1006:C:C4	2.71	0.44
31:y:1047:G:C8	31:y:1047:G:H3'	2.53	0.44
31:y:1075:C:C4'	31:y:1101:A:N6	2.81	0.44
31:y:1132:C:O2'	31:y:1133:G:H5'	2.18	0.44
31:y:1188:A:C4'	47:o:58:LYS:HE2	2.47	0.44
31:y:1215:G:C4	31:y:1216:G:N7	2.86	0.44
31:y:1229:A:O3'	32:z:30:G:H4'	2.18	0.44
31:y:1316:G:C5'	31:y:1360:A:H2	2.30	0.44
32:z:5:G:N3	32:z:5:G:C2'	2.80	0.44
35:c:28:PHE:CD1	35:c:28:PHE:C	2.96	0.44
35:c:98:LEU:HD23	35:c:98:LEU:C	2.43	0.44
35:c:119:GLU:HG3	35:c:153:ARG:NH2	2.32	0.44
35:c:132:LYS:HD3	35:c:133:LYS:N	2.27	0.44
35:c:141:GLU:O	35:c:143:GLU:N	2.51	0.44
35:c:168:THR:OG1	35:c:191:ASP:O	2.28	0.44
36:d:12:LEU:HA	36:d:16:ARG:HD2	2.00	0.44
36:d:113:ALA:O	36:d:114:PRO:C	2.61	0.44
36:d:142:MET:O	36:d:143:GLU:C	2.61	0.44
36:d:147:LYS:NZ	36:d:147:LYS:CB	2.81	0.44
36:d:199:LYS:HB3	36:d:201:TYR:CE2	2.53	0.44
37:e:190:ASP:O	37:e:193:ASP:HB2	2.17	0.44
39:g:4:TYR:O	39:g:65:VAL:O	2.35	0.44
39:g:10:LEU:CD1	39:g:14:LEU:CD1	2.95	0.44
39:g:12:PRO:C	39:g:13:ASN:HD22	2.26	0.44
42:j:90:PRO:C	42:j:92:TYR:N	2.74	0.44
42:j:112:LYS:O	42:j:113:LYS:C	2.59	0.44
45:m:85:ARG:CZ	45:m:86:GLY:O	2.65	0.44
45:m:95:VAL:HG11	45:m:97:TYR:O	2.18	0.44
46:n:68:GLY:O	46:n:71:ARG:HB2	2.17	0.44
46:n:95:GLY:CA	46:n:111:LYS:HG3	2.36	0.44
47:o:46:GLU:O	47:o:49:HIS:ND1	2.51	0.44
48:p:47:LYS:HB2	48:p:47:LYS:NZ	2.28	0.44
51:s:38:GLU:O	51:s:41:LYS:CE	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:u:31:SER:O	53:u:35:THR:OG1	2.27	0.44
54:v:17:THR:O	54:v:22:ARG:HD2	2.18	0.44
1:w:26:G:C8	1:w:27:G:C8	3.06	0.43
1:w:148:C:C5'	1:w:149:A:OP2	2.65	0.43
1:w:198:C:O3'	1:w:2243:U:O2'	2.31	0.43
1:w:483:A:N6	1:w:497:A:C1'	2.62	0.43
1:w:542:C:N4	1:w:552:G:C2	2.86	0.43
1:w:543:C:C4	1:w:551:G:N1	2.86	0.43
1:w:590:A:H2'	1:w:591:C:N1	2.31	0.43
1:w:675:A:C5	1:w:804:A:H2	2.35	0.43
1:w:682:G:N2	1:w:796:C:C2	2.86	0.43
1:w:713:G:C2	1:w:719:C:C4	3.06	0.43
1:w:769:G:C4	1:w:770:G:C8	3.06	0.43
1:w:810:U:O2'	1:w:811:U:P	2.76	0.43
1:w:846:C:C1'	1:w:847:U:C6	2.98	0.43
1:w:921:G:C5	1:w:922:U:C4	3.06	0.43
1:w:1009:A:C2	1:w:1153:C:C2'	3.01	0.43
1:w:1009:A:C2	1:w:1153:C:O2'	2.57	0.43
1:w:1190:G:OP1	12:J:32:THR:CB	2.65	0.43
1:w:1264:G:N1	1:w:2014:A:OP2	2.51	0.43
1:w:1271:G:H1'	1:w:1618:A:OP1	2.18	0.43
1:w:1313:U:H2'	1:w:1314:C:H5'	2.00	0.43
1:w:1399:C:H6	1:w:1399:C:O5'	2.01	0.43
1:w:1461:G:H2'	1:w:1462:C:C6	2.53	0.43
1:w:1471:A:N1	1:w:1472:A:N9	2.66	0.43
1:w:1791:A:C8	1:w:1828:G:N2	2.83	0.43
1:w:1795:C:N3	1:w:1796:U:N3	2.66	0.43
1:w:1822:G:O2'	1:w:1823:G:C5'	2.66	0.43
1:w:1840:G:N2	1:w:1841:U:C1'	2.81	0.43
1:w:1853:A:C6	1:w:1889:A:C6	3.06	0.43
1:w:2045:C:C2	1:w:2046:G:C8	3.06	0.43
1:w:2092:U:H5'	9:G:27:ARG:HH12	1.81	0.43
1:w:2128:C:H5'	3:A:37:LYS:HD2	1.96	0.43
1:w:2173:A:H5'	1:w:2174:C:OP2	2.17	0.43
1:w:2240:C:C2	1:w:2241:A:O4'	2.71	0.43
1:w:2287:A:O2'	1:w:2288:A:P	2.76	0.43
1:w:2304:G:H1'	7:E:132:ASN:CG	2.42	0.43
1:w:2370:G:O2'	1:w:2371:G:H5'	2.18	0.43
1:w:2436:G:H3'	1:w:2437:U:H5	1.83	0.43
1:w:2440:C:H5''	1:w:2588:G:P	2.58	0.43
1:w:2457:U:C2'	1:w:2458:G:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2618:G:H21	5:C:150:VAL:CG2	2.30	0.43
1:w:2652:C:H3'	1:w:2653:U:C5	2.53	0.43
1:w:2744:G:C6	1:w:2761:G:N1	2.86	0.43
1:w:2795:G:C1'	1:w:2801:A:H61	2.24	0.43
1:w:2825:G:C6	1:w:2826:A:C5	3.06	0.43
2:x:9:G:C4	2:x:112:G:N2	2.85	0.43
2:x:57:A:N7	7:E:27:ASN:ND2	2.65	0.43
2:x:73:A:C6	2:x:104:A:C4	3.06	0.43
2:x:93:C:C3'	2:x:94:C:H6	2.30	0.43
4:B:19:ALA:HB3	4:B:21:PHE:HE2	1.80	0.43
4:B:65:ILE:CB	4:B:105:ILE:HA	2.47	0.43
5:C:33:VAL:CG2	5:C:34:VAL:H	2.28	0.43
5:C:59:VAL:O	5:C:60:ASN:HB2	2.18	0.43
5:C:126:PRO:O	5:C:127:ASP:C	2.60	0.43
7:E:14:GLU:HA	7:E:17:PRO:CG	2.48	0.43
9:G:13:GLY:CA	9:G:17:GLN:HG2	2.46	0.43
9:G:48:GLU:CA	9:G:51:ILE:HD12	2.42	0.43
9:G:101:LEU:HA	9:G:101:LEU:HD13	1.63	0.43
9:G:128:LEU:HB2	9:G:141:LYS:HA	2.00	0.43
10:H:122:LEU:O	10:H:123:GLU:C	2.61	0.43
11:I:32:TYR:O	11:I:33:ALA:CB	2.61	0.43
11:I:47:ILE:HD13	11:I:47:ILE:HA	1.87	0.43
12:J:39:LYS:HB3	12:J:39:LYS:HZ2	1.83	0.43
12:J:97:PRO:O	12:J:99:LEU:N	2.50	0.43
14:L:87:TYR:OH	14:L:116:LEU:CD2	2.65	0.43
15:M:23:ARG:HG3	15:M:24:LEU:N	2.28	0.43
16:N:92:GLY:C	16:N:94:ALA:H	2.26	0.43
19:Q:12:ILE:C	19:Q:99:ARG:O	2.61	0.43
19:Q:17:VAL:O	19:Q:20:VAL:CB	2.65	0.43
21:S:36:ALA:C	21:S:37:VAL:HG13	2.36	0.43
21:S:46:LYS:N	21:S:57:GLN:CA	2.81	0.43
21:S:88:LYS:CG	21:S:89:PHE:HD1	2.22	0.43
22:T:76:LEU:CG	22:T:77:ASP:N	2.80	0.43
24:V:85:LEU:HD13	24:V:86:SER:N	2.33	0.43
24:V:87:PRO:C	24:V:91:LYS:HD2	2.42	0.43
26:X:44:ARG:N	26:X:44:ARG:CD	2.54	0.43
28:Z:5:TRP:CD1	28:Z:7:PRO:HD3	2.53	0.43
31:y:42:G:C4	31:y:43:C:C4	3.06	0.43
31:y:120:A:C5	31:y:122:G:C4	3.06	0.43
31:y:234:C:C1'	50:r:64:PRO:CG	2.94	0.43
31:y:360:A:C5	31:y:361:G:N7	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:361:G:C5	31:y:362:G:N3	2.86	0.43
31:y:380:G:C2	31:y:382:A:H5''	2.53	0.43
31:y:391:G:C2	31:y:392:G:C8	3.05	0.43
31:y:483:C:C2	31:y:484:G:N7	2.86	0.43
31:y:575:G:C4	31:y:881:G:C2	3.06	0.43
31:y:584:G:C6	31:y:585:G:C5	3.06	0.43
31:y:703:G:P	31:y:703:G:C3'	3.01	0.43
31:y:775:G:H2'	31:y:776:G:H8	1.82	0.43
31:y:896:C:O3'	50:r:101:ARG:NH2	2.51	0.43
31:y:980:C:C6	31:y:981:U:N1	2.87	0.43
31:y:1061:G:C5	31:y:1197:G:C2	3.06	0.43
31:y:1114:C:H2'	31:y:1115:C:C6	2.52	0.43
31:y:1115:C:H1'	47:o:61:TRP:HB2	1.99	0.43
31:y:1222:G:C8	31:y:1222:G:C5'	3.01	0.43
31:y:1300:G:N2	31:y:1334:G:H2'	2.33	0.43
31:y:1300:G:C2'	31:y:1301:U:C5	2.95	0.43
31:y:1306:A:N1	31:y:1331:G:O4'	2.51	0.43
31:y:1395:C:C4'	31:y:1401:G:H21	2.30	0.43
31:y:1402:4OC:H3'	31:y:1403:C:C5	2.53	0.43
31:y:1443:G:OP1	31:y:1446:A:H5''	2.17	0.43
32:z:65:G:C4	32:z:66:U:C5	3.05	0.43
35:c:187:LEU:CD2	35:c:203:GLY:H	2.27	0.43
35:c:194:PRO:O	35:c:195:ASP:C	2.60	0.43
36:d:45:LYS:C	36:d:47:LEU:N	2.76	0.43
36:d:117:ALA:O	36:d:118:GLN:C	2.61	0.43
36:d:156:ARG:HH21	36:d:161:GLU:CB	2.25	0.43
37:e:19:LEU:O	37:e:21:LEU:HG	2.18	0.43
37:e:115:ARG:O	37:e:118:ARG:CB	2.66	0.43
37:e:188:LEU:HA	37:e:189:PRO:HD2	1.90	0.43
38:f:137:GLU:O	38:f:138:ALA:C	2.60	0.43
40:h:103:TRP:CE2	40:h:137:LYS:NZ	2.86	0.43
40:h:121:ALA:O	40:h:122:HIS:C	2.61	0.43
41:i:6:ILE:H	41:i:6:ILE:HG13	1.53	0.43
44:l:14:VAL:CG1	44:l:35:PRO:HD3	2.48	0.43
44:l:51:LYS:N	44:l:51:LYS:CD	2.64	0.43
44:l:78:GLN:O	44:l:80:VAL:N	2.46	0.43
45:m:15:GLU:O	45:m:16:LYS:HG3	2.18	0.43
45:m:44:PRO:HB2	45:m:45:LYS:H	1.65	0.43
46:n:4:ILE:CG2	46:n:57:ARG:O	2.56	0.43
46:n:22:ILE:HG22	46:n:23:TYR:N	2.25	0.43
46:n:28:ALA:C	46:n:30:ALA:N	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:n:28:ALA:O	46:n:30:ALA:N	2.51	0.43
46:n:99:ARG:HG2	46:n:101:GLN:HE22	1.81	0.43
50:r:21:VAL:HG13	50:r:22:LEU:H	1.83	0.43
52:t:74:PHE:C	52:t:76:PRO:HD2	2.43	0.43
1:w:65:C:C2'	1:w:66:C:O4'	2.53	0.43
1:w:123:G:N7	1:w:124:G:C4	2.86	0.43
1:w:185:U:C5'	1:w:218:A:O2'	2.66	0.43
1:w:258:G:C6	1:w:259:G:C6	3.06	0.43
1:w:270(H):C:O2'	1:w:270(I):C:H5'	2.18	0.43
1:w:270(O):G:H2'	1:w:270(P):U:H5''	1.99	0.43
1:w:270(W):G:N2	1:w:270(X):G:O6	2.52	0.43
1:w:457:A:C5'	28:Z:40:TRP:CH2	2.98	0.43
1:w:488:G:N3	1:w:491:G:P	2.91	0.43
1:w:543:C:H2'	1:w:544:C:C6	2.52	0.43
1:w:576:U:C2'	1:w:577:G:C5'	2.96	0.43
1:w:579:G:N3	1:w:580:C:C2	2.84	0.43
1:w:604:G:O6	1:w:625:G:C6	2.71	0.43
1:w:664:C:N3	1:w:665:C:C5	2.86	0.43
1:w:708:C:C6	1:w:708:C:O5'	2.71	0.43
1:w:734:A:C5	1:w:735:A:C5	3.06	0.43
1:w:919:G:N1	1:w:2268:A:C5	2.86	0.43
1:w:919:G:C4	1:w:920:G:C8	3.07	0.43
1:w:956:G:N2	1:w:959:A:H3'	2.33	0.43
1:w:1123:C:H2'	1:w:1124:C:H6	1.83	0.43
1:w:1266:G:O2'	1:w:1267:U:P	2.77	0.43
1:w:1296:G:H2'	1:w:1297:C:O4'	2.18	0.43
1:w:1336:A:H8	1:w:1336:A:P	2.41	0.43
1:w:1431:U:C4	1:w:1432:C:C5	3.06	0.43
1:w:1534:G:H1'	1:w:1538:G:H22	1.83	0.43
1:w:1544:C:O2'	1:w:1545:A:O5'	2.36	0.43
1:w:1548:C:N4	1:w:1549:C:H41	2.15	0.43
1:w:1562:A:C6	1:w:1563:G:C5	3.06	0.43
1:w:1637:A:H2'	1:w:1638:C:O4'	2.17	0.43
1:w:1686:C:C5	1:w:1687:G:C8	3.05	0.43
1:w:1689:A:H2'	1:w:1690:A:C5'	2.48	0.43
1:w:1727:U:O5'	1:w:1727:U:H6	2.01	0.43
1:w:1789:A:O5'	1:w:1790:C:H5	2.00	0.43
1:w:1800:C:N4	1:w:1819:A:C8	2.82	0.43
1:w:1823:G:N7	1:w:1824:G:N7	2.66	0.43
1:w:1827:C:H4'	1:w:1971:A:C3'	2.46	0.43
1:w:1860:G:N2	1:w:1883:G:H1'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1991:U:C2	1:w:1993:U:O4	2.68	0.43
1:w:2024:G:C2	1:w:2040:C:C2	3.06	0.43
1:w:2053:G:H8	1:w:2053:G:O5'	2.01	0.43
1:w:2074:U:O2	1:w:2074:U:C2'	2.66	0.43
1:w:2196:C:H2'	1:w:2197:U:H5'	2.00	0.43
1:w:2241:A:H5''	1:w:2242:G:P	2.58	0.43
1:w:2268:A:HO2'	1:w:2269:A:C5'	2.31	0.43
1:w:2283:C:C2'	1:w:2284:C:C6	2.89	0.43
1:w:2360:A:C2	1:w:2361:A:C1'	2.76	0.43
1:w:2444:G:N2	1:w:2445:G:H1'	2.33	0.43
1:w:2447:G:N7	1:w:2500:U:H2'	2.33	0.43
1:w:2507:C:O2	1:w:2583:G:C2	2.71	0.43
1:w:2512:C:C6	1:w:2512:C:C4'	3.01	0.43
1:w:2520:C:C5	1:w:2567:G:C4	3.06	0.43
1:w:2603:G:C5	1:w:2604:U:C5	3.06	0.43
1:w:2675:A:C8	1:w:2675:A:H5''	2.53	0.43
1:w:2694:G:OP2	1:w:2694:G:C8	2.69	0.43
1:w:2694:G:C3'	1:w:2695:C:C5'	2.96	0.43
1:w:2718:G:H21	1:w:2847:U:H4'	1.84	0.43
1:w:2727:G:C2'	1:w:2728:U:H5'	2.49	0.43
1:w:2737:G:C2	1:w:2738:A:N7	2.86	0.43
1:w:2878:U:C5	1:w:2878:U:OP2	2.71	0.43
2:x:41:U:C5'	2:x:42:C:H5'	2.39	0.43
2:x:73:A:C2'	2:x:74:U:H5'	2.47	0.43
2:x:73:A:HO2'	2:x:74:U:H5'	1.79	0.43
2:x:80:U:C2	2:x:81:G:C8	3.06	0.43
2:x:81:G:C4	2:x:82:G:C8	3.05	0.43
3:A:52:PRO:CB	3:A:166:ASN:ND2	2.81	0.43
5:C:174:ASP:OD1	5:C:176:ILE:CD1	2.66	0.43
5:C:182:LEU:O	5:C:183:LEU:HB3	2.17	0.43
6:D:196:VAL:O	6:D:197:PHE:CD1	2.70	0.43
8:F:8:PRO:HA	8:F:49:VAL:CG1	2.48	0.43
8:F:19:VAL:HA	8:F:24:VAL:CA	2.47	0.43
8:F:42:ARG:C	8:F:53:GLU:HB3	2.43	0.43
9:G:37:VAL:O	9:G:37:VAL:HG12	2.18	0.43
10:H:101:TYR:H	10:H:102:PRO:CD	2.31	0.43
12:J:55:ARG:O	12:J:55:ARG:HG3	2.17	0.43
13:K:3:MET:O	13:K:3:MET:CG	2.64	0.43
13:K:115:MET:C	13:K:119:ARG:HD3	2.42	0.43
16:N:24:PRO:CA	16:N:49:VAL:CG1	2.73	0.43
16:N:92:GLY:H	16:N:116:ALA:CA	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:114:LEU:HD23	16:N:114:LEU:HA	1.86	0.43
17:O:55:ARG:HA	17:O:58:ARG:CD	2.35	0.43
17:O:66:ASN:HA	17:O:69:CYS:SG	2.58	0.43
25:W:43:GLN:C	25:W:45:SER:H	2.26	0.43
27:Y:16:ARG:CA	27:Y:20:ARG:NH1	2.80	0.43
31:y:42:G:C2	31:y:401:C:O2	2.71	0.43
31:y:68:G:H2'	31:y:69:G:C4'	2.41	0.43
31:y:95:G:C5	31:y:96:G:C6	3.06	0.43
31:y:137:C:H1'	49:q:62:VAL:HA	1.99	0.43
31:y:157:G:C5	31:y:165:C:C4	3.06	0.43
31:y:243:A:H2	31:y:282:A:H62	1.66	0.43
31:y:367:U:HO2'	31:y:368:U:C5'	2.23	0.43
31:y:425:G:N3	31:y:426:G:O4'	2.51	0.43
31:y:474:G:P	49:q:80:PHE:CB	3.06	0.43
31:y:495:A:C2	31:y:496:A:C2	3.06	0.43
31:y:498:A:N6	31:y:546:G:H2'	2.30	0.43
31:y:584:G:C2	31:y:585:G:C8	3.05	0.43
31:y:664:G:O2'	31:y:726:C:O4'	2.33	0.43
31:y:701:C:H3'	31:y:702:A:H2'	2.00	0.43
31:y:718:G:H1'	44:l:116:HIS:CG	2.53	0.43
31:y:1013:G:H21	31:y:1016:A:H62	1.46	0.43
31:y:1137:C:H1'	31:y:1138:G:N3	2.33	0.43
31:y:1151:A:OP1	43:k:42:THR:N	2.52	0.43
31:y:1157:A:C2	31:y:1181:G:C8	3.06	0.43
31:y:1206:G:H5'	36:d:194:GLY:N	2.33	0.43
31:y:1250:A:O2'	42:j:12:GLU:HB3	2.18	0.43
31:y:1259:C:O5'	31:y:1259:C:C6	2.61	0.43
31:y:1308:U:C2	31:y:1329:A:C2	3.05	0.43
31:y:1311:G:N7	52:t:2:PRO:CB	2.80	0.43
31:y:1344:C:H4'	42:j:120:ARG:C	2.43	0.43
31:y:1368:G:H3'	42:j:112:LYS:HB3	1.98	0.43
31:y:1433:A:C2	31:y:1468:A:N3	2.85	0.43
31:y:1510:U:C3'	31:y:1511:G:H8	2.31	0.43
31:y:1511:G:H2'	31:y:1512:U:H6	1.80	0.43
33:0:36:A:N6	33:0:37:A:C5	2.86	0.43
35:c:50:GLU:C	35:c:52:GLU:N	2.75	0.43
35:c:86:GLU:HA	35:c:92:TYR:CE2	2.53	0.43
35:c:170:GLU:O	35:c:172:ILE:N	2.51	0.43
36:d:67:THR:HG23	36:d:103:VAL:HA	2.00	0.43
37:e:9:CYS:CB	37:e:22:LYS:NZ	2.39	0.43
37:e:65:ARG:HD3	37:e:65:ARG:C	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:119:GLN:O	37:e:120:LEU:C	2.60	0.43
37:e:155:LEU:HB3	37:e:158:ILE:HG12	2.00	0.43
38:f:100:VAL:CG1	38:f:110:LEU:CD1	2.96	0.43
38:f:135:THR:O	38:f:139:LEU:HG	2.19	0.43
41:i:75:ARG:HG3	41:i:75:ARG:HH11	1.84	0.43
41:i:85:ARG:NH1	41:i:85:ARG:CB	2.77	0.43
41:i:95:VAL:HG23	41:i:99:GLU:CB	2.48	0.43
42:j:127:LYS:N	42:j:127:LYS:HD2	2.33	0.43
43:k:78:ASN:H	43:k:78:ASN:ND2	2.15	0.43
44:l:14:VAL:HG13	44:l:35:PRO:CD	2.48	0.43
44:l:121:PRO:O	44:l:122:LYS:NZ	2.48	0.43
47:o:9:LYS:HG3	47:o:23:ARG:HB2	1.99	0.43
47:o:16:PHE:HB3	47:o:19:ARG:HH11	1.82	0.43
50:r:82:MET:HB3	50:r:86:GLU:CG	2.49	0.43
51:s:51:LEU:HG	51:s:55:ARG:HB3	2.00	0.43
52:t:22:LEU:C	52:t:24:ALA:H	2.26	0.43
52:t:43:GLU:O	52:t:44:MET:HB3	2.18	0.43
54:v:9:ARG:CZ	54:v:21:TYR:HB3	2.48	0.43
1:w:55:G:C2	1:w:56:A:N7	2.85	0.43
1:w:126:A:C8	1:w:127:A:N7	2.86	0.43
1:w:141(B):C:C6	1:w:142:G:C8	3.07	0.43
1:w:194:G:C2'	1:w:195:A:H5'	2.48	0.43
1:w:199:A:C2	1:w:2433:A:C2	3.06	0.43
1:w:221:A:H2'	1:w:222:A:OP2	2.18	0.43
1:w:253:C:O2'	1:w:254:G:C5'	2.46	0.43
1:w:270(K):G:C6	1:w:270(L):C:C2	3.07	0.43
1:w:325:G:C8	1:w:325:G:O5'	2.71	0.43
1:w:440:G:C2	1:w:441:U:O2	2.72	0.43
1:w:497:A:H2'	1:w:498:G:O4'	2.19	0.43
1:w:513:A:C6	1:w:514:A:N7	2.86	0.43
1:w:542:C:N4	1:w:552:G:N2	2.66	0.43
1:w:618(A):G:N3	1:w:618(B):C:C4	2.87	0.43
1:w:702:G:H5'	1:w:703:U:OP2	2.19	0.43
1:w:753:C:H2'	1:w:754:C:C6	2.53	0.43
1:w:765:G:C4	1:w:766:C:N1	2.86	0.43
1:w:817:C:H6	1:w:817:C:C5'	2.27	0.43
1:w:832:G:H4'	12:J:52:GLU:CD	2.43	0.43
1:w:848:G:O6	1:w:931:G:C1'	2.55	0.43
1:w:861:A:N3	2:x:79:C:C4'	2.65	0.43
1:w:909:A:H1'	13:K:69:PHE:CE1	2.53	0.43
1:w:964:C:C5	1:w:965:C:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:977:G:C6	1:w:978:G:C5	3.05	0.43
1:w:993:G:OP1	17:O:50:ARG:CD	2.64	0.43
1:w:1007:C:O3'	10:H:132:LYS:NZ	2.52	0.43
1:w:1218:C:C2	1:w:1219:G:C8	3.05	0.43
1:w:1296:G:O3'	1:w:2710:C:H5''	2.18	0.43
1:w:144(B):A:O4'	1:w:1461:G:OP1	2.35	0.43
1:w:1614:A:P	1:w:1614:A:N3	2.91	0.43
1:w:1672:C:C6	1:w:1672:C:C3'	3.01	0.43
1:w:1747:G:C6	1:w:1748:G:C6	3.06	0.43
1:w:1759:A:H1'	1:w:2711:A:C2	2.53	0.43
1:w:1819:A:C2'	4:B:179:SER:CB	2.90	0.43
1:w:1936:A:C4	1:w:1945:G:C5	3.06	0.43
1:w:2018:G:N7	27:Y:9:LYS:NZ	2.65	0.43
1:w:2056:G:N2	27:Y:5:PRO:CA	2.81	0.43
1:w:2071:A:O2'	1:w:2072:G:H5'	2.17	0.43
1:w:2085:C:N3	1:w:2235:G:C6	2.86	0.43
1:w:2092:U:C6	1:w:2225:A:H2	2.37	0.43
1:w:2100:G:C4	1:w:2101:G:N7	2.86	0.43
1:w:2122:U:H2'	1:w:2123:G:H5'	2.00	0.43
1:w:2270:G:O2'	23:U:19:LYS:O	2.28	0.43
1:w:2303:G:N7	1:w:2304:G:N7	2.65	0.43
1:w:2324:C:O2'	1:w:2337:G:C5'	2.62	0.43
1:w:2468:G:O6	1:w:2481:G:C4	2.71	0.43
1:w:2530:A:H1'	1:w:2534:A:N6	2.33	0.43
1:w:2618:G:C4	1:w:2619:C:C5	3.06	0.43
1:w:2638:G:C4	1:w:2775:A:C6	3.06	0.43
1:w:2638:G:C2'	1:w:2775:A:N1	2.80	0.43
1:w:2653:U:OP2	1:w:2654:A:O2'	2.36	0.43
1:w:2667:C:N4	1:w:2668:G:C5	2.86	0.43
1:w:2709:G:O2'	1:w:2710:C:O4'	2.35	0.43
1:w:2790:A:C5'	1:w:2892:A:H61	2.31	0.43
2:x:67:G:C6	2:x:68:C:C4	3.06	0.43
2:x:95:U:C2'	2:x:96:G:H8	2.31	0.43
2:x:99:A:C6	2:x:100:G:C2	3.07	0.43
3:A:61:GLY:CA	3:A:164:PHE:CE2	2.99	0.43
4:B:63:ARG:HH21	4:B:86:PRO:N	2.16	0.43
4:B:136:ILE:CG1	4:B:137:PRO:CD	2.94	0.43
4:B:143:HIS:O	4:B:192:THR:O	2.36	0.43
5:C:116:VAL:HG23	5:C:120:TRP:HD1	1.82	0.43
5:C:119:ARG:NE	5:C:120:TRP:CZ2	2.86	0.43
6:D:152:VAL:HG13	6:D:190:ASP:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:51:ARG:O	7:E:52:ILE:C	2.61	0.43
7:E:74:LYS:CB	7:E:86:MET:HB2	2.18	0.43
7:E:128:ARG:HG3	7:E:163:ALA:O	2.18	0.43
8:F:19:VAL:H	8:F:24:VAL:HA	1.82	0.43
8:F:144:VAL:HA	8:F:147:ASN:HD22	1.84	0.43
10:H:120:ARG:O	10:H:121:VAL:C	2.60	0.43
11:I:7:TYR:N	11:I:7:TYR:CD2	2.84	0.43
11:I:39:ILE:HD11	11:I:62:VAL:CG2	2.48	0.43
11:I:47:ILE:O	11:I:47:ILE:HG22	2.17	0.43
11:I:74:GLY:O	11:I:75:SER:HB2	2.18	0.43
13:K:15:GLY:O	13:K:16:ARG:HB2	2.18	0.43
13:K:67:ARG:C	13:K:68:ILE:HD12	2.43	0.43
14:L:3:HIS:CE1	14:L:4:LEU:CG	2.99	0.43
14:L:9:LYS:HB2	14:L:10:LEU:H	1.52	0.43
14:L:61:HIS:O	14:L:65:LEU:HG	2.18	0.43
16:N:24:PRO:HA	16:N:49:VAL:CG2	2.48	0.43
16:N:51:ARG:CZ	16:N:60:THR:HG21	2.49	0.43
16:N:103:ARG:HG2	16:N:103:ARG:HH11	1.83	0.43
17:O:8:VAL:CG1	17:O:11:ARG:NE	2.63	0.43
17:O:16:LYS:O	17:O:20:LEU:HD23	2.19	0.43
17:O:92:ARG:CG	17:O:94:ASN:HD21	2.26	0.43
18:P:29:PRO:HA	18:P:66:ARG:HB3	2.00	0.43
20:R:17:ALA:C	20:R:26:TYR:HB3	2.41	0.43
21:S:55:TYR:HD1	21:S:56:PRO:N	2.16	0.43
21:S:76:CYS:HB3	21:S:77:PRO:HD2	2.00	0.43
22:T:17:ALA:CA	22:T:20:ARG:CZ	2.91	0.43
23:U:45:PHE:HD2	23:U:78:TYR:CA	2.31	0.43
24:V:69:LYS:HA	24:V:72:GLU:HB3	2.01	0.43
25:W:59:ARG:HE	25:W:62:THR:CA	2.27	0.43
31:y:257:G:N1	31:y:258:G:C6	2.86	0.43
31:y:279:A:N7	50:r:95:TYR:HE1	2.08	0.43
31:y:324:G:O5'	53:u:70:SER:O	2.37	0.43
31:y:329:A:C6	31:y:332:G:C5	3.07	0.43
31:y:450:G:H2'	31:y:481:G:N1	2.34	0.43
31:y:564:C:C3'	31:y:566:G:C2'	2.90	0.43
31:y:622:A:C8	31:y:622:A:C3'	3.01	0.43
31:y:624:C:C5'	49:q:10:GLY:HA2	2.48	0.43
31:y:659:U:OP2	31:y:659:U:C6	2.70	0.43
31:y:735:C:H5'	51:s:71:LYS:CD	2.37	0.43
31:y:738:C:C5	31:y:739:C:N4	2.85	0.43
31:y:756:C:C3'	31:y:757:U:H5'	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:778:G:C3'	31:y:779:C:H6	2.23	0.43
31:y:832:C:C4	31:y:833:U:C6	3.07	0.43
31:y:899:C:C6	31:y:900:A:C8	3.06	0.43
31:y:978:A:C4	31:y:1319:A:C2	3.06	0.43
31:y:1005:A:OP2	31:y:1006:C:C5	2.71	0.43
31:y:1061:G:C6	31:y:1194:U:O4	2.72	0.43
31:y:1064:G:O2'	31:y:1065:U:C5'	2.66	0.43
31:y:1088:G:N1	31:y:1089:G:C6	2.86	0.43
31:y:1228:C:H4'	46:n:114:ARG:HE	1.83	0.43
31:y:1305:G:H8	54:v:5:ASP:OD1	2.01	0.43
31:y:1329:A:OP1	54:v:7:ARG:NH1	2.49	0.43
31:y:1350:A:H8	31:y:1350:A:P	2.41	0.43
31:y:1369:C:C5	42:j:112:LYS:HB2	2.47	0.43
31:y:1497:G:C8	31:y:1497:G:C3'	3.01	0.43
32:z:24:G:C2	32:z:25:C:O2	2.71	0.43
32:z:50:U:C5	32:z:51:U:C4	3.06	0.43
33:0:36:A:C2'	33:0:37:A:H5'	2.48	0.43
35:c:69:LEU:O	35:c:162:ILE:HD12	2.18	0.43
36:d:77:ILE:HG13	36:d:84:ILE:CB	2.45	0.43
36:d:152:ILE:O	36:d:198:VAL:HA	2.18	0.43
36:d:162:GLN:C	36:d:164:ARG:N	2.75	0.43
37:e:34:GLU:O	37:e:35:ARG:CB	2.66	0.43
37:e:51:PRO:O	37:e:52:SER:C	2.59	0.43
37:e:76:ARG:HH12	37:e:80:GLU:CB	2.31	0.43
37:e:190:ASP:C	37:e:192:GLU:H	2.25	0.43
38:f:104:ALA:O	38:f:107:ARG:HB3	2.18	0.43
39:g:19:LEU:HD11	39:g:59:TYR:CE2	2.53	0.43
40:h:103:TRP:CZ2	40:h:137:LYS:NZ	2.85	0.43
40:h:121:ALA:HA	40:h:124:LEU:CG	2.45	0.43
42:j:20:ARG:O	42:j:59:PHE:HA	2.18	0.43
42:j:53:VAL:HB	42:j:58:ARG:NH2	2.33	0.43
45:m:51:LEU:C	45:m:52:ARG:HG3	2.43	0.43
45:m:68:TYR:H	45:m:98:HIS:HA	1.83	0.43
48:p:27:VAL:C	48:p:29:VAL:N	2.76	0.43
48:p:27:VAL:HG12	48:p:28:GLN:N	2.34	0.43
48:p:80:ALA:C	48:p:82:ILE:N	2.77	0.43
49:q:42:ARG:O	49:q:43:LYS:C	2.61	0.43
49:q:56:ALA:C	49:q:58:TYR:N	2.74	0.43
50:r:27:PHE:CE1	50:r:36:ILE:HD11	2.53	0.43
51:s:32:ARG:HE	51:s:32:ARG:HA	1.83	0.43
51:s:61:LYS:CA	51:s:64:ARG:HB2	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:u:59:ALA:O	53:u:60:GLU:C	2.62	0.43
53:u:62:LEU:C	53:u:62:LEU:CD1	2.90	0.43
53:u:104:LEU:C	53:u:104:LEU:CD1	2.92	0.43
1:w:20:C:C2'	1:w:21:A:C8	2.98	0.43
1:w:55:G:N2	1:w:116:C:H1'	2.34	0.43
1:w:55:G:O2'	1:w:127:A:N1	2.51	0.43
1:w:135:G:O2'	1:w:136:G:H5'	2.17	0.43
1:w:138:G:N2	1:w:140:A:P	2.91	0.43
1:w:145:G:C5	1:w:146:G:C8	3.06	0.43
1:w:188:G:H4'	1:w:1365:A:C6	2.53	0.43
1:w:216:A:H2'	1:w:217:G:O4'	2.18	0.43
1:w:242:G:O2'	1:w:243:U:P	2.76	0.43
1:w:262:A:OP1	1:w:609(B):G:O2'	2.30	0.43
1:w:270(A):A:OP2	1:w:270(Z):G:N1	2.50	0.43
1:w:481:G:C2	1:w:507:A:C4	3.06	0.43
1:w:539:G:C4	1:w:540:G:N7	2.86	0.43
1:w:576:U:C4	1:w:577:G:C5	3.07	0.43
1:w:590:A:N6	1:w:668:G:N1	2.66	0.43
1:w:624:C:N3	1:w:625:G:N7	2.67	0.43
1:w:637:A:OP2	12:J:115:LEU:CD1	2.66	0.43
1:w:724:U:C6	1:w:725:G:N7	2.86	0.43
1:w:741:G:H2'	1:w:742:G:H8	1.83	0.43
1:w:787:U:C6	1:w:791:C:C4	3.07	0.43
1:w:859:G:O2'	1:w:860:U:OP2	2.35	0.43
1:w:863:A:H4'	2:x:100:G:H21	1.82	0.43
1:w:969:U:OP1	26:X:16:PRO:CA	2.60	0.43
1:w:986:C:O5'	1:w:986:C:H6	2.00	0.43
1:w:993:G:C2'	1:w:994:C:C5'	2.88	0.43
1:w:1000:A:N7	1:w:1155:A:N6	2.65	0.43
1:w:1033:U:C2'	1:w:1034:G:OP1	2.66	0.43
1:w:1044:G:N1	1:w:1112:G:C6	2.86	0.43
1:w:1184:G:C2'	1:w:1185:C:O5'	2.66	0.43
1:w:1206:G:C2'	1:w:1207:C:H6	2.08	0.43
1:w:1229:G:H2'	1:w:1229:G:N3	2.34	0.43
1:w:1243:G:C4'	12:J:9:ASN:ND2	2.63	0.43
1:w:1363:C:O4'	1:w:1810:A:C5'	2.66	0.43
1:w:1370:C:C5	1:w:1371:G:C6	3.05	0.43
1:w:1469:A:C2'	1:w:1470:G:O5'	2.66	0.43
1:w:1502:C:C6	1:w:1502:C:OP2	2.71	0.43
1:w:1700:A:H2'	1:w:1701:A:O5'	2.17	0.43
1:w:1728:G:H8	1:w:1728:G:O5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1840:G:N3	1:w:1841:U:C6	2.86	0.43
1:w:1994:C:H2'	1:w:1994:C:O2	2.17	0.43
1:w:2052:G:O2'	5:C:144:ARG:O	2.36	0.43
1:w:2104:G:C4	1:w:2186:G:C2	3.07	0.43
1:w:2209:C:C2	1:w:2210:G:N7	2.87	0.43
1:w:2239:G:N3	1:w:2240:C:C5	2.86	0.43
1:w:2266:A:H5'	1:w:2267:A:C4	2.53	0.43
1:w:2314:C:H6	1:w:2314:C:H3'	1.83	0.43
1:w:2359:C:H1'	29:a:52:LYS:HE2	1.99	0.43
1:w:2483:C:OP2	1:w:2483:C:H5	2.00	0.43
1:w:2528:U:H2'	1:w:2530:A:O5'	2.19	0.43
1:w:2570:G:C4	1:w:2571:C:C5	3.06	0.43
1:w:2651:C:C4	1:w:2670:A:N1	2.87	0.43
1:w:2747:G:C2	1:w:2756:U:O5'	2.71	0.43
1:w:2899:G:C2'	1:w:2900:A:C5'	2.95	0.43
2:x:4:C:N3	2:x:117:G:N2	2.65	0.43
2:x:15:A:H5''	2:x:108:C:H4'	1.99	0.43
3:A:63:VAL:CG2	3:A:64:SER:H	2.24	0.43
3:A:194:ILE:CA	3:A:197:LEU:HD23	2.48	0.43
4:B:60:ARG:HG3	4:B:86:PRO:HB2	2.01	0.43
4:B:65:ILE:HB	4:B:104:TYR:C	2.40	0.43
4:B:74:GLY:O	4:B:75:ILE:CG1	2.66	0.43
4:B:131:LEU:N	4:B:190:TYR:CE1	2.86	0.43
4:B:165:ILE:HG23	4:B:174:ILE:C	2.44	0.43
5:C:18:ASP:OD1	16:N:81:PRO:HA	2.18	0.43
6:D:55:SER:OG	6:D:73:ILE:HG23	2.17	0.43
8:F:125:VAL:HG12	8:F:128:PRO:HB2	2.00	0.43
9:G:11:ASN:HB3	9:G:12:LEU:H	1.63	0.43
9:G:38:LEU:O	9:G:39:ALA:CB	2.65	0.43
9:G:76:THR:HG22	9:G:142:VAL:HA	2.01	0.43
9:G:77:LEU:O	9:G:78:THR:CG2	2.66	0.43
9:G:132:PRO:CG	9:G:138:ILE:HG22	2.48	0.43
10:H:45:THR:HG21	10:H:48:ARG:HG3	1.99	0.43
10:H:112:LYS:NZ	10:H:116:THR:H	2.16	0.43
10:H:120:ARG:CG	10:H:124:HIS:CE1	2.99	0.43
10:H:156:GLN:O	10:H:157:ARG:CB	2.60	0.43
10:H:157:ARG:NH1	10:H:159:GLU:OE1	2.50	0.43
12:J:44:GLY:O	12:J:45:LEU:C	2.62	0.43
12:J:45:LEU:O	12:J:46:LYS:C	2.62	0.43
14:L:54:LEU:HA	14:L:57:ARG:CG	2.47	0.43
14:L:72:ASP:O	14:L:76:VAL:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:90:ARG:NH2	14:L:118:GLU:HG3	2.28	0.43
16:N:33:LYS:NZ	16:N:33:LYS:HB3	2.33	0.43
16:N:65:LYS:C	16:N:67:SER:N	2.75	0.43
16:N:109:GLU:HB3	16:N:112:ARG:HH21	1.83	0.43
17:O:59:ARG:O	17:O:62:ILE:N	2.51	0.43
17:O:74:LEU:HD21	17:O:110:VAL:HG13	2.00	0.43
17:O:105:VAL:CA	18:P:43:GLU:CD	2.80	0.43
18:P:1:MET:HG2	18:P:2:PHE:H	1.84	0.43
18:P:42:GLY:O	18:P:47:VAL:CG1	2.67	0.43
21:S:14:LEU:HD22	21:S:39:VAL:CG1	2.43	0.43
21:S:60:PHE:CE1	21:S:61:ILE:O	2.72	0.43
22:T:50:GLN:C	22:T:54:HIS:HD2	2.27	0.43
22:T:84:GLU:HG3	22:T:85:HIS:N	2.32	0.43
22:T:151:HIS:HA	22:T:169:GLU:O	2.18	0.43
23:U:21:LEU:CD2	23:U:39:ARG:HG2	2.49	0.43
23:U:50:ASN:CB	23:U:81:VAL:HG12	2.44	0.43
23:U:68:GLU:H	23:U:79:VAL:HB	1.82	0.43
24:V:51:VAL:CB	24:V:60:PHE:N	2.70	0.43
27:Y:32:PRO:O	27:Y:39:MET:HA	2.17	0.43
27:Y:38:ALA:CB	27:Y:49:CYS:HB2	2.46	0.43
29:a:29:LYS:H	29:a:44:LYS:NZ	2.13	0.43
30:b:2:LYS:N	30:b:35:ARG:CD	2.75	0.43
31:y:97:U:N1	31:y:99:C:C5	2.86	0.43
31:y:105:G:C6	31:y:106:C:C4	3.05	0.43
31:y:107:G:H2'	31:y:108:G:H5'	1.98	0.43
31:y:191(B):G:H2'	31:y:191(C):G:H8	1.83	0.43
31:y:284:G:H2'	31:y:285:G:H8	1.84	0.43
31:y:356:A:C2	31:y:368:U:O2	2.71	0.43
31:y:361:G:C3'	31:y:362:G:H8	2.28	0.43
31:y:364:A:C6	31:y:365:U:H5	2.37	0.43
31:y:450:G:H2'	31:y:481:G:H1	1.83	0.43
31:y:540:G:C8	31:y:541:G:N7	2.87	0.43
31:y:696:A:H2'	31:y:697:U:H5	1.80	0.43
31:y:720:C:C3'	31:y:721:G:C8	3.02	0.43
31:y:784:C:C4	31:y:799:G:C6	3.07	0.43
31:y:908:A:O2'	31:y:909:A:H8	2.01	0.43
31:y:920:U:C4	31:y:921:U:C5	3.06	0.43
31:y:1022:G:H2'	31:y:1023:G:H8	1.84	0.43
31:y:1035:A:O5'	31:y:1035:A:C8	2.69	0.43
31:y:1061:G:H2'	31:y:1062:U:H6	1.66	0.43
31:y:1162:C:H3'	31:y:1163:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1195:C:H3'	31:y:1196:U:C5'	2.48	0.43
31:y:1262:C:N3	31:y:1263:C:N4	2.67	0.43
31:y:1269:A:H4'	31:y:1326:C:H5'	2.01	0.43
31:y:1305:G:N2	31:y:1306:A:N1	2.66	0.43
31:y:1433:A:N6	31:y:1434:A:N6	2.66	0.43
31:y:1435:G:C5	31:y:1436:U:C4	3.06	0.43
32:z:35:A:C2	34:1:2:U:O2	2.71	0.43
33:0:54:U:H3	33:0:58:A:H62	0.62	0.43
36:d:69:HIS:CD2	36:d:107:GLN:NE2	2.85	0.43
36:d:108:ASN:CG	36:d:111:LEU:HD12	2.43	0.43
36:d:117:ALA:CB	36:d:187:ALA:HB2	2.48	0.43
36:d:124:ILE:CD1	36:d:133:ALA:HB3	2.38	0.43
36:d:175:LEU:HD13	36:d:175:LEU:H	1.83	0.43
37:e:17:VAL:HG12	37:e:19:LEU:H	1.83	0.43
37:e:34:GLU:O	37:e:35:ARG:HD3	2.18	0.43
37:e:184:LYS:CG	37:e:185:PHE:N	2.81	0.43
38:f:13:ILE:HG13	38:f:29:GLY:O	2.19	0.43
41:i:8:ASP:OD1	41:i:8:ASP:C	2.61	0.43
41:i:107:LEU:O	41:i:109:ILE:N	2.52	0.43
42:j:19:LEU:O	42:j:20:ARG:NE	2.31	0.43
42:j:20:ARG:HD3	42:j:20:ARG:HA	1.91	0.43
42:j:112:LYS:O	42:j:112:LYS:HG2	2.18	0.43
43:k:10:GLY:HA2	43:k:94:VAL:HG13	2.00	0.43
43:k:86:MET:O	43:k:87:THR:C	2.60	0.43
44:l:110:ASP:O	51:s:84:LYS:HG2	2.17	0.43
46:n:91:ARG:HD2	46:n:96:LEU:CD1	2.48	0.43
46:n:94:ARG:NH1	52:t:81:ARG:NH2	2.65	0.43
47:o:13:THR:C	47:o:15:LYS:N	2.74	0.43
47:o:22:THR:HG22	47:o:33:VAL:HB	1.99	0.43
47:o:29:ARG:HB3	47:o:40:CYS:CA	2.47	0.43
48:p:49:ASP:CB	48:p:53:HIS:NE2	2.78	0.43
48:p:78:TYR:C	48:p:80:ALA:N	2.73	0.43
48:p:78:TYR:HA	48:p:82:ILE:HD13	2.00	0.43
49:q:2:VAL:HG23	49:q:64:ALA:H	1.83	0.43
49:q:16:HIS:O	49:q:17:TYR:O	2.35	0.43
50:r:56:VAL:O	50:r:76:LEU:CD2	2.65	0.43
51:s:26:LEU:HD11	51:s:39:VAL:HG13	2.00	0.43
51:s:36:ASN:O	51:s:39:VAL:HB	2.17	0.43
1:w:26:G:H2'	1:w:27:G:C4'	2.39	0.43
1:w:92:G:C2'	1:w:93:C:C5	2.92	0.43
1:w:116:C:H4'	1:w:127:A:H1'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:126:A:C8	28:Z:18:PHE:CD2	3.06	0.43
1:w:173:G:H2'	1:w:174:C:C6	2.54	0.43
1:w:214:G:O2'	1:w:217:G:H5'	2.19	0.43
1:w:270(F):G:O6	1:w:270(V):C:N4	2.41	0.43
1:w:271(D):U:C4	1:w:271:G:O2'	2.72	0.43
1:w:414:C:C6	1:w:414:C:H3'	2.53	0.43
1:w:492:A:C8	1:w:492:A:P	3.10	0.43
1:w:517:C:P	27:Y:13:LYS:HZ1	2.41	0.43
1:w:519:U:OP2	1:w:520:G:N7	2.51	0.43
1:w:520:G:H2'	1:w:520:G:N3	2.34	0.43
1:w:531:C:C5	1:w:2035:G:N2	2.87	0.43
1:w:545:G:C4	1:w:549:G:C2	3.07	0.43
1:w:601:C:C2'	1:w:602:G:H5'	2.49	0.43
1:w:604:G:N2	1:w:657:U:H5'	2.34	0.43
1:w:616:A:H3'	1:w:616:A:H8	1.81	0.43
1:w:637:A:H4'	1:w:638:G:C4'	2.49	0.43
1:w:673:C:H3'	1:w:673:C:C6	2.54	0.43
1:w:676:A:OP2	1:w:676:A:C2	2.72	0.43
1:w:719:C:H2'	1:w:720:C:C6	2.52	0.43
1:w:731:C:N4	1:w:732:C:H41	2.17	0.43
1:w:801:G:OP1	6:D:51:GLU:CA	2.64	0.43
1:w:818:G:C6	1:w:1187:G:C8	3.07	0.43
1:w:832:G:OP2	12:J:38:GLN:HG2	2.18	0.43
1:w:937:U:O3'	1:w:938:G:O4'	2.37	0.43
1:w:972:G:OP1	1:w:974(B):C:H5''	2.18	0.43
1:w:1047:G:H1'	1:w:1111:A:N6	2.33	0.43
1:w:1125:G:C2'	1:w:1126:A:OP1	2.67	0.43
1:w:1165:U:C2	1:w:1166:C:C5	3.07	0.43
1:w:1336:A:OP1	20:R:64:LYS:HE2	2.18	0.43
1:w:1342:A:C5'	20:R:55:ASN:OD1	2.67	0.43
1:w:1364:G:C8	24:V:8:SER:O	2.72	0.43
1:w:1365:A:C5	1:w:1366:A:C8	3.06	0.43
1:w:1443:G:N3	1:w:1444:G:C8	2.86	0.43
1:w:1574:C:N3	1:w:1575:C:C4	2.86	0.43
1:w:1579:A:H2'	1:w:1580:A:H8	1.79	0.43
1:w:1658:C:C2'	1:w:1659:U:H6	2.12	0.43
1:w:1668:A:H2	1:w:1670:C:N3	2.12	0.43
1:w:1696:G:H22	1:w:1977:A:HO2'	1.66	0.43
1:w:1746:G:C5	1:w:1747:G:N9	2.86	0.43
1:w:1966:A:N3	1:w:2593:U:H5'	2.33	0.43
1:w:2011:U:OP1	19:Q:12:ILE:HG21	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2024:G:N2	1:w:2040:C:C2	2.87	0.43
1:w:2077:A:C5	1:w:2078:C:C4	3.06	0.43
1:w:2094:G:C6	1:w:2095:C:N3	2.87	0.43
1:w:2262:U:H3'	1:w:2262:U:H6	1.83	0.43
1:w:2281:C:C2'	1:w:2282:G:H5''	2.45	0.43
1:w:2282:G:H1'	1:w:2390:U:O2	2.19	0.43
1:w:2313:C:H4'	7:E:40:ASN:ND2	2.32	0.43
1:w:2343:C:O2'	1:w:2373:G:O2'	2.08	0.43
1:w:2494:G:C6	1:w:2495:G:N7	2.87	0.43
1:w:2523:G:O6	1:w:2541:A:C2	2.71	0.43
1:w:2658:C:C2'	1:w:2659:G:C5'	2.89	0.43
1:w:2741:A:H8	1:w:2741:A:O5'	2.01	0.43
1:w:2747:G:N2	1:w:2756:U:P	2.92	0.43
1:w:2828:C:C2	1:w:2829:C:C5	3.07	0.43
1:w:2842:G:N2	1:w:2876:G:C4	2.87	0.43
1:w:2858:C:C5	1:w:2859:G:C5	3.06	0.43
2:x:10:C:O2'	2:x:11:C:O4'	2.33	0.43
4:B:17:THR:OG1	4:B:205:VAL:CG2	2.65	0.43
4:B:72:LYS:CB	4:B:97:TYR:OH	2.66	0.43
4:B:90:ALA:HB1	4:B:106:ILE:HG21	1.98	0.43
6:D:150:LEU:HD22	6:D:150:LEU:N	2.34	0.43
8:F:89:ILE:C	8:F:90:LYS:HD3	2.43	0.43
9:G:6:LEU:CB	9:G:35:LEU:O	2.66	0.43
9:G:40:THR:HG23	9:G:40:THR:O	2.18	0.43
9:G:114:LEU:N	9:G:130:TYR:CE1	2.86	0.43
10:H:60:LYS:CA	10:H:60:LYS:CE	2.88	0.43
10:H:86:THR:HG22	10:H:89:LYS:HZ1	1.80	0.43
11:I:49:ARG:O	11:I:50:GLY:C	2.60	0.43
12:J:86:LYS:CD	12:J:118:GLY:HA3	2.49	0.43
12:J:119:GLU:O	12:J:120:ALA:HB2	2.18	0.43
13:K:9:TYR:HE1	13:K:12:GLN:OE1	2.00	0.43
13:K:16:ARG:C	13:K:17:LEU:CD1	2.79	0.43
17:O:83:LEU:CG	17:O:84:LYS:NZ	2.81	0.43
19:Q:29:LEU:O	19:Q:30:GLU:C	2.60	0.43
21:S:50:ARG:HA	21:S:54:LYS:C	2.43	0.43
22:T:30:ASN:OD1	22:T:32:HIS:N	2.43	0.43
22:T:102:LEU:CD1	22:T:124:ILE:N	2.82	0.43
24:V:26:ARG:HB2	24:V:35:THR:N	2.33	0.43
25:W:47:ASN:C	25:W:49:LYS:N	2.73	0.43
26:X:29:ARG:O	26:X:30:ARG:CB	2.65	0.43
28:Z:24:THR:HG23	28:Z:27:GLY:HA3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:a:34:TRP:O	29:a:36:LYS:HD2	2.19	0.43
29:a:54:GLU:O	29:a:55:ALA:C	2.61	0.43
31:y:25:C:H4'	31:y:524:G:HI'	2.00	0.43
31:y:102:G:N3	31:y:103:C:C4	2.86	0.43
31:y:103:C:OP2	31:y:103:C:H5	2.00	0.43
31:y:108:G:C6	53:u:15:ARG:HD2	2.53	0.43
31:y:186(D):G:C6	31:y:186(E):C:N4	2.86	0.43
31:y:241:C:C5'	45:m:18:ARG:HH22	2.24	0.43
31:y:265:G:C3'	31:y:267:C:H5	2.32	0.43
31:y:300:A:HO2'	31:y:564:C:N4	2.15	0.43
31:y:303:A:C6	31:y:304:U:C4	3.06	0.43
31:y:342:C:C4	31:y:348:G:N1	2.86	0.43
31:y:391:G:N1	31:y:392:G:C5	2.87	0.43
31:y:403:C:H5''	37:e:135:LEU:CD2	2.49	0.43
31:y:485:G:H4'	31:y:486:U:C6	2.53	0.43
31:y:561:U:H2'	31:y:562:C:OP2	2.18	0.43
31:y:578:C:O2'	31:y:728:A:N3	2.50	0.43
31:y:661:G:C2	31:y:662:G:C8	3.07	0.43
31:y:684:A:N1	31:y:704:A:OP2	2.51	0.43
31:y:826:C:O2'	41:i:12:ARG:CB	2.67	0.43
31:y:834:C:N3	31:y:853:G:N1	2.67	0.43
31:y:925:G:C6	31:y:927:G:N7	2.87	0.43
31:y:933:G:N2	31:y:935:A:HI'	2.28	0.43
31:y:959:A:H4'	31:y:984:C:O2'	2.18	0.43
31:y:1159:U:H5''	31:y:1181:G:H21	1.83	0.43
31:y:1470:G:C5	31:y:1471:G:C8	3.07	0.43
31:y:1497:G:C8	31:y:1497:G:C4'	3.01	0.43
33:0:37:A:C3'	33:0:38:A:O4'	2.67	0.43
33:0:46:G:H8	33:0:46:G:H5''	1.82	0.43
35:c:226:ARG:HB2	35:c:226:ARG:CZ	2.49	0.43
36:d:32:LEU:O	36:d:33:LEU:C	2.61	0.43
36:d:79:ARG:N	36:d:82:GLU:HG2	2.34	0.43
37:e:157:LEU:O	37:e:158:ILE:C	2.62	0.43
38:f:45:PHE:C	38:f:45:PHE:HD1	2.26	0.43
38:f:76:ILE:CD1	38:f:92:LYS:O	2.62	0.43
38:f:79:GLU:CG	41:i:104:ARG:NH1	2.82	0.43
38:f:95:ALA:HB2	38:f:119:LEU:HD11	2.01	0.43
40:h:39:ALA:O	40:h:43:PHE:HD2	2.01	0.43
40:h:70:LYS:O	40:h:72:ARG:HD2	2.19	0.43
41:i:46:LYS:CD	41:i:63:LEU:C	2.91	0.43
41:i:67:PRO:O	41:i:68:ARG:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:8:LEU:HG	43:k:8:LEU:O	2.18	0.43
45:m:42:VAL:HG12	45:m:52:ARG:HH22	1.83	0.43
46:n:15:VAL:HG22	46:n:16:ASP:N	2.33	0.43
48:p:66:LEU:H	48:p:66:LEU:CD1	2.31	0.43
49:q:59:TRP:C	49:q:64:ALA:HB2	2.43	0.43
50:r:10:VAL:HG23	50:r:54:GLY:CA	2.48	0.43
50:r:13:ASP:OD1	50:r:19:VAL:HG11	2.19	0.43
52:t:16:LEU:HD12	52:t:19:VAL:CG1	2.48	0.43
54:v:21:TYR:O	54:v:22:ARG:CG	2.66	0.43
1:w:14:A:H3'	1:w:15:G:O4'	2.19	0.43
1:w:77:C:P	25:W:49:LYS:HE3	2.58	0.43
1:w:116:C:O2'	1:w:127:A:N3	2.51	0.43
1:w:217:G:C3'	1:w:218:A:C8	3.01	0.43
1:w:573:G:H5''	1:w:574:C:OP1	2.18	0.43
1:w:589:C:H1'	6:D:88:LYS:HZ2	1.81	0.43
1:w:591:C:H2'	1:w:592:G:C8	2.54	0.43
1:w:640:C:H2'	1:w:641:C:O5'	2.18	0.43
1:w:669:G:N7	1:w:669:G:OP1	2.52	0.43
1:w:703:U:H3'	1:w:704:G:H8	1.83	0.43
1:w:768:G:C6	1:w:769:G:C6	3.07	0.43
1:w:790:C:H2'	1:w:790:C:O2	2.19	0.43
1:w:799:G:O5'	1:w:799:G:C8	2.69	0.43
1:w:869:G:C2'	1:w:870:A:C8	2.99	0.43
1:w:952:G:C2	1:w:2267:A:N7	2.86	0.43
1:w:952:G:O6	1:w:966:G:C6	2.71	0.43
1:w:952:G:C4	1:w:966:G:N2	2.87	0.43
1:w:986:C:O5'	1:w:986:C:C6	2.71	0.43
1:w:1000:A:C5	1:w:1154:G:N2	2.87	0.43
1:w:1268:A:O2'	1:w:1269:A:H5'	2.19	0.43
1:w:1296:G:C2	1:w:1645:G:C2	3.06	0.43
1:w:1298:C:C4	1:w:1299:G:C5	3.05	0.43
1:w:1354:A:C2'	1:w:1355:G:H5'	2.43	0.43
1:w:1403:C:O3'	1:w:1471:A:H2'	2.17	0.43
1:w:1409:C:O2'	1:w:1410:G:H5'	2.18	0.43
1:w:1422:G:H2'	1:w:1423:G:C8	2.53	0.43
1:w:1549:C:HO2'	1:w:1550:C:H6	1.65	0.43
1:w:1664:A:H3'	1:w:1665:A:C8	2.54	0.43
1:w:1665:A:C2	11:I:1:MET:HE3	2.54	0.43
1:w:1690:A:H2'	1:w:1691:C:O4'	2.18	0.43
1:w:1709:U:H2'	1:w:1710:C:C6	2.53	0.43
1:w:1772:G:O6	1:w:1979:C:N3	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1830:C:H6	1:w:1830:C:O5'	2.01	0.43
1:w:1911:U:O5'	1:w:1911:U:H6	2.02	0.43
1:w:1939:U:H6	1:w:1939:U:O5'	2.01	0.43
1:w:1942:C:P	1:w:1943:U:H3'	2.58	0.43
1:w:2033:A:C6	1:w:2036:C:N1	2.87	0.43
1:w:2133:G:H3'	1:w:2157:G:N2	2.32	0.43
1:w:2194:G:C5	1:w:2195:C:N4	2.87	0.43
1:w:2226:C:OP2	1:w:2226:C:C5	2.71	0.43
1:w:2333:A:N7	1:w:2335:A:N1	2.67	0.43
1:w:2352:A:C5	1:w:2365:G:N2	2.78	0.43
1:w:2403:C:C2	1:w:2404:C:H5	2.37	0.43
1:w:2560:C:H2'	1:w:2561:A:C8	2.49	0.43
1:w:2562:U:C2'	1:w:2563:U:H5'	2.43	0.43
1:w:2570:G:C6	1:w:2571:C:C4	3.06	0.43
1:w:2642:G:H1	1:w:2773:C:N4	2.16	0.43
1:w:2714:G:N2	1:w:2715:C:C2	2.87	0.43
1:w:2743:C:H2'	1:w:2744:G:H5'	1.79	0.43
1:w:2857:G:O2'	1:w:2858:C:C5	2.61	0.43
1:w:2865:U:C6	1:w:2865:U:OP2	2.71	0.43
2:x:41:U:H5	2:x:41:U:OP2	1.99	0.43
2:x:82:G:C6	2:x:83:G:O6	2.72	0.43
2:x:87:G:O2'	2:x:89(B):A:N6	2.52	0.43
2:x:105:G:H2'	2:x:106:G:C8	2.54	0.43
4:B:34:VAL:O	4:B:35:LYS:HD3	2.17	0.43
4:B:36:PRO:HG2	4:B:61:LEU:HG	2.00	0.43
4:B:94:LEU:O	4:B:94:LEU:HD23	2.16	0.43
4:B:215:LEU:CD1	4:B:215:LEU:N	2.82	0.43
6:D:148:SER:HA	6:D:167:TRP:CE2	2.54	0.43
7:E:10:LYS:HD3	7:E:10:LYS:C	2.43	0.43
7:E:43:LEU:HD22	7:E:45:GLU:CG	2.40	0.43
7:E:115:ARG:C	7:E:116:ASP:CG	2.84	0.43
8:F:57:ASP:O	8:F:58:GLU:C	2.61	0.43
9:G:4:ILE:CA	9:G:37:VAL:HB	2.48	0.43
9:G:76:THR:CG2	9:G:77:LEU:N	2.81	0.43
9:G:129:THR:CA	9:G:139:GLN:HA	2.45	0.43
10:H:32:VAL:HG11	10:H:71:MET:HB2	2.00	0.43
10:H:41:ALA:O	10:H:43:GLY:N	2.52	0.43
10:H:60:LYS:NZ	17:O:63:VAL:HG12	2.33	0.43
10:H:126:VAL:C	10:H:128:GLY:N	2.76	0.43
10:H:155:ALA:O	10:H:156:GLN:HB2	2.18	0.43
11:I:14:THR:N	11:I:17:ARG:NH1	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:23:ARG:CG	11:I:24:VAL:N	2.82	0.43
11:I:90:GLN:O	11:I:90:GLN:OE1	2.36	0.43
11:I:107:ARG:HB2	11:I:115:VAL:HG11	2.01	0.43
12:J:98:GLU:N	12:J:101:VAL:CG1	2.76	0.43
13:K:20:ALA:C	13:K:22:LYS:N	2.74	0.43
13:K:37:LEU:CD2	13:K:128:LYS:O	2.67	0.43
13:K:75:THR:CG2	13:K:76:LYS:H	2.32	0.43
14:L:28:LEU:N	14:L:34:ILE:HG13	2.34	0.43
16:N:29:ARG:HB3	16:N:86:ILE:H	1.82	0.43
19:Q:29:LEU:HD11	19:Q:66:GLU:HG2	2.01	0.43
20:R:7:VAL:HG13	20:R:31:HIS:CG	2.53	0.43
22:T:9:TYR:HA	22:T:37:VAL:HG12	2.00	0.43
23:U:51:VAL:CG2	23:U:79:VAL:CG2	2.96	0.43
24:V:38:SER:N	24:V:39:LYS:NZ	2.65	0.43
24:V:58:ILE:HG21	24:V:86:SER:OG	2.19	0.43
31:y:23:C:H4'	31:y:913:A:N6	2.25	0.43
31:y:148:G:C2	31:y:149:A:N7	2.86	0.43
31:y:242:C:H2'	31:y:243:A:O5'	2.16	0.43
31:y:317:G:H2'	31:y:318:G:O5'	2.19	0.43
31:y:406:G:O3'	37:e:118:ARG:NH2	2.51	0.43
31:y:451:A:C8	31:y:452:A:N6	2.87	0.43
31:y:517:G:C2'	31:y:531:U:H5'	2.47	0.43
31:y:833:U:O2	31:y:853:G:N2	2.49	0.43
31:y:889:A:C4'	31:y:891:U:C6	3.01	0.43
31:y:895:G:H3'	31:y:896:C:C6	2.53	0.43
31:y:973:G:C3'	31:y:974:A:H5''	2.48	0.43
31:y:1016:A:C2	31:y:1017:G:C6	3.06	0.43
31:y:1076:C:C2	31:y:1077:G:N7	2.86	0.43
31:y:1170:A:O5'	31:y:1170:A:C8	2.56	0.43
31:y:1179:A:C2'	31:y:1180:A:O4'	2.63	0.43
31:y:1206:G:N7	31:y:1207:2MG:C8	2.87	0.43
31:y:1236:A:H2'	31:y:1237:C:C5'	2.48	0.43
31:y:1244:C:HO2'	31:y:1245:A:H8	1.65	0.43
31:y:1417:G:H1'	31:y:1483:A:H61	1.81	0.43
31:y:1422:G:C4	31:y:1423:G:N7	2.87	0.43
32:z:26:A:H3'	32:z:27:G:H8	1.84	0.43
35:c:144:ARG:HA	35:c:147:LYS:CE	2.48	0.43
35:c:155:LEU:C	35:c:157:ARG:H	2.27	0.43
36:d:118:GLN:CA	36:d:187:ALA:CB	2.89	0.43
36:d:132:ARG:HA	36:d:136:GLN:HG3	2.00	0.43
36:d:141:VAL:CG1	36:d:142:MET:N	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:194:GLY:O	36:d:195:VAL:CB	2.67	0.43
38:f:14:ARG:HE	38:f:14:ARG:C	2.26	0.43
39:g:9:VAL:CG2	39:g:87:ARG:O	2.67	0.43
40:h:32:ARG:O	40:h:33:ASP:HB2	2.18	0.43
40:h:120:ILE:O	40:h:121:ALA:C	2.60	0.43
40:h:122:HIS:CD2	40:h:122:HIS:H	2.35	0.43
44:l:73:MET:CE	44:l:73:MET:CA	2.93	0.43
44:l:103:LEU:CD1	44:l:104:GLN:N	2.80	0.43
45:m:70:PRO:HD2	45:m:99:ILE:HG22	2.01	0.43
46:n:4:ILE:CA	46:n:57:ARG:HA	2.49	0.43
46:n:45:VAL:HA	46:n:48:LEU:HB2	2.01	0.43
46:n:119:GLY:O	46:n:120:LYS:C	2.62	0.43
47:o:32:SER:HB3	47:o:41:ARG:NH1	2.33	0.43
47:o:34:TYR:CZ	47:o:36:PHE:HD2	2.36	0.43
48:p:81:LEU:CA	48:p:84:LYS:NZ	2.75	0.43
50:r:6:LEU:N	50:r:6:LEU:HD23	2.33	0.43
52:t:71:LEU:CD1	52:t:75:ALA:HB2	2.48	0.43
53:u:48:LYS:HB3	53:u:51:GLU:CG	2.48	0.43
53:u:69:GLY:C	53:u:73:HIS:HE2	2.27	0.43
1:w:52:A:H2'	1:w:53:A:H8	1.82	0.43
1:w:55:G:N1	1:w:116:C:C4	2.87	0.43
1:w:95:G:H2'	25:W:41:ILE:CG1	2.46	0.43
1:w:147:U:O4	1:w:148:C:N4	2.52	0.43
1:w:197:A:C2	1:w:198:C:C1'	3.02	0.43
1:w:221:A:N3	1:w:233:A:C4	2.86	0.43
1:w:271:G:H2'	1:w:272:G:C8	2.53	0.43
1:w:299:A:OP2	1:w:299:A:C8	2.71	0.43
1:w:301:G:H5'	1:w:334:C:C2	2.51	0.43
1:w:305:U:H3	1:w:312:G:H1	1.65	0.43
1:w:333:G:N2	1:w:334:C:C1'	2.82	0.43
1:w:341:G:H3'	1:w:342:G:H8	1.83	0.43
1:w:360:G:C8	1:w:360:G:O5'	2.71	0.43
1:w:378:C:N3	1:w:396:G:C6	2.87	0.43
1:w:449:A:P	1:w:449:A:H8	2.42	0.43
1:w:488:G:N3	1:w:491:G:OP1	2.52	0.43
1:w:600:G:C6	1:w:601:C:C4	3.06	0.43
1:w:634:C:O2	1:w:635:C:C4	2.71	0.43
1:w:710:G:C4	1:w:711:G:C8	3.07	0.43
1:w:724:U:H2'	1:w:725:G:C8	2.54	0.43
1:w:794:G:C2'	1:w:795:C:H6	2.31	0.43
1:w:794:G:C6	1:w:795:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:833:U:O2	12:J:55:ARG:HD2	2.19	0.43
1:w:965:C:C4	1:w:966:G:C8	3.06	0.43
1:w:993:G:OP2	1:w:993:G:H3'	2.18	0.43
1:w:996:A:C6	1:w:1160:G:C2	3.06	0.43
1:w:1007:C:C5'	1:w:1008:C:H5''	2.49	0.43
1:w:1059:G:C2	1:w:1080:C:N4	2.87	0.43
1:w:1152:C:C1'	17:O:77:SER:CA	2.87	0.43
1:w:122(A):C:C4	1:w:1229:G:C2	3.07	0.43
1:w:1297:C:P	1:w:2710:C:H5''	2.59	0.43
1:w:1337:G:C6	1:w:1338:G:C5	3.06	0.43
1:w:1341:U:HO2'	20:R:55:ASN:CG	2.27	0.43
1:w:1363:C:O5'	1:w:1363:C:C6	2.72	0.43
1:w:1409:C:C2	1:w:1410:G:C8	3.07	0.43
1:w:1510:A:N6	1:w:1511:A:C2	2.87	0.43
1:w:1674:G:H1'	1:w:1676:A:H62	1.82	0.43
1:w:1788:C:C6	1:w:1788:C:C3'	3.02	0.43
1:w:1920:C:H4'	31:y:1517:G:C5	2.54	0.43
1:w:2022:U:O2'	1:w:2023:G:C5'	2.67	0.43
1:w:2085:C:O2	1:w:2085:C:C2'	2.65	0.43
1:w:2124:G:OP1	3:A:172:ILE:HD11	2.18	0.43
1:w:2213:U:C3'	1:w:2215:G:H8	2.17	0.43
1:w:2304:G:O2'	7:E:133:LEU:CA	2.67	0.43
1:w:2330:G:O2'	1:w:2331:G:H5'	2.19	0.43
1:w:2335:A:C4'	1:w:2336:A:N7	2.71	0.43
1:w:2342:C:C6	1:w:2342:C:O5'	2.71	0.43
1:w:2457:U:H2'	1:w:2458:G:O4'	2.18	0.43
1:w:2563:U:N3	1:w:2565:A:O5'	2.52	0.43
1:w:2669:G:C5	1:w:2670:A:C8	3.07	0.43
1:w:2786:U:O4'	5:C:64:LYS:HG2	2.19	0.43
1:w:2824:C:C6	1:w:2824:C:P	3.12	0.43
1:w:2850:A:C2'	1:w:2851:A:H5'	2.49	0.43
2:x:35:U:HO2'	2:x:36:C:H5'	1.79	0.43
4:B:212:SER:N	4:B:215:LEU:HD22	2.33	0.43
4:B:227:ASN:ND2	4:B:237:GLU:OE2	2.51	0.43
4:B:257:LEU:O	4:B:257:LEU:CD1	2.67	0.43
5:C:28:ALA:HB3	5:C:180:ASN:CG	2.43	0.43
6:D:48:THR:N	6:D:52:VAL:HG21	2.34	0.43
6:D:69:ARG:O	6:D:70:HIS:HB2	2.19	0.43
6:D:121:VAL:O	6:D:121:VAL:CG1	2.66	0.43
6:D:151:LEU:N	6:D:169:VAL:HB	2.33	0.43
7:E:3:LEU:HB3	7:E:5:LEU:HD23	1.94	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:123:ASN:O	7:E:125:PHE:N	2.46	0.43
9:G:55:ALA:CA	9:G:58:LEU:HB3	2.49	0.43
9:G:115:ALA:O	9:G:118:LYS:NZ	2.50	0.43
9:G:131:LYS:HE2	9:G:133:HIS:C	2.44	0.43
10:H:32:VAL:O	10:H:33:GLU:HB2	2.19	0.43
10:H:99:SER:HA	10:H:105:LEU:HD13	2.01	0.43
11:I:2:ILE:CG2	11:I:33:ALA:HB3	2.49	0.43
12:J:60:MET:SD	12:J:60:MET:N	2.91	0.43
12:J:98:GLU:H	12:J:101:VAL:HG13	1.79	0.43
12:J:147:LEU:CD1	12:J:148:LEU:N	2.81	0.43
13:K:25:ASP:OD1	13:K:102:VAL:HB	2.18	0.43
13:K:124:LYS:HZ2	13:K:125:LEU:HB2	1.82	0.43
14:L:76:VAL:O	14:L:80:PHE:CD2	2.72	0.43
17:O:44:ASN:ND2	18:P:77:ALA:O	2.41	0.43
17:O:88:ILE:C	17:O:89:GLU:HG3	2.44	0.43
21:S:84:ARG:HD3	21:S:92:ASN:N	2.34	0.43
22:T:29:TYR:HE1	22:T:89:PHE:HD1	1.65	0.43
23:U:10:THR:O	23:U:11:LYS:CG	2.65	0.43
25:W:7:ARG:CB	25:W:8:LYS:NZ	2.77	0.43
26:X:4:LEU:CD1	26:X:57:GLU:H	2.31	0.43
26:X:9:VAL:HA	26:X:32:GLN:CA	2.49	0.43
27:Y:7:PRO:O	27:Y:8:LYS:CB	2.59	0.43
28:Z:6:GLN:HA	28:Z:7:PRO:HD2	1.90	0.43
28:Z:24:THR:O	28:Z:28:ARG:HB2	2.18	0.43
30:b:16:VAL:CA	30:b:25:VAL:HB	2.43	0.43
31:y:21:G:H2'	31:y:22:G:O5'	2.18	0.43
31:y:125:U:O2	31:y:236:G:O6	2.37	0.43
31:y:128:G:N1	31:y:234:C:C4	2.86	0.43
31:y:135:C:N3	31:y:228:A:N1	2.66	0.43
31:y:173:U:HO2'	31:y:174:C:P	2.42	0.43
31:y:191(A):G:C6	31:y:191(B):G:C4	3.06	0.43
31:y:191(C):G:H2'	31:y:191(D):U:H5'	1.99	0.43
31:y:236:G:O3'	31:y:237:C:H6	2.01	0.43
31:y:265:G:H5''	50:r:65:ILE:O	2.19	0.43
31:y:321:A:OP1	31:y:1436:U:O4'	2.37	0.43
31:y:334:C:C2'	31:y:1434:A:O2'	2.67	0.43
31:y:342:C:C4	31:y:348:G:C2	3.06	0.43
31:y:382:A:H3'	31:y:383:A:C8	2.54	0.43
31:y:385:C:C2'	31:y:386:C:C5'	2.96	0.43
31:y:434:U:C6	31:y:434:U:O5'	2.71	0.43
31:y:435:C:H2'	31:y:436:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:448:A:H2'	31:y:449:C:H6	1.81	0.43
31:y:516:PSU:C2	31:y:536:C:C4	3.07	0.43
31:y:628:G:O6	31:y:629:G:N1	2.52	0.43
31:y:692:U:O4	44:l:53:SER:O	2.37	0.43
31:y:707:C:C4	31:y:708:C:N4	2.87	0.43
31:y:781:A:H5''	31:y:1523:G:C4'	2.49	0.43
31:y:786:G:C5	31:y:787:A:N7	2.87	0.43
31:y:885:G:N2	31:y:913:A:C2	2.87	0.43
31:y:900:A:C2'	31:y:901:A:O5'	2.67	0.43
31:y:911:U:N3	31:y:912:C:N4	2.66	0.43
31:y:1051:C:O5'	31:y:1051:C:C6	2.63	0.43
31:y:1161:C:H2'	31:y:1162:C:C5	2.54	0.43
31:y:1234:C:C5'	31:y:1364:U:O2	2.65	0.43
31:y:1276:G:H1'	31:y:1282:C:C1'	2.48	0.43
31:y:1374:A:H2'	31:y:1375:A:O5'	2.14	0.43
31:y:1439:C:C4	31:y:1440:C:N4	2.84	0.43
31:y:1489:G:C6	31:y:1490:C:C4	3.07	0.43
33:0:26:G:H2'	33:0:27:C:O4'	2.18	0.43
33:0:73:A:H8	33:0:73:A:O5'	2.01	0.43
35:c:52:GLU:O	35:c:53:ARG:C	2.62	0.43
35:c:178:ARG:CZ	41:i:71:GLY:O	2.67	0.43
36:d:45:LYS:H	36:d:48:TYR:HB3	1.75	0.43
36:d:120:VAL:O	36:d:123:GLN:CD	2.61	0.43
37:e:9:CYS:N	37:e:22:LYS:HZ1	2.17	0.43
37:e:22:LYS:HD2	37:e:25:ARG:HD3	2.00	0.43
37:e:74:GLN:O	37:e:78:LEU:HD13	2.18	0.43
37:e:161:ASN:OD1	37:e:162:LEU:N	2.52	0.43
39:g:60:PHE:O	39:g:61:LEU:CD2	2.66	0.43
39:g:95:GLU:OE2	51:s:32:ARG:HD3	2.18	0.43
40:h:84:ASN:HD22	40:h:84:ASN:N	1.96	0.43
40:h:99:LEU:C	40:h:101:LEU:N	2.76	0.43
41:i:28:ALA:HA	41:i:59:LEU:HD13	1.99	0.43
42:j:78:LYS:CD	42:j:101:PHE:HA	2.49	0.43
43:k:56:HIS:O	43:k:57:LYS:C	2.62	0.43
45:m:34:GLY:O	45:m:35:VAL:C	2.61	0.43
46:n:4:ILE:HA	46:n:57:ARG:CA	2.49	0.43
46:n:86:CYS:O	46:n:89:GLY:HA3	2.18	0.43
47:o:27:CYS:SG	47:o:29:ARG:NH1	2.88	0.43
50:r:76:LEU:HD23	50:r:76:LEU:C	2.43	0.43
52:t:7:LYS:C	52:t:9:VAL:N	2.73	0.43
1:w:26:G:C5	1:w:27:G:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:31:C:O5'	1:w:31:C:H6	2.02	0.43
1:w:43:G:H2'	1:w:44:A:O5'	2.18	0.43
1:w:61:G:H2'	1:w:62:C:C5	2.46	0.43
1:w:161:U:OP2	1:w:161:U:C5	2.72	0.43
1:w:224:G:C2	1:w:225:A:C4	3.07	0.43
1:w:247:G:H4'	1:w:386:G:C5	2.46	0.43
1:w:290:G:H2'	1:w:291:C:C6	2.53	0.43
1:w:300:A:N3	1:w:319:C:C2	2.87	0.43
1:w:346:A:O2'	1:w:347:A:H3'	2.19	0.43
1:w:396:G:H4'	24:V:46:LEU:CG	2.49	0.43
1:w:480:A:H5''	1:w:481:G:H5''	2.00	0.43
1:w:483:A:C3'	1:w:484:C:H6	2.32	0.43
1:w:487:C:O2	19:Q:53:SER:HB3	2.19	0.43
1:w:512:G:H2'	1:w:513:A:OP2	2.18	0.43
1:w:514:A:H61	1:w:515:A:N6	2.15	0.43
1:w:531:C:C4'	1:w:532:A:H5''	2.27	0.43
1:w:557:U:C2'	1:w:558:G:C5'	2.97	0.43
1:w:571:A:N7	1:w:573:G:OP2	2.51	0.43
1:w:579:G:O2'	27:Y:10:LYS:HD2	2.19	0.43
1:w:618(B):C:C4	1:w:619:G:C5	3.07	0.43
1:w:623:G:C6	1:w:624:C:N4	2.87	0.43
1:w:739:G:H4'	1:w:740:U:OP1	2.19	0.43
1:w:749:C:HO2'	1:w:1618:A:P	2.42	0.43
1:w:802:A:C2'	1:w:803:U:C6	3.02	0.43
1:w:865:C:C4	1:w:909:A:N6	2.85	0.43
1:w:918:A:H4'	2:x:97:G:N3	2.33	0.43
1:w:923:C:H1'	23:U:26:TYR:CG	2.54	0.43
1:w:957:A:C5'	13:K:74:TYR:CZ	2.99	0.43
1:w:968:G:C5	1:w:969:U:C5	3.06	0.43
1:w:981:A:N6	1:w:2028:U:H5'	2.33	0.43
1:w:1136:G:C2	1:w:2038:G:C5'	2.93	0.43
1:w:1197:G:N3	1:w:1197:G:C2'	2.78	0.43
1:w:1259:G:C5	1:w:1260:G:C6	3.06	0.43
1:w:1385:G:O2'	1:w:1386:C:C1'	2.67	0.43
1:w:1403:C:H4'	1:w:1471:A:H1'	2.01	0.43
1:w:1422:G:H2'	1:w:1423:G:H8	1.83	0.43
1:w:1430:C:OP2	1:w:1430:C:C5	2.72	0.43
1:w:1451:C:C4	1:w:1458:C:N4	2.87	0.43
1:w:1535:U:C2'	1:w:1536:A:O4'	2.67	0.43
1:w:1552:G:HO2'	1:w:1553:A:C5'	2.27	0.43
1:w:1642:G:C5	1:w:1643:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1788:C:C2'	1:w:1789:A:H5'	2.48	0.43
1:w:1992:G:C8	1:w:1992:G:P	3.12	0.43
1:w:2002:G:C6	1:w:2003:G:O6	2.71	0.43
1:w:2032:G:N1	1:w:2572:A:C4	2.86	0.43
1:w:2134:A:OP2	1:w:2156:G:C2	2.70	0.43
1:w:2159:G:C3'	1:w:2160:G:C5'	2.94	0.43
1:w:2171:A:O2'	1:w:2172:U:O4'	2.37	0.43
1:w:2305:A:C6	1:w:2306:C:C5	3.06	0.43
1:w:2306:C:OP1	1:w:2307:G:H5''	2.19	0.43
1:w:2447:G:C5	1:w:2501:C:C2	3.07	0.43
1:w:2458:G:C8	1:w:2490:G:O6	2.72	0.43
1:w:2530:A:H1'	1:w:2534:A:H61	1.84	0.43
1:w:2556:C:C2'	1:w:2557:G:C5'	2.97	0.43
1:w:2619:C:H2'	1:w:2620:C:O4'	2.18	0.43
1:w:2662:A:O5'	1:w:2662:A:H8	2.02	0.43
1:w:2804:C:H3'	1:w:2804:C:C6	2.51	0.43
2:x:27:C:N4	2:x:56:G:O6	2.51	0.43
2:x:74:U:O3'	2:x:75:G:O4'	2.36	0.43
3:A:6:LYS:C	3:A:7:ARG:CG	2.92	0.43
3:A:48:LEU:HD12	3:A:209:PHE:CD1	2.49	0.43
3:A:167:ASP:O	3:A:171:ALA:HA	2.18	0.43
4:B:138:VAL:O	4:B:165:ILE:HB	2.18	0.43
5:C:9:VAL:H	5:C:26:ILE:CD1	2.31	0.43
5:C:98:PRO:HB3	5:C:173:VAL:C	2.43	0.43
5:C:100:GLU:O	5:C:172:VAL:HG23	2.19	0.43
5:C:104:VAL:O	5:C:167:VAL:CG1	2.67	0.43
5:C:110:GLY:HA2	5:C:160:TYR:O	2.19	0.43
6:D:182:VAL:C	12:J:6:LEU:HA	2.44	0.43
7:E:92:VAL:CG2	7:E:93:THR:H	2.32	0.43
8:F:34:GLU:O	8:F:35:VAL:HG23	2.18	0.43
8:F:89:ILE:HG13	8:F:94:TYR:CE1	2.53	0.43
9:G:13:GLY:C	9:G:15:VAL:N	2.76	0.43
9:G:26:ALA:HA	9:G:30:LEU:N	2.34	0.43
10:H:34:PRO:HG3	10:H:71:MET:CA	2.48	0.43
11:I:75:SER:H	16:N:77:PRO:HD3	1.83	0.43
11:I:117:LEU:O	11:I:119:PRO:HD3	2.18	0.43
13:K:124:LYS:NZ	13:K:124:LYS:C	2.77	0.43
14:L:44:LEU:HD13	14:L:47:PHE:HE2	1.77	0.43
14:L:48:VAL:O	14:L:49:ASP:C	2.61	0.43
14:L:98:LEU:O	14:L:112:ALA:CB	2.58	0.43
15:M:26:LEU:O	15:M:88:ASP:O	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:67:ARG:CA	15:M:101:LEU:CD2	2.96	0.43
15:M:73:LEU:CB	15:M:76:LYS:HD3	2.44	0.43
16:N:33:LYS:HZ2	16:N:33:LYS:CB	2.31	0.43
16:N:40:THR:O	16:N:41:ARG:HB2	2.18	0.43
16:N:74:ARG:CD	16:N:76:PHE:CZ	2.96	0.43
16:N:90:GLN:CD	16:N:120:ARG:HG2	2.42	0.43
17:O:84:LYS:C	17:O:86:ALA:N	2.76	0.43
17:O:105:VAL:O	18:P:43:GLU:OE2	2.36	0.43
20:R:87:GLN:O	20:R:88:LYS:HB2	2.18	0.43
20:R:88:LYS:HA	20:R:88:LYS:HD2	1.79	0.43
21:S:50:ARG:O	21:S:51:VAL:C	2.62	0.43
21:S:80:GLY:O	21:S:97:ARG:CG	2.55	0.43
23:U:22:GLY:O	23:U:38:VAL:CA	2.52	0.43
23:U:36:ILE:HD12	23:U:60:PHE:CD2	2.54	0.43
23:U:37:LEU:CD2	23:U:59:LEU:C	2.91	0.43
23:U:41:ARG:HG3	23:U:41:ARG:NH1	2.34	0.43
23:U:44:ARG:HG3	23:U:45:PHE:HD1	1.84	0.43
24:V:23:LYS:CG	24:V:38:SER:O	2.67	0.43
25:W:35:LEU:C	25:W:37:PHE:N	2.77	0.43
28:Z:14:LYS:CA	28:Z:20:ALA:CB	2.95	0.43
31:y:61:G:H21	31:y:379:C:C4'	2.30	0.43
31:y:73:G:H2'	31:y:74:C:H6	1.82	0.43
31:y:178:C:O5'	31:y:178:C:H6	2.02	0.43
31:y:186(D):G:C6	31:y:186(E):C:C4	3.07	0.43
31:y:230:G:C4	49:q:25:ARG:NH2	2.86	0.43
31:y:267:C:P	50:r:67:LYS:CB	2.99	0.43
31:y:290:C:C2	31:y:291:C:H5	2.34	0.43
31:y:342:C:H6	31:y:342:C:O5'	2.02	0.43
31:y:373:A:C2'	31:y:374:A:C5'	2.95	0.43
31:y:412:A:C1'	31:y:413:G:N7	2.82	0.43
31:y:474:G:P	49:q:75:ARG:HG3	2.46	0.43
31:y:538:G:H3'	45:m:114:LYS:HZ2	1.78	0.43
31:y:552:U:H4'	45:m:85:ARG:NH2	2.34	0.43
31:y:607:A:N3	31:y:607:A:C2'	2.81	0.43
31:y:735:C:C5'	51:s:71:LYS:HD3	2.40	0.43
31:y:816:A:H5'	31:y:817:C:H3'	2.00	0.43
31:y:834:C:H3'	31:y:835:U:C5	2.53	0.43
31:y:960:U:H2'	31:y:1225:A:N7	2.34	0.43
31:y:984:C:C2	31:y:985:C:C5	3.07	0.43
31:y:1054:C:HO2'	31:y:1055:A:C5'	2.14	0.43
31:y:1360:A:C2'	31:y:1361:G:C8	2.93	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1380:U:OP2	40:h:4:ARG:HG2	2.19	0.43
31:y:1401:G:C2	31:y:1402:4OC:C1'	3.01	0.43
31:y:1437:C:O2	31:y:1437:C:C2'	2.56	0.43
31:y:1447:G:C6	31:y:1448:C:N3	2.87	0.43
31:y:1487:G:C5	31:y:1488:G:N7	2.87	0.43
31:y:1497:G:H1'	31:y:1518:MA6:C2	2.48	0.43
31:y:1498:UR3:H6	31:y:1498:UR3:C5'	2.46	0.43
33:0:26:G:C6	33:0:27:C:C5	3.06	0.43
33:0:61:C:H2'	33:0:62:A:C8	2.53	0.43
36:d:32:LEU:O	36:d:35:GLU:HB2	2.18	0.43
36:d:166:GLU:HG3	36:d:167:TRP:N	2.33	0.43
37:e:64:LEU:HD22	37:e:198:VAL:CB	2.44	0.43
37:e:207:TYR:HD1	37:e:207:TYR:N	2.17	0.43
38:f:82:VAL:O	38:f:88:LYS:CG	2.58	0.43
38:f:94:ALA:HA	38:f:119:LEU:N	2.33	0.43
38:f:152:ARG:HA	41:i:43:GLY:HA3	1.99	0.43
42:j:28:VAL:HG21	42:j:33:PHE:CD1	2.54	0.43
44:l:63:LEU:N	44:l:63:LEU:CD2	2.80	0.43
44:l:90:GLY:O	44:l:91:ARG:O	2.37	0.43
46:n:90:LEU:CD2	46:n:94:ARG:NH1	2.82	0.43
46:n:92:HIS:CD2	46:n:98:VAL:HG11	2.54	0.43
46:n:114:ARG:HG3	46:n:114:ARG:NH1	2.34	0.43
47:o:50:LYS:HD2	47:o:52:GLN:H	1.84	0.43
50:r:10:VAL:CB	50:r:52:LYS:O	2.67	0.43
50:r:27:PHE:HB2	50:r:28:PRO:HD2	2.01	0.43
50:r:81:ARG:NH2	50:r:83:ASP:HB2	2.27	0.43
53:u:45:GLN:OE1	53:u:46:GLU:CG	2.67	0.43
1:w:4:C:O2'	1:w:5:A:O5'	2.36	0.43
1:w:12:U:O4	1:w:2627:G:C5'	2.64	0.43
1:w:28:A:C5	1:w:513:A:C5	3.07	0.43
1:w:61:G:N7	1:w:62:C:N4	2.66	0.43
1:w:116:C:C2	1:w:117:G:O4'	2.72	0.43
1:w:133:C:C6	1:w:133:C:O5'	2.72	0.43
1:w:178:G:C6	1:w:179:G:N7	2.86	0.43
1:w:189:G:H1	1:w:205:G:C2'	2.31	0.43
1:w:270(M):U:H2'	1:w:270(N):U:C5	2.47	0.43
1:w:295:G:H5''	1:w:296:C:OP2	2.18	0.43
1:w:479:A:C5'	1:w:480:A:O5'	2.66	0.43
1:w:494:G:H4'	19:Q:6:ILE:HG13	2.01	0.43
1:w:631:A:O2'	12:J:67:MET:CG	2.66	0.43
1:w:742:G:C8	1:w:742:G:O5'	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:745:G:O2'	1:w:748:G:H1'	2.18	0.43
1:w:789:A:H3'	1:w:790:C:H5	1.80	0.43
1:w:852:G:H2'	1:w:853:G:C8	2.54	0.43
1:w:855:G:C6	1:w:856:C:N3	2.86	0.43
1:w:983:A:H2	1:w:984:A:C4	2.35	0.43
1:w:985:C:H2'	1:w:986:C:C6	2.50	0.43
1:w:1028:A:C2	1:w:2487:G:H1'	2.53	0.43
1:w:1146:C:C4	1:w:1147:C:N4	2.87	0.43
1:w:1181:C:H2'	1:w:1182:A:C4	2.54	0.43
1:w:1195:G:C4	1:w:1196:C:C5	3.07	0.43
1:w:1197:G:N1	1:w:1250:G:C4	2.87	0.43
1:w:1260:G:C2	1:w:1261:C:C4	3.06	0.43
1:w:1313:U:O2'	1:w:1314:C:C5'	2.64	0.43
1:w:1317:A:C2	1:w:1335:U:O2	2.72	0.43
1:w:1351:C:H3'	1:w:1351:C:C6	2.54	0.43
1:w:1365:A:C8	24:V:43:TYR:OH	2.68	0.43
1:w:1378:A:O2'	1:w:1380:G:N7	2.51	0.43
1:w:1473:G:OP2	1:w:1473:G:C8	2.71	0.43
1:w:1602:U:O5'	1:w:1602:U:C6	2.63	0.43
1:w:1629:U:H2'	1:w:1630:G:C8	2.54	0.43
1:w:1651:G:C6	1:w:1652:A:C6	3.07	0.43
1:w:1767:C:O2'	1:w:1768:U:H5'	2.19	0.43
1:w:2023:G:H2'	1:w:2024:G:O5'	2.19	0.43
1:w:2111:C:H41	1:w:2144:U:H5'	1.82	0.43
1:w:2114:A:C8	1:w:2114:A:OP2	2.72	0.43
1:w:2115:G:H8	1:w:2115:G:O5'	2.01	0.43
1:w:2140:C:C2'	1:w:2141:G:H8	2.30	0.43
1:w:2196:C:C4	1:w:2197:U:C5	3.06	0.43
1:w:2209:C:H2'	1:w:2210:G:C8	2.53	0.43
1:w:2230:G:H4'	24:V:45:ASN:O	2.19	0.43
1:w:2302:G:C2	1:w:2303:G:C5	3.07	0.43
1:w:2354:G:H21	23:U:36:ILE:HG12	1.84	0.43
1:w:2432:A:C6	1:w:2433:A:C5	3.07	0.43
1:w:2640:G:O3'	10:H:98:TYR:HE2	2.02	0.43
1:w:2730:C:N4	1:w:2731:G:N7	2.67	0.43
1:w:2772:C:H2'	1:w:2773:C:H6	1.83	0.43
1:w:2790:A:H5'	1:w:2892:A:N6	2.32	0.43
1:w:2797:U:C4	1:w:2799:A:N1	2.87	0.43
1:w:2831:G:C4'	1:w:2883:A:C2	2.78	0.43
1:w:2899:G:C5	1:w:2900:A:N7	2.87	0.43
2:x:42:C:H3'	2:x:43:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:8:TYR:CG	3:A:12:LEU:CD1	3.02	0.43
3:A:29:LEU:HG	3:A:33:LEU:CD2	2.49	0.43
3:A:36:ALA:HB3	3:A:219:MET:CG	2.49	0.43
3:A:185:LYS:HD3	3:A:185:LYS:C	2.39	0.43
4:B:46:GLN:O	4:B:46:GLN:CG	2.67	0.43
5:C:29:GLY:O	5:C:91:VAL:CG1	2.67	0.43
5:C:64:LYS:C	5:C:66:HIS:N	2.77	0.43
5:C:66:HIS:O	5:C:67:PHE:CD2	2.72	0.43
6:D:15:LEU:HD13	6:D:19:LEU:CG	2.49	0.43
6:D:111:ASP:HA	6:D:114:ARG:HE	1.83	0.43
6:D:179:TYR:HA	6:D:182:VAL:CG1	2.49	0.43
8:F:76:VAL:CA	8:F:79:VAL:HG13	2.39	0.43
8:F:138:LYS:HB3	8:F:141:VAL:CG1	2.49	0.43
13:K:34:LEU:HD12	13:K:103:MET:HE1	1.85	0.43
13:K:68:ILE:O	13:K:69:PHE:CB	2.67	0.43
16:N:17:THR:O	16:N:18:ASP:HB3	2.18	0.43
16:N:70:VAL:O	16:N:72:VAL:HG23	2.19	0.43
17:O:40:PHE:CB	18:P:78:LYS:CG	2.96	0.43
18:P:4:ILE:HG22	18:P:39:LEU:HD11	2.01	0.43
19:Q:72:LYS:HG3	19:Q:107:LEU:HA	2.00	0.43
20:R:26:TYR:HB2	20:R:27:THR:H	1.74	0.43
21:S:72:VAL:C	21:S:73:ARG:CG	2.92	0.43
22:T:29:TYR:CD1	22:T:29:TYR:C	2.97	0.43
22:T:43:GLU:HA	22:T:46:LYS:CG	2.46	0.43
24:V:14:VAL:HG22	24:V:16:ASN:O	2.19	0.43
24:V:45:ASN:O	24:V:46:LEU:C	2.61	0.43
24:V:59:THR:C	24:V:60:PHE:CG	2.96	0.43
24:V:90:ILE:O	24:V:91:LYS:C	2.61	0.43
26:X:4:LEU:HD11	26:X:56:VAL:HG13	1.99	0.43
26:X:41:PRO:O	26:X:42:ALA:C	2.60	0.43
27:Y:14:ALA:C	27:Y:16:ARG:H	2.27	0.43
28:Z:10:ARG:O	28:Z:13:ALA:CB	2.59	0.43
28:Z:31:LEU:O	28:Z:32:LYS:C	2.62	0.43
31:y:38:G:N3	31:y:397:A:C5	2.87	0.43
31:y:191(A):G:OP2	31:y:191(A):G:H3'	2.18	0.43
31:y:225:C:C2'	31:y:226:G:O4'	2.67	0.43
31:y:247:G:OP2	50:r:99:SER:CB	2.54	0.43
31:y:332:G:C5	31:y:333:G:N7	2.87	0.43
31:y:366:C:H2'	31:y:366:C:O2	2.18	0.43
31:y:434:U:H6	31:y:434:U:O5'	2.02	0.43
31:y:475:G:C4	31:y:476:G:N7	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:564:C:H3'	31:y:566:G:C3'	2.49	0.43
31:y:734:G:C8	31:y:734:G:O5'	2.71	0.43
31:y:917:G:HO2'	31:y:918:A:H5'	1.84	0.43
31:y:919:A:N3	31:y:920:U:C5	2.87	0.43
31:y:1255:G:H1	31:y:1282:C:H42	1.64	0.43
31:y:1365:G:C3'	31:y:1366:C:C6	3.01	0.43
31:y:1385:G:N2	31:y:1386:G:H1'	2.33	0.43
32:z:9:A:N6	32:z:22:G:C8	2.74	0.43
32:z:46:7MG:H5''	32:z:46:7MG:C8	2.53	0.43
32:z:70:G:C5	32:z:71:G:N7	2.87	0.43
33:0:33:U:O2	33:0:35:A:H8	1.98	0.43
36:d:8:ILE:O	36:d:10:PHE:N	2.51	0.43
37:e:22:LYS:CA	37:e:26:CYS:HB2	2.48	0.43
37:e:67:ILE:HG22	37:e:68:TYR:N	2.34	0.43
39:g:11:ASN:O	39:g:14:LEU:CD1	2.66	0.43
39:g:37:VAL:CG1	39:g:38:GLU:N	2.81	0.43
39:g:38:GLU:HB2	39:g:64:GLN:OE1	2.19	0.43
40:h:5:ARG:HD2	40:h:5:ARG:C	2.43	0.43
40:h:15:ASP:OD2	40:h:15:ASP:C	2.61	0.43
40:h:80:VAL:HG11	40:h:85:TYR:CZ	2.54	0.43
40:h:149:ARG:CA	44:l:59:TYR:HB2	2.48	0.43
40:h:150:ALA:C	40:h:151:TYR:CD2	2.97	0.43
41:i:17:THR:HG22	41:i:18:ARG:H	1.83	0.43
42:j:99:LEU:HB2	42:j:101:PHE:HD1	1.80	0.43
43:k:44:VAL:HB	43:k:64:GLU:HB2	2.01	0.43
44:l:51:LYS:C	44:l:55:LYS:HE3	2.44	0.43
45:m:7:ASN:OD1	45:m:11:ARG:CB	2.67	0.43
45:m:32:ARG:HG3	45:m:32:ARG:NH1	2.33	0.43
45:m:37:THR:HG22	45:m:38:VAL:N	2.33	0.43
45:m:57:VAL:HB	45:m:65:VAL:HG23	2.01	0.43
45:m:112:ARG:NE	45:m:112:ARG:CA	2.73	0.43
45:m:123:LYS:HB3	45:m:126:GLU:CD	2.43	0.43
46:n:80:ARG:O	46:n:84:ILE:HG12	2.19	0.43
46:n:112:GLY:O	46:n:113:PRO:O	2.37	0.43
49:q:3:LYS:H	49:q:65:GLN:CB	2.28	0.43
49:q:16:HIS:CA	49:q:41:PRO:CD	2.94	0.43
51:s:51:LEU:HD21	51:s:55:ARG:HG3	1.99	0.43
52:t:22:LEU:HD23	52:t:25:LYS:NZ	2.34	0.43
52:t:48:THR:C	52:t:49:ILE:HD13	2.43	0.43
53:u:74:LYS:C	53:u:76:ALA:H	2.26	0.43
1:w:46:C:OP2	1:w:215:G:OP2	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:273(G):C:N4	1:w:274:G:N7	2.66	0.43
1:w:278:A:N1	1:w:362:U:C2	2.87	0.43
1:w:338:G:C2'	1:w:339:U:H6	2.32	0.43
1:w:487:C:H1'	19:Q:53:SER:CB	2.46	0.43
1:w:577:G:C2	1:w:578:A:C4	3.07	0.43
1:w:718:A:C5	1:w:719:C:H1'	2.54	0.43
1:w:748:G:C8	19:Q:89:ALA:HB2	2.54	0.43
1:w:857:C:H4'	23:U:44:ARG:NH2	2.33	0.43
1:w:1042:G:H1'	1:w:1114:G:H22	1.72	0.43
1:w:1083:U:H2'	1:w:1085:A:OP2	2.19	0.43
1:w:1173:G:H2'	1:w:1176:G:C6	2.36	0.43
1:w:1259:G:O2'	1:w:1260:G:H5'	2.19	0.43
1:w:1357:U:C5	1:w:1358:G:N7	2.87	0.43
1:w:1415:U:O2	1:w:1587:A:C2	2.72	0.43
1:w:1435:G:C3'	1:w:1436:G:H8	2.31	0.43
1:w:1492:G:C8	1:w:1492:G:H3'	2.54	0.43
1:w:1516:U:O2'	1:w:1517:G:O5'	2.37	0.43
1:w:1541:U:N3	1:w:1542:G:C2	2.87	0.43
1:w:1670:C:O2'	1:w:1994:C:C4'	2.67	0.43
1:w:1801:G:C4'	1:w:1815:A:N1	2.72	0.43
1:w:1858:G:C2'	1:w:1883:G:N2	2.80	0.43
1:w:1861:G:C2	1:w:1862:G:C8	3.07	0.43
1:w:1862:G:N3	1:w:1881:C:O2	2.52	0.43
1:w:1924:C:C4	1:w:1925:C:N4	2.87	0.43
1:w:1970:A:H4'	1:w:1971:A:OP1	2.16	0.43
1:w:2051:A:C3'	1:w:2614:A:N6	2.76	0.43
1:w:2061:G:C6	1:w:2063:C:N4	2.87	0.43
1:w:2077:A:N3	1:w:2434:A:H1'	2.34	0.43
1:w:2158:A:N3	1:w:2159:G:O4'	2.51	0.43
1:w:2218:G:O2'	4:B:148:GLU:HG3	2.19	0.43
1:w:2303:G:C5	1:w:2304:G:N7	2.86	0.43
1:w:2310:A:H8	1:w:2310:A:O5'	2.02	0.43
1:w:2351:G:H1'	1:w:2366:A:N6	2.34	0.43
1:w:2373:G:C2	1:w:2374:C:N3	2.86	0.43
1:w:2379:G:O6	1:w:2380:C:N4	2.52	0.43
1:w:2404:C:C2'	1:w:2405:G:H5'	2.48	0.43
1:w:2495:G:H2'	1:w:2495:G:N3	2.34	0.43
1:w:2588:G:C5	1:w:2607:G:C2	3.07	0.43
1:w:2682:U:H1'	5:C:12:THR:CB	2.49	0.43
1:w:2690:C:O2'	1:w:2691:C:O5'	2.33	0.43
2:x:30:C:C2'	2:x:31:C:C5'	2.93	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:37:C:C2'	2:x:37:C:O2	2.66	0.43
3:A:11:LEU:H	3:A:11:LEU:CD1	2.32	0.43
3:A:43:GLU:O	3:A:215:VAL:HG13	2.19	0.43
3:A:48:LEU:HA	3:A:211:ARG:NH1	2.33	0.43
3:A:194:ILE:O	3:A:197:LEU:CG	2.61	0.43
