



Full wwPDB EM Validation Report ⓘ

Jun 18, 2026 – 12:23 pm BST

PDB ID : 7PJZ / pdb_00007pjz
EMDB ID : EMD-13465
Title : Structure of the 70S-EF-G-GDP ribosome complex with tRNAs in chimeric state 2 (CHI2-EF-G-GDP)
Authors : Petrychenko, V.; Peng, B.Z.; Schwarzer, A.C.; Peske, F.; Rodnina, M.V.; Fischer, N.
Deposited on : 2021-08-24
Resolution : 6.00 Å (reported)
Based on initial models : 5LZD, 4AQY, 5J9Z, 6YSS

This is a Full wwPDB EM 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/EMValidationReportHelp>

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:

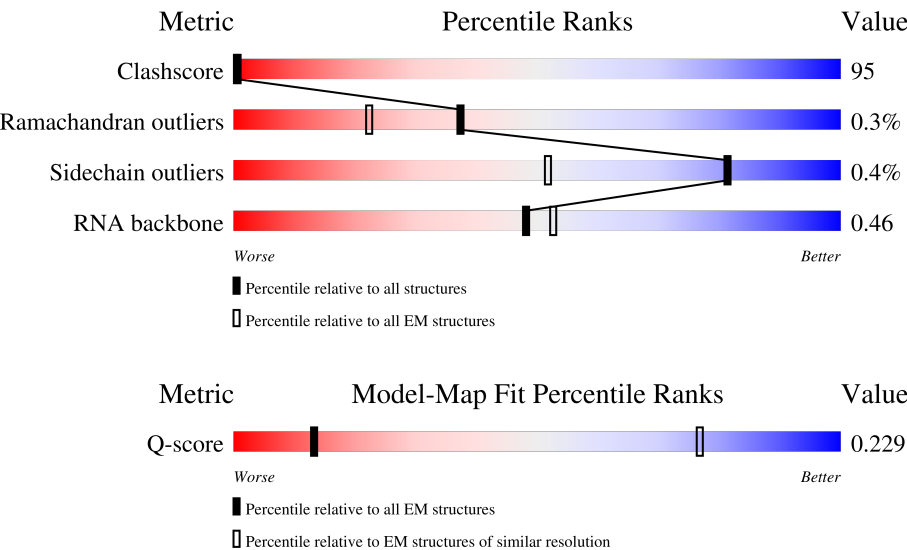
EMDB validation analysis : 0.0.1.dev132
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
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:
ELECTRON MICROSCOPY

The reported resolution of this entry is 6.00 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.



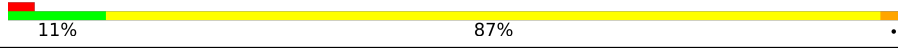
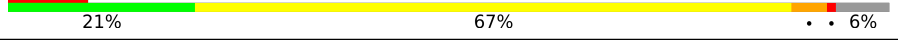
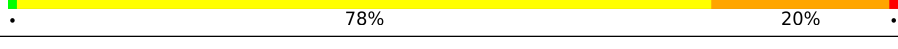
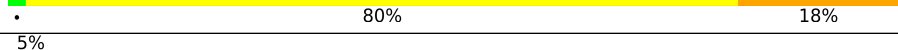
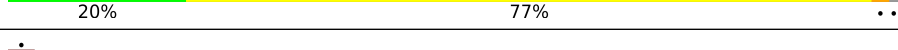
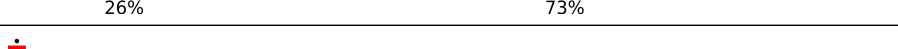
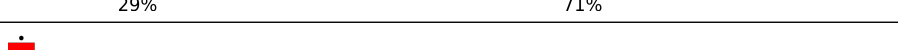
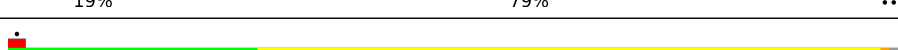
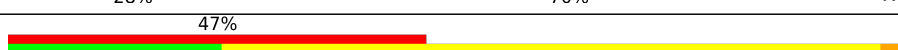
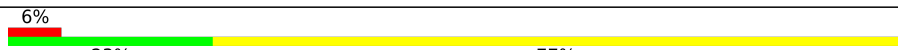
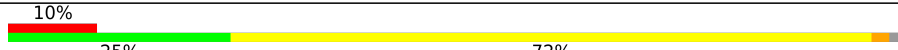
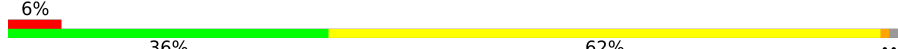
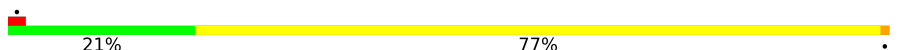
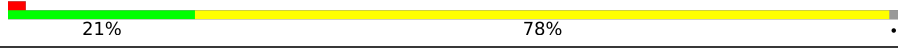
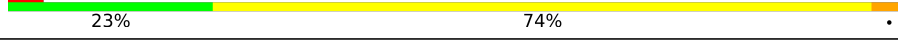
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	525 (5.50 - 6.50)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	0	57	5% 28% 70% .
2	1	55	16% 73% 9% .

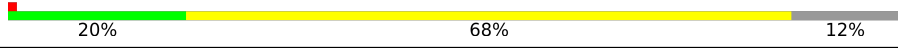
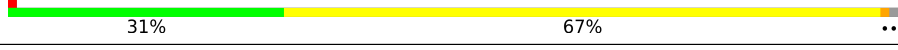
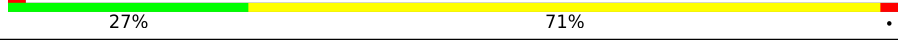
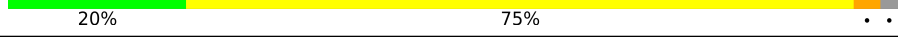
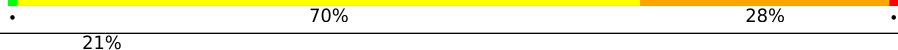
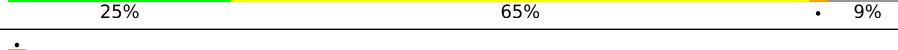
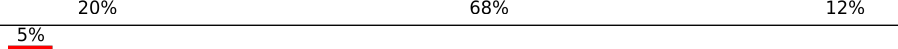
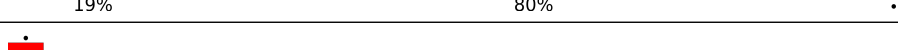
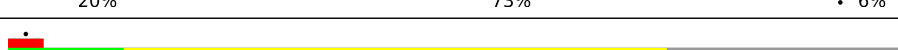
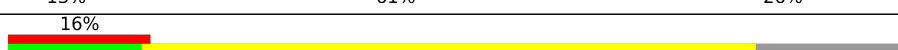
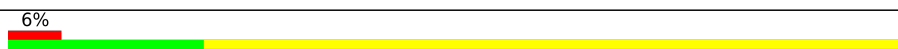
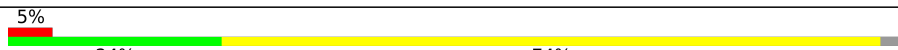
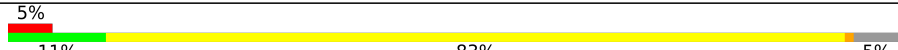
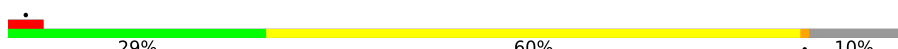
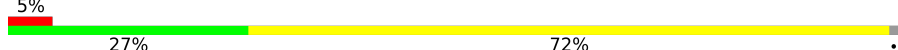
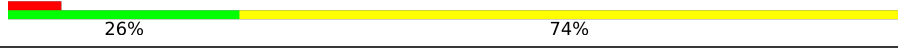
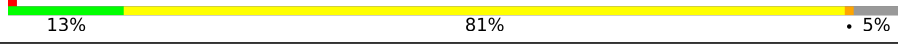
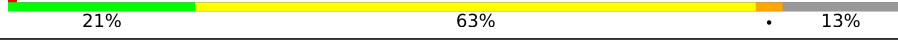
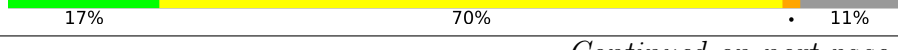
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Mol	Chain	Length	Quality of chain
3	2	46	
4	3	65	
5	4	38	
6	5	165	
7	6	70	
8	A	2903	
9	B	120	
10	C	273	
11	D	209	
12	E	201	
13	F	179	
14	G	177	
15	H	149	
16	I	142	
17	J	142	
18	K	123	
19	L	144	
20	M	136	
21	N	127	
22	O	117	
23	P	115	
24	Q	118	
25	R	103	
26	S	110	
27	T	100	

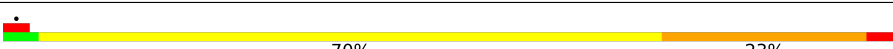
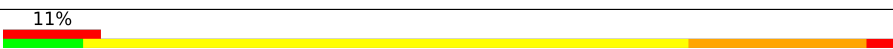
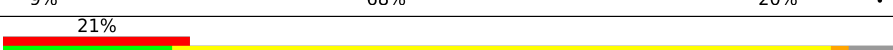
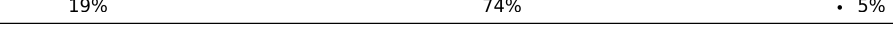
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Mol	Chain	Length	Quality of chain
28	U	104	
29	V	94	
30	W	85	
31	X	78	
32	Y	63	
33	Z	59	
34	a	1542	
35	b	240	
36	c	233	
37	d	206	
38	e	167	
39	f	135	
40	g	179	
41	h	130	
42	i	130	
43	j	103	
44	k	129	
45	l	124	
46	m	118	
47	n	102	
48	o	89	
49	p	82	
50	q	84	
51	r	75	
52	s	92	

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Mol	Chain	Length	Quality of chain
53	t	87	
54	u	71	
55	v	77	
56	w	76	
57	x	704	
58	y	2	
59	z	33	

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
34	2MG	a	1207	-	-	X	-
34	4OC	a	1402	-	-	X	-
34	UR3	a	1498	-	-	X	-
34	MA6	a	1518	-	-	X	-
34	MA6	a	1519	-	-	X	-
34	PSU	a	516	-	-	X	-
55	PSU	v	55	-	-	X	-
56	MIA	w	37	-	-	X	-
56	PSU	w	39	-	-	X	-
62	GDP	x	801	-	-	X	-
8	PSU	A	1917	-	-	X	-
8	5MC	A	1962	-	-	X	-
8	2MG	A	2445	-	-	X	-
8	OMU	A	2552	-	-	X	-
8	PSU	A	2580	-	-	X	-
8	PSU	A	2604	-	-	X	-
8	PSU	A	2605	-	-	X	-
8	1MG	A	745	-	-	X	-
8	PSU	A	955	-	-	X	-

2 Entry composition

There are 62 unique types of molecules in this entry. The entry contains 152440 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	0	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 2 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
2	1	50	Total	C	N	O	0	0
			409	263	75	71		

- Molecule 3 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	2	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 4 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	3	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 5 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	4	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 6 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	5	131	Total	C	N	O	0	0
			647	385	131	131		

- Molecule 7 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	6	66	Total	C	N	O	S	0	0
			522	323	99	94	6		

- Molecule 8 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	A	2903	Total	C	N	O	P	0	0
			62338	27816	11471	20148	2903		

- Molecule 9 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	B	120	Total	C	N	O	P	0	0
			2570	1144	468	838	120		

- Molecule 10 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	C	271	Total	C	N	O	S	0	0
			2082	1288	423	364	7		

- Molecule 11 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	D	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 12 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	E	201	Total	C	N	O	S	0	0
			1552	974	283	290	5		

- Molecule 13 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	F	177	Total	C	N	O	S	0	0
			1410	899	249	256	6		

- Molecule 14 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	G	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 15 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	H	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 16 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	I	141	Total	C	N	O	S	0	0
			693	411	141	141			

- Molecule 17 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	J	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 18 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	K	122	Total	C	N	O	S	0	0
			938	587	180	165	6		

- Molecule 19 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	L	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 20 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	M	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 21 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	N	120	Total	C	N	O	S	0	0
			960	593	196	166	5		

- Molecule 22 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	O	116	Total	C	N	O		0	0
			892	552	178	162			

- Molecule 23 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	P	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

- Molecule 24 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Q	117	Total	C	N	O		0	0
			947	604	192	151			

- Molecule 25 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	R	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 26 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	S	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 27 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	T	93	Total	C	N	O	S	0	0
			738	466	139	131	2		

- Molecule 28 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	U	102	Total	C	N	O	0	0
			779	492	146	141		

- Molecule 29 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	V	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 30 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	W	75	Total	C	N	O	S	0	0
			575	356	116	102	1		

- Molecule 31 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	X	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 32 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Y	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 33 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Z	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 34 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	a	1540	Total	C	N	O	P	0	0
			33050	14748	6057	10705	1540		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
35	b	218	Total	C	N	O	S	0	0
			1704	1081	305	311	7		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
36	c	206	Total	C	N	O	S	0	0
			1624	1028	305	288	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
37	d	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
38	e	157	Total	C	N	O	S	0	0
			1141	709	218	208	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
39	f	100	Total	C	N	O	S	0	0
			817	515	148	148	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
40	g	151	Total	C	N	O	S	0	0
			1181	735	227	215	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
41	h	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
42	i	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
43	j	98	Total	C	N	O	S	0	0
			786	493	150	142	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
44	k	116	Total	C	N	O	S	0	0
			869	535	173	158	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
45	l	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
46	m	114	Total	C	N	O	S	0	0
			883	546	178	156	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
47	n	101	Total	C	N	O	S	0	0
			799	498	165	133	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
n	35	ALA	-	insertion	UNP C3SR07

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

Mol	Chain	Residues	Atoms					AltConf	Trace
48	o	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
49	p	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
50	q	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
51	r	65	Total	C	N	O	S	0	0
			535	339	100	95	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
52	s	82	Total	C	N	O	S	0	0
			658	421	125	110	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
53	t	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 54 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	u	65	Total	C	N	O	S	0	0
			506	313	105	87	1		

- Molecule 55 is a RNA chain called P-site tRNA(fMet).

Mol	Chain	Residues	Atoms						AltConf	Trace
55	v	77	Total	C	N	O	P	S	0	0
			1642	733	297	534	77	1		

- Molecule 56 is a RNA chain called P-site fMet-Phe-tRNA(Phe).

Mol	Chain	Residues	Atoms						AltConf	Trace
56	w	76	Total	C	N	O	P	S	0	0
			1631	731	291	531	76	2		

- Molecule 57 is a protein called Elongation factor G.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	x	669	Total	C	N	O	S	1	0
			5192	3275	900	994	23		

- Molecule 58 is a protein called Dipeptide (FME-PHE).

Mol	Chain	Residues	Atoms					AltConf	Trace
58	y	2	Total	C	N	O	S	0	0
			21	15	2	3	1		

- Molecule 59 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	z	10	Total	C	N	O	P	0	0
			208	93	29	76	10		

- Molecule 60 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
60	6	1	Total	Zn	0
			1	1	

- Molecule 61 is APRAMYCIN (CCD ID: AM2) (formula: C₂₁H₄₁N₅O₁₁).



Mol	Chain	Residues	Atoms				AltConf
61	a	1	Total	C	N	O	0
			37	21	5	11	

- Molecule 62 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $\text{C}_{10}\text{H}_{15}\text{N}_5\text{O}_{11}\text{P}_2$).