4:B:21:PHE:C	4:B:24:ILE:CG2	2.92	0.43
4:B:130:ALA:C	4:B:190:TYR:HE1	2.20	0.43
4:B:137:PRO:HB2	4:B:140:THR:HG23	1.94	0.43
5:C:5:LEU:N	5:C:5:LEU:CD1	2.81	0.43
5:C:8:LYS:CD	5:C:190:GLY:O	2.67	0.43
5:C:8:LYS:HD3	5:C:190:GLY:O	2.19	0.43
6:D:69:ARG:O	6:D:70:HIS:CB	2.66	0.43
6:D:151:LEU:HD13	6:D:188:VAL:CG1	2.49	0.43
6:D:181:ILE:CA	6:D:184:THR:HG1	2.32	0.43
7:E:5:LEU:N	7:E:5:LEU:HD22	2.34	0.43
7:E:5:LEU:CB	7:E:100:TRP:HH2	2.32	0.43
7:E:56:ALA:O	7:E:57:ALA:C	2.62	0.43
8:F:13:LYS:CE	8:F:29:PRO:HA	2.45	0.43
9:G:26:ALA:C	9:G:31:LEU:H	2.27	0.43
11:I:15:GLY:N	11:I:17:ARG:HH12	2.17	0.43
12:J:113:LYS:HZ2	12:J:131:SER:CB	2.30	0.43
15:M:58:LEU:CD2	15:M:59:LYS:N	2.74	0.43
15:M:68:GLN:HA	15:M:71:ARG:HH12	1.69	0.43
15:M:84:GLN:CD	15:M:85:VAL:N	2.76	0.43
16:N:35:LYS:N	16:N:35:LYS:CD	2.77	0.43
16:N:61:PHE:HD1	16:N:76:PHE:O	2.01	0.43
16:N:102:ILE:HA	16:N:110:ILE:HG12	2.00	0.43
16:N:105:LEU:C	16:N:110:ILE:HD13	2.43	0.43
17:O:50:ARG:CG	17:O:50:ARG:NH2	2.82	0.43
17:O:103:PRO:C	17:O:105:VAL:H	2.25	0.43
18:P:11:GLN:HG2	18:P:11:GLN:H	1.71	0.43
18:P:34:GLU:N	18:P:64:HIS:HE1	2.17	0.43
18:P:71:LEU:HD21	18:P:93:GLU:HB3	1.99	0.43
19:Q:24:ILE:CG1	19:Q:36:LEU:CD1	2.97	0.43
20:R:27:THR:HA	20:R:78:LYS:CB	2.39	0.43
20:R:28:PHE:CE1	20:R:78:LYS:CB	3.01	0.43
20:R:29:TRP:CD1	20:R:29:TRP:N	2.87	0.43
20:R:78:LYS:HD2	20:R:79:ALA:H	1.78	0.43
20:R:84:ALA:H	20:R:85:PRO:HD2	1.84	0.43
21:S:72:VAL:O	21:S:73:ARG:HG3	2.19	0.43
21:S:84:ARG:HB2	21:S:91:GLU:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:73:GLN:HB3	22:T:87:ASP:HB2	1.99	0.43
22:T:151:HIS:HB2	22:T:168:GLU:C	2.44	0.43
23:U:35:ASN:C	23:U:60:PHE:HB2	2.44	0.43
23:U:45:PHE:CE1	23:U:77:ARG:HB3	2.53	0.43
24:V:51:VAL:HB	24:V:60:PHE:C	2.43	0.43
24:V:51:VAL:HB	24:V:60:PHE:CA	2.49	0.43
24:V:82:LEU:O	24:V:83:GLU:O	2.37	0.43
26:X:23:LEU:N	26:X:23:LEU:HD23	2.34	0.43
29:a:2:PRO:HB2	29:a:3:LYS:H	1.58	0.43
31:y:96:G:C2'	31:y:97:U:C6	2.80	0.43
31:y:120:A:C5	31:y:122:G:C5	3.07	0.43
31:y:123:C:H5''	31:y:311:C:H2'	1.99	0.43
31:y:147:G:H2'	31:y:148:G:C1'	2.49	0.43
31:y:157:G:C6	31:y:165:C:C4	3.07	0.43
31:y:186(B):C:O2	53:u:89:ARG:NH1	2.49	0.43
31:y:274:A:O2'	31:y:275:G:O4'	2.27	0.43
31:y:300:A:N3	31:y:566:G:C6	2.86	0.43
31:y:335:C:O2'	31:y:1433:A:C1'	2.40	0.43
31:y:355:C:C5	31:y:356:A:N7	2.87	0.43
31:y:404:U:C2	31:y:405:U:C5	3.03	0.43
31:y:457:C:H2'	31:y:458:C:O4'	2.19	0.43
31:y:506:G:C8	31:y:507:C:N4	2.87	0.43
31:y:538:G:H5''	45:m:114:LYS:HG2	2.00	0.43
31:y:645:C:H2'	31:y:646:U:C5	2.54	0.43
31:y:668:G:N7	31:y:669:U:C5	2.86	0.43
31:y:717:C:C2'	31:y:734:G:H5'	2.48	0.43
31:y:760:G:N1	50:r:105:ALA:CA	2.82	0.43
31:y:819:A:N6	31:y:1529:G:C6	2.87	0.43
31:y:897:C:O5'	31:y:897:C:H6	2.02	0.43
31:y:959:A:H8	31:y:959:A:O5'	2.01	0.43
31:y:1003:G:C5	31:y:1004:A:C4	3.07	0.43
31:y:1034:G:C2	31:y:1035:A:N1	2.86	0.43
31:y:1074:G:H2'	31:y:1075:C:C6	2.53	0.43
31:y:1147:C:N3	31:y:1148:U:O2	2.51	0.43
31:y:1215:G:N3	31:y:1216:G:C8	2.87	0.43
31:y:1300:G:C2	31:y:1335:C:O4'	2.72	0.43
31:y:1447:G:C5	31:y:1448:C:C4	3.07	0.43
31:y:1507:A:C2	31:y:1528:U:O2	2.71	0.43
32:z:9:A:O2'	32:z:10:G:N7	2.49	0.43
33:0:35:A:C6	33:0:36:A:C6	3.07	0.43
35:c:31:TYR:O	35:c:43:ASP:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:130:ARG:NE	35:c:131:PRO:CD	2.77	0.43
36:d:66:VAL:HB	36:d:101:LEU:HB3	2.00	0.43
37:e:13:ARG:C	37:e:16:GLY:H	2.27	0.43
37:e:28:SER:C	37:e:30:LYS:N	2.69	0.43
37:e:93:PHE:CE1	37:e:97:LEU:HD21	2.54	0.43
37:e:201:GLN:HA	37:e:204:ILE:CD1	2.49	0.43
40:h:66:VAL:O	40:h:70:LYS:HB3	2.18	0.43
40:h:100:ALA:O	40:h:104:LEU:CD2	2.65	0.43
41:i:11:THR:N	41:i:14:ARG:NH1	2.66	0.43
41:i:42:GLU:HB3	41:i:44:PHE:HE2	1.79	0.43
42:j:95:LYS:HB2	42:j:96:LEU:CD1	2.47	0.43
42:j:127:LYS:O	42:j:128:ARG:CB	2.67	0.43
43:k:71:LEU:HD23	43:k:72:VAL:N	2.34	0.43
43:k:84:GLN:NE2	43:k:87:THR:HG22	2.34	0.43
44:l:27:ASN:CG	44:l:55:LYS:HB3	2.44	0.43
44:l:33:THR:HB	44:l:37:GLY:O	2.19	0.43
44:l:37:GLY:O	44:l:38:ASN:C	2.61	0.43
44:l:71:LYS:O	44:l:75:TYR:CE1	2.72	0.43
45:m:117:SER:O	45:m:119:TYR:N	2.52	0.43
46:n:30:ALA:C	46:n:32:GLU:H	2.26	0.43
47:o:15:LYS:HB3	47:o:19:ARG:CG	2.48	0.43
49:q:58:TYR:O	49:q:61:SER:CB	2.67	0.43
49:q:76:GLN:O	49:q:77:ALA:C	2.62	0.43
50:r:12:SER:HB3	50:r:20:THR:N	2.34	0.43
51:s:60:ALA:O	51:s:64:ARG:HG3	2.18	0.43
52:t:19:VAL:CG1	52:t:20:LEU:N	2.79	0.43
53:u:10:LEU:H	53:u:10:LEU:CD2	2.32	0.43
1:w:78:A:H2'	1:w:79:G:O4'	2.18	0.42
1:w:115:C:C4	1:w:116:C:C5	3.08	0.42
1:w:149:A:C2'	1:w:150:C:C5'	2.74	0.42
1:w:214:G:C2'	1:w:216:A:O2'	2.67	0.42
1:w:226:G:O2'	1:w:227:A:C5'	2.67	0.42
1:w:240:G:C6	1:w:241:A:C6	3.07	0.42
1:w:265:A:H4'	1:w:266:G:OP1	2.19	0.42
1:w:306:U:C2	1:w:310:A:N6	2.84	0.42
1:w:465:G:H1'	28:Z:16:HIS:HE1	1.84	0.42
1:w:484:C:C5	1:w:484:C:OP2	2.72	0.42
1:w:517:C:OP2	27:Y:13:LYS:NZ	2.51	0.42
1:w:519:U:C3'	19:Q:25:ARG:NH2	2.79	0.42
1:w:520:G:H8	1:w:520:G:P	2.41	0.42
1:w:557:U:H5''	10:H:134:PRO:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:741:G:O6	1:w:757:U:C2	2.72	0.42
1:w:766:C:C2'	1:w:767:U:H5'	2.49	0.42
1:w:827:U:H5'	1:w:828:U:O5'	2.19	0.42
1:w:888:C:O3'	1:w:889:C:H3'	2.19	0.42
1:w:924:C:C6	1:w:924:C:C3'	3.02	0.42
1:w:963:U:H6	1:w:963:U:H5'	1.84	0.42
1:w:1135:C:N4	1:w:1138:G:C8	2.86	0.42
1:w:1284:A:O2'	1:w:1285:G:H5'	2.19	0.42
1:w:1501:C:H2'	1:w:1502:C:C1'	2.49	0.42
1:w:154(B):C:HO2'	1:w:1547:C:P	2.40	0.42
1:w:1564:C:C2'	1:w:1565:C:O4'	2.67	0.42
1:w:1787:A:O5'	1:w:1787:A:H8	2.02	0.42
1:w:1794:U:C2'	1:w:1900:A:C2	3.00	0.42
1:w:1803:A:C5'	4:B:259:THR:O	2.67	0.42
1:w:1958:C:C2'	1:w:1959:G:H5'	2.47	0.42
1:w:2082:A:C2	1:w:2239:G:C2	3.07	0.42
1:w:2187:G:C2	1:w:2188:C:H1'	2.54	0.42
1:w:2255:G:C2'	1:w:2256:G:H5'	2.49	0.42
1:w:2317:C:O5'	1:w:2317:C:C6	2.70	0.42
1:w:2356:C:H2'	1:w:2357:U:H6	1.83	0.42
1:w:2372:G:C2	1:w:2373:G:C5	3.07	0.42
1:w:2417:C:H2'	1:w:2418:A:C5'	2.49	0.42
1:w:2505:G:C8	1:w:2576:G:C2	3.07	0.42
1:w:2559:C:H2'	1:w:2560:C:O5'	2.19	0.42
1:w:2587:A:N6	1:w:2608:G:O2'	2.41	0.42
1:w:2824:C:C4	1:w:2825:G:N1	2.87	0.42
2:x:81:G:N1	2:x:82:G:C4	2.87	0.42
2:x:84:C:O2'	2:x:85:G:H5'	2.19	0.42
3:A:19:LYS:HB3	3:A:21:TYR:OH	2.18	0.42
3:A:20:ILE:HD12	3:A:224:ARG:HD3	2.00	0.42
3:A:21:TYR:CE1	3:A:223:VAL:HG13	2.54	0.42
3:A:27:ALA:O	3:A:183:PRO:CB	2.67	0.42
3:A:53:ARG:CD	3:A:53:ARG:H	2.31	0.42
4:B:244:ARG:HA	4:B:245:PRO:HA	1.68	0.42
5:C:28:ALA:HB3	5:C:180:ASN:C	2.44	0.42
5:C:59:VAL:CG1	5:C:60:ASN:N	2.82	0.42
6:D:165:LEU:HD13	6:D:165:LEU:N	2.22	0.42
7:E:100:TRP:O	7:E:103:LEU:HD12	2.18	0.42
9:G:26:ALA:CA	9:G:31:LEU:H	2.31	0.42
9:G:89:TYR:N	9:G:89:TYR:CD1	2.81	0.42
9:G:103:ARG:HD2	9:G:103:ARG:C	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:131:LYS:C	9:G:131:LYS:HD2	2.44	0.42
9:G:137:PRO:O	9:G:138:ILE:HB	2.19	0.42
9:G:138:ILE:O	9:G:138:ILE:CG1	2.67	0.42
10:H:90:LEU:C	10:H:92:GLN:N	2.77	0.42
10:H:161:LEU:HD12	10:H:161:LEU:H	1.84	0.42
11:I:61:VAL:O	11:I:84:ALA:CB	2.67	0.42
11:I:63:VAL:HG22	11:I:83:ALA:O	2.18	0.42
12:J:23:PRO:HB2	12:J:24:GLY:H	1.66	0.42
12:J:61:ARG:HE	12:J:61:ARG:CA	2.31	0.42
12:J:137:LYS:HB2	12:J:138:LEU:HD12	2.01	0.42
13:K:1:MET:HG2	13:K:2:LEU:N	2.34	0.42
16:N:38:ASN:ND2	16:N:38:ASN:H	2.13	0.42
16:N:124:ASP:CB	16:N:125:ARG:HH12	2.26	0.42
18:P:13:ARG:O	18:P:14:VAL:HG13	2.18	0.42
21:S:82:PRO:HD3	21:S:97:ARG:NH1	2.34	0.42
24:V:37:ILE:CG2	24:V:38:SER:H	2.32	0.42
24:V:51:VAL:CG1	24:V:53:VAL:H	2.31	0.42
24:V:55:GLY:H	24:V:58:ILE:HD11	1.83	0.42
26:X:7:LYS:CA	26:X:55:ARG:HB3	2.48	0.42
27:Y:8:LYS:HB2	27:Y:8:LYS:HZ2	1.83	0.42
31:y:60:A:O5'	31:y:60:A:C8	2.70	0.42
31:y:107:G:C2'	31:y:108:G:H5'	2.49	0.42
31:y:127:G:C2	31:y:235:C:N3	2.87	0.42
31:y:157:G:N2	31:y:158:G:H1'	2.33	0.42
31:y:237:C:O2'	31:y:238:G:H5'	2.19	0.42
31:y:259:G:N2	31:y:268:C:C2	2.87	0.42
31:y:368:U:H3'	31:y:368:U:H6	1.84	0.42
31:y:447:G:C1'	31:y:487:A:N6	2.77	0.42
31:y:553:A:H3'	31:y:554:C:C5	2.53	0.42
31:y:601:C:C2	31:y:638:G:C2	3.07	0.42
31:y:645:C:H2'	31:y:646:U:H6	1.81	0.42
31:y:689:C:C2'	31:y:690:G:C5'	2.88	0.42
31:y:693:G:C1'	34:1:-3:A:H1'	2.41	0.42
31:y:784:C:C4	31:y:799:G:N1	2.86	0.42
31:y:800:G:O2'	31:y:801:U:C5	2.71	0.42
31:y:832:C:N4	31:y:855:G:C6	2.87	0.42
31:y:896:C:C5	31:y:896:C:OP2	2.72	0.42
31:y:924:C:H2'	31:y:925:G:O4'	2.18	0.42
31:y:936:C:H2'	31:y:937:A:O4'	2.19	0.42
31:y:1179:A:C2'	31:y:1180:A:H8	2.27	0.42
31:y:1307:U:O2	31:y:1330:U:O2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1312:G:N2	31:y:1326:C:C2	2.87	0.42
31:y:1346:A:O4'	31:y:1348:U:H5'	2.19	0.42
31:y:1406:U:C4	31:y:1407:5MC:C4	3.06	0.42
31:y:1429:C:C2	31:y:1430:C:C6	3.07	0.42
31:y:1476:G:H2'	31:y:1477:C:C5	2.53	0.42
32:z:18:G:C4	32:z:57:G:C2	3.07	0.42
35:c:114:ARG:O	35:c:117:GLU:HG2	2.19	0.42
36:d:18:TRP:NE1	47:o:53:LEU:O	2.52	0.42
36:d:122:GLU:O	36:d:125:GLU:CG	2.43	0.42
37:e:20:TYR:HB3	37:e:27:TYR:CE2	2.54	0.42
37:e:121:VAL:CB	37:e:136:PRO:HG2	2.47	0.42
38:f:79:GLU:HG3	41:i:104:ARG:HH11	1.84	0.42
43:k:8:LEU:HD21	43:k:71:LEU:N	2.33	0.42
43:k:41:PRO:O	43:k:42:THR:C	2.62	0.42
44:l:109:VAL:CA	51:s:88:LYS:HB2	2.49	0.42
45:m:40:ARG:HE	45:m:54:VAL:CG2	2.32	0.42
45:m:59:LEU:CD1	45:m:61:SER:C	2.92	0.42
46:n:32:GLU:HA	46:n:35:GLU:CB	2.41	0.42
52:t:52:TYR:CD1	52:t:57:HIS:N	2.87	0.42
52:t:65:ASN:CG	52:t:66:MET:H	2.27	0.42
53:u:15:ARG:HD3	53:u:18:GLN:NE2	2.34	0.42
1:w:72:U:O4	1:w:112:U:C4'	2.67	0.42
1:w:109:G:C3'	1:w:110:G:C8	2.79	0.42
1:w:138:G:C3'	1:w:139:G:H5''	2.48	0.42
1:w:142:G:O2'	1:w:143:C:H5''	2.19	0.42
1:w:147:U:N3	1:w:148:C:C4	2.87	0.42
1:w:188:G:H5'	24:V:18:ILE:CG1	2.29	0.42
1:w:238:C:C5'	1:w:609(A):A:H5'	2.49	0.42
1:w:244:A:H62	1:w:254:G:H1'	1.84	0.42
1:w:261:G:C2'	1:w:609(A):A:H2	2.32	0.42
1:w:270(F):G:O6	1:w:270(U):G:N1	2.52	0.42
1:w:425:G:H2'	1:w:426:C:C6	2.54	0.42
1:w:432:A:H2'	1:w:433:C:O4'	2.20	0.42
1:w:440:G:H2'	1:w:441:U:N1	2.34	0.42
1:w:450:G:N2	1:w:454:A:OP2	2.33	0.42
1:w:464:U:O2	1:w:788:A:C6	2.72	0.42
1:w:515:A:N1	1:w:1260:G:C2'	2.82	0.42
1:w:651:G:N3	1:w:651:G:C2'	2.76	0.42
1:w:652:U:H5'	1:w:654:U:C2	2.54	0.42
1:w:739:G:C4'	1:w:740:U:OP1	2.67	0.42
1:w:741:G:C6	1:w:757:U:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:789:A:C2'	1:w:790:C:O5'	2.68	0.42
1:w:848:G:C4	1:w:933:A:O2'	2.69	0.42
1:w:855:G:H22	23:U:26:TYR:CB	2.32	0.42
1:w:890:A:N6	1:w:892:G:C6	2.87	0.42
1:w:917:A:C6	1:w:918:A:C8	3.07	0.42
1:w:941:A:O2'	1:w:1190:G:H4'	2.19	0.42
1:w:974(A):G:H5'	1:w:1186:G:C2	2.46	0.42
1:w:987:G:O2'	1:w:988:A:OP1	2.34	0.42
1:w:1003:G:N3	1:w:1010:A:H2	2.18	0.42
1:w:1186:G:C2	1:w:1187:G:O2'	2.70	0.42
1:w:1229:G:N7	1:w:1230:C:C4	2.87	0.42
1:w:1274:A:O2'	1:w:1275:A:C5'	2.67	0.42
1:w:1303:G:H5'	1:w:1642:G:C2	2.55	0.42
1:w:1309:G:O5'	28:Z:9:ARG:HG3	2.18	0.42
1:w:1323:U:H5''	19:Q:84:ARG:HE	1.84	0.42
1:w:1335:U:H3'	1:w:1336:A:C8	2.54	0.42
1:w:1385:G:H2'	1:w:1386:C:O4'	2.18	0.42
1:w:1564:C:H2'	1:w:1565:C:O4'	2.18	0.42
1:w:1670:C:C3'	1:w:1671:U:H5'	2.49	0.42
1:w:1683:C:N4	1:w:1705:G:H1	2.13	0.42
1:w:1747:G:H2'	1:w:1748:G:C8	2.55	0.42
1:w:1747:G:N3	1:w:1748:G:C8	2.87	0.42
1:w:1797:C:C6	1:w:1797:C:P	3.12	0.42
1:w:1831:G:O6	1:w:1973:G:O6	2.38	0.42
1:w:1850:G:O2'	33:O:4:G:H4'	2.19	0.42
1:w:1857:G:C2'	1:w:1858:G:O4'	2.58	0.42
1:w:1911:U:C5	1:w:1918:A:N6	2.86	0.42
1:w:1920:C:C4'	31:y:1517:G:C4	3.01	0.42
1:w:2076:U:O5'	1:w:2238:G:N2	2.50	0.42
1:w:2176:A:O3'	3:A:222:SER:HB3	2.19	0.42
1:w:2370:G:O6	1:w:2371:G:N1	2.52	0.42
1:w:2377:A:H4'	15:M:112:PHE:HB2	2.01	0.42
1:w:2483:C:H6	1:w:2483:C:C5'	2.31	0.42
1:w:2531:A:C8	8:F:175:LYS:HD3	2.54	0.42
1:w:2565:A:C2'	1:w:2566:A:O4'	2.66	0.42
1:w:2583:G:C6	1:w:2584:U:N3	2.87	0.42
1:w:2588:G:C5	1:w:2589:A:C4	3.07	0.42
1:w:2671:A:C4	1:w:2672:G:C8	3.07	0.42
1:w:2674:G:H4'	11:I:26:LYS:NZ	2.33	0.42
1:w:2680:C:O2	1:w:2727:G:C2	2.69	0.42
1:w:2745:C:C2'	1:w:2746:U:H6	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2803:C:C2'	1:w:2804:C:H5'	2.37	0.42
1:w:2838:G:C2'	1:w:2839:G:O5'	2.67	0.42
1:w:2856:C:N3	1:w:2861:G:N2	2.66	0.42
2:x:3:C:N3	2:x:118:G:C6	2.87	0.42
2:x:42:C:H42	7:E:95:ARG:HH22	1.67	0.42
2:x:57:A:C8	7:E:27:ASN:CG	2.96	0.42
2:x:61:G:N1	2:x:62:C:N3	2.67	0.42
2:x:63:G:N3	2:x:64:C:O4'	2.52	0.42
4:B:155:LEU:CD2	4:B:157:ARG:CD	2.96	0.42
4:B:242:ARG:HH11	4:B:242:ARG:CG	2.31	0.42
7:E:82:LEU:CD1	7:E:84:LYS:H	2.23	0.42
9:G:127:VAL:CG1	9:G:141:LYS:NZ	2.82	0.42
10:H:47:GLY:O	10:H:48:ARG:C	2.62	0.42
10:H:48:ARG:O	10:H:52:LYS:CE	2.67	0.42
10:H:151:HIS:HE1	10:H:157:ARG:HG2	1.83	0.42
11:I:68:GLU:CD	11:I:78:ARG:HB2	2.44	0.42
14:L:38:VAL:CB	14:L:110:PRO:HB2	2.29	0.42
15:M:25:ARG:O	15:M:26:LEU:HD23	2.18	0.42
17:O:59:ARG:HG2	17:O:62:ILE:HD11	1.99	0.42
17:O:75:ASN:C	17:O:79:PHE:HB2	2.44	0.42
19:Q:10:VAL:CG2	19:Q:101:SER:HB2	2.41	0.42
20:R:19:ALA:O	20:R:21:PHE:N	2.51	0.42
21:S:13:VAL:O	21:S:69:ALA:HB1	2.19	0.42
21:S:53:PRO:O	21:S:54:LYS:CB	2.66	0.42
22:T:103:ARG:HB2	22:T:137:ILE:O	2.19	0.42
23:U:51:VAL:HG22	23:U:79:VAL:HG23	2.01	0.42
24:V:26:ARG:CD	24:V:26:ARG:N	2.82	0.42
26:X:20:LYS:O	26:X:24:LYS:NZ	2.51	0.42
31:y:14:U:C6	31:y:14:U:C3'	3.02	0.42
31:y:43:C:H6	31:y:43:C:O5'	2.02	0.42
31:y:92:G:H2'	31:y:93:U:O5'	2.19	0.42
31:y:114:U:C3'	31:y:115:G:H5''	2.49	0.42
31:y:201:C:C4	31:y:209:U:H5'	2.54	0.42
31:y:267:C:O2'	31:y:268:C:H5'	2.19	0.42
31:y:319:G:H21	31:y:320:C:H1'	1.83	0.42
31:y:374:A:N6	31:y:389:A:C6	2.87	0.42
31:y:382:A:H2'	31:y:383:A:O5'	2.18	0.42
31:y:439:A:N3	31:y:439:A:H2'	2.34	0.42
31:y:519:C:C3'	45:m:50:ALA:HB1	2.43	0.42
31:y:556:C:H2'	31:y:557:G:O4'	2.18	0.42
31:y:575:G:C5	31:y:881:G:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:696:A:H1'	31:y:786:G:HO2'	1.82	0.42
31:y:875:C:O2'	41:i:14:ARG:CD	2.68	0.42
31:y:887:G:H2'	31:y:888:G:O4'	2.19	0.42
31:y:951:G:C6	31:y:1231:G:N1	2.87	0.42
31:y:983:A:H1'	31:y:1049:U:O2	2.19	0.42
31:y:986:A:H61	31:y:1219:U:H3	1.67	0.42
31:y:1275:A:HO2'	31:y:1276:G:H5'	1.80	0.42
31:y:1350:A:O5'	31:y:1350:A:C8	2.67	0.42
31:y:1385:G:C2'	31:y:1386:G:H5'	2.49	0.42
31:y:1409:C:C6	31:y:1409:C:O5'	2.72	0.42
31:y:1420:C:H2'	31:y:1421:G:O4'	2.19	0.42
31:y:1435:G:H2'	31:y:1436:U:O5'	2.19	0.42
31:y:1453:G:C6	31:y:1454:G:C4	3.07	0.42
35:c:46:LYS:O	35:c:48:MET:N	2.53	0.42
35:c:207:ALA:O	35:c:211:ILE:HG12	2.20	0.42
36:d:46:GLU:OE2	36:d:46:GLU:CA	2.54	0.42
36:d:57:ILE:CG2	36:d:58:GLU:N	2.82	0.42
36:d:99:VAL:O	36:d:99:VAL:HG23	2.20	0.42
38:f:33:VAL:HG22	38:f:112:LEU:HB3	2.01	0.42
40:h:87:VAL:HA	40:h:88:PRO:HD3	1.84	0.42
40:h:109:ASN:HA	40:h:119:ARG:NH2	2.26	0.42
41:i:24:THR:HG22	41:i:61:VAL:CG2	2.37	0.42
41:i:35:ILE:HD12	41:i:38:ILE:HD12	1.98	0.42
41:i:50:ARG:HD3	41:i:50:ARG:C	2.44	0.42
41:i:53:VAL:HG23	41:i:58:TYR:HB2	2.00	0.42
42:j:93:ARG:O	42:j:97:LYS:CB	2.67	0.42
45:m:24:PRO:C	45:m:26:LEU:N	2.76	0.42
45:m:42:VAL:H	45:m:54:VAL:HG13	1.84	0.42
45:m:82:VAL:CG2	45:m:83:LEU:H	2.23	0.42
45:m:114:LYS:HA	45:m:114:LYS:HD3	1.85	0.42
46:n:13:LYS:HB3	46:n:17:VAL:CB	2.49	0.42
47:o:3:ARG:C	47:o:5:ALA:N	2.78	0.42
48:p:54:ARG:HD2	48:p:55:GLY:HA2	2.00	0.42
48:p:62:GLN:O	48:p:66:LEU:HD13	2.19	0.42
50:r:61:GLU:CD	50:r:62:SER:N	2.77	0.42
50:r:89:LEU:O	50:r:90:ILE:C	2.61	0.42
50:r:92:ARG:O	50:r:93:GLN:C	2.60	0.42
51:s:85:LEU:C	51:s:85:LEU:CD2	2.81	0.42
1:w:9:U:H2'	1:w:10:G:C1'	2.49	0.42
1:w:35:G:C5	1:w:36:G:C5	2.99	0.42
1:w:38:A:C2	1:w:39:C:N3	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:80:G:H1'	1:w:347:A:N1	2.29	0.42
1:w:123:G:C5	1:w:124:G:N3	2.88	0.42
1:w:123:G:C3'	1:w:124:G:C8	3.03	0.42
1:w:149:A:N6	1:w:150:C:C2	2.88	0.42
1:w:181:A:N3	1:w:434:U:H1'	2.32	0.42
1:w:193:U:H2'	1:w:194:G:H5'	2.01	0.42
1:w:309:G:C4	1:w:330:A:C6	3.07	0.42
1:w:648:G:H5'	1:w:2351:G:H4'	1.95	0.42
1:w:696:G:C2	1:w:767:U:H1'	2.40	0.42
1:w:719:C:N3	1:w:720:C:C4	2.87	0.42
1:w:744:G:C8	1:w:744:G:P	3.13	0.42
1:w:751:A:O5'	19:Q:90:ARG:HA	2.19	0.42
1:w:801:G:N1	6:D:49:ARG:HA	2.31	0.42
1:w:821:A:H61	1:w:972:G:H1'	1.83	0.42
1:w:836:G:C6	1:w:837:C:N4	2.87	0.42
1:w:1131:G:C2	1:w:1132:A:N7	2.86	0.42
1:w:1136:G:N2	1:w:2038:G:H5''	2.33	0.42
1:w:1138:G:C1'	10:H:128:GLY:C	2.92	0.42
1:w:1263:U:H5''	27:Y:11:THR:OG1	2.19	0.42
1:w:1314:C:C2	1:w:1315:C:C5	3.07	0.42
1:w:1480:G:H22	1:w:1514:U:H1'	1.84	0.42
1:w:1517:G:C6	1:w:1518:C:N4	2.87	0.42
1:w:1538:G:C3'	1:w:1539:G:C8	3.02	0.42
1:w:1547:C:N4	1:w:1548:C:N4	2.67	0.42
1:w:1637:A:C2	1:w:1638:C:C2	3.07	0.42
1:w:1649:G:C2'	1:w:1650:G:H5'	2.49	0.42
1:w:1686:C:C2	1:w:1703:G:C2	3.06	0.42
1:w:1726:G:H3'	1:w:1727:U:C5	2.54	0.42
1:w:1802:A:O2'	1:w:1803:A:C5'	2.64	0.42
1:w:1857:G:N1	1:w:1858:G:N1	2.67	0.42
1:w:2023:G:H4'	1:w:2617:C:O3'	2.19	0.42
1:w:2041:U:O2	1:w:2041:U:C2'	2.67	0.42
1:w:2052:G:N3	5:C:149:ARG:CA	2.83	0.42
1:w:2061:G:H2'	1:w:2501:C:O2'	2.19	0.42
1:w:2301:C:H2'	1:w:2302:G:O4'	2.19	0.42
1:w:2335:A:N7	1:w:2337:G:C2	2.88	0.42
1:w:2338:G:O5'	1:w:2338:G:H8	2.02	0.42
1:w:2395:C:H4'	24:V:33:LYS:NZ	2.34	0.42
1:w:2419:U:N3	1:w:2420:C:C5	2.87	0.42
1:w:2462:U:O4'	1:w:2491:U:N3	2.52	0.42
1:w:2529:G:H3'	1:w:2529:G:P	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2552:U:H6	1:w:2552:U:C4'	2.32	0.42
1:w:2634:G:N1	1:w:2785:C:C4	2.87	0.42
1:w:2635:C:C4	1:w:2636:U:C5	3.07	0.42
1:w:2647:U:H5'	1:w:2647:U:H6	1.84	0.42
1:w:2676:C:H2'	1:w:2677:G:O5'	2.18	0.42
1:w:712(B):A:H4'	1:w:2713:A:C5'	2.14	0.42
2:x:94:C:C4	2:x:95:U:O4	2.72	0.42
2:x:95:U:H2'	2:x:96:G:H8	1.79	0.42
3:A:23:ILE:CG2	3:A:23:ILE:O	2.67	0.42
4:B:23:GLU:O	4:B:82:ILE:HD12	2.20	0.42
4:B:76:PRO:HG2	4:B:118:VAL:HA	2.02	0.42
4:B:81:ALA:CB	4:B:94:LEU:CB	2.71	0.42
4:B:142:VAL:HG23	4:B:192:THR:C	2.42	0.42
4:B:175:LEU:HD13	4:B:185:VAL:HG21	2.00	0.42
5:C:37:ARG:HB2	5:C:46:ALA:H	1.84	0.42
5:C:51:PHE:HD1	5:C:52:LEU:N	1.82	0.42
5:C:101:ARG:HE	5:C:169:ASN:HB3	1.84	0.42
5:C:109:LYS:NZ	14:L:3:HIS:CE1	2.87	0.42
5:C:138:PRO:O	5:C:140:SER:N	2.52	0.42
6:D:129:GLY:N	6:D:134:PHE:CZ	2.87	0.42
6:D:130:LYS:C	6:D:134:PHE:CE2	2.97	0.42
7:E:16:ARG:HB2	7:E:17:PRO:CD	2.49	0.42
7:E:114:ILE:CG1	7:E:115:ARG:H	2.32	0.42
8:F:60:ARG:H	8:F:60:ARG:HG2	1.64	0.42
9:G:7:GLU:CD	9:G:35:LEU:HD11	2.44	0.42
9:G:41:GLU:N	9:G:41:GLU:OE1	2.52	0.42
10:H:25:LYS:CD	18:P:13:ARG:HH21	2.33	0.42
10:H:36:TRP:O	10:H:158:PRO:CG	2.67	0.42
10:H:57:LEU:C	10:H:59:GLY:N	2.77	0.42
11:I:13:ASN:C	11:I:17:ARG:HH12	2.23	0.42
11:I:104:ARG:HD2	11:I:104:ARG:N	2.34	0.42
13:K:34:LEU:O	13:K:103:MET:CE	2.67	0.42
13:K:65:PHE:O	13:K:104:PHE:CB	2.67	0.42
13:K:134:ARG:CD	13:K:136:ALA:N	2.82	0.42
14:L:94:TYR:CD1	14:L:94:TYR:N	2.88	0.42
16:N:25:GLY:O	16:N:48:ILE:HG13	2.20	0.42
16:N:98:LYS:HG3	16:N:100:TYR:CE1	2.52	0.42
17:O:33:ARG:C	17:O:37:GLU:OE1	2.61	0.42
17:O:83:LEU:HB3	17:O:84:LYS:HZ1	1.83	0.42
17:O:94:ASN:ND2	17:O:95:LEU:HG	2.34	0.42
17:O:114:LYS:CG	17:O:115:ALA:H	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:24:LYS:C	18:P:25:LEU:HD12	2.45	0.42
18:P:28:GLU:CB	18:P:29:PRO:CD	2.89	0.42
20:R:51:VAL:O	20:R:52:VAL:HG23	2.20	0.42
22:T:100:VAL:HB	22:T:101:PRO:HD2	2.00	0.42
23:U:15:ASP:HB3	23:U:20:ARG:HG2	2.01	0.42
23:U:52:GLY:HA2	23:U:62:LEU:HB2	1.95	0.42
24:V:10:LYS:CA	24:V:48:LYS:HZ1	2.30	0.42
25:W:29:LYS:HZ2	25:W:29:LYS:C	2.27	0.42
27:Y:31:VAL:HG22	27:Y:40:LYS:O	2.19	0.42
30:b:30:PRO:HA	30:b:33:LYS:HD2	2.00	0.42
31:y:22:G:H5''	31:y:885:G:C4'	2.48	0.42
31:y:126:G:HO2'	31:y:634:C:HO2'	1.65	0.42
31:y:266:G:C2	31:y:270:A:N6	2.77	0.42
31:y:267:C:O2	31:y:268:C:C6	2.72	0.42
31:y:298:A:C6	31:y:299:G:O6	2.72	0.42
31:y:337:C:C2	31:y:338:A:C8	3.08	0.42
31:y:361:G:C6	31:y:362:G:N3	2.87	0.42
31:y:363:A:C5'	45:m:33:ARG:HG3	2.40	0.42
31:y:418:C:C5	31:y:426:G:N2	2.87	0.42
31:y:423:G:H2'	31:y:423:G:N3	2.34	0.42
31:y:506:G:C3'	31:y:507:C:C6	3.02	0.42
31:y:545:C:O2'	31:y:549:C:OP1	2.36	0.42
31:y:582:U:OP2	31:y:758:G:C2	2.72	0.42
31:y:650:G:C8	31:y:650:G:H3'	2.53	0.42
31:y:687:A:N3	31:y:704:A:C6	2.87	0.42
31:y:720:C:C2	31:y:721:G:C6	3.07	0.42
31:y:730:G:N7	31:y:731:G:C1'	2.78	0.42
31:y:754:C:O2	31:y:754:C:C3'	2.67	0.42
31:y:781:A:C3'	31:y:782:A:H8	2.26	0.42
31:y:781:A:O4'	31:y:1523:G:O4'	2.37	0.42
31:y:976:G:O4'	31:y:1363:A:N6	2.53	0.42
31:y:986:A:C6	31:y:1220:G:N2	2.87	0.42
31:y:1057:G:H4'	36:d:196:LEU:CD1	2.47	0.42
31:y:1082:G:H2'	31:y:1083:U:H5'	2.01	0.42
31:y:1125:U:C2'	31:y:1126:U:H5''	2.48	0.42
31:y:1148:U:H3'	31:y:1148:U:C6	2.55	0.42
31:y:1280:A:C5'	43:k:43:ARG:HH12	2.32	0.42
31:y:1384:C:C6	31:y:1384:C:H3'	2.54	0.42
31:y:1440:C:C2'	31:y:1441:G:C5'	2.79	0.42
33:0:4:G:C2	33:0:5:A:C4	3.08	0.42
35:c:142:LEU:HA	35:c:145:LEU:CG	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:175:ARG:O	35:c:179:LYS:HG3	2.19	0.42
35:c:226:ARG:HH11	35:c:226:ARG:CB	2.31	0.42
36:d:40:ARG:HD2	36:d:43:LEU:CD2	2.49	0.42
36:d:44:GLU:CA	36:d:48:TYR:HB2	2.49	0.42
36:d:72:LYS:HA	36:d:73:PRO:HD2	1.78	0.42
36:d:173:VAL:H	36:d:174:PRO:HD3	1.82	0.42
37:e:50:ARG:O	37:e:51:PRO:O	2.36	0.42
37:e:72:GLU:OE2	37:e:72:GLU:N	2.37	0.42
37:e:126:ILE:HD12	37:e:127:THR:N	2.33	0.42
38:f:81:GLU:CB	38:f:89:ILE:O	2.67	0.42
38:f:143:ARG:CB	38:f:147:ASP:OD2	2.67	0.42
39:g:37:VAL:CG1	39:g:38:GLU:H	2.33	0.42
41:i:24:THR:OG1	41:i:63:LEU:HD22	2.18	0.42
41:i:97:VAL:HG13	41:i:98:LYS:N	2.31	0.42
42:j:83:ARG:O	42:j:87:GLN:HG3	2.20	0.42
43:k:30:SER:OG	43:k:81:THR:O	2.32	0.42
43:k:31:GLY:HA3	43:k:80:LYS:C	2.43	0.42
44:l:71:LYS:O	44:l:73:MET:N	2.52	0.42
44:l:78:GLN:O	44:l:104:GLN:O	2.36	0.42
46:n:4:ILE:HG23	46:n:56:LEU:O	2.19	0.42
46:n:20:THR:O	46:n:22:ILE:N	2.52	0.42
46:n:73:GLU:CD	46:n:76:ALA:HB3	2.44	0.42
47:o:26:ARG:NH2	47:o:43:CYS:HA	2.35	0.42
50:r:94:ASN:O	50:r:95:TYR:CD2	2.72	0.42
51:s:21:LYS:HD2	51:s:21:LYS:N	2.34	0.42
52:t:64:GLU:OE2	52:t:67:VAL:HA	2.18	0.42
1:w:13:A:C2	1:w:14:A:C6	2.99	0.42
1:w:15:G:H4'	27:Y:17:ASP:OD1	2.20	0.42
1:w:44:A:O5'	1:w:44:A:C8	2.66	0.42
1:w:77:C:N4	1:w:78:A:C6	2.87	0.42
1:w:90:U:C5	1:w:90:U:OP2	2.73	0.42
1:w:114:U:H3'	1:w:115:C:C5	2.54	0.42
1:w:145:G:C2	1:w:146:G:H1'	2.54	0.42
1:w:203:C:H5''	1:w:204:A:H5''	2.01	0.42
1:w:247:G:C8	1:w:249:C:C6	3.08	0.42
1:w:263:C:H2'	1:w:264:C:O4'	2.18	0.42
1:w:268:C:N4	1:w:269:U:C6	2.88	0.42
1:w:298:G:H21	1:w:340:A:H62	1.67	0.42
1:w:322:A:O5'	1:w:340:A:O4'	2.37	0.42
1:w:371:A:C8	1:w:402:A:N6	2.88	0.42
1:w:536:A:N1	1:w:558:G:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:609(B):G:C2	1:w:610:C:N3	2.87	0.42
1:w:690:G:H1'	4:B:43:ARG:HH22	1.85	0.42
1:w:734:A:N7	1:w:735:A:C5	2.87	0.42
1:w:849:A:O2'	26:X:17:LYS:HE2	2.19	0.42
1:w:861:A:C2	2:x:79:C:H4'	2.47	0.42
1:w:888:C:OP1	1:w:888:C:C6	2.72	0.42
1:w:957:A:H4'	13:K:74:TYR:CE2	2.54	0.42
1:w:982:C:H1'	1:w:2029:G:C4'	2.49	0.42
1:w:1123:C:C2	1:w:1124:C:H5	2.36	0.42
1:w:1138:G:H4'	10:H:128:GLY:HA2	1.90	0.42
1:w:1212:G:C2	1:w:1236:G:N1	2.86	0.42
1:w:1341:U:H2'	1:w:1397:U:C2	2.54	0.42
1:w:1350:C:O2'	1:w:1351:C:C5'	2.67	0.42
1:w:1357:U:H3'	1:w:1358:G:O4'	2.20	0.42
1:w:1381:G:O5'	1:w:1381:G:H8	2.02	0.42
1:w:1535:U:C5	1:w:1536:A:N3	2.87	0.42
1:w:1567:A:H2	4:B:84:TYR:CB	2.33	0.42
1:w:1658:C:OP2	5:C:135:HIS:HD2	2.00	0.42
1:w:1679:U:H3'	1:w:1679:U:C6	2.54	0.42
1:w:1711:C:O5'	1:w:1711:C:H6	2.02	0.42
1:w:1725:G:C2	1:w:1726:G:C6	3.08	0.42
1:w:1728:G:OP2	1:w:1730:U:P	2.78	0.42
1:w:1772:G:C2'	1:w:1773:A:O3'	2.67	0.42
1:w:1817:G:C6	1:w:1818:U:O2	2.72	0.42
1:w:1834:U:C4'	1:w:1969:A:C2	2.98	0.42
1:w:1910:G:N7	1:w:1921:G:C2	2.88	0.42
1:w:1944:U:C2'	1:w:1944:U:O2	2.66	0.42
1:w:1949:G:H1	1:w:1957:C:H42	1.67	0.42
1:w:1956:U:C4	1:w:1957:C:C5	3.07	0.42
1:w:2051:A:H5''	1:w:2578:G:O5'	2.16	0.42
1:w:2082:A:O3'	1:w:2083:G:H8	2.01	0.42
1:w:2150:U:N3	1:w:2151:G:C5	2.87	0.42
1:w:2265:U:OP2	1:w:2266:A:O2'	2.28	0.42
1:w:2286:A:H1'	1:w:2287:A:C4	2.54	0.42
1:w:2294:C:C6	1:w:2294:C:H3'	2.54	0.42
1:w:2303:G:O2'	7:E:132:ASN:N	2.52	0.42
1:w:2304:G:N3	1:w:2304:G:C2'	2.68	0.42
1:w:2591:C:HO2'	1:w:2592:G:H5'	1.82	0.42
1:w:2631:G:C2	5:C:61:ARG:NH1	2.52	0.42
1:w:2693:A:C6	1:w:2717:G:C6	3.08	0.42
1:w:2767:C:O2'	10:H:107:LYS:CE	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2768:C:C4	1:w:2769:C:C5	3.07	0.42
1:w:2817:G:H2'	1:w:2818:G:H8	1.66	0.42
1:w:2850:A:OP2	1:w:2866:U:O4	2.37	0.42
1:w:2867:G:O2'	1:w:2868:A:P	2.77	0.42
1:w:2900:A:C4	1:w:2901:C:C6	3.07	0.42
2:x:27:C:C6	2:x:27:C:O5'	2.70	0.42
2:x:116:G:H5'	15:M:55:ALA:CB	2.49	0.42
3:A:63:VAL:CG1	3:A:64:SER:H	2.23	0.42
3:A:226:ASN:O	3:A:228:HIS:N	2.52	0.42
4:B:142:VAL:CG2	4:B:143:HIS:O	2.62	0.42
4:B:211:ARG:O	4:B:215:LEU:N	2.48	0.42
4:B:228:PRO:HG3	4:B:236:GLY:HA2	2.01	0.42
4:B:261:LYS:O	4:B:262:ARG:C	2.63	0.42
5:C:40:GLU:HB2	5:C:41:LYS:H	1.58	0.42
5:C:113:PHE:CD2	5:C:114:ALA:N	2.67	0.42
6:D:27:LEU:HD22	6:D:28:LEU:N	2.33	0.42
6:D:61:PRO:CG	6:D:65:THR:HA	2.50	0.42
6:D:151:LEU:O	6:D:169:VAL:CG2	2.60	0.42
7:E:5:LEU:CA	7:E:100:TRP:HH2	2.33	0.42
7:E:8:LYS:O	7:E:10:LYS:N	2.51	0.42
7:E:11:TYR:CD2	7:E:12:TYR:CD2	3.07	0.42
7:E:87:PRO:O	7:E:88:ILE:CB	2.67	0.42
7:E:125:PHE:O	7:E:125:PHE:HD1	2.02	0.42
9:G:34:GLY:O	9:G:35:LEU:HB2	2.17	0.42
9:G:74:ASN:O	9:G:75:LEU:HB2	2.19	0.42
10:H:34:PRO:CG	10:H:142:ARG:HH12	2.33	0.42
10:H:35:ARG:CA	10:H:73:ASP:HA	2.47	0.42
10:H:80:ALA:CA	10:H:83:ILE:CD1	2.83	0.42
10:H:81:ASP:CG	10:H:147:ALA:HB2	2.43	0.42
10:H:120:ARG:HG2	10:H:124:HIS:NE2	2.34	0.42
11:I:49:ARG:O	11:I:51:ALA:N	2.52	0.42
11:I:59:LYS:NZ	11:I:89:ASN:CA	2.82	0.42
12:J:92:GLU:CD	12:J:123:LEU:HD13	2.44	0.42
13:K:11:LYS:HD3	13:K:12:GLN:N	2.34	0.42
13:K:29:PHE:C	13:K:65:PHE:CE2	2.98	0.42
15:M:111:GLU:OE2	15:M:112:PHE:HD2	2.03	0.42
16:N:98:LYS:CG	16:N:100:TYR:HE1	2.33	0.42
16:N:107:ASP:HA	16:N:111:ARG:NH2	2.34	0.42
17:O:92:ARG:HB3	17:O:95:LEU:HG	2.01	0.42
17:O:112:ARG:HD3	17:O:112:ARG:HA	1.73	0.42
18:P:23:GLU:OE2	18:P:23:GLU:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:21:VAL:HG23	19:Q:22:ASP:N	2.34	0.42
20:R:7:VAL:CG1	20:R:31:HIS:CB	2.97	0.42
20:R:12:VAL:HG22	20:R:13:LEU:H	1.84	0.42
20:R:78:LYS:O	20:R:79:ALA:HB2	2.20	0.42
22:T:53:ILE:HG12	22:T:54:HIS:CE1	2.54	0.42
23:U:37:LEU:HD23	23:U:60:PHE:HA	2.01	0.42
24:V:55:GLY:H	24:V:58:ILE:CG1	2.33	0.42
26:X:52:HIS:O	26:X:53:LEU:HB3	2.19	0.42
27:Y:38:ALA:HB2	27:Y:48:GLU:CA	2.50	0.42
29:a:28:GLY:C	29:a:30:ARG:H	2.27	0.42
31:y:8:A:H2	38:f:104:ALA:CA	2.31	0.42
31:y:90:C:C4	31:y:91:C:N4	2.87	0.42
31:y:122:G:C4	31:y:123:C:C5	3.07	0.42
31:y:136:C:C2	31:y:137:C:C4	3.07	0.42
31:y:361:G:H2'	31:y:362:G:C1'	2.47	0.42
31:y:376:G:C2'	31:y:377:G:O4'	2.63	0.42
31:y:529:G:N2	45:m:48:ASN:OD1	2.53	0.42
31:y:560:U:C6	31:y:566:G:C4	3.07	0.42
31:y:582:U:C6	31:y:582:U:C4'	3.01	0.42
31:y:708:C:C6	31:y:708:C:H3'	2.54	0.42
31:y:778:G:C6	31:y:779:C:N4	2.86	0.42
31:y:855:G:C2	31:y:856:C:C2	3.07	0.42
31:y:929:G:H2'	31:y:930:C:C5'	2.49	0.42
31:y:950:U:C5'	31:y:950:U:H6	2.32	0.42
31:y:1106:G:C4'	36:d:172:ARG:HD2	2.47	0.42
31:y:1130:A:N6	31:y:1144:G:N2	2.66	0.42
31:y:1148:U:C6	31:y:1148:U:C3'	3.03	0.42
31:y:1169:A:N6	31:y:1170:A:C2	2.87	0.42
31:y:1262:C:H2'	31:y:1263:C:C5	2.55	0.42
31:y:1292:U:O4	31:y:1293:G:O6	2.37	0.42
31:y:1310:G:N3	31:y:1311:G:C8	2.87	0.42
31:y:1426:C:N3	31:y:1475:G:C2	2.88	0.42
31:y:1472:U:C3'	31:y:1473:A:C8	3.02	0.42
31:y:1502:A:H2	31:y:1505:G:C2	2.38	0.42
32:z:31:A:O5'	32:z:32:PSU:OP2	2.37	0.42
35:c:63:MET:HE2	35:c:64:ARG:CA	2.49	0.42
35:c:132:LYS:HB3	35:c:135:GLN:NE2	2.34	0.42
36:d:12:LEU:O	36:d:16:ARG:HB3	2.19	0.42
36:d:81:GLY:HA2	36:d:84:ILE:CG2	2.49	0.42
36:d:124:ILE:CD1	36:d:128:PHE:O	2.68	0.42
36:d:152:ILE:HG22	36:d:199:LYS:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:55:ALA:HA	37:e:58:LEU:HD21	2.02	0.42
38:f:39:GLY:CA	38:f:71:LEU:HD11	2.49	0.42
38:f:144:THR:CG2	38:f:145:LYS:N	2.63	0.42
40:h:35:LYS:C	40:h:37:ASN:H	2.26	0.42
41:i:21:LYS:CD	41:i:24:THR:N	2.74	0.42
42:j:14:VAL:CG1	42:j:15:ALA:H	2.31	0.42
42:j:42:ARG:C	42:j:44:VAL:N	2.77	0.42
42:j:82:ALA:O	42:j:85:LEU:CD1	2.65	0.42
45:m:64:GLU:N	45:m:64:GLU:CD	2.78	0.42
46:n:13:LYS:CB	46:n:17:VAL:CB	2.95	0.42
47:o:16:PHE:CB	47:o:19:ARG:NH1	2.83	0.42
47:o:24:CYS:SG	47:o:39:LEU:HD23	2.59	0.42
47:o:29:ARG:NE	47:o:42:ILE:CG1	2.76	0.42
48:p:43:LEU:N	48:p:43:LEU:HD22	2.34	0.42
48:p:51:HIS:O	48:p:52:SER:C	2.61	0.42
51:s:23:LYS:HE2	51:s:23:LYS:CA	2.38	0.42
51:s:34:TYR:CG	51:s:35:ARG:N	2.88	0.42
51:s:47:THR:HG23	51:s:84:LYS:H	1.80	0.42
51:s:72:ARG:O	51:s:73:ALA:C	2.63	0.42
53:u:10:LEU:HD22	53:u:10:LEU:H	1.83	0.42
53:u:53:LEU:N	53:u:53:LEU:CD2	2.81	0.42
1:w:61:G:C8	1:w:62:C:C5	3.08	0.42
1:w:107:C:C2'	1:w:348:G:H22	2.21	0.42
1:w:207:A:H2'	1:w:208:C:C5'	2.50	0.42
1:w:217:G:C5	1:w:218:A:C5	3.08	0.42
1:w:242:G:C4	29:a:5:LYS:HB3	2.54	0.42
1:w:341:G:H2'	1:w:342:G:C4	2.53	0.42
1:w:349:G:C3'	1:w:350:U:C6	2.98	0.42
1:w:414:C:C6	1:w:414:C:C3'	3.01	0.42
1:w:511:U:H4'	1:w:1236:G:OP1	2.19	0.42
1:w:518:G:H4'	19:Q:76:VAL:HG23	2.00	0.42
1:w:569:U:O4'	1:w:946:G:O2'	2.33	0.42
1:w:594:U:O2	1:w:594:U:C2'	2.65	0.42
1:w:618(A):G:H3'	1:w:618(B):C:H6	1.80	0.42
1:w:679:C:C2	1:w:799:G:C2	3.08	0.42
1:w:792:G:N2	1:w:2072:G:O2'	2.46	0.42
1:w:823:G:H8	1:w:823:G:O5'	2.03	0.42
1:w:993:G:H2'	1:w:994:C:O5'	2.18	0.42
1:w:1011:G:O2'	1:w:1013:C:H4'	2.20	0.42
1:w:1161:C:C2'	1:w:1162:G:C8	2.90	0.42
1:w:1173:G:N1	1:w:1176:G:OP2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1197:G:O6	1:w:1198:U:C4	2.72	0.42
1:w:1342:A:N7	1:w:1397:U:C6	2.88	0.42
1:w:1422:G:N2	1:w:1423:G:C4	2.87	0.42
1:w:1497:U:O4	1:w:1578:U:OP1	2.38	0.42
1:w:1549:C:C2'	1:w:1550:C:C6	2.98	0.42
1:w:1651:G:N1	1:w:1652:A:C6	2.88	0.42
1:w:1702:G:C5	1:w:1703:G:N7	2.87	0.42
1:w:1767:C:O5'	1:w:1767:C:H6	2.02	0.42
1:w:1803:A:C8	1:w:1803:A:C3'	3.03	0.42
1:w:1805:U:H5'	4:B:252:TRP:CH2	2.54	0.42
1:w:1859:A:H8	1:w:1859:A:P	2.42	0.42
1:w:1909:C:O2	1:w:1909:C:H2'	2.20	0.42
1:w:1991:U:C3'	1:w:1992:G:H5''	2.45	0.42
1:w:2103:C:O2'	1:w:2104:G:H5'	2.19	0.42
1:w:2108:C:H1'	1:w:2182:G:N2	2.35	0.42
1:w:2120:G:N1	1:w:2121:G:C8	2.87	0.42
1:w:2175:C:HO2'	1:w:2176:A:H5''	1.78	0.42
1:w:2190:G:H5'	1:w:2190:G:C8	2.54	0.42
1:w:2286:A:H4'	1:w:2287:A:C5'	2.48	0.42
1:w:2310:A:C2'	1:w:2311:A:H5''	2.49	0.42
1:w:2330:G:N2	23:U:41:ARG:NH2	2.68	0.42
1:w:2349:G:OP2	29:a:42:ARG:CZ	2.67	0.42
1:w:2359:C:C1'	29:a:52:LYS:CE	2.98	0.42
1:w:2485:G:HO2'	13:K:126:PRO:N	2.17	0.42
1:w:2486:G:H2'	1:w:2487:G:O4'	2.18	0.42
1:w:2514:U:C3'	1:w:2515:C:C6	3.03	0.42
1:w:2519:U:C4	1:w:2542:A:C8	3.07	0.42
1:w:2532:G:C2	1:w:2663:G:N3	2.87	0.42
1:w:2569:G:N1	1:w:2570:G:C5	2.88	0.42
1:w:2712:U:C4'	1:w:712(B):A:O5'	2.67	0.42
1:w:2740:A:C2	1:w:2764:A:C2	3.07	0.42
1:w:2747:G:H22	1:w:2748:A:N6	2.13	0.42
1:w:2852:G:C6	1:w:2864:G:C6	3.00	0.42
2:x:12:C:C5	2:x:12:C:OP2	2.72	0.42
2:x:17:C:N4	2:x:18:G:C4	2.87	0.42
2:x:42:C:C3'	2:x:43:C:C6	3.02	0.42
3:A:59:VAL:HG12	3:A:201:LYS:CA	2.48	0.42
4:B:20:ASP:C	4:B:24:ILE:HB	2.42	0.42
4:B:79:VAL:HG12	4:B:80:ALA:N	2.35	0.42
4:B:107:ALA:HA	4:B:108:PRO:HD2	1.88	0.42
4:B:117:VAL:HA	4:B:126:GLN:NE2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:37:ARG:HA	5:C:42:ASP:CG	2.41	0.42
5:C:91:VAL:CG1	5:C:95:ILE:CD1	2.85	0.42
5:C:122:PHE:HB3	5:C:123:ALA:H	1.55	0.42
6:D:75:ALA:C	6:D:77:ILE:N	2.77	0.42
7:E:16:ARG:HA	7:E:19:LEU:HD12	2.00	0.42
7:E:35:GLU:HB3	7:E:160:VAL:HG12	2.00	0.42
7:E:148:MET:O	7:E:151:ALA:CB	2.62	0.42
7:E:165:THR:O	7:E:167:GLU:N	2.53	0.42
8:F:26:VAL:O	8:F:33:LEU:N	2.53	0.42
8:F:43:VAL:HB	8:F:51:ARG:O	2.19	0.42
8:F:114:VAL:C	8:F:115:VAL:HG23	2.44	0.42
8:F:121:ILE:O	8:F:123:PHE:CE1	2.73	0.42
9:G:40:THR:HG21	9:G:43:ASN:CB	2.47	0.42
9:G:113:ARG:NE	9:G:132:PRO:HB3	2.35	0.42
9:G:118:LYS:N	9:G:118:LYS:CD	2.82	0.42
10:H:119:GLU:CG	10:H:120:ARG:H	2.32	0.42
11:I:17:ARG:NE	11:I:47:ILE:CB	2.27	0.42
11:I:60:ALA:HA	11:I:86:ILE:CA	2.47	0.42
11:I:93:PRO:HG3	11:I:114:ILE:HG22	2.01	0.42
12:J:78:PRO:CB	12:J:110:TYR:CG	3.02	0.42
12:J:107:LYS:HG2	12:J:108:LYS:N	2.34	0.42
13:K:21:THR:HG1	13:K:98:LYS:HE2	1.82	0.42
13:K:69:PHE:HD2	13:K:69:PHE:C	2.24	0.42
13:K:81:VAL:HB	13:K:82:ARG:HD3	2.01	0.42
13:K:135:ASP:C	13:K:135:ASP:OD2	2.62	0.42
14:L:90:ARG:HH22	14:L:118:GLU:CG	2.26	0.42
15:M:25:ARG:CZ	15:M:40:ILE:HG22	2.50	0.42
15:M:67:ARG:HB3	15:M:100:ALA:HB1	2.01	0.42
15:M:106:ARG:O	15:M:107:GLU:C	2.63	0.42
16:N:51:ARG:CZ	16:N:60:THR:CG2	2.98	0.42
16:N:107:ASP:HB3	31:y:1431:C:H5"	2.01	0.42
21:S:25:GLY:C	21:S:37:VAL:HG12	2.44	0.42
22:T:19:ARG:O	22:T:22:GLY:N	2.52	0.42
22:T:68:PRO:HB2	22:T:91:LEU:HD12	2.01	0.42
22:T:70:LEU:HD23	22:T:70:LEU:HA	1.82	0.42
22:T:116:VAL:HG21	22:T:177:PRO:HD3	2.01	0.42
23:U:15:ASP:HB3	23:U:20:ARG:CG	2.49	0.42
23:U:30:VAL:CG2	23:U:31:VAL:N	2.49	0.42
23:U:50:ASN:HB2	23:U:81:VAL:HG12	1.85	0.42
25:W:4:SER:HB3	25:W:6:VAL:HG22	2.01	0.42
25:W:55:ARG:HB2	25:W:56:GLN:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:8:LEU:CD2	26:X:28:LEU:HD12	2.39	0.42
27:Y:38:ALA:CA	27:Y:49:CYS:HB2	2.49	0.42
27:Y:40:LYS:NZ	27:Y:51:TYR:CD1	2.78	0.42
31:y:152:A:H2'	31:y:153:C:C5'	2.50	0.42
31:y:153:C:H2'	31:y:154:C:C5'	2.47	0.42
31:y:161:A:N7	31:y:162:A:C5	2.88	0.42
31:y:271:C:H2'	31:y:272:C:H5'	2.01	0.42
31:y:295:C:H2'	31:y:296:U:C6	2.55	0.42
31:y:360:A:C2	31:y:361:G:O4'	2.72	0.42
31:y:412:A:C2'	31:y:413:G:H8	2.30	0.42
31:y:438:G:C5'	37:e:123:HIS:CE1	3.03	0.42
31:y:502:G:C4	31:y:503:C:C6	3.08	0.42
31:y:506:G:C8	31:y:507:C:C4	3.06	0.42
31:y:555:C:H2'	31:y:556:C:C4'	2.50	0.42
31:y:617:G:H8	31:y:617:G:P	2.43	0.42
31:y:718:G:N9	44:l:116:HIS:CD2	2.87	0.42
31:y:796:C:C4	31:y:797:C:C4	3.08	0.42
31:y:808:C:C6	31:y:808:C:O5'	2.72	0.42
31:y:936:C:O2'	31:y:1383:C:N4	2.53	0.42
31:y:955:U:C2'	31:y:956:U:C4'	2.91	0.42
31:y:1112:C:C2'	36:d:178:LEU:HD22	2.49	0.42
31:y:1138:G:N2	31:y:1140:C:C4	2.87	0.42
31:y:1245:A:C8	31:y:1246:C:C5	3.07	0.42
31:y:1307:U:C2'	31:y:1308:U:C6	2.98	0.42
31:y:1366:C:H2'	31:y:1367:C:C5'	2.49	0.42
31:y:1367:C:N3	31:y:1368:G:N7	2.68	0.42
31:y:1386:G:H2'	31:y:1387:G:H8	1.82	0.42
31:y:1422:G:N1	31:y:1479:C:C4	2.87	0.42
31:y:1433:A:C2'	31:y:1434:A:H5'	2.49	0.42
32:z:76:A:OP1	32:z:76:A:H4'	2.19	0.42
33:0:24:G:C5	33:0:25:C:C5	3.07	0.42
35:c:101:MET:O	35:c:102:LEU:HD23	2.19	0.42
35:c:117:GLU:O	35:c:121:LEU:CG	2.68	0.42
37:e:59:ARG:O	37:e:62:GLN:CG	2.66	0.42
37:e:165:MET:SD	37:e:168:ARG:CB	3.03	0.42
37:e:207:TYR:CD1	37:e:207:TYR:N	2.86	0.42
38:f:116:THR:O	38:f:118:ILE:N	2.53	0.42
41:i:118:VAL:C	41:i:119:LEU:CG	2.91	0.42
41:i:122:ARG:O	41:i:126:LYS:N	2.26	0.42
43:k:10:GLY:C	43:k:11:PHE:HD1	2.27	0.42
44:l:57:THR:O	44:l:58:PRO:C	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:5:THR:O	45:m:7:ASN:C	2.62	0.42
45:m:76:LEU:CD1	45:m:77:GLN:N	2.83	0.42
46:n:12:ASN:O	46:n:12:ASN:CG	2.62	0.42
46:n:81:LEU:HB2	46:n:92:HIS:HE2	1.84	0.42
47:o:30:ALA:O	47:o:33:VAL:HG13	2.18	0.42
49:q:26:ARG:HD2	49:q:31:LYS:HD3	2.02	0.42
49:q:71:ARG:HA	49:q:74:LEU:HD12	2.01	0.42
51:s:59:SER:O	51:s:63:GLN:HB3	2.20	0.42
52:t:40:ILE:HG22	52:t:41:VAL:O	2.19	0.42
1:w:4:C:C2	1:w:5:A:C8	3.08	0.42
1:w:27:G:C2'	1:w:28:A:OP2	2.68	0.42
1:w:34:C:OP2	1:w:446:G:N2	2.47	0.42
1:w:35:G:N9	1:w:454:A:C4	2.87	0.42
1:w:62:C:H3'	1:w:63:U:C5	2.55	0.42
1:w:216:A:N1	1:w:217:G:C2	2.87	0.42
1:w:268:C:N4	1:w:269:U:C5	2.87	0.42
1:w:274:G:O2'	1:w:275:G:P	2.77	0.42
1:w:341:G:H2'	1:w:342:G:C1'	2.47	0.42
1:w:379:G:N2	1:w:395:U:O2	2.51	0.42
1:w:419:C:H2'	1:w:420:C:O5'	2.19	0.42
1:w:468:G:N7	28:Z:39:ARG:NH1	2.68	0.42
1:w:479:A:C5	1:w:481:G:N3	2.87	0.42
1:w:592:G:N2	1:w:665:C:N3	2.65	0.42
1:w:614:U:C2'	1:w:615:G:H5'	2.48	0.42
1:w:650:C:O2	1:w:650:C:H2'	2.20	0.42
1:w:723:G:N1	1:w:724:U:N3	2.67	0.42
1:w:752:A:H2	1:w:2609:U:O2	2.03	0.42
1:w:783:A:H8	1:w:784:A:O4'	2.03	0.42
1:w:816:C:O2'	1:w:932:G:N1	2.37	0.42
1:w:1003:G:H21	1:w:1010:A:H2	1.65	0.42
1:w:1013:C:C4	1:w:1014:U:C5	3.08	0.42
1:w:1180:C:N4	1:w:1181:C:N4	2.68	0.42
1:w:1219:G:C6	1:w:1231:G:C6	3.08	0.42
1:w:1272:A:H5'	1:w:1646:C:O2	2.19	0.42
1:w:1346:G:N3	1:w:1347:G:H1'	2.34	0.42
1:w:1351:C:C6	1:w:1351:C:C3'	3.03	0.42
1:w:1358:G:C8	1:w:1371:G:O6	2.73	0.42
1:w:1364:G:C3'	1:w:1365:A:H5'	2.49	0.42
1:w:1426:G:H5'	1:w:1427:A:H5'	2.01	0.42
1:w:1454:U:O4	1:w:2702:U:O4	2.37	0.42
1:w:1459:G:C6	1:w:1461:G:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1476:C:H2'	1:w:1477:A:O4'	2.19	0.42
1:w:1487:G:H2'	1:w:1488:G:O4'	2.20	0.42
1:w:1538:G:O3'	1:w:1539:G:H8	2.01	0.42
1:w:1661:G:C6	1:w:1662:C:N4	2.87	0.42
1:w:1668:A:N6	1:w:1676:A:H61	2.17	0.42
1:w:1672:C:H1'	1:w:2553:G:H5''	2.02	0.42
1:w:1839:G:N1	1:w:1927:A:C4	2.87	0.42
1:w:1849:G:N3	1:w:1849:G:C2'	2.82	0.42
1:w:1855:G:H2'	1:w:1856:G:O4'	2.19	0.42
1:w:1884:A:P	1:w:1884:A:C8	3.10	0.42
1:w:1926:U:O2	1:w:1929:G:O5'	2.38	0.42
1:w:2044:C:N4	1:w:2045:C:N4	2.67	0.42
1:w:2066:C:C4	1:w:2445:G:C6	3.08	0.42
1:w:2075:U:C5	1:w:2238:G:N7	2.85	0.42
1:w:2101:G:N1	1:w:2189:U:C2	2.88	0.42
1:w:2135:A:N6	1:w:2156:G:C2'	2.73	0.42
1:w:2141:G:C2	1:w:2142:C:N1	2.88	0.42
1:w:2259:G:H2'	1:w:2260:C:H6	1.85	0.42
1:w:2291:U:OP1	1:w:2381:C:H5'	2.20	0.42
1:w:2299:G:N2	1:w:2317:C:C2	2.64	0.42
1:w:2335:A:OP1	15:M:15:ARG:NH2	2.51	0.42
1:w:2352:A:H2'	1:w:2353:G:H5'	2.01	0.42
1:w:2373:G:C2	1:w:2374:C:C5	3.06	0.42
1:w:2377:A:C8	1:w:2378:A:N1	2.88	0.42
1:w:2435:A:H8	1:w:2435:A:C5'	2.32	0.42
1:w:2459:A:H2'	1:w:2460:U:C6	2.54	0.42
1:w:2543:G:C5	1:w:2544:G:N7	2.87	0.42
1:w:2743:C:H2'	1:w:2744:G:C4'	2.37	0.42
1:w:2789:C:O2'	1:w:2892:A:N1	2.47	0.42
1:w:2842:G:C6	1:w:2843:G:O6	2.73	0.42
1:w:2865:U:C4	1:w:2866:U:N3	2.87	0.42
2:x:2:C:O2	2:x:2:C:C2'	2.68	0.42
2:x:83:G:C4	2:x:84:C:C6	3.07	0.42
4:B:38:LYS:O	4:B:39:LYS:O	2.38	0.42
4:B:117:VAL:O	4:B:118:VAL:HB	2.19	0.42
4:B:149:PRO:HA	4:B:186:HIS:CD2	2.54	0.42
5:C:104:VAL:HG12	5:C:105:THR:H	1.85	0.42
6:D:39:ARG:O	6:D:40:ARG:C	2.62	0.42
6:D:131:THR:CA	6:D:134:PHE:CE2	3.01	0.42
6:D:160:ARG:HG2	6:D:160:ARG:O	2.19	0.42
7:E:7:LEU:C	7:E:10:LYS:HB3	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:145:ALA:O	8:F:149:ARG:N	2.52	0.42
8:F:151:ILE:O	8:F:153:LYS:HG2	2.20	0.42
9:G:12:LEU:C	9:G:14:ASP:H	2.27	0.42
10:H:44:LYS:C	10:H:49:LEU:HD21	2.45	0.42
10:H:78:VAL:CG1	10:H:149:PRO:HA	2.47	0.42
10:H:78:VAL:HG21	10:H:149:PRO:CB	2.49	0.42
10:H:88:LYS:O	10:H:88:LYS:CG	2.67	0.42
10:H:90:LEU:C	10:H:110:LEU:HB2	2.44	0.42
10:H:146:TYR:CZ	10:H:148:GLY:CA	3.03	0.42
12:J:53:GLY:C	12:J:55:ARG:H	2.27	0.42
12:J:82:GLY:O	12:J:83:VAL:CB	2.66	0.42
12:J:85:LEU:HG	12:J:118:GLY:O	2.20	0.42
13:K:29:PHE:HB3	13:K:65:PHE:CE2	2.54	0.42
13:K:102:VAL:HG12	13:K:103:MET:H	1.83	0.42
14:L:80:PHE:HA	14:L:84:ALA:HB2	2.00	0.42
15:M:103:GLU:HG3	15:M:104:GLY:N	2.34	0.42
15:M:104:GLY:O	15:M:107:GLU:N	2.52	0.42
16:N:45:PHE:HZ	16:N:65:LYS:O	1.99	0.42
16:N:55:ASN:HD21	16:N:58:ASN:H	1.63	0.42
16:N:98:LYS:HB3	16:N:100:TYR:CE1	2.54	0.42
16:N:108:ARG:NH1	16:N:108:ARG:CG	2.73	0.42
17:O:36:ARG:CA	17:O:39:LEU:HG	2.49	0.42
17:O:74:LEU:HD21	17:O:110:VAL:HA	2.02	0.42
17:O:81:HIS:O	17:O:83:LEU:N	2.52	0.42
18:P:92:THR:O	18:P:93:GLU:HB2	2.20	0.42
19:Q:72:LYS:HD2	19:Q:106:ILE:C	2.44	0.42
19:Q:80:PRO:HD3	19:Q:102:HIS:HE2	1.83	0.42
23:U:45:PHE:HD2	23:U:78:TYR:O	2.01	0.42
25:W:7:ARG:HB3	25:W:8:LYS:HZ1	1.82	0.42
26:X:8:LEU:HD21	26:X:28:LEU:CD1	2.40	0.42
30:b:24:TYR:HB2	30:b:35:ARG:HG2	2.00	0.42
31:y:36:C:N1	31:y:37:U:C5	2.87	0.42
31:y:39:G:C6	31:y:40:C:C4	3.06	0.42
31:y:167:G:C5	31:y:168:G:N7	2.87	0.42
31:y:180:U:H2'	31:y:181:G:C8	2.54	0.42
31:y:186(B):C:H5'	53:u:82:SER:HA	2.01	0.42
31:y:229:U:O2'	49:q:23:ASP:OD1	2.36	0.42
31:y:248:C:N3	31:y:277:C:N3	2.67	0.42
31:y:271:C:C2'	31:y:272:C:H5'	2.49	0.42
31:y:323:U:O3'	53:u:22:ARG:HD3	2.19	0.42
31:y:383:A:H3'	31:y:384:G:H8	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:401:C:O2'	31:y:402:G:H5'	2.19	0.42
31:y:476:G:N3	31:y:477:G:C8	2.88	0.42
31:y:491:G:N3	31:y:491:G:H2'	2.34	0.42
31:y:662:G:O2'	31:y:836:G:C5'	2.67	0.42
31:y:830:G:C2	31:y:857:C:C2	3.08	0.42
31:y:890:G:O3'	31:y:891:U:H6	1.96	0.42
31:y:911:U:C6	31:y:911:U:O5'	2.73	0.42
31:y:986:A:C6	31:y:1220:G:C2	3.08	0.42
31:y:1023:G:C5	31:y:1024:G:C8	3.08	0.42
31:y:1076:C:H5''	35:c:175:ARG:CZ	2.50	0.42
31:y:1076:C:C2	31:y:1077:G:C8	3.08	0.42
31:y:1098:C:C4	31:y:1099:G:N7	2.88	0.42
31:y:1100:C:O2	31:y:1102:A:H5'	2.19	0.42
31:y:1104:G:O4'	31:y:1104:G:P	2.78	0.42
31:y:1146:A:C4	31:y:1147:C:C5	3.07	0.42
31:y:1276:G:H21	31:y:1282:C:H2'	1.84	0.42
31:y:1332:A:H8	31:y:1332:A:O5'	2.02	0.42
31:y:1379:G:C3'	31:y:1380:U:C5'	2.94	0.42
31:y:1460:A:C2	31:y:1461:G:C1'	2.90	0.42
31:y:1468:A:H3'	31:y:1469:G:H8	1.78	0.42
32:z:11:C:H2'	32:z:12:U:H6	1.80	0.42
32:z:61:C:C2'	32:z:62:C:C5'	2.94	0.42
33:0:27:C:C2'	33:0:28:C:C5	3.01	0.42
33:0:29:A:C2	33:0:41:U:O2	2.50	0.42
35:c:14:GLY:HA2	35:c:17:PHE:HE2	1.73	0.42
35:c:69:LEU:HB3	35:c:162:ILE:HD11	2.01	0.42
35:c:127:ILE:C	35:c:127:ILE:CD1	2.88	0.42
36:d:90:GLU:C	36:d:91:LEU:HD12	2.44	0.42
37:e:31:CYS:O	37:e:33:MET:N	2.53	0.42
37:e:93:PHE:O	37:e:96:LEU:HD12	2.19	0.42
37:e:101:LEU:HG	37:e:140:VAL:HG13	1.90	0.42
37:e:120:LEU:HD22	37:e:120:LEU:C	2.45	0.42
39:g:42:GLU:OE1	39:g:59:TYR:OH	2.25	0.42
40:h:13:GLN:CD	40:h:14:PRO:HD2	2.44	0.42
41:i:117:GLY:O	41:i:118:VAL:CG2	2.68	0.42
41:i:119:LEU:CD1	41:i:124:ALA:CA	2.58	0.42
42:j:24:GLY:O	42:j:56:LEU:HD12	2.20	0.42
42:j:27:THR:HG21	42:j:62:TYR:CD2	2.55	0.42
42:j:109:VAL:HG11	42:j:118:LYS:NZ	2.35	0.42
43:k:31:GLY:HA2	43:k:80:LYS:HB2	2.01	0.42
44:l:31:THR:O	44:l:32:ILE:HD13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:91:ARG:O	44:l:92:GLU:C	2.63	0.42
45:m:13:GLY:O	45:m:15:GLU:HB2	2.19	0.42
45:m:20:LYS:O	45:m:21:SER:C	2.62	0.42
45:m:87:GLY:HA3	45:m:98:HIS:CE1	2.54	0.42
46:n:120:LYS:O	46:n:123:ALA:N	2.53	0.42
47:o:26:ARG:CZ	47:o:27:CYS:SG	3.08	0.42
47:o:32:SER:OG	47:o:41:ARG:NH1	2.48	0.42
48:p:8:LYS:O	48:p:11:VAL:HG23	2.19	0.42
50:r:23:VAL:N	50:r:41:LYS:CB	2.82	0.42
50:r:33:GLY:O	50:r:34:LYS:CB	2.68	0.42
50:r:83:ASP:O	50:r:86:GLU:HB2	2.19	0.42
52:t:44:MET:HE2	52:t:62:ILE:CD1	2.50	0.42
53:u:84:LEU:HD23	53:u:88:VAL:CG2	2.48	0.42
54:v:15:ARG:HD3	54:v:17:THR:HG21	2.02	0.42
1:w:107:C:H4'	1:w:292:C:HO2'	1.76	0.42
1:w:183:C:H4'	1:w:432:A:O2'	2.19	0.42
1:w:242:G:O2'	1:w:243:U:C5	2.72	0.42
1:w:316:C:OP2	1:w:316:C:H6	2.03	0.42
1:w:335:C:O2'	21:S:67:LEU:CG	2.58	0.42
1:w:384:U:C6	1:w:384:U:H3'	2.55	0.42
1:w:459:U:C5	1:w:469:G:N2	2.87	0.42
1:w:529:A:C6	1:w:2042:A:C4	3.08	0.42
1:w:608:A:C8	1:w:609(A):A:N7	2.88	0.42
1:w:609(B):G:C3'	1:w:610:C:H5	2.28	0.42
1:w:667:U:C5	1:w:668:G:C8	3.07	0.42
1:w:695:G:C2	1:w:768:G:C6	3.07	0.42
1:w:735:A:C8	1:w:736:C:C5	3.08	0.42
1:w:748:G:OP2	19:Q:88:ARG:CA	2.68	0.42
1:w:811:U:H1'	1:w:1251:C:C3'	2.49	0.42
1:w:882:G:H3'	1:w:883:G:H5''	2.00	0.42
1:w:889:C:H1'	1:w:890:A:O4'	2.16	0.42
1:w:979:G:H5''	1:w:980:A:OP2	2.19	0.42
1:w:1109:C:N3	1:w:1110:G:C5	2.88	0.42
1:w:1140:C:C5'	10:H:89:LYS:HZ3	2.26	0.42
1:w:1226:A:H3'	1:w:1226:A:C8	2.55	0.42
1:w:1256:G:C6	1:w:1257:C:C4	3.08	0.42
1:w:1326:U:H3'	1:w:1327:C:C6	2.55	0.42
1:w:1339:G:C2	1:w:1340:U:H5	2.37	0.42
1:w:1342:A:H8	1:w:1342:A:P	2.41	0.42
1:w:1372:U:C2'	1:w:1373:A:H5'	2.50	0.42
1:w:1377:G:C8	1:w:1377:G:O5'	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1397:U:O2'	1:w:1398:C:OP1	2.30	0.42
1:w:1443:G:C4	1:w:1444:G:C8	3.08	0.42
1:w:1462:C:C1'	1:w:2703:C:H5'	2.50	0.42
1:w:1463:C:H2'	1:w:1464:C:C6	2.55	0.42
1:w:1471:A:N3	1:w:1471:A:H3'	2.35	0.42
1:w:1532:C:C6	1:w:1533:C:C4	3.07	0.42
1:w:1680:U:O2	1:w:1763:G:C8	2.73	0.42
1:w:1742:C:N3	1:w:1743:G:C5	2.88	0.42
1:w:1819:A:O2'	4:B:179:SER:HB3	2.20	0.42
1:w:1937:A:O2'	1:w:1938:A:P	2.78	0.42
1:w:1966:A:C8	1:w:1966:A:OP1	2.73	0.42
1:w:1975:G:N7	1:w:1976:U:C5	2.88	0.42
1:w:2003:G:C6	1:w:2004:G:N7	2.88	0.42
1:w:2048:G:C2	1:w:2049:G:C8	3.07	0.42
1:w:2127:G:H2'	1:w:2128:C:O5'	2.19	0.42
1:w:2227:A:C2	1:w:2228:G:H1'	2.55	0.42
1:w:2419:U:O4	29:a:31:HIS:CB	2.65	0.42
1:w:2419:U:OP2	29:a:31:HIS:HA	2.20	0.42
1:w:2513:G:H2'	1:w:2514:U:O4'	2.19	0.42
1:w:2641:G:C4	1:w:2642:G:C8	3.07	0.42
1:w:2679:A:H5''	5:C:108:SER:HB2	2.02	0.42
1:w:2684:U:OP1	16:N:51:ARG:NH2	2.53	0.42
1:w:2736:G:C8	1:w:2736:G:C3'	3.02	0.42
1:w:2842:G:N3	1:w:2843:G:C8	2.88	0.42
2:x:8:U:H5'	15:M:17:ARG:HH12	1.83	0.42
2:x:73:A:H2'	2:x:74:U:O5'	2.19	0.42
3:A:223:VAL:CG1	3:A:224:ARG:H	2.06	0.42
4:B:119:ALA:O	4:B:123:ALA:CB	2.68	0.42
4:B:177:LEU:HD12	4:B:181:GLU:HB3	2.01	0.42
4:B:249:PRO:CB	4:B:250:TRP:CZ3	2.93	0.42
5:C:29:GLY:CA	5:C:76:ARG:HH12	2.32	0.42
6:D:109:VAL:O	6:D:113:ALA:N	2.53	0.42
7:E:43:LEU:HD11	7:E:45:GLU:CD	2.45	0.42
7:E:123:ASN:OD1	7:E:180:PHE:HE1	2.03	0.42
7:E:170:ARG:C	7:E:173:LEU:HB2	2.44	0.42
9:G:56:LYS:HG3	9:G:57:ARG:H	1.85	0.42
9:G:65:ALA:CB	9:G:133:HIS:CE1	3.02	0.42
9:G:79:ILE:N	9:G:145:VAL:CG2	2.82	0.42
9:G:97:ILE:CD1	9:G:111:PRO:HG3	2.41	0.42
10:H:27:TYR:CE2	10:H:64:ASP:HA	2.55	0.42
10:H:143:LEU:HD13	10:H:143:LEU:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:45:LEU:C	12:J:45:LEU:CD2	2.93	0.42
12:J:88:LEU:HD21	12:J:90:ARG:HH21	1.81	0.42
13:K:65:PHE:HD1	13:K:105:GLU:O	2.03	0.42
14:L:36:THR:O	14:L:111:LEU:CA	2.67	0.42
15:M:38:GLN:O	15:M:38:GLN:CG	2.66	0.42
15:M:104:GLY:O	15:M:105:ALA:C	2.62	0.42
16:N:47:GLY:O	16:N:63:VAL:HG21	2.19	0.42
16:N:64:ARG:CG	16:N:65:LYS:H	2.16	0.42
16:N:64:ARG:HE	16:N:103:ARG:HB2	1.71	0.42
17:O:19:LYS:HA	17:O:19:LYS:NZ	2.35	0.42
17:O:60:LEU:C	17:O:60:LEU:CD2	2.92	0.42
17:O:111:GLU:HA	17:O:114:LYS:HD3	2.01	0.42
18:P:25:LEU:H	18:P:94:LEU:CD1	2.30	0.42
19:Q:31:GLU:CD	19:Q:31:GLU:N	2.72	0.42
19:Q:81:ALA:HA	19:Q:98:LYS:O	2.19	0.42
22:T:45:ASP:C	22:T:49:ARG:HG3	2.45	0.42
22:T:102:LEU:O	22:T:103:ARG:C	2.62	0.42
22:T:121:HIS:C	22:T:123:ASP:N	2.76	0.42
24:V:66:HIS:CB	24:V:69:LYS:HD2	2.49	0.42
29:a:7:HIS:CE1	29:a:9:GLY:H	2.37	0.42
31:y:6:G:H3'	31:y:6:G:N3	2.35	0.42
31:y:17:U:C2	31:y:18:C:C5	3.07	0.42
31:y:179:A:N6	31:y:196:A:H62	2.18	0.42
31:y:247:G:C6	31:y:278:G:N2	2.83	0.42
31:y:291:C:N3	31:y:310:G:N1	2.68	0.42
31:y:322:C:C4	31:y:323:U:N3	2.88	0.42
31:y:329:A:H61	53:u:16:HIS:CE1	2.38	0.42
31:y:338:A:C2'	31:y:339:C:H5'	2.49	0.42
31:y:374:A:N1	31:y:375:U:C2	2.88	0.42
31:y:509:A:C2	31:y:510:A:N3	2.88	0.42
31:y:576:G:P	31:y:577:G:H5''	2.59	0.42
31:y:654:G:N3	31:y:655:A:C8	2.86	0.42
31:y:662:G:H2'	31:y:662:G:N3	2.35	0.42
31:y:701:C:O2'	31:y:702:A:P	2.78	0.42
31:y:760:G:H2'	31:y:761:G:O5'	2.20	0.42
31:y:767:A:O2'	31:y:1524:C:H1'	2.19	0.42
31:y:934:C:O2'	31:y:1344:C:OP2	2.31	0.42
31:y:1054:C:C5'	31:y:1196:U:HO2'	2.28	0.42
31:y:1118:C:C4	31:y:1156:G:N2	2.87	0.42
31:y:1158:C:C2	31:y:1160:G:C8	3.08	0.42
31:y:1163:C:O2	31:y:1164:G:C8	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1237:C:C3'	31:y:1238:A:C5'	2.53	0.42
31:y:1238:A:N6	31:y:1301:U:O2	2.52	0.42
31:y:1256:A:C3'	31:y:1257:U:H4'	2.49	0.42
31:y:1290:G:C6	31:y:1291:G:C5	3.07	0.42
31:y:1293:G:O2'	31:y:1294:G:O5'	2.38	0.42
31:y:1308:U:OP2	31:y:1308:U:C6	2.73	0.42
31:y:1343:G:H2'	31:y:1344:C:C6	2.55	0.42
31:y:1350:A:N6	42:j:118:LYS:HE2	2.23	0.42
31:y:1368:G:OP2	42:j:114:TYR:CB	2.68	0.42
31:y:1392:G:C5	31:y:1393:U:C4	3.07	0.42
31:y:1409:C:OP2	31:y:1409:C:C5	2.73	0.42
32:z:75:C:H2'	32:z:76:A:H4'	2.02	0.42
35:c:82:ARG:HG3	35:c:94:ASN:HB3	2.02	0.42
35:c:141:GLU:O	35:c:142:LEU:C	2.62	0.42
35:c:142:LEU:HD12	35:c:145:LEU:HD12	2.02	0.42
36:d:5:ILE:CG2	36:d:6:HIS:N	2.82	0.42
37:e:24:GLU:O	37:e:30:LYS:HD2	2.20	0.42
37:e:97:LEU:HD23	37:e:97:LEU:N	2.34	0.42
37:e:192:GLU:OE2	37:e:192:GLU:N	2.53	0.42
38:f:147:ASP:C	38:f:150:ARG:HG2	2.44	0.42
39:g:101:ALA:HB2	51:s:28:GLU:HG2	2.02	0.42
42:j:85:LEU:CB	42:j:92:TYR:HB2	2.48	0.42
43:k:3:LYS:HA	43:k:74:ILE:O	2.19	0.42
43:k:84:GLN:O	43:k:85:LEU:C	2.62	0.42
44:l:110:ASP:HB2	51:s:88:LYS:CE	2.50	0.42
50:r:3:LYS:HD3	50:r:3:LYS:N	2.35	0.42
50:r:8:GLY:HA2	50:r:59:ILE:CG1	2.45	0.42
52:t:12:ASP:OD1	52:t:15:LEU:HD21	2.20	0.42
1:w:28:A:C2	1:w:513:A:N3	2.87	0.42
1:w:55:G:N2	1:w:116:C:C2	2.87	0.42
1:w:132:G:C4	1:w:133:C:C6	3.08	0.42
1:w:199:A:N6	1:w:2434:A:N7	2.67	0.42
1:w:218:A:OP2	1:w:219:G:O6	2.37	0.42
1:w:242:G:C4	29:a:5:LYS:HD3	2.52	0.42
1:w:353:G:C2	1:w:354:G:C4	3.07	0.42
1:w:458:G:H2'	1:w:459:U:OP2	2.19	0.42
1:w:477:A:C8	1:w:501:A:N6	2.79	0.42
1:w:517:C:P	27:Y:13:LYS:NZ	2.93	0.42
1:w:558:G:N1	1:w:559:G:N7	2.68	0.42
1:w:578:A:H5''	1:w:579:G:OP2	2.20	0.42
1:w:580:C:C4	1:w:581:C:N4	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:593:G:C6	1:w:594:U:O4	2.73	0.42
1:w:632:A:H5'	12:J:67:MET:SD	2.59	0.42
1:w:668:G:C2	1:w:670:A:C2	3.06	0.42
1:w:690:G:H5'	1:w:780:G:H5''	2.01	0.42
1:w:706:A:C5	1:w:707:G:C5	3.08	0.42
1:w:708:C:C4	1:w:709:U:C4	3.08	0.42
1:w:783:A:C3'	1:w:784:A:H4'	2.48	0.42
1:w:787:U:C2'	1:w:791:C:H41	2.32	0.42
1:w:835:A:H61	1:w:944:G:N2	2.18	0.42
1:w:887:A:H8	1:w:889:C:H2'	1.49	0.42
1:w:939:G:N3	1:w:939:G:C2'	2.71	0.42
1:w:960:A:C8	1:w:960:A:C3'	3.02	0.42
1:w:960:A:H2'	1:w:962:G:OP2	2.19	0.42
1:w:990:A:O2'	1:w:991:C:P	2.78	0.42
1:w:996:A:C5'	17:O:92:ARG:HD3	2.49	0.42
1:w:998:C:O5'	1:w:998:C:H6	2.00	0.42
1:w:1031:G:C4'	30:b:6:SER:HA	2.44	0.42
1:w:1182:A:H2'	1:w:1183:G:O4'	2.20	0.42
1:w:1221:C:C2	1:w:122(A):C:C5	3.08	0.42
1:w:1234:U:C6	1:w:1234:U:O5'	2.73	0.42
1:w:1442:G:C4	1:w:1443:G:C8	3.08	0.42
1:w:1662:C:N4	1:w:1663:C:H41	2.18	0.42
1:w:1707:G:O2'	1:w:1758:G:O6	2.29	0.42
1:w:1717:G:O6	1:w:1743:G:C2	2.71	0.42
1:w:1847:A:OP1	1:w:1847:A:C4	2.72	0.42
1:w:1943:U:O5'	1:w:1943:U:H6	2.03	0.42
1:w:1997:G:C6	1:w:1998:G:N7	2.87	0.42
1:w:2095:C:C2	1:w:2096:U:C6	3.07	0.42
1:w:2133:G:C8	1:w:2133:G:OP1	2.73	0.42
1:w:2144:U:O2'	1:w:2145:C:C6	2.72	0.42
1:w:2163:C:C4	1:w:2164:C:C2	3.08	0.42
1:w:2175:C:H1'	3:A:217:THR:O	2.19	0.42
1:w:2373:G:N1	1:w:2374:C:C4	2.88	0.42
1:w:2443:C:N3	1:w:2444:G:C6	2.87	0.42
1:w:2464:C:H2'	1:w:2465:C:H6	1.85	0.42
1:w:2476:A:H2'	1:w:2477:C:C6	2.54	0.42
1:w:2648:C:C2'	1:w:2649:U:O5'	2.68	0.42
1:w:2680:C:P	5:C:189:PRO:HD3	2.60	0.42
1:w:2719:G:N3	1:w:2719:G:H2'	2.34	0.42
1:w:2857:G:C3'	1:w:2858:C:C5'	2.97	0.42
1:w:2870:C:H2'	1:w:2871:C:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:39:ASP:HB2	3:A:178:LYS:HZ2	1.85	0.42
4:B:17:THR:HB	4:B:204:ILE:HA	2.01	0.42
4:B:82:ILE:CG2	4:B:91:ARG:CZ	2.98	0.42
4:B:234:GLY:O	4:B:235:GLY:C	2.61	0.42
4:B:260:ARG:C	4:B:262:ARG:H	2.28	0.42
6:D:144:ASP:O	6:D:145:GLY:C	2.63	0.42
6:D:152:VAL:O	6:D:152:VAL:HG13	2.20	0.42
7:E:3:LEU:CB	7:E:5:LEU:HD23	2.50	0.42
7:E:7:LEU:HD12	7:E:11:TYR:HB3	2.02	0.42
7:E:28:VAL:O	7:E:33:ARG:HD3	2.20	0.42
8:F:58:GLU:CG	8:F:61:HIS:CD2	3.03	0.42
10:H:40:ASP:OD1	10:H:78:VAL:O	2.37	0.42
11:I:66:LYS:O	11:I:78:ARG:NH1	2.53	0.42
11:I:66:LYS:HB3	11:I:78:ARG:HH22	1.85	0.42
12:J:9:ASN:O	12:J:11:GLY:N	2.53	0.42
12:J:50:ARG:HD3	12:J:51:PHE:O	2.20	0.42
12:J:100:LEU:N	12:J:100:LEU:CD2	2.83	0.42
13:K:53:ALA:O	13:K:57:HIS:CB	2.58	0.42
14:L:1:MET:O	14:L:1:MET:HG3	2.20	0.42
14:L:63:ARG:HA	14:L:63:ARG:HD3	1.93	0.42
14:L:80:PHE:CD2	14:L:80:PHE:N	2.87	0.42
16:N:102:ILE:CG1	16:N:103:ARG:H	2.14	0.42
19:Q:13:SER:HA	19:Q:14:PRO:HD3	1.70	0.42
19:Q:42:ARG:CG	19:Q:43:GLY:H	2.32	0.42
19:Q:83:LYS:HA	19:Q:97:LYS:HB3	2.02	0.42
21:S:46:LYS:N	21:S:57:GLN:N	2.67	0.42
22:T:161:VAL:CG1	22:T:162:GLU:N	2.81	0.42
23:U:27:GLU:CD	23:U:69:PHE:CB	2.93	0.42
23:U:37:LEU:H	23:U:60:PHE:CA	2.33	0.42
24:V:49:VAL:CG1	24:V:50:ARG:N	2.58	0.42
24:V:67:ILE:O	24:V:70:VAL:CG2	2.67	0.42
26:X:16:PRO:HG2	26:X:19:GLN:HG3	2.00	0.42
31:y:115:G:O2'	31:y:117:G:N7	2.52	0.42
31:y:186(A):C:O2	53:u:85:MET:SD	2.77	0.42
31:y:216:G:C3'	31:y:217:C:C6	3.03	0.42
31:y:245:C:N3	31:y:284:G:C2	2.88	0.42
31:y:265:G:H4'	50:r:65:ILE:C	2.44	0.42
31:y:284:G:C5	31:y:285:G:N7	2.88	0.42
31:y:291:C:OP2	31:y:305:G:C6	2.73	0.42
31:y:293:G:N2	31:y:304:U:O2	2.50	0.42
31:y:300:A:H8	31:y:300:A:P	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:399:G:C2	31:y:400:C:C2	3.08	0.42
31:y:408:A:OP1	37:e:115:ARG:CB	2.67	0.42
31:y:488:C:H2'	31:y:489:C:C6	2.55	0.42
31:y:505:G:C6	31:y:506:G:C5	3.07	0.42
31:y:602:A:N6	31:y:637:G:C6	2.88	0.42
31:y:605:U:C5	31:y:606:G:N7	2.88	0.42
31:y:656:C:H2'	31:y:657:G:C8	2.54	0.42
31:y:727:G:N1	31:y:729:A:OP1	2.53	0.42
31:y:786:G:C2	31:y:787:A:N9	2.88	0.42
31:y:821:G:H2'	31:y:822:C:C6	2.55	0.42
31:y:832:C:C2	31:y:833:U:H1'	2.55	0.42
31:y:896:C:H2'	31:y:897:C:C5'	2.49	0.42
31:y:918:A:C5	31:y:919:A:N7	2.87	0.42
31:y:959:A:C6	52:t:79:THR:HG21	2.46	0.42
31:y:1088:G:C2	31:y:1089:G:C5	3.07	0.42
31:y:1089:G:N2	31:y:1090:U:O4'	2.51	0.42
31:y:1148:U:O5'	31:y:1148:U:C6	2.71	0.42
31:y:1273:G:C5	31:y:1274:G:C6	3.08	0.42
31:y:1305:G:N1	31:y:1331:G:H1'	2.33	0.42
31:y:1378:C:C2'	40:h:156:TRP:CZ3	3.02	0.42
31:y:1382:C:C5'	40:h:79:ARG:HG3	2.49	0.42
31:y:1405:G:C1'	31:y:1519:MA6:H4'	2.50	0.42
33:0:15:G:C8	33:0:15:G:C3'	3.02	0.42
37:e:13:ARG:HG3	37:e:37:PRO:CA	2.32	0.42
37:e:48:ALA:C	37:e:49:ARG:HD3	2.45	0.42
38:f:127:ASN:CB	38:f:130:ASN:OD1	2.67	0.42
38:f:143:ARG:HG2	38:f:147:ASP:OD1	2.20	0.42
40:h:51:GLN:NE2	40:h:57:GLU:HA	2.35	0.42
40:h:70:LYS:O	40:h:72:ARG:CD	2.68	0.42
41:i:53:VAL:C	41:i:55:GLY:N	2.78	0.42
41:i:78:GLN:C	41:i:80:ILE:N	2.74	0.42
41:i:91:ARG:HH12	50:r:34:LYS:HA	1.85	0.42
43:k:48:THR:HG22	43:k:60:ARG:HH11	1.83	0.42
44:l:106:LYS:O	44:l:107:SER:HB3	2.20	0.42
44:l:122:LYS:O	44:l:124:LYS:N	2.53	0.42
45:m:55:ALA:O	45:m:67:ALA:O	2.37	0.42
45:m:57:VAL:CB	45:m:65:VAL:HG23	2.49	0.42
46:n:123:ALA:HA	46:n:124:PRO:HD3	1.82	0.42
48:p:42:HIS:HB3	48:p:43:LEU:HD22	2.02	0.42
49:q:9:PHE:CE2	49:q:18:ARG:CD	3.01	0.42
50:r:85:VAL:O	50:r:89:LEU:CD1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:s:63:GLN:HA	51:s:66:LEU:HB3	1.92	0.42
54:v:8:THR:C	54:v:9:ARG:CD	2.87	0.42
1:w:7:G:C5	1:w:8:A:C6	3.07	0.42
1:w:13:A:C2'	1:w:14:A:C8	3.02	0.42
1:w:126:A:O4'	28:Z:18:PHE:HD2	2.03	0.42
1:w:182:A:N3	1:w:433:C:C1'	2.83	0.42
1:w:216:A:C2'	1:w:217:G:H8	2.14	0.42
1:w:270(X):G:N7	1:w:270(Y):G:C5	2.87	0.42
1:w:286:C:O5'	1:w:286:C:C6	2.72	0.42
1:w:294:A:C5	1:w:344:G:N2	2.88	0.42
1:w:499:U:C5	1:w:500:G:N9	2.87	0.42
1:w:578:A:C2	1:w:2018:G:H1'	2.55	0.42
1:w:581:C:H6	1:w:581:C:O5'	2.03	0.42
1:w:590:A:C6	1:w:591:C:C4	3.08	0.42
1:w:630:G:N2	1:w:633:A:OP2	2.47	0.42
1:w:713:G:O2'	1:w:718:A:N6	2.53	0.42
1:w:748:G:H2'	1:w:749:C:C5	2.55	0.42
1:w:779:U:O5'	1:w:779:U:C6	2.73	0.42
1:w:818:G:C8	1:w:1187:G:C6	3.08	0.42
1:w:842:G:C5	1:w:843:G:C8	3.08	0.42
1:w:869:G:C5'	13:K:12:GLN:NE2	2.82	0.42
1:w:910:A:N1	1:w:911:A:C2	2.88	0.42
1:w:911:A:P	1:w:912:C:C5	3.13	0.42
1:w:918:A:C4	1:w:919:G:C1'	3.02	0.42
1:w:1022:G:H1	1:w:1141:U:H5	1.60	0.42
1:w:1042:G:H3'	1:w:1043:C:C6	2.55	0.42
1:w:1087:G:O2'	1:w:1089:G:H1'	2.19	0.42
1:w:1197:G:C5	1:w:1198:U:C6	3.07	0.42
1:w:1224:C:H2'	1:w:1225:G:O4'	2.19	0.42
1:w:1408:C:N3	1:w:1594:G:N2	2.67	0.42
1:w:1492:G:O5'	1:w:1492:G:H8	2.03	0.42
1:w:1570:A:C8	1:w:1570:A:OP2	2.72	0.42
1:w:1593:G:C6	1:w:1594:G:C4	3.08	0.42
1:w:1709:U:C6	1:w:1750:G:N2	2.88	0.42
1:w:1742:C:H2'	1:w:1743:G:C8	2.55	0.42
1:w:1857:G:C2	1:w:1858:G:C4	3.08	0.42
1:w:1903:G:OP2	4:B:242:ARG:HD3	2.19	0.42
1:w:1945:G:H2'	1:w:1946:U:O5'	2.20	0.42
1:w:1952:A:C6	1:w:1953:A:C2	3.08	0.42
1:w:2100:G:C5	1:w:2101:G:N7	2.87	0.42
1:w:2141:G:N1	1:w:2142:C:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2141:G:N2	1:w:2142:C:H1'	2.35	0.42
1:w:2294:C:H6	1:w:2294:C:C5'	2.29	0.42
1:w:2322:A:C5	1:w:2323:G:H1'	2.54	0.42
1:w:2380:C:C5	1:w:2381:C:C4	3.08	0.42
1:w:2434:A:O2'	1:w:2435:A:C5'	2.67	0.42
1:w:2485:G:C4'	13:K:46:GLN:NE2	2.71	0.42
1:w:2512:C:C5'	5:C:122:PHE:CE2	3.03	0.42
1:w:2563:U:C1'	1:w:2566:A:N7	2.83	0.42
1:w:2575:C:H5''	5:C:144:ARG:NH1	2.34	0.42
1:w:2588:G:O6	1:w:2607:G:C6	2.73	0.42
1:w:2655:G:OP2	1:w:2655:G:C8	2.72	0.42
1:w:2678:C:H2'	1:w:2679:A:C8	2.55	0.42
1:w:2688:U:C5	1:w:2719:G:N1	2.88	0.42
1:w:712(B):A:O2'	14:L:13:HIS:CD2	2.72	0.42
1:w:2777:G:OP1	1:w:2777:G:H3'	2.19	0.42
1:w:2784:C:N4	1:w:2785:C:C5	2.88	0.42
1:w:2850:A:H8	1:w:2868:A:H2	1.66	0.42
2:x:16:G:P	2:x:16:G:H8	2.43	0.42
2:x:76:G:N2	22:T:84:GLU:OE2	2.50	0.42
2:x:86:G:C2	2:x:91:C:C4	3.07	0.42
2:x:93:C:C4	2:x:94:C:C4	3.08	0.42
2:x:99:A:C2'	2:x:100:G:C8	3.03	0.42
3:A:20:ILE:HG13	3:A:225:ILE:N	2.34	0.42
3:A:43:GLU:CA	3:A:175:PRO:HA	2.47	0.42
4:B:31:LYS:HD3	4:B:32:SER:O	2.19	0.42
6:D:102:LYS:O	6:D:103:LYS:C	2.63	0.42
6:D:111:ASP:HA	6:D:114:ARG:NE	2.35	0.42
6:D:154:GLY:HA3	6:D:194:TRP:CZ2	2.55	0.42
7:E:129:GLY:N	7:E:163:ALA:HB3	2.35	0.42
8:F:14:GLY:O	8:F:15:VAL:CG2	2.58	0.42
8:F:22:GLY:C	8:F:23:ARG:HG3	2.45	0.42
8:F:152:ARG:O	8:F:154:PRO:N	2.52	0.42
9:G:3:VAL:CG1	9:G:4:ILE:H	2.32	0.42
10:H:78:VAL:O	10:H:80:ALA:CA	2.65	0.42
10:H:107:LYS:HG3	10:H:108:ILE:N	2.22	0.42
10:H:154:GLN:CD	10:H:154:GLN:C	2.88	0.42
11:I:53:LYS:O	11:I:54:GLU:C	2.63	0.42
11:I:67:LYS:HB3	11:I:79:PHE:CE1	2.55	0.42
11:I:77:ILE:O	11:I:77:ILE:HG23	2.20	0.42
12:J:79:ARG:HG3	12:J:81:GLN:HE22	1.84	0.42
13:K:36:ALA:CB	13:K:103:MET:SD	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:42:ILE:HD11	13:K:46:GLN:CB	2.35	0.42
13:K:79:LEU:HG	13:K:80:GLU:N	2.34	0.42
13:K:118:LEU:HB2	13:K:119:ARG:HH11	1.81	0.42
13:K:134:ARG:HE	13:K:136:ALA:HA	1.85	0.42
14:L:3:HIS:O	14:L:4:LEU:O	2.38	0.42
14:L:38:VAL:N	14:L:39:PRO:HD2	2.34	0.42
15:M:12:PHE:HD1	15:M:13:ARG:N	2.13	0.42
15:M:26:LEU:HD11	15:M:39:ILE:HA	1.97	0.42
16:N:33:LYS:CE	16:N:41:ARG:HB3	2.50	0.42
17:O:85:LYS:CG	17:O:116:ALA:HB1	2.49	0.42
18:P:21:ARG:O	18:P:22:VAL:HB	2.20	0.42
20:R:25:LYS:HZ3	20:R:87:GLN:HA	1.84	0.42
21:S:35:TYR:HB2	21:S:36:ALA:H	1.65	0.42
22:T:95:PRO:C	22:T:96:VAL:CG2	2.92	0.42
23:U:22:GLY:N	23:U:39:ARG:HB3	2.34	0.42
23:U:30:VAL:HG13	23:U:31:VAL:N	2.34	0.42
23:U:31:VAL:HG23	23:U:61:ALA:HB1	2.00	0.42
23:U:37:LEU:H	23:U:60:PHE:CB	2.33	0.42
27:Y:42:PRO:O	27:Y:43:HIS:CB	2.67	0.42
28:Z:46:VAL:CG1	28:Z:47:ARG:N	2.83	0.42
31:y:97:U:C4	31:y:99:C:C5	3.06	0.42
31:y:157:G:C4	31:y:158:G:C8	3.08	0.42
31:y:163:C:C6	31:y:163:C:O5'	2.72	0.42
31:y:186(B):C:O2'	31:y:186(C):C:H5'	2.19	0.42
31:y:191(C):G:N7	31:y:191(D):U:C5	2.88	0.42
31:y:279:A:H1'	31:y:281:G:N9	2.35	0.42
31:y:303:A:H1'	31:y:555:C:C3'	2.49	0.42
31:y:317:G:C5	31:y:318:G:C5	3.08	0.42
31:y:373:A:O2'	31:y:374:A:H5'	2.19	0.42
31:y:529:G:N1	45:m:48:ASN:HA	2.32	0.42
31:y:593:G:N1	31:y:594:G:N7	2.68	0.42
31:y:644:G:C6	31:y:645:C:C2	3.08	0.42
31:y:679:C:C6	31:y:679:C:P	3.12	0.42
31:y:727:G:C2	31:y:729:A:P	3.13	0.42
31:y:773:G:C8	31:y:773:G:C3'	3.02	0.42
31:y:780:A:O5'	31:y:780:A:C8	2.68	0.42
31:y:890:G:O2'	31:y:906:G:N1	2.52	0.42
31:y:896:C:C6	31:y:896:C:O5'	2.73	0.42
31:y:937:A:C8	31:y:938:A:C8	3.07	0.42
31:y:964:A:O2'	31:y:965:A:C5'	2.68	0.42
31:y:1049:U:C2'	31:y:1050:G:OP2	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1086:U:C6	31:y:1086:U:C3'	3.02	0.42
31:y:1089:G:C2	31:y:1090:U:C1'	3.03	0.42
31:y:1111:A:C6	36:d:176:HIS:HB2	2.54	0.42
31:y:1158:C:N3	31:y:1160:G:C8	2.88	0.42
31:y:1167:A:H8	31:y:1167:A:O5'	2.03	0.42
31:y:1174:G:H2'	31:y:1175:G:C8	2.55	0.42
31:y:1217:C:N3	31:y:1218:C:C4	2.88	0.42
31:y:1345:U:N3	31:y:1377:A:C4	2.87	0.42
31:y:1378:C:H5''	40:h:7:ALA:N	2.34	0.42
31:y:1385:G:H2'	31:y:1386:G:H5'	2.02	0.42
31:y:1428:A:C5	31:y:1429:C:N4	2.88	0.42
31:y:1440:C:H2'	31:y:1441:G:C4'	2.49	0.42
31:y:1475:G:N2	31:y:1476:G:H1'	2.35	0.42
31:y:1508:G:N1	31:y:1509:C:N4	2.68	0.42
32:z:12:U:H6	32:z:12:U:O5'	2.03	0.42
33:0:20:G:C8	33:0:20:G:C3'	3.03	0.42
35:c:24:TRP:HD1	35:c:26:PRO:HD3	1.84	0.42
35:c:166:ASP:HB3	35:c:169:LYS:HE3	2.02	0.42
37:e:8:VAL:H	37:e:22:LYS:HE3	1.82	0.42
38:f:37:ARG:HG2	38:f:112:LEU:CA	2.34	0.42
38:f:83:GLU:O	38:f:84:PHE:CB	2.65	0.42
38:f:100:VAL:HG11	38:f:110:LEU:HD11	1.99	0.42
40:h:66:VAL:O	40:h:70:LYS:CB	2.68	0.42
42:j:78:LYS:CG	42:j:101:PHE:HA	2.49	0.42
42:j:89:ASN:HD22	42:j:90:PRO:CD	2.33	0.42
43:k:6:ILE:O	43:k:71:LEU:CD2	2.68	0.42
43:k:38:ILE:HD12	43:k:72:VAL:H	1.85	0.42
46:n:92:HIS:CB	46:n:98:VAL:HG13	2.47	0.42
47:o:16:PHE:CB	47:o:19:ARG:HH11	2.33	0.42
47:o:36:PHE:C	47:o:37:PHE:CG	2.98	0.42
50:r:81:ARG:HH12	50:r:85:VAL:HG21	1.85	0.42
51:s:63:GLN:CA	51:s:66:LEU:HB2	2.31	0.42
51:s:73:ALA:CA	51:s:78:LEU:HD22	2.48	0.42
53:u:18:GLN:O	53:u:21:LYS:HD3	2.19	0.42
53:u:60:GLU:O	53:u:60:GLU:OE1	2.37	0.42
53:u:87:LYS:HB3	53:u:91:LEU:CD1	2.49	0.42
1:w:15:G:C4	1:w:16:G:C8	3.08	0.42
1:w:39:C:H6	1:w:39:C:P	2.43	0.42
1:w:77:C:C5'	25:W:53:LEU:HB2	2.50	0.42
1:w:194:G:O2'	1:w:195:A:H5'	2.20	0.42
1:w:195:A:N7	1:w:197:A:OP1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:273(B):G:O6	1:w:363(F):U:O4	2.37	0.42
1:w:281:G:C1'	1:w:359:A:H61	2.33	0.42
1:w:352:G:C2	1:w:353:G:C5	3.08	0.42
1:w:398:G:C5	1:w:399:G:N7	2.88	0.42
1:w:457:A:O2'	1:w:458:G:H4'	2.20	0.42
1:w:482:A:H4'	1:w:483:A:H5'	1.99	0.42
1:w:531:C:C4	1:w:2035:G:N2	2.88	0.42
1:w:554:U:O2	1:w:556:G:N7	2.53	0.42
1:w:562:U:C4'	1:w:563:G:H5''	2.50	0.42
1:w:585:G:N2	1:w:1254:A:N6	2.45	0.42
1:w:600:G:C8	1:w:600:G:O5'	2.63	0.42
1:w:614:U:H2'	1:w:615:G:C4'	2.50	0.42
1:w:650:C:O3'	29:a:17:THR:OG1	2.37	0.42
1:w:656:G:C5	1:w:657:U:C4	3.07	0.42
1:w:723:G:C2	1:w:724:U:N3	2.88	0.42
1:w:775:G:O2'	1:w:776:G:C8	2.73	0.42
1:w:835:A:O4'	1:w:2358:G:O2'	2.38	0.42
1:w:1055:G:C6	1:w:1056:G:N1	2.88	0.42
1:w:1150:C:C4	1:w:1151:G:N7	2.88	0.42
1:w:1195:G:N2	1:w:1196:C:N1	2.68	0.42
1:w:1260:G:N2	1:w:1261:C:C2	2.88	0.42
1:w:1287:A:O5'	1:w:1288:U:H5	2.01	0.42
1:w:1560:G:C2	1:w:1561:G:C4	3.08	0.42
1:w:1592:C:O2'	1:w:1593:G:C5'	2.66	0.42
1:w:1668:A:O2'	1:w:1669:A:P	2.77	0.42
1:w:1707:G:N7	1:w:1756:G:N7	2.67	0.42
1:w:1936:A:C2	1:w:1942:C:C4	3.05	0.42
1:w:2001:A:H2'	1:w:2002:G:C8	2.55	0.42
1:w:2239:G:H3'	1:w:2240:C:C5	2.53	0.42
1:w:2353:G:H22	23:U:36:ILE:HD11	1.81	0.42
1:w:2432:A:HO2'	1:w:2433:A:H5'	1.83	0.42
1:w:2577:A:C3'	1:w:2578:G:H5'	2.50	0.42
1:w:2677:G:N9	1:w:2678:C:C5	2.87	0.42
1:w:2684:U:OP2	1:w:2684:U:C5	2.72	0.42
1:w:2759:G:C4	1:w:2760:C:C6	3.08	0.42
1:w:2824:C:C2'	1:w:2825:G:N7	2.82	0.42
1:w:2846:G:OP1	16:N:54:ARG:HB2	2.20	0.42
2:x:73:A:C4	2:x:104:A:N1	2.86	0.42
3:A:40:GLU:O	3:A:178:LYS:HA	2.20	0.42
3:A:60:ARG:C	3:A:164:PHE:CZ	2.98	0.42
4:B:92:ILE:HG22	4:B:105:ILE:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:117:VAL:HA	4:B:126:GLN:CD	2.44	0.42
4:B:242:ARG:CD	4:B:243:GLY:H	2.33	0.42
5:C:11:MET:CB	5:C:24:THR:HA	2.50	0.42
5:C:93:VAL:HG11	5:C:175:VAL:HG23	2.02	0.42
5:C:97:LYS:N	5:C:100:GLU:OE1	2.49	0.42
6:D:78:PHE:HD2	6:D:78:PHE:N	2.03	0.42
7:E:139:LEU:HD23	46:n:3:ARG:CZ	2.50	0.42
8:F:140:LYS:CE	8:F:141:VAL:HG23	2.50	0.42
9:G:126:TYR:CG	9:G:127:VAL:N	2.88	0.42
9:G:126:TYR:CD1	9:G:127:VAL:N	2.88	0.42
10:H:113:MET:HG3	10:H:121:VAL:CB	2.50	0.42
11:I:77:ILE:HD13	11:I:77:ILE:C	2.45	0.42
11:I:87:ILE:C	11:I:88:ASN:O	2.63	0.42
14:L:20:LEU:HD22	14:L:21:TYR:CE1	2.55	0.42
14:L:49:ASP:O	14:L:52:ILE:HB	2.20	0.42
18:P:18:LEU:HD22	18:P:98:GLU:OE1	2.19	0.42
18:P:66:ARG:HG3	18:P:67:GLY:N	2.35	0.42
19:Q:23:LEU:HD11	27:Y:27:PRO:CB	2.50	0.42
21:S:67:LEU:O	21:S:68:HIS:CD2	2.72	0.42
25:W:45:SER:O	25:W:46:GLN:CG	2.67	0.42
26:X:35:ARG:HA	26:X:35:ARG:HD2	1.79	0.42
28:Z:10:ARG:HG3	28:Z:11:LYS:H	1.85	0.42
28:Z:24:THR:H	28:Z:28:ARG:CD	2.33	0.42
31:y:5:U:O2'	31:y:6:G:N2	2.53	0.42
31:y:15:G:C6	31:y:16:A:C6	3.07	0.42
31:y:53:A:C5	31:y:54:C:C5	3.07	0.42
31:y:117:G:C4	31:y:118:U:N3	2.87	0.42
31:y:200:G:O2'	31:y:201:C:C6	2.70	0.42
31:y:232:G:C5	31:y:233:C:C6	3.08	0.42
31:y:275:G:H5'	31:y:276:G:P	2.60	0.42
31:y:307:C:O5'	31:y:307:C:H6	2.02	0.42
31:y:335:C:O2	31:y:1433:A:H2	2.02	0.42
31:y:507:C:H2'	31:y:508:C:C4	2.53	0.42
31:y:507:C:O5'	31:y:508:C:H2'	2.20	0.42
31:y:560:U:H2'	31:y:561:U:OP2	2.20	0.42
31:y:622:A:C8	31:y:623:C:C6	3.07	0.42
31:y:677:U:H1'	31:y:777:A:O2'	2.20	0.42
31:y:710:G:C2	31:y:711:G:C8	3.08	0.42
31:y:758:G:N3	31:y:758:G:H2'	2.35	0.42
31:y:781:A:H4'	31:y:1523:G:O4'	2.19	0.42
31:y:831:U:O2'	31:y:832:C:H5''	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:849:C:O2'	31:y:850:U:H5'	2.19	0.42
31:y:979:C:H6	31:y:979:C:C3'	2.30	0.42
31:y:1134:G:C5	31:y:1135:U:C5	3.08	0.42
31:y:1137:C:O2	31:y:1138:G:N2	2.53	0.42
31:y:1206:G:C4	31:y:1207:2MG:H1'	2.53	0.42
31:y:1253:G:H21	31:y:1355:G:H4'	1.83	0.42
31:y:1413:A:H2	31:y:1487:G:H22	1.67	0.42
31:y:1439:C:C2	31:y:1440:C:N1	2.88	0.42
33:0:9:A:N3	33:0:46:G:N3	2.67	0.42
35:c:16:HIS:CD2	35:c:210:SER:OG	2.73	0.42
35:c:56:ARG:HD3	35:c:56:ARG:H	1.84	0.42
36:d:128:PHE:HB3	36:d:132:ARG:NH2	2.34	0.42
37:e:18:LYS:HG2	37:e:20:TYR:CE2	2.55	0.42
37:e:201:GLN:HA	37:e:204:ILE:CG1	2.49	0.42
38:f:57:LYS:HE3	38:f:57:LYS:HB3	1.84	0.42
39:g:72:VAL:CA	39:g:75:LEU:HD11	2.47	0.42
39:g:94:GLN:HG2	51:s:35:ARG:NH2	2.35	0.42
40:h:27:ILE:HA	40:h:27:ILE:HD12	1.93	0.42
40:h:84:ASN:ND2	40:h:84:ASN:N	2.63	0.42
40:h:127:ALA:C	40:h:129:GLU:N	2.76	0.42
42:j:99:LEU:H	42:j:99:LEU:CD2	2.31	0.42
46:n:67:GLU:N	46:n:70:LEU:CG	2.78	0.42
46:n:97:PRO:N	46:n:110:ARG:HD2	2.35	0.42
49:q:5:ARG:NE	49:q:22:THR:HB	2.34	0.42
50:r:13:ASP:OD2	50:r:49:GLU:HA	2.20	0.42
51:s:60:ALA:HB1	51:s:64:ARG:NH2	2.34	0.42
1:w:108:U:O2	1:w:348:G:C2'	2.68	0.41
1:w:147:U:C4	1:w:148:C:C4	3.07	0.41
1:w:153:C:H4'	24:V:92:LYS:HD3	2.01	0.41
1:w:181:A:C2	1:w:182:A:C4	3.08	0.41
1:w:207:A:O2'	1:w:799:G:C4'	2.65	0.41
1:w:209:C:N3	1:w:210:C:C4	2.88	0.41
1:w:215:G:C4'	1:w:216:A:OP1	2.68	0.41
1:w:376:C:N4	1:w:377:C:C4	2.88	0.41
1:w:459:U:H2'	1:w:460:A:C8	2.49	0.41
1:w:501:A:C8	1:w:501:A:OP1	2.73	0.41
1:w:562:U:C2'	1:w:563:G:OP2	2.68	0.41
1:w:562:U:H2'	1:w:563:G:OP2	2.20	0.41
1:w:682:G:N1	1:w:796:C:C4	2.88	0.41
1:w:779:U:N3	1:w:780:G:C5	2.88	0.41
1:w:814:C:C4'	18:P:87:HIS:CE1	2.99	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:828:U:O2	1:w:828:U:C2'	2.68	0.41
1:w:839:U:HO2'	1:w:840:C:H5'	1.85	0.41
1:w:843:G:C4	1:w:844:C:C4	3.08	0.41
1:w:906:G:H1'	13:K:29:PHE:CE1	2.55	0.41
1:w:1066:U:C2'	1:w:1068:G:OP2	2.67	0.41
1:w:1138:G:H1'	10:H:128:GLY:C	2.44	0.41
1:w:1177:A:N7	1:w:1178:C:C4	2.88	0.41
1:w:1181:C:C2'	1:w:1182:A:C8	3.03	0.41
1:w:1204:A:C2'	1:w:1205:U:OP2	2.67	0.41
1:w:1253:A:OP1	17:O:10:ARG:NH1	2.53	0.41
1:w:1259:G:N9	1:w:1260:G:C8	2.88	0.41
1:w:1285:G:C2	1:w:1329:U:N1	2.88	0.41
1:w:1303:G:C5	1:w:1304:C:C4	3.07	0.41
1:w:1319:G:N2	1:w:1334:G:C5	2.88	0.41
1:w:1364:G:C5	24:V:8:SER:O	2.73	0.41
1:w:1537:C:H2'	1:w:1538:G:H4'	2.02	0.41
1:w:1702:G:C2	1:w:1703:G:C5	3.07	0.41
1:w:1777:U:H2'	1:w:1778:U:C4'	2.50	0.41
1:w:1817:G:N3	1:w:1817:G:C2'	2.81	0.41
1:w:1910:G:N1	1:w:1911:U:C2	2.88	0.41
1:w:1914:C:N3	1:w:1915:U:C5	2.88	0.41
1:w:2088:G:N2	1:w:2232:U:C2	2.88	0.41
1:w:2098:U:C3'	1:w:2099:U:H6	2.31	0.41
1:w:2190:G:H2'	1:w:2191:G:C8	2.47	0.41
1:w:2192:G:C2	1:w:2193:G:N7	2.88	0.41
1:w:2306:C:OP2	1:w:2307:G:C8	2.73	0.41
1:w:2349:G:C2'	1:w:2350:C:H5''	2.45	0.41
1:w:2372:G:N1	1:w:2373:G:O6	2.52	0.41
1:w:2462:U:C2'	1:w:2463:C:C5'	2.86	0.41
1:w:2472:G:OP2	1:w:2474:C:OP2	2.37	0.41
1:w:2549:G:C2'	1:w:2550:G:O5'	2.68	0.41
1:w:2683:C:H42	1:w:2727:G:C2'	2.33	0.41
1:w:2690:C:O2	1:w:2690:C:C2'	2.65	0.41
1:w:2715:C:O2'	1:w:2716:U:H5'	2.20	0.41
1:w:2721:A:C2'	1:w:2722:G:C8	3.00	0.41
1:w:2763:G:C8	1:w:2763:G:C3'	3.03	0.41
1:w:2852:G:C6	1:w:2864:G:O6	2.73	0.41
5:C:101:ARG:HA	5:C:170:LEU:O	2.20	0.41
5:C:175:VAL:HA	5:C:182:LEU:HD12	2.01	0.41
5:C:195:LEU:C	5:C:196:VAL:HG13	2.44	0.41
6:D:171:LEU:HB3	6:D:172:ALA:H	1.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:177:ASN:HB3	6:D:180:ASP:OD2	2.20	0.41
7:E:64:THR:O	7:E:102:PHE:CE1	2.73	0.41
7:E:172:LEU:HD12	7:E:173:LEU:N	2.35	0.41
7:E:176:LEU:O	7:E:178:PHE:CE1	2.73	0.41
8:F:27:LYS:HA	8:F:32:GLU:N	2.35	0.41
10:H:96:THR:HG21	10:H:107:LYS:HA	1.99	0.41
10:H:100:GLY:C	10:H:101:TYR:HD1	2.28	0.41
10:H:112:LYS:CD	10:H:116:THR:HG22	2.48	0.41
10:H:130:LEU:HB3	10:H:131:PRO:CD	2.49	0.41
11:I:44:LYS:HB2	11:I:45:GLU:H	1.70	0.41
12:J:16:ARG:HH21	12:J:17:LYS:HA	1.85	0.41
12:J:51:PHE:O	12:J:52:GLU:HB2	2.20	0.41
12:J:55:ARG:NH2	29:a:52:LYS:NZ	2.67	0.41
13:K:55:VAL:HA	13:K:58:PHE:HB2	2.02	0.41
13:K:69:PHE:O	13:K:95:ALA:HB1	2.21	0.41
13:K:88:GLY:C	13:K:91:GLU:HB3	2.45	0.41
14:L:26:LYS:O	14:L:29:LEU:CB	2.54	0.41
14:L:38:VAL:O	14:L:41:ALA:HB3	2.20	0.41
14:L:45:ARG:CG	14:L:45:ARG:NH1	2.81	0.41
14:L:85:PRO:CA	14:L:88:ARG:HB2	2.49	0.41
14:L:86:ARG:CD	14:L:87:TYR:CE1	3.03	0.41
15:M:99:LYS:O	15:M:103:GLU:HG2	2.19	0.41
16:N:26:ASP:H	16:N:90:GLN:HA	1.85	0.41
16:N:28:VAL:CG2	16:N:45:PHE:O	2.39	0.41
17:O:47:TYR:O	17:O:50:ARG:CA	2.66	0.41
17:O:56:ASP:C	17:O:58:ARG:N	2.77	0.41
17:O:114:LYS:CG	17:O:115:ALA:N	2.81	0.41
18:P:24:LYS:HG2	18:P:94:LEU:HD21	2.01	0.41
20:R:60:ARG:CG	20:R:74:PRO:HG3	2.50	0.41
21:S:38:ILE:CG1	21:S:39:VAL:N	2.76	0.41
22:T:33:LEU:C	22:T:33:LEU:CD1	2.93	0.41
23:U:21:LEU:HB3	23:U:39:ARG:O	2.20	0.41
23:U:71:ASP:HB3	23:U:77:ARG:CA	2.41	0.41
24:V:21:ARG:O	24:V:39:LYS:HB3	2.20	0.41
24:V:59:THR:O	24:V:60:PHE:CD1	2.73	0.41
25:W:3:LEU:CD1	25:W:8:LYS:NZ	2.83	0.41
26:X:41:PRO:CA	26:X:44:ARG:CD	2.87	0.41
27:Y:51:TYR:O	27:Y:52:TYR:CB	2.68	0.41
27:Y:51:TYR:HB3	27:Y:52:TYR:H	1.48	0.41
31:y:97:U:H2'	31:y:99:C:O4'	2.19	0.41
31:y:234:C:O4'	50:r:64:PRO:CG	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:243:A:N3	31:y:245:C:C5	2.88	0.41
31:y:323:U:H2'	31:y:324:G:C8	2.55	0.41
31:y:347:G:O6	31:y:348:G:C5	2.73	0.41
31:y:355:C:N4	31:y:356:A:C5	2.87	0.41
31:y:358:U:C6	31:y:358:U:OP2	2.73	0.41
31:y:560:U:C5	31:y:566:G:C5	3.08	0.41
31:y:564:C:H5	50:r:32:TYR:CZ	2.38	0.41
31:y:666:G:N2	48:p:52:SER:CA	2.82	0.41
31:y:667:G:C4	31:y:668:G:N7	2.88	0.41
31:y:721:G:C4'	31:y:722:A:C4	3.03	0.41
31:y:743:U:O5'	31:y:743:U:C6	2.73	0.41
31:y:849:C:O2	31:y:849:C:H2'	2.19	0.41
31:y:1123:A:C3'	31:y:1124:G:C8	3.03	0.41
31:y:1146:A:C5	31:y:1147:C:C5	3.08	0.41
31:y:1204:A:C5	31:y:1205:U:C5	3.08	0.41
31:y:1230:C:H3'	31:y:1230:C:C6	2.55	0.41
31:y:1312:G:H21	31:y:1313:U:H1'	1.80	0.41
31:y:1325:C:H2'	31:y:1326:C:C5	2.55	0.41
31:y:1381:U:H4'	40:h:78:ARG:NH2	2.33	0.41
31:y:1435:G:O6	31:y:1467:G:N2	2.53	0.41
31:y:1442:G:P	31:y:1442:G:C2	3.13	0.41
31:y:1446:A:H62	31:y:1462:G:H1'	1.85	0.41
31:y:1449:C:H2'	31:y:1450:U:C5'	2.50	0.41
31:y:1469:G:C4	31:y:1470:G:C8	3.08	0.41
31:y:1484:C:C4	31:y:1485:U:C5	3.09	0.41
32:z:25:C:H2'	32:z:26:A:H5'	2.02	0.41
32:z:30:G:C2'	32:z:31:A:H8	2.26	0.41
35:c:106:LYS:C	35:c:108:ILE:H	2.27	0.41
35:c:233:SER:HB3	35:c:234:PRO:CD	2.47	0.41
36:d:3:ASN:HD22	36:d:4:LYS:N	2.18	0.41
36:d:35:GLU:C	36:d:37:GLN:H	2.27	0.41
36:d:124:ILE:CA	36:d:128:PHE:HB2	2.42	0.41
36:d:142:MET:C	36:d:144:SER:N	2.78	0.41
37:e:15:GLU:HG2	37:e:63:LYS:CG	2.50	0.41
37:e:33:MET:C	37:e:35:ARG:N	2.75	0.41
37:e:128:VAL:CG1	37:e:131:ARG:HB2	2.50	0.41
38:f:71:LEU:HD22	38:f:114:GLY:O	2.20	0.41
40:h:135:VAL:O	40:h:136:LYS:C	2.62	0.41
41:i:13:ILE:HA	41:i:16:ALA:HB3	2.02	0.41
43:k:27:ALA:HB1	43:k:32:ALA:O	2.20	0.41
43:k:67:THR:O	43:k:68:HIS:CG	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:104:GLN:C	44:l:106:LYS:H	2.28	0.41
44:l:110:ASP:HB2	51:s:88:LYS:CD	2.48	0.41
45:m:8:GLN:HG3	45:m:11:ARG:HD2	2.01	0.41
45:m:123:LYS:CE	45:m:123:LYS:CA	2.93	0.41
46:n:23:TYR:C	46:n:25:ILE:HG12	2.45	0.41
46:n:34:LEU:O	46:n:38:GLY:HA2	2.20	0.41
47:o:46:GLU:O	47:o:47:LEU:C	2.63	0.41
50:r:51:TYR:CD2	50:r:57:VAL:CG1	2.97	0.41
51:s:72:ARG:O	51:s:75:ILE:HG12	2.20	0.41
51:s:86:VAL:O	51:s:87:ARG:CB	2.67	0.41
52:t:22:LEU:O	52:t:26:GLY:O	2.38	0.41
52:t:78:ARG:O	52:t:79:THR:O	2.38	0.41
53:u:13:LEU:C	53:u:15:ARG:N	2.77	0.41
1:w:20:C:O4'	1:w:521:G:N2	2.53	0.41
1:w:80:G:H2'	1:w:81:G:O4'	2.20	0.41
1:w:225:A:N6	1:w:419:C:H1'	2.35	0.41
1:w:253:C:O2	1:w:254:G:O4'	2.39	0.41
1:w:270(K):G:N1	1:w:270(R):C:N3	2.67	0.41
1:w:270(U):G:C2	1:w:270(V):C:N4	2.88	0.41
1:w:273(B):G:H2'	1:w:273(C):C:H5''	2.02	0.41
1:w:281:G:O6	1:w:357:A:H3'	2.20	0.41
1:w:413:C:C2	1:w:414:C:C5	3.08	0.41
1:w:467:G:O3'	1:w:797:C:H5'	2.19	0.41
1:w:486:C:O2'	1:w:487:C:H5'	2.20	0.41
1:w:521:G:C6	1:w:522:G:C5	3.08	0.41
1:w:533:G:C6	1:w:534:U:C5	3.08	0.41
1:w:616:A:C8	1:w:616:A:C3'	3.03	0.41
1:w:653:C:OP1	1:w:654:U:C5	2.74	0.41
1:w:663:G:O6	1:w:664:C:C2	2.73	0.41
1:w:695:G:C2	1:w:768:G:C5	3.08	0.41
1:w:699:A:C8	1:w:734:A:C6	3.08	0.41
1:w:706:A:N6	1:w:707:G:N1	2.68	0.41
1:w:957:A:N6	1:w:2459:A:C8	2.88	0.41
1:w:1001:A:C2'	1:w:1002:G:H5'	2.49	0.41
1:w:1109:C:C6	1:w:1109:C:C3'	3.03	0.41
1:w:1164:G:C4	1:w:1165:U:C5	3.07	0.41
1:w:1168:G:N2	1:w:1181:C:C2	2.70	0.41
1:w:1197:G:C5	1:w:1250:G:N2	2.86	0.41
1:w:1197:G:N1	1:w:1198:U:C2	2.88	0.41
1:w:1225:G:HO2'	18:P:86:GLY:CA	2.33	0.41
1:w:1301:A:H2	1:w:1641:A:H61	1.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1422:G:N2	1:w:1423:G:N3	2.68	0.41
1:w:1477:A:H5'	1:w:1478:G:P	2.59	0.41
1:w:1599:C:H2'	1:w:1600:C:O5'	2.20	0.41
1:w:1808:U:H2'	1:w:1809:A:H1'	2.02	0.41
1:w:1932:A:C2'	1:w:1933:G:H5'	2.51	0.41
1:w:2099:U:O2	1:w:2190:G:C2	2.74	0.41
1:w:2218:G:N1	1:w:2219:G:C5	2.88	0.41
1:w:2226:C:H3'	1:w:2227:A:C8	2.52	0.41
1:w:2259:G:C8	1:w:2427:C:C4	3.08	0.41
1:w:2293:C:C3'	1:w:2294:C:H5''	2.49	0.41
1:w:2310:A:H2'	1:w:2311:A:H5''	2.02	0.41
1:w:2328:A:O2'	1:w:2329:G:H5'	2.20	0.41
1:w:2368:C:C5'	1:w:2368:C:H6	2.28	0.41
1:w:2377:A:H3'	1:w:2378:A:C5	2.55	0.41
1:w:2397:G:C4	1:w:2398:U:C5	3.08	0.41
1:w:2416:C:H5''	12:J:64:LYS:HZ3	1.84	0.41
1:w:2514:U:C2'	1:w:2515:C:H6	2.31	0.41
1:w:2579:C:H4'	5:C:134:ILE:CD1	2.50	0.41
1:w:2582:G:C2	1:w:2583:G:C8	3.08	0.41
1:w:2611:U:C2'	1:w:2612:C:H5'	2.50	0.41
1:w:2649:U:H2'	1:w:2650:U:H6	1.81	0.41
1:w:2728:U:H2'	1:w:2729:G:O4'	2.19	0.41
1:w:2734:A:C8	1:w:2735:G:C8	3.08	0.41
1:w:2813:A:H61	1:w:2888:C:N4	2.16	0.41
1:w:2828:C:N4	1:w:2829:C:H42	2.14	0.41
1:w:2835:A:C1'	1:w:2879:C:C6	3.02	0.41
2:x:11:C:P	23:U:72:ARG:HD2	2.56	0.41
2:x:76:G:C6	2:x:77:U:O2	2.73	0.41
4:B:8:PRO:HG3	4:B:15:PHE:CZ	2.54	0.41
4:B:78:LYS:HZ2	4:B:113:VAL:HG12	1.84	0.41
4:B:124:PRO:O	4:B:129:ASN:HB3	2.20	0.41
5:C:57:LYS:C	5:C:58:ARG:CG	2.93	0.41
6:D:26:HIS:N	6:D:26:HIS:HD2	2.17	0.41
6:D:165:LEU:CD1	6:D:165:LEU:N	2.81	0.41
6:D:176:LEU:HD11	6:D:178:VAL:CG1	2.46	0.41
7:E:70:VAL:HB	7:E:90:LEU:HD11	2.02	0.41
8:F:20:ALA:CB	8:F:23:ARG:O	2.69	0.41
8:F:46:GLU:O	8:F:47:GLU:HB2	2.19	0.41
9:G:6:LEU:CG	9:G:35:LEU:HD13	2.50	0.41
10:H:34:PRO:HB3	10:H:72:GLY:C	2.45	0.41
10:H:55:THR:HG22	10:H:55:THR:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:71:MET:H	10:H:71:MET:HE3	1.85	0.41
10:H:118:PRO:CA	10:H:121:VAL:HG23	2.50	0.41
10:H:143:LEU:HD13	10:H:143:LEU:N	2.35	0.41
11:I:85:VAL:C	11:I:86:ILE:CG1	2.93	0.41
12:J:134:ALA:O	12:J:135:LEU:C	2.62	0.41
13:K:16:ARG:HG3	13:K:17:LEU:N	2.34	0.41
13:K:116:GLU:O	13:K:119:ARG:N	2.53	0.41
14:L:21:TYR:HA	14:L:24:GLN:CB	2.50	0.41
14:L:29:LEU:HD21	14:L:75:LEU:HD13	1.99	0.41
14:L:35:THR:C	14:L:36:THR:HG23	2.45	0.41
14:L:97:VAL:HG22	14:L:114:VAL:HA	2.02	0.41
15:M:47:THR:O	15:M:48:LEU:O	2.37	0.41
15:M:76:LYS:CB	15:M:76:LYS:NZ	2.83	0.41
15:M:87:PHE:O	15:M:88:ASP:HB2	2.21	0.41
16:N:64:ARG:NE	16:N:103:ARG:CB	2.61	0.41
16:N:107:ASP:HB2	31:y:1431:C:O5'	2.20	0.41
16:N:121:ILE:C	16:N:121:ILE:CD1	2.92	0.41
17:O:22:LYS:HD3	17:O:22:LYS:HA	1.77	0.41
18:P:82:ARG:HD2	18:P:82:ARG:O	2.21	0.41
19:Q:30:GLU:HA	19:Q:33:ARG:HE	1.79	0.41
21:S:47:LYS:CG	21:S:48:ALA:N	2.66	0.41
23:U:82:ARG:HA	23:U:83:PRO:HD3	1.93	0.41
27:Y:25:LEU:O	27:Y:27:PRO:HD3	2.21	0.41
28:Z:11:LYS:HD2	28:Z:11:LYS:C	2.43	0.41
31:y:10:A:OP2	38:f:126:ARG:CD	2.67	0.41
31:y:186(F):C:N3	31:y:191(C):G:C2	2.88	0.41
31:y:227:G:H2'	31:y:228:A:C5'	2.50	0.41
31:y:314:C:O2'	31:y:353:A:N6	2.51	0.41
31:y:339:C:H2'	31:y:340:U:H6	1.79	0.41
31:y:374:A:C2	31:y:375:U:C2	3.08	0.41
31:y:385:C:C2	31:y:386:C:C6	3.09	0.41
31:y:408:A:H2	31:y:434:U:O2	2.03	0.41
31:y:421:U:H3'	31:y:422:C:C5	2.54	0.41
31:y:484:G:O2'	31:y:485:G:C5'	2.67	0.41
31:y:721:G:O4'	31:y:722:A:C4	2.73	0.41
31:y:895:G:O3'	50:r:100:LYS:HD3	2.19	0.41
31:y:949:A:OP2	46:n:102:ARG:NH1	2.53	0.41
31:y:1088:G:C6	31:y:1089:G:C6	3.07	0.41
31:y:1194:U:C5	31:y:1195:C:N4	2.88	0.41
31:y:1216:G:N3	31:y:1217:C:C6	2.88	0.41
31:y:1259:C:C1'	31:y:1283:G:H1'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1322:C:C4'	31:y:136(B):C:H42	2.30	0.41
31:y:1475:G:C6	31:y:1476:G:N7	2.88	0.41
32:z:24:G:C2	32:z:25:C:C2	3.08	0.41
33:0:10:G:C2	33:0:11:C:C4	3.08	0.41
35:c:184:VAL:C	35:c:185:ILE:CG2	2.94	0.41
35:c:185:ILE:CA	35:c:199:TYR:O	2.63	0.41
36:d:17:ASP:O	36:d:18:TRP:CE3	2.73	0.41
36:d:23:TYR:CB	43:k:94:VAL:N	2.82	0.41
36:d:90:GLU:O	36:d:94:LEU:HD23	2.20	0.41
37:e:22:LYS:CB	37:e:26:CYS:HB2	2.49	0.41
37:e:31:CYS:N	37:e:34:GLU:HB3	2.35	0.41
37:e:52:SER:HG	37:e:55:ALA:HB2	1.80	0.41
37:e:82:ALA:O	37:e:83:SER:C	2.64	0.41
37:e:87:GLY:O	37:e:89:THR:N	2.53	0.41
37:e:199:ASN:HD22	37:e:202:LEU:N	2.08	0.41
39:g:44:GLY:O	39:g:60:PHE:CA	2.68	0.41
40:h:95:ARG:HG3	40:h:95:ARG:HH11	1.85	0.41
43:k:27:ALA:HB1	43:k:33:GLN:CA	2.49	0.41
44:l:16:SER:O	44:l:35:PRO:HG3	2.20	0.41
44:l:27:ASN:HA	44:l:56:GLY:N	2.34	0.41
45:m:6:ILE:H	45:m:6:ILE:CD1	2.31	0.41
46:n:44:ARG:O	46:n:47:ASP:N	2.48	0.41
46:n:87:TYR:CG	46:n:88:ARG:N	2.88	0.41
49:q:19:ILE:CD1	49:q:39:TYR:HB2	2.50	0.41
50:r:100:LYS:CD	50:r:101:ARG:HG3	2.44	0.41
52:t:19:VAL:CG1	52:t:20:LEU:H	2.32	0.41
52:t:75:ALA:N	52:t:76:PRO:CD	2.83	0.41
1:w:54:G:N2	1:w:126:A:C6	2.88	0.41
1:w:71:A:C2	20:R:31:HIS:HE1	2.38	0.41
1:w:95:G:H4'	25:W:38:GLN:O	2.19	0.41
1:w:110:G:C2	1:w:111:A:N7	2.88	0.41
1:w:222:A:OP1	1:w:271(B):C:C4	2.73	0.41
1:w:270(V):C:C4	1:w:270(W):G:C5	3.08	0.41
1:w:271(C):G:O2'	1:w:271(D):U:P	2.78	0.41
1:w:325:G:O2'	1:w:326:G:H5'	2.20	0.41
1:w:349:G:C2'	1:w:350:U:C6	3.03	0.41
1:w:363(A):G:C2'	1:w:363(B):A:O5'	2.69	0.41
1:w:386:G:C5'	1:w:387:U:C5	2.75	0.41
1:w:396:G:C2'	1:w:397:G:O5'	2.68	0.41
1:w:399:G:N7	1:w:400:G:C6	2.87	0.41
1:w:466:A:H5''	28:Z:30:VAL:HG13	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:471:A:H8	1:w:471:A:O5'	2.04	0.41
1:w:543:C:C2	1:w:544:C:C6	3.08	0.41
1:w:553:U:H2'	1:w:554:U:C5'	2.50	0.41
1:w:566:U:H6	1:w:566:U:C4'	2.33	0.41
1:w:613:U:C2'	1:w:615:G:OP2	2.68	0.41
1:w:667:U:C2'	1:w:668:G:C4'	2.88	0.41
1:w:696:G:N2	1:w:766:C:O2	2.46	0.41
1:w:697:C:C4	1:w:698:C:N4	2.88	0.41
1:w:751:A:H5'	19:Q:90:ARG:HG2	2.02	0.41
1:w:789:A:C3'	1:w:790:C:C5	3.01	0.41
1:w:798:G:H2'	1:w:799:G:O5'	2.21	0.41
1:w:885:C:N4	1:w:886:C:C4	2.89	0.41
1:w:946:G:O6	1:w:947:G:C6	2.73	0.41
1:w:1165:U:O2	1:w:1165:U:H2'	2.19	0.41
1:w:1238:G:C5	1:w:1239:G:C8	3.09	0.41
1:w:1300:U:H6	1:w:1626:G:HO2'	1.55	0.41
1:w:1306:C:C4	1:w:1307:A:N7	2.88	0.41
1:w:1619:G:H21	28:Z:2:LYS:N	2.05	0.41
1:w:1623:G:N1	1:w:1624:G:C4	2.87	0.41
1:w:1743:G:N1	1:w:1746:G:C6	2.87	0.41
1:w:1755:A:H2'	1:w:1756:G:C4'	2.50	0.41
1:w:1816:G:P	4:B:39:LYS:CD	3.04	0.41
1:w:1841:U:O2	1:w:1901:A:N1	2.52	0.41
1:w:1861:G:H8	1:w:1861:G:O5'	2.03	0.41
1:w:1870:C:N3	1:w:1871:A:C5	2.87	0.41
1:w:2024:G:O2'	1:w:2025:C:C5'	2.63	0.41
1:w:2081:C:C6	1:w:2081:C:H3'	2.55	0.41
1:w:2092:U:C5'	9:G:27:ARG:NH1	2.67	0.41
1:w:2093:G:C2'	1:w:2094:G:C5'	2.94	0.41
1:w:2098:U:H3'	1:w:2099:U:C6	2.55	0.41
1:w:2133:G:H8	1:w:2133:G:OP1	2.03	0.41
1:w:2216:G:H2'	1:w:2217:G:C8	2.50	0.41
1:w:2232:U:H2'	1:w:2233:U:C5'	2.51	0.41
1:w:2313:C:H4'	7:E:40:ASN:CG	2.45	0.41
1:w:2347:C:C5	1:w:2382:G:C1'	3.03	0.41
1:w:2468:G:C6	1:w:2481:G:C6	3.08	0.41
1:w:2484:G:C1'	13:K:49:ALA:CB	2.97	0.41
1:w:2509:G:H1	1:w:2579:C:H42	1.68	0.41
1:w:2589:A:H5''	4:B:237:GLU:CD	2.38	0.41
1:w:2714:G:C6	1:w:2715:C:N4	2.88	0.41
1:w:2746:U:H5'	8:F:142:GLY:HA3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2851:A:N7	1:w:2866:U:O4	2.54	0.41
2:x:40:U:H3'	2:x:41:U:H5'	2.02	0.41
2:x:54:G:O5'	2:x:54:G:C8	2.70	0.41
2:x:73:A:C2'	2:x:74:U:C5'	2.98	0.41
2:x:76:G:C5	2:x:77:U:C2	3.08	0.41
2:x:78:A:C5	2:x:79:C:C6	3.09	0.41
3:A:22:THR:N	3:A:25:GLU:HG3	2.34	0.41
3:A:216:THR:CA	3:A:221:PRO:O	2.56	0.41
4:B:52:ARG:HB3	4:B:53:PHE:CD1	2.55	0.41
4:B:134:ARG:NH2	4:B:187:GLY:CA	2.62	0.41
4:B:231:HIS:CE1	4:B:233:HIS:HB2	2.55	0.41
6:D:57:ARG:N	6:D:73:ILE:HG21	2.35	0.41
6:D:150:LEU:HB3	6:D:169:VAL:HB	1.99	0.41
6:D:155:ASN:HB2	6:D:157:LEU:CG	2.51	0.41
7:E:103:LEU:H	7:E:103:LEU:HG	1.60	0.41
8:F:95:ARG:HD2	8:F:106:THR:O	2.20	0.41
8:F:117:PRO:HA	8:F:118:PRO:HD2	1.92	0.41
8:F:157:TYR:HB2	8:F:172:LYS:O	2.19	0.41
9:G:8:PRO:HB2	9:G:9:LEU:H	1.70	0.41
9:G:12:LEU:C	9:G:14:ASP:N	2.76	0.41
9:G:96:ASP:O	9:G:99:GLU:HB2	2.20	0.41
9:G:113:ARG:HB2	9:G:130:TYR:CZ	2.55	0.41
10:H:37:VAL:HA	10:H:157:ARG:C	2.45	0.41
10:H:51:THR:C	10:H:53:ILE:H	2.28	0.41
10:H:95:TYR:CD1	10:H:108:ILE:HG13	2.54	0.41
10:H:118:PRO:O	10:H:121:VAL:HB	2.20	0.41
11:I:62:VAL:C	11:I:63:VAL:HG22	2.45	0.41
12:J:46:LYS:NZ	12:J:52:GLU:OE1	2.44	0.41
12:J:105:LEU:O	12:J:106:LEU:HB2	2.20	0.41
12:J:111:ARG:HH21	12:J:148:LEU:HD21	1.76	0.41
13:K:16:ARG:CA	13:K:17:LEU:HD13	2.48	0.41
13:K:68:ILE:HB	13:K:69:PHE:H	1.51	0.41
14:L:40:LYS:O	14:L:41:ALA:C	2.62	0.41
14:L:48:VAL:HG22	14:L:49:ASP:N	2.35	0.41
17:O:38:THR:HG23	17:O:42:ALA:HB2	2.02	0.41
18:P:7:THR:HG23	18:P:10:LYS:HZ3	1.84	0.41
18:P:47:VAL:CG1	18:P:48:GLY:H	2.31	0.41
18:P:100:ARG:HH11	18:P:101:GLY:C	2.28	0.41
19:Q:23:LEU:CD1	27:Y:25:LEU:O	2.64	0.41
19:Q:42:ARG:CD	19:Q:46:PHE:CZ	2.97	0.41
20:R:60:ARG:HA	20:R:60:ARG:HD2	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:55:TYR:CD1	21:S:56:PRO:N	2.88	0.41
21:S:84:ARG:O	21:S:91:GLU:HG3	2.20	0.41
21:S:97:ARG:CA	21:S:102:CYS:O	2.62	0.41
22:T:5:LEU:HB2	22:T:57:ILE:CG1	2.51	0.41
22:T:26:GLY:HA3	22:T:86:VAL:HG23	2.02	0.41
22:T:97:GLU:HB3	22:T:127:LYS:HA	2.01	0.41
23:U:50:ASN:HD22	23:U:65:GLY:CA	2.34	0.41
24:V:9:GLY:HA3	24:V:61:ARG:CZ	2.49	0.41
24:V:12:PRO:CG	24:V:63:ALA:CB	2.97	0.41
25:W:27:GLU:HA	25:W:30:ARG:CG	2.50	0.41
29:a:34:TRP:HH2	29:a:39:LYS:C	2.28	0.41
29:a:44:LYS:CD	29:a:45:GLY:N	2.75	0.41
31:y:27:G:C6	31:y:557:G:N1	2.88	0.41
31:y:95:G:H5''	31:y:95:G:H8	1.85	0.41
31:y:116:A:C4	31:y:117:G:N9	2.88	0.41
31:y:127:G:H1	31:y:234:C:N4	2.18	0.41
31:y:259:G:H2'	31:y:260:G:O4'	2.20	0.41
31:y:285:G:N3	31:y:285:G:C2'	2.83	0.41
31:y:303:A:C8	31:y:303:A:H3'	2.55	0.41
31:y:314:C:C2'	31:y:315:A:C4'	2.96	0.41
31:y:318:G:H1'	31:y:1469:G:H5''	2.02	0.41
31:y:393:A:C4	31:y:394:G:N7	2.88	0.41
31:y:443:C:H2'	31:y:444:C:O4'	2.19	0.41
31:y:475:G:C6	31:y:476:G:N7	2.89	0.41
31:y:541:G:C6	31:y:542:G:C5	3.08	0.41
31:y:673:G:C2	31:y:734:G:C2	3.09	0.41
31:y:693:G:H1'	34:l:-3:A:C1'	2.40	0.41
31:y:765:G:N7	31:y:812:C:N4	2.67	0.41
31:y:796:C:H2'	31:y:797:C:O5'	2.20	0.41
31:y:796:C:N3	31:y:797:C:C5	2.88	0.41
31:y:833:U:C2	31:y:834:C:C5	3.08	0.41
31:y:1015:A:C2'	31:y:1016:A:H5'	2.49	0.41
31:y:1103:C:O2'	31:y:1104:G:O4'	2.35	0.41
31:y:1114:C:O2'	31:y:1115:C:C5'	2.61	0.41
31:y:1157:A:N6	31:y:1178:G:C2'	2.82	0.41
31:y:1159:U:HO2'	31:y:1160:G:P	2.29	0.41
31:y:1246:C:N3	31:y:1291:G:N1	2.61	0.41
31:y:1298:C:H4'	31:y:1299:A:C8	2.54	0.41
31:y:1344:C:C3'	42:j:120:ARG:HA	2.50	0.41
31:y:1347:G:C1'	31:y:1348:U:H5	2.34	0.41
31:y:1380:U:C5'	40:h:4:ARG:HB3	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1402:4OC:HM41	34:l:2:U:OP1	2.20	0.41
31:y:1430:C:N4	31:y:1431:C:N4	2.69	0.41
31:y:1469:G:C5	31:y:1470:G:N7	2.89	0.41
32:z:11:C:O2	32:z:12:U:C5	2.73	0.41
32:z:53:G:O2'	32:z:54:5MU:P	2.78	0.41
33:0:29:A:C2	33:0:42:G:C5	3.08	0.41
33:0:32:C:C2'	33:0:33:U:H5'	2.50	0.41
35:c:51:LEU:HD22	35:c:55:PHE:HB2	2.01	0.41
36:d:37:GLN:O	36:d:40:ARG:N	2.53	0.41
36:d:131:ARG:C	36:d:134:ILE:HG12	2.45	0.41
36:d:135:LYS:CA	36:d:138:VAL:HG23	2.48	0.41
37:e:36:ARG:N	37:e:37:PRO:CD	2.84	0.41
37:e:108:LEU:C	37:e:110:PHE:N	2.77	0.41
37:e:204:ILE:O	37:e:205:GLU:C	2.63	0.41
40:h:98:SER:O	40:h:101:LEU:HB2	2.20	0.41
40:h:107:ALA:CB	40:h:134:ALA:H	2.32	0.41
41:i:8:ASP:OD1	41:i:9:MET:N	2.54	0.41
41:i:20:TYR:HA	41:i:65:TYR:CZ	2.55	0.41
41:i:64:LYS:C	41:i:65:TYR:CG	2.97	0.41
41:i:79:VAL:O	41:i:80:ILE:HD12	2.16	0.41
41:i:80:ILE:O	41:i:81:HIS:C	2.64	0.41
41:i:90:GLY:C	50:r:34:LYS:CE	2.93	0.41
45:m:7:ASN:O	45:m:11:ARG:N	2.53	0.41
45:m:41:THR:HB	45:m:53:LYS:HA	2.01	0.41
45:m:44:PRO:CD	45:m:52:ARG:HD2	2.50	0.41
46:n:40:ASN:HA	46:n:41:PRO:HD3	1.89	0.41
47:o:9:LYS:C	47:o:9:LYS:CD	2.79	0.41
47:o:47:LEU:CD1	47:o:50:LYS:NZ	2.81	0.41
49:q:18:ARG:NH2	49:q:35:LYS:HG3	2.36	0.41
49:q:21:VAL:CG1	49:q:22:THR:N	2.83	0.41
53:u:96:GLY:O	53:u:97:ALA:HB3	2.19	0.41
1:w:95:G:OP1	25:W:38:GLN:OE1	2.38	0.41
1:w:109:G:H2'	1:w:110:G:C1'	2.50	0.41
1:w:274:G:N3	1:w:274:G:C2'	2.83	0.41
1:w:299:A:H2	1:w:323:G:N2	2.07	0.41
1:w:321:G:C2	6:D:160:ARG:NH1	2.89	0.41
1:w:329:G:H5'	1:w:330:A:OP2	2.20	0.41
1:w:372:G:O2'	1:w:373:U:OP1	2.37	0.41
1:w:478:A:O2'	21:S:63:LYS:CD	2.66	0.41
1:w:568:U:H5'	1:w:945:A:C6	2.55	0.41
1:w:574:C:O2	1:w:574:C:H2'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:607:U:C5	1:w:620:G:N3	2.89	0.41
1:w:612:G:N2	1:w:613:U:O2	2.50	0.41
1:w:706:A:H61	1:w:725:G:C1'	2.16	0.41
1:w:726:G:O2'	1:w:727:A:H8	2.01	0.41
1:w:738:G:H22	1:w:1981:A:H2	1.61	0.41
1:w:795:C:O2	1:w:795:C:C2'	2.65	0.41
1:w:851:U:H4'	26:X:45:GLY:C	2.46	0.41
1:w:871:U:O2'	1:w:872:A:H5'	2.21	0.41
1:w:877:U:C2	1:w:900:A:N1	2.89	0.41
1:w:984:A:H8	1:w:984:A:OP2	2.04	0.41
1:w:1153:C:C5'	17:O:76:TYR:CZ	2.94	0.41
1:w:1206:G:C2	1:w:1207:C:C2	3.07	0.41
1:w:1208:C:C5	1:w:1208:C:P	3.13	0.41
1:w:1227:G:C2	1:w:1228:G:C4	3.09	0.41
1:w:1291:C:C4	1:w:1292:U:C4	3.07	0.41
1:w:1327:C:C6	1:w:1328:G:N7	2.88	0.41
1:w:1477:A:C5	1:w:1478:G:C8	3.09	0.41
1:w:1497:U:O4	1:w:1578:U:C5'	2.69	0.41
1:w:1510:A:N1	1:w:1511:A:C2	2.89	0.41
1:w:1649:G:H1'	14:L:107:ASP:OD2	2.21	0.41
1:w:1650:G:O6	1:w:1651:G:C6	2.73	0.41
1:w:1666:G:C2'	1:w:1667:G:O5'	2.68	0.41
1:w:1698:A:O5'	1:w:1698:A:C8	2.74	0.41
1:w:1707:G:C6	1:w:1756:G:O6	2.73	0.41
1:w:1712:C:C2	1:w:1747:G:N2	2.88	0.41
1:w:1731:G:H2'	1:w:1732:A:H8	1.75	0.41
1:w:1741:C:C6	1:w:1741:C:O5'	2.66	0.41
1:w:1753:G:C2	1:w:1755:A:O5'	2.74	0.41
1:w:1753:G:C5	1:w:1755:A:OP2	2.69	0.41
1:w:1818:U:OP1	4:B:88:ARG:NE	2.53	0.41
1:w:1820:U:O2'	4:B:204:ILE:HD11	2.21	0.41
1:w:1850:G:O3'	33:O:4:G:H4'	2.21	0.41
1:w:1884:A:H3'	1:w:1885:A:C5'	2.30	0.41
1:w:1937:A:O2'	1:w:1938:A:H5'	2.20	0.41
1:w:2045:C:C2	1:w:2624:G:C2	3.08	0.41
1:w:2100:G:C2'	1:w:2101:G:H5'	2.51	0.41
1:w:2135:A:H61	1:w:2156:G:H1'	1.85	0.41
1:w:2252:G:H1	32:Z:74:C:N4	2.15	0.41
1:w:2278:A:H62	23:U:10:THR:C	2.27	0.41
1:w:2304:G:H4'	7:E:124:SER:OG	2.19	0.41
1:w:2320:A:N6	15:M:8:GLU:OE2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2320:A:C8	1:w:2333:A:C6	3.08	0.41
1:w:2355:C:C6	1:w:2355:C:O5'	2.73	0.41
1:w:2356:C:O5'	23:U:18:ALA:HB3	2.20	0.41
1:w:2404:C:O5'	1:w:2404:C:C6	2.71	0.41
1:w:2472:G:O2'	1:w:2478:A:N6	2.44	0.41
1:w:2535:G:H2'	1:w:2536:G:O5'	2.20	0.41
1:w:2562:U:H2'	1:w:2562:U:O2	2.21	0.41
1:w:2572:A:H62	5:C:145:LYS:HB2	1.86	0.41
1:w:2795:G:C2	1:w:2802:G:C6	3.08	0.41
1:w:2841:C:H2'	1:w:2842:G:C4'	2.51	0.41
1:w:2850:A:H8	1:w:2868:A:C2	2.38	0.41
2:x:12:C:H6	2:x:12:C:H5''	1.85	0.41
2:x:57:A:N6	7:E:29:TRP:CE3	2.87	0.41
2:x:77:U:O2	2:x:78:A:N9	2.54	0.41
3:A:19:LYS:HA	3:A:19:LYS:CE	2.39	0.41
4:B:48:ARG:CD	4:B:49:ILE:HG13	2.51	0.41
4:B:79:VAL:CA	4:B:95:LEU:CB	2.80	0.41
4:B:260:ARG:NH2	4:B:264:LYS:HD3	2.34	0.41
5:C:36:ARG:O	5:C:37:ARG:O	2.38	0.41
5:C:44:TYR:N	5:C:44:TYR:HD1	2.15	0.41
5:C:99:GLY:O	5:C:100:GLU:C	2.62	0.41
5:C:162:ALA:O	5:C:163:GLU:HB3	2.18	0.41
6:D:18:ASP:C	6:D:20:PRO:CD	2.86	0.41
6:D:179:TYR:O	6:D:182:VAL:CG1	2.62	0.41
7:E:12:TYR:O	7:E:13:GLU:CB	2.69	0.41
10:H:26:THR:CG2	10:H:27:TYR:H	2.09	0.41
10:H:49:LEU:HD13	10:H:49:LEU:N	2.36	0.41
11:I:5:GLN:O	11:I:5:GLN:CD	2.64	0.41
11:I:24:VAL:HG13	11:I:25:LEU:N	2.35	0.41
11:I:106:LEU:HB3	11:I:111:PHE:HD2	1.86	0.41
13:K:57:HIS:C	13:K:58:PHE:HD2	2.25	0.41
13:K:73:PRO:C	13:K:92:GLY:O	2.64	0.41
16:N:38:ASN:ND2	16:N:38:ASN:N	2.66	0.41
16:N:50:ILE:CG2	16:N:63:VAL:N	2.79	0.41
16:N:67:SER:O	16:N:69:GLY:N	2.44	0.41
16:N:76:PHE:HA	16:N:77:PRO:HD3	1.77	0.41
17:O:35:ALA:O	17:O:36:ARG:C	2.63	0.41
17:O:107:ALA:O	17:O:108:GLU:C	2.63	0.41
18:P:63:GLY:C	18:P:97:LYS:O	2.62	0.41
18:P:73:SER:HB3	18:P:75:PHE:CE2	2.55	0.41
18:P:80:GLN:C	18:P:82:ARG:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:45:TYR:O	19:Q:45:TYR:CG	2.72	0.41
19:Q:95:ILE:O	19:Q:96:ILE:CG2	2.54	0.41
20:R:55:ASN:H	20:R:77:LYS:HD2	1.84	0.41
21:S:87:LYS:HB3	21:S:88:LYS:H	1.70	0.41
22:T:48:PHE:O	22:T:50:GLN:N	2.53	0.41
23:U:33:ALA:O	23:U:60:PHE:CZ	2.73	0.41
24:V:31:GLY:O	24:V:32:LYS:CB	2.67	0.41
25:W:12:GLU:OE1	25:W:12:GLU:N	2.54	0.41
26:X:19:GLN:NE2	26:X:49:LYS:HG2	2.35	0.41
26:X:20:LYS:CA	26:X:23:LEU:HD21	2.15	0.41
27:Y:34:PRO:CG	27:Y:52:TYR:CE2	3.02	0.41
29:a:6:THR:HB	29:a:63:PRO:HD3	2.03	0.41
31:y:32:A:C6	31:y:33:A:C6	3.08	0.41
31:y:66:G:N7	31:y:104:G:N2	2.68	0.41
31:y:84:U:O5'	31:y:84:U:H6	2.04	0.41
31:y:116:A:C6	31:y:117:G:C2	3.08	0.41
31:y:175:C:C2	31:y:176:C:O4'	2.74	0.41
31:y:380:G:N2	31:y:382:A:H5''	2.35	0.41
31:y:505:G:C2'	31:y:506:G:H5'	2.51	0.41
31:y:585:G:H3'	31:y:586:C:C5	2.55	0.41
31:y:585:G:C6	31:y:586:C:N3	2.88	0.41
31:y:608:A:C2'	31:y:609:A:H8	2.32	0.41
31:y:777:A:O3'	31:y:778:G:O4'	2.39	0.41
31:y:778:G:C3'	31:y:779:C:C6	3.01	0.41
31:y:831:U:H2'	31:y:832:C:C6	2.56	0.41
31:y:888:G:C2'	31:y:889:A:OP1	2.68	0.41
31:y:976:G:C5	31:y:1363:A:N1	2.88	0.41
31:y:1016:A:C2'	31:y:1017:G:O4'	2.69	0.41
31:y:1053:G:C6	31:y:1199:U:C4	3.08	0.41
31:y:1074:G:O2'	31:y:1075:C:H5'	2.21	0.41
31:y:1123:A:H4'	43:k:37:PRO:CG	2.50	0.41
31:y:1226:C:O5'	31:y:1226:C:C6	2.66	0.41
31:y:1296:C:C1'	31:y:1302:U:N3	2.64	0.41
31:y:1370:G:H2'	31:y:1371:G:C8	2.55	0.41
31:y:1376:U:O4	40:h:10:ARG:CD	2.67	0.41
32:z:66:U:OP2	32:z:67:C:H5	2.03	0.41
33:0:26:G:C2	33:0:27:C:H1'	2.55	0.41
35:c:74:LYS:HZ1	35:c:76:GLN:CG	2.33	0.41
35:c:117:GLU:O	35:c:121:LEU:HG	2.21	0.41
36:d:17:ASP:O	36:d:18:TRP:CB	2.66	0.41
36:d:22:TRP:HE3	36:d:23:TYR:C	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:193:TYR:CD1	36:d:193:TYR:N	2.87	0.41
37:e:12:CYS:HB3	37:e:19:LEU:O	2.19	0.41
37:e:14:ARG:C	37:e:14:ARG:CD	2.89	0.41
37:e:54:TYR:C	37:e:57:ARG:HB2	2.45	0.41
37:e:145:GLU:HB2	37:e:184:LYS:CD	2.50	0.41
38:f:39:GLY:HA2	38:f:71:LEU:HD11	2.03	0.41
38:f:93:PRO:O	38:f:119:LEU:HB2	2.20	0.41
41:i:51:VAL:C	41:i:58:TYR:H	2.28	0.41
41:i:87:SER:OG	41:i:93:VAL:N	2.54	0.41
41:i:104:ARG:HB3	41:i:107:LEU:N	2.34	0.41
42:j:47:LEU:HB3	42:j:51:ARG:HG3	2.02	0.41
43:k:10:GLY:O	43:k:11:PHE:CD1	2.73	0.41
43:k:12:ASP:O	43:k:16:LEU:HD23	2.20	0.41
45:m:98:HIS:HB2	45:m:99:ILE:H	1.66	0.41
46:n:39:ILE:CG2	46:n:52:GLU:HB3	2.51	0.41
46:n:89:GLY:O	46:n:92:HIS:CE1	2.74	0.41
48:p:54:ARG:CG	48:p:55:GLY:N	2.83	0.41
48:p:82:ILE:HG23	48:p:86:GLY:HA2	2.03	0.41
49:q:2:VAL:CG2	49:q:64:ALA:H	2.33	0.41
52:t:5:LEU:HD22	52:t:6:LYS:NZ	2.35	0.41
52:t:10:PHE:HE2	52:t:37:ARG:O	2.02	0.41
53:u:10:LEU:N	53:u:10:LEU:CD2	2.82	0.41
53:u:62:LEU:HD12	53:u:63:ILE:CA	2.48	0.41
1:w:47:C:H6	1:w:47:C:O5'	2.04	0.41
1:w:124:G:H2'	28:Z:19:ARG:NH1	2.33	0.41
1:w:128:C:C6	1:w:128:C:C4'	3.03	0.41
1:w:135:G:C2	1:w:145:G:C2	3.07	0.41
1:w:142:G:N3	20:R:38:GLU:CD	2.78	0.41
1:w:179:G:C2'	1:w:180:G:H8	2.22	0.41
1:w:247:G:N2	1:w:251:A:OP2	2.53	0.41
1:w:329:G:N3	1:w:329:G:C2'	2.83	0.41
1:w:331:A:C6	1:w:1210:A:OP2	2.73	0.41
1:w:356:G:C2'	1:w:357:A:C5'	2.79	0.41
1:w:449:A:C8	1:w:449:A:OP2	2.74	0.41
1:w:559:G:C5	1:w:560:C:C6	3.09	0.41
1:w:590:A:H2'	1:w:591:C:C1'	2.51	0.41
1:w:592:G:H1'	29:a:3:LYS:N	2.34	0.41
1:w:618(A):G:C5	1:w:618(B):C:C4	3.06	0.41
1:w:623:G:H8	1:w:623:G:OP2	2.04	0.41
1:w:624:C:O2	1:w:657:U:OP1	2.38	0.41
1:w:631:A:H4'	12:J:65:ARG:CG	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:661:C:H2'	1:w:662:G:C5'	2.51	0.41
1:w:669:G:N7	1:w:669:G:P	2.94	0.41
1:w:847:U:C6	1:w:847:U:C3'	3.03	0.41
1:w:896:A:H3'	22:T:175:VAL:HG11	2.02	0.41
1:w:947:G:C2'	1:w:948:G:O5'	2.68	0.41
1:w:1047:G:H4'	1:w:1111:A:H61	1.85	0.41
1:w:1069:A:C2'	1:w:1073:A:OP1	2.66	0.41
1:w:1316:U:O4'	1:w:1392:A:H2	1.98	0.41
1:w:1353:A:C2	1:w:1378:A:C4	3.08	0.41
1:w:1366:A:N7	1:w:1367:A:C2	2.89	0.41
1:w:1459:G:C6	1:w:1461:G:C4	3.09	0.41
1:w:1462:C:H2'	1:w:1463:C:H5'	2.01	0.41
1:w:1486:A:H2'	1:w:1487:G:H5'	1.96	0.41
1:w:1492:G:OP1	1:w:1493:C:H5'	2.19	0.41
1:w:1542:G:C5	1:w:1543:A:N6	2.89	0.41
1:w:1654:A:H2'	1:w:1655:A:O4'	2.20	0.41
1:w:1658:C:H2'	1:w:1659:U:O4'	2.20	0.41
1:w:1693:U:H3'	1:w:1694:C:C6	2.54	0.41
1:w:1796:U:O3'	4:B:256:GLY:CA	2.68	0.41
1:w:1822:G:N1	1:w:1823:G:N7	2.68	0.41
1:w:1838:C:O2'	1:w:1898:U:O4	2.38	0.41
1:w:1853:A:C6	1:w:1889:A:C5	3.08	0.41
1:w:1902:C:H2'	1:w:1903:G:C4'	2.50	0.41
1:w:2002:G:N1	1:w:2003:G:C6	2.89	0.41
1:w:2003:G:C2'	1:w:2004:G:O5'	2.68	0.41
1:w:2017:U:H4'	27:Y:8:LYS:C	2.45	0.41
1:w:2096:U:H2'	1:w:2097:C:C6	2.55	0.41
1:w:2121:G:N2	1:w:2178:C:H1'	2.36	0.41
1:w:2130:U:OP1	3:A:7:ARG:HD2	2.20	0.41
1:w:2205:C:N4	1:w:2206:C:C5	2.89	0.41
1:w:2232:U:C2	1:w:2233:U:C6	3.08	0.41
1:w:2270:G:C2	1:w:2271:G:N9	2.88	0.41
1:w:2363:C:C2	1:w:2364:C:H5	2.35	0.41
1:w:2419:U:C5'	29:a:32:LEU:CD2	2.80	0.41
1:w:2445:G:C2	1:w:2446:G:C4	3.09	0.41
1:w:2462:U:C4	1:w:2463:C:C5	3.08	0.41
1:w:2563:U:C1'	1:w:2566:A:C5	2.99	0.41
1:w:2588:G:C5	1:w:2607:G:N2	2.89	0.41
1:w:2641:G:O6	1:w:2642:G:O6	2.38	0.41
1:w:2677:G:C4	1:w:2678:C:C6	3.08	0.41
1:w:2685:G:H1	1:w:2724:C:N4	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2686:G:C4	1:w:2687:U:C6	3.09	0.41
1:w:2720:U:O2	1:w:2721:A:C8	2.73	0.41
1:w:2737:G:H2'	1:w:2738:A:C8	2.51	0.41
1:w:2760:C:O2	1:w:2760:C:H2'	2.20	0.41
1:w:2795:G:C4	1:w:2799:A:P	3.13	0.41
1:w:2819:G:N1	1:w:2828:C:C4	2.88	0.41
2:x:42:C:O2	2:x:43:C:H1'	2.20	0.41
2:x:69:G:C2'	2:x:70:C:H5'	2.51	0.41
2:x:74:U:H2'	2:x:75:G:N9	2.36	0.41
2:x:95:U:C3'	2:x:96:G:H8	2.33	0.41
3:A:20:ILE:HB	3:A:224:ARG:HD3	2.02	0.41
4:B:79:VAL:O	4:B:80:ALA:HB2	2.20	0.41
4:B:134:ARG:NH2	4:B:171:ASP:O	2.51	0.41
4:B:247:ALA:CA	4:B:253:GLN:HA	2.37	0.41
5:C:47:VAL:HG12	5:C:49:LEU:CD2	2.50	0.41
6:D:26:HIS:CD2	6:D:27:LEU:CD1	3.02	0.41
6:D:153:THR:HG21	6:D:158:VAL:HG11	2.02	0.41
6:D:158:VAL:HA	6:D:161:ALA:HB3	2.02	0.41
7:E:139:LEU:C	7:E:141:PHE:N	2.77	0.41
8:F:53:GLU:CG	8:F:54:ARG:H	2.32	0.41
8:F:55:PRO:HG2	8:F:58:GLU:OE2	2.20	0.41
8:F:162:ILE:O	8:F:163:TYR:CD1	2.74	0.41
9:G:4:ILE:HG22	9:G:37:VAL:CG2	2.46	0.41
9:G:48:GLU:HG3	9:G:51:ILE:HD12	2.02	0.41
9:G:126:TYR:CE2	9:G:127:VAL:O	2.74	0.41
9:G:127:VAL:O	9:G:128:LEU:HG	2.19	0.41
9:G:129:THR:OG1	9:G:139:GLN:HB3	2.20	0.41
10:H:29:PRO:O	10:H:30:LYS:CB	2.66	0.41
10:H:78:VAL:CB	10:H:146:TYR:HE2	2.33	0.41
11:I:12:ASP:OD2	11:I:13:ASN:N	2.53	0.41
11:I:21:CYS:HA	11:I:41:ALA:HB2	2.01	0.41
11:I:85:VAL:O	11:I:86:ILE:CD1	2.67	0.41
14:L:96:ARG:HG3	14:L:117:VAL:HA	2.02	0.41
15:M:9:ARG:HB2	15:M:9:ARG:HH21	1.84	0.41
15:M:75:GLU:O	15:M:78:LEU:HB2	2.20	0.41
17:O:10:ARG:O	17:O:11:ARG:C	2.61	0.41
19:Q:42:ARG:CG	19:Q:43:GLY:N	2.83	0.41
19:Q:87:PRO:HA	19:Q:88:ARG:HH21	1.83	0.41
19:Q:90:ARG:O	19:Q:91:GLY:C	2.64	0.41
22:T:5:LEU:CD1	22:T:6:LYS:H	2.26	0.41
22:T:15:PRO:CA	22:T:19:ARG:CZ	2.98	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:62:LEU:HD12	23:U:63:VAL:CG2	2.38	0.41
28:Z:17:GLY:O	28:Z:20:ALA:HB3	2.20	0.41
29:a:60:LEU:C	29:a:63:PRO:HD2	2.46	0.41
31:y:96:G:C2	31:y:97:U:N3	2.89	0.41
31:y:148:G:N1	31:y:149:A:N7	2.68	0.41
31:y:196:A:C4'	31:y:222:U:H5'	2.39	0.41
31:y:267:C:H2'	31:y:268:C:H6	1.86	0.41
31:y:390:C:O3'	49:q:8:ARG:NH1	2.53	0.41
31:y:451:A:O5'	31:y:451:A:H8	2.03	0.41
31:y:643:C:H2'	31:y:644:G:C8	2.55	0.41
31:y:675:A:N3	31:y:675:A:C2'	2.83	0.41
31:y:750:G:O2'	48:p:21:ASP:OD2	2.39	0.41
31:y:755:G:C6	31:y:756:C:N4	2.89	0.41
31:y:755:G:H3'	31:y:756:C:C5	2.50	0.41
31:y:777:A:N3	31:y:778:G:N9	2.68	0.41
31:y:784:C:N4	31:y:799:G:O6	2.54	0.41
31:y:790:A:H1'	32:z:38:A:H4'	2.02	0.41
31:y:790:A:C2'	31:y:791:G:C8	3.04	0.41
31:y:895:G:C3'	31:y:896:C:C6	3.03	0.41
31:y:967:5MC:H4'	42:j:128:ARG:HH11	1.86	0.41
31:y:1029:G:C6	31:y:1031:G:OP1	2.74	0.41
31:y:1269:A:C1'	31:y:1326:C:O4'	2.69	0.41
31:y:1284:C:H5''	31:y:1285:A:O5'	2.21	0.41
31:y:1295:G:H2'	31:y:1295:G:N3	2.35	0.41
31:y:1300:G:O2'	31:y:1301:U:C5	2.40	0.41
31:y:1350:A:OP2	31:y:1350:A:C8	2.73	0.41
31:y:1376:U:H2'	31:y:1377:A:N7	2.30	0.41
31:y:1428:A:C4	31:y:1429:C:C4	3.09	0.41
33:0:26:G:C5	33:0:27:C:C6	3.07	0.41
34:1:-3:A:C8	40:h:83:ALA:HA	2.56	0.41
35:c:108:ILE:C	35:c:110:GLN:N	2.79	0.41
35:c:223:ILE:CG1	35:c:230:VAL:CG2	2.96	0.41
36:d:6:HIS:O	36:d:10:PHE:HB2	2.21	0.41
37:e:7:PRO:HG2	37:e:10:ARG:HB2	2.02	0.41
37:e:14:ARG:HD2	37:e:15:GLU:OE1	2.20	0.41
37:e:101:LEU:CG	37:e:140:VAL:CG1	2.78	0.41
37:e:105:VAL:HG13	37:e:110:PHE:HB2	2.03	0.41
39:g:62:TRP:HB2	51:s:34:TYR:HH	1.85	0.41
40:h:78:ARG:CG	40:h:79:ARG:H	2.14	0.41
41:i:35:ILE:HA	41:i:38:ILE:HG13	2.02	0.41
41:i:136:GLU:OE2	41:i:138:TRP:CD1	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:72:ALA:HB1	44:l:77:MET:HG2	2.01	0.41
44:l:96:ARG:N	44:l:98:LEU:HG	2.32	0.41
46:n:52:GLU:HA	46:n:55:ARG:NE	2.10	0.41
46:n:91:ARG:O	46:n:96:LEU:HB2	2.20	0.41
48:p:80:ALA:C	48:p:82:ILE:H	2.28	0.41
49:q:1:MET:H2	49:q:63:GLY:C	2.28	0.41
50:r:55:ASP:HA	50:r:78:GLU:O	2.19	0.41
53:u:62:LEU:HA	53:u:65:LYS:CG	2.50	0.41
54:v:24:ARG:HB3	54:v:25:LYS:HD2	2.02	0.41
1:w:51:G:O3'	1:w:52:A:C8	2.71	0.41
1:w:116:C:H2'	1:w:126:A:N3	2.35	0.41
1:w:178:G:N1	1:w:179:G:C8	2.88	0.41
1:w:182:A:C2'	1:w:433:C:H4'	2.50	0.41
1:w:216:A:N7	1:w:217:G:C5	2.88	0.41
1:w:217:G:H3'	1:w:218:A:C8	2.55	0.41
1:w:380:U:N3	1:w:394:A:C2	2.83	0.41
1:w:388:G:C8	1:w:390:A:N7	2.89	0.41
1:w:522:G:C4	1:w:523:C:C5	3.09	0.41
1:w:558:G:C4'	10:H:135:LEU:HD22	2.50	0.41
1:w:591:C:H2'	1:w:592:G:H8	1.85	0.41
1:w:594:U:C2'	1:w:595:C:C5	2.99	0.41
1:w:603:A:C4'	1:w:604:G:O4'	2.68	0.41
1:w:649:G:C6	1:w:650:C:C4	3.09	0.41
1:w:669:G:N7	1:w:801:G:C6	2.87	0.41
1:w:718:A:H2'	1:w:719:C:C1'	2.49	0.41
1:w:724:U:C5	1:w:725:G:N7	2.88	0.41
1:w:725:G:H5''	1:w:726:G:P	2.61	0.41
1:w:794:G:C3'	1:w:795:C:C6	3.03	0.41
1:w:813:U:O2'	1:w:1225:G:C1'	2.56	0.41
1:w:836:G:O5'	1:w:836:G:H8	2.04	0.41
1:w:845:G:OP2	1:w:845:G:C8	2.73	0.41
1:w:902:C:N4	1:w:903:C:H42	2.18	0.41
1:w:919:G:C2'	1:w:920:G:H8	2.06	0.41
1:w:929:G:C8	1:w:930:U:N3	2.87	0.41
1:w:936:C:C2	1:w:937:U:C6	3.08	0.41
1:w:950:G:O6	1:w:968:G:C6	2.73	0.41
1:w:971:C:H2'	1:w:972:G:C8	2.55	0.41
1:w:1031:G:H5''	30:b:6:SER:CB	2.51	0.41
1:w:1178:C:H3'	1:w:1179:C:C6	2.55	0.41
1:w:1191:G:C8	1:w:1191:G:C3'	3.03	0.41
1:w:1203:G:C2	1:w:1243:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1253:A:H5''	1:w:1253:A:H8	1.86	0.41
1:w:1271:G:C2	1:w:1617:C:C4'	3.03	0.41
1:w:1284:A:C5	1:w:1285:G:N2	2.87	0.41
1:w:1314:C:O2	1:w:1314:C:H2'	2.19	0.41
1:w:1357:U:H2'	1:w:1358:G:O4'	2.21	0.41
1:w:1426:G:H5''	1:w:1427:A:H5''	2.02	0.41
1:w:1492:G:C8	1:w:1492:G:C3'	3.04	0.41
1:w:1535:U:C6	1:w:1536:A:C1'	3.03	0.41
1:w:1728:G:N2	1:w:1732:A:C6	2.67	0.41
1:w:1728:G:O6	1:w:1730:U:H5'	2.21	0.41
1:w:1735:U:C2	1:w:1741:C:C5	3.09	0.41
1:w:1773:A:H5''	1:w:1829:A:OP2	2.20	0.41
1:w:1803:A:OP1	1:w:1804:C:OP2	2.38	0.41
1:w:1806:C:N4	1:w:1807:G:C6	2.89	0.41
1:w:1816:G:H3'	4:B:62:TYR:HE2	1.85	0.41
1:w:1915:U:C4	1:w:1916:A:N3	2.88	0.41
1:w:2056:G:H2'	1:w:2057:A:H5'	2.02	0.41
1:w:2066:C:H42	1:w:2444:G:H1	1.68	0.41
1:w:2111:C:C4	1:w:2144:U:H4'	2.49	0.41
1:w:2120:G:N2	1:w:2121:G:O4'	2.53	0.41
1:w:2208:U:H2'	1:w:2209:C:C6	2.56	0.41
1:w:2263:C:C4	1:w:2264:C:C5	3.09	0.41
1:w:2335:A:H2'	1:w:2335:A:P	2.61	0.41
1:w:2375:G:N3	1:w:2377:A:OP2	2.53	0.41
1:w:2396:G:C3'	1:w:2396:G:C8	3.04	0.41
1:w:2396:G:C5	1:w:2397:G:C8	3.08	0.41
1:w:2521:C:O2'	1:w:2564:A:H1'	2.20	0.41
1:w:2536:G:C3'	1:w:2537:U:C6	3.03	0.41
1:w:2544:G:C2	1:w:2545:G:C4	3.09	0.41
1:w:2602:A:N3	1:w:2602:A:C2'	2.83	0.41
1:w:2606:C:C4	1:w:2607:G:C5	3.09	0.41
1:w:2651:C:C4	1:w:2652:C:C4	3.08	0.41
1:w:2691:C:C6	1:w:2872:G:O6	2.73	0.41
1:w:2692:C:H5''	1:w:2870:C:H1'	2.02	0.41
1:w:2821:A:OP2	14:L:2:ARG:C	2.64	0.41
1:w:2900:A:C2'	1:w:2901:C:C5'	2.88	0.41
1:w:2900:A:C2	1:w:2901:C:C6	3.08	0.41
2:x:37:C:H2'	2:x:38:C:C6	2.55	0.41
2:x:97:G:C6	2:x:98:G:C4	3.09	0.41
3:A:30:VAL:HG21	3:A:183:PRO:HB3	2.02	0.41
3:A:56:ASP:C	3:A:57:GLN:HG3	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:64:LYS:HE2	5:C:64:LYS:HB2	1.93	0.41
7:E:41:GLN:CG	7:E:155:MET:HA	2.44	0.41
7:E:78:SER:C	7:E:79:ASN:O	2.64	0.41
8:F:43:VAL:CG2	8:F:44:VAL:N	2.61	0.41
8:F:58:GLU:HG2	8:F:61:HIS:CD2	2.55	0.41
8:F:64:LEU:HD12	8:F:65:HIS:CA	2.49	0.41
8:F:90:LYS:O	8:F:160:LYS:HG3	2.21	0.41
8:F:172:LYS:HA	8:F:173:PRO:HD2	1.96	0.41
9:G:3:VAL:HB	9:G:21:VAL:CG2	2.48	0.41
9:G:90:GLY:O	9:G:91:SER:HB3	2.21	0.41
9:G:91:SER:O	9:G:92:VAL:HG13	2.21	0.41
9:G:124:GLY:C	9:G:143:SER:C	2.89	0.41
10:H:101:TYR:N	10:H:101:TYR:HD1	2.18	0.41
11:I:10:VAL:CG2	11:I:17:ARG:C	2.94	0.41
11:I:118:ALA:HA	11:I:119:PRO:HD2	1.89	0.41
12:J:71:VAL:CG2	12:J:72:PRO:CD	2.88	0.41
12:J:95:VAL:HG23	12:J:125:VAL:HB	2.02	0.41
18:P:85:LYS:HE2	18:P:86:GLY:HA2	2.03	0.41
19:Q:42:ARG:HG3	19:Q:43:GLY:H	1.85	0.41
22:T:99:TYR:CE1	22:T:125:LEU:CD2	2.97	0.41
22:T:128:VAL:HG11	22:T:134:PRO:CD	2.40	0.41
23:U:45:PHE:HB3	23:U:79:VAL:HG13	2.03	0.41
24:V:57:GLU:O	24:V:58:ILE:CG2	2.59	0.41
25:W:35:LEU:HA	25:W:37:PHE:HE2	1.80	0.41
29:a:37:SER:O	29:a:38:GLY:C	2.64	0.41
29:a:39:LYS:O	29:a:39:LYS:HE2	2.21	0.41
31:y:77:C:C2'	31:y:78:G:H5'	2.50	0.41
31:y:158:G:C4	31:y:159:G:C8	3.09	0.41
31:y:186(G):C:H3'	31:y:187:C:H6	1.83	0.41
31:y:191(F):U:H4'	53:u:106:ALA:OXT	2.19	0.41
31:y:246:A:C2	31:y:282:A:C5	3.09	0.41
31:y:251:G:C2	31:y:253:U:O4	2.71	0.41
31:y:257:G:H8	31:y:257:G:O5'	2.04	0.41
31:y:318:G:C8	31:y:318:G:O5'	2.63	0.41
31:y:322:C:O2'	31:y:323:U:H5'	2.21	0.41
31:y:391:G:H5''	49:q:8:ARG:HH22	1.86	0.41
31:y:422:C:C6	31:y:422:C:O5'	2.73	0.41
31:y:475:G:C2	31:y:476:G:C5	3.08	0.41
31:y:490:G:C5	31:y:491:G:C8	3.08	0.41
31:y:577:G:H1'	31:y:816:A:H2'	2.02	0.41
31:y:585:G:H4'	45:m:7:ASN:HD22	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:721:G:H5'	31:y:722:A:C8	2.56	0.41
31:y:740:U:H2'	31:y:741:G:H8	1.81	0.41
31:y:820:U:C6	31:y:820:U:C5'	2.94	0.41
31:y:855:G:H3'	31:y:856:C:C5	2.54	0.41
31:y:874:G:C2'	31:y:875:C:C6	2.79	0.41
31:y:889:A:N6	31:y:908:A:C8	2.81	0.41
31:y:919:A:H2'	31:y:920:U:H6	1.86	0.41
31:y:947:G:P	46:n:106:ASN:HD21	2.43	0.41
31:y:969:A:H3'	31:y:970:C:H5	1.85	0.41
31:y:1004:A:O2'	31:y:1005:A:OP1	2.38	0.41
31:y:1023:G:C8	31:y:1024:G:C8	3.08	0.41
31:y:1212:U:O2'	31:y:1213:A:C8	2.73	0.41
31:y:1266:G:H5''	31:y:1267:C:OP2	2.20	0.41
31:y:1268:A:H3'	31:y:1269:A:N7	2.35	0.41
31:y:1301:U:H6	31:y:1301:U:C5'	2.33	0.41
31:y:1347:G:N7	42:j:107:ARG:HD2	2.35	0.41
31:y:1501:C:C5	31:y:1504:G:C4	3.08	0.41
32:z:65:G:C2	32:z:66:U:C6	3.08	0.41
35:c:28:PHE:CE1	35:c:31:TYR:C	2.99	0.41
35:c:114:ARG:HG2	35:c:115:LEU:N	2.35	0.41
35:c:177:ALA:O	35:c:178:ARG:C	2.63	0.41
36:d:32:LEU:HD11	36:d:36:ASP:OD1	2.21	0.41
36:d:40:ARG:HA	36:d:40:ARG:HD2	1.93	0.41
36:d:132:ARG:HA	36:d:135:LYS:HZ3	1.85	0.41
36:d:202:ILE:HG21	36:d:204:LEU:HD11	1.97	0.41
37:e:26:CYS:N	37:e:31:CYS:HA	2.35	0.41
37:e:131:ARG:HG3	37:e:131:ARG:NH1	2.35	0.41
38:f:15:ARG:O	38:f:15:ARG:CG	2.66	0.41
38:f:120:THR:O	38:f:121:LYS:HB3	2.20	0.41
38:f:125:SER:C	38:f:127:ASN:N	2.78	0.41
43:k:21:GLN:C	43:k:23:ILE:H	2.29	0.41
43:k:63:PHE:HD2	47:o:57:ARG:C	2.28	0.41
44:l:50:TYR:C	44:l:51:LYS:HD2	2.45	0.41
45:m:59:LEU:HD11	45:m:61:SER:CA	2.49	0.41
45:m:104:TYR:CD1	45:m:104:TYR:N	2.89	0.41
49:q:7:ALA:O	49:q:17:TYR:CD2	2.74	0.41
53:u:23:ARG:HG2	53:u:23:ARG:NH1	2.32	0.41
1:w:38:A:C2	1:w:39:C:N4	2.89	0.41
1:w:54:G:C8	1:w:54:G:H3'	2.56	0.41
1:w:148:C:H5'	1:w:149:A:OP2	2.19	0.41
1:w:240:G:H5'	1:w:622:G:H4'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:286:C:H3'	1:w:287:C:H5	1.82	0.41
1:w:359:A:N9	1:w:360:G:C8	2.89	0.41
1:w:413:C:H4'	1:w:1880:C:O2'	2.21	0.41
1:w:465:G:N7	1:w:466:A:N1	2.69	0.41
1:w:487:C:N4	1:w:493:G:H1	2.17	0.41
1:w:518:G:H4'	19:Q:76:VAL:CG2	2.50	0.41
1:w:537:C:C2'	1:w:539:G:H5'	2.50	0.41
1:w:575:A:N3	1:w:575:A:H2'	2.36	0.41
1:w:579:G:H4'	1:w:2017:U:C3'	2.43	0.41
1:w:601:C:H2'	1:w:602:G:H5'	2.02	0.41
1:w:708:C:N4	1:w:709:U:O4	2.54	0.41
1:w:719:C:C2	1:w:720:C:C6	3.08	0.41
1:w:802:A:C2	1:w:803:U:H1'	2.56	0.41
1:w:857:C:P	23:U:69:PHE:CE1	3.14	0.41
1:w:916:G:H5'	2:x:100:G:H5'	2.02	0.41
1:w:940:G:C2	1:w:941:A:C8	3.08	0.41
1:w:969:U:H2'	1:w:970:C:C2	2.54	0.41
1:w:1136:G:OP2	1:w:1136:G:O3'	2.39	0.41
1:w:1204:A:C5	1:w:1240:U:C4	3.08	0.41
1:w:1208:C:C6	1:w:1208:C:C5'	3.03	0.41
1:w:1226:A:C8	1:w:1226:A:C3'	3.03	0.41
1:w:1300:U:C5	1:w:1626:G:C2'	3.03	0.41
1:w:1344:G:C2	1:w:1385:G:C8	3.09	0.41
1:w:1366:A:OP1	24:V:8:SER:N	2.54	0.41
1:w:1367:A:O2'	1:w:1368:G:C4'	2.68	0.41
1:w:1539:G:C4	1:w:1540:G:H1'	2.55	0.41
1:w:1676:A:C2'	1:w:1677:A:H8	2.32	0.41
1:w:1789:A:OP1	4:B:221:VAL:CA	2.65	0.41
1:w:1824:G:C4	1:w:1825:A:C8	3.08	0.41
1:w:1993:U:C1'	5:C:129:HIS:NE2	2.84	0.41
1:w:2084:C:C4	1:w:2085:C:C6	3.08	0.41
1:w:2133:G:C3'	1:w:2157:G:N2	2.83	0.41
1:w:2206:C:H2'	1:w:2207:C:O5'	2.21	0.41
1:w:2275:C:H6	1:w:2275:C:H5'	1.85	0.41
1:w:2297:C:H3'	1:w:2298:A:C8	2.56	0.41
1:w:2345:G:C6	1:w:2347:C:N4	2.89	0.41
1:w:2397:G:C6	1:w:2398:U:C4	3.08	0.41
1:w:2486:G:C2	1:w:2487:G:N9	2.89	0.41
1:w:2535:G:C5	1:w:2536:G:C5	3.09	0.41
1:w:2565:A:H3'	1:w:2566:A:O4'	2.21	0.41
1:w:2685:G:H1	1:w:2724:C:H42	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2728:U:O5'	1:w:2728:U:H6	2.04	0.41
1:w:2809:A:O2'	1:w:2810:A:H5'	2.21	0.41
1:w:2841:C:C2	1:w:2842:G:C8	3.09	0.41
1:w:2845:G:H2'	1:w:2846:G:H8	1.85	0.41
2:x:82:G:C3'	2:x:83:G:C8	3.04	0.41
3:A:12:LEU:HD12	3:A:12:LEU:N	2.36	0.41
3:A:29:LEU:C	3:A:33:LEU:HG	2.46	0.41
4:B:82:ILE:HG22	4:B:91:ARG:HD2	2.02	0.41
4:B:166:GLN:HG2	31:y:712:A:C5'	2.51	0.41
4:B:257:LEU:HD12	4:B:259:THR:OG1	2.21	0.41
5:C:192:ASN:OD1	16:N:4:GLY:HA2	2.19	0.41
5:C:201:THR:CG2	5:C:203:LYS:H	2.34	0.41
7:E:54:GLU:CA	7:E:57:ALA:HB3	2.51	0.41
7:E:149:VAL:HG23	7:E:150:ASP:N	2.36	0.41
9:G:33:ARG:C	9:G:33:ARG:HD3	2.46	0.41
9:G:62:LYS:HZ3	9:G:133:HIS:CG	2.38	0.41
9:G:95:LYS:N	9:G:95:LYS:HE2	2.36	0.41
9:G:126:TYR:CD1	9:G:127:VAL:HG22	2.56	0.41
10:H:32:VAL:HG21	10:H:62:ARG:HD2	2.01	0.41
10:H:86:THR:HB	10:H:87:GLY:H	1.68	0.41
10:H:121:VAL:O	10:H:123:GLU:N	2.53	0.41
10:H:160:LYS:HD3	10:H:160:LYS:HA	1.90	0.41
11:I:42:SER:CA	11:I:57:VAL:HG22	2.50	0.41
11:I:75:SER:HA	16:N:76:PHE:HA	2.03	0.41
13:K:11:LYS:CG	13:K:14:ARG:HH12	2.34	0.41
13:K:25:ASP:CG	13:K:102:VAL:CB	2.93	0.41
13:K:27:VAL:CG2	13:K:28:ALA:H	2.00	0.41
13:K:47:ILE:O	13:K:51:ARG:HD3	2.16	0.41
13:K:67:ARG:C	13:K:68:ILE:CD1	2.93	0.41
15:M:44:LYS:C	15:M:46:VAL:HG23	2.45	0.41
15:M:63:THR:O	15:M:100:ALA:CB	2.69	0.41
16:N:24:PRO:CA	16:N:49:VAL:HG21	2.50	0.41
16:N:100:TYR:C	16:N:103:ARG:HH12	2.29	0.41
16:N:107:ASP:OD2	31:y:1431:C:H5''	2.20	0.41
16:N:108:ARG:HD2	31:y:1431:C:OP1	2.20	0.41
18:P:63:GLY:O	18:P:96:ILE:HG21	2.20	0.41
19:Q:18:ARG:HG3	19:Q:76:VAL:HG11	2.02	0.41
21:S:98:VAL:O	21:S:99:CYS:HB2	2.20	0.41
22:T:40:ASP:O	22:T:43:GLU:CD	2.64	0.41
22:T:48:PHE:HD1	22:T:52:SER:OG	2.03	0.41
23:U:23:VAL:HG13	23:U:38:VAL:CG1	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:26:TYR:HE2	23:U:29:GLN:CD	2.29	0.41
23:U:53:MET:HA	23:U:59:LEU:HG	2.02	0.41
24:V:25:LYS:H	24:V:37:ILE:CG2	2.34	0.41
24:V:34:THR:O	24:V:35:THR:OG1	2.23	0.41
25:W:43:GLN:O	25:W:44:LEU:C	2.63	0.41
25:W:55:ARG:NH1	25:W:55:ARG:CA	2.82	0.41
31:y:95:G:C4	31:y:96:G:C5	3.08	0.41
31:y:102:G:N2	31:y:103:C:C2	2.89	0.41
31:y:115:G:C1'	31:y:116:A:C8	3.03	0.41
31:y:121:C:N3	31:y:235:C:C4	2.89	0.41
31:y:154:C:N4	31:y:166:G:O6	2.54	0.41
31:y:179:A:C4	31:y:180:U:C6	3.08	0.41
31:y:216:G:C3'	31:y:217:C:H6	2.34	0.41
31:y:292:G:C4	31:y:309:G:N1	2.89	0.41
31:y:292:G:N3	31:y:309:G:C2	2.89	0.41
31:y:329:A:C6	31:y:332:G:N3	2.88	0.41
31:y:376:G:N1	31:y:377:G:C4	2.88	0.41
31:y:401:C:N3	31:y:402:G:N7	2.69	0.41
31:y:609:A:C4	31:y:610:G:C8	3.09	0.41
31:y:634:C:H3'	31:y:634:C:C6	2.56	0.41
31:y:638:G:H2'	31:y:639:G:H8	1.79	0.41
31:y:652:U:O2'	31:y:653:A:C5'	2.44	0.41
31:y:660:G:C6	31:y:661:G:C5	3.09	0.41
31:y:667:G:C5'	48:p:51:HIS:CG	3.01	0.41
31:y:671:G:N1	31:y:736:C:N4	2.66	0.41
31:y:685:G:C2'	31:y:686:U:C5'	2.98	0.41
31:y:696:A:O2'	31:y:697:U:C6	2.71	0.41
31:y:747:C:H2'	31:y:748:C:C1'	2.50	0.41
31:y:752:G:O2'	31:y:753:A:C8	2.73	0.41
31:y:893:C:H2'	31:y:893:C:O2	2.21	0.41
31:y:918:A:C4	31:y:919:A:C5	3.08	0.41
31:y:1014:A:H1'	52:t:34:TRP:CE3	2.55	0.41
31:y:1023:G:N7	31:y:1024:G:N7	2.68	0.41
31:y:102(B):C:C2'	31:y:102(C):C:OP1	2.69	0.41
31:y:1057:G:N1	31:y:1204:A:C6	2.88	0.41
31:y:1109:C:H5'	31:y:1110:A:N7	2.35	0.41
31:y:1120:G:C5	31:y:1154:G:C2	3.09	0.41
31:y:1188:A:C6	31:y:1189:C:N1	2.89	0.41
31:y:1195:C:C4	31:y:1197:G:N7	2.88	0.41
31:y:1278:U:H4'	31:y:1279:A:C8	2.56	0.41
31:y:1279:A:H2'	31:y:1280:A:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1293:G:H8	31:y:1293:G:O5'	2.03	0.41
31:y:1307:U:H5''	46:n:109:THR:HG21	2.03	0.41
31:y:1308:U:C4	46:n:99:ARG:NH2	2.88	0.41
31:y:1316:G:H5''	31:y:1360:A:C2	2.55	0.41
31:y:1345:U:H1'	31:y:1375:A:H61	1.86	0.41
31:y:1488:G:N1	31:y:1489:G:C6	2.88	0.41
31:y:1502:A:C2	31:y:1505:G:N2	2.89	0.41
31:y:1518:MA6:N7	31:y:1518:MA6:C10	2.83	0.41
35:c:52:GLU:CA	35:c:56:ARG:NH1	2.79	0.41
35:c:151:GLY:C	35:c:153:ARG:N	2.78	0.41
35:c:163:PHE:HA	35:c:185:ILE:O	2.20	0.41
36:d:125:GLU:CB	36:d:190:ARG:O	2.63	0.41
37:e:12:CYS:O	37:e:17:VAL:O	2.39	0.41
37:e:17:VAL:HB	37:e:19:LEU:CD2	2.51	0.41
37:e:121:VAL:O	37:e:136:PRO:HG2	2.20	0.41
37:e:204:ILE:HG13	37:e:205:GLU:OE1	2.20	0.41
38:f:18:ARG:HB2	38:f:25:ARG:O	2.21	0.41
40:h:15:ASP:CA	40:h:24:THR:HG21	2.45	0.41
40:h:108:ALA:O	40:h:119:ARG:NE	2.54	0.41
41:i:88:LYS:HE2	41:i:88:LYS:HB2	1.90	0.41
41:i:91:ARG:C	41:i:91:ARG:HD3	2.46	0.41
42:j:13:ALA:HA	42:j:67:GLY:HA3	2.02	0.41
43:k:10:GLY:C	43:k:11:PHE:CD1	2.99	0.41
44:l:103:LEU:HD12	44:l:104:GLN:H	1.82	0.41
45:m:8:GLN:N	45:m:11:ARG:HH11	2.18	0.41
45:m:52:ARG:NH2	45:m:52:ARG:H	2.18	0.41
45:m:57:VAL:CG2	45:m:67:ALA:N	2.82	0.41
46:n:69:GLU:O	46:n:72:ALA:CB	2.65	0.41
46:n:71:ARG:HA	46:n:74:VAL:HG23	1.90	0.41
47:o:15:LYS:O	47:o:16:PHE:CD1	2.74	0.41
47:o:15:LYS:HB3	47:o:19:ARG:CB	2.51	0.41
48:p:18:PHE:HA	48:p:19:PRO:HD3	1.82	0.41
48:p:64:ARG:HA	48:p:67:LEU:HD11	2.01	0.41
48:p:64:ARG:C	48:p:67:LEU:HG	2.45	0.41
50:r:29:HIS:CD2	50:r:30:PRO:HG2	2.56	0.41
52:t:45:VAL:HA	52:t:62:ILE:CD1	2.50	0.41
1:w:38:A:C5'	6:D:45:SER:OG	2.65	0.41
1:w:71:A:OP2	1:w:113:G:C5'	2.68	0.41
1:w:77:C:H4'	25:W:53:LEU:HG	2.02	0.41
1:w:78:A:C5	1:w:79:G:C5	3.09	0.41
1:w:101:G:H5''	1:w:102:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:110:G:N2	1:w:111:A:C5	2.89	0.41
1:w:123:G:C8	1:w:124:G:C5	3.09	0.41
1:w:190:A:N6	1:w:191:A:C6	2.88	0.41
1:w:221:A:H1'	1:w:233:A:C1'	2.46	0.41
1:w:346:A:C2'	1:w:348:G:N7	2.84	0.41
1:w:425:G:H8	1:w:425:G:P	2.44	0.41
1:w:513:A:O5'	1:w:513:A:H8	2.04	0.41
1:w:536:A:O2'	17:O:57:PHE:HE1	2.04	0.41
1:w:595:C:O2'	1:w:596:G:H5'	2.21	0.41
1:w:612:G:H2'	1:w:612:G:N3	2.36	0.41
1:w:633:A:O4'	1:w:2404:C:C5'	2.69	0.41
1:w:642:G:H2'	1:w:644:A:OP2	2.20	0.41
1:w:675:A:N3	1:w:2444:G:C1'	2.83	0.41
1:w:701:G:C2'	1:w:702:G:O4'	2.69	0.41
1:w:786:C:C2	1:w:787:U:C5	3.08	0.41
1:w:843:G:H3'	1:w:844:C:C6	2.55	0.41
1:w:856:C:O2	1:w:856:C:C2'	2.67	0.41
1:w:892:G:C5	1:w:893:C:C4	3.08	0.41
1:w:1047:G:C1'	1:w:1111:A:H62	2.34	0.41
1:w:1082:U:H3'	1:w:1083:U:C5'	2.46	0.41
1:w:1232:G:C2	1:w:1233:C:C4	3.08	0.41
1:w:1233:C:C6	1:w:1233:C:O5'	2.73	0.41
1:w:1276:A:P	1:w:1645:G:HO2'	2.34	0.41
1:w:1283:G:O3'	1:w:1285:G:C6	2.70	0.41
1:w:1296:G:H8	1:w:1296:G:OP2	2.04	0.41
1:w:1321:A:OP2	1:w:1322:A:P	2.79	0.41
1:w:1327:C:C5	1:w:1328:G:O6	2.74	0.41
1:w:1356:G:C4	1:w:1357:U:C5	3.08	0.41
1:w:1388:G:C4	1:w:1389:G:C8	3.08	0.41
1:w:1435:G:C5'	1:w:1436:G:OP2	2.69	0.41
1:w:1480:G:C2	1:w:1514:U:C2	3.09	0.41
1:w:1533:C:N3	1:w:1534:G:H1'	2.33	0.41
1:w:1540:G:H2'	1:w:1541:U:O4'	2.20	0.41
1:w:1759:A:H5'	1:w:2715:C:H1'	2.00	0.41
1:w:1844:C:O3'	4:B:258:LYS:NZ	2.48	0.41
1:w:1927:A:O5'	1:w:1928:A:OP2	2.38	0.41
1:w:1952:A:C6	1:w:1953:A:N1	2.89	0.41
1:w:2034:U:O2'	1:w:2035:G:OP1	2.36	0.41
1:w:2210:G:C6	1:w:2215:G:N1	2.89	0.41
1:w:2258:C:O2	1:w:2426:A:O4'	2.39	0.41
1:w:2303:G:C8	1:w:2304:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2420:C:H2'	1:w:2421:G:H8	1.86	0.41
1:w:2468:G:C6	1:w:2481:G:N1	2.88	0.41
1:w:2485:G:H2'	1:w:2486:G:C5'	2.50	0.41
1:w:2486:G:C2	1:w:2487:G:C1'	3.03	0.41
1:w:2497:A:O2'	1:w:2498:C:P	2.79	0.41
1:w:2503:A:H3'	1:w:2503:A:N3	2.35	0.41
1:w:2508:G:C5	1:w:2509:G:C8	3.09	0.41
1:w:2530:A:C1'	1:w:2534:A:H61	2.34	0.41
1:w:2785:C:H3'	1:w:2786:U:C5	2.54	0.41
1:w:2793:G:C2	1:w:2794:C:C5	3.08	0.41
1:w:2799:A:OP1	1:w:2799:A:C8	2.74	0.41
1:w:2828:C:C6	1:w:2829:C:C5	3.09	0.41
2:x:2:C:N4	2:x:119:A:N1	2.69	0.41
2:x:7:G:N2	15:M:47:THR:HG21	2.36	0.41
2:x:115:G:C2	2:x:116:G:C8	3.08	0.41
4:B:5:LYS:H	4:B:5:LYS:CD	2.33	0.41
4:B:24:ILE:C	4:B:82:ILE:HB	2.46	0.41
4:B:73:VAL:HG12	4:B:73:VAL:O	2.21	0.41
4:B:177:LEU:C	4:B:179:SER:N	2.74	0.41
4:B:201:HIS:O	4:B:202:LYS:C	2.63	0.41
4:B:233:HIS:NE2	4:B:241:PRO:O	2.53	0.41
5:C:28:ALA:H	5:C:180:ASN:C	2.28	0.41
5:C:52:LEU:HD12	5:C:76:ARG:HE	1.83	0.41
6:D:99:LYS:O	6:D:99:LYS:HG2	2.21	0.41
6:D:129:GLY:CA	6:D:134:PHE:HZ	2.32	0.41
6:D:180:ASP:O	6:D:184:THR:HG23	2.21	0.41
7:E:10:LYS:C	7:E:10:LYS:CD	2.94	0.41
7:E:35:GLU:C	7:E:36:LYS:HG2	2.46	0.41
7:E:41:GLN:NE2	7:E:42:GLY:H	2.18	0.41
9:G:113:ARG:NH1	9:G:133:HIS:CB	2.77	0.41
10:H:24:VAL:O	10:H:24:VAL:CG1	2.68	0.41
10:H:32:VAL:HG12	10:H:35:ARG:NH1	2.34	0.41
11:I:16:ALA:N	11:I:17:ARG:CZ	2.84	0.41
11:I:77:ILE:HD13	11:I:78:ARG:C	2.46	0.41
12:J:17:LYS:C	12:J:19:VAL:H	2.27	0.41