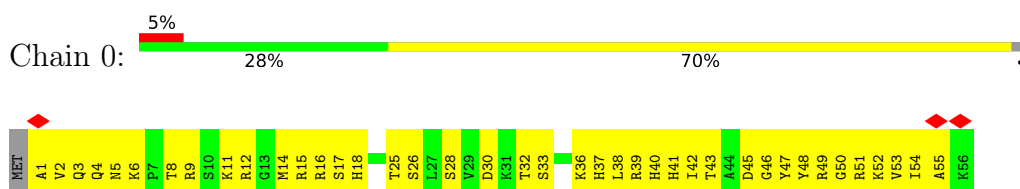


Mol	Chain	Residues	Atoms					AltConf
62	x	1	Total	C	N	O	P	0
			28	10	5	11	2	

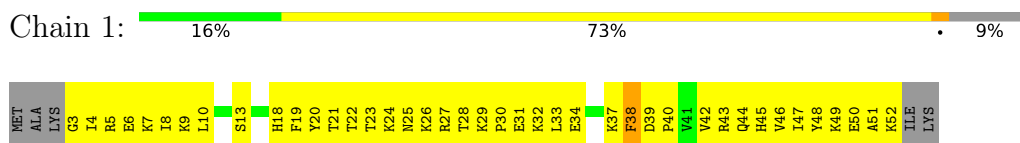
3 Residue-property plots

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

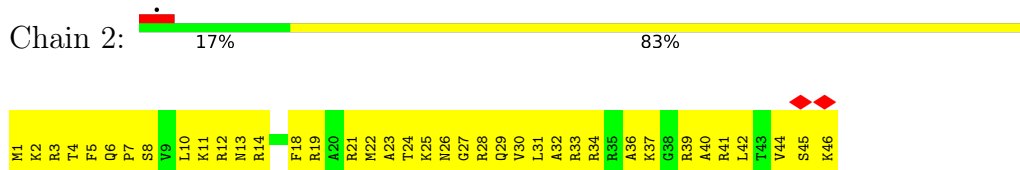
- Molecule 1: 50S ribosomal protein L32



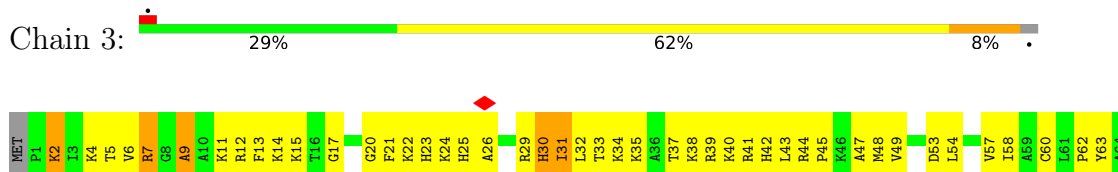
- Molecule 2: 50S ribosomal protein L33



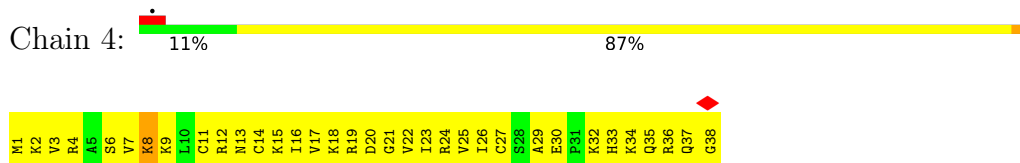
- Molecule 3: 50S ribosomal protein L34



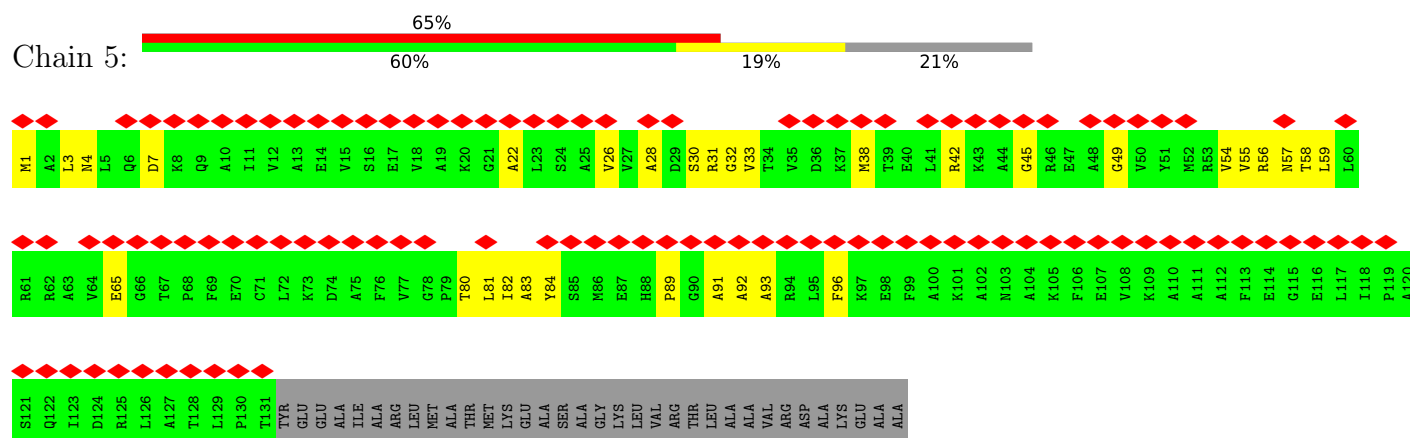
- Molecule 4: 50S ribosomal protein L35



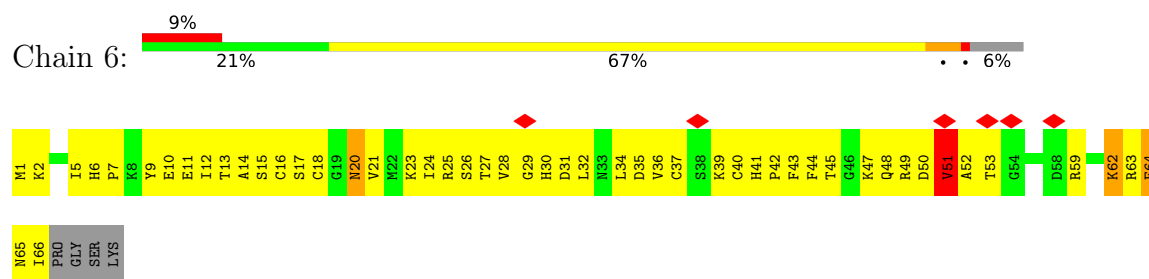
- Molecule 5: 50S ribosomal protein L36



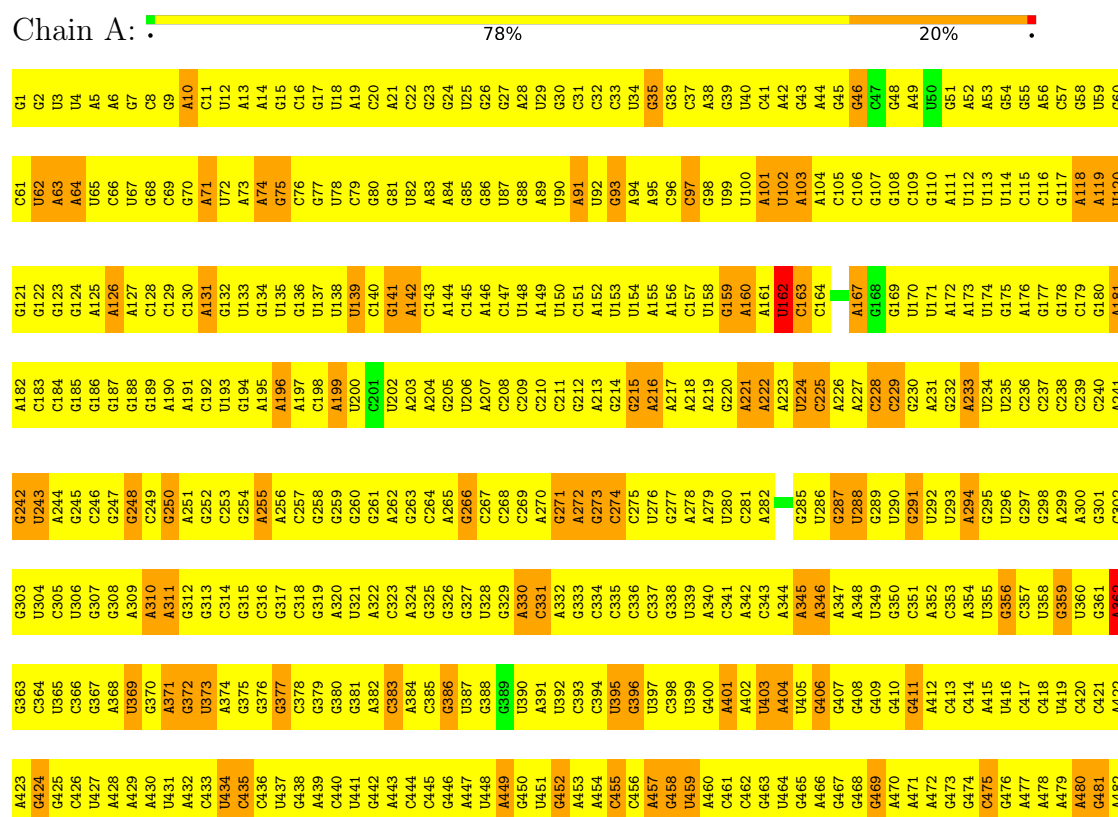
• Molecule 6: 50S ribosomal protein L10



• Molecule 7: 50S ribosomal protein L31



• Molecule 8: 23S ribosomal RNA



A1503	U1443	A1383	G1323	U1263	U1203	A1143	U1083	U1023	U963	C903	G843	A783	C723	G663	A603	G543	A483
A1504	G1444	A1384	G1324	A1264	A1204	A1144	A1084	G1024	C964	G904	A844	G784	U724	G664	G604	G544	C484
A1505	G1445	A1385	U1325	A1265	A1205	C1145	A1085	G1025	C965	A905	A845	G785	G725	G665	G605	C544	C485
A1506	G1446	A1386	G1326	G1266	G1206	C1146	A1086	G1026	C966	U906	A846	G786	G726	A666	U606	U546	C486
C1507	C1447	A1387	A1327	U1267	C1207	C1147	A1087	A1027	U967	U907	C847	G787	A727	U667	U607	C547	C487
A1508	G1448	A1388	A1328	A1268	C1208	U1148	A1088	A1028	C968	C908	C848	G788	G728	A668	A608	G548	C488
A1509	G1449	A1389	U1329	A1269	U1209	U1149	A1089	A1029	C969	A909	A849	G789	G729	G669	A609	G549	C489
G1510	G1450	U1390	C1330	C1270	G1210	C1150	A1090	C1030	U970	A910	U850	G790	A730	A670	C610	C550	C490
G1511	G1451	U1391	G1331	G1271	C1211	A1151	G1091	G1031	G971	A911	C851	G791	C731	C671	C611	C551	C491
G1512	A1452	A1392	G1332	A1272	G1212	C1152	C1092	U1032	A972	C912	C852	U792	C732	C672	G612	U552	A492
G1513	G1453	A1393	G1333	U1273	A1213	C1153	G1093	U1033	A973	C913	C853	A793	G733	C673	A613	G453	G493
G1514	A1454	U1394	G1334	A1274	A1214	G1154	U1094	G1034	G974	G914	C854	G794	A734	G674	U614	U554	G494
A1515	G1455	A1395	G1335	A1275	G1215	A1155	A1095	U1035	A975	C915	C855	C795	A735	A675	U615	G555	G495
G1516	G1456	U1396	A1336	A1276	G1216	A1156	A1096	G1036	C976	G916	C856	C796	C736	A676	A616	A556	G496
U1517	U1457	U1397	G1337	G1277	U1217	G1157	U1097	G1037	G977	A917	C857	G797	C737	A677	G617	C557	A497
U1518	U1458	A1398	G1338	C1278	G1218	C1158	A1098	U1038	C978	A918	C858	G798	G738	U678	U558	U598	G498
G1519	U1459	C1399	G1339	G1279	U1219	U1159	G1099	A1039	A979	U919	C859	G799	G739	G679	G619	G559	U499
U1520	U1460	U1400	U1340	G1280	G1220	G1160	C1100	A1040	A980	U920	U860	A800	C740	C680	C620	C560	G500
G1521	G1461	G1401	G1341	U1281	C1221	C1161	U1101	G1041	A981	C921	A861	C801	U741	G681	A621	G561	A501
A1522	C1462	U1402	A1342	U1282	U1222	G1162	C1102	G1042	C982	C922	C862	A802	A742	G682	G622	U562	A502
U1523	C1463	A1403	G1343	G1283	G1223	C1163	A1103	C1043	A983	G923	C863	U803	A743	U683	C623	A563	A503
A1524	G1464	C1404	U1344	A1284	U1224	C1164	C1104	C1044	A984	G924	C864	A804	U744	G684	C624	C564	A504
A1525	G1465	U1405	G1345	A1285	G1225	A1165	U1105	C1045	C985	A925	C865	A805	G745	A685	G625	C565	A505
C1526	U1466	U1406	G1346	A1286	A1226	G1166	G1106	A1046	C986	G926	A866	C806	U746	U686	A626	U566	G506
G1527	U1467	G1407	A1347	U1287	G1227	C1167	G1107	G1047	C987	A927	C867	U807	C747	G687	A627	U567	A507
U1528	U1468	G1408	C1348	G1288	G1228	G1168	U1108	A1048	A988	A928	U868	C808	G748	U688	G628	U568	A508
G1529	U1469	U1409	C1349	C1289	C1229	A1169	G1109	C1049	C989	U929	C869	C809	A749	A689	G629	U569	C509
U1530	A1470	A1410	U1350	U1290	A1230	C1170	G1110	A1050	A990	G930	U870	U810	A750	G690	G630	G570	C510
C1531	G1471	U1411	C1351	G1291	U1231	G1171	A1111	G1051	C991	U931	U871	U811	A751	U691	A631	U571	U511
A1532	C1472	U1412	G1352	G1292	G1232	C1172	G1112	C1052	C992	U932	U872	C812	A752	C692	A632	A572	G512
C1533	G1473	A1413	A1353	C1293	C1233	U1173	U1113	C1053	C993	A933	C873	U813	A753	A693	A633	U573	A513
U1534	U1474	C1414	A1354	U1294	U1234	U1174	C1114	A1054	C994	U934	C874	C814	U754	U694	C634	A574	A514
A1535	G1475	U1415	G1355	C1295	G1235	U1175	G1115	G1055	C995	C935	C875	C815	U755	G695	C635	A575	A515
U1536	U1476	A1416	G1356	G1296	G1236	U1176	C1116	A1056	A996	A936	C876	C816	A756	G696	G636	U576	C516
G1537	A1477	C1417	C1357	G1297	A1237	G1177	C1117	A1057	G997	C937	C877	C817	G757	G697	A637	G577	C517
U1538	G1478	G1418	G1358	C1298	G1238	C1178	C1118	U1058	C998	G938	A878	C818	C758	C698	G638	G578	G518
G1539	G1479	A1419	A1359	G1299	U1239	U1179	U1119	G1059	U999	G939	C879	A819	G759	A699	U639	G579	U519
U1540	U1480	A1420	G1360	G1300	U1240	U1180	G1120	U1060	A1000	G940	C880	A820	G760	G700	C640	U580	G520
C1541	U1481	G1421	G1361	A1301	A1241	U1181	C1121	U1061	A941	A941	C881	A821	U761	G701	U641	C581	U521
U1542	G1482	G1422	C1362	A1302	U1242	U1182	G1122	G1062	G1002	G942	C882	G822	U762	U702	U642	A582	A522
G1543	U1483	G1423	C1363	G1303	C1243	U1183	C1123	C1063	G1003	A943	C883	C823	G763	G703	A643	G583	C523
A1544	U1484	G1424	A1364	A1304	A1244	U1184	G1124	C1064	U1004	C944	U884	U824	A764	G704	A644	C584	G524
A1545	U1485	G1425	A1365	C1305	G1245	G1185	G1125	U1065	C1005	A945	C885	A825	C765	A705	G645	G585	U525
G1546	U1486	G1426	A1366	C1306	A1246	G1186	A1126	U1066	C1006	C946	A886	U826	U766	A706	U646	A586	A526
U1547	U1487	A1427	A1367	A1307	A1247	G1187	A1127	A1067	C1007	A947	A887	U827	U767	G707	G647	C587	C527
A1548	C1488	C1428	G1368	A1308	G1248	U1188	G1128	G1068	C948	C948	C888	U828	G768	G708	G648	U588	A528
A1549	U1489	G1429	G1369	A1309	U1249	A1189	A1129	A1069	A1009	G949	C889	A829	U769	U709	G649	U589	A529
A1550	A1490	G1430	C1370	G1310	G1250	G1190	U1130	A1070	G950	C950	C890	G830	G770	U710	C650	A590	G530
C1551	G1491	A1431	G1371	G1311	C1251	G1191	G1131	G1071	G1011	C951	C891	G831	G771	G711	G651	U591	C531
A1552	G1492	G1432	U1372	U1312	G1252	U1192	U1132	C1072	U1012	C952	A892	U832	C772	G712	U652	A592	A532
C1493	A1493	A1433	A1373	U1313	A1253	G1193	A1133	A1073	C1013	G953	C893	A833	U773	G713	U653	U593	G533
U1554	A1494	A1434	G1374	C1314	A1254	A1194	A1134	G1074	U1014	G954	U894	U834	G774	U714	A654	U594	U534
A1495	U1495	G1435	U1375	C1315	U1255	G1195	C1135	C1075	U1015	U955	U895	C835	G775	A715	A655	C595	G535
C1556	A1496	A1436	G1376	U1316	G1256	C1196	G1136	C1076	G1016	G956	A896	G836	G776	A716	G656	U596	G536
U1497	U1497	C1437	G1377	G1317	C1257	U1197	G1137	A1077	G1017	C957	C897	C837	G777	G717	U657	G597	G537
C1498	C1498	U1438	A1378	U1318	U1258	U1198	G1138	U1078	U1018	U958	C898	C838	G778	A718	U658	U598	A538
U1499	G1499	A1439	U1379	C1319	G1259	U1199	G1139	C1079	U1019	A959	A899	U839	U779	C719	G659	A599	G539
U1500	G1500	U1440	G1380	A1260	U1260	C1200	C1140	A1080	A1020	A900	A890	C840	G780	U720	C660	G600	C540
C1561	U1501	G1441	C1381	U1261	U1201	U1141	C1141	A1081	A1021	C961	C901	A841	A781	A721	A661	C601	A541
U1562	A1502	U1442	G1382	A1262	G1202	C1202	A1142	U1082	G1022	G962	C902	U842	A782	A722	G662	A602	C542

C2466	A2406	U2344	G2224	C2164	G2104	C2044	G1984	C1924	U1864	C1804	G1743	U1683	G1623	U1563
C2467	A2407	G2345	A2225	C2165	U2105	C2045	C1985	C1925	U1865	A1805	A1744	G1684	U1624	C1564
A2468	U2408	C2346	C2226	U2166	U2106	G2046	A1866	U1926	A1866	C1806	A1745	C1685	C1625	C1565
A2469	A2409	C2347	C2227	U2167	G2107	C2047	A1867	A1927	G1867	U1807	A1746	C1686	A1626	A1566
A2470	G2410	U2348	A2228	C2168	A2108	G2048	G1868	G1928	C1868	A1808	U1747	G1687	G1627	G1567
A2471	G2411	G2349	U2229	A2169	U2109	G2049	G1869	A1929	A1809	U1809	C1748	U1688	G1628	G1568
A2472	A2412	C2350	G2230	A2170	G2110	C2050	C1990	G1930	C1870	A1810	A1749	A1689	U1629	A1569
G2473	G2413	G2351	U2231	A2171	U2111	A2051	U1991	U1931	A1871	G1811	U1750	A1690	A1630	A1570
G2474	G2414	A2352	U2232	U2172	G2112	A2052	G1992	A1932	A1872	U1812	U1751	C1691	G1631	A1571
G2475	G2415	G2353	G2233	A2173	U2113	G2053	U1993	G1933	C1873	G1813	C1752	U1692	A1632	A1572
A2476	A2416	C2354	G2234	C2174	A2114	A2054	G1994	C1934	G1874	G1814	G1753	U1693	G1633	G1573
A2477	G2417	G2355	G2235	C2175	G2115	G2055	U1995	A1935	A1875	A1815	A1754	C1694	A1634	C1574
A2478	A2418	U2356	G2236	A2176	G2116	G2056	G1996	G1936	G1876	C1816	A1755	G1695	C1635	C1575
U2479	U2419	G2357	G2237	C2177	A2117	G2057	C1997	A1937	A1877	G1817	G1756	G1696	U1636	U1576
G2480	G2420	A2358	G2238	C2178	U2118	A2058	A1998	U1938	G1878	U1818	A1757	G1697	A1637	C1577
G2481	G2421	U2359	G2239	C2179	A2119	A2059	C1999	A1939	C1879	A1819	U1758	A1698	C1638	U1578
A2482	A2422	G2360	U2240	U2180	G2120	A2060	C2000	U1940	U1880	U1820	A1759	G1699	C1639	A1579
A2483	U2423	G2361	A2241	U2181	G2121	G2061	C2001	C1941	C1881	A1821	C1760	A1700	A1640	A1580
A2484	C2424	C2362	G2242	U2182	U2122	A2062	G2002	C1942	U1882	G1822	C1761	A1701	A1641	G1581
G2485	A2425	G2363	U2243	A2183	G2123	C2063	A2003	U1943	U1883	G1823	A1762	G1702	G1642	A1582
G2486	G2426	G2364	U2244	A2184	G2124	C2064	G2004	U1944	A1884	G1824	G1763	G1703	G1643	A1583
G2487	G2427	U2305	U2245	U2185	G2125	C2065	A2005	U1945	A1885	U1825	C1764	C1704	G1644	U1584
G2488	G2428	C2306	G2246	G2186	A2126	C2066	C2006	U1946	U1886	G1826	U1765	A1705	G1645	C1585
U2489	G2429	G2307	A2247	U2187	G2127	G2067	U2007	C1947	G1887	U1827	G1766	C1706	G1646	A1586
G2490	A2430	U2308	G2248	U2188	G2128	U2068	C2008	G1948	G1888	G1828	G1767	G1707	U1647	G1587
U2491	U2431	A2309	U2249	U2189	G2129	A2069	A2009	G1949	A1889	A1829	C1768	C1708	U1648	G1588
U2492	A2432	G2310	G2250	G2190	A2130	A2070	G2010	U1950	A1890	G1830	U1769	U1709	G1649	A1589
U2493	A2433	U2311	G2251	U2191	U2131	A2071	U2011	U1951	G1891	G1831	G1770	G1710	A1650	A1590
G2494	A2434	G2312	G2252	U2192	U2132	C2072	G2012	A1952	C1892	C1832	C1771	U1711	A1651	A1591
G2495	A2435	G2313	G2253	G2193	G2133	C2073	A2013	A1953	C1893	G1833	A1772	U1712	A1652	C1592
G2496	G2436	A2314	C2254	U2194	A2134	U2074	A2014	G1954	C1894	U1834	A1773	U1713	G1653	A1593
A2497	G2437	G2315	G2255	U2195	U2135	U2075	A2015	U1955	C1895	A1835	C1774	U1714	A1654	U1594
G2498	A2378	G2316	G2256	C2196	A2136	G2076	U2016	U1956	G1896	G1836	U1775	G1715	A1655	C1595
G2499	G2379	U2317	U2257	U2197	U2137	A2077	G2017	C1957	G1897	C1837	G1776	U1716	C1656	A1596
U2500	C2380	G2318	G2258	A2198	G2138	C2078	G2018	G1958	U1898	C1838	U1777	U1717	U1657	A1597
G2501	U2441	U2319	U2259	A2199	U2139	U2079	A2019	G1959	A1899	G1839	U1778	G1718	C1658	A1598
G2502	C2442	G2320	C2260	C2200	G2140	A2080	A2020	A1960	A1900	G1840	U1779	G1719	G1659	U1599
A2503	C2443	U2321	C2261	G2201	G2141	U2081	C2021	C1961	A1901	U1841	A1780	U1720	G1660	C1600
U2504	G2444	A2322	U2262	U2202	A2142	A2082	U2022	G1962	C1902	G1842	U1781	G1721	G1661	G1601
G2505	A2445	G2323	C2263	U2203	G2143	G2083	C2023	U1963	G1903	C1843	U1782	A1722	U1662	A1602
U2506	A2386	U2324	C2264	G2204	G2144	C2084	G2024	G1964	G1904	C1844	A1783	G1723	G1663	A1603
G2507	G2447	U2387	U2265	A2205	C2145	U2085	C2025	C1965	C1905	G1845	A1784	G1724	A1664	C1604
G2508	A2388	C2326	A2266	C2206	C2146	U2086	U2026	A1966	G1906	G1846	A1785	U1725	A1665	C1605
G2509	G2389	A2327	A2267	C2207	A2147	G2087	G2027	C1967	G1907	G1847	U1786	G1726	G1666	C1606
C2510	A2450	A2328	A2268	C2208	G2148	A2088	C1908	G1968	C1908	A1848	A1787	C1727	G1667	C1607
U2511	A2451	U2329	G2269	G2209	U2149	C2089	C1909	A1969	C1909	G1849	C1788	C1728	A1668	A1608
C2512	A2452	A2330	A2270	U2210	C2150	A2090	G1910	A1970	U1850	G1850	A1789	U1729	A1669	A1609
A2513	A2453	U2331	G2271	A2211	U2151	C2091	U1911	U1971	U1851	U1851	C1790	C1730	C1670	A1610
U2514	G2454	C2332	U2272	A2212	G2152	U2092	G2032	G1972	A1912	U1852	A1791	G1731	U1671	C1611
C2515	G2455	A2333	A2273	U2213	C2153	G2093	A2033	G1973	A1913	A1853		C1732	A1672	C1612
A2516	C2456	U2334	A2274	C2214	A2154	A2094	U2034	C1974	C1914	U1854	A1794	G1733	G1673	G1613
C2517	G2397	A2335	C2275	G2215	U2155	A2095	G2035	G1975	3TD1915	U1855	C1795	G1734	G1674	A1614
A2518	U2398	C2336	G2276	G2216	G2156	C2096	C2036	U1976	A1916	U1856	U1796	A1735	C1675	C1615
U2519	A2459	G2337	G2277	G2217	G2157	A2097	U1917	A1977	U1917	G1857	G1797	U1736	A1676	A1616
C2520	U2460	G2338	G2278	G2218	A2158	U2098	G2038	U1978	A1918	A1858	U1798	G1737	A1677	C1617
C2521	A2461	C2339	G2279	U2219	A2159	U2099	U2039	U1979	A1919	U1859	G1799	G1738	A1678	A1618
U2522	C2462	A2340	G2280	U2220	G2160	G2100	G2040	G1980	C1920	G1860	C1800	A1739	A1679	G1619
G2523	G2463	G2341	A2281	G2221	U2101	A2101	U2041	G1981	G1921	G1861	A1801	G1740	U1680	G1620
G2524	G2464	C2342	G2282	C2222	G2162	G2102	A2042	U1982	G1922	G1862	A1802	C1741	G1681	U1621
G2525	G2465	U2343	C2283	G2223	A2163	C2103	C2043	G1983	U1923	G1863	A1803	U1742	G1682	G1622

G2526	A2586	C2646	A2706	A2766	A2826	A2886
C2527	A2587	U2647	U2707	C2767	C2827	A2887
U2528	A2588	G2648	G2708	G2768	G2828	C2888
G2529	A2589	C2649	C2709	U2769	A2829	C2889
A2530	A2590	U2650	U2710	G2770	G2830	G2890
A2531	C2591	C2651	A2711	C2771	G2831	U2891
G2532	G2592	C2652	C2712	C2772	U2832	G2892
U2533	U2593	U2653	U2713	C2773	U2833	A2893
A2534	C2594	A2654	G2714	C2774	G2834	G2894
G2535	U2595	G2655	C2715	G2775	A2835	G2895
G2536	U2596	U2656	C2716	A2776	U2836	C2896
U2537	G2597	A2657	C2717	C2777	A2837	U2897
G2538	A2598	C2658	G2718	A2778	G2838	U2898
C2539	G2599	G2659	C2719	U2779	G2839	A2899
U2540	A2600	A2660	U2720	G2780	C2840	A2900
A2541	C2601	G2661	A2721	A2781	G2841	C2901
A2542	A2602	A2662	G2722	G2782	G2842	C2902
G2543	G2603	G2663	C2723	U2783	G2843	U2903
U2544	U2604	G2664	U2724	U2784	G2844	
G2545	U2605	A2665	A2725	C2785	U2845	
U2546	C2606	C2666	A2726	U2786	G2846	
A2547	G2607	C2667	A2727	C2787	U2847	
U2548	G2608	G2668	U2728	C2788	G2848	
G2549	U2609	C2669	G2729	G2789	U2849	
U2550	C2610	A2670	C2730	U2790	A2850	
C2551	C2611	G2671	G2731	G2791	A2851	
U2552	U2612	U2672	G2732	A2792	G2852	
G2553	G2613	C2673	C2733	C2793	C2853	
U2554	A2614	A2674	A2734	C2794	G2854	
U2555	U2615	A2675	G2735	C2795	C2855	
C2556	C2616	C2676	A2736	U2796	A2856	
G2557	U2617	C2677	G2737	U2797	G2857	
U2558	G2618	C2678	A2738	U2798	C2858	
C2559	C2619	A2679	U2739	A2799	G2859	
A2560	C2620	U2680	A2740	A2800	C2860	
U2561	G2621	C2681	A2741	C2801	U2861	
U2562	U2622	A2682	G2742	G2802	G2862	
U2563	G2623	C2683	U2743	G2803	C2863	
A2564	G2624	U2684	G2744	U2804	G2864	
U2565	G2625	G2685	C2745	C2805	U2865	
A2566	C2626	C2686	U2746	C2806	U2866	
G2567	G2627	U2687	G2747	U2807	G2867	
U2568	C2628	C2688	A2748	G2808	A2868	
G2569	U2629	U2689	A2749	A2809	C2869	
U2570	G2630	U2690	A2750	A2810	C2870	
U2571	G2631	C2691	G2751	G2811	U2871	
A2572	A2632	G2692	C2752	G2812	A2872	
G2573	G2633	G2693	A2753	A2813	A2873	
C2574	A2634	A2694	U2754	A2814	C2874	
G2575	A2635	U2695	C2755	C2815	G2875	
G2576	C2636	U2696	U2756	G2816	C2876	
A2577	U2637	U2697	A2757	U2817	G2877	
G2578	A2638	C2698	U2758	U2818	U2878	
C2579	C2639	C2699	G2759	G2819	A2879	
U2580	G2640	A2700	C2760	A2820	C2880	
G2581	G2641	U2701	A2761	A2821	U2881	
G2582	G2642	G2702	C2762	G2822	A2882	
G2583	G2643	C2703	G2763	A2823	C2883	
U2584	G2644	A2764	C2764	U2824	U2884	
U2585	G2645	A2705	A2765	G2825	C2885	