12:J:75:ILE:O	12:J:75:ILE:HG23	2.20	0.41
16:N:51:ARG:HH11	16:N:75:ILE:HG21	1.80	0.41
16:N:100:TYR:C	16:N:103:ARG:NH2	2.77	0.41
17:O:17:ILE:CG2	17:O:35:ALA:HB1	2.50	0.41
17:O:40:PHE:C	18:P:78:LYS:HG3	2.46	0.41
17:O:47:TYR:CD2	17:O:48:ALA:N	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:104:THR:HG22	19:Q:105:VAL:H	1.85	0.41
20:R:10:ALA:HA	20:R:11:PRO:HD3	1.91	0.41
20:R:51:VAL:CB	20:R:79:ALA:HB1	2.30	0.41
21:S:26:LYS:HG2	21:S:27:VAL:HG22	2.03	0.41
22:T:52:SER:O	22:T:98:MET:CE	2.69	0.41
25:W:61:LEU:O	25:W:62:THR:OG1	2.37	0.41
26:X:28:LEU:HD21	26:X:35:ARG:HG3	2.03	0.41
27:Y:56:LYS:CD	27:Y:56:LYS:N	2.84	0.41
28:Z:39:ARG:HH11	28:Z:39:ARG:HG3	1.85	0.41
31:y:27:G:N3	31:y:557:G:C2	2.89	0.41
31:y:186(A):C:H1'	53:u:85:MET:SD	2.60	0.41
31:y:298:A:C4	31:y:299:G:N7	2.89	0.41
31:y:363:A:N1	45:m:31:PHE:HE2	2.13	0.41
31:y:496:A:H2'	31:y:496:A:N3	2.36	0.41
31:y:565:U:H5	31:y:566:G:HO2'	1.69	0.41
31:y:666:G:N2	48:p:52:SER:HA	2.35	0.41
31:y:668:G:N7	31:y:669:U:C4	2.89	0.41
31:y:796:C:N4	31:y:797:C:C4	2.89	0.41
31:y:897:C:H2'	31:y:898:G:O4'	2.21	0.41
31:y:965:A:C2'	31:y:966:M2G:OP2	2.65	0.41
31:y:102(C):C:N3	31:y:1029:G:C4	2.89	0.41
31:y:1056:U:O2'	31:y:1057:G:H5'	2.20	0.41
31:y:1057:G:C2	31:y:1204:A:C2	3.09	0.41
31:y:1084:G:H1'	31:y:1102:A:N7	2.36	0.41
31:y:1223:C:H3'	31:y:1223:C:H6	1.84	0.41
31:y:1342:C:H4'	42:j:125:TYR:CD2	2.53	0.41
31:y:1347:G:C1'	31:y:1348:U:C5	3.00	0.41
31:y:1374:A:O2'	40:h:29:LYS:HA	2.19	0.41
31:y:1506:U:H2'	31:y:1507:A:C5'	2.49	0.41
32:z:54:5MU:H2'	32:z:55:PSU:O4'	2.20	0.41
33:0:18:G:C2	33:0:57:G:N2	2.89	0.41
35:c:35:GLU:CG	35:c:39:ILE:O	2.52	0.41
35:c:206:ASP:O	35:c:207:ALA:CB	2.67	0.41
36:d:18:TRP:HB3	36:d:19:GLU:H	1.53	0.41
36:d:59:ARG:NE	36:d:64:VAL:HG21	2.36	0.41
36:d:120:VAL:CG1	36:d:133:ALA:C	2.93	0.41
36:d:138:VAL:CG1	36:d:169:ALA:HA	2.51	0.41
36:d:150:LYS:HB3	36:d:201:TYR:CE1	2.36	0.41
36:d:180:ALA:O	36:d:203:PHE:CE1	2.74	0.41
37:e:196:LEU:HA	37:e:197:PRO:HD2	1.73	0.41
37:e:201:GLN:CA	37:e:204:ILE:HG12	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:36:ASP:OD2	38:f:37:ARG:N	2.53	0.41
38:f:51:VAL:HA	38:f:54:ALA:CB	2.51	0.41
39:g:48:LEU:HD22	51:s:78:LEU:HD12	2.02	0.41
40:h:32:ARG:O	40:h:32:ARG:CG	2.69	0.41
40:h:134:ALA:O	40:h:137:LYS:N	2.54	0.41
41:i:26:VAL:HG12	41:i:61:VAL:H	1.85	0.41
41:i:126:LYS:C	41:i:128:GLY:H	2.28	0.41
41:i:134:ILE:HG22	41:i:135:CYS:H	1.82	0.41
44:l:30:VAL:HG21	44:l:64:ALA:CB	2.51	0.41
45:m:51:LEU:C	45:m:52:ARG:CD	2.93	0.41
47:o:44:LEU:O	47:o:45:ARG:C	2.64	0.41
48:p:41:GLU:C	48:p:43:LEU:N	2.78	0.41
48:p:50:HIS:O	48:p:51:HIS:C	2.63	0.41
49:q:3:LYS:CA	49:q:65:GLN:O	2.52	0.41
50:r:87:LYS:O	50:r:88:TYR:C	2.62	0.41
52:t:45:VAL:C	52:t:47:HIS:H	2.21	0.41
52:t:80:TYR:O	52:t:81:ARG:C	2.64	0.41
53:u:15:ARG:HA	53:u:15:ARG:HD3	1.93	0.41
53:u:45:GLN:CD	53:u:45:GLN:C	2.88	0.41
53:u:45:GLN:CD	53:u:46:GLU:N	2.78	0.41
53:u:59:ALA:C	53:u:63:ILE:HG13	2.45	0.41
1:w:47:C:O5'	1:w:47:C:C6	2.73	0.41
1:w:65:C:H5''	20:R:68:ARG:CA	2.50	0.41
1:w:71:A:C2	20:R:31:HIS:CE1	3.09	0.41
1:w:99:U:H5'	1:w:102:G:C8	2.56	0.41
1:w:114:U:O2	1:w:114:U:H2'	2.21	0.41
1:w:138:G:C2	1:w:140:A:OP1	2.73	0.41
1:w:211:A:H2'	1:w:212:G:C8	2.56	0.41
1:w:217:G:O6	1:w:431:U:O2	2.39	0.41
1:w:270(A):A:P	1:w:270(Z):G:N2	2.94	0.41
1:w:270(E):C:C2	1:w:270(F):G:C5	3.08	0.41
1:w:322:A:O5'	1:w:340:A:C1'	2.69	0.41
1:w:338:G:H5''	1:w:338:G:C8	2.55	0.41
1:w:366(B):C:OP2	1:w:366(B):C:C6	2.73	0.41
1:w:396:G:C5'	24:V:46:LEU:HD13	2.50	0.41
1:w:469:G:O6	28:Z:39:ARG:NE	2.53	0.41
1:w:479:A:C5'	1:w:480:A:P	3.09	0.41
1:w:483:A:O3'	21:S:56:PRO:CB	2.66	0.41
1:w:535:C:N3	1:w:536:A:C5	2.89	0.41
1:w:535:C:C4	1:w:536:A:N7	2.89	0.41
1:w:536:A:C2'	1:w:537:C:C5	2.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:571:A:N7	1:w:573:G:C8	2.88	0.41
1:w:579:G:N3	1:w:580:C:N1	2.69	0.41
1:w:585:G:H5''	1:w:586:A:OP1	2.20	0.41
1:w:592:G:C2	1:w:666:G:C5	3.09	0.41
1:w:607:U:H3	1:w:620:G:C1'	2.34	0.41
1:w:611:C:C4	1:w:612:G:C8	3.09	0.41
1:w:678:C:H2'	1:w:679:C:O5'	2.20	0.41
1:w:796:C:O2'	1:w:797:C:C5'	2.68	0.41
1:w:798:G:C2	1:w:799:G:C8	3.08	0.41
1:w:799:G:OP1	1:w:800:A:H5''	2.21	0.41
1:w:800:A:O2'	1:w:801:G:O5'	2.34	0.41
1:w:823:G:C6	1:w:835:A:C2	3.09	0.41
1:w:828:U:H4'	1:w:831:G:C2	2.55	0.41
1:w:867:C:H2'	1:w:868:U:C5'	2.41	0.41
1:w:892:G:N7	1:w:893:C:C5	2.89	0.41
1:w:904:C:C4	1:w:905:U:C4	3.09	0.41
1:w:930:U:H1'	1:w:931:G:N3	2.36	0.41
1:w:935:C:H2'	1:w:936:C:O5'	2.21	0.41
1:w:945:A:C4	1:w:2448:A:N3	2.89	0.41
1:w:947:G:N3	1:w:984:A:C2	2.81	0.41
1:w:954:G:H5''	13:K:17:LEU:CD2	2.39	0.41
1:w:1000:A:N6	1:w:1155:A:C5	2.88	0.41
1:w:1021:A:N6	1:w:1141:U:C2	2.89	0.41
1:w:1132:A:N1	1:w:2039:C:H1'	2.35	0.41
1:w:1208:C:H6	1:w:1208:C:C5'	2.34	0.41
1:w:1256:G:C4	1:w:1257:C:C5	3.09	0.41
1:w:1298:C:C6	1:w:1302:A:C2	3.09	0.41
1:w:1423:G:C2	1:w:1576:U:O2	2.73	0.41
1:w:1423:G:C6	1:w:1424:G:C6	3.09	0.41
1:w:1501:C:OP1	4:B:102:LYS:HD3	2.20	0.41
1:w:1510:A:N1	1:w:1511:A:N3	2.69	0.41
1:w:1534:G:N3	1:w:1534:G:C2'	2.83	0.41
1:w:1562:A:C2	1:w:1563:G:C8	3.08	0.41
1:w:1600:C:O5'	1:w:1600:C:H6	2.04	0.41
1:w:1603:A:H2'	1:w:1604:C:O5'	2.19	0.41
1:w:1611:C:O2	1:w:1611:C:H2'	2.20	0.41
1:w:1676:A:C2	1:w:1677:A:N3	2.89	0.41
1:w:1687:G:C5'	1:w:1688:U:P	3.09	0.41
1:w:1692:U:C5'	1:w:1977:A:H1'	2.51	0.41
1:w:1718:G:N2	1:w:1725:G:C4	2.89	0.41
1:w:1765:C:N3	1:w:1987:G:N1	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1769:G:C6	1:w:1770:G:C5	3.09	0.41
1:w:1776:G:C2	1:w:1789:A:C2	3.09	0.41
1:w:1779:U:H5	1:w:1784:A:N6	2.19	0.41
1:w:1797:C:H5'	4:B:257:LEU:N	2.34	0.41
1:w:1797:C:C4	1:w:1823:G:C2	3.09	0.41
1:w:1798:U:O2'	1:w:1802:A:C2'	2.68	0.41
1:w:1824:G:N3	4:B:254:THR:OG1	2.44	0.41
1:w:1833:U:H2'	1:w:1833:U:O2	2.20	0.41
1:w:1934:C:C6	1:w:1934:C:C4'	3.03	0.41
1:w:1940:U:OP1	1:w:1965:C:C4	2.74	0.41
1:w:1966:A:C8	1:w:1966:A:P	3.11	0.41
1:w:1983:C:H5''	1:w:2607:G:OP1	2.21	0.41
1:w:2017:U:H5''	1:w:2018:G:OP1	2.20	0.41
1:w:2017:U:H4'	27:Y:9:LYS:HA	2.03	0.41
1:w:2052:G:C2'	1:w:2053:G:H8	2.05	0.41
1:w:2073:C:C4	1:w:2074:U:C5	3.09	0.41
1:w:2073:C:C2	1:w:2074:U:C6	3.08	0.41
1:w:2102:U:H3'	1:w:2103:C:C6	2.56	0.41
1:w:2138:C:H3'	1:w:2139:C:H5	1.84	0.41
1:w:2146:C:C6	1:w:2146:C:O5'	2.72	0.41
1:w:2226:C:C6	1:w:2227:A:N7	2.88	0.41
1:w:2266:A:C6	1:w:2272:U:H2'	2.56	0.41
1:w:2268:A:H3'	1:w:2268:A:OP2	2.21	0.41
1:w:2277:G:O2'	1:w:2278:A:H5'	2.21	0.41
1:w:2279:G:O6	23:U:11:LYS:CB	2.69	0.41
1:w:2280:G:H2'	1:w:2280:G:N3	2.36	0.41
1:w:2305:A:H1'	7:E:136:ARG:NE	2.36	0.41
1:w:2330:G:C2'	1:w:2331:G:O5'	2.69	0.41
1:w:2340:G:C8	1:w:2340:G:OP2	2.73	0.41
1:w:2341:G:C6	1:w:2342:C:N4	2.88	0.41
1:w:2354:G:O2'	23:U:36:ILE:CB	2.69	0.41
1:w:2355:C:N3	1:w:2356:C:C1'	2.84	0.41
1:w:2391:G:O6	1:w:2425:A:H8	2.03	0.41
1:w:2394:C:HO2'	1:w:2395:C:H5'	1.84	0.41
1:w:2396:G:N1	1:w:2397:G:N7	2.68	0.41
1:w:2432:A:C2'	1:w:2433:A:C5'	2.94	0.41
1:w:2468:G:O6	1:w:2481:G:C6	2.74	0.41
1:w:2512:C:H2'	1:w:2513:G:C4'	2.51	0.41
1:w:2514:U:C2	1:w:2515:C:C6	3.08	0.41
1:w:2547:U:O4'	1:w:2566:A:C2	2.74	0.41
1:w:2548:G:C2	1:w:2561:A:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2559:C:O2	1:w:2560:C:C6	2.74	0.41
1:w:2574:G:C6	1:w:2575:C:C4	3.08	0.41
1:w:2587:A:H2'	1:w:2588:G:C5'	2.41	0.41
1:w:2631:G:H1	5:C:61:ARG:HH12	1.62	0.41
1:w:2644:G:C3'	1:w:2645:G:C8	3.04	0.41
1:w:2645:G:C8	1:w:2645:G:OP2	2.74	0.41
1:w:2654:A:C1'	1:w:2655:G:C1'	2.97	0.41
1:w:2720:U:H2'	1:w:2721:A:C8	2.53	0.41
1:w:2720:U:H3	1:w:2873:A:N6	2.19	0.41
1:w:2720:U:N3	1:w:2721:A:C5	2.89	0.41
1:w:2799:A:C2	1:w:2801:A:C2	3.08	0.41
1:w:2807:G:C3'	1:w:2808:U:C5'	2.93	0.41
1:w:2819:G:C6	1:w:2828:C:N3	2.89	0.41
1:w:2819:G:C2	1:w:2828:C:C2	3.09	0.41
1:w:2832:U:C2'	1:w:2833:G:OP2	2.66	0.41
1:w:2850:A:N7	1:w:2866:U:C5	2.89	0.41
1:w:2851:A:N6	1:w:2866:U:N3	2.69	0.41
2:x:7:G:C5	2:x:8:U:O4	2.73	0.41
2:x:15:A:H5'	2:x:108:C:H5''	2.03	0.41
2:x:71:C:C4	2:x:72:G:O6	2.73	0.41
2:x:77:U:O2	2:x:78:A:H1'	2.21	0.41
3:A:23:ILE:O	3:A:27:ALA:HB3	2.20	0.41
3:A:34:ALA:CB	3:A:179:ALA:HB1	2.51	0.41
4:B:31:LYS:CE	4:B:32:SER:H	2.33	0.41
4:B:53:PHE:O	4:B:54:ARG:CB	2.68	0.41
4:B:62:TYR:CD1	4:B:62:TYR:C	2.99	0.41
4:B:206:LEU:CD2	4:B:206:LEU:N	2.84	0.41
4:B:247:ALA:HA	4:B:253:GLN:N	2.35	0.41
5:C:7:VAL:CG2	5:C:27:LEU:H	2.33	0.41
5:C:71:GLY:C	5:C:73:GLU:H	2.28	0.41
5:C:91:VAL:CG1	5:C:92:THR:N	2.83	0.41
5:C:103:ASP:C	5:C:199:ARG:HB2	2.46	0.41
5:C:104:VAL:O	5:C:167:VAL:HG12	2.20	0.41
5:C:144:ARG:HG2	5:C:146:THR:HG1	1.85	0.41
5:C:144:ARG:HB2	5:C:145:LYS:H	1.62	0.41
5:C:201:THR:CG2	5:C:202:LYS:N	2.83	0.41
6:D:4:ILE:HG12	6:D:12:ARG:CD	2.50	0.41
6:D:26:HIS:C	6:D:30:GLU:OE1	2.64	0.41
6:D:30:GLU:OE1	12:J:13:ASN:HB3	2.20	0.41
6:D:119:LEU:C	6:D:121:VAL:N	2.66	0.41
6:D:120:LEU:O	6:D:120:LEU:CD2	2.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:132:LYS:HG3	6:D:133:GLU:N	2.25	0.41
6:D:148:SER:H	6:D:167:TRP:HE1	1.64	0.41
6:D:150:LEU:O	6:D:187:LEU:CG	2.55	0.41
6:D:162:ALA:O	6:D:163:ARG:C	2.63	0.41
6:D:182:VAL:O	12:J:6:LEU:HA	2.20	0.41
7:E:82:LEU:CG	7:E:84:LYS:HG2	2.50	0.41
7:E:107:LEU:C	7:E:111:LEU:HD22	2.46	0.41
7:E:124:SER:O	7:E:131:TYR:HE2	1.98	0.41
8:F:172:LYS:NZ	8:F:173:PRO:HD2	2.36	0.41
9:G:57:ARG:N	9:G:57:ARG:HD2	2.35	0.41
9:G:118:LYS:HA	9:G:119:PRO:HD2	1.87	0.41
9:G:147:GLN:O	9:G:148:GLU:HB2	2.21	0.41
10:H:31:GLN:HB3	10:H:33:GLU:OE2	2.21	0.41
10:H:88:LYS:HD3	10:H:88:LYS:C	2.46	0.41
10:H:93:LYS:O	10:H:109:PRO:HA	2.20	0.41
10:H:156:GLN:CG	10:H:157:ARG:N	2.84	0.41
11:I:77:ILE:HG12	16:N:74:ARG:CA	2.51	0.41
11:I:85:VAL:O	11:I:86:ILE:CG1	2.69	0.41
11:I:87:ILE:CD1	11:I:114:ILE:HG21	2.51	0.41
11:I:111:PHE:O	11:I:114:ILE:HG12	2.20	0.41
12:J:36:LYS:N	12:J:36:LYS:HD2	2.34	0.41
12:J:71:VAL:O	12:J:72:PRO:C	2.64	0.41
12:J:79:ARG:HG3	12:J:80:TYR:H	1.85	0.41
13:K:57:HIS:O	13:K:57:HIS:CG	2.74	0.41
13:K:65:PHE:CD1	13:K:105:GLU:O	2.74	0.41
14:L:9:LYS:CD	14:L:10:LEU:N	2.84	0.41
14:L:35:THR:OG1	14:L:36:THR:N	2.54	0.41
14:L:54:LEU:HD13	14:L:65:LEU:HD22	2.03	0.41
15:M:77:ALA:O	15:M:82:ILE:HG12	2.20	0.41
15:M:82:ILE:HG23	15:M:85:VAL:CB	2.47	0.41
16:N:92:GLY:C	16:N:94:ALA:N	2.79	0.41
16:N:107:ASP:O	16:N:108:ARG:C	2.64	0.41
16:N:107:ASP:CA	16:N:111:ARG:NE	2.82	0.41
16:N:118:ARG:HG3	16:N:118:ARG:NH1	2.32	0.41
17:O:44:ASN:HD21	18:P:78:LYS:CB	2.18	0.41
17:O:51:LYS:O	17:O:55:ARG:CG	2.63	0.41
17:O:92:ARG:NE	18:P:11:GLN:CD	2.78	0.41
17:O:110:VAL:C	17:O:112:ARG:N	2.76	0.41
18:P:30:GLY:N	18:P:66:ARG:H	2.19	0.41
18:P:74:LYS:O	18:P:75:PHE:HD2	2.01	0.41
18:P:90:PRO:CG	18:P:91:TYR:H	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:24:ILE:O	19:Q:71:VAL:HG11	2.21	0.41
19:Q:30:GLU:HA	19:Q:33:ARG:NH2	2.36	0.41
19:Q:36:LEU:HD23	19:Q:36:LEU:HA	1.80	0.41
20:R:40:LYS:O	20:R:44:GLU:HB2	2.21	0.41
20:R:92:LEU:O	20:R:93:GLU:HB2	2.21	0.41
22:T:40:ASP:OD2	22:T:41:LEU:HD12	2.21	0.41
22:T:46:LYS:HB3	22:T:49:ARG:NH1	2.35	0.41
22:T:183:LEU:O	22:T:184:ALA:HB2	2.21	0.41
23:U:37:LEU:CB	23:U:60:PHE:HA	2.51	0.41
23:U:51:VAL:CG2	23:U:79:VAL:HG23	2.50	0.41
24:V:17:SER:O	24:V:44:PRO:CD	2.68	0.41
24:V:22:GLY:CA	24:V:39:LYS:HA	2.50	0.41
24:V:76:ARG:HH22	24:V:94:LEU:CD1	2.28	0.41
25:W:29:LYS:O	25:W:32:LEU:HB3	2.21	0.41
29:a:22:VAL:HB	29:a:53:PRO:CB	2.51	0.41
29:a:32:LEU:CD2	29:a:35:GLN:HA	2.50	0.41
29:a:40:GLU:C	29:a:41:ILE:HD12	2.46	0.41
30:b:14:CYS:HA	30:b:27:CYS:HB3	2.02	0.41
30:b:29:ASN:HA	30:b:30:PRO:HD3	1.94	0.41
30:b:33:LYS:HZ1	30:b:35:ARG:HH21	1.66	0.41
31:y:15:G:O6	31:y:16:A:N1	2.53	0.41
31:y:64:G:N2	31:y:67:C:N4	2.68	0.41
31:y:65:U:C1'	31:y:199:G:HO2'	2.34	0.41
31:y:95:G:H5''	31:y:95:G:C8	2.56	0.41
31:y:96:G:O2'	31:y:97:U:O4'	2.32	0.41
31:y:99:C:C2'	31:y:101:A:N7	2.66	0.41
31:y:122:G:N3	31:y:123:C:N1	2.69	0.41
31:y:186(G):C:C4	31:y:187:C:C4	3.09	0.41
31:y:210:U:C4'	31:y:216:G:N7	2.83	0.41
31:y:241:C:H3'	31:y:241:C:C6	2.55	0.41
31:y:279:A:C1'	31:y:281:G:H1'	2.51	0.41
31:y:360:A:H2'	31:y:361:G:C5'	2.50	0.41
31:y:369:C:N3	31:y:370:C:C5	2.88	0.41
31:y:382:A:C2'	31:y:383:A:C5'	2.99	0.41
31:y:382:A:C8	31:y:383:A:N7	2.89	0.41
31:y:400:C:H5''	37:e:73:ARG:NH2	2.36	0.41
31:y:408:A:C4	31:y:409:G:N7	2.89	0.41
31:y:414:A:C2	31:y:415:A:C8	3.09	0.41
31:y:414:A:C2	31:y:415:A:C4	3.08	0.41
31:y:424:G:H8	31:y:424:G:O5'	2.03	0.41
31:y:467:G:C4	31:y:468:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:483:C:P	31:y:484:G:C3'	3.09	0.41
31:y:490:G:C3'	31:y:491:G:O4'	2.69	0.41
31:y:507:C:C5	31:y:508:C:H6	2.38	0.41
31:y:598:U:C2	31:y:599:C:C6	3.09	0.41
31:y:599:C:C4	31:y:640:A:N1	2.88	0.41
31:y:652:U:C6	31:y:752:G:C6	3.09	0.41
31:y:668:G:N2	31:y:739:C:O2	2.54	0.41
31:y:671:G:O6	31:y:736:C:N4	2.54	0.41
31:y:677:U:C2	31:y:678:U:C5	3.08	0.41
31:y:708:C:O2'	31:y:709:G:H5'	2.20	0.41
31:y:734:G:C5	31:y:735:C:C5	3.09	0.41
31:y:741:G:N3	31:y:741:G:C2'	2.81	0.41
31:y:741:G:H4'	48:p:59:MET:HE1	2.02	0.41
31:y:745:C:H1'	31:y:836:G:HO2'	1.80	0.41
31:y:749:C:C3'	31:y:750:G:C8	3.04	0.41
31:y:773:G:C2	31:y:774:G:N7	2.89	0.41
31:y:834:C:C3'	31:y:835:U:H6	2.34	0.41
31:y:857:C:C2'	31:y:858:G:H8	2.30	0.41
31:y:967:5MC:O5'	42:j:128:ARG:HD3	2.21	0.41
31:y:969:A:H61	46:n:126:LYS:CD	2.34	0.41
31:y:1001:G:H3'	31:y:1002:G:H5''	2.03	0.41
31:y:103(C):G:C2'	31:y:1033:G:O4'	2.69	0.41
31:y:1082:G:C6	31:y:1083:U:C2	3.09	0.41
31:y:1087:G:O2'	31:y:1088:G:H5'	2.21	0.41
31:y:1089:G:N1	31:y:1090:U:C1'	2.84	0.41
31:y:1098:C:C2	31:y:1099:G:C8	3.09	0.41
31:y:1104:G:C4	31:y:1105:A:C8	3.09	0.41
31:y:1107:C:H6	31:y:1107:C:O5'	2.04	0.41
31:y:1108:G:C5	31:y:1109:C:C6	3.09	0.41
31:y:1128:C:H4'	31:y:1148:U:HO2'	1.79	0.41
31:y:1142:G:H5'	31:y:1143:G:C8	2.56	0.41
31:y:1190:G:OP1	36:d:5:ILE:CG1	2.69	0.41
31:y:1246:C:C3'	31:y:1247:U:C6	3.01	0.41
31:y:1269:A:H4'	31:y:1326:C:C4'	2.51	0.41
31:y:1269:A:H5''	54:v:18:TYR:HB3	2.03	0.41
31:y:1272:G:O6	31:y:1273:G:C6	2.74	0.41
31:y:1281:U:C5'	31:y:1282:C:N4	2.83	0.41
31:y:1316:G:H5''	31:y:1360:A:N3	2.36	0.41
31:y:1345:U:O2	31:y:1375:A:N1	2.53	0.41
31:y:1359:C:OP2	47:o:33:VAL:O	2.39	0.41
31:y:1367:C:C5'	43:k:60:ARG:HH22	2.15	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1378:C:C5'	40:h:5:ARG:O	2.65	0.41
31:y:1384:C:C6	31:y:1384:C:C3'	3.04	0.41
31:y:1392:G:H22	31:y:1502:A:H8	1.69	0.41
31:y:1399:C:H4'	31:y:1400:5MC:C5'	2.41	0.41
31:y:1402:4OC:H1'	31:y:1402:4OC:HM23	1.61	0.41
31:y:1430:C:C4	31:y:1431:C:C4	3.09	0.41
31:y:1509:C:N4	31:y:1510:U:N3	2.69	0.41
32:z:31:A:N1	32:z:39:PSU:C2	2.87	0.41
32:z:50:U:O4	32:z:64:A:C6	2.74	0.41
33:0:10:G:H2'	33:0:11:C:C6	2.56	0.41
33:0:73:A:C2	33:0:74:C:C2	3.09	0.41
35:c:112:VAL:O	35:c:113:HIS:C	2.63	0.41
35:c:115:LEU:O	35:c:118:LEU:HB2	2.21	0.41
35:c:172:ILE:O	35:c:173:ALA:C	2.63	0.41
36:d:29:TYR:C	36:d:33:LEU:HD23	2.45	0.41
37:e:9:CYS:HB3	37:e:32:ALA:N	2.32	0.41
37:e:23:GLY:C	37:e:25:ARG:N	2.64	0.41
37:e:53:ASP:O	37:e:56:VAL:HG22	2.21	0.41
37:e:156:GLU:HG2	37:e:157:LEU:N	2.34	0.41
37:e:191:ARG:HG2	37:e:200:GLU:OE2	2.21	0.41
37:e:195:ALA:C	37:e:196:LEU:HG	2.45	0.41
38:f:105:VAL:O	38:f:108:ALA:N	2.54	0.41
39:g:4:TYR:OH	39:g:69:GLU:CB	2.56	0.41
40:h:120:ILE:CD1	40:h:120:ILE:N	2.84	0.41
40:h:136:LYS:O	40:h:137:LYS:C	2.63	0.41
41:i:16:ALA:HA	41:i:19:VAL:HG11	1.95	0.41
41:i:76:PRO:O	41:i:77:GLU:C	2.63	0.41
41:i:103:VAL:CG2	41:i:121:ASP:OD1	2.51	0.41
42:j:89:ASN:HD22	42:j:89:ASN:C	2.27	0.41
42:j:115:GLY:O	42:j:117:HIS:N	2.53	0.41
42:j:115:GLY:O	42:j:117:HIS:ND1	2.54	0.41
43:k:5:ARG:HA	43:k:73:ASP:OD2	2.20	0.41
43:k:6:ILE:O	43:k:71:LEU:HD23	2.21	0.41
43:k:34:VAL:CG2	43:k:35:SER:H	2.33	0.41
43:k:80:LYS:HE2	43:k:80:LYS:HB3	1.88	0.41
44:l:67:ASP:O	44:l:68:ALA:C	2.63	0.41
44:l:82:VAL:HG13	44:l:105:VAL:CA	2.49	0.41
44:l:82:VAL:O	44:l:82:VAL:HG23	2.20	0.41
44:l:108:ILE:C	51:s:88:LYS:HB3	2.46	0.41
45:m:33:ARG:HA	45:m:84:ILE:CD1	2.36	0.41
45:m:40:ARG:CZ	45:m:54:VAL:HG21	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:115:SER:HB3	45:m:118:LYS:HD3	2.03	0.41
46:n:39:ILE:HG21	46:n:56:LEU:HD11	2.02	0.41
46:n:109:THR:C	46:n:110:ARG:NE	2.79	0.41
47:o:13:THR:N	47:o:14:PRO:CD	2.84	0.41
49:q:15:PRO:CG	49:q:41:PRO:HG2	2.50	0.41
49:q:73:LEU:HD12	49:q:73:LEU:H	1.76	0.41
50:r:10:VAL:HG21	50:r:55:ASP:CA	2.51	0.41
50:r:55:ASP:O	50:r:56:VAL:C	2.63	0.41
50:r:79:SER:OG	50:r:80:GLY:N	2.54	0.41
50:r:81:ARG:NH2	50:r:82:MET:O	2.54	0.41
51:s:68:LYS:O	51:s:69:THR:C	2.63	0.41
52:t:51:VAL:HB	52:t:58:VAL:O	2.20	0.41
1:w:7:G:N9	1:w:8:A:C8	2.88	0.41
1:w:46:C:C6	1:w:215:G:N7	2.89	0.41
1:w:95:G:O2'	25:W:40:SER:N	2.53	0.41
1:w:265:A:C5	1:w:428:A:C6	3.09	0.41
1:w:270(O):G:H2'	1:w:270(P):U:C5'	2.51	0.41
1:w:371:A:C4'	1:w:373:U:C1'	2.98	0.41
1:w:399:G:C8	1:w:400:G:C5	3.09	0.41
1:w:426:C:C6	1:w:426:C:O5'	2.74	0.41
1:w:497:A:C8	1:w:497:A:P	3.12	0.41
1:w:543:C:C2	1:w:544:C:C5	3.08	0.41
1:w:578:A:N9	1:w:2018:G:H5'	2.36	0.41
1:w:580:C:C1'	27:Y:10:LYS:HZ3	2.34	0.41
1:w:627:A:O2'	1:w:628:G:P	2.79	0.41
1:w:642:G:C4	1:w:644:A:OP2	2.74	0.41
1:w:646:A:C2	1:w:647:G:H1'	2.56	0.41
1:w:666:G:C2'	1:w:667:U:O5'	2.68	0.41
1:w:682:G:H2'	1:w:683:C:O4'	2.20	0.41
1:w:760:G:C5	1:w:761:A:C8	3.08	0.41
1:w:802:A:H2'	1:w:803:U:H1'	2.01	0.41
1:w:813:U:C6	1:w:813:U:C4'	3.04	0.41
1:w:824:A:C6	1:w:825:C:C4	3.09	0.41
1:w:832:G:P	12:J:38:GLN:CA	3.09	0.41
1:w:871:U:H2'	1:w:872:A:H8	1.86	0.41
1:w:1082:U:C3'	1:w:1083:U:H5''	2.45	0.41
1:w:1145:C:C4	1:w:1146:C:C5	3.09	0.41
1:w:1178:C:H3'	1:w:1179:C:H6	1.86	0.41
1:w:1217:C:N4	1:w:1218:C:C4	2.89	0.41
1:w:1224:C:O2	1:w:1225:G:N9	2.54	0.41
1:w:1241:A:O2'	1:w:1242:A:C5'	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1285:G:C4	1:w:1329:U:N3	2.89	0.41
1:w:1342:A:C8	1:w:1397:U:H6	2.39	0.41
1:w:1432:C:H2'	1:w:1433:U:C6	2.56	0.41
1:w:1656:C:O3'	5:C:136:ARG:O	2.39	0.41
1:w:1681:G:HO2'	1:w:1762:A:H2'	1.80	0.41
1:w:1689:A:C2'	1:w:1690:A:C5'	2.99	0.41
1:w:1693:U:H5''	1:w:1693:U:H6	1.86	0.41
1:w:1747:G:C4	1:w:1748:G:N7	2.89	0.41
1:w:1805:U:O2'	4:B:50:THR:HA	2.21	0.41
1:w:1833:U:H2'	1:w:1834:U:C6	2.50	0.41
1:w:1978:A:C2'	1:w:1979:C:O5'	2.69	0.41
1:w:1998:G:C5'	1:w:2725:A:H5'	2.51	0.41
1:w:2006:C:N3	1:w:2007:C:N4	2.68	0.41
1:w:2036:C:H2'	1:w:2037:G:H8	1.86	0.41
1:w:2075:U:C5	1:w:2238:G:C8	3.09	0.41
1:w:2130:U:C5	1:w:2131:G:N2	2.89	0.41
1:w:2131:G:O3'	1:w:2132:U:C6	2.74	0.41
1:w:2146:C:C4	1:w:2147:G:N7	2.89	0.41
1:w:2259:G:C4'	1:w:2427:C:H2'	2.51	0.41
1:w:2283:C:N4	1:w:2284:C:N4	2.68	0.41
1:w:2310:A:H2'	1:w:2311:A:C5'	2.51	0.41
1:w:2323:G:C5	1:w:2324:C:N4	2.89	0.41
1:w:2353:G:C6	1:w:2354:G:C5	3.08	0.41
1:w:2399:G:H2'	1:w:2399:G:N3	2.36	0.41
1:w:2401:U:C2'	1:w:2402:C:H5''	2.43	0.41
1:w:2460:U:O2	1:w:2492:U:C4	2.74	0.41
1:w:2564:A:H2'	1:w:2565:A:C8	2.56	0.41
1:w:2581:G:HO2'	1:w:2582:G:P	2.44	0.41
1:w:2786:U:O2	5:C:62:PRO:HB3	2.20	0.41
1:w:2821:A:O5'	14:L:2:ARG:O	2.38	0.41
2:x:44:G:H2'	2:x:47:C:N4	2.36	0.41
2:x:81:G:C5	2:x:82:G:N7	2.89	0.41
2:x:117:G:N3	2:x:118:G:N7	2.69	0.41
3:A:25:GLU:HG3	3:A:26:ALA:H	1.85	0.41
4:B:67:PHE:O	4:B:68:LYS:HG3	2.21	0.41
4:B:108:PRO:N	4:B:197:GLY:HA2	2.36	0.41
4:B:164:GLN:C	4:B:164:GLN:NE2	2.79	0.41
5:C:109:LYS:HZ3	14:L:4:LEU:HG	1.83	0.41
7:E:11:TYR:CD1	7:E:15:VAL:HB	2.54	0.41
7:E:149:VAL:HG23	7:E:150:ASP:H	1.86	0.41
8:F:17:VAL:HG13	8:F:45:VAL:HB	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:94:TYR:C	8:F:95:ARG:HG3	2.45	0.41
8:F:108:GLY:O	8:F:109:PHE:C	2.63	0.41
8:F:111:HIS:CB	8:F:112:PRO:HD3	2.48	0.41
9:G:4:ILE:HG13	9:G:18:VAL:HA	2.03	0.41
9:G:20:ASP:O	9:G:21:VAL:C	2.63	0.41
10:H:27:TYR:CZ	10:H:63:PRO:O	2.74	0.41
10:H:112:LYS:HZ1	10:H:115:ALA:CB	2.31	0.41
10:H:157:ARG:NH1	10:H:159:GLU:HB3	2.36	0.41
12:J:35:HIS:H	12:J:36:LYS:CD	2.34	0.41
12:J:46:LYS:HE3	12:J:52:GLU:CD	2.46	0.41
14:L:7:GLY:C	14:L:8:ARG:CG	2.94	0.41
14:L:20:LEU:O	14:L:24:GLN:N	2.54	0.41
14:L:23:ASN:CA	14:L:26:LYS:CB	2.94	0.41
14:L:56:LYS:HA	14:L:84:ALA:HB2	1.93	0.41
15:M:96:GLY:CA	15:M:99:LYS:HD2	2.20	0.41
15:M:106:ARG:C	15:M:106:ARG:NE	2.68	0.41
16:N:12:SER:CA	16:N:15:VAL:HG22	2.50	0.41
16:N:90:GLN:OE1	16:N:120:ARG:HG2	2.20	0.41
16:N:93:ARG:HG3	16:N:117:ASP:OD2	2.20	0.41
16:N:95:ARG:NE	16:N:96:ARG:HH22	2.17	0.41
17:O:20:LEU:N	17:O:20:LEU:HD22	2.36	0.41
17:O:61:TRP:CZ2	17:O:94:ASN:HB3	2.55	0.41
18:P:68:LYS:HB3	18:P:94:LEU:HD22	1.86	0.41
20:R:54:VAL:CG2	20:R:77:LYS:HE3	2.49	0.41
20:R:62:LYS:HB2	20:R:63:LYS:H	1.76	0.41
24:V:86:SER:C	24:V:89:GLU:OE2	2.64	0.41
24:V:92:LYS:C	24:V:94:LEU:H	2.28	0.41
29:a:34:TRP:O	29:a:35:GLN:CB	2.68	0.41
31:y:15:G:C6	31:y:16:A:C2	3.09	0.41
31:y:38:G:C2	31:y:397:A:N3	2.89	0.41
31:y:50:A:C6	31:y:361:G:C4'	3.04	0.41
31:y:116:A:C2'	31:y:117:G:H8	2.34	0.41
31:y:180:U:O2	31:y:195:A:C5	2.71	0.41
31:y:186(A):C:O4'	53:u:81:LYS:HE2	2.20	0.41
31:y:251:G:C2	31:y:266:G:N1	2.89	0.41
31:y:292:G:C6	31:y:309:G:O6	2.74	0.41
31:y:336:C:C4	31:y:337:C:H5	2.39	0.41
31:y:339:C:O2'	31:y:340:U:C5'	2.64	0.41
31:y:366:C:C2'	31:y:366:C:O2	2.65	0.41
31:y:389:A:C3'	31:y:390:C:C6	2.92	0.41
31:y:437:U:O2'	31:y:438:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:491:G:C2	31:y:492:G:C5	3.09	0.41
31:y:510:A:O3'	31:y:542:G:O2'	2.39	0.41
31:y:519:C:C3'	45:m:50:ALA:CB	2.99	0.41
31:y:522:C:O5'	31:y:522:C:C6	2.71	0.41
31:y:558:G:O5'	31:y:559:A:H3'	2.20	0.41
31:y:586:C:H1'	31:y:878:G:HO2'	1.75	0.41
31:y:597:G:C4	31:y:644:G:N1	2.89	0.41
31:y:623:C:O2	31:y:624:C:H1'	2.21	0.41
31:y:646:U:H6	31:y:646:U:O5'	2.04	0.41
31:y:715:A:O4'	31:y:777:A:C6	2.74	0.41
31:y:766:A:C2	31:y:1525:G:O2'	2.74	0.41
31:y:890:G:O2'	31:y:891:U:P	2.79	0.41
31:y:907:A:N6	31:y:908:A:N1	2.69	0.41
31:y:944:G:C5'	31:y:945:G:OP2	2.69	0.41
31:y:1221:G:C4	31:y:1222:G:C8	3.08	0.41
31:y:1267:C:O2	54:v:20:LYS:HE3	2.21	0.41
31:y:1275:A:H2'	31:y:1276:G:C5'	2.48	0.41
31:y:1279:A:N3	31:y:1279:A:C2'	2.83	0.41
31:y:1443:G:O4'	31:y:1447:G:OP1	2.39	0.41
31:y:1467:G:O2'	31:y:1468:A:H5'	2.21	0.41
31:y:1471:G:C6	31:y:1472:U:N3	2.88	0.41
32:z:10:G:C6	32:z:26:A:N3	2.89	0.41
32:z:17:C:C3'	32:z:18:G:H5'	2.51	0.41
32:z:19:G:N2	32:z:57:G:C4	2.89	0.41
32:z:66:U:C2	32:z:67:C:C6	3.09	0.41
35:c:61:LEU:HD13	35:c:64:ARG:HE	1.86	0.41
35:c:137:ARG:HG2	35:c:141:GLU:CD	2.46	0.41
35:c:142:LEU:HA	35:c:145:LEU:HG	2.02	0.41
36:d:6:HIS:HA	36:d:7:PRO:HD2	1.78	0.41
36:d:10:PHE:CD2	36:d:175:LEU:HD21	2.56	0.41
36:d:34:LEU:HB3	36:d:38:ARG:CZ	2.50	0.41
37:e:170:VAL:HB	37:e:174:LEU:HB2	2.02	0.41
38:f:5:ASP:OD2	38:f:5:ASP:N	2.54	0.41
39:g:10:LEU:HD21	39:g:19:LEU:HD11	2.03	0.41
39:g:10:LEU:HA	39:g:86:ARG:HG2	2.02	0.41
39:g:90:VAL:CG2	39:g:91:VAL:H	2.33	0.41
40:h:147:ALA:HB1	44:l:59:TYR:CZ	2.56	0.41
41:i:24:THR:HG21	41:i:63:LEU:HD13	2.00	0.41
41:i:126:LYS:O	41:i:128:GLY:N	2.54	0.41
42:j:4:TYR:HD1	42:j:20:ARG:NE	2.19	0.41
42:j:74:ILE:O	42:j:77:ILE:HB	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:84:ILE:HG22	45:m:99:ILE:HD12	2.01	0.41
50:r:51:TYR:CB	50:r:57:VAL:HG21	2.36	0.41
50:r:58:GLU:OE1	50:r:74:LEU:HD13	2.21	0.41
51:s:66:LEU:C	51:s:68:LYS:N	2.78	0.41
53:u:24:LEU:HA	53:u:27:LYS:HB3	2.02	0.41
53:u:86:ARG:O	53:u:89:ARG:HG2	2.21	0.41
53:u:87:LYS:HB3	53:u:91:LEU:HD11	2.03	0.41
1:w:1:G:O6	1:w:2:G:C6	2.74	0.40
1:w:55:G:C2	1:w:116:C:N3	2.89	0.40
1:w:74:A:OP2	1:w:74:A:H2	2.01	0.40
1:w:237:C:C2'	1:w:238:C:O5'	2.70	0.40
1:w:242:G:N2	1:w:254:G:H2'	2.36	0.40
1:w:308:G:N7	1:w:309:G:N2	2.68	0.40
1:w:325:G:O5'	1:w:325:G:H8	2.04	0.40
1:w:458:G:O2'	1:w:459:U:C6	2.74	0.40
1:w:591:C:C5	1:w:591:C:OP2	2.74	0.40
1:w:611:C:N4	1:w:618(A):G:N1	2.68	0.40
1:w:618(B):C:C5	1:w:619:G:N7	2.90	0.40
1:w:625:G:C4	1:w:626:U:C5	3.09	0.40
1:w:626:U:P	1:w:627:A:C5'	3.08	0.40
1:w:654:U:H6	1:w:654:U:H3'	1.86	0.40
1:w:697:C:N3	1:w:698:C:C4	2.90	0.40
1:w:779:U:H2'	1:w:780:G:O4'	2.20	0.40
1:w:784:A:C2'	1:w:785:G:H8	2.33	0.40
1:w:811:U:O2	1:w:811:U:C2'	2.67	0.40
1:w:878:A:C3'	1:w:879:G:C8	3.04	0.40
1:w:888:C:P	1:w:888:C:C6	3.13	0.40
1:w:917:A:H2'	1:w:918:A:H5'	2.03	0.40
1:w:954:G:C5'	13:K:17:LEU:CD1	2.90	0.40
1:w:1003:G:N2	1:w:1153:C:C6	2.89	0.40
1:w:1031:G:H5''	30:b:6:SER:HA	2.03	0.40
1:w:1079:C:N4	1:w:1088:A:C4	2.89	0.40
1:w:1169:G:N7	1:w:1170:G:N9	2.69	0.40
1:w:1169:G:C3'	1:w:1170:G:C4'	2.98	0.40
1:w:1232:G:C5	1:w:1233:C:N4	2.89	0.40
1:w:1312:U:H5'	1:w:1313:U:C6	2.56	0.40
1:w:1381:G:N7	1:w:1382:G:C8	2.88	0.40
1:w:1417:C:C4	1:w:1418:G:C4	3.09	0.40
1:w:1461:G:H3'	1:w:1462:C:C5	2.56	0.40
1:w:1486:A:C2	1:w:1503:U:C2	3.09	0.40
1:w:1531:C:C4	1:w:1532:C:H5	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1650:G:N1	1:w:1651:G:C4	2.89	0.40
1:w:1650:G:N1	1:w:1651:G:N3	2.68	0.40
1:w:1789:A:O3'	4:B:219:PRO:CB	2.68	0.40
1:w:1795:C:H3'	1:w:1796:U:C6	2.56	0.40
1:w:1863:G:H2'	1:w:1864:U:H5''	2.03	0.40
1:w:1886:C:C2	1:w:1887:C:C5	3.09	0.40
1:w:1903:G:H2'	1:w:1904:G:O4'	2.22	0.40
1:w:2033:A:H61	1:w:2036:C:H1'	1.86	0.40
1:w:2055:C:C5'	1:w:2056:G:C5'	2.98	0.40
1:w:2091:U:H5''	1:w:2092:U:P	2.60	0.40
1:w:2101:G:H22	1:w:2189:U:H1'	1.86	0.40
1:w:2137:C:O2	1:w:2137:C:H2'	2.20	0.40
1:w:2195:C:HO2'	1:w:2196:C:H5'	1.80	0.40
1:w:2259:G:C4	1:w:2260:C:C6	3.10	0.40
1:w:2270:G:O2'	23:U:19:LYS:CB	2.69	0.40
1:w:2314:C:H3'	1:w:2314:C:C6	2.56	0.40
1:w:2319:G:H4'	1:w:2320:A:OP1	2.20	0.40
1:w:2335:A:O2'	1:w:2337:G:C8	2.61	0.40
1:w:2400:G:N3	1:w:2400:G:H2'	2.35	0.40
1:w:2526:G:O6	1:w:2538:C:C4	2.74	0.40
1:w:2592:G:N7	1:w:2593:U:C5	2.89	0.40
1:w:2618:G:N3	5:C:150:VAL:CG2	2.67	0.40
1:w:2731:G:H2'	1:w:2732:G:C8	2.55	0.40
1:w:2744:G:N2	8:F:143:GLN:CB	2.84	0.40
1:w:2745:C:O2	8:F:143:GLN:HG2	2.21	0.40
1:w:2805:G:H3'	1:w:2807:G:C8	2.56	0.40
2:x:14:U:C5'	2:x:106:G:N2	2.69	0.40
2:x:23:G:C2'	2:x:24:G:N7	2.61	0.40
4:B:131:LEU:HD21	4:B:135:PHE:CB	2.39	0.40
4:B:223:GLY:C	4:B:225:ALA:N	2.78	0.40
5:C:9:VAL:N	5:C:26:ILE:HD13	2.37	0.40
5:C:48:GLN:CD	5:C:78:LEU:HD13	2.46	0.40
5:C:176:ILE:C	5:C:181:LEU:HD23	2.46	0.40
6:D:147:GLU:O	6:D:185:GLU:HB2	2.20	0.40
6:D:191:LEU:CD2	6:D:193:ALA:H	2.32	0.40
7:E:10:LYS:HZ3	7:E:15:VAL:N	2.18	0.40
7:E:176:LEU:HG	7:E:178:PHE:HE1	1.85	0.40
7:E:180:PHE:HB3	7:E:182:LYS:NZ	2.35	0.40
8:F:10:PRO:CG	8:F:12:PRO:HD3	2.50	0.40
8:F:175:LYS:HB3	8:F:176:ALA:H	1.59	0.40
9:G:44:LEU:HD22	9:G:47:LEU:HD11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:96:THR:C	12:J:100:LEU:HD23	2.46	0.40
13:K:55:VAL:C	13:K:58:PHE:H	2.30	0.40
13:K:133:ARG:HG2	13:K:134:ARG:N	2.16	0.40
15:M:25:ARG:HH21	15:M:40:ILE:HG22	1.85	0.40
16:N:53:ARG:HD2	16:N:54:ARG:N	2.35	0.40
16:N:91:ARG:HB2	16:N:91:ARG:HE	1.73	0.40
16:N:98:LYS:O	16:N:100:TYR:CD1	2.69	0.40
17:O:6:THR:HB	17:O:7:GLY:H	1.74	0.40
17:O:15:LYS:O	17:O:16:LYS:C	2.64	0.40
19:Q:4:LYS:C	19:Q:4:LYS:CD	2.88	0.40
19:Q:11:ARG:C	19:Q:12:ILE:CG1	2.93	0.40
19:Q:68:ARG:HD3	19:Q:68:ARG:C	2.46	0.40
20:R:29:TRP:CD1	20:R:76:ARG:CG	3.04	0.40
21:S:42:VAL:CB	21:S:61:ILE:CG2	2.88	0.40
22:T:117:LEU:C	22:T:118:GLN:HG3	2.46	0.40
23:U:62:LEU:CD1	23:U:63:VAL:CG2	2.99	0.40
24:V:76:ARG:CZ	24:V:94:LEU:HD11	2.51	0.40
26:X:33:GLN:NE2	26:X:35:ARG:HD3	2.34	0.40
31:y:59:A:C3'	31:y:60:A:H5''	2.51	0.40
31:y:179:A:N3	31:y:179:A:H2'	2.36	0.40
31:y:229:U:O2'	49:q:23:ASP:CB	2.69	0.40
31:y:253:U:C6	31:y:253:U:C3'	3.04	0.40
31:y:302:G:C5	31:y:303:A:C6	3.09	0.40
31:y:320:C:OP2	31:y:320:C:H5	2.03	0.40
31:y:404:U:C5	37:e:2:GLY:CA	3.03	0.40
31:y:424:G:C5	31:y:425:G:C8	3.08	0.40
31:y:506:G:N7	31:y:507:C:C4	2.88	0.40
31:y:520:A:P	45:m:51:LEU:O	2.79	0.40
31:y:564:C:N4	50:r:31:LEU:CD2	2.82	0.40
31:y:615:C:P	31:y:615:C:C6	3.12	0.40
31:y:619:U:HO2'	31:y:620:C:H5'	1.79	0.40
31:y:629:G:H2'	31:y:630:G:H8	1.86	0.40
31:y:635:G:C6	31:y:636:U:C4	3.09	0.40
31:y:762:C:C2'	31:y:763:G:H5'	2.51	0.40
31:y:790:A:C1'	32:z:38:A:H4'	2.51	0.40
31:y:825:G:C4	31:y:826:C:C4	3.09	0.40
31:y:923:A:H2'	31:y:924:C:H5'	2.03	0.40
31:y:1029:G:C5	31:y:1031:G:OP1	2.74	0.40
31:y:1076:C:N3	31:y:1077:G:N7	2.69	0.40
31:y:1092:A:C5	31:y:1093:A:C6	3.08	0.40
31:y:1111:A:H3'	31:y:1111:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1114:C:C2	31:y:1187:G:N2	2.89	0.40
31:y:1127:G:C8	31:y:1127:G:O5'	2.74	0.40
31:y:1276:G:O2'	31:y:1282:C:O4'	2.37	0.40
31:y:1368:G:OP1	42:j:114:TYR:HB3	2.21	0.40
31:y:1372:U:P	42:j:70:LYS:H	2.44	0.40
31:y:1395:C:O2'	31:y:1398:A:H4'	2.21	0.40
31:y:1435:G:C6	31:y:1436:U:O4	2.75	0.40
31:y:1436:U:O2'	31:y:1437:C:O4'	2.36	0.40
32:z:3:C:N3	32:z:4:C:C4	2.89	0.40
32:z:18:G:C6	32:z:57:G:O6	2.74	0.40
32:z:18:G:O2'	32:z:19:G:C5'	2.68	0.40
33:0:41:U:H2'	33:0:42:G:H8	1.86	0.40
34:1:-3:A:O2'	34:1:-2:U:H5'	2.20	0.40
35:c:9:GLU:OE2	35:c:12:GLU:HB3	2.20	0.40
35:c:28:PHE:CZ	35:c:31:TYR:HB2	2.53	0.40
35:c:174:VAL:O	35:c:175:ARG:C	2.64	0.40
35:c:212:GLN:NE2	35:c:235:SER:HB2	2.36	0.40
36:d:33:LEU:O	36:d:37:GLN:HG2	2.20	0.40
36:d:160:ALA:O	36:d:162:GLN:O	2.39	0.40
37:e:21:LEU:O	37:e:22:LYS:CB	2.70	0.40
37:e:61:LYS:HE2	37:e:206:PHE:CE2	2.56	0.40
37:e:81:GLU:HA	37:e:84:LYS:HD3	2.03	0.40
38:f:16:THR:O	38:f:18:ARG:NH2	2.37	0.40
39:g:10:LEU:O	39:g:58:GLY:HA2	2.20	0.40
39:g:95:GLU:HA	39:g:96:PRO:HD2	1.95	0.40
41:i:27:PRO:CA	41:i:57:PRO:O	2.69	0.40
43:k:26:ALA:O	43:k:81:THR:CG2	2.69	0.40
44:l:60:ALA:O	44:l:63:LEU:HD23	2.22	0.40
44:l:108:ILE:O	44:l:109:VAL:CG2	2.69	0.40
45:m:6:ILE:HD12	45:m:6:ILE:N	2.34	0.40
45:m:23:VAL:CG1	45:m:26:LEU:HA	2.51	0.40
47:o:48:ALA:O	47:o:49:HIS:C	2.64	0.40
49:q:3:LYS:HA	49:q:65:GLN:HB3	2.02	0.40
49:q:4:ILE:HG22	49:q:5:ARG:H	1.83	0.40
49:q:17:TYR:CB	49:q:39:TYR:CD2	2.94	0.40
50:r:13:ASP:OD2	50:r:49:GLU:CA	2.69	0.40
50:r:88:TYR:CD2	50:r:89:LEU:N	2.89	0.40
54:v:19:GLY:C	54:v:21:TYR:N	2.78	0.40
1:w:89:G:H3'	1:w:89:G:C8	2.55	0.40
1:w:161:U:O2	1:w:161:U:C2'	2.69	0.40
1:w:262:A:P	1:w:609(B):G:O2'	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:467:G:H4'	1:w:796:C:C2'	2.46	0.40
1:w:546:C:H2'	1:w:547:A:C1'	2.50	0.40
1:w:579:G:H2'	1:w:580:C:O4'	2.20	0.40
1:w:582:G:C2	1:w:1259:G:C2	3.09	0.40
1:w:616:A:H2	6:D:173:PRO:HB2	1.85	0.40
1:w:686:G:N2	1:w:788:A:C6	2.90	0.40
1:w:796:C:C2'	1:w:797:C:H6	2.15	0.40
1:w:848:G:C8	1:w:933:A:C2	3.10	0.40
1:w:855:G:H22	23:U:27:GLU:H	1.67	0.40
1:w:874:G:O5'	1:w:874:G:H8	2.05	0.40
1:w:968:G:C6	1:w:969:U:C4	3.09	0.40
1:w:1051:G:O2'	1:w:1052:C:H5'	2.21	0.40
1:w:1059:G:O2'	1:w:1060:U:P	2.80	0.40
1:w:1130:U:N3	1:w:2025:C:C5'	2.50	0.40
1:w:1130:U:H2'	1:w:1130:U:O2	2.20	0.40
1:w:1229:G:N2	1:w:1230:C:H1'	2.36	0.40
1:w:1263:U:H2'	1:w:1264:G:C8	2.56	0.40
1:w:1307:A:H2'	1:w:1307:A:N3	2.36	0.40
1:w:1310:G:H4'	1:w:1611:C:H5''	2.04	0.40
1:w:1388:G:H2'	1:w:1389:G:O4'	2.21	0.40
1:w:1476:C:C2	1:w:1477:A:N7	2.89	0.40
1:w:1492:G:H3'	1:w:1492:G:H8	1.86	0.40
1:w:1516:U:O4	1:w:1517:G:O6	2.40	0.40
1:w:1566:A:O2'	1:w:1567:A:H8	2.03	0.40
1:w:1640:C:H3'	1:w:1641:A:H8	1.87	0.40
1:w:1641:A:H2'	1:w:1642:G:H5'	2.03	0.40
1:w:1651:G:H2'	1:w:1651:G:N3	2.36	0.40
1:w:1717:G:H2'	1:w:1718:G:C4'	2.51	0.40
1:w:1782:C:C1'	1:w:2609:U:H5'	2.42	0.40
1:w:1797:C:H2'	1:w:1798:U:H6	1.83	0.40
1:w:1815:A:C3'	1:w:1816:G:H5'	2.47	0.40
1:w:1820:U:N3	4:B:202:LYS:CA	2.68	0.40
1:w:1821:A:N6	1:w:1822:G:C5	2.87	0.40
1:w:1906:G:N7	1:w:1929:G:H2'	2.35	0.40
1:w:1911:U:H2'	1:w:1919:A:H61	1.86	0.40
1:w:1930:G:O2'	1:w:1931:U:C5	2.73	0.40
1:w:1956:U:H2'	1:w:1957:C:H6	1.86	0.40
1:w:2024:G:C6	1:w:2025:C:C4	3.09	0.40
1:w:2076:U:H5''	1:w:2077:A:OP2	2.20	0.40
1:w:2080:G:N2	1:w:2081:C:N1	2.68	0.40
1:w:2097:C:N3	1:w:2193:G:C6	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2308:G:C4	1:w:2310:A:N6	2.89	0.40
1:w:2359:C:C4	12:J:55:ARG:CZ	3.04	0.40
1:w:2549:G:H2'	1:w:2550:G:O5'	2.21	0.40
1:w:2682:U:C2'	1:w:2683:C:H5'	2.49	0.40
1:w:2717:G:C5'	1:w:2718:G:OP2	2.69	0.40
1:w:2755:C:C2	30:b:19:ARG:NH1	2.89	0.40
1:w:2791:C:C4	1:w:2893:G:C6	3.08	0.40
1:w:2878:U:C6	1:w:2878:U:OP2	2.75	0.40
2:x:8:U:C2'	2:x:9:G:H8	2.35	0.40
2:x:9:G:C6	2:x:112:G:C6	3.09	0.40
2:x:17:C:C3'	2:x:18:G:H5'	2.47	0.40
2:x:37:C:H2'	2:x:37:C:O2	2.21	0.40
2:x:110:G:C6	2:x:111:U:N3	2.89	0.40
3:A:39:ASP:HB3	3:A:40:GLU:H	1.65	0.40
4:B:10:THR:O	4:B:10:THR:HG23	2.21	0.40
4:B:80:ALA:HA	4:B:113:VAL:HG13	2.03	0.40
4:B:146:GLU:HA	4:B:153:ALA:HA	2.02	0.40
4:B:150:LYS:HD2	4:B:188:GLU:HB3	2.03	0.40
5:C:27:LEU:HA	5:C:181:LEU:HA	2.03	0.40
5:C:51:PHE:CD1	5:C:52:LEU:HA	2.55	0.40
5:C:59:VAL:CG1	5:C:60:ASN:H	2.26	0.40
6:D:187:LEU:HD23	6:D:188:VAL:H	1.86	0.40
7:E:51:ARG:HG3	7:E:51:ARG:NH2	2.35	0.40
7:E:174:GLU:O	7:E:175:LEU:C	2.64	0.40
8:F:11:VAL:O	8:F:11:VAL:CG1	2.68	0.40
8:F:162:ILE:C	8:F:163:TYR:CG	3.00	0.40
9:G:101:LEU:O	9:G:107:ILE:N	2.42	0.40
10:H:58:ARG:HG3	10:H:59:GLY:N	2.36	0.40
10:H:151:HIS:HA	10:H:152:PRO:HD2	1.83	0.40
10:H:161:LEU:HD12	10:H:161:LEU:N	2.36	0.40
11:I:34:THR:OG1	11:I:35:VAL:N	2.53	0.40
13:K:106:VAL:CG2	13:K:107:ALA:H	2.25	0.40
14:L:103:ARG:CG	19:Q:40:ASN:CG	2.87	0.40
15:M:75:GLU:O	15:M:76:LYS:C	2.64	0.40
16:N:7:ILE:HG22	16:N:11:GLU:OE1	2.20	0.40
17:O:14:HIS:HB3	17:O:32:PHE:HB3	2.03	0.40
19:Q:40:ASN:O	19:Q:41:LYS:CB	2.70	0.40
20:R:47:PHE:CD1	20:R:47:PHE:N	2.89	0.40
22:T:19:ARG:CD	22:T:19:ARG:H	2.11	0.40
22:T:45:ASP:CB	22:T:49:ARG:HE	2.34	0.40
22:T:141:VAL:HG22	22:T:144:LEU:CD2	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:66:VAL:O	23:U:66:VAL:HG23	2.21	0.40
25:W:3:LEU:HG	25:W:7:ARG:HB2	2.02	0.40
27:Y:36:CYS:HB3	27:Y:48:GLU:O	2.22	0.40
30:b:2:LYS:HA	30:b:2:LYS:CE	2.46	0.40
31:y:37:U:OP1	45:m:122:LYS:NZ	2.54	0.40
31:y:37:U:C5'	45:m:116:ARG:NH2	2.84	0.40
31:y:60:A:H2	31:y:107:G:N2	2.16	0.40
31:y:115:G:O2'	31:y:116:A:P	2.79	0.40
31:y:120:A:C8	31:y:122:G:C5	3.09	0.40
31:y:167:G:O2'	31:y:168:G:H5'	2.21	0.40
31:y:191(C):G:C6	31:y:191(D):U:C2	3.10	0.40
31:y:254:G:C6	31:y:266:G:O6	2.75	0.40
31:y:409:G:C6	31:y:410:G:N3	2.89	0.40
31:y:448:A:C5	31:y:487:A:H1'	2.57	0.40
31:y:490:G:H2'	31:y:491:G:C1'	2.50	0.40
31:y:574:A:HO2'	31:y:882:C:HO2'	0.43	0.40
31:y:625:G:C4'	49:q:16:HIS:CD2	3.04	0.40
31:y:671:G:C4	31:y:672:U:C5	3.09	0.40
31:y:674:G:C2	31:y:675:A:C6	3.10	0.40
31:y:764:C:C2'	31:y:765:G:O5'	2.68	0.40
31:y:765:G:C6	31:y:812:C:C6	3.10	0.40
31:y:785:G:C2	31:y:786:G:C5	3.09	0.40
31:y:829:G:H2'	31:y:830:G:H5'	2.03	0.40
31:y:879:C:C4	31:y:880:C:C5	3.09	0.40
31:y:991:U:O4	31:y:1213:A:C5'	2.70	0.40
31:y:1087:G:O2'	31:y:1088:G:H8	2.02	0.40
31:y:1106:G:H2'	31:y:1107:C:C5'	2.43	0.40
31:y:1161:C:C4	31:y:1162:C:N4	2.90	0.40
31:y:1162:C:C5	31:y:1163:C:C4	3.09	0.40
31:y:1174:G:C5	31:y:1175:G:N7	2.89	0.40
31:y:1230:C:C6	31:y:1230:C:C3'	3.04	0.40
31:y:1231:G:C5	31:y:1232:U:C5	3.09	0.40
31:y:1240:U:C5'	31:y:1241:G:N7	2.76	0.40
31:y:1271:G:C2'	31:y:1272:G:C5'	2.99	0.40
31:y:1341:U:H6	31:y:1341:U:O5'	2.04	0.40
31:y:1357:A:C5'	43:k:47:PHE:CE2	3.04	0.40
31:y:1390:U:C2'	31:y:1391:U:C6	2.86	0.40
31:y:1435:G:C2'	31:y:1436:U:O5'	2.70	0.40
31:y:1440:C:H2'	31:y:1441:G:O4'	2.21	0.40
31:y:1462:G:C8	31:y:1463:C:C5	3.09	0.40
32:z:30:G:C2'	32:z:31:A:C8	3.01	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:0:10:G:C2	33:0:26:G:C8	3.09	0.40
35:c:63:MET:HB3	35:c:225:ALA:HB1	2.02	0.40
35:c:101:MET:HA	35:c:108:ILE:CD1	2.47	0.40
35:c:151:GLY:C	35:c:153:ARG:H	2.29	0.40
36:d:14:ILE:HG22	47:o:57:ARG:NH2	2.32	0.40
36:d:29:TYR:O	36:d:33:LEU:HD23	2.21	0.40
36:d:131:ARG:O	36:d:134:ILE:CG1	2.69	0.40
37:e:53:ASP:OD2	37:e:57:ARG:NH1	2.54	0.40
38:f:12:LEU:HD22	38:f:13:ILE:N	2.36	0.40
38:f:14:ARG:CA	38:f:14:ARG:NE	2.76	0.40
38:f:63:ARG:O	38:f:66:MET:HG2	2.22	0.40
40:h:29:LYS:O	40:h:30:ILE:C	2.64	0.40
40:h:54:THR:O	40:h:54:THR:CG2	2.68	0.40
40:h:92:SER:C	40:h:96:GLN:HG2	2.45	0.40
41:i:10:LEU:C	41:i:14:ARG:NH1	2.80	0.40
41:i:15:ASN:O	41:i:18:ARG:N	2.54	0.40
41:i:33:GLU:OE1	41:i:50:ARG:HB3	2.20	0.40
42:j:28:VAL:O	42:j:29:ASN:CB	2.69	0.40
43:k:12:ASP:O	43:k:16:LEU:CD2	2.69	0.40
43:k:63:PHE:C	43:k:64:GLU:HG3	2.45	0.40
45:m:52:ARG:HB2	45:m:52:ARG:CZ	2.52	0.40
45:m:52:ARG:CZ	45:m:52:ARG:CB	2.99	0.40
45:m:63:TYR:CD2	45:m:63:TYR:N	2.88	0.40
46:n:23:TYR:O	46:n:25:ILE:N	2.54	0.40
49:q:53:VAL:O	49:q:57:ARG:HG3	2.21	0.40
51:s:53:ARG:HD2	51:s:58:LEU:CD1	2.51	0.40
53:u:26:ASN:CG	53:u:71:THR:HG22	2.46	0.40
53:u:53:LEU:O	53:u:57:ARG:HG3	2.21	0.40
1:w:8:A:H4'	10:H:74:PHE:CE1	2.56	0.40
1:w:151:C:H2'	1:w:152:G:H8	1.87	0.40
1:w:264:C:H2'	1:w:265:A:OP2	2.21	0.40
1:w:283:A:H2'	1:w:284:U:O5'	2.20	0.40
1:w:300:A:C8	1:w:300:A:P	3.14	0.40
1:w:348:G:N7	1:w:349:G:C8	2.90	0.40
1:w:372:G:O2'	1:w:400:G:N1	2.52	0.40
1:w:379:G:C4'	24:V:21:ARG:CD	2.88	0.40
1:w:383:U:C5'	1:w:384:U:OP2	2.61	0.40
1:w:418:G:H2'	1:w:419:C:C5	2.55	0.40
1:w:499:U:C2	1:w:500:G:H1'	2.57	0.40
1:w:502:A:O5'	1:w:502:A:C8	2.71	0.40
1:w:560:C:O2	17:O:49:HIS:CE1	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:587:C:O3'	1:w:588:U:C6	2.74	0.40
1:w:593:G:C2	1:w:594:U:C2	3.10	0.40
1:w:594:U:O2	1:w:594:U:H2'	2.21	0.40
1:w:598:G:C1'	12:J:13:ASN:HD21	2.30	0.40
1:w:667:U:OP1	12:J:47:ASP:OD2	2.39	0.40
1:w:681:G:C2	1:w:682:G:C5	3.09	0.40
1:w:686:G:O2'	28:Z:6:GLN:O	2.36	0.40
1:w:718:A:O5'	1:w:718:A:C8	2.69	0.40
1:w:798:G:H2'	1:w:798:G:N3	2.35	0.40
1:w:846:C:C2	1:w:847:U:O4	2.74	0.40
1:w:945:A:C5	1:w:2448:A:C4	3.09	0.40
1:w:965:C:N4	1:w:966:G:C6	2.89	0.40
1:w:1041:C:H6	1:w:1041:C:O5'	2.05	0.40
1:w:1080:C:H3'	1:w:1081:U:C6	2.56	0.40
1:w:1131:G:O2'	1:w:1132:A:OP2	2.39	0.40
1:w:1175:U:OP2	1:w:1176:G:OP2	2.39	0.40
1:w:1194:A:C3'	1:w:1195:G:O4'	2.70	0.40
1:w:1223:G:N3	1:w:1227:G:C2	2.89	0.40
1:w:1225:G:H4'	18:P:87:HIS:N	2.37	0.40
1:w:1364:G:C2	1:w:1368:G:C6	3.09	0.40
1:w:1453:A:N1	1:w:2702:U:C6	2.89	0.40
1:w:1479:G:C5	1:w:1480:G:N7	2.88	0.40
1:w:1555:G:O2'	1:w:1556:C:H5'	2.22	0.40
1:w:1699:G:H5'	1:w:1699:G:C8	2.56	0.40
1:w:1704:G:N3	1:w:1704:G:C2'	2.84	0.40
1:w:1729:A:C6	1:w:1731:G:C5	3.09	0.40
1:w:1753:G:N2	1:w:1755:A:H8	2.18	0.40
1:w:1786:A:C2'	1:w:1787:A:OP1	2.70	0.40
1:w:1837:C:O2'	1:w:1928:A:O4'	2.30	0.40
1:w:1851:U:H5'	33:O:4:G:H4'	1.98	0.40
1:w:1863:G:C2	1:w:1864:U:H1'	2.57	0.40
1:w:1881:C:C2	1:w:1882:C:C4	3.09	0.40
1:w:1919:A:H2'	1:w:1920:C:O4'	2.22	0.40
1:w:1928:A:H2'	1:w:1929:G:O4'	2.21	0.40
1:w:1948:G:O2'	1:w:1949:G:H5'	2.21	0.40
1:w:2033:A:C2'	1:w:2034:U:H5''	2.48	0.40
1:w:2073:C:C6	1:w:2074:U:C5	3.09	0.40
1:w:2150:U:C4	1:w:2151:G:N7	2.89	0.40
1:w:2207:C:N4	1:w:2217:G:H1	2.19	0.40
1:w:2218:G:C4	1:w:2219:G:N7	2.90	0.40
1:w:2218:G:H8	1:w:2218:G:OP2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2287:A:H2'	1:w:2287:A:N3	2.36	0.40
1:w:2290:G:C6	1:w:2291:U:C4	3.09	0.40
1:w:2316:C:H3'	1:w:2316:C:C6	2.56	0.40
1:w:2351:G:C2'	1:w:2352:A:OP2	2.70	0.40
1:w:2356:C:O2	1:w:2357:U:O4'	2.38	0.40
1:w:2358:G:N2	1:w:2359:C:C4	2.89	0.40
1:w:2396:G:C6	1:w:2420:C:N3	2.89	0.40
1:w:2461:C:C2'	1:w:2462:U:O5'	2.70	0.40
1:w:2482:G:H2'	1:w:2483:C:C5'	2.48	0.40
1:w:2535:G:C2'	1:w:2536:G:O4'	2.69	0.40
1:w:2628:C:O2'	1:w:2781:A:C5	2.71	0.40
1:w:2634:G:C2	1:w:2635:C:C2	3.09	0.40
1:w:2635:C:C2'	5:C:80:GLU:OE2	2.69	0.40
1:w:2645:G:O2'	1:w:2646:C:OP1	2.26	0.40
1:w:2691:C:H5'	1:w:2691:C:C6	2.56	0.40
1:w:2734:A:H3'	1:w:2734:A:H8	1.86	0.40
1:w:2785:C:C2	1:w:2786:U:C5	3.09	0.40
1:w:2838:G:O2'	14:L:45:ARG:NE	2.53	0.40
2:x:15:A:H1'	2:x:109:G:N7	2.36	0.40
2:x:25:A:N7	2:x:26:A:H1'	2.35	0.40
2:x:57:A:C4	2:x:58:A:C8	3.10	0.40
4:B:121:PRO:C	4:B:131:LEU:CG	2.84	0.40
4:B:133:LEU:H	4:B:189:CYS:N	2.15	0.40
5:C:8:LYS:HG3	5:C:192:ASN:HA	2.04	0.40
5:C:8:LYS:CE	5:C:190:GLY:O	2.69	0.40
5:C:101:ARG:HG2	5:C:170:LEU:H	1.86	0.40
5:C:117:MET:CB	5:C:136:ARG:NH2	2.69	0.40
5:C:145:LYS:CA	5:C:148:GLY:HA2	2.50	0.40
6:D:16:ALA:HA	6:D:19:LEU:CD2	2.52	0.40
6:D:64:HIS:C	6:D:65:THR:HG22	2.47	0.40
7:E:10:LYS:O	7:E:14:GLU:HB2	2.21	0.40
7:E:87:PRO:HG2	7:E:88:ILE:H	1.86	0.40
8:F:34:GLU:C	8:F:35:VAL:CG2	2.95	0.40
8:F:79:VAL:O	8:F:80:SER:C	2.65	0.40
10:H:90:LEU:CA	10:H:110:LEU:CG	2.97	0.40
10:H:90:LEU:HD12	10:H:110:LEU:CB	2.50	0.40
10:H:112:LYS:O	10:H:115:ALA:CB	2.66	0.40
11:I:66:LYS:HD3	11:I:80:ASP:HA	2.03	0.40
12:J:101:VAL:HA	12:J:105:LEU:O	2.21	0.40
12:J:110:TYR:CD2	12:J:111:ARG:HG2	2.54	0.40
12:J:122:PRO:HA	12:J:138:LEU:HG	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:133:ARG:HE	13:K:134:ARG:CA	2.34	0.40
16:N:122:ASP:OD1	31:y:1447:G:H4'	2.22	0.40
18:P:76:LYS:C	18:P:76:LYS:CD	2.95	0.40
18:P:76:LYS:HB3	18:P:76:LYS:HE2	1.86	0.40
19:Q:4:LYS:CG	19:Q:5:ALA:N	2.85	0.40
19:Q:12:ILE:N	19:Q:100:THR:HA	2.37	0.40
19:Q:19:LEU:O	19:Q:23:LEU:CB	2.68	0.40
21:S:11:ASP:O	21:S:12:THR:C	2.65	0.40
21:S:25:GLY:HA2	21:S:37:VAL:CG1	2.50	0.40
23:U:74:ARG:C	23:U:74:ARG:CD	2.82	0.40
25:W:6:VAL:CG2	25:W:7:ARG:N	2.83	0.40
26:X:2:PRO:HB2	26:X:39:ASP:CG	2.45	0.40
31:y:39:G:C2	31:y:40:C:C2	3.09	0.40
31:y:228:A:O2'	49:q:59:TRP:CZ3	2.57	0.40
31:y:309:G:C6	31:y:310:G:C5	3.09	0.40
31:y:362:G:C8	31:y:362:G:C3'	3.05	0.40
31:y:382:A:C8	31:y:383:A:C5	3.09	0.40
31:y:392:G:C5	31:y:393:A:C4	3.10	0.40
31:y:447:G:O2'	31:y:487:A:N6	2.54	0.40
31:y:502:G:C5	31:y:503:C:C6	3.09	0.40
31:y:527:7MG:CM7	45:m:90:LYS:HE2	2.52	0.40
31:y:664:G:O2'	31:y:666:G:OP2	2.39	0.40
31:y:734:G:C6	31:y:735:C:C2	3.10	0.40
31:y:827:U:H4'	41:i:15:ASN:HD21	1.86	0.40
31:y:876:G:H2'	31:y:876:G:N3	2.37	0.40
31:y:896:C:O2'	31:y:897:C:H5'	2.22	0.40
31:y:913:A:O5'	31:y:913:A:C8	2.71	0.40
31:y:918:A:C8	31:y:919:A:N7	2.89	0.40
31:y:932:C:OP1	40:h:3:ARG:HD3	2.22	0.40
31:y:1217:C:H2'	31:y:1218:C:C6	2.56	0.40
31:y:1226:C:N4	46:n:104:ARG:NH2	2.69	0.40
31:y:1310:G:H2'	31:y:1311:G:C8	2.49	0.40
31:y:1419:G:C2'	31:y:1420:C:O5'	2.69	0.40
32:z:44:G:H8	32:z:44:G:P	2.44	0.40
33:0:41:U:H2'	33:0:42:G:C8	2.56	0.40
35:c:73:THR:HG21	35:c:95:GLN:O	2.21	0.40
35:c:154:LEU:O	35:c:155:LEU:C	2.64	0.40
35:c:189:ASP:OD2	35:c:204:ASN:HA	2.20	0.40
35:c:219:VAL:C	35:c:221:LEU:N	2.79	0.40
36:d:15:THR:HG22	36:d:15:THR:O	2.22	0.40
36:d:32:LEU:HD13	36:d:33:LEU:HD22	2.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:10:ARG:HD2	37:e:32:ALA:HB1	2.02	0.40
37:e:14:ARG:HA	37:e:40:PRO:HD3	1.93	0.40
37:e:162:LEU:O	37:e:162:LEU:HD12	2.22	0.40
38:f:118:ILE:HG21	38:f:120:THR:HG22	1.99	0.40
39:g:71:ARG:HA	39:g:71:ARG:NE	2.33	0.40
40:h:45:ASP:O	40:h:49:ILE:N	2.54	0.40
43:k:43:ARG:HD2	43:k:69:ASN:HB2	2.03	0.40
43:k:46:ARG:HD3	43:k:46:ARG:C	2.46	0.40
45:m:39:VAL:H	45:m:78:GLU:HA	1.87	0.40
45:m:52:ARG:O	45:m:54:VAL:HG13	2.20	0.40
46:n:87:TYR:CE2	52:t:73:GLU:HA	2.56	0.40
46:n:95:GLY:HA2	46:n:110:ARG:HB3	2.03	0.40
48:p:43:LEU:HD21	48:p:53:HIS:HE1	1.78	0.40
48:p:74:ASP:CG	48:p:75:PRO:HD2	2.46	0.40
49:q:49:LEU:C	49:q:49:LEU:HD12	2.47	0.40
54:v:8:THR:HB	54:v:9:ARG:H	1.71	0.40
1:w:49:A:H5'	1:w:50:U:O5'	2.22	0.40
1:w:155:C:C3'	1:w:161:U:H6	2.34	0.40
1:w:163:U:OP2	1:w:164:U:OP1	2.38	0.40
1:w:259:G:C6	1:w:260:G:C5	3.10	0.40
1:w:270(Q):C:N3	1:w:270(R):C:C4	2.90	0.40
1:w:288:C:C2	1:w:353:G:C2	3.09	0.40
1:w:416:C:H6	1:w:416:C:C5'	2.31	0.40
1:w:587:C:O2	1:w:671:C:C6	2.74	0.40
1:w:593:G:C2	1:w:594:U:C6	3.10	0.40
1:w:610:C:C6	1:w:610:C:C3'	3.05	0.40
1:w:631:A:H2'	1:w:632:A:C8	2.56	0.40
1:w:695:G:P	1:w:1569:A:N6	2.95	0.40
1:w:709:U:H3'	1:w:710:G:C8	2.56	0.40
1:w:748:G:O2'	1:w:749:C:H5	2.04	0.40
1:w:867:C:N4	1:w:912:C:H1'	2.36	0.40
1:w:913:U:H6	1:w:913:U:H5''	1.86	0.40
1:w:951:C:C2	1:w:952:G:N7	2.90	0.40
1:w:962:G:H2'	1:w:963:U:C5'	2.38	0.40
1:w:1060:U:O2	1:w:1088:A:N7	2.54	0.40
1:w:1208:C:C4	1:w:1239:G:C2	3.09	0.40
1:w:1272:A:C5'	1:w:1646:C:N3	2.76	0.40
1:w:1288:U:O2'	1:w:1647:G:N2	2.55	0.40
1:w:1342:A:C4	1:w:1397:U:H6	2.39	0.40
1:w:1451:C:H2'	1:w:1457:A:N1	2.37	0.40
1:w:1545:A:C2'	1:w:1546:A:H5'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1614:A:C6	19:Q:91:GLY:CA	3.05	0.40
1:w:1663:C:O2'	1:w:1664:A:P	2.77	0.40
1:w:1664:A:N6	1:w:1996:C:H42	2.11	0.40
1:w:1747:G:H2'	1:w:1748:G:H8	1.86	0.40
1:w:1782:C:C5	1:w:2609:U:C5	3.08	0.40
1:w:1808:U:C5	1:w:1809:A:C8	3.10	0.40
1:w:1824:G:H2'	1:w:1825:A:C1'	2.52	0.40
1:w:1827:C:O2	1:w:1827:C:C2'	2.67	0.40
1:w:1886:C:O2'	1:w:1887:C:C5'	2.64	0.40
1:w:1915:U:C5	1:w:1916:A:C4	3.10	0.40
1:w:1942:C:C4	1:w:1943:U:C2	3.10	0.40
1:w:1947:C:C6	1:w:1947:C:H5''	2.57	0.40
1:w:2001:A:H2'	1:w:2002:G:C1'	2.52	0.40
1:w:2018:G:H2'	1:w:2019:A:C4'	2.51	0.40
1:w:2020:A:C6	1:w:2035:G:N1	2.90	0.40
1:w:2093:G:H2'	1:w:2094:G:C5'	2.51	0.40
1:w:2188:C:C4	1:w:2189:U:C5	3.10	0.40
1:w:2240:C:C2'	1:w:2241:A:C5'	2.69	0.40
1:w:2380:C:H2'	1:w:2381:C:O4'	2.22	0.40
1:w:2403:C:C4	1:w:2415:G:N1	2.89	0.40
1:w:2458:G:C2	1:w:2490:G:C4	3.09	0.40
1:w:2459:A:H2'	1:w:2460:U:H6	1.85	0.40
1:w:2468:G:H1	1:w:2481:G:H2'	1.86	0.40
1:w:2488:A:N1	1:w:2489:G:N3	2.68	0.40
1:w:2618:G:C5	1:w:2619:C:C5	3.09	0.40
1:w:2685:G:OP2	1:w:2685:G:H8	2.05	0.40
1:w:2712:U:H1'	1:w:712(B):A:H5''	2.03	0.40
1:w:2714:G:N1	1:w:2715:C:C4	2.89	0.40
1:w:2734:A:C8	1:w:2734:A:C3'	3.03	0.40
1:w:2864:G:C8	1:w:2864:G:C3'	3.04	0.40
2:x:34:U:O5'	2:x:34:U:H6	2.04	0.40
2:x:67:G:C4	2:x:68:C:H5	2.36	0.40
2:x:76:G:C5	2:x:77:U:O2	2.75	0.40
3:A:36:ALA:CB	3:A:219:MET:CG	2.97	0.40
3:A:59:VAL:O	3:A:59:VAL:HG23	2.22	0.40
3:A:195:ARG:C	3:A:197:LEU:N	2.75	0.40
3:A:228:HIS:O	3:A:229:SER:C	2.64	0.40
4:B:31:LYS:CG	4:B:32:SER:H	2.33	0.40
4:B:35:LYS:HB3	4:B:64:ILE:HG22	2.03	0.40
4:B:44:ASN:CB	4:B:49:ILE:HA	2.51	0.40
4:B:71:ASP:OD2	4:B:72:LYS:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:88:ARG:NE	4:B:157:ARG:HH21	2.19	0.40
4:B:119:ALA:HB1	4:B:190:TYR:OH	2.21	0.40
4:B:136:ILE:HG23	4:B:140:THR:HG21	2.03	0.40
4:B:215:LEU:HD13	4:B:215:LEU:N	2.36	0.40
4:B:242:ARG:C	4:B:244:ARG:H	2.29	0.40
5:C:27:LEU:HD23	5:C:27:LEU:C	2.46	0.40
5:C:128:SER:O	5:C:129:HIS:CG	2.74	0.40
5:C:153:GLY:O	5:C:154:LYS:O	2.40	0.40
6:D:35:GLN:OE1	6:D:38:LYS:HB3	2.22	0.40
6:D:187:LEU:CG	6:D:188:VAL:H	2.35	0.40
6:D:195:GLU:CG	6:D:196:VAL:H	2.33	0.40
8:F:10:PRO:HG2	8:F:12:PRO:CG	2.51	0.40
8:F:43:VAL:CB	8:F:51:ARG:O	2.69	0.40
8:F:89:ILE:HD12	8:F:90:LYS:C	2.46	0.40
9:G:37:VAL:C	9:G:39:ALA:N	2.79	0.40
9:G:65:ALA:O	9:G:68:LEU:HB2	2.22	0.40
9:G:130:TYR:CD2	9:G:138:ILE:HG21	2.51	0.40
10:H:126:VAL:O	10:H:127:LYS:C	2.64	0.40
11:I:35:VAL:N	11:I:62:VAL:HG11	2.36	0.40
11:I:67:LYS:C	11:I:68:GLU:HG2	2.45	0.40
11:I:88:ASN:CG	11:I:94:ARG:HG3	2.46	0.40
12:J:49:ARG:HG2	12:J:49:ARG:H	1.73	0.40
12:J:121:LYS:O	12:J:122:PRO:C	2.63	0.40
13:K:9:TYR:CE1	13:K:12:GLN:NE2	2.89	0.40
13:K:16:ARG:CG	13:K:17:LEU:N	2.84	0.40
13:K:30:GLY:CA	13:K:65:PHE:CZ	3.04	0.40
14:L:44:LEU:CD1	14:L:47:PHE:CE2	3.01	0.40
14:L:52:ILE:C	14:L:54:LEU:N	2.76	0.40
14:L:78:LYS:NZ	14:L:82:GLU:HB3	2.36	0.40
15:M:11:LYS:O	15:M:14:VAL:HB	2.22	0.40
16:N:28:VAL:CG1	16:N:44:ASP:HB2	2.52	0.40
16:N:50:ILE:CB	16:N:63:VAL:CA	2.92	0.40
17:O:74:LEU:CD2	17:O:110:VAL:HG22	2.38	0.40
18:P:14:VAL:HB	18:P:98:GLU:OE1	2.20	0.40
18:P:24:LYS:C	18:P:25:LEU:CG	2.94	0.40
19:Q:3:ALA:HB3	19:Q:107:LEU:C	2.46	0.40
21:S:45:VAL:HA	21:S:57:GLN:CA	2.46	0.40
21:S:52:SER:O	21:S:54:LYS:N	2.54	0.40
22:T:15:PRO:CB	22:T:19:ARG:CZ	2.99	0.40
22:T:45:ASP:OD1	22:T:48:PHE:CZ	2.74	0.40
22:T:101:PRO:HD2	22:T:135:GLU:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:150:LEU:HA	22:T:154:ASP:OD1	2.21	0.40
23:U:31:VAL:C	23:U:61:ALA:HB1	2.45	0.40
24:V:12:PRO:O	24:V:13:ILE:HD13	2.21	0.40
26:X:10:LYS:CB	26:X:53:LEU:CB	2.89	0.40
27:Y:41:PRO:O	27:Y:43:HIS:N	2.55	0.40
30:b:11:CYS:SG	30:b:13:LYS:HE2	2.61	0.40
31:y:10:A:OP2	38:f:126:ARG:HD3	2.21	0.40
31:y:49:U:C2'	31:y:50:A:H5'	2.52	0.40
31:y:50:A:H1'	31:y:52:G:O4'	2.22	0.40
31:y:143:A:O4'	31:y:196:A:C2	2.67	0.40
31:y:185:A:C6	31:y:192:U:O4	2.74	0.40
31:y:246:A:N6	31:y:279:A:C2	2.89	0.40
31:y:301:G:H2'	31:y:302:G:C5'	2.50	0.40
31:y:364:A:C5	31:y:365:U:C4	3.10	0.40
31:y:402:G:H2'	31:y:403:C:O4'	2.21	0.40
31:y:403:C:H5''	37:e:135:LEU:HD21	2.02	0.40
31:y:424:G:N1	31:y:425:G:C4	2.90	0.40
31:y:438:G:H22	31:y:494:U:H3'	1.86	0.40
31:y:595:G:C2	31:y:641:U:H2'	2.56	0.40
31:y:602:A:H2'	31:y:603:U:C5'	2.52	0.40
31:y:624:C:C2'	31:y:625:G:C5'	2.98	0.40
31:y:628:G:C5	31:y:629:G:C5	3.09	0.40
31:y:683:G:H2'	31:y:684:A:H8	1.87	0.40
31:y:739:C:C6	31:y:739:C:O5'	2.72	0.40
31:y:817:C:H5'	31:y:819:A:C5'	2.45	0.40
31:y:867:G:N1	31:y:868:C:N4	2.69	0.40
31:y:874:G:C2'	31:y:875:C:O4'	2.70	0.40
31:y:877:C:H2'	31:y:878:G:C8	2.57	0.40
31:y:960:U:H3'	31:y:960:U:O2	2.20	0.40
31:y:985:C:H2'	31:y:986:A:O5'	2.21	0.40
31:y:1049:U:H2'	31:y:1050:G:OP2	2.21	0.40
31:y:1074:G:N1	31:y:1075:C:C4	2.87	0.40
31:y:1124:G:H2'	31:y:1125:U:OP2	2.20	0.40
31:y:1226:C:H6	31:y:1226:C:P	2.45	0.40
31:y:1228:C:C5'	46:n:114:ARG:HE	2.34	0.40
31:y:1346:A:N3	31:y:1348:U:C5	2.90	0.40
31:y:1494:G:C2	31:y:1495:U:C2	3.10	0.40
33:0:24:G:N1	33:0:25:C:C2	2.89	0.40
35:c:97:TRP:CE3	35:c:172:ILE:HB	2.57	0.40
35:c:117:GLU:O	35:c:121:LEU:CD1	2.69	0.40
36:d:44:GLU:OE2	36:d:48:TYR:CD1	2.71	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:47:LEU:HD11	36:d:75:VAL:O	2.21	0.40
36:d:130:VAL:HG23	36:d:131:ARG:H	1.87	0.40
36:d:155:GLY:O	36:d:156:ARG:CB	2.68	0.40
37:e:22:LYS:HB2	37:e:26:CYS:H	1.81	0.40
37:e:64:LEU:CD2	37:e:198:VAL:HG12	2.52	0.40
37:e:173:TRP:CB	37:e:187:ARG:HB3	2.52	0.40
38:f:76:ILE:HD11	38:f:118:ILE:HG22	2.04	0.40
38:f:76:ILE:HD11	38:f:118:ILE:HG23	2.01	0.40
38:f:79:GLU:CD	38:f:93:PRO:CD	2.95	0.40
38:f:101:ILE:CD1	38:f:119:LEU:HD23	2.35	0.40
39:g:3:ARG:HA	39:g:66:GLU:CB	2.51	0.40
39:g:50:TYR:CB	39:g:51:PRO:HD2	2.42	0.40
39:g:80:ARG:H	39:g:80:ARG:HD2	1.86	0.40
41:i:5:PRO:O	41:i:6:ILE:C	2.64	0.40
41:i:77:GLU:OE1	41:i:81:HIS:CE1	2.73	0.40
42:j:11:LYS:O	42:j:12:GLU:C	2.63	0.40
44:l:103:LEU:O	44:l:104:GLN:C	2.64	0.40
45:m:40:ARG:HG2	45:m:41:THR:H	1.86	0.40
45:m:43:THR:HA	45:m:44:PRO:HD3	1.80	0.40
46:n:77:ASN:HB2	46:n:78:ILE:H	1.73	0.40
46:n:99:ARG:CG	46:n:101:GLN:NE2	2.84	0.40
50:r:10:VAL:HG23	50:r:10:VAL:O	2.21	0.40
50:r:17:LYS:HB3	50:r:17:LYS:HZ2	1.87	0.40
51:s:74:ARG:HD3	51:s:81:PHE:CE1	2.57	0.40
53:u:10:LEU:C	53:u:12:ALA:H	2.30	0.40
1:w:99:U:H5'	1:w:102:G:C1'	2.51	0.40
1:w:141(B):C:C4	1:w:142:G:C6	3.10	0.40
1:w:172:C:N4	1:w:173:G:C5	2.89	0.40
1:w:185:U:C2'	1:w:186:G:H5'	2.51	0.40
1:w:245:G:O2'	12:J:71:VAL:HA	2.22	0.40
1:w:275:G:H3'	1:w:276:A:C8	2.57	0.40
1:w:314:A:H2'	1:w:315:G:H8	1.85	0.40
1:w:344:G:C2'	1:w:345:A:C5'	3.00	0.40
1:w:425:G:H2'	1:w:426:C:H6	1.85	0.40
1:w:467:G:C2'	1:w:468:G:O4'	2.64	0.40
1:w:492:A:OP2	1:w:492:A:N7	2.54	0.40
1:w:514:A:N1	1:w:515:A:N6	2.69	0.40
1:w:520:G:N3	1:w:521:G:C8	2.89	0.40
1:w:522:G:H2'	1:w:523:C:C5	2.56	0.40
1:w:578:A:N6	1:w:2018:G:C8	2.90	0.40
1:w:579:G:C2	1:w:1262:A:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:587:C:C2	1:w:671:C:N1	2.89	0.40
1:w:610:C:H2'	1:w:611:C:C5	2.56	0.40
1:w:615:G:N3	1:w:615:G:C2'	2.81	0.40
1:w:661:C:O5'	1:w:661:C:H6	2.04	0.40
1:w:668:G:C4	1:w:670:A:C8	3.10	0.40
1:w:713:G:H8	1:w:713:G:O5'	2.05	0.40
1:w:724:U:C3'	1:w:725:G:C8	2.99	0.40
1:w:747:U:N3	1:w:2013:A:C2	2.89	0.40
1:w:751:A:N7	28:Z:3:ARG:CZ	2.84	0.40
1:w:752:A:C5	1:w:1781:C:N1	2.89	0.40
1:w:784:A:O2'	1:w:785:G:O4'	2.36	0.40
1:w:889:C:C2'	1:w:889:C:O2	2.69	0.40
1:w:904:C:H2'	1:w:905:U:C5'	2.51	0.40
1:w:980:A:C6	1:w:1136:G:C5'	3.05	0.40
1:w:1022:G:N2	1:w:1023:U:O4	2.52	0.40
1:w:1058:G:C3'	1:w:1059:G:C5'	2.96	0.40
1:w:1114:G:C6	1:w:1115:G:C6	3.09	0.40
1:w:1197:G:C6	1:w:1250:G:C4	3.09	0.40
1:w:1208:C:C2'	1:w:1209:G:C8	2.96	0.40
1:w:1426:G:C5'	1:w:1427:A:C5'	2.99	0.40
1:w:1459:G:N3	1:w:1461:G:C8	2.89	0.40
1:w:1471:A:N3	1:w:1471:A:C3'	2.84	0.40
1:w:1519:G:H2'	1:w:1520:U:O4'	2.21	0.40
1:w:1531:C:N4	1:w:1532:C:H41	2.19	0.40
1:w:1569:A:O4'	4:B:59:LYS:CE	2.70	0.40
1:w:1650:G:H2'	1:w:1651:G:C1'	2.51	0.40
1:w:1725:G:N1	1:w:1726:G:C6	2.89	0.40
1:w:1779:U:C5	1:w:1784:A:N6	2.89	0.40
1:w:1786:A:HO2'	1:w:1787:A:P	2.41	0.40
1:w:1815:A:H5'	1:w:1817:G:C8	2.57	0.40
1:w:1933:G:N1	1:w:1934:C:C2	2.89	0.40
1:w:1936:A:H2	1:w:1943:U:O2	2.05	0.40
1:w:2044:C:C4	1:w:2625:G:N1	2.90	0.40
1:w:2123:G:H21	3:A:45:HIS:CE1	2.40	0.40
1:w:2192:G:C4	1:w:2193:G:C8	3.10	0.40
1:w:2207:C:H42	1:w:2217:G:H1	1.68	0.40
1:w:2314:C:C6	1:w:2314:C:C3'	3.04	0.40
1:w:2351:G:H22	1:w:2365:G:H3'	1.85	0.40
1:w:2352:A:H2'	1:w:2353:G:O4'	2.21	0.40
1:w:2399:G:H3'	1:w:2400:G:C8	2.52	0.40
1:w:2411:A:O5'	1:w:2411:A:C8	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2532:G:N7	1:w:2533:A:N7	2.69	0.40
1:w:2550:G:C3'	1:w:2551:C:C5'	2.98	0.40
1:w:2636:U:C4'	5:C:80:GLU:OE1	2.63	0.40
1:w:2740:A:C6	1:w:2764:A:N9	2.89	0.40
1:w:2773:C:C5'	5:C:164:ARG:HD3	2.51	0.40
1:w:2820:A:H3'	1:w:2820:A:P	2.57	0.40
1:w:2828:C:C2'	1:w:2829:C:C6	2.91	0.40
2:x:114:G:H2'	2:x:115:G:H8	1.86	0.40
3:A:51:ASP:HA	3:A:52:PRO:HD2	1.90	0.40
4:B:17:THR:CB	4:B:205:VAL:H	2.34	0.40
4:B:36:PRO:HB2	4:B:61:LEU:HB3	2.02	0.40
4:B:270:ILE:HD12	4:B:270:ILE:C	2.43	0.40
5:C:33:VAL:HA	5:C:48:GLN:O	2.22	0.40
5:C:201:THR:HG23	5:C:203:LYS:H	1.87	0.40
6:D:88:LYS:O	6:D:89:PRO:C	2.65	0.40
6:D:112:ARG:HH22	6:D:181:ILE:HD12	1.85	0.40
6:D:156:GLU:O	6:D:159:ARG:HB2	2.22	0.40
7:E:8:LYS:HB2	7:E:100:TRP:CZ2	2.57	0.40
7:E:43:LEU:HD13	7:E:45:GLU:CG	2.52	0.40
7:E:59:GLU:CG	7:E:60:LEU:HD23	2.46	0.40
7:E:99:MET:O	7:E:103:LEU:CD2	2.64	0.40
7:E:164:GLU:C	7:E:165:THR:HG23	2.47	0.40
9:G:4:ILE:HG22	9:G:5:LEU:H	1.87	0.40
9:G:77:LEU:O	9:G:142:VAL:HA	2.22	0.40
9:G:88:ILE:HG22	9:G:121:LYS:CB	2.49	0.40
10:H:45:THR:HB	10:H:49:LEU:CD1	2.51	0.40
10:H:90:LEU:HD11	10:H:111:GLU:HB2	2.03	0.40
10:H:112:LYS:O	10:H:112:LYS:CE	2.70	0.40
10:H:156:GLN:HG2	10:H:157:ARG:N	2.36	0.40
11:I:113:LYS:HG3	11:I:114:ILE:H	1.85	0.40
13:K:31:ASP:CG	13:K:32:PHE:H	2.29	0.40
13:K:35:VAL:HG22	13:K:130:LYS:CA	2.51	0.40
14:L:65:LEU:HD12	14:L:66:VAL:N	2.37	0.40
14:L:84:ALA:O	14:L:87:TYR:C	2.65	0.40
14:L:109:ALA:C	14:L:111:LEU:H	2.30	0.40
15:M:24:LEU:C	15:M:25:ARG:O	2.64	0.40
15:M:71:ARG:CB	15:M:108:GLY:O	2.69	0.40
16:N:48:ILE:HG23	16:N:49:VAL:HG13	2.04	0.40
16:N:95:ARG:CD	16:N:96:ARG:NH1	2.65	0.40
16:N:98:LYS:CB	16:N:100:TYR:HE1	2.34	0.40
17:O:74:LEU:HD11	17:O:110:VAL:HG22	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:80:ILE:HG22	17:O:84:LYS:HE3	2.03	0.40
21:S:45:VAL:O	21:S:45:VAL:HG23	2.22	0.40
21:S:55:TYR:CD1	21:S:55:TYR:C	3.00	0.40
22:T:4:ARG:O	22:T:57:ILE:HD11	2.21	0.40
22:T:150:LEU:HD21	22:T:154:ASP:HB2	2.00	0.40
24:V:51:VAL:CG1	24:V:60:PHE:H	2.34	0.40
25:W:3:LEU:CD1	25:W:8:LYS:HZ2	2.34	0.40
25:W:61:LEU:O	25:W:62:THR:HB	2.21	0.40
27:Y:6:VAL:HA	27:Y:7:PRO:HD3	1.75	0.40
30:b:32:HIS:O	30:b:34:GLN:NE2	2.55	0.40
31:y:22:G:C4	31:y:23:C:C4	3.10	0.40
31:y:32:A:C6	31:y:33:A:N6	2.90	0.40
31:y:175:C:C2'	31:y:176:C:C5'	2.78	0.40
31:y:296:U:N3	31:y:297:G:C6	2.89	0.40
31:y:323:U:C4	31:y:324:G:C6	3.10	0.40
31:y:352:C:C6	31:y:352:C:C3'	3.05	0.40
31:y:356:A:H2	31:y:368:U:O2	2.04	0.40
31:y:370:C:C2	31:y:371:G:C8	3.09	0.40
31:y:373:A:N3	31:y:481:G:N2	2.64	0.40
31:y:391:G:H2'	31:y:392:G:O4'	2.21	0.40
31:y:407:G:OP1	37:e:5:ILE:CG1	2.44	0.40
31:y:407:G:C2'	31:y:408:A:H5'	2.51	0.40
31:y:495:A:C4	31:y:496:A:C5	3.10	0.40
31:y:514:C:C6	31:y:514:C:C4'	3.05	0.40
31:y:560:U:O2	31:y:566:G:C4'	2.70	0.40
31:y:686:U:C5'	44:l:42:TRP:HE1	2.34	0.40
31:y:692:U:H1'	31:y:695:A:C8	2.56	0.40
31:y:707:C:H2'	31:y:708:C:O5'	2.22	0.40
31:y:742:G:O2'	31:y:743:U:H5'	2.22	0.40
31:y:864:A:OP2	38:f:85:GLY:HA2	2.21	0.40
31:y:1044:A:H2'	31:y:1045:C:C6	2.56	0.40
31:y:1139:G:N3	31:y:1141:C:N4	2.69	0.40
31:y:1157:A:H1'	31:y:1181:G:C2	2.57	0.40
31:y:1220:G:O6	31:y:1221:G:O6	2.39	0.40
31:y:1243:C:N4	31:y:1294:G:H1	2.19	0.40
31:y:1395:C:H2'	31:y:1395:C:O2	2.21	0.40
31:y:1403:C:H1'	31:y:1500:A:C6	2.56	0.40
31:y:1494:G:C4	31:y:1495:U:C6	3.10	0.40
33:0:27:C:N3	33:0:28:C:C4	2.89	0.40
35:c:99:GLY:O	35:c:101:MET:N	2.55	0.40
35:c:114:ARG:HG3	35:c:118:LEU:HD21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:132:LYS:HD2	35:c:132:LYS:H	1.86	0.40
35:c:208:ILE:H	35:c:208:ILE:HG13	1.64	0.40
36:d:89:GLU:O	36:d:90:GLU:C	2.64	0.40
36:d:119:ARG:NH2	36:d:123:GLN:CG	2.82	0.40
36:d:148:GLY:CA	36:d:203:PHE:HB3	2.51	0.40
37:e:88:VAL:C	37:e:90:GLY:N	2.80	0.40
37:e:156:GLU:CG	37:e:157:LEU:H	2.34	0.40
38:f:11:ILE:N	38:f:32:VAL:HG12	2.26	0.40
38:f:90:VAL:N	38:f:123:LEU:HD23	2.36	0.40
39:g:101:ALA:CA	51:s:28:GLU:HG2	2.52	0.40
40:h:47:CYS:O	40:h:50:ILE:CB	2.65	0.40
40:h:58:PRO:HA	40:h:61:VAL:CG2	2.51	0.40
40:h:64:GLN:O	40:h:65:ALA:C	2.65	0.40
40:h:124:LEU:HD23	40:h:124:LEU:H	1.86	0.40
40:h:126:ASP:C	40:h:135:VAL:HG21	2.47	0.40
41:i:10:LEU:HB3	41:i:14:ARG:CZ	2.51	0.40
41:i:20:TYR:HD1	41:i:65:TYR:CG	2.38	0.40
41:i:52:ASP:OD2	41:i:57:PRO:HB3	2.22	0.40
42:j:17:VAL:C	42:j:18:PHE:CD1	3.00	0.40
43:k:78:ASN:N	43:k:78:ASN:ND2	2.68	0.40
44:l:71:LYS:C	44:l:73:MET:N	2.80	0.40
44:l:95:ILE:CA	44:l:98:LEU:HD11	2.26	0.40
46:n:84:ILE:HG13	46:n:85:GLY:H	1.86	0.40
47:o:58:LYS:HA	47:o:58:LYS:HD2	1.70	0.40
48:p:14:GLU:HB3	48:p:15:PHE:CE1	2.56	0.40
49:q:1:MET:C	49:q:3:LYS:N	2.79	0.40
53:u:27:LYS:O	53:u:28:ALA:C	2.65	0.40
54:v:19:GLY:O	54:v:23:PRO:HD3	2.21	0.40