• Molecule 9: 5S ribosomal RNA

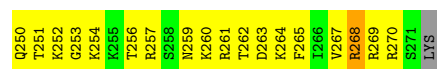
Chain B:  80% 18%

U1	G61
G2	C62
C3	G63
C4	G64
U5	U65
G6	A66
G7	G67
C8	C68
G9	G69
C10	C70
C11	G71
C12	G72
G13	A73
U14	U74
A15	G75
G16	G76
C17	A77
G18	U78
C19	G79
G20	U80
G21	G81
U22	U82
G23	G83
G24	G84
U25	G85
C26	G86
C27	U87
C28	C88
A29	U89
C30	C90
C31	C91
U32	C92
G33	C93
A34	A94
C35	U95
C36	G96
C37	C97
C38	G98
A39	A99
U40	G100
G41	A101
C42	G102
C43	U103
A44	A104
A45	G105
A46	G106
C47	G107
U48	A108
C49	A109
A50	C110
G51	U111
A52	G112
A53	C113
G54	C114
U55	A115
G56	G116
A57	G117
A58	C118
A59	U119
C60	U120

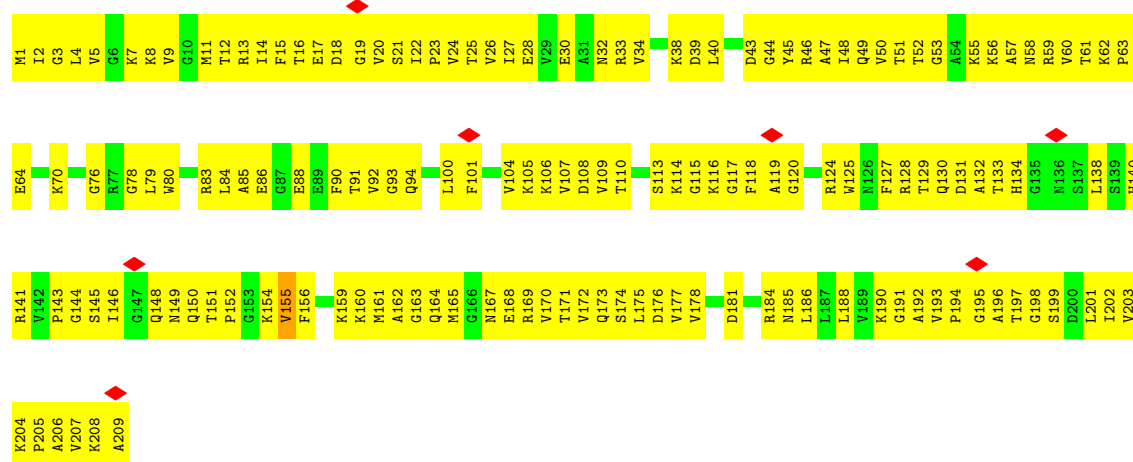
• Molecule 10: 50S ribosomal protein L2

Chain C:  5% 20% 77%

MET	K67	N127	C187
A1	R68	T128	R188
V2	N69	P129	A189
V3	K70	P130	T190
K4	D71	M131	L191
C5	G72	R132	G192
K6	I73	N133	E193
P7	P74	I134	V194
T8	A75	P135	G195
S9	V76	V136	N196
P10	V77	G137	A197
G11	E78	S138	E198
R12	R79	T139	H199
R13	L80	V140	M200
H14	E81	H141	L201
V15	Y82	N142	R202
V16	D83	V143	V203
K17	P84	E144	L204
V18	N85	P145	G205
V19	R86	P146	K206
N20	A88	P147	A207
L23	N89	G148	G208
H24	I90	K149	A209
K27	A91	G150	A210
P28	L92	G151	R211
P29	V93	Q152	W212
F29	L94	L153	R213
A30	Y95	A154	G214
P31	K96	R155	V215
L32	D97	S156	R216
L33	G98	A157	P217
E99	E99	G158	G221
R100	R100	T159	M224
R101	R101	Y160	N225
Y102	Y102	V161	P226
I103	I103	Q162	V227
L104	L104	I163	D228
A105	A105	V164	H229
P106	P106	A165	P230
K107	K107	R166	H231
G108	G108	D167	G232
L109	L109	G168	G233
K110	K110	A169	G234
T110	T110	Y170	E235
G111	G111	V171	G236
D112	D112	T172	R237
D113	D113	L173	N238
Q114	Q114	R174	F239
I115	I115	L175	G240
Q116	Q116	R176	K241
S117	S117	S177	H242
G118	G118	G178	V243
V119	V119	E179	T244
D120	D120	M180	P245
A121	A121	R181	T246
A122	A122	K182	W247
G123	G123	V183	E248
K124	K124	E184	V249
P125	P125	A185	
L126	L126	G186	



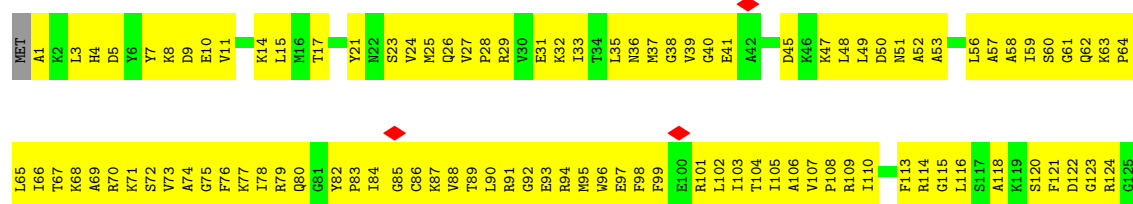
• Molecule 11: 50S ribosomal protein L3

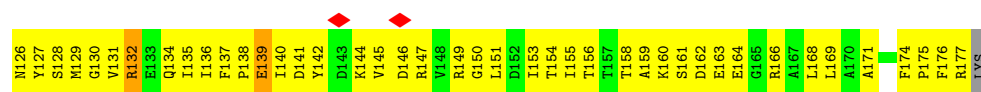


• Molecule 12: 50S ribosomal protein L4

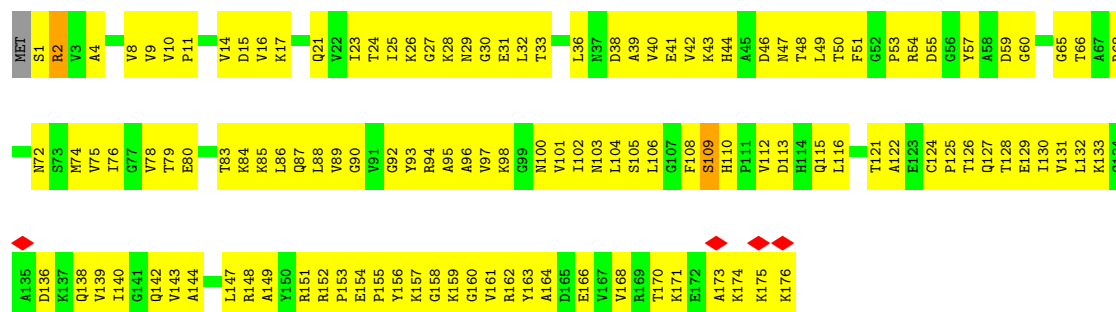
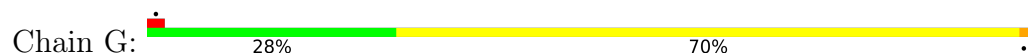


• Molecule 13: 50S ribosomal protein L5

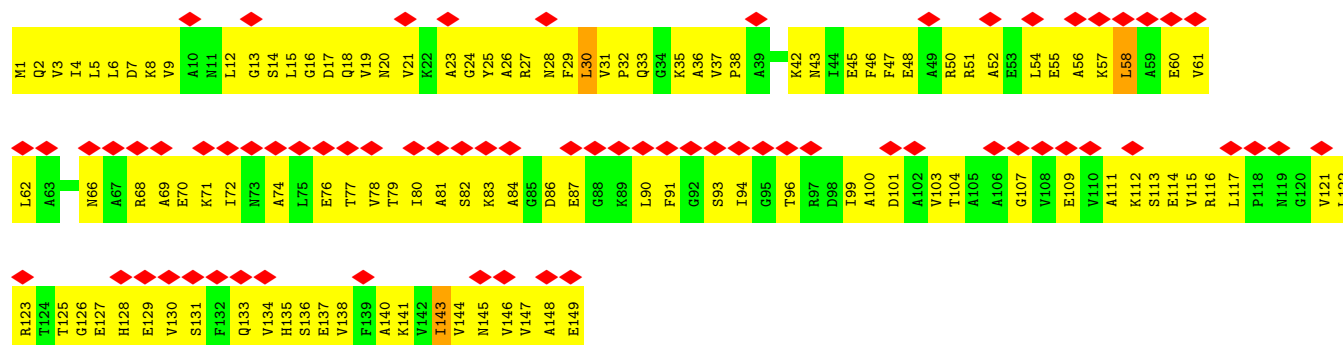




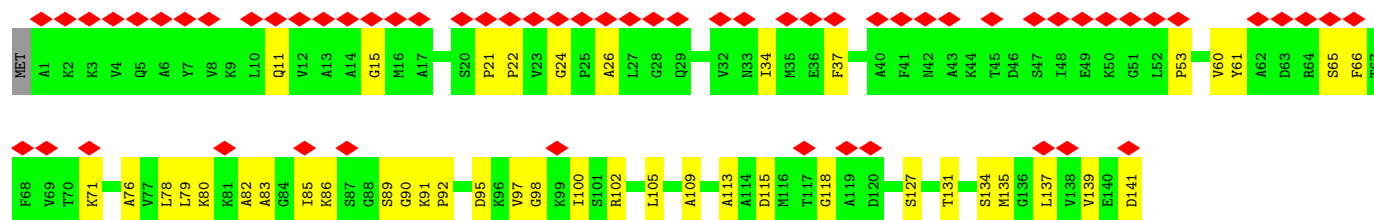
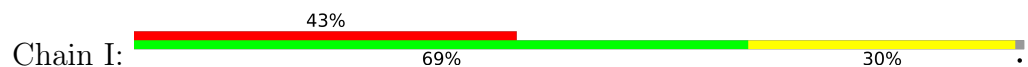
• Molecule 14: 50S ribosomal protein L6