All (3) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1457:A:OP1	1:w:1457:A:OP1[6_555]	1.38	0.82
9:G:89:TYR:O	31:y:357:G:O2'[4_555]	2.01	0.19
9:G:91:SER:O	31:y:368:U:OP1[4_555]	2.19	0.01

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	A	123/229 (54%)	54 (44%)	39 (32%)	30 (24%)	0	0
4	B	270/276 (98%)	103 (38%)	84 (31%)	83 (31%)	0	0
5	C	199/206 (97%)	89 (45%)	48 (24%)	62 (31%)	0	0
6	D	192/205 (94%)	76 (40%)	54 (28%)	62 (32%)	0	0
7	E	178/182 (98%)	84 (47%)	53 (30%)	41 (23%)	0	0
8	F	171/180 (95%)	76 (44%)	53 (31%)	42 (25%)	0	0
9	G	146/148 (99%)	75 (51%)	30 (20%)	41 (28%)	0	0
10	H	136/163 (83%)	48 (35%)	40 (29%)	48 (35%)	0	0
11	I	120/122 (98%)	50 (42%)	37 (31%)	33 (28%)	0	0
12	J	144/150 (96%)	59 (41%)	39 (27%)	46 (32%)	0	0
13	K	135/141 (96%)	52 (38%)	44 (33%)	39 (29%)	0	0
14	L	116/118 (98%)	60 (52%)	28 (24%)	28 (24%)	0	0
15	M	104/112 (93%)	40 (38%)	31 (30%)	33 (32%)	0	0
16	N	135/146 (92%)	59 (44%)	36 (27%)	40 (30%)	0	0
17	O	115/118 (98%)	64 (56%)	27 (24%)	24 (21%)	0	1
18	P	99/101 (98%)	30 (30%)	32 (32%)	37 (37%)	0	0
19	Q	107/113 (95%)	49 (46%)	30 (28%)	28 (26%)	0	0
20	R	90/96 (94%)	28 (31%)	29 (32%)	33 (37%)	0	0
21	S	101/110 (92%)	36 (36%)	34 (34%)	31 (31%)	0	0
22	T	183/206 (89%)	104 (57%)	41 (22%)	38 (21%)	0	1
23	U	74/85 (87%)	35 (47%)	23 (31%)	16 (22%)	0	1
24	V	86/98 (88%)	30 (35%)	31 (36%)	25 (29%)	0	0
25	W	60/72 (83%)	28 (47%)	12 (20%)	20 (33%)	0	0
26	X	58/60 (97%)	32 (55%)	15 (26%)	11 (19%)	0	1
27	Y	54/60 (90%)	22 (41%)	12 (22%)	20 (37%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	Z	46/49 (94%)	25 (54%)	9 (20%)	12 (26%)	0	0
29	a	61/65 (94%)	20 (33%)	22 (36%)	19 (31%)	0	0
30	b	33/37 (89%)	22 (67%)	5 (15%)	6 (18%)	0	1
35	c	232/256 (91%)	109 (47%)	66 (28%)	57 (25%)	0	0
36	d	204/239 (85%)	98 (48%)	49 (24%)	57 (28%)	0	0
37	e	206/209 (99%)	99 (48%)	44 (21%)	63 (31%)	0	0
38	f	148/162 (91%)	89 (60%)	33 (22%)	26 (18%)	0	1
39	g	99/101 (98%)	61 (62%)	24 (24%)	14 (14%)	0	3
40	h	153/156 (98%)	84 (55%)	40 (26%)	29 (19%)	0	1
41	i	136/138 (99%)	71 (52%)	35 (26%)	30 (22%)	0	0
42	j	125/128 (98%)	73 (58%)	31 (25%)	21 (17%)	0	2
43	k	96/105 (91%)	50 (52%)	24 (25%)	22 (23%)	0	0
44	l	114/129 (88%)	59 (52%)	28 (25%)	27 (24%)	0	0
45	m	122/132 (92%)	51 (42%)	32 (26%)	39 (32%)	0	0
46	n	123/126 (98%)	53 (43%)	35 (28%)	35 (28%)	0	0
47	o	58/61 (95%)	22 (38%)	19 (33%)	17 (29%)	0	0
48	p	86/89 (97%)	46 (54%)	23 (27%)	17 (20%)	0	1
49	q	81/88 (92%)	37 (46%)	28 (35%)	16 (20%)	0	1
50	r	102/105 (97%)	46 (45%)	31 (30%)	25 (24%)	0	0
51	s	71/88 (81%)	42 (59%)	12 (17%)	17 (24%)	0	0
52	t	78/93 (84%)	26 (33%)	31 (40%)	21 (27%)	0	0
53	u	97/106 (92%)	42 (43%)	37 (38%)	18 (19%)	0	1
54	v	22/27 (82%)	11 (50%)	7 (32%)	4 (18%)	0	1
All	All	5689/6186 (92%)	2619 (46%)	1567 (28%)	1503 (26%)	0	0

All (1503) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	63	VAL
3	A	179	ALA
3	A	180	SER
3	A	201	LYS
3	A	203	GLU
3	A	209	PHE

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Mol	Chain	Res	Type
3	A	210	LEU
3	A	224	ARG
4	B	4	LYS
4	B	15	PHE
4	B	28	GLU
4	B	39	LYS
4	B	53	PHE
4	B	58	HIS
4	B	75	ILE
4	B	80	ALA
4	B	81	ALA
4	B	83	GLU
4	B	90	ALA
4	B	99	ASP
4	B	105	ILE
4	B	115	GLN
4	B	124	PRO
4	B	127	VAL
4	B	146	GLU
4	B	149	PRO
4	B	157	ARG
4	B	158	ALA
4	B	178	PRO
4	B	181	GLU
4	B	196	VAL
4	B	198	ASN
4	B	223	GLY
4	B	224	ALA
4	B	227	ASN
4	B	228	PRO
4	B	229	VAL
4	B	244	ARG
4	B	248	SER
4	B	249	PRO
4	B	257	LEU
4	B	262	ARG
4	B	272	ALA
5	C	11	MET
5	C	12	THR
5	C	16	ARG
5	C	37	ARG
5	C	60	ASN

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Mol	Chain	Res	Type
5	C	61	ARG
5	C	64	LYS
5	C	77	ILE
5	C	82	ARG
5	C	89	ASP
5	C	116	VAL
5	C	131	ALA
5	C	134	ILE
5	C	143	ASN
5	C	149	ARG
5	C	154	LYS
5	C	155	LYS
5	C	157	ALA
5	C	178	GLU
5	C	187	ALA
5	C	198	VAL
5	C	201	THR
6	D	15	LEU
6	D	17	ALA
6	D	23	ILE
6	D	26	HIS
6	D	30	GLU
6	D	48	THR
6	D	57	ARG
6	D	58	LYS
6	D	59	ILE
6	D	60	TRP
6	D	65	THR
6	D	87	PRO
6	D	92	TYR
6	D	101	ARG
6	D	119	LEU
6	D	120	LEU
6	D	121	VAL
6	D	122	GLU
6	D	128	ASN
6	D	148	SER
6	D	157	LEU
6	D	165	LEU
6	D	172	ALA
6	D	196	VAL
7	E	6	ALA

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Mol	Chain	Res	Type
7	E	8	LYS
7	E	13	GLU
7	E	20	ILE
7	E	23	PHE
7	E	33	ARG
7	E	49	ASP
7	E	60	LEU
7	E	84	LYS
7	E	86	MET
7	E	88	ILE
7	E	116	ASP
8	F	42	ARG
8	F	55	PRO
8	F	58	GLU
8	F	109	PHE
8	F	118	PRO
8	F	126	PRO
8	F	152	ARG
8	F	153	LYS
8	F	155	SER
8	F	160	LYS
8	F	162	ILE
8	F	178	ALA
9	G	2	LYS
9	G	9	LEU
9	G	14	ASP
9	G	21	VAL
9	G	25	TYR
9	G	35	LEU
9	G	38	LEU
9	G	74	ASN
9	G	82	ARG
9	G	88	ILE
9	G	91	SER
9	G	92	VAL
9	G	93	THR
9	G	120	ILE
9	G	125	GLU
9	G	138	ILE
9	G	147	GLN
10	H	27	TYR
10	H	34	PRO

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Mol	Chain	Res	Type
10	H	40	ASP
10	H	51	THR
10	H	58	ARG
10	H	67	PRO
10	H	74	PHE
10	H	79	ASN
10	H	83	ILE
10	H	85	VAL
10	H	111	GLU
10	H	114	LEU
10	H	121	VAL
10	H	125	ALA
10	H	130	LEU
10	H	146	TYR
10	H	147	ALA
10	H	156	GLN
10	H	157	ARG
11	I	5	GLN
11	I	28	SER
11	I	48	PRO
11	I	51	ALA
11	I	64	ARG
11	I	67	LYS
11	I	70	LYS
11	I	87	ILE
11	I	91	LEU
11	I	102	VAL
11	I	114	ILE
11	I	115	VAL
12	J	14	LYS
12	J	19	VAL
12	J	23	PRO
12	J	35	HIS
12	J	46	LYS
12	J	47	ASP
12	J	51	PHE
12	J	56	SER
12	J	61	ARG
12	J	71	VAL
12	J	83	VAL
12	J	86	LYS
12	J	90	ARG

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Mol	Chain	Res	Type
12	J	97	PRO
12	J	101	VAL
12	J	108	LYS
12	J	115	LEU
12	J	129	ALA
12	J	148	LEU
13	K	4	PRO
13	K	8	LYS
13	K	9	TYR
13	K	12	GLN
13	K	18	LYS
13	K	21	THR
13	K	22	LYS
13	K	27	VAL
13	K	32	PHE
13	K	45	GLN
13	K	52	VAL
13	K	59	ARG
13	K	63	LYS
13	K	68	ILE
13	K	73	PRO
13	K	81	VAL
13	K	82	ARG
13	K	89	ASN
13	K	90	VAL
13	K	111	GLU
13	K	133	ARG
14	L	2	ARG
14	L	4	LEU
14	L	5	LYS
14	L	8	ARG
14	L	10	LEU
14	L	12	ARG
14	L	39	PRO
14	L	43	GLU
14	L	45	ARG
14	L	60	LEU
14	L	62	ALA
14	L	64	ARG
14	L	67	LEU
14	L	72	ASP
14	L	74	LYS

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Mol	Chain	Res	Type
14	L	117	VAL
15	M	9	ARG
15	M	10	ARG
15	M	12	PHE
15	M	14	VAL
15	M	18	ILE
15	M	25	ARG
15	M	35	ILE
15	M	43	GLU
15	M	45	GLY
15	M	48	LEU
15	M	69	VAL
15	M	73	LEU
15	M	85	VAL
15	M	86	ALA
15	M	87	PHE
15	M	92	TYR
16	N	2	ASN
16	N	22	PHE
16	N	24	PRO
16	N	30	VAL
16	N	33	LYS
16	N	36	GLU
16	N	42	ILE
16	N	47	GLY
16	N	49	VAL
16	N	55	ASN
16	N	65	LYS
16	N	66	VAL
16	N	67	SER
16	N	79	HIS
16	N	88	ILE
16	N	90	GLN
16	N	107	ASP
17	O	9	VAL
17	O	26	GLY
17	O	49	HIS
17	O	62	ILE
17	O	64	ARG
17	O	76	TYR
17	O	77	SER
17	O	86	ALA

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Mol	Chain	Res	Type
17	O	91	ASP
17	O	93	LYS
17	O	96	ALA
17	O	112	ARG
18	P	5	VAL
18	P	15	GLU
18	P	16	PRO
18	P	22	VAL
18	P	27	ALA
18	P	28	GLU
18	P	47	VAL
18	P	50	PRO
18	P	51	VAL
18	P	66	ARG
18	P	74	LYS
18	P	77	ALA
18	P	79	VAL
18	P	84	LYS
18	P	90	PRO
18	P	99	ILE
18	P	100	ARG
19	Q	18	ARG
19	Q	30	GLU
19	Q	31	GLU
19	Q	35	ILE
19	Q	43	GLY
19	Q	45	TYR
19	Q	47	VAL
19	Q	63	ASP
19	Q	66	GLU
19	Q	88	ARG
19	Q	96	ILE
19	Q	103	ILE
20	R	5	TYR
20	R	11	PRO
20	R	12	VAL
20	R	14	SER
20	R	35	THR
20	R	37	THR
20	R	42	ALA
20	R	52	VAL
20	R	58	HIS

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Mol	Chain	Res	Type
20	R	59	VAL
20	R	60	ARG
20	R	64	LYS
20	R	65	ARG
20	R	69	TYR
20	R	81	VAL
20	R	82	GLN
20	R	84	ALA
20	R	88	LYS
20	R	89	ILE
21	S	9	LYS
21	S	13	VAL
21	S	37	VAL
21	S	39	VAL
21	S	52	SER
21	S	55	TYR
21	S	60	PHE
21	S	61	ILE
21	S	66	PRO
21	S	68	HIS
21	S	74	PRO
21	S	75	ILE
21	S	88	LYS
21	S	90	LEU
21	S	94	LYS
21	S	99	CYS
21	S	101	LYS
22	T	7	ALA
22	T	13	GLU
22	T	15	PRO
22	T	16	SER
22	T	41	LEU
22	T	42	VAL
22	T	46	LYS
22	T	72	ARG
22	T	73	GLN
22	T	78	LYS
22	T	83	PRO
22	T	95	PRO
22	T	120	ILE
22	T	153	SER
22	T	154	ASP

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Mol	Chain	Res	Type
22	T	155	LEU
22	T	165	VAL
22	T	184	ALA
23	U	20	ARG
23	U	30	VAL
23	U	31	VAL
23	U	47	PRO
23	U	58	THR
23	U	63	VAL
23	U	64	ASP
23	U	81	VAL
24	V	11	ARG
24	V	24	ALA
24	V	33	LYS
24	V	66	HIS
24	V	69	LYS
24	V	70	VAL
24	V	75	GLU
24	V	82	LEU
24	V	83	GLU
24	V	85	LEU
24	V	86	SER
25	W	9	GLN
25	W	13	ALA
25	W	32	LEU
25	W	33	MET
25	W	46	GLN
25	W	54	LYS
26	X	8	LEU
26	X	9	VAL
26	X	12	PRO
26	X	30	ARG
26	X	57	GLU
27	Y	8	LYS
27	Y	35	GLU
27	Y	51	TYR
27	Y	52	TYR
27	Y	55	ARG
28	Z	2	LYS
28	Z	3	ARG
28	Z	9	ARG
28	Z	17	GLY

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Mol	Chain	Res	Type
28	Z	18	PHE
28	Z	22	MET
28	Z	44	PRO
29	a	6	THR
29	a	18	ALA
29	a	19	SER
29	a	29	LYS
29	a	30	ARG
29	a	36	LYS
29	a	40	GLU
29	a	41	ILE
29	a	42	ARG
29	a	51	ALA
29	a	57	ARG
30	b	3	VAL
30	b	10	ILE
35	c	13	ALA
35	c	21	ARG
35	c	24	TRP
35	c	45	GLN
35	c	47	THR
35	c	58	ILE
35	c	107	THR
35	c	109	SER
35	c	130	ARG
35	c	157	ARG
35	c	160	ASP
35	c	172	ILE
35	c	174	VAL
35	c	181	PHE
35	c	190	THR
35	c	195	ASP
35	c	207	ALA
36	d	4	LYS
36	d	12	LEU
36	d	18	TRP
36	d	20	SER
36	d	29	TYR
36	d	30	ARG
36	d	43	LEU
36	d	45	LYS
36	d	47	LEU

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Mol	Chain	Res	Type
36	d	49	SER
36	d	50	ALA
36	d	56	ASP
36	d	61	ALA
36	d	62	ASP
36	d	108	ASN
36	d	127	ARG
36	d	128	PHE
36	d	133	ALA
36	d	146	ALA
36	d	152	ILE
36	d	156	ARG
36	d	161	GLU
36	d	170	GLN
36	d	195	VAL
37	e	22	LYS
37	e	34	GLU
37	e	35	ARG
37	e	52	SER
37	e	59	ARG
37	e	66	ARG
37	e	67	ILE
37	e	79	PHE
37	e	81	GLU
37	e	111	ALA
37	e	113	SER
37	e	140	VAL
37	e	148	VAL
37	e	152	SER
37	e	156	GLU
37	e	178	VAL
37	e	196	LEU
37	e	205	GLU
37	e	206	PHE
38	f	56	GLN
38	f	70	PRO
38	f	73	ASN
38	f	77	PRO
38	f	84	PHE
38	f	144	THR
38	f	152	ARG
39	g	45	LEU

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Mol	Chain	Res	Type
39	g	95	GLU
39	g	99	ALA
40	h	4	ARG
40	h	31	MET
40	h	32	ARG
40	h	65	ALA
40	h	80	VAL
40	h	113	GLU
40	h	117	ALA
40	h	118	VAL
40	h	119	ARG
41	i	19	VAL
41	i	25	ASP
41	i	27	PRO
41	i	50	ARG
41	i	60	ARG
41	i	68	ARG
41	i	79	VAL
41	i	97	VAL
41	i	132	GLU
42	j	3	GLN
42	j	37	PHE
42	j	41	VAL
42	j	91	ASP
42	j	105	ASP
42	j	117	HIS
43	k	18	ALA
43	k	26	ALA
43	k	30	SER
43	k	57	LYS
43	k	58	ASP
43	k	72	VAL
43	k	94	VAL
44	l	54	ARG
44	l	71	LYS
44	l	91	ARG
44	l	123	LYS
45	m	7	ASN
45	m	8	GLN
45	m	24	PRO
45	m	28	GLY
45	m	37	THR

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Mol	Chain	Res	Type
45	m	40	ARG
45	m	46	LYS
45	m	65	VAL
45	m	72	GLU
45	m	73	GLY
45	m	74	HIS
45	m	75	ASN
45	m	78	GLU
45	m	103	VAL
45	m	104	TYR
45	m	109	VAL
45	m	119	TYR
46	n	7	VAL
46	n	12	ASN
46	n	19	LEU
46	n	27	LYS
46	n	57	ARG
46	n	77	ASN
46	n	94	ARG
46	n	98	VAL
46	n	108	ARG
46	n	113	PRO
46	n	122	LYS
46	n	124	PRO
47	o	6	LEU
47	o	8	GLU
47	o	16	PHE
47	o	21	TYR
47	o	50	LYS
47	o	56	VAL
47	o	60	SER
48	p	3	ILE
48	p	6	GLU
48	p	27	VAL
48	p	28	GLN
48	p	29	VAL
48	p	45	VAL
48	p	46	HIS
48	p	49	ASP
49	q	3	LYS
49	q	13	HIS
49	q	17	TYR

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Mol	Chain	Res	Type
49	q	23	ASP
49	q	26	ARG
49	q	34	GLU
49	q	36	ILE
49	q	64	ALA
49	q	66	PRO
49	q	77	ALA
50	r	27	PHE
50	r	33	GLY
50	r	47	PRO
50	r	55	ASP
50	r	74	LEU
50	r	75	ARG
50	r	95	TYR
51	s	17	SER
51	s	48	GLY
51	s	83	GLU
52	t	5	LEU
52	t	6	LYS
52	t	9	VAL
52	t	37	ARG
52	t	43	GLU
52	t	44	MET
52	t	47	HIS
52	t	52	TYR
52	t	61	TYR
52	t	67	VAL
52	t	69	HIS
52	t	79	THR
53	u	48	LYS
53	u	75	ASN
53	u	93	GLU
54	v	22	ARG
54	v	23	PRO
3	A	9	ARG
3	A	15	VAL
3	A	18	ASN
3	A	30	VAL
3	A	163	GLU
3	A	171	ALA
3	A	196	ALA
4	B	41	GLY

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Mol	Chain	Res	Type
4	B	45	ASN
4	B	54	ARG
4	B	65	ILE
4	B	91	ARG
4	B	98	VAL
4	B	113	VAL
4	B	114	GLY
4	B	152	GLY
4	B	156	ALA
4	B	201	HIS
4	B	206	LEU
4	B	222	ARG
4	B	232	PRO
4	B	235	GLY
4	B	237	GLU
4	B	245	PRO
4	B	253	GLN
4	B	258	LYS
4	B	263	ARG
5	C	13	ARG
5	C	35	GLN
5	C	44	TYR
5	C	55	ASN
5	C	68	ALA
5	C	86	PRO
5	C	88	GLY
5	C	112	GLY
5	C	127	ASP
5	C	132	HIS
5	C	133	LYS
5	C	139	GLY
5	C	151	TYR
5	C	184	VAL
6	D	28	LEU
6	D	38	LYS
6	D	53	ALA
6	D	63	LYS
6	D	66	GLY
6	D	71	GLY
6	D	73	ILE
6	D	83	VAL
6	D	97	PRO

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Mol	Chain	Res	Type
6	D	117	LYS
6	D	125	ALA
6	D	145	GLY
6	D	154	GLY
6	D	160	ARG
6	D	185	GLU
6	D	191	LEU
7	E	59	GLU
7	E	75	LYS
7	E	79	ASN
7	E	87	PRO
7	E	151	ALA
7	E	163	ALA
7	E	164	GLU
7	E	173	LEU
8	F	8	PRO
8	F	18	GLU
8	F	24	VAL
8	F	40	GLU
8	F	54	ARG
8	F	65	HIS
8	F	71	LEU
9	G	20	ASP
9	G	22	LYS
9	G	39	ALA
9	G	81	VAL
9	G	83	ALA
9	G	86	THR
9	G	94	ALA
9	G	107	ILE
9	G	113	ARG
9	G	117	GLU
9	G	134	PRO
9	G	137	PRO
10	H	39	ILE
10	H	42	GLU
10	H	50	ALA
10	H	84	ARG
10	H	108	ILE
10	H	122	LEU
10	H	124	HIS
10	H	127	LYS

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Mol	Chain	Res	Type
10	H	148	GLY
11	I	13	ASN
11	I	29	ASN
11	I	49	ARG
11	I	85	VAL
11	I	86	ILE
11	I	88	ASN
11	I	94	ARG
11	I	103	ALA
12	J	11	GLY
12	J	28	GLY
12	J	32	THR
12	J	40	SER
12	J	65	ARG
12	J	67	MET
12	J	70	GLN
12	J	93	GLY
12	J	102	ARG
12	J	104	GLY
12	J	141	ALA
13	K	2	LEU
13	K	20	ALA
13	K	25	ASP
13	K	46	GLN
13	K	115	MET
13	K	136	ALA
14	L	28	LEU
14	L	32	GLY
14	L	102	GLU
15	M	39	ILE
15	M	42	ASP
15	M	67	ARG
15	M	68	GLN
15	M	91	PRO
16	N	4	GLY
16	N	28	VAL
16	N	45	PHE
16	N	46	GLU
16	N	68	TYR
16	N	71	GLY
16	N	77	PRO
16	N	94	ALA

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Mol	Chain	Res	Type
16	N	97	ALA
16	N	120	ARG
17	O	58	ARG
17	O	67	ALA
17	O	92	ARG
17	O	113	ALA
17	O	115	ALA
18	P	8	GLY
18	P	14	VAL
18	P	43	GLU
18	P	45	THR
18	P	76	LYS
18	P	91	TYR
18	P	93	GLU
19	Q	32	ALA
19	Q	41	LYS
20	R	6	ASP
20	R	13	LEU
20	R	20	GLY
20	R	25	LYS
20	R	36	LYS
20	R	93	GLU
21	S	7	VAL
21	S	38	ILE
21	S	50	ARG
21	S	54	LYS
21	S	63	LYS
21	S	65	ALA
21	S	73	ARG
21	S	96	ILE
22	T	12	GLY
22	T	39	VAL
22	T	49	ARG
22	T	63	ASP
22	T	90	VAL
22	T	133	ILE
22	T	182	LYS
23	U	16	SER
23	U	50	ASN
24	V	12	PRO
24	V	23	LYS
24	V	44	PRO

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Mol	Chain	Res	Type
24	V	52	ARG
24	V	56	GLN
24	V	68	PRO
24	V	74	VAL
24	V	78	LYS
24	V	88	LYS
24	V	89	GLU
25	W	11	GLU
25	W	14	ARG
25	W	19	VAL
25	W	39	ALA
25	W	42	GLY
25	W	44	LEU
25	W	47	ASN
25	W	51	ARG
26	X	32	GLN
26	X	53	LEU
26	X	58	VAL
27	Y	18	ALA
27	Y	30	LEU
27	Y	34	PRO
27	Y	42	PRO
27	Y	57	VAL
28	Z	7	PRO
29	a	35	GLN
29	a	38	GLY
29	a	59	LYS
30	b	4	ARG
30	b	9	ARG
30	b	20	HIS
35	c	9	GLU
35	c	15	VAL
35	c	29	ALA
35	c	52	GLU
35	c	62	ALA
35	c	77	ALA
35	c	88	ALA
35	c	93	VAL
35	c	100	GLY
35	c	106	LYS
35	c	115	LEU
35	c	150	SER

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Mol	Chain	Res	Type
35	c	153	ARG
35	c	155	LEU
35	c	165	VAL
35	c	171	ALA
35	c	194	PRO
36	d	8	ILE
36	d	15	THR
36	d	36	ASP
36	d	48	TYR
36	d	51	GLY
36	d	63	ASN
36	d	90	GLU
36	d	98	ASN
36	d	109	PRO
36	d	132	ARG
36	d	164	ARG
36	d	178	LEU
36	d	196	LEU
36	d	200	ALA
37	e	5	ILE
37	e	18	LYS
37	e	19	LEU
37	e	24	GLU
37	e	29	PRO
37	e	85	LYS
37	e	88	VAL
37	e	91	SER
37	e	109	GLY
37	e	134	ASP
37	e	151	LYS
37	e	179	GLU
37	e	181	MET
37	e	204	ILE
38	f	49	PRO
38	f	100	VAL
38	f	104	ALA
38	f	117	ASP
38	f	126	ARG
38	f	131	ILE
39	g	7	ASN
39	g	16	GLN
40	h	7	ALA

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Mol	Chain	Res	Type
40	h	89	MET
40	h	116	ALA
40	h	128	ALA
40	h	153	HIS
41	i	20	TYR
41	i	24	THR
41	i	45	ILE
41	i	46	LYS
41	i	51	VAL
41	i	82	HIS
41	i	91	ARG
41	i	108	GLY
42	j	24	GLY
42	j	46	ALA
42	j	53	VAL
42	j	69	GLY
42	j	100	GLY
42	j	119	ALA
43	k	6	ILE
43	k	14	LYS
43	k	17	ASP
43	k	51	ARG
43	k	55	LYS
43	k	61	GLU
43	k	74	ILE
44	l	13	GLN
44	l	52	GLY
44	l	60	ALA
44	l	78	GLN
44	l	96	ARG
44	l	98	LEU
45	m	9	LEU
45	m	14	ARG
45	m	15	GLU
45	m	21	SER
45	m	36	CYS
45	m	44	PRO
45	m	71	GLY
45	m	99	ILE
45	m	115	SER
45	m	124	PRO
46	n	6	GLY

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Mol	Chain	Res	Type
46	n	20	THR
46	n	22	ILE
46	n	39	ILE
46	n	45	VAL
46	n	48	LEU
46	n	66	LEU
46	n	67	GLU
46	n	74	VAL
46	n	118	ALA
47	o	3	ARG
47	o	42	ILE
48	p	50	HIS
48	p	72	ARG
48	p	81	LEU
49	q	43	LYS
49	q	53	VAL
49	q	76	GLN
50	r	17	LYS
50	r	32	TYR
50	r	34	LYS
50	r	40	LYS
50	r	50	LYS
50	r	56	VAL
50	r	96	GLN
51	s	20	ALA
51	s	42	ARG
51	s	44	LEU
51	s	53	ARG
51	s	58	LEU
51	s	82	THR
51	s	85	LEU
52	t	3	ARG
52	t	51	VAL
52	t	66	MET
52	t	80	TYR
53	u	9	ASN
53	u	50	GLU
53	u	71	THR
53	u	80	ARG
53	u	99	LEU
54	v	18	TYR
3	A	8	TYR

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Mol	Chain	Res	Type
3	A	19	LYS
3	A	29	LEU
3	A	36	ALA
3	A	176	VAL
3	A	211	ARG
3	A	221	PRO
3	A	223	VAL
4	B	3	VAL
4	B	33	LEU
4	B	73	VAL
4	B	107	ALA
4	B	116	GLN
4	B	137	PRO
4	B	170	GLY
4	B	226	MET
4	B	236	GLY
4	B	238	GLY
4	B	239	ARG
4	B	242	ARG
5	C	53	PRO
5	C	56	PRO
5	C	117	MET
5	C	119	ARG
5	C	129	HIS
5	C	169	ASN
6	D	18	ASP
6	D	56	GLY
6	D	70	HIS
6	D	88	LYS
6	D	106	ALA
6	D	132	LYS
6	D	146	SER
6	D	163	ARG
6	D	167	TRP
6	D	173	PRO
6	D	186	ARG
7	E	9	ARG
7	E	82	LEU
7	E	138	GLN
7	E	152	LEU
8	F	9	ILE
8	F	13	LYS

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Mol	Chain	Res	Type
8	F	20	ALA
8	F	32	GLU
8	F	60	ARG
8	F	170	ARG
9	G	8	PRO
9	G	23	PRO
10	H	64	ASP
10	H	65	TRP
10	H	93	LYS
10	H	131	PRO
10	H	132	LYS
10	H	150	ASP
11	I	24	VAL
11	I	33	ALA
11	I	63	VAL
11	I	113	LYS
12	J	16	ARG
12	J	52	GLU
12	J	117	GLU
12	J	122	PRO
12	J	145	PRO
13	K	13	GLN
14	L	6	SER
14	L	42	LYS
15	M	17	ARG
15	M	20	ARG
15	M	56	LEU
15	M	72	ALA
16	N	12	SER
16	N	29	ARG
16	N	62	THR
16	N	96	ARG
16	N	103	ARG
16	N	135	VAL
17	O	25	TRP
17	O	47	TYR
17	O	57	PHE
17	O	87	GLY
17	O	90	VAL
17	O	99	ALA
18	P	29	PRO
19	Q	34	ASN

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Mol	Chain	Res	Type
19	Q	73	ALA
19	Q	87	PRO
19	Q	97	LYS
20	R	32	PRO
20	R	72	LYS
20	R	78	LYS
21	S	20	TYR
21	S	35	TYR
22	T	45	ASP
22	T	80	ARG
22	T	152	ALA
22	T	183	LEU
23	U	44	ARG
24	V	26	ARG
24	V	46	LEU
25	W	2	LYS
27	Y	7	PRO
27	Y	16	ARG
27	Y	24	ALA
27	Y	28	PRO
27	Y	32	PRO
27	Y	39	MET
28	Z	13	ALA
28	Z	31	LEU
28	Z	33	ARG
29	a	48	PHE
29	a	56	GLU
35	c	12	GLU
35	c	26	PRO
35	c	51	LEU
35	c	141	GLU
35	c	142	LEU
35	c	145	LEU
35	c	210	SER
35	c	212	GLN
36	d	17	ASP
36	d	40	ARG
36	d	110	ASN
36	d	122	GLU
37	e	10	ARG
37	e	36	ARG
37	e	37	PRO

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Mol	Chain	Res	Type
37	e	48	ALA
37	e	49	ARG
37	e	51	PRO
37	e	84	LYS
37	e	89	THR
37	e	122	ARG
37	e	168	ARG
37	e	174	LEU
37	e	202	LEU
37	e	208	SER
38	f	48	ALA
38	f	50	GLU
38	f	65	ASN
38	f	71	LEU
38	f	97	GLY
38	f	135	THR
39	g	41	GLU
39	g	82	ARG
40	h	17	VAL
40	h	68	ASN
40	h	93	PRO
40	h	100	ALA
40	h	129	GLU
40	h	130	GLY
41	i	16	ALA
41	i	106	GLY
41	i	121	ASP
42	j	29	ASN
42	j	97	LYS
42	j	111	ARG
43	k	8	LEU
43	k	13	HIS
43	k	39	PRO
43	k	71	LEU
44	l	15	ALA
44	l	59	TYR
44	l	72	ALA
44	l	101	SER
44	l	121	PRO
45	m	26	LEU
45	m	82	VAL
45	m	93	PRO

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Mol	Chain	Res	Type
45	m	111	ASP
45	m	120	GLY
46	n	29	ARG
46	n	105	THR
46	n	106	ASN
46	n	121	LYS
47	o	15	LYS
47	o	59	ALA
48	p	5	LYS
48	p	51	HIS
48	p	54	ARG
48	p	79	ARG
49	q	15	PRO
49	q	55	ARG
49	q	82	GLN
50	r	12	SER
50	r	13	ASP
50	r	30	PRO
50	r	41	LYS
50	r	45	HIS
50	r	46	ASP
51	s	84	LYS
51	s	87	ARG
52	t	42	PRO
52	t	54	GLY
53	u	43	LEU
53	u	98	PRO
54	v	24	ARG
3	A	168	LYS
4	B	57	GLY
4	B	106	ILE
4	B	204	ILE
5	C	18	ASP
5	C	45	THR
5	C	121	ASN
5	C	130	GLY
5	C	145	LYS
5	C	177	PRO
5	C	183	LEU
5	C	188	VAL
5	C	192	ASN
5	C	199	ARG

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Mol	Chain	Res	Type
6	D	39	ARG
6	D	61	PRO
6	D	80	GLY
6	D	91	ASP
6	D	96	LEU
6	D	104	GLY
6	D	116	GLY
7	E	22	ARG
7	E	73	ALA
7	E	124	SER
7	E	127	GLY
7	E	136	ARG
7	E	166	ASP
8	F	25	LYS
8	F	59	ARG
8	F	173	PRO
9	G	7	GLU
9	G	29	TYR
9	G	69	LYS
9	G	75	LEU
9	G	119	PRO
9	G	135	GLU
10	H	101	TYR
11	I	27	GLY
11	I	54	GLU
11	I	89	ASN
12	J	50	ARG
12	J	55	ARG
12	J	89	ALA
12	J	110	TYR
13	K	6	ARG
13	K	31	ASP
13	K	54	MET
13	K	132	VAL
14	L	41	ALA
14	L	50	HIS
14	L	52	ILE
14	L	84	ALA
15	M	37	ALA
15	M	62	LYS
15	M	64	GLU
16	N	31	SER

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Mol	Chain	Res	Type
16	N	80	SER
16	N	128	GLU
18	P	36	PRO
18	P	53	GLU
18	P	55	ALA
19	Q	5	ALA
19	Q	33	ARG
19	Q	44	ALA
19	Q	72	LYS
20	R	7	VAL
20	R	18	TYR
20	R	48	LYS
20	R	77	LYS
21	S	40	GLU
22	T	6	LYS
22	T	29	TYR
22	T	103	ARG
22	T	147	GLY
23	U	41	ARG
23	U	53	MET
23	U	69	PHE
25	W	35	LEU
25	W	56	GLN
26	X	44	ARG
26	X	51	ALA
27	Y	43	HIS
28	Z	20	ALA
29	a	32	LEU
29	a	54	GLU
35	c	46	LYS
35	c	97	TRP
35	c	110	GLN
35	c	216	SER
36	d	19	GLU
36	d	60	ALA
36	d	76	VAL
36	d	131	ARG
36	d	135	LYS
36	d	176	HIS
37	e	32	ALA
37	e	46	LYS
37	e	86	LYS

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Mol	Chain	Res	Type
38	f	40	ARG
38	f	128	PRO
38	f	136	MET
38	f	138	ALA
40	h	9	VAL
40	h	20	ASP
40	h	40	ALA
40	h	78	ARG
40	h	135	VAL
40	h	146	GLU
41	i	81	HIS
41	i	104	ARG
41	i	122	ARG
41	i	123	GLU
42	j	42	ARG
42	j	48	GLU
43	k	42	THR
44	l	35	PRO
44	l	55	LYS
44	l	79	SER
44	l	95	ILE
44	l	104	GLN
44	l	105	VAL
45	m	18	ARG
45	m	45	LYS
45	m	116	ARG
46	n	13	LYS
46	n	24	GLY
46	n	111	LYS
47	o	4	LYS
47	o	28	GLY
47	o	46	GLU
47	o	58	LYS
50	r	42	TYR
51	s	68	LYS
52	t	31	ILE
52	t	78	ARG
53	u	30	LYS
53	u	33	ILE
53	u	97	ALA
3	A	37	LYS
3	A	39	ASP