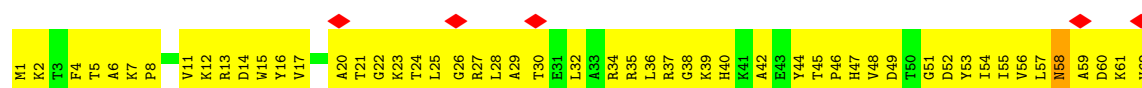
• Molecule 15: 50S ribosomal protein L9

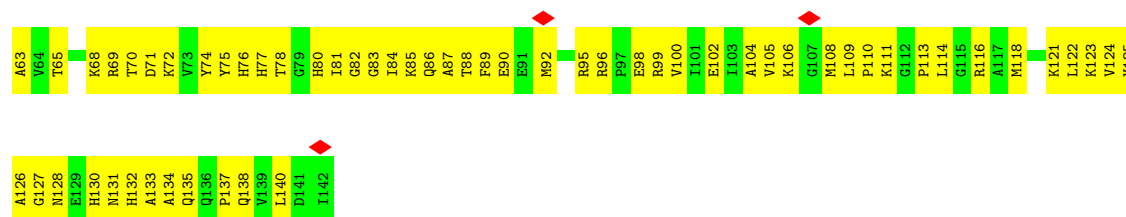


• Molecule 16: 50S ribosomal protein L11

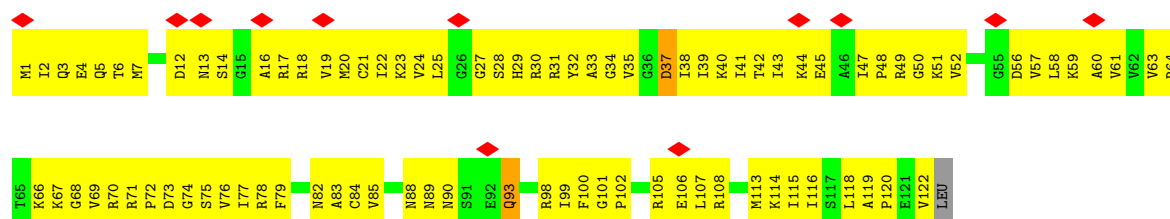


• Molecule 17: 50S ribosomal protein L13

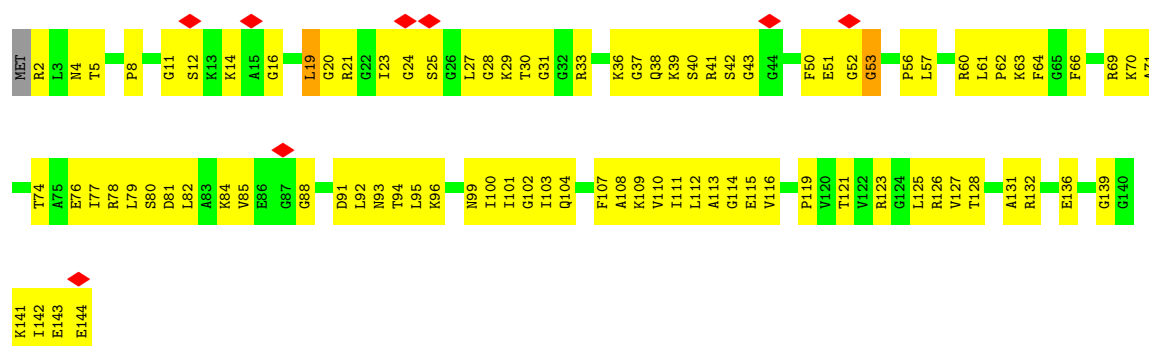




• Molecule 18: 50S ribosomal protein L14



• Molecule 19: 50S ribosomal protein L15



• Molecule 20: 50S ribosomal protein L16

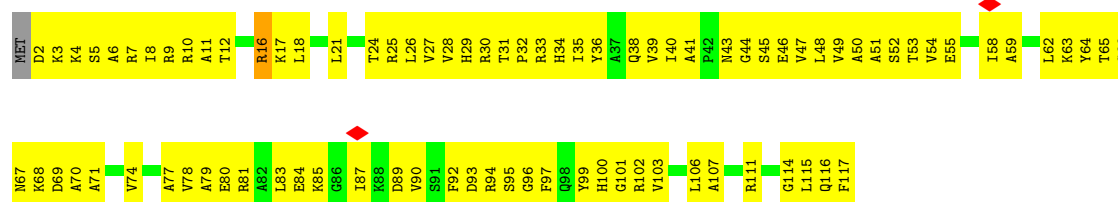


Chain N:  20% 74% 6%



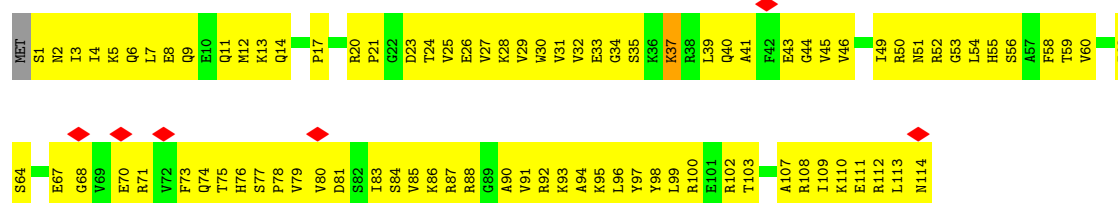
- Molecule 22: 50S ribosomal protein L18

Chain O:  25% 74% 1%



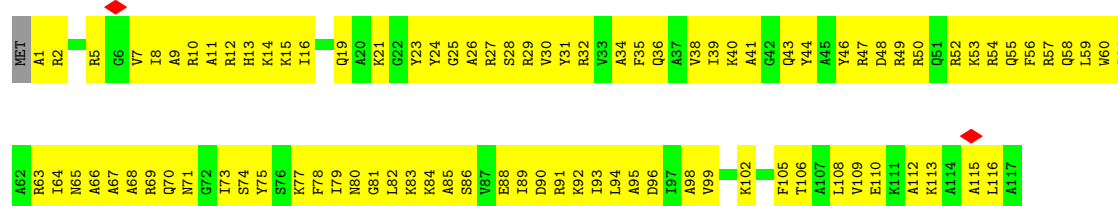
- Molecule 23: 50S ribosomal protein L19

Chain P:  5% 21% 77%



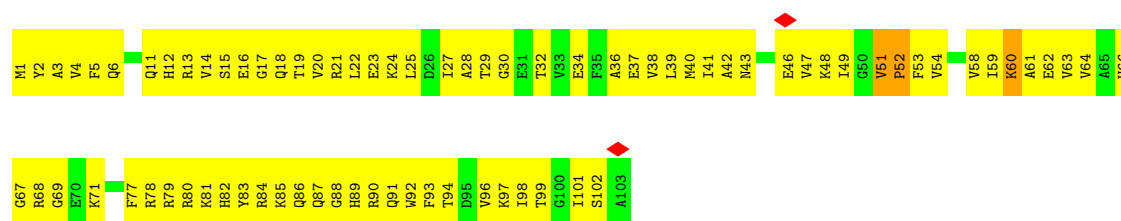
- Molecule 24: 50S ribosomal protein L20

Chain Q:  21% 78% 1%



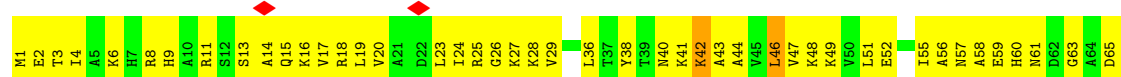
- Molecule 25: 50S ribosomal protein L21

Chain R:  23% 74% 3%



• Molecule 26: 50S ribosomal protein L22

Chain S: 23% 74%



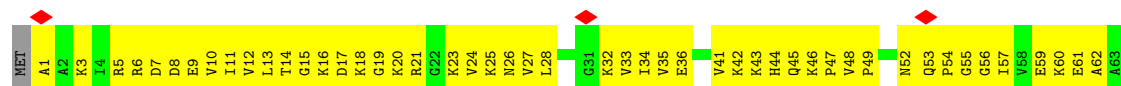
• Molecule 27: 50S ribosomal protein L23

Chain T: 19% 73% 7%



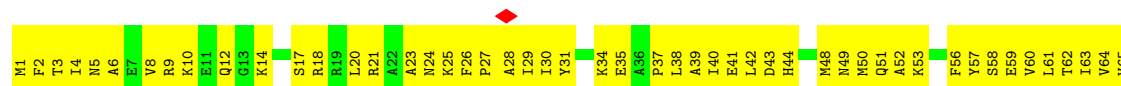
• Molecule 28: 50S ribosomal protein L24

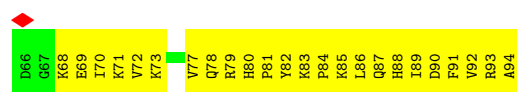
Chain U: 15% 81%



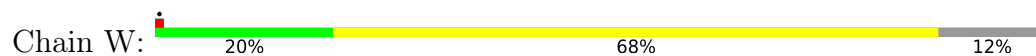
• Molecule 29: 50S ribosomal protein L25

Chain V: 21% 79%

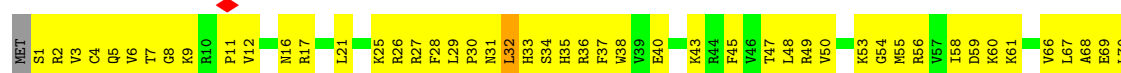




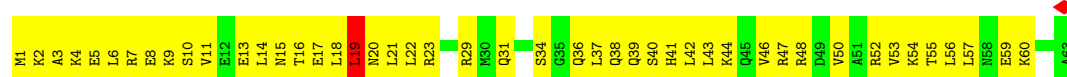
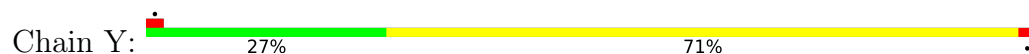
• Molecule 30: 50S ribosomal protein L27



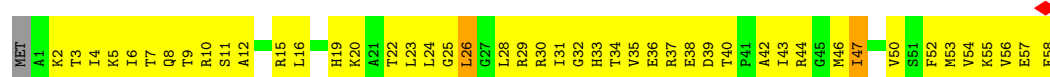
• Molecule 31: 50S ribosomal protein L28



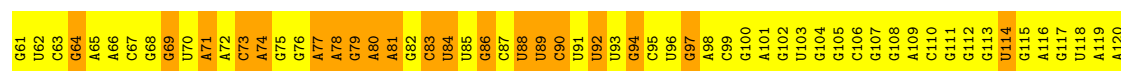
• Molecule 32: 50S ribosomal protein L29