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Mol	Chain	Res	Type
4	B	35	LYS
4	B	117	VAL
4	B	118	VAL
5	C	67	PHE
5	C	73	GLU
6	D	8	SER
7	E	7	LEU
7	E	19	LEU
7	E	58	GLN
7	E	92	VAL
7	E	111	LEU
7	E	169	ALA
8	F	11	VAL
8	F	19	VAL
8	F	150	ALA
8	F	157	TYR
9	G	26	ALA
9	G	53	ALA
10	H	30	LYS
10	H	31	GLN
10	H	37	VAL
10	H	45	THR
10	H	78	VAL
10	H	145	VAL
10	H	155	ALA
11	I	10	VAL
11	I	69	VAL
11	I	99	PHE
12	J	31	ALA
12	J	45	LEU
12	J	140	ALA
13	K	5	ARG
13	K	7	MET
13	K	28	ALA
13	K	74	TYR
14	L	14	SER
14	L	109	ALA
15	M	30	ARG
15	M	32	LEU
15	M	88	ASP
16	N	6	LEU
16	N	74	ARG

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Mol	Chain	Res	Type
18	P	71	LEU
18	P	78	LYS
19	Q	69	LEU
19	Q	76	VAL
20	R	51	VAL
21	S	57	GLN
21	S	76	CYS
22	T	17	ALA
22	T	22	GLY
23	U	55	ARG
24	V	49	VAL
25	W	6	VAL
29	a	31	HIS
30	b	6	SER
35	c	20	GLU
35	c	67	THR
35	c	89	GLY
35	c	91	PRO
35	c	125	PRO
35	c	154	LEU
35	c	209	ARG
35	c	229	VAL
36	d	151	VAL
36	d	162	GLN
37	e	9	CYS
37	e	78	LEU
37	e	83	SER
37	e	87	GLY
37	e	124	GLY
38	f	93	PRO
38	f	143	ARG
39	g	23	LYS
39	g	61	LEU
39	g	77	ARG
39	g	88	VAL
40	h	33	ASP
42	j	23	ASN
43	k	40	LEU
43	k	77	PRO
44	l	40	ILE
44	l	43	SER
44	l	70	LYS

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Mol	Chain	Res	Type
44	l	117	ASN
45	m	13	GLY
46	n	28	ALA
46	n	40	ASN
46	n	78	ILE
46	n	84	ILE
47	o	37	PHE
50	r	51	TYR
50	r	64	PRO
53	u	45	GLN
53	u	47	GLY
53	u	100	ILE
3	A	58	ASN
3	A	204	GLY
4	B	141	VAL
4	B	159	ALA
5	C	15	PHE
5	C	39	PRO
5	C	52	LEU
5	C	72	VAL
5	C	162	ALA
6	D	52	VAL
6	D	149	VAL
6	D	171	LEU
7	E	10	LYS
7	E	44	GLY
7	E	97	ASP
8	F	66	GLY
8	F	75	ALA
8	F	93	GLY
8	F	121	ILE
10	H	59	GLY
10	H	95	TYR
10	H	109	PRO
12	J	48	PRO
12	J	62	LEU
12	J	72	PRO
12	J	106	LEU
13	K	69	PHE
15	M	28	VAL
15	M	65	VAL
17	O	74	LEU

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Mol	Chain	Res	Type
18	P	39	LEU
18	P	88	ARG
19	Q	9	TYR
19	Q	50	VAL
19	Q	54	ALA
22	T	175	VAL
22	T	177	PRO
23	U	15	ASP
25	W	55	ARG
25	W	61	LEU
26	X	59	VAL
27	Y	9	LYS
35	c	60	ASP
36	d	35	GLU
36	d	75	VAL
36	d	81	GLY
36	d	134	ILE
37	e	70	ILE
37	e	170	VAL
37	e	198	VAL
40	h	88	PRO
41	i	75	ARG
41	i	90	GLY
42	j	33	PHE
42	j	116	LYS
44	l	107	SER
45	m	31	PHE
47	o	48	ALA
48	p	19	PRO
50	r	6	LEU
51	s	66	LEU
51	s	78	LEU
51	s	81	PHE
52	t	49	ILE
3	A	175	PRO
3	A	183	PRO
4	B	74	GLY
4	B	174	ILE
4	B	256	GLY
8	F	17	VAL
9	G	34	GLY
9	G	111	PRO

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Mol	Chain	Res	Type
11	I	4	PRO
11	I	72	PRO
13	K	108	GLY
18	P	42	GLY
18	P	61	VAL
18	P	96	ILE
19	Q	12	ILE
35	c	124	SER
37	e	17	VAL
37	e	133	VAL
37	e	158	ILE
45	m	42	VAL
4	B	24	ILE
5	C	34	VAL
8	F	50	VAL
8	F	52	VAL
8	F	136	ILE
13	K	3	MET
18	P	37	VAL
21	S	49	VAL
24	V	58	ILE
27	Y	29	ILE
36	d	96	GLY
39	g	81	ILE
40	h	55	GLY
41	i	6	ILE
41	i	26	VAL
41	i	38	ILE
41	i	129	VAL
42	j	67	GLY
43	k	53	PRO
45	m	94	GLY
46	n	17	VAL
51	s	52	PRO
4	B	76	PRO
4	B	110	GLY
4	B	121	PRO
10	H	77	VAL
10	H	158	PRO
14	L	34	ILE
22	T	47	VAL
36	d	7	PRO

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Mol	Chain	Res	Type
37	e	7	PRO
37	e	180	GLY
38	f	96	PRO
46	n	53	VAL
53	u	88	VAL
4	B	160	GLY
5	C	189	PRO
7	E	32	PRO
8	F	29	PRO
10	H	117	HIS
16	N	72	VAL
18	P	52	VAL
27	Y	50	GLY
35	c	228	GLY
39	g	6	VAL
39	g	68	PRO
44	l	58	PRO
48	p	87	ILE
50	r	5	VAL
53	u	41	VAL
5	C	173	VAL
7	E	85	GLY
11	I	110	GLY
16	N	70	VAL
36	d	55	VAL
37	e	44	GLY
8	F	128	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	A	106/181 (59%)	89 (84%)	17 (16%)	2	15
4	B	214/218 (98%)	171 (80%)	43 (20%)	1	8
5	C	163/166 (98%)	124 (76%)	39 (24%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	D	154/162 (95%)	125 (81%)	29 (19%)	1	10
7	E	154/156 (99%)	126 (82%)	28 (18%)	2	11
8	F	142/148 (96%)	118 (83%)	24 (17%)	2	13
9	G	124/124 (100%)	100 (81%)	24 (19%)	1	9
10	H	117/139 (84%)	91 (78%)	26 (22%)	1	7
11	I	100/100 (100%)	78 (78%)	22 (22%)	1	7
12	J	112/116 (97%)	89 (80%)	23 (20%)	1	8
13	K	108/111 (97%)	79 (73%)	29 (27%)	0	4
14	L	101/101 (100%)	77 (76%)	24 (24%)	1	6
15	M	84/88 (96%)	69 (82%)	15 (18%)	2	12
16	N	121/128 (94%)	94 (78%)	27 (22%)	1	6
17	O	93/94 (99%)	79 (85%)	14 (15%)	3	16
18	P	82/82 (100%)	69 (84%)	13 (16%)	2	15
19	Q	89/92 (97%)	74 (83%)	15 (17%)	2	13
20	R	74/78 (95%)	62 (84%)	12 (16%)	2	14
21	S	86/91 (94%)	75 (87%)	11 (13%)	4	21
22	T	163/179 (91%)	138 (85%)	25 (15%)	3	16
23	U	61/67 (91%)	48 (79%)	13 (21%)	1	7
24	V	73/83 (88%)	59 (81%)	14 (19%)	1	9
25	W	58/67 (87%)	42 (72%)	16 (28%)	0	3
26	X	52/52 (100%)	42 (81%)	10 (19%)	1	9
27	Y	49/52 (94%)	43 (88%)	6 (12%)	5	22
28	Z	41/42 (98%)	32 (78%)	9 (22%)	1	7
29	a	53/55 (96%)	39 (74%)	14 (26%)	0	4
30	b	33/34 (97%)	30 (91%)	3 (9%)	9	32
35	c	202/220 (92%)	153 (76%)	49 (24%)	1	5
36	d	160/188 (85%)	129 (81%)	31 (19%)	1	9
37	e	180/181 (99%)	142 (79%)	38 (21%)	1	7
38	f	115/123 (94%)	93 (81%)	22 (19%)	1	10
39	g	90/90 (100%)	77 (86%)	13 (14%)	3	18
40	h	126/127 (99%)	112 (89%)	14 (11%)	6	25

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
41	i	119/119 (100%)	100 (84%)	19 (16%)	2	15
42	j	98/99 (99%)	82 (84%)	16 (16%)	2	14
43	k	88/92 (96%)	77 (88%)	11 (12%)	4	21
44	l	88/99 (89%)	73 (83%)	15 (17%)	2	13
45	m	104/109 (95%)	84 (81%)	20 (19%)	1	9
46	n	100/101 (99%)	83 (83%)	17 (17%)	2	13
47	o	49/50 (98%)	39 (80%)	10 (20%)	1	8
48	p	79/80 (99%)	65 (82%)	14 (18%)	2	12
49	q	72/74 (97%)	59 (82%)	13 (18%)	2	12
50	r	96/97 (99%)	76 (79%)	20 (21%)	1	8
51	s	64/77 (83%)	53 (83%)	11 (17%)	2	13
52	t	71/80 (89%)	63 (89%)	8 (11%)	5	25
53	u	76/82 (93%)	69 (91%)	7 (9%)	8	32
54	v	19/22 (86%)	17 (90%)	2 (10%)	6	28
All	All	4803/5116 (94%)	3908 (81%)	895 (19%)	1	10

All (895) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	7	ARG
3	A	8	TYR
3	A	9	ARG
3	A	18	ASN
3	A	19	LYS
3	A	23	ILE
3	A	30	VAL
3	A	38	PHE
3	A	47	LYS
3	A	53	ARG
3	A	165	ARG
3	A	197	LEU
3	A	201	LYS
3	A	209	PHE
3	A	212	SER
3	A	214	TYR
3	A	224	ARG
4	B	9	TYR

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Mol	Chain	Res	Type
4	B	24	ILE
4	B	27	THR
4	B	37	LEU
4	B	43	ARG
4	B	60	ARG
4	B	66	ASP
4	B	67	PHE
4	B	68	LYS
4	B	88	ARG
4	B	92	ILE
4	B	94	LEU
4	B	95	LEU
4	B	96	HIS
4	B	102	LYS
4	B	111	LEU
4	B	115	GLN
4	B	129	ASN
4	B	133	LEU
4	B	135	PHE
4	B	136	ILE
4	B	146	GLU
4	B	149	PRO
4	B	150	LYS
4	B	155	LEU
4	B	173	VAL
4	B	175	LEU
4	B	192	THR
4	B	198	ASN
4	B	201	HIS
4	B	204	ILE
4	B	206	LEU
4	B	208	LYS
4	B	215	LEU
4	B	217	ARG
4	B	230	ASP
4	B	242	ARG
4	B	249	PRO
4	B	250	TRP
4	B	255	LYS
4	B	257	LEU
4	B	263	ARG
4	B	269	PHE

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Mol	Chain	Res	Type
5	C	4	ILE
5	C	9	VAL
5	C	16	ARG
5	C	19	ARG
5	C	23	VAL
5	C	27	LEU
5	C	33	VAL
5	C	34	VAL
5	C	42	ASP
5	C	44	TYR
5	C	47	VAL
5	C	49	LEU
5	C	61	ARG
5	C	67	PHE
5	C	79	ARG
5	C	81	ILE
5	C	89	ASP
5	C	92	THR
5	C	93	VAL
5	C	105	THR
5	C	113	PHE
5	C	117	MET
5	C	119	ARG
5	C	134	ILE
5	C	141	ILE
5	C	144	ARG
5	C	154	LYS
5	C	156	MET
5	C	167	VAL
5	C	174	ASP
5	C	175	VAL
5	C	179	GLU
5	C	181	LEU
5	C	182	LEU
5	C	188	VAL
5	C	200	GLU
5	C	201	THR
5	C	202	LYS
5	C	203	LYS
6	D	7	LEU
6	D	12	ARG
6	D	26	HIS

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Mol	Chain	Res	Type
6	D	27	LEU
6	D	29	TRP
6	D	41	ARG
6	D	54	TYR
6	D	59	ILE
6	D	60	TRP
6	D	69	ARG
6	D	77	ILE
6	D	78	PHE
6	D	85	PHE
6	D	94	TYR
6	D	97	PRO
6	D	109	VAL
6	D	112	ARG
6	D	117	LYS
6	D	132	LYS
6	D	144	ASP
6	D	147	GLU
6	D	165	LEU
6	D	171	LEU
6	D	178	VAL
6	D	179	TYR
6	D	180	ASP
6	D	181	ILE
6	D	182	VAL
6	D	191	LEU
7	E	10	LYS
7	E	11	TYR
7	E	12	TYR
7	E	25	TYR
7	E	26	GLN
7	E	31	VAL
7	E	33	ARG
7	E	53	LEU
7	E	55	LYS
7	E	60	LEU
7	E	71	THR
7	E	82	LEU
7	E	90	LEU
7	E	95	ARG
7	E	99	MET
7	E	103	LEU

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Mol	Chain	Res	Type
7	E	125	PHE
7	E	133	LEU
7	E	137	GLU
7	E	139	LEU
7	E	140	ILE
7	E	144	ILE
7	E	148	MET
7	E	155	MET
7	E	159	VAL
7	E	164	GLU
7	E	176	LEU
7	E	178	PHE
8	F	9	ILE
8	F	15	VAL
8	F	60	ARG
8	F	65	HIS
8	F	68	THR
8	F	72	ILE
8	F	87	LEU
8	F	88	LEU
8	F	89	ILE
8	F	92	ILE
8	F	105	LEU
8	F	121	ILE
8	F	123	PHE
8	F	125	VAL
8	F	131	VAL
8	F	138	LYS
8	F	139	GLN
8	F	140	LYS
8	F	144	VAL
8	F	149	ARG
8	F	152	ARG
8	F	162	ILE
8	F	171	LEU
8	F	172	LYS
9	G	4	ILE
9	G	10	GLU
9	G	12	LEU
9	G	27	ARG
9	G	33	ARG
9	G	35	LEU

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Mol	Chain	Res	Type
9	G	38	LEU
9	G	41	GLU
9	G	44	LEU
9	G	58	LEU
9	G	85	GLU
9	G	89	TYR
9	G	95	LYS
9	G	97	ILE
9	G	99	GLU
9	G	101	LEU
9	G	107	ILE
9	G	109	ILE
9	G	118	LYS
9	G	120	ILE
9	G	121	LYS
9	G	123	LEU
9	G	138	ILE
9	G	139	GLN
10	H	34	PRO
10	H	35	ARG
10	H	48	ARG
10	H	49	LEU
10	H	52	LYS
10	H	56	LEU
10	H	60	LYS
10	H	62	ARG
10	H	64	ASP
10	H	67	PRO
10	H	74	PHE
10	H	79	ASN
10	H	84	ARG
10	H	95	TYR
10	H	98	TYR
10	H	101	TYR
10	H	105	LEU
10	H	112	LYS
10	H	116	THR
10	H	117	HIS
10	H	122	LEU
10	H	124	HIS
10	H	132	LYS
10	H	143	LEU

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Mol	Chain	Res	Type
10	H	146	TYR
10	H	154	GLN
11	I	1	MET
11	I	2	ILE
11	I	3	GLN
11	I	9	GLU
11	I	20	MET
11	I	29	ASN
11	I	39	ILE
11	I	40	VAL
11	I	44	LYS
11	I	45	GLU
11	I	47	ILE
11	I	48	PRO
11	I	52	VAL
11	I	59	LYS
11	I	77	ILE
11	I	79	PHE
11	I	86	ILE
11	I	91	LEU
11	I	97	ARG
11	I	104	ARG
11	I	105	GLU
11	I	109	LYS
12	J	6	LEU
12	J	13	ASN
12	J	32	THR
12	J	39	LYS
12	J	45	LEU
12	J	61	ARG
12	J	62	LEU
12	J	67	MET
12	J	74	GLU
12	J	81	GLN
12	J	85	LEU
12	J	91	PHE
12	J	95	VAL
12	J	100	LEU
12	J	101	VAL
12	J	105	LEU
12	J	112	LEU
12	J	121	LYS

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Mol	Chain	Res	Type
12	J	130	PHE
12	J	139	LYS
12	J	147	LEU
12	J	148	LEU
12	J	149	GLU
13	K	8	LYS
13	K	11	LYS
13	K	12	GLN
13	K	14	ARG
13	K	17	LEU
13	K	22	LYS
13	K	29	PHE
13	K	34	LEU
13	K	38	GLU
13	K	41	TRP
13	K	42	ILE
13	K	51	ARG
13	K	57	HIS
13	K	60	ARG
13	K	68	ILE
13	K	69	PHE
13	K	72	LYS
13	K	82	ARG
13	K	89	ASN
13	K	91	GLU
13	K	93	TYR
13	K	94	VAL
13	K	112	GLU
13	K	123	HIS
13	K	124	LYS
13	K	125	LEU
13	K	127	ILE
13	K	133	ARG
13	K	134	ARG
14	L	9	LYS
14	L	14	SER
14	L	18	LEU
14	L	20	LEU
14	L	21	TYR
14	L	31	HIS
14	L	40	LYS
14	L	44	LEU

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Mol	Chain	Res	Type
14	L	45	ARG
14	L	47	PHE
14	L	48	VAL
14	L	51	LEU
14	L	59	ASP
14	L	64	ARG
14	L	68	ARG
14	L	70	LEU
14	L	78	LYS
14	L	83	ILE
14	L	87	TYR
14	L	91	GLN
14	L	94	TYR
14	L	99	LYS
14	L	113	LEU
14	L	116	LEU
15	M	9	ARG
15	M	10	ARG
15	M	12	PHE
15	M	24	LEU
15	M	26	LEU
15	M	39	ILE
15	M	42	ASP
15	M	44	LYS
15	M	47	THR
15	M	49	VAL
15	M	56	LEU
15	M	64	GLU
15	M	71	ARG
15	M	76	LYS
15	M	111	GLU
16	N	15	VAL
16	N	18	ASP
16	N	22	PHE
16	N	33	LYS
16	N	35	LYS
16	N	38	ASN
16	N	42	ILE
16	N	46	GLU
16	N	49	VAL
16	N	50	ILE
16	N	61	PHE

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Mol	Chain	Res	Type
16	N	62	THR
16	N	70	VAL
16	N	72	VAL
16	N	90	GLN
16	N	95	ARG
16	N	99	LEU
16	N	101	PHE
16	N	103	ARG
16	N	108	ARG
16	N	111	ARG
16	N	113	LYS
16	N	114	LEU
16	N	119	LYS
16	N	121	ILE
16	N	123	LYS
16	N	124	ASP
17	O	9	VAL
17	O	19	LYS
17	O	25	TRP
17	O	38	THR
17	O	39	LEU
17	O	49	HIS
17	O	50	ARG
17	O	64	ARG
17	O	74	LEU
17	O	79	PHE
17	O	85	LYS
17	O	94	ASN
17	O	97	ASP
17	O	109	LEU
18	P	2	PHE
18	P	11	GLN
18	P	13	ARG
18	P	18	LEU
18	P	23	GLU
18	P	25	LEU
18	P	39	LEU
18	P	40	LEU
18	P	60	GLU
18	P	80	GLN
18	P	82	ARG
18	P	84	LYS

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Mol	Chain	Res	Type
18	P	85	LYS
19	Q	4	LYS
19	Q	6	ILE
19	Q	8	ARG
19	Q	12	ILE
19	Q	17	VAL
19	Q	31	GLU
19	Q	47	VAL
19	Q	51	LEU
19	Q	61	ASN
19	Q	68	ARG
19	Q	82	LEU
19	Q	88	ARG
19	Q	97	LYS
19	Q	104	THR
19	Q	106	ILE
20	R	11	PRO
20	R	26	TYR
20	R	43	VAL
20	R	49	VAL
20	R	50	LYS
20	R	54	VAL
20	R	59	VAL
20	R	62	LYS
20	R	64	LYS
20	R	77	LYS
20	R	78	LYS
20	R	89	ILE
21	S	9	LYS
21	S	13	VAL
21	S	28	LYS
21	S	55	TYR
21	S	64	GLU
21	S	71	LYS
21	S	73	ARG
21	S	74	PRO
21	S	84	ARG
21	S	96	ILE
21	S	97	ARG
22	T	9	TYR
22	T	24	LEU
22	T	28	MET

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Mol	Chain	Res	Type
22	T	34	ASN
22	T	37	VAL
22	T	38	TYR
22	T	41	LEU
22	T	53	ILE
22	T	55	HIS
22	T	73	GLN
22	T	76	LEU
22	T	78	LYS
22	T	80	ARG
22	T	96	VAL
22	T	104	PHE
22	T	117	LEU
22	T	119	GLU
22	T	145	GLU
22	T	146	ILE
22	T	155	LEU
22	T	157	LEU
22	T	162	GLU
22	T	165	VAL
22	T	171	ILE
22	T	175	VAL
23	U	24	LYS
23	U	31	VAL
23	U	35	ASN
23	U	36	ILE
23	U	40	GLN
23	U	41	ARG
23	U	46	LYS
23	U	53	MET
23	U	56	ASP
23	U	62	LEU
23	U	67	VAL
23	U	75	LEU
23	U	79	VAL
24	V	11	ARG
24	V	13	ILE
24	V	18	ILE
24	V	20	ARG
24	V	26	ARG
24	V	33	LYS
24	V	46	LEU

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Mol	Chain	Res	Type
24	V	58	ILE
24	V	78	LYS
24	V	82	LEU
24	V	85	LEU
24	V	89	GLU
24	V	91	LYS
24	V	94	LEU
25	W	1	MET
25	W	5	GLU
25	W	9	GLN
25	W	12	GLU
25	W	14	ARG
25	W	25	VAL
25	W	29	LYS
25	W	37	PHE
25	W	41	ILE
25	W	47	ASN
25	W	48	HIS
25	W	51	ARG
25	W	52	ASP
25	W	55	ARG
25	W	60	LEU
25	W	61	LEU
26	X	8	LEU
26	X	13	ILE
26	X	15	TYR
26	X	23	LEU
26	X	33	GLN
26	X	43	ILE
26	X	44	ARG
26	X	49	LYS
26	X	50	VAL
26	X	59	VAL
27	Y	8	LYS
27	Y	15	ARG
27	Y	26	THR
27	Y	29	ILE
27	Y	51	TYR
27	Y	56	LYS
28	Z	2	LYS
28	Z	7	PRO
28	Z	15	THR

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Mol	Chain	Res	Type
28	Z	24	THR
28	Z	31	LEU
28	Z	34	ARG
28	Z	39	ARG
28	Z	43	THR
28	Z	44	PRO
29	a	3	LYS
29	a	6	THR
29	a	13	ARG
29	a	16	ILE
29	a	35	GLN
29	a	36	LYS
29	a	39	LYS
29	a	41	ILE
29	a	44	LYS
29	a	48	PHE
29	a	54	GLU
29	a	56	GLU
29	a	59	LYS
29	a	60	LEU
30	b	2	LYS
30	b	25	VAL
30	b	29	ASN
35	c	8	LYS
35	c	10	LEU
35	c	17	PHE
35	c	23	ARG
35	c	33	TYR
35	c	40	HIS
35	c	42	ILE
35	c	44	LEU
35	c	46	LYS
35	c	47	THR
35	c	50	GLU
35	c	51	LEU
35	c	53	ARG
35	c	55	PHE
35	c	59	GLU
35	c	61	LEU
35	c	63	MET
35	c	70	PHE
35	c	82	ARG

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Mol	Chain	Res	Type
35	c	90	MET
35	c	91	PRO
35	c	93	VAL
35	c	97	TRP
35	c	105	PHE
35	c	108	ILE
35	c	118	LEU
35	c	126	GLU
35	c	129	GLU
35	c	132	LYS
35	c	133	LYS
35	c	137	ARG
35	c	138	LEU
35	c	149	LEU
35	c	155	LEU
35	c	157	ARG
35	c	158	LEU
35	c	160	ASP
35	c	169	LYS
35	c	172	ILE
35	c	185	ILE
35	c	191	ASP
35	c	195	ASP
35	c	200	ILE
35	c	204	ASN
35	c	205	ASP
35	c	206	ASP
35	c	209	ARG
35	c	221	LEU
35	c	222	ILE
36	d	3	ASN
36	d	4	LYS
36	d	18	TRP
36	d	33	LEU
36	d	36	ASP
36	d	40	ARG
36	d	43	LEU
36	d	45	LYS
36	d	46	GLU
36	d	56	ASP
36	d	58	GLU
36	d	93	LYS

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Mol	Chain	Res	Type
36	d	94	LEU
36	d	97	LYS
36	d	101	LEU
36	d	107	GLN
36	d	112	SER
36	d	118	GLN
36	d	126	ARG
36	d	131	ARG
36	d	135	LYS
36	d	139	GLN
36	d	147	LYS
36	d	152	ILE
36	d	153	VAL
36	d	156	ARG
36	d	167	TRP
36	d	172	ARG
36	d	175	LEU
36	d	201	TYR
36	d	204	LEU
37	e	8	VAL
37	e	12	CYS
37	e	21	LEU
37	e	22	LYS
37	e	33	MET
37	e	35	ARG
37	e	47	ARG
37	e	49	ARG
37	e	58	LEU
37	e	60	GLU
37	e	61	LYS
37	e	62	GLN
37	e	65	ARG
37	e	68	TYR
37	e	78	LEU
37	e	79	PHE
37	e	86	LYS
37	e	93	PHE
37	e	94	LEU
37	e	96	LEU
37	e	97	LEU
37	e	106	TYR
37	e	108	LEU

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Mol	Chain	Res	Type
37	e	110	PHE
37	e	112	VAL
37	e	116	GLN
37	e	120	LEU
37	e	122	ARG
37	e	123	HIS
37	e	129	ASN
37	e	148	VAL
37	e	158	ILE
37	e	178	VAL
37	e	187	ARG
37	e	191	ARG
37	e	192	GLU
37	e	200	GLU
37	e	205	GLU
38	f	12	LEU
38	f	25	ARG
38	f	31	LEU
38	f	34	VAL
38	f	43	LEU
38	f	50	GLU
38	f	53	LEU
38	f	55	VAL
38	f	57	LYS
38	f	69	VAL
38	f	72	GLN
38	f	81	GLU
38	f	89	ILE
38	f	93	PRO
38	f	100	VAL
38	f	110	LEU
38	f	112	LEU
38	f	115	VAL
38	f	123	LEU
38	f	142	LEU
38	f	143	ARG
38	f	147	ASP
39	g	6	VAL
39	g	11	ASN
39	g	14	LEU
39	g	23	LYS
39	g	31	GLU

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Mol	Chain	Res	Type
39	g	40	VAL
39	g	45	LEU
39	g	61	LEU
39	g	71	ARG
39	g	75	LEU
39	g	80	ARG
39	g	85	VAL
39	g	98	LEU
40	h	4	ARG
40	h	5	ARG
40	h	16	LEU
40	h	21	VAL
40	h	22	LEU
40	h	35	LYS
40	h	43	PHE
40	h	67	GLU
40	h	84	ASN
40	h	85	TYR
40	h	113	GLU
40	h	124	LEU
40	h	136	LYS
40	h	151	TYR
41	i	2	LEU
41	i	6	ILE
41	i	8	ASP
41	i	10	LEU
41	i	19	VAL
41	i	21	LYS
41	i	24	THR
41	i	39	LEU
41	i	45	ILE
41	i	62	TYR
41	i	65	TYR
41	i	91	ARG
41	i	95	VAL
41	i	103	VAL
41	i	104	ARG
41	i	105	ARG
41	i	111	ILE
41	i	120	THR
41	i	122	ARG
42	j	4	TYR

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Mol	Chain	Res	Type
42	j	5	TYR
42	j	20	ARG
42	j	26	VAL
42	j	37	PHE
42	j	53	VAL
42	j	59	PHE
42	j	64	THR
42	j	85	LEU
42	j	93	ARG
42	j	99	LEU
42	j	104	ARG
42	j	109	VAL
42	j	121	ARG
42	j	125	TYR
42	j	127	LYS
43	k	13	HIS
43	k	16	LEU
43	k	40	LEU
43	k	47	PHE
43	k	62	HIS
43	k	63	PHE
43	k	64	GLU
43	k	66	ARG
43	k	78	ASN
43	k	79	ARG
43	k	82	ILE
44	l	13	GLN
44	l	21	ILE
44	l	29	ILE
44	l	51	LYS
44	l	54	ARG
44	l	73	MET
44	l	75	TYR
44	l	92	GLU
44	l	93	GLN
44	l	99	GLN
44	l	103	LEU
44	l	108	ILE
44	l	110	ASP
44	l	122	LYS
44	l	124	LYS
45	m	14	ARG

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Mol	Chain	Res	Type
45	m	27	LYS
45	m	31	PHE
45	m	40	ARG
45	m	41	THR
45	m	43	THR
45	m	52	ARG
45	m	54	VAL
45	m	58	ARG
45	m	59	LEU
45	m	64	GLU
45	m	77	GLN
45	m	80	SER
45	m	84	ILE
45	m	92	LEU
45	m	98	HIS
45	m	100	VAL
45	m	112	ARG
45	m	122	LYS
45	m	126	GLU
46	n	3	ARG
46	n	4	ILE
46	n	9	ILE
46	n	15	VAL
46	n	19	LEU
46	n	20	THR
46	n	22	ILE
46	n	25	ILE
46	n	27	LYS
46	n	47	ASP
46	n	56	LEU
46	n	60	VAL
46	n	82	MET
46	n	91	ARG
46	n	105	THR
46	n	110	ARG
46	n	113	PRO
47	o	6	LEU
47	o	7	ILE
47	o	8	GLU
47	o	16	PHE
47	o	17	LYS
47	o	21	TYR

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Mol	Chain	Res	Type
47	o	23	ARG
47	o	29	ARG
47	o	47	LEU
47	o	61	TRP
48	p	15	PHE
48	p	28	GLN
48	p	35	ARG
48	p	38	ARG
48	p	47	LYS
48	p	57	LEU
48	p	59	MET
48	p	63	ARG
48	p	69	TYR
48	p	70	LEU
48	p	77	ARG
48	p	82	ILE
48	p	84	LYS
48	p	87	ILE
49	q	1	MET
49	q	3	LYS
49	q	13	HIS
49	q	27	LYS
49	q	29	ASP
49	q	35	LYS
49	q	43	LYS
49	q	48	TRP
49	q	49	LEU
49	q	58	TYR
49	q	59	TRP
49	q	60	LEU
49	q	79	VAL
50	r	6	LEU
50	r	13	ASP
50	r	15	MET
50	r	17	LYS
50	r	18	THR
50	r	22	LEU
50	r	25	ARG
50	r	29	HIS
50	r	36	ILE
50	r	41	LYS
50	r	42	TYR

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Mol	Chain	Res	Type
50	r	43	LEU
50	r	47	PRO
50	r	48	GLU
50	r	52	LYS
50	r	60	ILE
50	r	70	ARG
50	r	81	ARG
50	r	87	LYS
50	r	88	TYR
51	s	23	LYS
51	s	28	GLU
51	s	31	LEU
51	s	32	ARG
51	s	38	GLU
51	s	41	LYS
51	s	42	ARG
51	s	46	GLU
51	s	66	LEU
51	s	68	LYS
51	s	78	LEU
52	t	5	LEU
52	t	6	LYS
52	t	13	ASP
52	t	14	HIS
52	t	15	LEU
52	t	25	LYS
52	t	32	LYS
52	t	49	ILE
53	u	21	LYS
53	u	27	LYS
53	u	34	LYS
53	u	39	LYS
53	u	51	GLU
53	u	54	LYS
53	u	60	GLU
54	v	10	ARG
54	v	14	TRP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (174) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	18	ASN

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Mol	Chain	Res	Type
3	A	45	HIS
3	A	57	GLN
3	A	58	ASN
3	A	189	ASN
4	B	44	ASN
4	B	46	GLN
4	B	115	GLN
4	B	116	GLN
4	B	126	GLN
4	B	129	ASN
4	B	164	GLN
4	B	203	ASN
4	B	227	ASN
4	B	253	GLN
5	C	55	ASN
5	C	60	ASN
5	C	66	HIS
5	C	137	HIS
5	C	143	ASN
5	C	159	HIS
6	D	26	HIS
6	D	35	GLN
6	D	70	HIS
6	D	128	ASN
7	E	40	ASN
7	E	41	GLN
7	E	108	ASN
7	E	123	ASN
8	F	61	HIS
8	F	65	HIS
8	F	74	ASN
8	F	111	HIS
8	F	147	ASN
9	G	17	GLN
9	G	28	ASN
9	G	133	HIS
9	G	147	GLN
10	H	154	GLN
11	I	3	GLN
11	I	13	ASN
11	I	29	ASN
11	I	82	ASN

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Mol	Chain	Res	Type
12	J	13	ASN
12	J	35	HIS
12	J	81	GLN
12	J	128	HIS
13	K	12	GLN
13	K	13	GLN
13	K	45	GLN
13	K	46	GLN
14	L	13	HIS
14	L	16	HIS
14	L	50	HIS
14	L	53	HIS
14	L	91	GLN
15	M	68	GLN
15	M	84	GLN
16	N	38	ASN
16	N	55	ASN
16	N	90	GLN
17	O	14	HIS
17	O	44	ASN
17	O	66	ASN
17	O	81	HIS
17	O	94	ASN
18	P	64	HIS
18	P	87	HIS
18	P	89	GLN
19	Q	57	ASN
19	Q	61	ASN
19	Q	62	HIS
20	R	31	HIS
20	R	41	ASN
21	S	68	HIS
22	T	34	ASN
22	T	54	HIS
22	T	65	GLN
22	T	73	GLN
22	T	85	HIS
23	U	35	ASN
23	U	40	GLN
23	U	50	ASN
23	U	80	HIS
24	V	19	GLN

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Mol	Chain	Res	Type
24	V	45	ASN
24	V	47	GLN
24	V	66	HIS
25	W	47	ASN
27	Y	23	HIS
28	Z	6	GLN
28	Z	36	GLN
29	a	33	ASN
29	a	35	GLN
29	a	43	GLN
30	b	29	ASN
30	b	36	GLN
35	c	16	HIS
35	c	94	ASN
35	c	95	GLN
35	c	110	GLN
35	c	113	HIS
35	c	135	GLN
35	c	146	GLN
35	c	212	GLN
36	d	3	ASN
36	d	28	GLN
36	d	69	HIS
36	d	102	ASN
36	d	107	GLN
36	d	108	ASN
36	d	110	ASN
36	d	139	GLN
36	d	162	GLN
36	d	176	HIS
37	e	42	GLN
37	e	62	GLN
37	e	129	ASN
37	e	199	ASN
37	e	201	GLN
38	f	65	ASN
38	f	72	GLN
38	f	73	ASN
39	g	11	ASN
39	g	13	ASN
39	g	16	GLN
39	g	27	GLN

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Mol	Chain	Res	Type
39	g	94	GLN
39	g	100	ASN
40	h	13	GLN
40	h	28	ASN
40	h	64	GLN
40	h	84	ASN
40	h	148	ASN
41	i	15	ASN
41	i	82	HIS
42	j	3	GLN
42	j	73	GLN
42	j	89	ASN
43	k	13	HIS
43	k	69	ASN
43	k	76	ASN
43	k	78	ASN
44	l	22	HIS
44	l	26	ASN
44	l	38	ASN
44	l	78	GLN
44	l	93	GLN
44	l	116	HIS
44	l	117	ASN
45	m	74	HIS
45	m	77	GLN
45	m	98	HIS
46	n	77	ASN
46	n	101	GLN
47	o	49	HIS
48	p	37	ASN
48	p	42	HIS
48	p	46	HIS
48	p	53	HIS
48	p	71	GLN
49	q	14	ASN
49	q	76	GLN
50	r	26	GLN
50	r	29	HIS
50	r	45	HIS
51	s	63	GLN
52	t	23	ASN
52	t	69	HIS

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Mol	Chain	Res	Type
53	u	9	ASN
53	u	16	HIS
53	u	18	GLN
53	u	42	GLN
53	u	75	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	w	2888/2889 (99%)	1140 (39%)	0
2	x	119/121 (98%)	42 (35%)	0
31	y	1501/1522 (98%)	506 (33%)	0
32	z	75/76 (98%)	29 (38%)	0
33	0	75/76 (98%)	30 (40%)	5 (6%)
34	1	5/10 (50%)	2 (40%)	0
All	All	4663/4694 (99%)	1749 (37%)	5 (0%)

All (1749) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	w	10	G
1	w	12	U
1	w	13	A
1	w	15	G
1	w	16	G
1	w	17	G
1	w	20	C
1	w	28	A
1	w	29	U
1	w	34	C
1	w	35	G
1	w	37	C
1	w	39	C
1	w	43	G
1	w	45	G
1	w	46	C
1	w	49	A
1	w	50	U
1	w	51	G
1	w	52	A
1	w	59	U

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Mol	Chain	Res	Type
1	w	61	G
1	w	63	U
1	w	64	A
1	w	69	C
1	w	70	G
1	w	71	A
1	w	72	U
1	w	73	A
1	w	75	G
1	w	78	A
1	w	80	G
1	w	85	G
1	w	88	G
1	w	89	G
1	w	91	A
1	w	95	G
1	w	101	G
1	w	102	G
1	w	103	A
1	w	104	U
1	w	107	C
1	w	108	U
1	w	117	G
1	w	118	A
1	w	119	A
1	w	120	U
1	w	121	G
1	w	125	G
1	w	126	A
1	w	128	C
1	w	130	C
1	w	131	G
1	w	132	G
1	w	137(A)	C
1	w	138	G
1	w	139	G
1	w	140	A
1	w	143	C
1	w	144	C
1	w	146	G
1	w	149	A
1	w	151	C

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Mol	Chain	Res	Type
1	w	153	C
1	w	162	U
1	w	163	U
1	w	164	U
1	w	165	U
1	w	174	C
1	w	175	G
1	w	176	G
1	w	181	A
1	w	182	A
1	w	184	C
1	w	186	G
1	w	188	G
1	w	196	A
1	w	197	A
1	w	199	A
1	w	204	A
1	w	205	G
1	w	206	U
1	w	216	A
1	w	221	A
1	w	222	A
1	w	228	A
1	w	229	A
1	w	233	A
1	w	239	U
1	w	241	A
1	w	242	G
1	w	243	U
1	w	248	G
1	w	249	C
1	w	250	G
1	w	251	A
1	w	265	A
1	w	266	G
1	w	267	C
1	w	269	U
1	w	270(D)	C
1	w	270(E)	C
1	w	270(J)	G
1	w	270(O)	G
1	w	270(P)	U

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Mol	Chain	Res	Type
1	w	270(Q)	C
1	w	270(S)	G
1	w	270(T)	G
1	w	270(Z)	G
1	w	271(A)	U
1	w	271(B)	C
1	w	271(C)	G
1	w	271(D)	U
1	w	271	G
1	w	273(C)	C
1	w	273(F)	U
1	w	274	G
1	w	275	G
1	w	278	A
1	w	284	U
1	w	289	A
1	w	292	C
1	w	294	A
1	w	295	G
1	w	296	C
1	w	297	C
1	w	298	G
1	w	299	A
1	w	300	A
1	w	301	G
1	w	310	A
1	w	311	A
1	w	315	G
1	w	316	C
1	w	317	G
1	w	322	A
1	w	323	G
1	w	329	G
1	w	330	A
1	w	331	A
1	w	332	A
1	w	333	G
1	w	334	C
1	w	336	C
1	w	338	G
1	w	341	G
1	w	342	G

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Mol	Chain	Res	Type
1	w	347	A
1	w	348	G
1	w	349	G
1	w	352	G
1	w	358	U
1	w	361	G
1	w	362	U
1	w	363(A)	G
1	w	363(B)	A
1	w	363(E)	G
1	w	363(F)	U
1	w	364	C
1	w	366(B)	C
1	w	370	G
1	w	371	A
1	w	372	G
1	w	373	U
1	w	380	U
1	w	384	U
1	w	386	G
1	w	387	U
1	w	388	G
1	w	390	A
1	w	394	A
1	w	395	U
1	w	396	G
1	w	397	G
1	w	405	U
1	w	411	G
1	w	412	A
1	w	413	C
1	w	428	A
1	w	435	C
1	w	438	G
1	w	444	C
1	w	446	G
1	w	449	A
1	w	451	C
1	w	453	C
1	w	455	C
1	w	456	C
1	w	457	A

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Mol	Chain	Res	Type
1	w	458	G
1	w	459	U
1	w	462	C
1	w	464	U
1	w	468	G
1	w	469	G
1	w	470	A
1	w	473	G
1	w	475	U
1	w	477	A
1	w	478	A
1	w	480	A
1	w	481	G
1	w	483	A
1	w	487	C
1	w	492	A
1	w	501	A
1	w	504	U
1	w	505	A
1	w	508	G
1	w	509	C
1	w	510	C
1	w	518	G
1	w	528	A
1	w	532	A
1	w	533	G
1	w	535	C
1	w	542	C
1	w	549	G
1	w	551	G
1	w	559	G
1	w	560	C
1	w	563	G
1	w	564	C
1	w	567	A
1	w	569	U
1	w	570	G
1	w	572	A
1	w	574	C
1	w	575	A
1	w	578	A
1	w	583	G

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Mol	Chain	Res	Type
1	w	584	C
1	w	588	U
1	w	589	C
1	w	590	A
1	w	593	G
1	w	594	U
1	w	595	C
1	w	598	G
1	w	603	A
1	w	604	G
1	w	607	U
1	w	608	A
1	w	614	U
1	w	615	G
1	w	616	A
1	w	618(A)	G
1	w	618(B)	C
1	w	620	G
1	w	621	A
1	w	623	G
1	w	627	A
1	w	628	G
1	w	629	G
1	w	634	C
1	w	645	C
1	w	647	G
1	w	648	G
1	w	654	U
1	w	656	G
1	w	665	C
1	w	666	G
1	w	669	G
1	w	670	A
1	w	671	C
1	w	672	C
1	w	674	G
1	w	684	G
1	w	685	A
1	w	686	G
1	w	687	C
1	w	710	G
1	w	716	A

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Mol	Chain	Res	Type
1	w	717	G
1	w	718	A
1	w	719	C
1	w	722	A
1	w	725	G
1	w	726	G
1	w	728	G
1	w	729	G
1	w	730	C
1	w	735	A
1	w	740	U
1	w	741	G
1	w	743	G
1	w	745	G
1	w	747	U
1	w	753	C
1	w	762	U
1	w	763	G
1	w	769	G
1	w	774	A
1	w	775	G
1	w	776	G
1	w	777	A
1	w	781	A
1	w	782	A
1	w	783	A
1	w	784	A
1	w	789	A
1	w	790	C
1	w	792	G
1	w	798	G
1	w	799	G
1	w	800	A
1	w	801	G
1	w	804	A
1	w	805	G
1	w	806	C
1	w	811	U
1	w	812	C
1	w	813	U
1	w	818	G
1	w	827	U

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Mol	Chain	Res	Type
1	w	828	U
1	w	830	G
1	w	831	G
1	w	846	C
1	w	847	U
1	w	848	G
1	w	849	A
1	w	850	C
1	w	856	C
1	w	859	G
1	w	860	U
1	w	861	A
1	w	865	C
1	w	866	A
1	w	867	C
1	w	870	A
1	w	883	G
1	w	886	C
1	w	887	A
1	w	889	C
1	w	890	A
1	w	895	U
1	w	896	A
1	w	897	C
1	w	899	A
1	w	902	C
1	w	906	G
1	w	907	U
1	w	910	A
1	w	912	C
1	w	914	C
1	w	916	G
1	w	919	G
1	w	921	G
1	w	926	A
1	w	931	G
1	w	932	G
1	w	933	A
1	w	938	G
1	w	939	G
1	w	943	U
1	w	944	G

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Mol	Chain	Res	Type
1	w	945	A
1	w	946	G
1	w	954	G
1	w	958	U
1	w	959	A
1	w	960	A
1	w	961	C
1	w	962	G
1	w	963	U
1	w	965	C
1	w	966	G
1	w	972	G
1	w	973	A
1	w	974(A)	G
1	w	974(B)	C
1	w	975	G
1	w	976	C
1	w	980	A
1	w	983	A
1	w	984	A
1	w	988	A
1	w	990	A
1	w	991	C
1	w	992	C
1	w	993	G
1	w	995	C
1	w	996	A
1	w	997	G
1	w	1005	C
1	w	1006	C
1	w	1008	C
1	w	1009	A
1	w	1011	G
1	w	1012	U
1	w	1013	C
1	w	1015	G
1	w	1016	G
1	w	1017	G
1	w	1020	A
1	w	1022	G
1	w	1023	U
1	w	1024	G

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Mol	Chain	Res	Type
1	w	1025	G
1	w	1033	U
1	w	1034	G
1	w	1043	C
1	w	1045	A
1	w	1046	A
1	w	1047	G
1	w	1054	A
1	w	1059	G
1	w	1060	U
1	w	1061	U
1	w	1070	A
1	w	1071	G
1	w	1079	C
1	w	1080	C
1	w	1082	U
1	w	1083	U
1	w	1087	G
1	w	1088	A
1	w	1103	A
1	w	1110	G
1	w	1111	A
1	w	1112	G
1	w	1116	C
1	w	1122	G
1	w	1125	G
1	w	1126	A
1	w	1129	A
1	w	1131	G
1	w	1132	A
1	w	1135	C
1	w	1136	G
1	w	1138	G
1	w	1139	G
1	w	1141	U
1	w	1142	C
1	w	114(B)	A
1	w	1148	A
1	w	1149	G
1	w	1152	C
1	w	1155	A
1	w	1160	G

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Mol	Chain	Res	Type
1	w	1161	C
1	w	1164	G
1	w	1166	C
1	w	1167	U
1	w	1170	G
1	w	1174	A
1	w	1175	U
1	w	1177	A
1	w	1178	C
1	w	1179	C
1	w	1180	C
1	w	1182	A
1	w	1183	G
1	w	1185	C
1	w	1186	G
1	w	1188	U
1	w	1194	A
1	w	1195	G
1	w	1197	G
1	w	1199	U
1	w	1201	C
1	w	1204	A
1	w	1205	U
1	w	1206	G
1	w	1209	G
1	w	1211	U
1	w	1212	G
1	w	1213	A
1	w	1216	G
1	w	1220	A
1	w	1221	C
1	w	1223	G
1	w	1224	C
1	w	1225	G
1	w	1227	G
1	w	1229	G
1	w	1236	G
1	w	1237	A
1	w	1238	G
1	w	1240	U
1	w	1244	G
1	w	1247	A

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Mol	Chain	Res	Type
1	w	1248	G
1	w	1250	G
1	w	1251	C
1	w	1252	G
1	w	1253	A
1	w	1254	A
1	w	1256	G
1	w	1261	C
1	w	1265	A
1	w	1266	G
1	w	1267	U
1	w	1270	C
1	w	1271	G
1	w	1272	A
1	w	1273	U
1	w	1274	A
1	w	1275	A
1	w	1276	A
1	w	1278	A
1	w	1283	G
1	w	1287	A
1	w	1289	C
1	w	1295	C
1	w	1300	U
1	w	1301	A
1	w	1302	A
1	w	1305	C
1	w	1310	G
1	w	1311	G
1	w	1313	U
1	w	1314	C
1	w	1319	G
1	w	1320	C
1	w	1321	A
1	w	1324	G
1	w	1326	U
1	w	1329	U
1	w	1332	G
1	w	1334	G
1	w	1335	U
1	w	1336	A
1	w	1337	G

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Mol	Chain	Res	Type
1	w	1341	U
1	w	1343	G
1	w	1344	G
1	w	1345	C
1	w	1347	G
1	w	1351	C
1	w	1358	G
1	w	1359	A
1	w	1362	C
1	w	1364	G
1	w	1365	A
1	w	1366	A
1	w	1367	A
1	w	1374	G
1	w	1377	G
1	w	1378	A
1	w	1379	A
1	w	1384	A
1	w	1385	G
1	w	1386	C
1	w	1398	C
1	w	1400	G
1	w	1406	U
1	w	1413	G
1	w	1416	G
1	w	1419	A
1	w	1421	G
1	w	1424	G
1	w	1426	G
1	w	1427	A
1	w	1428	C
1	w	1429	G
1	w	1430	C
1	w	1436	G
1	w	1438	U
1	w	144(B)	A
1	w	1445	C
1	w	1448	G
1	w	149(B)	A
1	w	1449	G
1	w	1451	C
1	w	1453	A

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Mol	Chain	Res	Type
1	w	1454	U
1	w	1455	G
1	w	1458	C
1	w	1459	G
1	w	1460	A
1	w	1461	G
1	w	1466	G
1	w	1467	C
1	w	1470	G
1	w	1471	A
1	w	1474	C
1	w	1478	G
1	w	1481	U
1	w	1483	G
1	w	1485	G
1	w	1487	G
1	w	1488	G
1	w	1490	A
1	w	1491	G
1	w	1497	U
1	w	1498	C
1	w	1499	C
1	w	1501	C
1	w	1502	C
1	w	1506	C
1	w	1508	A
1	w	1509	A
1	w	1510	A
1	w	1517	G
1	w	1519	G
1	w	1522	G
1	w	1523	U
1	w	1526	G
1	w	1528	A
1	w	1530	G
1	w	1531	C
1	w	1535	U
1	w	1536	A
1	w	1537	C
1	w	1538	G
1	w	1540	G
1	w	1541	U

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Mol	Chain	Res	Type
1	w	1544	C
1	w	1545	A
1	w	1546	A
1	w	154(B)	C
1	w	1547	C
1	w	1553	A
1	w	1558	A
1	w	1559	G
1	w	1560	G
1	w	1562	A
1	w	1565	C
1	w	1567	A
1	w	1569	A
1	w	1574	C
1	w	1576	U
1	w	1577	C
1	w	1578	U
1	w	1579	A
1	w	1581	G
1	w	1585	C
1	w	1586	A
1	w	1596	A
1	w	1603	A
1	w	1604	C
1	w	1607	C
1	w	1608	A
1	w	1609	A
1	w	1613	G
1	w	1616	A
1	w	1617	C
1	w	1618	A
1	w	1619	G
1	w	1623	G
1	w	1627	G
1	w	1628	G
1	w	163(B)	C
1	w	1635	G
1	w	1640	C
1	w	1645	G
1	w	1646	C
1	w	1647	G
1	w	1648	C

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Mol	Chain	Res	Type
1	w	1651	G
1	w	1652	A
1	w	1655	A
1	w	1664	A
1	w	1665	A
1	w	1669	A
1	w	1670	C
1	w	1672	C
1	w	1674	G
1	w	1682	G
1	w	1683	C
1	w	1688	U
1	w	1693	U
1	w	1694	C
1	w	1695	G
1	w	1698	A
1	w	1699	G
1	w	1700	A
1	w	1701	A
1	w	1703	G
1	w	1706	U
1	w	1707	G
1	w	1716	U
1	w	1717	G
1	w	1718	G
1	w	1725	G
1	w	1729	A
1	w	1730	U
1	w	1731	G
1	w	1733	G
1	w	1741	C
1	w	1742	C
1	w	1747	G
1	w	1753	G
1	w	1757	U
1	w	1758	G
1	w	1759	A
1	w	1763	G
1	w	1764	G
1	w	1773	A
1	w	1774	C
1	w	1777	U

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Mol	Chain	Res	Type
1	w	1781	C
1	w	1782	C
1	w	1784	A
1	w	1785	A
1	w	1787	A
1	w	1791	A
1	w	1792	G
1	w	1794	U
1	w	1795	C
1	w	1797	C
1	w	1798	U
1	w	1799	G
1	w	1800	C
1	w	1801	G
1	w	1802	A
1	w	1803	A
1	w	1806	C
1	w	1809	A
1	w	1810	A
1	w	1811	G
1	w	1815	A
1	w	1816	G
1	w	1817	G
1	w	1819	A
1	w	1820	U
1	w	1821	A
1	w	1822	G
1	w	1823	G
1	w	1824	G
1	w	1825	A
1	w	1827	C
1	w	1828	G
1	w	1829	A
1	w	1836	C
1	w	1838	C
1	w	1839	G
1	w	1841	U
1	w	1843	C
1	w	1847	A
1	w	1848	A
1	w	1850	G
1	w	1858	G

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Mol	Chain	Res	Type
1	w	1863	G
1	w	1864	U
1	w	1869	G
1	w	1878	G
1	w	1879	C
1	w	1880	C
1	w	1885	A
1	w	1886	C
1	w	1888	G
1	w	1889	A
1	w	1898	U
1	w	1899	G
1	w	1900	A
1	w	1903	G
1	w	1906	G
1	w	1909	C
1	w	1912	A
1	w	1913	A
1	w	1914	C
1	w	1916	A
1	w	1918	A
1	w	1929	G
1	w	1930	G
1	w	1931	U
1	w	1935	G
1	w	1937	A
1	w	1938	A
1	w	1939	U
1	w	1943	U
1	w	1944	U
1	w	1945	G
1	w	1955	U
1	w	1960	A
1	w	1963	U
1	w	1964	G
1	w	1965	C
1	w	1967	C
1	w	1968	G
1	w	1969	A
1	w	1971	A
1	w	1972	A
1	w	1975	G

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Mol	Chain	Res	Type
1	w	1976	U
1	w	1978	A
1	w	1981	A
1	w	1982	C
1	w	1987	G
1	w	1991	U
1	w	1992	G
1	w	1993	U
1	w	1997	G
1	w	1998	G
1	w	2013	A
1	w	2014	A
1	w	2020	A
1	w	2022	U
1	w	2023	G
1	w	2024	G
1	w	2026	C
1	w	2031	A
1	w	2033	A
1	w	2034	U
1	w	2035	G
1	w	2036	C
1	w	2041	U
1	w	2043	C
1	w	2047	U
1	w	2048	G
1	w	2051	A
1	w	2052	G
1	w	2055	C
1	w	2056	G
1	w	2057	A
1	w	2060	A
1	w	2061	G
1	w	2062	A
1	w	2063	C
1	w	2064	C
1	w	2066	C
1	w	2069	G
1	w	2071	A
1	w	2076	U
1	w	2077	A
1	w	2078	C

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Mol	Chain	Res	Type
1	w	2087	G
1	w	2092	U
1	w	2093	G
1	w	2096	U
1	w	2097	C
1	w	2099	U
1	w	2101	G
1	w	2110	G
1	w	2111	C
1	w	2112	G
1	w	2113	U
1	w	2116	G
1	w	2118	U
1	w	2120	G
1	w	2126	A
1	w	2127	G
1	w	2128	C
1	w	2130	U
1	w	2131	G
1	w	2132	U
1	w	2133	G
1	w	2138	C
1	w	2145	C
1	w	2148	G
1	w	2153	G
1	w	2157	G
1	w	2158	A
1	w	2160	G
1	w	2168	G
1	w	2169	A
1	w	2171	A
1	w	2172	U
1	w	2173	A
1	w	2174	C
1	w	2176	A
1	w	2179	C
1	w	2181	G
1	w	2188	C
1	w	2190	G
1	w	2191	G
1	w	2192	G
1	w	2193	G

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Mol	Chain	Res	Type
1	w	2194	G
1	w	2195	C
1	w	2198	A
1	w	2199	A
1	w	2205	C
1	w	2211	G
1	w	2212	A
1	w	2213	U
1	w	2215	G
1	w	2218	G
1	w	2219	G
1	w	2225	A
1	w	2226	C
1	w	2228	G
1	w	2238	G
1	w	2239	G
1	w	2243	U
1	w	2246	G
1	w	2251	G
1	w	2255	G
1	w	2259	G
1	w	2267	A
1	w	2268	A
1	w	2273	A
1	w	2275	C
1	w	2276	G
1	w	2279	G
1	w	2280	G
1	w	2282	G
1	w	2283	C
1	w	2286	A
1	w	2287	A
1	w	2288	A
1	w	2290	G
1	w	2293	C
1	w	2294	C
1	w	2296	U
1	w	2297	C
1	w	2298	A
1	w	2304	G
1	w	2305	A
1	w	2307	G

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Mol	Chain	Res	Type
1	w	2308	G
1	w	2309	A
1	w	2310	A
1	w	2311	A
1	w	2314	C
1	w	2319	G
1	w	2320	A
1	w	2321	G
1	w	2322	A
1	w	2323	G
1	w	2325	G
1	w	2331	G
1	w	2334	G
1	w	2335	A
1	w	2336	A
1	w	2337	G
1	w	2341	G
1	w	2345	G
1	w	2346	A
1	w	2347	C
1	w	2350	C
1	w	2354	G
1	w	2356	C
1	w	2357	U
1	w	2359	C
1	w	2361	A
1	w	2363	C
1	w	2365	G
1	w	2367	G
1	w	2368	C
1	w	2374	C
1	w	2378	A
1	w	2379	G
1	w	2383	G
1	w	2385	C
1	w	2390	U
1	w	2391	G
1	w	2394	C
1	w	2398	U
1	w	2399	G
1	w	2400	G
1	w	2402	C

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Mol	Chain	Res	Type
1	w	2403	C
1	w	2406	U
1	w	2407	G
1	w	2411	A
1	w	2414	G
1	w	2416	C
1	w	2422	A
1	w	2423	U
1	w	2425	A
1	w	2427	C
1	w	2428	G
1	w	2429	G
1	w	2432	A
1	w	2434	A
1	w	2435	A
1	w	2439	A
1	w	2441	C
1	w	2442	C
1	w	2447	G
1	w	2448	A
1	w	2449	U
1	w	2450	A
1	w	2457	U
1	w	2463	C
1	w	2469	A
1	w	2471	C
1	w	2478	A
1	w	2480	C
1	w	2491	U
1	w	2492	U
1	w	2495	G
1	w	2498	C
1	w	2501	C
1	w	2502	G
1	w	2503	A
1	w	2504	U
1	w	2505	G
1	w	2506	U
1	w	2511	U
1	w	2512	C
1	w	2513	G
1	w	2514	U

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Mol	Chain	Res	Type
1	w	2515	C
1	w	2517	C
1	w	2518	A
1	w	2519	U
1	w	2520	C
1	w	2523	G
1	w	2529	G
1	w	2535	G
1	w	2538	C
1	w	2542	A
1	w	2543	G
1	w	2547	U
1	w	2549	G
1	w	2553	G
1	w	2554	U
1	w	2556	C
1	w	2563	U
1	w	2566	A
1	w	2567	G
1	w	2572	A
1	w	2573	C
1	w	2574	G
1	w	2576	G
1	w	2578	G
1	w	2582	G
1	w	2583	G
1	w	2584	U
1	w	2585	U
1	w	2586	C
1	w	2588	G
1	w	2602	A
1	w	2603	G
1	w	2610	C
1	w	2611	U
1	w	2613	U
1	w	2615	U
1	w	2616	C
1	w	2618	G
1	w	2621	A
1	w	2622	C
1	w	2629	A
1	w	2630	G

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Mol	Chain	Res	Type
1	w	2634	G
1	w	2643	G
1	w	2644	G
1	w	2646	C
1	w	2647	U
1	w	2648	C
1	w	2649	U
1	w	2653	U
1	w	2654	A
1	w	2655	G
1	w	2656	U
1	w	2658	C
1	w	2665	A
1	w	2668	G
1	w	2670	A
1	w	2675	A
1	w	2680	C
1	w	2682	U
1	w	2685	G
1	w	2690	C
1	w	2691	C
1	w	2694	G
1	w	2695	C
1	w	2702	U
1	w	2703	C
1	w	2712	U
1	w	712(B)	A
1	w	2713	A
1	w	2714	G
1	w	2718	G
1	w	2720	U
1	w	2721	A
1	w	2723	C
1	w	2724	C
1	w	2726	U
1	w	2727	G
1	w	2732	G
1	w	2734	A
1	w	2736	G
1	w	2744	G
1	w	2745	C
1	w	2751	G

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Mol	Chain	Res	Type
1	w	2752	C
1	w	2754	U
1	w	2755	C
1	w	2756	U
1	w	2757	A
1	w	2759	G
1	w	2761	G
1	w	2762	G
1	w	2763	G
1	w	2766	G
1	w	2768	C
1	w	2771	C
1	w	2775	A
1	w	2777	G
1	w	2778	A
1	w	2779	U
1	w	2781	A
1	w	2785	C
1	w	2787	C
1	w	2789	C
1	w	2791	C
1	w	2792	G
1	w	2793	G
1	w	2795	G
1	w	2797	U
1	w	2798	C
1	w	2799	A
1	w	2802	G
1	w	2804	C
1	w	2807	G
1	w	2808	U
1	w	2815	C
1	w	2818	G
1	w	2820	A
1	w	2821	A
1	w	2823	A
1	w	2825	G
1	w	2827	C
1	w	2833	G
1	w	2834	G
1	w	2835	A
1	w	2836	U

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Mol	Chain	Res	Type
1	w	2841	C
1	w	2845	G
1	w	2848	G
1	w	2849	U
1	w	2852	G
1	w	2853	C
1	w	2858	C
1	w	2861	G
1	w	2864	G
1	w	2866	U
1	w	2867	G
1	w	2868	A
1	w	2872	G
1	w	2873	A
1	w	2875	C
1	w	2876	G
1	w	2879	C
1	w	2880	C
1	w	2883	A
1	w	2884	U
1	w	2887	U
1	w	2889	C
1	w	2892	A
1	w	2894	G
1	w	2895	U
1	w	2896	C
1	w	2901	C
2	x	8	U
2	x	9	G
2	x	10	C
2	x	13	A
2	x	15	A
2	x	21	G
2	x	25	A
2	x	26	A
2	x	27	C
2	x	33	G
2	x	34	U
2	x	35	U
2	x	38	C
2	x	40	U
2	x	42	C

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Mol	Chain	Res	Type
2	x	43	C
2	x	44	G
2	x	45	A
2	x	50	G
2	x	52	A
2	x	53	A
2	x	63	G
2	x	64	C
2	x	65	C
2	x	66	A
2	x	67	G
2	x	75	G
2	x	76	G
2	x	79	C
2	x	83	G
2	x	87	G
2	x	90	C
2	x	98	G
2	x	99	A
2	x	103	U
2	x	108	C
2	x	109	G
2	x	111	U
2	x	113	C
2	x	114	G
2	x	117	G
2	x	118	G
31	y	6	G
31	y	7	G
31	y	8	A
31	y	9	G
31	y	13	U
31	y	14	U
31	y	18	C
31	y	31	G
31	y	32	A
31	y	38	G
31	y	39	G
31	y	47	C
31	y	48	C
31	y	50	A
31	y	51	A

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Mol	Chain	Res	Type
31	y	60	A
31	y	61	G
31	y	63	C
31	y	65	U
31	y	68	G
31	y	69	G
31	y	78	G
31	y	82	U
31	y	84	U
31	y	88	C
31	y	93	U
31	y	95	G
31	y	104	G
31	y	105	G
31	y	110	C
31	y	112	G
31	y	115	G
31	y	116	A
31	y	120	A
31	y	121	C
31	y	122	G
31	y	126	G
31	y	127	G
31	y	129(B)	G
31	y	130	A
31	y	131	C
31	y	133	U
31	y	134	A
31	y	136	C
31	y	139	G
31	y	144	G
31	y	149	A
31	y	157	G
31	y	163	C
31	y	169	C
31	y	173	U
31	y	174	C
31	y	176	C
31	y	186(A)	C
31	y	186(C)	C
31	y	190	G
31	y	191(A)	G

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Mol	Chain	Res	Type
31	y	195	A
31	y	196	A
31	y	197	A
31	y	198	G
31	y	201	C
31	y	208	U
31	y	209	U
31	y	210	U
31	y	223	U
31	y	233	C
31	y	244	U
31	y	245	C
31	y	246	A
31	y	247	G
31	y	251	G
31	y	252	U
31	y	253	U
31	y	263	A
31	y	266	G
31	y	267	C
31	y	275	G
31	y	276	G
31	y	279	A
31	y	280	C
31	y	281	G
31	y	286	G
31	y	289	G
31	y	295	C
31	y	298	A
31	y	299	G
31	y	300	A
31	y	316	G
31	y	320	C
31	y	321	A
31	y	322	C
31	y	328	C
31	y	329	A
31	y	330	C
31	y	332	G
31	y	342	C
31	y	344	A
31	y	345	C

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Mol	Chain	Res	Type
31	y	347	G
31	y	350	G
31	y	351	G
31	y	352	C
31	y	353	A
31	y	354	G
31	y	358	U
31	y	360	A
31	y	361	G
31	y	363	A
31	y	366	C
31	y	367	U
31	y	368	U
31	y	369	C
31	y	372	C
31	y	378	G
31	y	382	A
31	y	383	A
31	y	388	G
31	y	391	G
31	y	392	G
31	y	397	A
31	y	398	C
31	y	406	G
31	y	412	A
31	y	413	G
31	y	414	A
31	y	421	U
31	y	422	C
31	y	423	G
31	y	424	G
31	y	428	G
31	y	429	U
31	y	430	A
31	y	436	C
31	y	437	U
31	y	439	A
31	y	440	A
31	y	451	A
31	y	452	A
31	y	455	C
31	y	466	G

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Mol	Chain	Res	Type
31	y	467	G
31	y	468	A
31	y	481	G
31	y	484	G
31	y	485	G
31	y	491	G
31	y	493	G
31	y	496	A
31	y	497	U
31	y	498	A
31	y	500	G
31	y	508	C
31	y	509	A
31	y	511	C
31	y	512	U
31	y	516	PSU
31	y	517	G
31	y	518	C
31	y	519	C
31	y	520	A
31	y	521	G
31	y	523	A
31	y	524	G
31	y	525	C
31	y	527	7MG
31	y	530	G
31	y	531	U
31	y	532	A
31	y	533	A
31	y	534	U
31	y	535	A
31	y	540	G
31	y	543	C
31	y	547	A
31	y	550	G
31	y	552	U
31	y	556	C
31	y	561	U
31	y	563	A
31	y	564	C
31	y	565	U
31	y	566	G

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Mol	Chain	Res	Type
31	y	570	G
31	y	572	A
31	y	573	A
31	y	575	G
31	y	576	G
31	y	577	G
31	y	580	U
31	y	586	C
31	y	588	G
31	y	596	C
31	y	597	G
31	y	602	A
31	y	612	C
31	y	614	A
31	y	615	C
31	y	618	C
31	y	619	U
31	y	620	C
31	y	622	A
31	y	627	G
31	y	629	G
31	y	631	G
31	y	641	U
31	y	642	A
31	y	652	U
31	y	653	A
31	y	654	G
31	y	661	G
31	y	662	G
31	y	667	G
31	y	674	G
31	y	675	A
31	y	678	U
31	y	687	A
31	y	688	G
31	y	693	G
31	y	695	A
31	y	696	A
31	y	702	A
31	y	703	G
31	y	706	A
31	y	708	C

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Mol	Chain	Res	Type
31	y	713	G
31	y	716	A
31	y	717	C
31	y	718	G
31	y	724	G
31	y	728	A
31	y	732	C
31	y	733	A
31	y	734	G
31	y	741	G
31	y	747	C
31	y	748	C
31	y	749	C
31	y	750	G
31	y	752	G
31	y	753	A
31	y	755	G
31	y	759	A
31	y	765	G
31	y	771	G
31	y	772	U
31	y	776	G
31	y	777	A
31	y	778	G
31	y	779	C
31	y	781	A
31	y	788	U
31	y	792	A
31	y	794	A
31	y	801	U
31	y	812	C
31	y	813	U
31	y	816	A
31	y	817	C
31	y	818	G
31	y	819	A
31	y	820	U
31	y	821	G
31	y	828	A
31	y	832	C
31	y	833	U
31	y	836	G

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Mol	Chain	Res	Type
31	y	841	U
31	y	842	C
31	y	843	U
31	y	855	G
31	y	867	G
31	y	870	U
31	y	871	U
31	y	872	A
31	y	873	A
31	y	874	G
31	y	876	G
31	y	885	G
31	y	889	A
31	y	890	G
31	y	900	A
31	y	901	A
31	y	902	G
31	y	906	G
31	y	912	C
31	y	913	A
31	y	914	A
31	y	915	A
31	y	916	G
31	y	926	G
31	y	927	G
31	y	931	C
31	y	934	C
31	y	935	A
31	y	936	C
31	y	939	G
31	y	946	A
31	y	956	U
31	y	959	A
31	y	960	U
31	y	961	U
31	y	965	A
31	y	966	M2G
31	y	967	5MC
31	y	968	A
31	y	969	A
31	y	974	A
31	y	976	G

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Mol	Chain	Res	Type
31	y	977	A
31	y	978	A
31	y	981	U
31	y	982	U
31	y	983	A
31	y	991	U
31	y	992	U
31	y	993	G
31	y	1002	G
31	y	1004	A
31	y	1005	A
31	y	1007	C
31	y	1009	G
31	y	1016	A
31	y	1025	U
31	y	1026	G
31	y	1027	C
31	y	102(C)	C
31	y	1030	C
31	y	1037	C
31	y	1042	G
31	y	1050	G
31	y	1052	U
31	y	1053	G
31	y	1054	C
31	y	1055	A
31	y	1056	U
31	y	1064	G
31	y	1065	U
31	y	1066	C
31	y	1068	G
31	y	1080	A
31	y	1085	U
31	y	1086	U
31	y	1089	G
31	y	1094	G
31	y	1095	U
31	y	1100	C
31	y	1101	A
31	y	1102	A
31	y	1104	G
31	y	1109	C

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Mol	Chain	Res	Type
31	y	1111	A
31	y	1118	C
31	y	1126	U
31	y	1130	A
31	y	1131	G
31	y	1136	U
31	y	1137	C
31	y	1139	G
31	y	1140	C
31	y	1142	G
31	y	1146	A
31	y	1151	A
31	y	1152	A
31	y	1154	G
31	y	1158	C
31	y	1159	U
31	y	1160	G
31	y	1176	A
31	y	1177	G
31	y	1178	G
31	y	1179	A
31	y	1181	G
31	y	1184	G
31	y	1186	G
31	y	1187	G
31	y	1189	C
31	y	1190	G
31	y	1193	G
31	y	1196	U
31	y	1197	G
31	y	1200	C
31	y	1201	A
31	y	1202	G
31	y	1207	2MG
31	y	1208	C
31	y	1211	U
31	y	1212	U
31	y	1213	A
31	y	1215	G
31	y	1220	G
31	y	1225	A
31	y	1227	A

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Mol	Chain	Res	Type
31	y	1228	C
31	y	1234	C
31	y	1235	U
31	y	1237	C
31	y	1238	A
31	y	1239	A
31	y	1240	U
31	y	1241	G
31	y	1245	A
31	y	1247	U
31	y	1248	A
31	y	1251	A
31	y	1252	A
31	y	1253	G
31	y	1256	A
31	y	1257	U
31	y	1260	C
31	y	1261	A
31	y	1263	C
31	y	1268	A
31	y	1276	G
31	y	1278	U
31	y	1280	A
31	y	1281	U
31	y	1282	C
31	y	1283	G
31	y	1285	A
31	y	1286	A
31	y	1290	G
31	y	1291	G
31	y	1293	G
31	y	1296	C
31	y	1297	C
31	y	1298	C
31	y	1299	A
31	y	1300	G
31	y	1301	U
31	y	1302	U
31	y	1303	C
31	y	1305	G
31	y	1306	A
31	y	1308	U

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Mol	Chain	Res	Type
31	y	1316	G
31	y	1317	C
31	y	1319	A
31	y	1320	C
31	y	1323	G
31	y	1324	A
31	y	1326	C
31	y	1329	A
31	y	1331	G
31	y	1332	A
31	y	1333	A
31	y	1334	G
31	y	1338	G
31	y	1346	A
31	y	1347	G
31	y	1348	U
31	y	1359	C
31	y	1360	A
31	y	1361	G
31	y	136(B)	C
31	y	1364	U
31	y	1365	G
31	y	1373	G
31	y	1375	A
31	y	1378	C
31	y	1380	U
31	y	1381	U
31	y	1388	C
31	y	1393	U
31	y	1395	C
31	y	1397	C
31	y	1398	A
31	y	1399	C
31	y	1400	5MC
31	y	1402	4OC
31	y	1404	5MC
31	y	1405	G
31	y	1406	U
31	y	1407	5MC
31	y	1409	C
31	y	1417	G
31	y	1424	C

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Mol	Chain	Res	Type
31	y	1428	A
31	y	1429	C
31	y	1431	C
31	y	1433	A
31	y	1443	G
31	y	1446	A
31	y	1447	G
31	y	1452	C
31	y	1461	G
31	y	1469	G
31	y	1471	G
31	y	1473	A
31	y	1483	A
31	y	1484	C
31	y	1492	A
31	y	1494	G
31	y	1495	U
31	y	1498	UR3
31	y	1499	A
31	y	1504	G
31	y	1505	G
31	y	1507	A
31	y	1517	G
31	y	1518	MA6
31	y	1519	MA6
31	y	1520	G
31	y	1523	G
31	y	1525	G
31	y	1529	G
32	z	2	C
32	z	7	A
32	z	8	4SU
32	z	9	A
32	z	16	H2U
32	z	17	C
32	z	18	G
32	z	19	G
32	z	20	H2U
32	z	21	A
32	z	27	G
32	z	32	PSU
32	z	33	U

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Mol	Chain	Res	Type
32	z	37	MIA
32	z	39	PSU
32	z	42	C
32	z	45	U
32	z	46	7MG
32	z	48	C
32	z	49	C
32	z	54	5MU
32	z	55	PSU
32	z	59	U
32	z	61	C
32	z	63	G
32	z	65	G
32	z	67	C
32	z	72	C
32	z	76	A
33	0	8	U
33	0	14	A
33	0	15	G
33	0	16	U
33	0	17	U
33	0	18	G
33	0	20	G
33	0	21	A
33	0	22	G
33	0	34	G
33	0	35	A
33	0	36	A
33	0	38	A
33	0	39	U
33	0	40	C
33	0	41	U
33	0	45	G
33	0	46	G
33	0	47	U
33	0	48	C
33	0	54	U
33	0	55	PSU
33	0	56	C
33	0	57	G
33	0	59	U
33	0	61	C

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Mol	Chain	Res	Type
33	0	71	G
33	0	72	C
33	0	75	C
33	0	76	A
34	1	-2	U
34	1	1	U

All (5) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
33	0	7	U
33	0	9	A
33	0	46	G
33	0	48	C
33	0	56	C

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

22 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
31	UR3	y	1498	31	19,22,23	1.64	2 (10%)	26,32,35	1.57	6 (23%)
32	H2U	z	16	32	18,21,22	0.98	1 (5%)	19,30,33	0.97	1 (5%)
31	5MC	y	1407	31	19,22,23	0.92	1 (5%)	26,32,35	1.48	5 (19%)
31	MA6	y	1518	31	23,26,27	1.71	6 (26%)	33,38,41	2.39	14 (42%)
31	5MC	y	967	31	19,22,23	0.89	2 (10%)	26,32,35	1.17	3 (11%)
32	PSU	z	55	32	18,21,22	1.97	4 (22%)	21,30,33	2.08	6 (28%)
33	PSU	0	55	33	18,21,22	3.40	6 (33%)	21,30,33	2.16	5 (23%)
32	4SU	z	8	32	18,21,22	1.82	3 (16%)	25,30,33	2.38	9 (36%)
32	MIA	z	37	32	28,31,32	2.10	8 (28%)	38,44,47	2.09	5 (13%)
31	7MG	y	527	31	23,26,27	3.19	4 (17%)	27,39,42	1.77	6 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	MA6	y	1519	31	23,26,27	1.80	6 (26%)	33,38,41	2.38	16 (48%)
32	PSU	z	32	32	18,21,22	2.04	3 (16%)	21,30,33	2.19	6 (28%)
31	2MG	y	1207	31	23,26,27	1.26	2 (8%)	33,38,41	1.82	8 (24%)
32	5MU	z	54	32	19,22,23	1.77	1 (5%)	27,32,35	1.54	5 (18%)
31	5MC	y	1404	31	19,22,23	1.11	2 (10%)	26,32,35	1.53	5 (19%)
32	PSU	z	39	32	18,21,22	2.31	4 (22%)	21,30,33	1.92	7 (33%)
31	PSU	y	516	31	18,21,22	1.90	4 (22%)	21,30,33	1.99	7 (33%)
32	H2U	z	20	32	18,21,22	0.76	0	19,30,33	0.92	1 (5%)
31	M2G	y	966	31	24,27,28	1.59	3 (12%)	33,40,43	1.35	5 (15%)
31	5MC	y	1400	31	19,22,23	1.09	2 (10%)	26,32,35	1.47	4 (15%)
31	4OC	y	1402	31	20,23,24	1.38	3 (15%)	25,32,35	1.57	5 (20%)
32	7MG	z	46	32	23,26,27	3.05	5 (21%)	27,39,42	1.91	6 (22%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	UR3	y	1498	31	-	5/7/25/26	0/2/2/2
32	H2U	z	16	32	-	2/7/38/39	0/2/2/2
31	5MC	y	1407	31	-	0/7/25/26	0/2/2/2
31	MA6	y	1518	31	-	2/11/29/30	0/3/3/3
31	5MC	y	967	31	-	0/7/25/26	0/2/2/2
32	PSU	z	55	32	-	2/7/25/26	0/2/2/2
33	PSU	0	55	33	-	2/7/25/26	0/2/2/2
32	4SU	z	8	32	-	2/7/25/26	0/2/2/2
32	MIA	z	37	32	-	5/15/33/34	0/3/3/3
31	7MG	y	527	31	-	0/7/37/38	0/3/3/3
31	MA6	y	1519	31	-	1/11/29/30	0/3/3/3
32	PSU	z	32	32	-	3/7/25/26	0/2/2/2
31	2MG	y	1207	31	-	1/9/27/28	0/3/3/3
32	5MU	z	54	32	-	0/7/25/26	0/2/2/2
31	5MC	y	1404	31	-	2/7/25/26	0/2/2/2
32	PSU	z	39	32	-	4/7/25/26	0/2/2/2
31	PSU	y	516	31	-	4/7/25/26	0/2/2/2
32	H2U	z	20	32	-	2/7/38/39	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	M2G	y	966	31	-	2/11/29/30	0/3/3/3
31	5MC	y	1400	31	-	0/7/25/26	0/2/2/2
31	4OC	y	1402	31	-	3/9/29/30	0/2/2/2
32	7MG	z	46	32	-	0/7/37/38	0/3/3/3

All (72) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	y	527	7MG	C8-N9	-14.14	1.36	1.45
32	z	46	7MG	C8-N9	-13.24	1.37	1.45
33	0	55	PSU	O2-C2	11.91	1.48	1.23
32	z	54	5MU	O4-C4	6.90	1.36	1.23
32	z	39	PSU	O2-C2	6.87	1.38	1.23
32	z	37	MIA	C13-C14	6.08	1.50	1.32
32	z	32	PSU	O2-C2	6.06	1.36	1.23
32	z	37	MIA	C16-C14	5.83	1.66	1.50
32	z	55	PSU	O2-C2	5.81	1.35	1.23
31	y	516	PSU	O2-C2	5.67	1.35	1.23
31	y	1498	UR3	O4-C4	5.31	1.34	1.23
33	0	55	PSU	C2-N1	4.75	1.42	1.36
31	y	966	M2G	C6-N1	4.69	1.47	1.38
32	z	8	4SU	C6-C5	4.61	1.45	1.35
31	y	1518	MA6	C6-N1	4.32	1.42	1.34
32	z	39	PSU	C6-C5	4.08	1.39	1.35
31	y	1519	MA6	C6-N1	4.07	1.42	1.34
32	z	8	4SU	C4-N3	3.97	1.41	1.37
32	z	39	PSU	C2-N1	3.95	1.41	1.36
32	z	32	PSU	C6-C5	3.91	1.39	1.35
31	y	1402	4OC	O2'-CM2	-3.83	1.29	1.42
31	y	1207	2MG	C2-N1	3.82	1.42	1.36
31	y	966	M2G	C2-N1	3.78	1.45	1.36
33	0	55	PSU	O4'-C1'	3.75	1.49	1.43
32	z	37	MIA	C2-S10	-3.58	1.72	1.75
32	z	32	PSU	C2-N1	3.53	1.41	1.36
32	z	46	7MG	C6-N1	3.43	1.45	1.38
31	y	516	PSU	C6-C5	3.40	1.39	1.35
31	y	1400	5MC	C4-N4	3.36	1.42	1.34
32	z	55	PSU	C2-N1	3.30	1.41	1.36
31	y	1519	MA6	C5-C6	3.29	1.49	1.41
31	y	1518	MA6	C6-N6	3.20	1.45	1.36
31	y	1518	MA6	C5-N7	-3.16	1.33	1.39
31	y	1519	MA6	O4'-C1'	3.04	1.49	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	z	55	PSU	C6-C5	3.02	1.38	1.35
31	y	1518	MA6	C5-C6	2.99	1.49	1.41
31	y	1207	2MG	C6-N1	2.92	1.44	1.38
31	y	967	5MC	C4-N4	2.82	1.41	1.34
31	y	516	PSU	C2-N1	2.76	1.40	1.36
31	y	1404	5MC	C4-N4	2.74	1.41	1.34
31	y	966	M2G	C2-N2	2.74	1.40	1.35
31	y	527	7MG	C6-N1	2.64	1.43	1.38
32	z	8	4SU	O2-C2	2.61	1.27	1.23
32	z	37	MIA	C6-N1	2.60	1.39	1.34
31	y	1407	5MC	C4-N4	2.58	1.40	1.34
31	y	1402	4OC	C4-N4	2.56	1.41	1.36
32	z	37	MIA	C2-N1	2.55	1.37	1.34
33	0	55	PSU	C4-N3	-2.53	1.34	1.38
31	y	1519	MA6	C5-N7	-2.47	1.34	1.39
33	0	55	PSU	C4-C5	-2.37	1.37	1.44
32	z	46	7MG	C8-N7	-2.36	1.30	1.42
32	z	37	MIA	C5-C4	2.35	1.43	1.39
31	y	527	7MG	C8-N7	-2.35	1.30	1.42
31	y	1519	MA6	C6-N6	2.32	1.43	1.36
32	z	39	PSU	O4'-C4'	-2.26	1.40	1.45
32	z	16	H2U	C1'-N1	2.25	1.50	1.46
31	y	516	PSU	C2'-C1'	2.22	1.56	1.53
31	y	1400	5MC	C6-C5	2.22	1.38	1.34
31	y	1519	MA6	C4-N9	-2.20	1.33	1.37
31	y	1518	MA6	C5-C4	2.20	1.43	1.39
32	z	55	PSU	C4-C5	-2.18	1.38	1.44
31	y	1498	UR3	C4-N3	-2.18	1.36	1.40
32	z	46	7MG	C5-N7	2.17	1.38	1.35
31	y	527	7MG	C2-N1	2.16	1.42	1.37
31	y	1402	4OC	O3'-C3'	2.16	1.48	1.43
31	y	967	5MC	C5-C4	-2.14	1.42	1.44
32	z	37	MIA	C12-N6	2.13	1.50	1.45
32	z	46	7MG	C5-C6	2.13	1.48	1.43
31	y	1518	MA6	C2-N1	2.08	1.37	1.33
33	0	55	PSU	C2-N3	-2.05	1.34	1.37
32	z	37	MIA	C5-N7	-2.04	1.35	1.39
31	y	1404	5MC	O4'-C1'	2.02	1.46	1.42

All (135) bond angle outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	z	37	MIA	C12-C13-C14	-9.14	110.60	127.01
31	y	1207	2MG	C4'-O4'-C1'	-5.72	96.83	109.47
31	y	1518	MA6	N1-C6-N6	5.68	123.78	116.86
31	y	527	7MG	N9-C8-N7	5.67	111.41	103.37
32	z	8	4SU	C5-C4-S4	-5.59	117.92	124.31
32	z	46	7MG	N9-C8-N7	5.51	111.17	103.37
32	z	8	4SU	C4-N3-C2	-5.11	122.42	127.31
31	y	1519	MA6	C2'-C1'-N9	-5.03	100.81	113.30
31	y	1518	MA6	C5-C4-N3	-4.60	120.38	126.72
32	z	32	PSU	C3'-C2'-C1'	4.55	107.05	101.69
32	z	55	PSU	N1-C2-N3	4.52	119.93	115.17
32	z	37	MIA	C11-S10-C2	4.50	105.63	102.25
32	z	55	PSU	C4-N3-C2	-4.49	120.19	126.37
32	z	46	7MG	O4'-C1'-N9	-4.42	103.27	109.30
31	y	516	PSU	C4-N3-C2	-4.26	120.50	126.37
31	y	516	PSU	N1-C2-N3	4.21	119.61	115.17
33	0	55	PSU	C6-N1-C2	-4.11	118.88	122.69
33	0	55	PSU	C4-N3-C2	-4.08	120.75	126.37
31	y	1518	MA6	N3-C4-N9	4.07	134.09	127.17
31	y	1519	MA6	C5-C4-N3	-4.05	121.14	126.72
32	z	32	PSU	C4-N3-C2	-4.02	120.83	126.37
33	0	55	PSU	C3'-C2'-C1'	4.01	106.42	101.69
32	z	39	PSU	N1-C2-N3	4.00	119.38	115.17
32	z	39	PSU	C4-N3-C2	-3.99	120.88	126.37
31	y	1207	2MG	C2-N3-C4	3.92	116.91	112.00
32	z	32	PSU	N1-C2-N3	3.85	119.23	115.17
33	0	55	PSU	N1-C2-N3	3.81	119.19	115.17
31	y	1519	MA6	N1-C6-N6	3.78	121.46	116.86
32	z	8	4SU	S4-C4-N3	3.75	124.12	120.20
31	y	1519	MA6	C2-N3-C4	3.72	120.91	111.83
31	y	1519	MA6	N9-C8-N7	-3.72	108.66	113.94
31	y	1207	2MG	CM2-N2-C2	-3.60	115.92	123.65
31	y	1498	UR3	C1'-N1-C2	3.54	122.84	117.04
31	y	1407	5MC	CM5-C5-C6	-3.54	118.06	122.85
31	y	1518	MA6	C2-N1-C6	3.53	120.46	111.83
32	z	8	4SU	O2-C2-N1	-3.52	118.22	122.80
32	z	8	4SU	N3-C2-N1	3.52	119.47	114.89
32	z	8	4SU	C5'-C4'-C3'	-3.52	102.55	115.21
31	y	1518	MA6	C2-N3-C4	3.51	120.41	111.83
31	y	1519	MA6	N1-C2-N3	-3.44	123.37	128.58
32	z	8	4SU	C5-C4-N3	3.43	117.94	114.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	1400	5MC	C5-C6-N1	-3.40	119.62	123.31
32	z	37	MIA	C16-C14-C13	-3.36	112.56	122.66
31	y	1519	MA6	C4-N9-C8	3.32	109.22	105.74
32	z	32	PSU	C5'-C4'-C3'	-3.31	103.31	115.21
31	y	1407	5MC	C2'-C1'-N1	-3.29	104.10	113.25
31	y	1518	MA6	C5-C6-N6	-3.27	120.16	125.33
31	y	1519	MA6	C2-N1-C6	3.26	119.80	111.83
31	y	1518	MA6	N1-C2-N3	-3.25	123.67	128.58
32	z	37	MIA	C2'-C1'-N9	-3.22	105.30	113.30
31	y	1404	5MC	C4'-O4'-C1'	-3.17	102.47	109.47
32	z	55	PSU	C3'-C2'-C1'	3.16	105.41	101.69
31	y	966	M2G	C2-N3-C4	3.15	118.33	112.51
31	y	1519	MA6	C2'-C3'-C4'	3.13	108.65	102.61
32	z	46	7MG	C2-N3-C4	3.11	117.66	112.30
32	z	55	PSU	C6-C5-C4	3.10	120.26	118.17
31	y	1498	UR3	C6-N1-C2	-3.08	119.28	121.80
32	z	55	PSU	C6-N1-C2	-3.07	119.84	122.69
31	y	1402	4OC	C1'-N1-C2	3.04	125.16	118.44
31	y	1519	MA6	N3-C4-N9	3.03	132.32	127.17
31	y	1518	MA6	C4-C5-C6	3.01	119.02	115.91
32	z	39	PSU	C6-N1-C2	-3.00	119.91	122.69
31	y	1519	MA6	C3'-C2'-C1'	2.98	107.09	101.46
32	z	46	7MG	C4-C5-N7	2.98	108.89	105.38
32	z	54	5MU	N3-C2-N1	2.96	118.74	114.89
32	z	32	PSU	C6-N1-C2	-2.94	119.96	122.69
31	y	1404	5MC	C1'-N1-C6	-2.93	116.33	121.15
31	y	527	7MG	C2-N3-C4	2.93	117.34	112.30
31	y	1518	MA6	C3'-C2'-C1'	2.92	106.98	101.46
31	y	527	7MG	C4-C5-N7	2.91	108.81	105.38
31	y	527	7MG	N9-C4-N3	2.90	129.71	125.46
31	y	966	M2G	C2'-C1'-N9	-2.89	105.20	113.25
31	y	1404	5MC	C1'-N1-C2	2.87	124.78	118.44
31	y	1404	5MC	CM5-C5-C6	-2.87	118.97	122.85
32	z	32	PSU	O4'-C4'-C3'	2.86	110.83	105.15
31	y	516	PSU	C6-N1-C2	-2.84	120.05	122.69
31	y	1404	5MC	O4'-C4'-C5'	2.84	118.44	109.33
31	y	1207	2MG	N1-C2-N2	2.81	119.43	116.56
31	y	1400	5MC	C1'-N1-C6	2.78	125.72	121.15
31	y	1402	4OC	O4'-C4'-C5'	2.77	118.20	109.33
31	y	1518	MA6	C5'-C4'-C3'	-2.77	105.25	115.21
31	y	1518	MA6	C5-N7-C8	2.74	107.76	103.45
31	y	1518	MA6	O4'-C4'-C3'	2.71	110.54	105.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	1402	4OC	O4'-C4'-C3'	2.70	110.50	105.15
31	y	1519	MA6	C5-N7-C8	2.69	107.68	103.45
32	z	39	PSU	O2-C2-N1	-2.68	120.03	122.79
31	y	516	PSU	C4'-O4'-C1'	-2.67	101.76	108.44
32	z	54	5MU	C4-N3-C2	-2.66	123.85	127.34
31	y	966	M2G	O3'-C3'-C2'	2.62	120.21	111.82
31	y	516	PSU	O2-C2-N1	-2.60	120.11	122.79
31	y	966	M2G	C3'-C2'-C1'	2.59	106.36	101.46
31	y	1407	5MC	C3'-C2'-C1'	2.58	106.35	101.46
32	z	55	PSU	O2-C2-N1	-2.57	120.14	122.79
31	y	1518	MA6	N9-C8-N7	-2.57	110.29	113.94
31	y	1402	4OC	C1'-N1-C6	-2.55	115.33	120.78
31	y	967	5MC	CM5-C5-C6	-2.52	119.44	122.85
31	y	967	5MC	C3'-C2'-C1'	2.47	106.14	101.46
31	y	516	PSU	C3'-C2'-C1'	2.45	104.58	101.69
31	y	1498	UR3	O4'-C1'-N1	-2.44	102.83	108.36
33	0	55	PSU	C5-C4-N3	2.42	121.88	116.55
31	y	1207	2MG	O4'-C4'-C5'	2.41	117.07	109.33
31	y	966	M2G	C5'-C4'-C3'	-2.41	106.53	115.21
31	y	967	5MC	C5-C6-N1	-2.41	120.70	123.31
31	y	1207	2MG	N2-C2-N3	-2.40	117.45	120.51
32	z	54	5MU	C5M-C5-C6	-2.38	119.62	122.85
32	z	54	5MU	O3'-C3'-C4'	-2.37	104.28	111.08
31	y	1519	MA6	C4-C5-N7	-2.36	107.88	110.58
32	z	16	H2U	C3'-C2'-C1'	2.36	105.93	101.46
32	z	39	PSU	C6-C5-C4	2.35	119.76	118.17
31	y	1519	MA6	C5-C6-N6	-2.35	121.62	125.33
31	y	1407	5MC	C2'-C3'-C4'	2.31	107.06	102.61
31	y	1407	5MC	C5-C6-N1	-2.31	120.81	123.31
31	y	1498	UR3	O3'-C3'-C4'	2.30	117.68	111.08
31	y	1519	MA6	C1'-N9-C8	-2.29	122.02	127.09
32	z	37	MIA	C5-C4-N3	-2.28	124.78	127.18
32	z	8	4SU	C3'-C2'-C1'	2.28	105.77	101.46
31	y	516	PSU	O4'-C4'-C5'	2.26	116.56	109.33
32	z	46	7MG	C5'-C4'-C3'	-2.25	107.10	115.21
32	z	20	H2U	C3'-C2'-C1'	2.25	105.72	101.46
31	y	1498	UR3	O4'-C4'-C3'	2.25	109.61	105.15
32	z	8	4SU	O4'-C4'-C3'	2.23	109.58	105.15
32	z	46	7MG	O4'-C4'-C3'	2.20	109.53	105.15
31	y	527	7MG	C4'-O4'-C1'	-2.15	104.72	109.47
32	z	39	PSU	O3'-C3'-C2'	2.14	118.67	111.82
31	y	1207	2MG	O3'-C3'-C2'	2.13	118.63	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	1400	5MC	C5-C4-N3	-2.12	119.58	121.75
31	y	1519	MA6	O4'-C1'-N9	2.08	112.08	108.09
31	y	1402	4OC	O3'-C3'-C4'	2.07	117.03	111.08
31	y	527	7MG	C5-C4-N3	-2.06	124.26	128.13
31	y	1207	2MG	C2'-C3'-C4'	-2.05	98.66	102.61
31	y	1400	5MC	N1-C2-N3	2.04	122.34	118.80
32	z	54	5MU	C2'-C3'-C4'	2.03	106.53	102.61
31	y	1498	UR3	C3'-C2'-C1'	2.03	105.30	101.46
31	y	1518	MA6	O3'-C3'-C2'	2.02	118.31	111.82
32	z	39	PSU	O4'-C4'-C5'	2.02	115.79	109.33

There are no chirality outliers.

All (42) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
31	y	516	PSU	C2'-C1'-C5-C4
31	y	516	PSU	C2'-C1'-C5-C6
31	y	1402	4OC	C1'-C2'-O2'-CM2
31	y	1518	MA6	O4'-C4'-C5'-O5'
32	z	16	H2U	O4'-C4'-C5'-O5'
32	z	16	H2U	C3'-C4'-C5'-O5'
32	z	37	MIA	O4'-C4'-C5'-O5'
32	z	37	MIA	C5-C6-N6-C12
32	z	37	MIA	C12-C13-C14-C16
32	z	39	PSU	C2'-C1'-C5-C4
32	z	39	PSU	C2'-C1'-C5-C6
33	0	55	PSU	C2'-C1'-C5-C4
31	y	1402	4OC	O4'-C4'-C5'-O5'
31	y	1518	MA6	C3'-C4'-C5'-O5'
32	z	37	MIA	C3'-C4'-C5'-O5'
32	z	39	PSU	O4'-C4'-C5'-O5'
31	y	1498	UR3	O4'-C4'-C5'-O5'
32	z	20	H2U	O4'-C4'-C5'-O5'
32	z	20	H2U	C3'-C4'-C5'-O5'
32	z	32	PSU	O4'-C4'-C5'-O5'
31	y	966	M2G	O4'-C1'-N9-C4
31	y	1498	UR3	C3'-C4'-C5'-O5'
32	z	32	PSU	C3'-C4'-C5'-O5'
32	z	8	4SU	C3'-C4'-C5'-O5'
32	z	39	PSU	C3'-C4'-C5'-O5'
31	y	1402	4OC	C3'-C4'-C5'-O5'
32	z	8	4SU	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
31	y	966	M2G	O4'-C1'-N9-C8
32	z	37	MIA	N1-C6-N6-C12
31	y	1404	5MC	O4'-C4'-C5'-O5'
31	y	516	PSU	O4'-C1'-C5-C4
32	z	32	PSU	O4'-C1'-C5-C4
33	0	55	PSU	O4'-C1'-C5-C4
31	y	1404	5MC	C3'-C4'-C5'-O5'
31	y	1498	UR3	O4'-C1'-N1-C6
31	y	516	PSU	O4'-C1'-C5-C6
32	z	55	PSU	O4'-C1'-C5-C6
31	y	1519	MA6	C3'-C4'-C5'-O5'
31	y	1498	UR3	C2'-C1'-N1-C6
32	z	55	PSU	C2'-C1'-C5-C6
31	y	1498	UR3	O4'-C1'-N1-C2
31	y	1207	2MG	C2'-C1'-N9-C8

There are no ring outliers.

21 monomers are involved in 194 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
31	y	1498	UR3	10	0
32	z	16	H2U	3	0
31	y	1407	5MC	9	0
31	y	1518	MA6	37	0
31	y	967	5MC	15	0
32	z	55	PSU	11	0
33	0	55	PSU	5	0
32	z	8	4SU	6	0
31	y	527	7MG	5	0
31	y	1519	MA6	12	0
32	z	32	PSU	4	0
31	y	1207	2MG	16	0
32	z	54	5MU	8	0
31	y	1404	5MC	1	0
32	z	39	PSU	7	0
31	y	516	PSU	10	0
32	z	20	H2U	2	0
31	y	966	M2G	8	0
31	y	1400	5MC	12	0
31	y	1402	4OC	16	0
32	z	46	7MG	12	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	w	31
31	y	5

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	w	926:A	O3'	928:G	P	1.97
1	w	1506:C	O3'	1508:A	P	1.96
1	w	890:A	O3'	892:G	P	1.94
1	w	1171:G	O3'	1173:G	P	1.94
1	w	1481:U	O3'	1483:G	P	1.90
1	w	154(B):C	O3'	1547:C	P	1.90
1	w	1743:G	O3'	1746:G	P	1.89
1	y	102(C):C	O3'	1029:G	P	1.87
1	w	41:C	O3'	43:G	P	1.86
1	w	1133:U	O3'	1135:C	P	1.86
1	w	1712:C	O3'	1716:U	P	1.86
1	w	99:U	O3'	101:G	P	1.85
1	w	149(B):A	O3'	1449:G	P	1.85
1	w	1864:U	O3'	1869:G	P	1.83
1	w	2219:G	O3'	2224:G	P	1.83
1	w	155:C	O3'	161:U	P	1.82
1	w	489:G	O3'	491:G	P	1.82
1	w	1735:U	O3'	1741:C	P	1.82
1	w	2199:A	O3'	2205:C	P	1.82

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	y	458:C	O3'	464:G	P	1.82
1	w	114(B):A	O3'	1143:A	P	1.81
1	w	2213:U	O3'	2215:G	P	1.81
1	y	843:U	O3'	848:C	P	1.81
1	w	366(B):C	O3'	370:G	P	1.80
1	w	122(A):C	O3'	1222:C	P	1.80
1	y	210:U	O3'	216:G	P	1.80
1	w	165:U	O3'	171:G	P	1.79
1	w	163(B):C	O3'	1631:A	P	1.79
1	w	1872:A	O3'	1878:G	P	1.79
1	w	1451:C	O3'	1453:A	P	1.78
1	w	436:C	O3'	438:G	P	1.77
1	w	144(B):A	O3'	1445:C	P	1.77
1	w	1583:A	O3'	1585:C	P	1.77
1	w	537:C	O3'	539:G	P	1.76
1	y	838:G	O3'	841:U	P	1.76
1	w	712(B):A	O3'	2713:A	P	1.75

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	w	2889/2889 (100%)	0.53	309 (10%) 11 12	5, 5, 117, 159	0
2	x	120/121 (99%)	0.14	7 (5%) 29 20	5, 13, 95, 127	0
3	A	127/229 (55%)	0.28	11 (8%) 16 14	5, 50, 148, 151	0
4	B	272/276 (98%)	1.13	70 (25%) 1 2	5, 60, 148, 155	0
5	C	201/206 (97%)	1.08	41 (20%) 3 3	5, 49, 148, 159	0
6	D	194/205 (94%)	1.02	38 (19%) 3 4	5, 55, 148, 165	0
7	E	180/182 (98%)	0.57	17 (9%) 14 13	5, 58, 148, 156	0
8	F	173/180 (96%)	0.38	14 (8%) 18 14	5, 67, 148, 160	0
9	G	148/148 (100%)	-0.06	6 (4%) 41 26	5, 43, 148, 151	0
10	H	138/163 (84%)	0.77	19 (13%) 6 8	5, 52, 147, 152	0
11	I	122/122 (100%)	0.85	22 (18%) 3 5	5, 35, 142, 148	0
12	J	146/150 (97%)	1.41	45 (30%) 1 1	5, 90, 150, 160	0
13	K	137/141 (97%)	0.79	21 (15%) 5 7	5, 24, 148, 152	0
14	L	118/118 (100%)	0.85	22 (18%) 3 4	5, 44, 148, 148	0
15	M	106/112 (94%)	0.55	12 (11%) 10 11	5, 48, 148, 160	0
16	N	137/146 (93%)	0.75	26 (18%) 3 4	5, 74, 150, 167	0
17	O	117/118 (99%)	1.04	20 (17%) 4 5	5, 35, 114, 148	0
18	P	101/101 (100%)	0.68	13 (12%) 7 9	5, 79, 148, 159	0
19	Q	109/113 (96%)	0.41	12 (11%) 10 11	5, 33, 137, 149	0
20	R	92/96 (95%)	1.47	31 (33%) 1 1	5, 73, 148, 161	0
21	S	103/110 (93%)	0.73	18 (17%) 4 5	5, 86, 160, 163	0
22	T	185/206 (89%)	0.77	30 (16%) 4 6	5, 50, 148, 161	0
23	U	76/85 (89%)	0.62	7 (9%) 14 13	5, 57, 151, 166	0
24	V	88/98 (89%)	1.07	20 (22%) 2 3	5, 91, 148, 154	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	W	62/72 (86%)	0.68	7 (11%) 10 11	5, 88, 149, 155	0
26	X	60/60 (100%)	0.22	4 (6%) 24 17	5, 36, 148, 150	0
27	Y	56/60 (93%)	0.79	11 (19%) 3 4	7, 77, 164, 168	0
28	Z	48/49 (97%)	0.65	6 (12%) 8 10	5, 5, 42, 126	0
29	a	63/65 (96%)	1.16	13 (20%) 2 3	5, 50, 151, 157	0
30	b	35/37 (94%)	2.19	16 (45%) 0 1	5, 102, 149, 153	0
31	y	1490/1522 (97%)	0.33	109 (7%) 21 16	5, 9, 113, 163	0
32	z	67/76 (88%)	0.35	5 (7%) 20 15	5, 6, 82, 117	0
33	0	75/76 (98%)	0.58	7 (9%) 14 13	5, 37, 128, 148	0
34	1	6/10 (60%)	1.76	2 (33%) 1 1	5, 5, 54, 67	0
35	c	234/256 (91%)	0.27	15 (6%) 25 18	5, 50, 151, 164	0
36	d	206/239 (86%)	0.51	30 (14%) 6 8	5, 57, 148, 151	0
37	e	208/209 (99%)	0.88	35 (16%) 4 6	5, 50, 148, 157	0
38	f	150/162 (92%)	1.18	32 (21%) 2 3	5, 62, 148, 154	0
39	g	101/101 (100%)	0.52	8 (7%) 18 15	5, 72, 148, 156	0
40	h	155/156 (99%)	1.04	37 (23%) 2 2	5, 73, 155, 163	0
41	i	138/138 (100%)	0.61	20 (14%) 6 8	5, 43, 148, 149	0
42	j	127/128 (99%)	1.16	26 (20%) 2 3	5, 85, 150, 154	0
43	k	98/105 (93%)	1.10	21 (21%) 2 3	5, 83, 151, 164	0
44	l	116/129 (89%)	0.81	19 (16%) 4 6	5, 71, 150, 162	0
45	m	124/132 (93%)	0.61	16 (12%) 7 9	5, 30, 148, 152	0
46	n	125/126 (99%)	1.17	27 (21%) 2 3	5, 74, 148, 162	0
47	o	60/61 (98%)	0.65	6 (10%) 12 13	5, 66, 151, 161	0
48	p	88/89 (98%)	0.64	9 (10%) 12 12	5, 57, 148, 163	0
49	q	83/88 (94%)	0.78	14 (16%) 4 6	5, 50, 148, 148	0
50	r	104/105 (99%)	0.56	17 (16%) 4 6	5, 52, 148, 158	0
51	s	73/88 (82%)	0.70	7 (9%) 13 13	5, 69, 149, 157	0
52	t	80/93 (86%)	0.78	16 (20%) 3 4	5, 52, 148, 159	0
53	u	99/106 (93%)	0.91	15 (15%) 5 7	10, 66, 199, 199	0
54	v	24/27 (88%)	1.23	8 (33%) 1 1	5, 47, 139, 142	0
All	All	10434/10880 (95%)	0.64	1389 (13%) 7 9	5, 32, 148, 199	0

All (1389) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
46	n	118	ALA	18.5
1	w	1061	U	15.8
1	w	896	A	14.1
42	j	14	VAL	14.1
22	T	173	ALA	13.3
1	w	1063	G	11.9
6	D	82	GLY	11.8
1	w	270(C)	A	11.7
46	n	124	PRO	11.6
1	w	2499	C	11.1
30	b	24	TYR	11.0
22	T	116	VAL	10.7
10	H	98	TYR	10.6
45	m	113	LYS	10.5
51	s	51	LEU	10.5
1	w	29	U	10.4
1	w	1062	G	10.1
5	C	57	LYS	10.0
38	f	123	LEU	9.9
1	w	883	G	9.6
1	w	192	C	9.5
37	e	7	PRO	9.4
1	w	2382	G	9.3
37	e	44	GLY	9.2
38	f	125	SER	9.1
38	f	88	LYS	9.1
1	w	2612	C	8.9
4	B	36	PRO	8.8
14	L	67	LEU	8.8
1	w	2500	U	8.7
43	k	51	ARG	8.7
17	O	56	ASP	8.6
40	h	37	ASN	8.6
8	F	179	LYS	8.6
1	w	882	G	8.6
1	w	1954	G	8.6
10	H	106	LYS	8.5
41	i	131	GLY	8.4
31	y	1257	U	8.4
29	a	29	LYS	8.3
1	w	1093	G	8.0
42	j	66	ARG	8.0

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Mol	Chain	Res	Type	RSRZ
38	f	83	GLU	8.0
33	0	20	G	8.0
12	J	22	GLY	8.0
39	g	88	VAL	7.8
5	C	125	GLY	7.8
7	E	62	LEU	7.8
1	w	1070	A	7.8
1	w	271(A)	U	7.7
1	w	530	G	7.7
31	y	1492	A	7.7
48	p	53	HIS	7.7
1	w	413	C	7.6
1	w	1064	C	7.6
6	D	81	GLY	7.6
1	w	2410	G	7.6
32	z	7	A	7.6
1	w	1094	U	7.6
46	n	126	LYS	7.6
40	h	84	ASN	7.5
1	w	1059	G	7.5
12	J	114	ILE	7.5
6	D	46	THR	7.4
1	w	30	G	7.4
41	i	116	LYS	7.4
46	n	119	GLY	7.4
1	w	1057	A	7.3
1	w	1072	C	7.3
36	d	190	ARG	7.2
46	n	28	ALA	7.2
25	W	46	GLN	7.1
38	f	89	ILE	7.1
42	j	65	VAL	7.1
37	e	160	GLN	7.0
46	n	125	ARG	7.0
33	0	47	U	7.0
14	L	70	LEU	7.0
4	B	15	PHE	6.9
22	T	68	PRO	6.9
25	W	43	GLN	6.9
25	W	50	ILE	6.9
11	I	1	MET	6.8
38	f	124	GLY	6.8

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Mol	Chain	Res	Type	RSRZ
1	w	409	C	6.8
35	c	231	GLU	6.8
4	B	8	PRO	6.8
6	D	74	GLY	6.8
1	w	885	C	6.8
1	w	139	G	6.8
11	I	25	LEU	6.7
13	K	82	ARG	6.7
1	w	270(B)	A	6.7
22	T	27	VAL	6.7
38	f	24	ARG	6.6
44	l	20	TYR	6.6
38	f	90	VAL	6.6
37	e	43	HIS	6.6
20	R	71	GLY	6.5
4	B	233	HIS	6.5
1	w	884	C	6.5
6	D	47	LYS	6.5
43	k	56	HIS	6.5
1	w	2380	C	6.4
20	R	33	LYS	6.4
1	w	1071	G	6.4
31	y	111	G	6.4
6	D	31	VAL	6.3
1	w	448	U	6.3
30	b	8	LYS	6.3
52	t	11	VAL	6.3
15	M	33	LYS	6.2
31	y	588	G	6.2
7	E	90	LEU	6.2
1	w	1098	A	6.2
4	B	9	TYR	6.1
6	D	80	GLY	6.1
46	n	29	ARG	6.1
1	w	2523	G	6.1
4	B	41	GLY	6.0
1	w	1498	C	6.0
1	w	2454	G	6.0
16	N	57	PHE	6.0
40	h	83	ALA	6.0
11	I	32	TYR	6.0
37	e	92	VAL	6.0

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Mol	Chain	Res	Type	RSRZ
1	w	2308	G	6.0
1	w	2391	G	6.0
6	D	85	PHE	5.9
12	J	130	PHE	5.9
1	w	201	C	5.9
1	w	2701	C	5.9
31	y	353	A	5.9
31	y	1219	U	5.9
17	O	6	THR	5.9
5	C	151	TYR	5.8
4	B	89	SER	5.8
40	h	41	ARG	5.8
38	f	121	LYS	5.8
1	w	248	G	5.8
40	h	78	ARG	5.8
20	R	73	ARG	5.8
31	y	869	G	5.7
1	w	2551	C	5.7
1	w	412	A	5.7
15	M	57	LYS	5.7
1	w	932	G	5.7
28	Z	48	LYS	5.7
39	g	92	LYS	5.7
11	I	8	LEU	5.7
10	H	97	ARG	5.7
29	a	28	GLY	5.7
29	a	64	TYR	5.6
6	D	58	LYS	5.6
1	w	2820	A	5.6
53	u	76	ALA	5.6
42	j	124	GLN	5.6
1	w	734	A	5.6
36	d	52	LEU	5.6
1	w	2020	A	5.5
1	w	271(B)	C	5.5
31	y	107	G	5.5
34	l	-1	G	5.5
12	J	76	LYS	5.5
31	y	1150	U	5.5
46	n	30	ALA	5.5
31	y	412	A	5.5
4	B	10	THR	5.5

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Mol	Chain	Res	Type	RSRZ
1	w	1056	G	5.5
1	w	2090	G	5.5
1	w	200	U	5.5
4	B	153	ALA	5.5
52	t	57	HIS	5.5
51	s	62	GLU	5.4
30	b	20	HIS	5.4
13	K	5	ARG	5.4
20	R	68	ARG	5.4
37	e	67	ILE	5.4
1	w	1205	U	5.4
1	w	76	C	5.4
7	E	88	ILE	5.4
11	I	2	ILE	5.4
24	V	18	ILE	5.4
1	w	2447	G	5.4
24	V	40	ARG	5.4
1	w	202	U	5.3
20	R	54	VAL	5.3
42	j	127	LYS	5.3
40	h	38	LEU	5.3
16	N	135	VAL	5.3
30	b	17	ILE	5.3
1	w	575	A	5.3
12	J	21	ARG	5.3
46	n	117	VAL	5.3
53	u	72	LEU	5.3
38	f	126	ARG	5.3
44	l	31	THR	5.3
1	w	1060	U	5.3
8	F	138	LYS	5.3
43	k	55	LYS	5.2
10	H	119	GLU	5.2
1	w	2611	U	5.2
1	w	606	U	5.2
27	Y	12	SER	5.2
1	w	2831	G	5.2
45	m	111	ASP	5.2
45	m	112	ARG	5.1
52	t	36	ARG	5.1
18	P	45	THR	5.1
44	l	22	HIS	5.1

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Mol	Chain	Res	Type	RSRZ
15	M	59	LYS	5.1
12	J	104	GLY	5.1
25	W	49	LYS	5.1
41	i	91	ARG	5.1
6	D	95	THR	5.1
14	L	108	GLY	5.1
1	w	2412	A	5.1
1	w	958	U	5.1
7	E	156	ASP	5.1
17	O	53	ARG	5.1
31	y	63	C	5.1
23	U	16	SER	5.0
27	Y	6	VAL	5.0
31	y	1354	C	5.0
12	J	36	LYS	5.0
1	w	2506	U	5.0
49	q	42	ARG	5.0
15	M	60	GLY	5.0
45	m	18	ARG	5.0
1	w	195	A	5.0
22	T	28	MET	4.9
1	w	194	G	4.9
42	j	125	TYR	4.9
11	I	19	ILE	4.9
5	C	128	SER	4.9
4	B	159	ALA	4.9
14	L	66	VAL	4.9
11	I	7	TYR	4.9
21	S	93	GLY	4.9
10	H	75	VAL	4.9
1	w	504	U	4.9
12	J	43	GLY	4.9
42	j	13	ALA	4.9
29	a	14	VAL	4.9
44	l	110	ASP	4.8
1	w	1099	G	4.8
1	w	1104	C	4.8
1	w	2429	G	4.8
20	R	34	ALA	4.8
1	w	2388	A	4.8
43	k	35	SER	4.8
1	w	1033	U	4.8

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Mol	Chain	Res	Type	RSRZ
31	y	982	U	4.8
44	l	83	ILE	4.8
1	w	449	A	4.7
10	H	96	THR	4.7
50	r	20	THR	4.7
1	w	2895	U	4.7
4	B	158	ALA	4.7
18	P	46	VAL	4.7
16	N	68	TYR	4.7
43	k	60	ARG	4.7
1	w	1783	A	4.7
1	w	2883	A	4.7
22	T	118	GLN	4.7
40	h	86	GLN	4.7
31	y	1287	A	4.7
37	e	153	ARG	4.7
1	w	574	C	4.7
20	R	53	LYS	4.6
28	Z	47	ARG	4.6
4	B	214	TRP	4.6
1	w	514	A	4.6
13	K	80	GLU	4.6
1	w	249	C	4.6
6	D	75	ALA	4.6
11	I	3	GLN	4.6
31	y	1278	U	4.6
28	Z	45	ALA	4.6
48	p	64	ARG	4.6
20	R	4	ALA	4.5
1	w	1097	U	4.5
19	Q	9	TYR	4.5
44	l	84	VAL	4.5
37	e	42	GLN	4.5
10	H	102	PRO	4.5
25	W	48	HIS	4.5
1	w	345	A	4.5
31	y	977	A	4.5
52	t	73	GLU	4.5
12	J	47	ASP	4.5
45	m	19	LYS	4.5
6	D	34	TRP	4.5
40	h	85	TYR	4.5

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Mol	Chain	Res	Type	RSRZ
6	D	96	LEU	4.5
4	B	231	HIS	4.5
5	C	141	ILE	4.5
31	y	522	C	4.5
1	w	1087	G	4.5
17	O	8	VAL	4.5
16	N	77	PRO	4.4
51	s	34	TYR	4.4
40	h	33	ASP	4.4
43	k	50	ILE	4.4
17	O	96	ALA	4.4
48	p	62	GLN	4.4
4	B	237	GLU	4.4
16	N	134	GLU	4.4
1	w	79	G	4.4
1	w	859	G	4.4
1	w	881	G	4.4
27	Y	55	ARG	4.4
40	h	76	ARG	4.4
20	R	6	ASP	4.4
16	N	69	GLY	4.4
4	B	39	LYS	4.4
17	O	58	ARG	4.4
49	q	71	ARG	4.4
50	r	26	GLN	4.4
12	J	30	THR	4.4
36	d	191	THR	4.4
38	f	87	SER	4.3
31	y	731	G	4.3
4	B	228	PRO	4.3
12	J	23	PRO	4.3
12	J	82	GLY	4.3
20	R	11	PRO	4.3
6	D	94	TYR	4.3
33	0	39	U	4.3
31	y	767	A	4.3
42	j	123	PRO	4.3
21	S	3	VAL	4.3
12	J	50	ARG	4.3
3	A	47	LYS	4.3
20	R	72	LYS	4.3
4	B	13	ARG	4.3

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Mol	Chain	Res	Type	RSRZ
12	J	63	PRO	4.3
17	O	5	LYS	4.3
18	P	6	LYS	4.3
20	R	62	LYS	4.3
4	B	66	ASP	4.3
10	H	25	LYS	4.2
22	T	176	PRO	4.2
30	b	6	SER	4.2
36	d	3	ASN	4.2
44	l	12	ARG	4.2
1	w	1100	C	4.2
40	h	75	VAL	4.2
31	y	706	A	4.2
1	w	196	A	4.2
30	b	3	VAL	4.2
4	B	224	ALA	4.2
11	I	38	VAL	4.2
1	w	193	U	4.2
4	B	262	ARG	4.2
3	A	48	LEU	4.2
4	B	229	VAL	4.1
1	w	2126	A	4.1
11	I	120	GLU	4.1
13	K	83	MET	4.1
22	T	174	VAL	4.1
37	e	6	GLY	4.1
44	l	41	THR	4.1
31	y	1070	U	4.1
1	w	1379	A	4.1
1	w	2411	A	4.1
46	n	115	LYS	4.1
24	V	95	LEU	4.1
16	N	116	ALA	4.1
1	w	810	U	4.1
36	d	173	VAL	4.1
4	B	235	GLY	4.1
7	E	89	GLY	4.1
49	q	28	ARG	4.1
17	O	28	ARG	4.1
36	d	10	PHE	4.0
44	l	124	LYS	4.0
13	K	90	VAL	4.0

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Mol	Chain	Res	Type	RSRZ
27	Y	11	THR	4.0
31	y	1503	A	4.0
36	d	189	ALA	4.0
5	C	120	TRP	4.0
52	t	34	TRP	4.0
2	x	55	U	4.0
38	f	29	GLY	4.0
17	O	4	ALA	4.0
1	w	915	C	4.0
49	q	68	ASP	4.0
48	p	87	ILE	4.0
18	P	79	VAL	4.0
10	H	107	LYS	4.0
20	R	77	LYS	4.0
1	w	198	C	4.0
1	w	2498	C	4.0
1	w	2211	G	4.0
32	z	29	G	4.0
19	Q	78	GLU	4.0
30	b	31	LYS	3.9
31	y	1360	A	3.9
40	h	77	SER	3.9
1	w	2466	C	3.9
1	w	1730	U	3.9
47	o	45	ARG	3.9
4	B	152	GLY	3.9
50	r	92	ARG	3.9
22	T	178	GLU	3.9
41	i	84	ARG	3.9
46	n	113	PRO	3.9
5	C	137	HIS	3.9
51	s	59	SER	3.9
18	P	13	ARG	3.9
37	e	3	ARG	3.9
37	e	115	ARG	3.9
40	h	79	ARG	3.9
26	X	26	LEU	3.9
38	f	26	PHE	3.9
46	n	101	GLN	3.9
21	S	17	SER	3.9
12	J	54	GLY	3.9
1	w	1089	G	3.9

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Mol	Chain	Res	Type	RSRZ
1	w	1630	G	3.9
5	C	154	LYS	3.9
21	S	94	LYS	3.9
40	h	104	LEU	3.9
1	w	1289	C	3.9
13	K	20	ALA	3.9
46	n	27	LYS	3.9
1	w	405	U	3.8
1	w	2615	U	3.8
6	D	76	PRO	3.8
1	w	1184	G	3.8
16	N	39	ARG	3.8
20	R	60	ARG	3.8
1	w	331	A	3.8
23	U	15	ASP	3.8
20	R	67	GLY	3.8
37	e	209	ARG	3.8
24	V	71	TYR	3.8
13	K	22	LYS	3.8
1	w	197	A	3.8
1	w	887	A	3.8
31	y	1286	A	3.8
36	d	54	ARG	3.8
2	x	28	C	3.8
18	P	80	GLN	3.8
37	e	88	VAL	3.8
1	w	1058	G	3.8
12	J	65	ARG	3.8
1	w	1963	U	3.8
4	B	38	LYS	3.8
5	C	165	VAL	3.8
22	T	72	ARG	3.7
14	L	109	ALA	3.7
1	w	945	A	3.7
50	r	14	LYS	3.7
1	w	508	G	3.7
49	q	46	PRO	3.7
32	z	48	C	3.7
18	P	26	ASP	3.7
4	B	265	PRO	3.7
46	n	114	ARG	3.7
1	w	72	U	3.7

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Mol	Chain	Res	Type	RSRZ
4	B	240	ALA	3.7
36	d	149	ALA	3.7
31	y	1059	C	3.7
39	g	90	VAL	3.7
19	Q	4	LYS	3.7
12	J	31	ALA	3.7
12	J	83	VAL	3.7
31	y	60	A	3.7
31	y	768	A	3.7
36	d	109	PRO	3.7
53	u	70	SER	3.7
20	R	40	LYS	3.7
1	w	2258	C	3.7
31	y	221	C	3.7
31	y	112	G	3.7
1	w	677	A	3.6
53	u	15	ARG	3.6
40	h	74	GLU	3.6
1	w	2345	G	3.6
1	w	2582	G	3.6
31	y	1190	G	3.6
6	D	98	LYS	3.6
49	q	11	SER	3.6
1	w	2448	A	3.6
9	G	119	PRO	3.6
11	I	119	PRO	3.6
50	r	44	ALA	3.6
12	J	39	LYS	3.6
31	y	59	A	3.6
17	O	9	VAL	3.6
37	e	137	SER	3.6
22	T	177	PRO	3.6
12	J	80	TYR	3.6
1	w	1251	C	3.6
31	y	314	C	3.6
14	L	104	ARG	3.6
35	c	89	GLY	3.6
5	C	160	TYR	3.6
9	G	52	ARG	3.6
30	b	19	ARG	3.6
11	I	55	GLY	3.6
22	T	73	GLN	3.5

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Mol	Chain	Res	Type	RSRZ
1	w	2666	C	3.5
46	n	35	GLU	3.5
1	w	2644	G	3.5
22	T	74	VAL	3.5
1	w	2431	U	3.5
52	t	3	ARG	3.5
1	w	858	U	3.5
1	w	411	G	3.5
6	D	79	VAL	3.5
37	e	5	ILE	3.5
10	H	122	LEU	3.5
15	M	51	ALA	3.5
1	w	2765	A	3.5
31	y	1418	A	3.5
1	w	125	G	3.5
31	y	579	G	3.5
29	a	27	THR	3.5
41	i	3	THR	3.5
12	J	33	ARG	3.5
1	w	1080	C	3.5
1	w	1983	C	3.5
53	u	75	ASN	3.5
5	C	159	HIS	3.5
4	B	208	LYS	3.4
38	f	111	GLU	3.4
31	y	223	U	3.4
36	d	55	VAL	3.4
52	t	77	THR	3.4
16	N	54	ARG	3.4
47	o	52	GLN	3.4
30	b	7	VAL	3.4
37	e	135	LEU	3.4
54	v	24	ARG	3.4
31	y	496	A	3.4
17	O	11	ARG	3.4
37	e	8	VAL	3.4
40	h	34	GLY	3.4
1	w	782	A	3.4
31	y	653	A	3.4
31	y	1227	A	3.4
31	y	1329	A	3.4
40	h	89	MET	3.4

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Mol	Chain	Res	Type	RSRZ
45	m	117	SER	3.4
1	w	1074	G	3.4
1	w	1817	G	3.4
35	c	139	LYS	3.4
42	j	75	ASP	3.4
1	w	645	C	3.4
32	z	17	C	3.4
1	w	387	U	3.4
1	w	569	U	3.4
1	w	1090	U	3.4
27	Y	13	LYS	3.4
7	E	82	LEU	3.3
13	K	41	TRP	3.3
53	u	65	LYS	3.3
1	w	31	C	3.3
1	w	1079	C	3.3
1	w	2387	U	3.3
39	g	89	MET	3.3
5	C	18	ASP	3.3
5	C	114	ALA	3.3
37	e	131	ARG	3.3
19	Q	6	ILE	3.3
43	k	58	ASP	3.3
12	J	72	PRO	3.3
38	f	104	ALA	3.3
1	w	2446	G	3.3
1	w	2845	G	3.3
31	y	1294	G	3.3
31	y	135	C	3.3
9	G	31	LEU	3.3
43	k	71	LEU	3.3
1	w	149	A	3.3
1	w	1085	A	3.3
18	P	44	LYS	3.3
11	I	101	PRO	3.3
19	Q	45	TYR	3.3
1	w	505	A	3.3
22	T	120	ILE	3.3
53	u	69	GLY	3.3
4	B	40	THR	3.3
14	L	111	LEU	3.2
45	m	6	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
21	S	95	LYS	3.2
31	y	1039	C	3.2
1	w	1608	A	3.2
4	B	148	GLU	3.2
14	L	43	GLU	3.2
24	V	19	GLN	3.2
3	A	210	LEU	3.2
31	y	1517	G	3.2
35	c	233	SER	3.2
1	w	403	U	3.2
40	h	149	ARG	3.2
1	w	531	C	3.2
29	a	11	LYS	3.2
1	w	2592	G	3.2
6	D	72	ASP	3.2
12	J	75	ILE	3.2
39	g	87	ARG	3.2
24	V	49	VAL	3.2
22	T	115	GLY	3.2
4	B	222	ARG	3.2
29	a	46	ARG	3.2
30	b	36	GLN	3.2
48	p	88	ARG	3.2
1	w	1077	A	3.2
1	w	2054	A	3.2
11	I	112	MET	3.2
31	y	934	C	3.2
31	y	1129	C	3.2
43	k	18	ALA	3.2
1	w	75	G	3.2
22	T	147	GLY	3.2
37	e	53	ASP	3.2
29	a	30	ARG	3.1
31	y	1226	C	3.1
4	B	68	LYS	3.1
16	N	1	MET	3.1
25	W	53	LEU	3.1
1	w	1559	G	3.1
31	y	1003	G	3.1
28	Z	41	ARG	3.1
46	n	71	ARG	3.1
4	B	261	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
12	J	38	GLN	3.1
40	h	18	TYR	3.1
38	f	146	ALA	3.1
46	n	32	GLU	3.1
37	e	102	ASP	3.1
1	w	1084	A	3.1
1	w	2424	C	3.1
6	D	77	ILE	3.1
50	r	69	LYS	3.1
4	B	227	ASN	3.1
6	D	151	LEU	3.1
36	d	167	TRP	3.1
1	w	1717	G	3.1
40	h	116	ALA	3.1
41	i	115	SER	3.1
12	J	64	LYS	3.1
24	V	52	ARG	3.1
1	w	282	A	3.1
1	w	390	A	3.1
1	w	529	A	3.1
1	w	2430	A	3.1
1	w	234	C	3.1
2	x	6	C	3.1
21	S	92	ASN	3.1
5	C	131	ALA	3.1
31	y	219	C	3.1
40	h	44	TYR	3.1
47	o	48	ALA	3.1
13	K	126	PRO	3.1
27	Y	5	PRO	3.1
10	H	128	GLY	3.1
17	O	7	GLY	3.1
41	i	114	THR	3.1
49	q	45	THR	3.1
49	q	69	THR	3.1
1	w	259	G	3.1
41	i	97	VAL	3.1
36	d	186	PHE	3.1
12	J	108	LYS	3.1
42	j	118	LYS	3.1
35	c	232	PRO	3.1
1	w	265	A	3.1

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Mol	Chain	Res	Type	RSRZ
1	w	364	C	3.1
31	y	456	C	3.1
11	I	121	VAL	3.0
19	Q	85	VAL	3.0
5	C	113	PHE	3.0
6	D	102	LYS	3.0
1	w	2449	U	3.0
15	M	32	LEU	3.0
22	T	140	ASP	3.0
1	w	715	G	3.0
4	B	42	GLY	3.0
31	y	1295	G	3.0
40	h	82	GLY	3.0
42	j	103	THR	3.0
6	D	100	VAL	3.0
21	S	81	LYS	3.0
24	V	77	ALA	3.0
46	n	111	LYS	3.0
4	B	244	ARG	3.0
7	E	30	GLU	3.0
1	w	1880	C	3.0
13	K	39	PRO	3.0
31	y	433	C	3.0
36	d	192	THR	3.0
4	B	195	ALA	3.0
43	k	61	GLU	3.0
5	C	191	PRO	3.0
1	w	28	A	3.0
5	C	124	GLY	3.0
31	y	790	A	3.0
42	j	43	ALA	3.0
46	n	21	TYR	3.0
54	v	23	PRO	3.0
8	F	140	LYS	3.0
12	J	17	LYS	3.0
36	d	4	LYS	3.0
38	f	9	LYS	3.0
52	t	56	GLN	3.0
20	R	70	LEU	3.0
29	a	37	SER	3.0
1	w	247	G	3.0
1	w	746	A	3.0

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Mol	Chain	Res	Type	RSRZ
1	w	1106	G	3.0
1	w	2409	G	3.0
16	N	58	ASN	3.0
18	P	43	GLU	3.0
53	u	50	GLU	3.0
1	w	527	C	3.0
1	w	2395	C	3.0
13	K	21	THR	3.0
38	f	15	ARG	3.0
8	F	137	ASP	3.0
52	t	12	ASP	3.0
12	J	29	LYS	2.9
35	c	201	ILE	2.9
43	k	38	ILE	2.9
48	p	31	LEU	2.9
10	H	129	MET	2.9
50	r	102	GLY	2.9
1	w	1272	A	2.9
14	L	36	THR	2.9
16	N	59	THR	2.9
23	U	10	THR	2.9
50	r	105	ALA	2.9
31	y	654	G	2.9
31	y	1036	G	2.9
31	y	1124	G	2.9
44	l	111	ASP	2.9
7	E	39	ILE	2.9
12	J	107	LYS	2.9
40	h	109	ASN	2.9
41	i	76	PRO	2.9
50	r	43	LEU	2.9
4	B	250	TRP	2.9
42	j	67	GLY	2.9
12	J	150	ALA	2.9
13	K	136	ALA	2.9
28	Z	2	LYS	2.9
1	w	1088	A	2.9
36	d	174	PRO	2.9
11	I	6	THR	2.9
1	w	1332	G	2.9
31	y	1184	G	2.9
31	y	1038	C	2.9

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Mol	Chain	Res	Type	RSRZ
38	f	108	ALA	2.9
1	w	3	U	2.9
15	M	61	ASN	2.9
21	S	43	ASN	2.9
41	i	136	GLU	2.9
5	C	144	ARG	2.9
4	B	223	GLY	2.9
6	D	60	TRP	2.9
44	l	109	VAL	2.9
36	d	157	ILE	2.9
1	w	784	A	2.9
22	T	67	LEU	2.9
22	T	91	LEU	2.9
1	w	827	U	2.9
31	y	940	C	2.9
48	p	86	GLY	2.9
46	n	116	THR	2.9
1	w	5	A	2.8
7	E	166	ASP	2.8
22	T	181	GLU	2.9
37	e	156	GLU	2.9
36	d	170	GLN	2.8
14	L	100	LEU	2.8
1	w	1955	U	2.8
1	w	2798	C	2.8
16	N	13	ARG	2.8
54	v	9	ARG	2.8
1	w	2872	G	2.8
38	f	73	ASN	2.8
6	D	73	ILE	2.8
4	B	273	ARG	2.8
29	a	22	VAL	2.8
50	r	21	VAL	2.8
1	w	1671	U	2.8
5	C	130	GLY	2.8
1	w	203	C	2.8
1	w	268	C	2.8
31	y	589	C	2.8
47	o	16	PHE	2.8
33	0	19	G	2.8
42	j	128	ARG	2.8
1	w	2453	A	2.8

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Mol	Chain	Res	Type	RSRZ
8	F	178	ALA	2.8
6	D	91	ASP	2.8
5	C	13	ARG	2.8
5	C	136	ARG	2.8
16	N	51	ARG	2.8
44	l	126	ARG	2.8
1	w	63	U	2.8
52	t	42	PRO	2.8
18	P	81	TYR	2.8
21	S	35	TYR	2.8
5	C	121	ASN	2.8
16	N	133	GLU	2.8
18	P	49	THR	2.8
21	S	4	LYS	2.8
30	b	15	LYS	2.8
1	w	1980	G	2.8
20	R	75	ASP	2.8
31	y	1258	G	2.8
1	w	2392	A	2.8
4	B	145	VAL	2.8
36	d	154	SER	2.8
42	j	17	VAL	2.8
4	B	225	ALA	2.8
7	E	40	ASN	2.8
46	n	123	ALA	2.8
4	B	54	ARG	2.7
37	e	159	ARG	2.7
54	v	6	ARG	2.7
35	c	213	LEU	2.7
1	w	731	C	2.7
1	w	894	C	2.7
1	w	2231	C	2.7
31	y	1465	C	2.7
8	F	144	VAL	2.7
12	J	40	SER	2.7
21	S	34	LYS	2.7
36	d	45	LYS	2.7
6	D	66	GLY	2.7
23	U	65	GLY	2.7
1	w	349	G	2.7
31	y	413	G	2.7
12	J	35	HIS	2.7

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Mol	Chain	Res	Type	RSRZ
3	A	39	ASP	2.7
1	w	270(G)	U	2.7
11	I	69	VAL	2.7
35	c	71	VAL	2.7
21	S	47	LYS	2.7
5	C	142	GLY	2.7
44	l	74	ALA	2.7
54	v	16	GLY	2.7
8	F	104	GLU	2.7
20	R	27	THR	2.7
30	b	22	ARG	2.7
50	r	89	LEU	2.7
1	w	503	A	2.7
1	w	1096	A	2.7
1	w	1186	G	2.7
34	l	-3	A	2.7
46	n	26	GLY	2.7
6	D	164	ASN	2.7
16	N	52	ILE	2.7
23	U	12	ASN	2.7
50	r	104	LYS	2.7
22	T	86	VAL	2.7
35	c	230	VAL	2.7
1	w	1463	C	2.7
45	m	71	GLY	2.7
43	k	7	LYS	2.7
1	w	191	A	2.7
31	y	197	A	2.7
31	y	766	A	2.7
3	A	229	SER	2.7
26	X	11	SER	2.7
7	E	159	VAL	2.7
1	w	2384	G	2.7
31	y	657	G	2.7
7	E	83	ARG	2.7
16	N	95	ARG	2.7
22	T	148	ASP	2.7
52	t	13	ASP	2.7
6	D	65	THR	2.7
38	f	81	GLU	2.7
41	i	22	GLU	2.7
3	A	173	HIS	2.6

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Mol	Chain	Res	Type	RSRZ
24	V	41	ARG	2.6
1	w	229	A	2.6
1	w	1086	A	2.6
37	e	154	ASN	2.6
44	l	125	PHE	2.6
1	w	771	G	2.6
1	w	2766	G	2.6
1	w	2805	G	2.6
1	w	2833	G	2.6
43	k	44	VAL	2.6
12	J	81	GLN	2.6
27	Y	53	ALA	2.6
41	i	66	GLY	2.6
5	C	127	ASP	2.6
20	R	35	THR	2.6
26	X	18	ASP	2.6
24	V	60	PHE	2.6
16	N	34	VAL	2.6
23	U	31	VAL	2.6
36	d	198	VAL	2.6
1	w	204	A	2.6
36	d	39	ILE	2.6
12	J	48	PRO	2.6
29	a	34	TRP	2.6
17	O	27	LEU	2.6
20	R	69	TYR	2.6
41	i	31	PHE	2.6
53	u	51	GLU	2.6
54	v	7	ARG	2.6
17	O	93	LYS	2.6
1	w	4	C	2.6
1	w	2467	C	2.6
4	B	246	PRO	2.6
28	Z	31	LEU	2.6
20	R	28	PHE	2.6
1	w	2713	A	2.6
43	k	69	ASN	2.6
4	B	217	ARG	2.6
10	H	24	VAL	2.6
13	K	96	VAL	2.6
17	O	10	ARG	2.6
37	e	122	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
4	B	5	LYS	2.6
17	O	54	LYS	2.6
26	X	10	LYS	2.6
16	N	97	ALA	2.6
1	w	92	G	2.6
1	w	250	G	2.6
1	w	2762	G	2.6
6	D	197	PHE	2.6
12	J	52	GLU	2.6
50	r	97	SER	2.6
4	B	44	ASN	2.6
4	B	264	LYS	2.6
9	G	50	ARG	2.6
24	V	14	VAL	2.6
31	y	962	C	2.6
42	j	29	ASN	2.6
53	u	79	ARG	2.6
31	y	1502	A	2.6
32	z	58	A	2.6
50	r	71	PHE	2.6
17	O	22	LYS	2.5
37	e	169	LYS	2.5
15	M	98	VAL	2.5
38	f	105	VAL	2.5
3	A	219	MET	2.5
1	w	517	C	2.5
20	R	3	THR	2.5
31	y	1320	C	2.5
43	k	92	THR	2.5
30	b	25	VAL	2.5
42	j	110	GLU	2.5
43	k	72	VAL	2.5
1	w	422	A	2.5
1	w	1453	A	2.5
5	C	190	GLY	2.5
18	P	74	LYS	2.5
41	i	32	LYS	2.5
24	V	20	ARG	2.5
49	q	13	HIS	2.5
4	B	70	TRP	2.5
15	M	58	LEU	2.5
1	w	408	G	2.5

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Mol	Chain	Res	Type	RSRZ
1	w	1238	G	2.5
1	w	2894	G	2.5
1	w	2464	C	2.5
4	B	154	LYS	2.5
45	m	90	LYS	2.5
1	w	346	A	2.5
1	w	657	U	2.5
1	w	1095	A	2.5
1	w	1127	A	2.5
1	w	2041	U	2.5
21	S	83	THR	2.5
20	R	58	HIS	2.5
37	e	4	TYR	2.5
5	C	25	VAL	2.5
12	J	146	VAL	2.5
22	T	126	VAL	2.5
40	h	80	VAL	2.5
4	B	65	ILE	2.5
7	E	105	LYS	2.5
13	K	63	LYS	2.5
14	L	45	ARG	2.5
22	T	117	LEU	2.5
36	d	153	VAL	2.5
42	j	5	TYR	2.5
1	w	2205	C	2.5
1	w	809	G	2.5
31	y	190	G	2.5
49	q	34	GLU	2.5
1	w	2068	U	2.5
1	w	126	A	2.5
1	w	181	A	2.5
27	Y	9	LYS	2.5
8	F	176	ALA	2.5
21	S	16	ALA	2.5
5	C	138	PRO	2.5
20	R	74	PRO	2.5
42	j	108	VAL	2.5
54	v	18	TYR	2.5
22	T	85	HIS	2.4
36	d	166	GLU	2.4
52	t	10	PHE	2.4
5	C	133	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
40	h	29	LYS	2.4
39	g	57	GLN	2.4
39	g	75	LEU	2.4
42	j	9	ARG	2.4
53	u	83	ARG	2.4
1	w	1005	C	2.4
1	w	2021	C	2.4
2	x	12	C	2.4
5	C	168	MET	2.4
31	y	387	U	2.4
1	w	407	G	2.4
1	w	2124	G	2.4
31	y	64	G	2.4
31	y	81	G	2.4
31	y	926	G	2.4
49	q	50	LYS	2.4
4	B	64	ILE	2.4
30	b	26	ILE	2.4
4	B	156	ALA	2.4
47	o	47	LEU	2.4
38	f	107	ARG	2.4
12	J	32	THR	2.4
19	Q	16	LYS	2.4
45	m	22	LYS	2.4
46	n	23	TYR	2.4
8	F	81	GLU	2.4
20	R	57	LEU	2.4
48	p	6	GLU	2.4
1	w	1053	C	2.4
13	K	16	ARG	2.4
17	O	12	ARG	2.4
40	h	2	ALA	2.4
50	r	96	GLN	2.4
2	x	59	A	2.4
15	M	81	GLY	2.4
38	f	22	GLY	2.4
1	w	563	G	2.4
1	w	2428	G	2.4
1	w	2550	G	2.4
3	A	64	SER	2.4
31	y	1491	G	2.4
40	h	60	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
42	j	126	SER	2.4
35	c	138	LEU	2.4
3	A	195	ARG	2.4
21	S	44	ILE	2.4
1	w	653	C	2.4
31	y	824	C	2.4
1	w	223	A	2.4
10	H	101	TYR	2.4
19	Q	52	GLU	2.4
41	i	37	ARG	2.4
31	y	66	G	2.4
24	V	45	ASN	2.4
44	l	86	GLY	2.4
16	N	76	PHE	2.4
19	Q	15	ARG	2.4
37	e	76	ARG	2.4
22	T	2	GLU	2.4
30	b	5	ALA	2.4
44	l	68	ALA	2.4
53	u	46	GLU	2.4
5	C	145	LYS	2.4
24	V	33	LYS	2.4
1	w	524	U	2.3
1	w	2555	U	2.3
2	x	14	U	2.3
42	j	33	PHE	2.3
53	u	101	GLY	2.3
1	w	888	C	2.3
1	w	1156	A	2.3
1	w	1762	A	2.3
1	w	1982	C	2.3
22	T	76	LEU	2.3
24	V	35	THR	2.3
35	c	164	VAL	2.3
49	q	67	THR	2.3
4	B	218	ARG	2.3
16	N	115	ARG	2.3
46	n	108	ARG	2.3
1	w	270(F)	G	2.3
1	w	446	G	2.3
31	y	584	G	2.3
45	m	16	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
45	m	45	LYS	2.3
30	b	34	GLN	2.3
9	G	30	LEU	2.3
29	a	31	HIS	2.3
43	k	11	PHE	2.3
12	J	37	GLY	2.3
15	M	18	ILE	2.3
19	Q	79	GLY	2.3
5	C	90	THR	2.3
1	w	860	U	2.3
31	y	990	C	2.3
31	y	1071	C	2.3
33	0	75	C	2.3
36	d	44	GLU	2.3
38	f	122	GLU	2.3
8	F	136	ILE	2.3
27	Y	54	GLY	2.3
6	D	84	VAL	2.3
9	G	92	VAL	2.3
5	C	149	ARG	2.3
46	n	11	ARG	2.3
52	t	37	ARG	2.3
1	w	2048	G	2.3
1	w	2087	G	2.3
1	w	2154	G	2.3
5	C	187	ALA	2.3
42	j	15	ALA	2.3
7	E	97	ASP	2.3
46	n	83	ASP	2.3
1	w	895	U	2.3
1	w	2122	U	2.3
5	C	22	PRO	2.3
42	j	41	VAL	2.3
1	w	1213	A	2.3
1	w	1786	A	2.3
18	P	82	ARG	2.3
1	w	825	C	2.3
31	y	1328	C	2.3
37	e	38	TYR	2.3
40	h	30	ILE	2.3
15	M	103	GLU	2.3
22	T	138	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
10	H	103	GLY	2.3
16	N	56	GLY	2.3
3	A	45	HIS	2.3
10	H	48	ARG	2.3
12	J	111	ARG	2.3
14	L	61	HIS	2.3
40	h	36	LYS	2.3
53	u	23	ARG	2.3
53	u	71	THR	2.3
1	w	315	G	2.3
1	w	620	G	2.3
1	w	1449	G	2.3
2	x	75	G	2.3
31	y	220	G	2.3
31	y	760	G	2.3
1	w	525	U	2.3
1	w	826	U	2.3
31	y	723	U	2.3
33	0	16	U	2.3
51	s	50	ILE	2.3
24	V	43	TYR	2.3
1	w	52	A	2.3
31	y	1035	A	2.3
1	w	270(D)	C	2.3
1	w	2347	C	2.3
6	D	87	PRO	2.3
14	L	46	GLY	2.3
23	U	64	ASP	2.3
31	y	1037	C	2.3
35	c	36	ARG	2.3
44	l	120	ARG	2.3
38	f	65	ASN	2.2
38	f	45	PHE	2.2
7	E	41	GLN	2.2
11	I	105	GLU	2.2
1	w	1480	G	2.2
1	w	2552	U	2.2
1	w	2618	G	2.2
4	B	232	PRO	2.2
14	L	105	ARG	2.2
22	T	175	VAL	2.2
24	V	30	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
31	y	31	G	2.2
31	y	631	G	2.2
31	y	851	G	2.2
31	y	1094	G	2.2
36	d	2	GLY	2.2
36	d	172	ARG	2.2
37	e	168	ARG	2.2
48	p	65	ARG	2.2
11	I	73	ASP	2.2
17	O	98	LEU	2.2
36	d	56	ASP	2.2
38	f	91	LEU	2.2
38	f	120	THR	2.2
37	e	129	ASN	2.2
45	m	31	PHE	2.2
50	r	90	ILE	2.2
1	w	513	A	2.2
1	w	621	A	2.2
31	y	149	A	2.2
12	J	89	ALA	2.2
4	B	150	LYS	2.2
22	T	182	LYS	2.2
31	y	47	C	2.2
36	d	193	TYR	2.2
51	s	63	GLN	2.2
4	B	268	ARG	2.2
20	R	51	VAL	2.2
4	B	11	PRO	2.2
11	I	72	PRO	2.2
47	o	44	LEU	2.2
4	B	161	THR	2.2
5	C	85	ASN	2.2
20	R	41	ASN	2.2
1	w	1083	U	2.2
20	R	50	LYS	2.2
1	w	495	G	2.2
1	w	1573	G	2.2
1	w	2032	G	2.2
19	Q	8	ARG	2.2
31	y	765	G	2.2
11	I	98	VAL	2.2
37	e	178	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
41	i	2	LEU	2.2
1	w	783	A	2.2
1	w	1637	A	2.2
4	B	149	PRO	2.2
4	B	236	GLY	2.2
41	i	5	PRO	2.2
54	v	4	GLY	2.2
31	y	968	A	2.2
49	q	36	ILE	2.2
1	w	961	C	2.2
1	w	1962	C	2.2
52	t	70	LYS	2.2
11	I	75	SER	2.2
4	B	213	ARG	2.2
19	Q	92	ARG	2.2
35	c	154	LEU	2.2
10	H	131	PRO	2.2
41	i	96	GLY	2.2
1	w	271(D)	U	2.2
6	D	70	HIS	2.2
1	w	1348	G	2.2
1	w	1554	A	2.2
10	H	56	LEU	2.2
42	j	42	ARG	2.2
13	K	97	VAL	2.2
39	g	91	VAL	2.2
45	m	97	TYR	2.2
49	q	38	TYR	2.2
1	w	893	C	2.2
5	C	14	ILE	2.2
43	k	53	PRO	2.2
8	F	67	LEU	2.2
12	J	67	MET	2.2
4	B	32	SER	2.1
4	B	63	ARG	2.1
8	F	63	SER	2.1
31	y	84	U	2.1
31	y	870	U	2.1
35	c	30	ARG	2.1
40	h	106	GLN	2.1
5	C	23	VAL	2.1
7	E	63	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
5	C	115	GLY	2.1
6	D	97	PRO	2.1
38	f	84	PHE	2.1
40	h	26	PHE	2.1
24	V	69	LYS	2.1
1	w	1545	A	2.1
31	y	1044	A	2.1
1	w	615	G	2.1
1	w	1187	G	2.1
1	w	1527	G	2.1
40	h	128	ALA	2.1
40	h	115	ARG	2.1
41	i	30	ARG	2.1
1	w	897	C	2.1
1	w	2667	C	2.1
7	E	76	SER	2.1
31	y	136(B)	C	2.1
31	y	1466	C	2.1
50	r	16	GLN	2.1
44	l	108	ILE	2.1
25	W	54	LYS	2.1
35	c	22	LYS	2.1
43	k	3	LYS	2.1
38	f	106	PRO	2.1
40	h	8	GLU	2.1
6	D	48	THR	2.1
1	w	562	U	2.1
1	w	1012	U	2.1
5	C	199	ARG	2.1
6	D	39	ARG	2.1
44	l	54	ARG	2.1
12	J	131	SER	2.1
4	B	51	VAL	2.1
1	w	824	A	2.1
14	L	89	ASP	2.1
31	y	329	A	2.1
52	t	80	TYR	2.1
20	R	61	GLY	2.1
14	L	44	LEU	2.1
45	m	72	GLU	2.1
1	w	1470	G	2.1
1	w	2012	G	2.1

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Mol	Chain	Res	Type	RSRZ
20	R	37	THR	2.1
31	y	316	G	2.1
14	L	22	ARG	2.1
40	h	32	ARG	2.1
51	s	87	ARG	2.1
12	J	25	SER	2.1
14	L	11	ASN	2.1
13	K	77	LYS	2.1
1	w	1300	U	2.1
4	B	53	PHE	2.1
6	D	78	PHE	2.1
21	S	49	VAL	2.1
31	y	1159	U	2.1
31	y	1315	U	2.1
8	F	57	ASP	2.1
13	K	137	TYR	2.1
37	e	134	ASP	2.1
41	i	112	LEU	2.1
1	w	2227	A	2.1
31	y	1093	A	2.1
24	V	23	LYS	2.1
16	N	99	LEU	2.1
1	w	955	C	2.1
1	w	1934	C	2.1
1	w	1935	G	2.1
1	w	2252	G	2.1
17	O	24	TYR	2.1
31	y	732	C	2.1
40	h	20	ASP	2.1
29	a	40	GLU	2.1
16	N	23	ARG	2.1
5	C	155	LYS	2.1
21	S	79	CYS	2.1
27	Y	10	LYS	2.1
31	y	222	U	2.1
31	y	1126	U	2.1
36	d	60	ALA	2.1
52	t	38	SER	2.1
4	B	61	LEU	2.1
14	L	28	LEU	2.1
1	w	2753	A	2.0
13	K	123	HIS	2.0

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Mol	Chain	Res	Type	RSRZ
14	L	58	GLY	2.0
3	A	227	PRO	2.0
43	k	91	PRO	2.0
4	B	17	THR	2.0
5	C	17	ASP	2.0
12	J	16	ARG	2.0
37	e	73	ARG	2.0
13	K	76	LYS	2.0
38	f	86	ALA	2.0
24	V	80	LEU	2.0
6	D	188	VAL	2.0
14	L	73	VAL	2.0
31	y	379	C	2.0
1	w	916	G	2.0
31	y	871	U	2.0
4	B	52	ARG	2.0
6	D	25	PRO	2.0
27	Y	8	LYS	2.0
12	J	87	ASP	2.0
13	K	69	PHE	2.0
16	N	94	ALA	2.0
1	w	233	A	2.0
1	w	1889	A	2.0
31	y	101	A	2.0
37	e	112	VAL	2.0
42	j	26	VAL	2.0
4	B	48	ARG	2.0
4	B	170	GLY	2.0
10	H	141	LYS	2.0
16	N	98	LYS	2.0
43	k	14	LYS	2.0
45	m	73	GLY	2.0
40	h	120	ILE	2.0
46	n	109	THR	2.0
1	w	1145	C	2.0
1	w	2161	C	2.0
8	F	64	LEU	2.0
37	e	60	GLU	2.0
14	L	107	ASP	2.0
1	w	566	U	2.0
1	w	1082	U	2.0
1	w	1105	U	2.0

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Mol	Chain	Res	Type	RSRZ
1	w	2689	U	2.0
21	S	70	SER	2.0
33	0	54	U	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
32	H2U	z	20	20/21	0.66	0.12	124,124,133,133	0
31	5MC	y	967	21/22	0.69	0.24	124,124,133,133	0
32	H2U	z	16	20/21	0.73	0.16	80,92,93,95	0
31	PSU	y	516	20/21	0.77	0.16	137,138,148,148	0
32	PSU	z	55	20/21	0.79	0.13	40,50,52,53	0
32	4SU	z	8	20/21	0.85	0.18	5,5,5,5	0
32	MIA	z	37	29/30	0.86	0.26	20,26,32,32	0
32	PSU	z	32	20/21	0.86	0.16	42,52,58,59	0
33	PSU	0	55	20/21	0.86	0.12	36,36,36,36	0
31	5MC	y	1404	21/22	0.89	0.19	5,6,8,9	0
31	M2G	y	966	25/26	0.92	0.11	15,16,20,31	0
32	PSU	z	39	20/21	0.92	0.12	5,5,5,5	0
31	4OC	y	1402	22/23	0.93	0.10	10,13,16,16	0
31	7MG	y	527	24/25	0.93	0.10	7,10,24,26	0
31	MA6	y	1518	24/25	0.93	0.14	31,39,52,53	0
31	MA6	y	1519	24/25	0.93	0.14	5,5,6,8	0
32	7MG	z	46	24/25	0.94	0.09	5,5,12,12	0
31	2MG	y	1207	24/25	0.94	0.09	21,22,26,26	0
31	5MC	y	1407	21/22	0.94	0.09	25,28,30,30	0
31	UR3	y	1498	21/22	0.95	0.12	5,5,5,5	0
32	5MU	z	54	21/22	0.95	0.08	5,5,5,5	0
31	5MC	y	1400	21/22	0.96	0.09	5,5,5,5	0

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.