• Molecule 33: 50S ribosomal protein L30

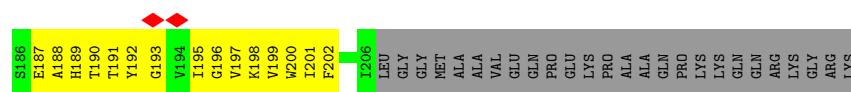


• Molecule 34: 16S ribosomal RNA

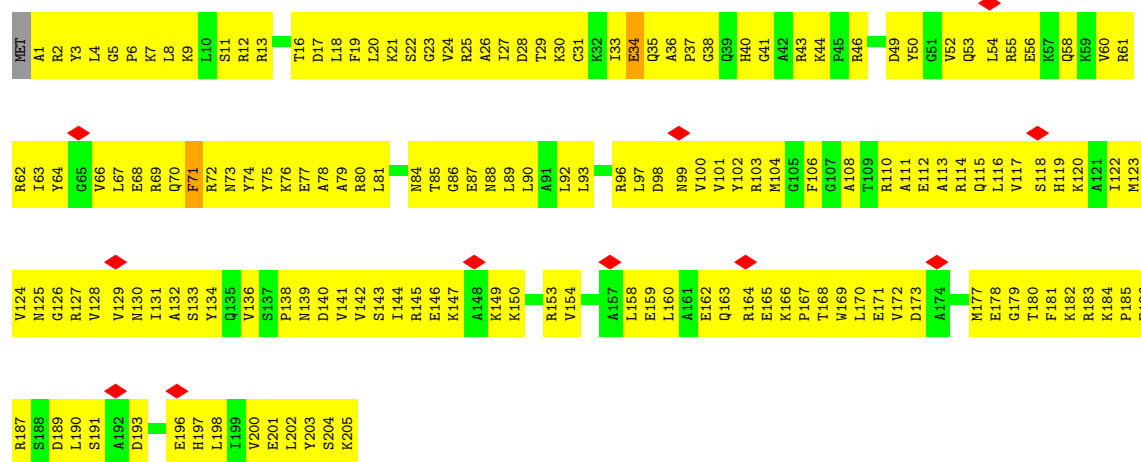


C1141	A1081	A1021	U961	A901	C941	A781	G721	G661	G541	G481	U421	G361	G301	G241	A181	U121
G1142	A1082	A1022	C962	G902	U942	A782	G722	U662	G542	A482	C422	G362	G302	G242	A182	G122
G1143	U1083	U1023	G963	G903	U943	C783	U723	A663	G543	C483	G423	A363	A303	A243	C183	U123
G1144	G1084	G1024	A964	U904	G944	A784	G724	G664	G544	G484	G424	A364	A304	A244	G184	U124
A1145	U1085	U1025	U965	U905	A945	G785	G725	A665	C545	U485	U425	U365	G305	U245	U185	U125
A1146	U1086	G1026	G966	A906	G946	G786	G726	G666	A546	U486	U426	U366	A306	A246	C186	G126
C1147	G1087	C1027	C967	A907	G947	A787	G727	G667	A547	A487	U427	U367	C307	G247	G187	G127
U1148	G1088	U1028	A968	A908	C948	U788	A728	G668	G548	C488	G428	U368	C308	C248	C188	G128
C1149	U1089	U1029	A969	A909	C949	U789	A729	G669	G549	C489	U429	U369	A309	U249	A189	A129
A1150	U1090	U1030	C970	C910	U950	A790	G730	G670	G550	C490	A430	C370	A310	A250	A190	A130
A1151	U1091	C1031	G971	U911	U951	G791	G731	G671	U551	C491	A431	C371	C311	A251	G191	A131
A1152	A1092	G1032	C972	C912	G952	A792	G732	U672	U552	C492	A432	C372	A312	U252	A192	C132
G1153	A1093	G1033	G973	A913	C953	U793	G733	A673	A553	A493	C433	A373	A313	A253	C193	U133
G1154	G1094	G1034	A974	A914	U954	A794	G734	G674	A554	C494	U434	A374	C314	G254	C194	G134
U1155	U1095	A1035	A975	U915	U955	C795	C735	A675	U555	A495	A435	U375	A315	G255	A195	C135
G1156	C1096	A1036	G976	U916	C956	C796	C736	A676	C556	C496	A436	G376	A316	G256	A196	C136
A1157	C1097	C1037	A977	A917	C957	U797	C737	U677	G557	C497	U437	G377	A317	G257	A197	U137
C1158	C1098	U1038	A978	A918	G958	U798	C738	G678	G558	C498	U438	G378	G318	G258	G198	G138
U1159	G1099	U1039	C979	A919	G959	G799	C739	G679	A559	A499	U439	C379	G319	G259	A199	A139
G1160	C1100	U1040	C980	U920	A860	G800	U740	G680	A560	C500	C440	C380	A320	G260	G200	U140
C1161	A1101	G1041	U981	U921	A861	A621	G741	G681	U561	C501	A441	C381	A321	G261	G201	G141
C1162	U1042	A1042	U982	G922	C862	A802	G742	G682	U562	A502	C442	A382	G322	A262	G202	G142
A1163	C1103	G1043	A983	A923	U863	G803	A743	G683	A563	C503	C443	A383	U323	A263	G203	A143
G1164	G1104	A1044	C984	C924	A864	U804	G744	G684	C624	C504	G444	G384	G324	G264	G204	G144
U1165	A1105	G1045	C985	G925	A865	C805	G745	G685	U565	C505	G445	G385	A325	G265	A205	G145
G1166	G1106	A1046	U986	G926	C866	C806	A746	U686	G566	C506	G446	C386	G326	G266	C206	G146
C1167	C1107	G1047	G987	G927	U867	A807	A747	A687	G567	C507	G447	U387	A327	G267	C207	G147
U1168	U1048	G1048	C988	G928	C868	G808	G748	G688	U568	C508	A448	C388	U328	U268	U208	G148
A1169	U1049	U1049	U989	G929	G869	G809	A749	G689	C569	A509	A449	A389	A329	C269	U209	A149
A1170	A1110	G1050	C990	C930	U870	C810	C750	G690	G570	A510	C450	U390	C330	A270	U210	U150
C1171	A1111	C1051	U991	C931	U871	C811	U751	G691	U571	C511	A451	G391	G331	G271	G211	A151
C1172	C1112	U1052	U992	C932	A872	G812	G752	G692	A572	U512	A452	C392	G332	G272	G212	A152
U1173	C1113	G1053	G993	G933	A873	U813	A753	G693	A573	C513	C453	A393	U333	U273	G213	C153
G1174	C1114	A1054	A994	C934	G874	A814	G754	A694	A574	C514	G454	G394	C334	A274	C214	U154
G1175	U1115	C1055	C995	A935	U875	A815	G755	A695	G575	C515	G455	C395	G335	G275	A155	A155
A1176	U1116	U1056	A996	C936	C876	A816	C756	A696	C576	U516	A456	C396	A336	G276	C156	C156
G1177	A1117	G1057	U997	A937	G877	C817	U757	G697	G577	G517	G457	A397	G337	G277	C157	U157
G1178	U1118	G1058	C998	A938	A878	G818	C758	G698	C578	C518	U458	U398	A338	G278	G158	G158
A1179	C1119	U1059	C999	G939	C879	A819	A759	C699	A579	C519	A459	C399	A339	A279	G159	G159
A1180	C1120	U1060	U1000	C940	C880	U820	G760	G700	C580	A520	A460	C400	U340	G280	A160	A160
G1181	G1061	G1061	C1001	G941	G881	G821	G761	U701	G581	G521	A461	C401	C341	G281	C221	A161
G1182	U1122	U1062	G1002	G942	C882	U822	U762	A702	C582	C522	A462	C402	C342	A282	C222	A162
U1183	G1123	C1063	G1003	U943	C883	G823	G763	G703	A583	A523	U463	C403	U343	U283	A223	C163
G1184	G1124	A1064	U1004	G944	U884	G824	C764	A704	G584	G524	U464	C404	A344	G284	U224	G164
G1185	U1125	U1065	A1005	G945	G885	A825	G765	G705	G585	C525	A465	U405	C345	C285	C225	G165
U1186	U1126	C1066	G886	A946	G886	C826	A766	A706	G586	C526	A466	C406	G346	G286	G226	U166
G1187	G1127	A1067	U1007	G947	G887	U827	A767	U707	G587	G527	U467	U407	G347	U287	A167	A167
A1188	U1068	G1068	U1008	C948	G888	U828	A768	C708	G588	C528	A468	U408	G348	A288	G168	G168
U1189	C1129	C1069	A889	A949	A889	G829	G769	U709	U589	G529	C469	U409	A349	G289	U229	C169
G1190	A1130	U1070	U1010	U950	G890	G830	C770	G710	U590	G530	C470	G410	G350	C290	U170	U170
A1191	G1131	C1071	C1011	G951	U891	A831	G771	G711	U591	U531	U471	A411	G351	U291	U231	A171
C1192	C1132	G1072	A1012	U952	A892	G832	A772	A712	G592	A532	U472	A412	C352	G292	G232	A172
G1193	G1133	U1073	G1013	G953	C893	C833	G773	G713	U593	A533	U473	G413	A353	G293	C233	U173
U1194	G1134	G1074	A1014	G954	G894	U834	G774	G714	U594	U534	G474	A414	A354	U294	C234	A174
C1195	U1135	U1075	G1015	U955	G895	U835	G775	A715	A595	A535	U475	A415	C355	C295	C235	C175
A1196	A1136	U1076	A1016	U956	C896	G836	G776	A716	A596	A536	U476	A416	A356	U296	A236	C176
A1197	C1137	G1077	U1017	U957	C897	U837	A777	U717	G597	C537	C477	G417	G357	G297	G237	G177
G1198	G1138	U1078	G1018	A958	G898	G838	G778	A718	U598	G538	A478	C418	U358	A298	A238	C178
U1199	G1139	U1079	A1019	A959	C899	C839	C779	C719	U599	G539	U479	C419	G359	G299	G239	A179
C1200	C1140	A1080	G1020	U960	A900	C940	A780	C720	A600	G540	U480	U420	G360	A300	G240	U180





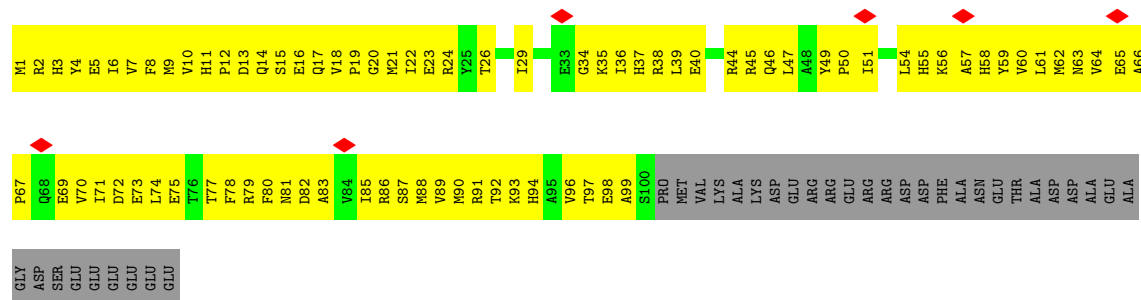
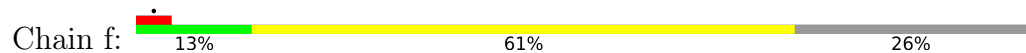
• Molecule 37: 30S ribosomal protein S4



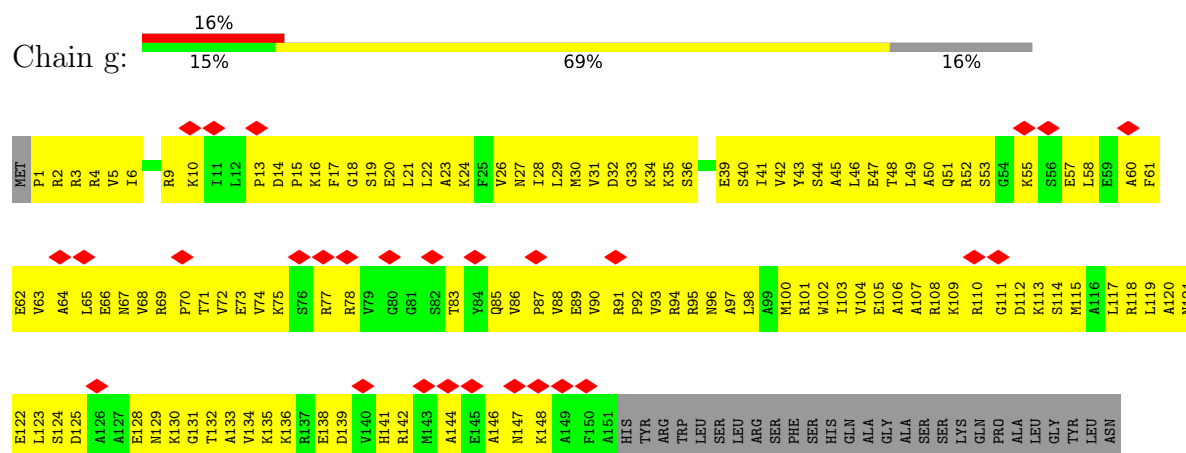
• Molecule 38: 30S ribosomal protein S5



• Molecule 39: 30S ribosomal protein S6

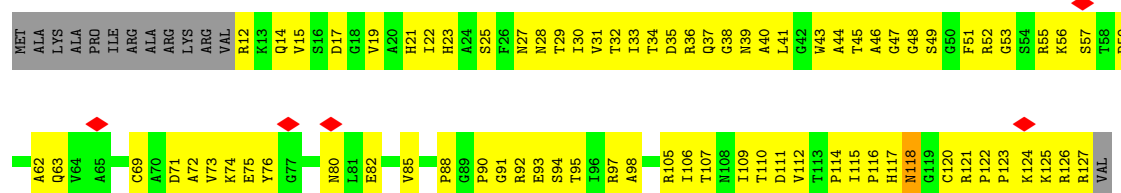
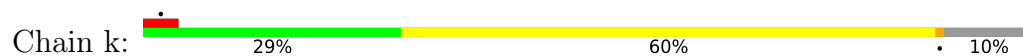


- Molecule 40: 30S ribosomal protein S7





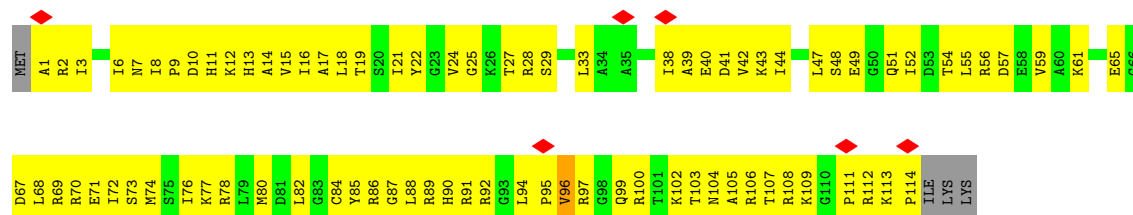
- Molecule 44: 30S ribosomal protein S11



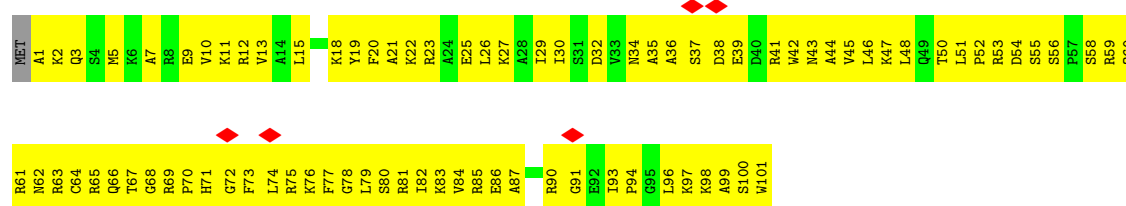
- Molecule 45: 30S ribosomal protein S12



- Molecule 46: 30S ribosomal protein S13



- Molecule 47: 30S ribosomal protein S14



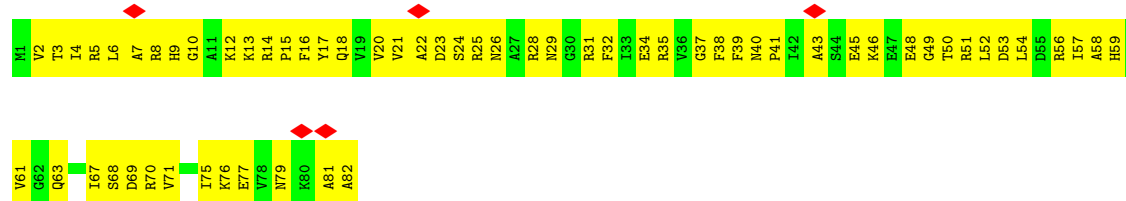
- Molecule 48: 30S ribosomal protein S15

Chain o: 

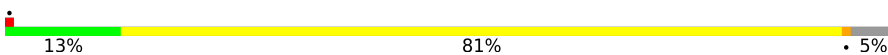


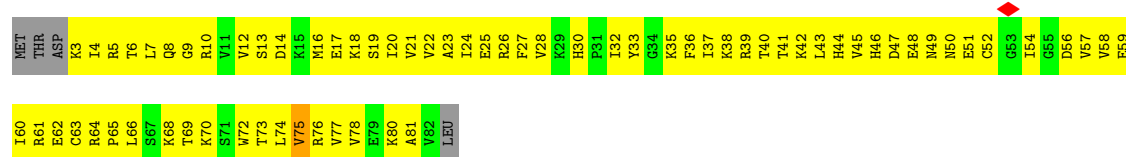
- Molecule 49: 30S ribosomal protein S16

Chain p: 

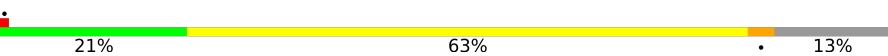


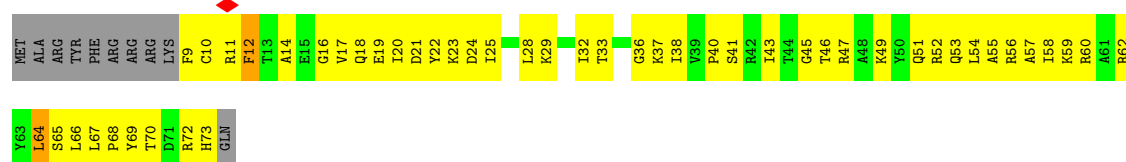
- Molecule 50: 30S ribosomal protein S17

Chain q: 

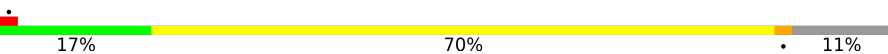


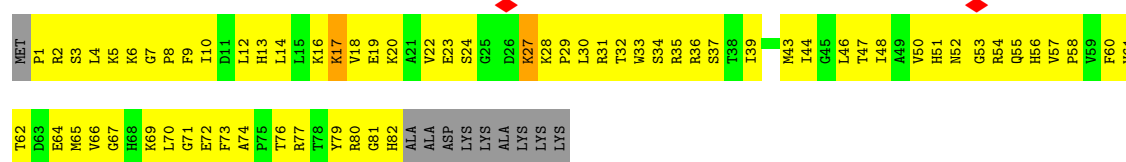
- Molecule 51: 30S ribosomal protein S18

Chain r: 



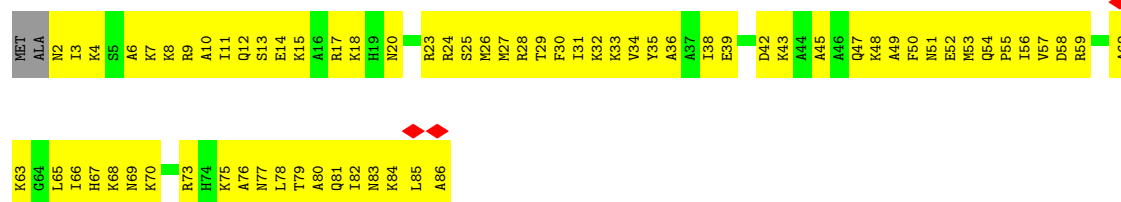
- Molecule 52: 30S ribosomal protein S19

Chain s: 



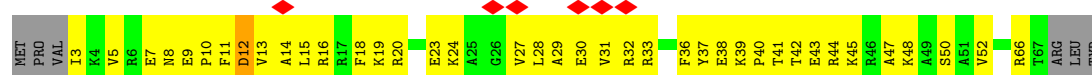
- Molecule 53: 30S ribosomal protein S20

Chain t: 



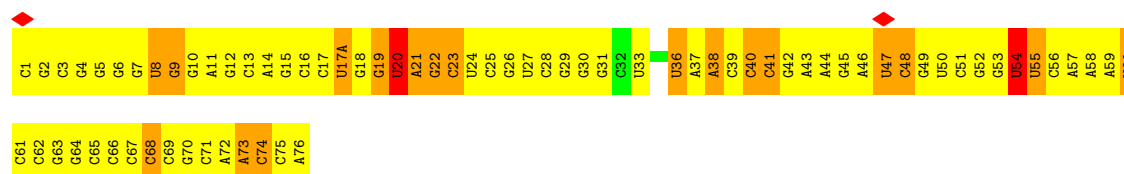
- Molecule 54: 30S ribosomal protein S21

Chain u: 

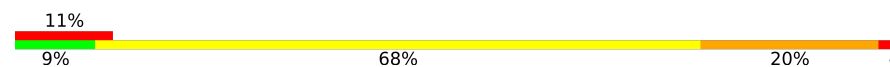


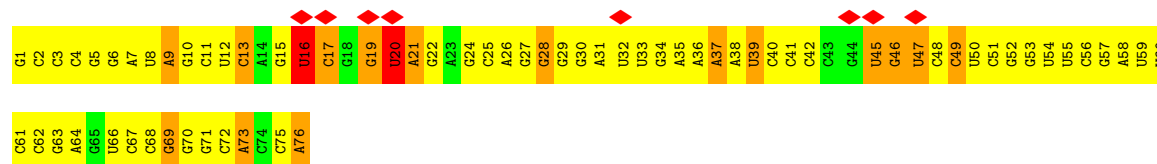
- Molecule 55: P-site tRNA(fMet)

Chain v: 



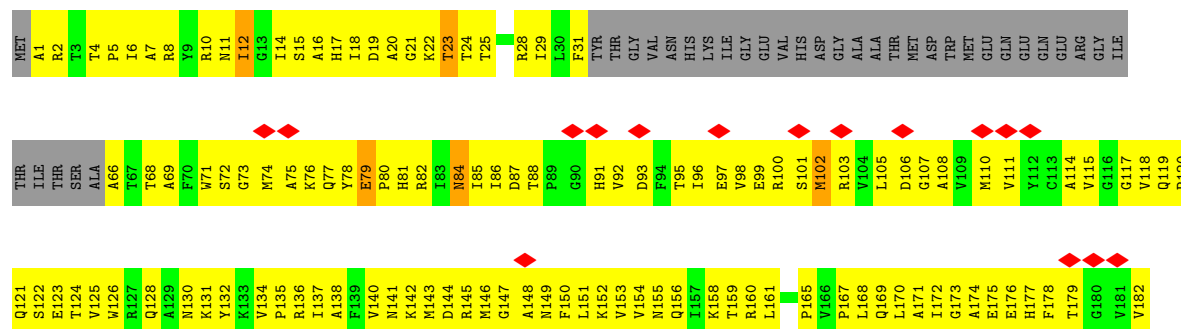
- Molecule 56: P-site fMet-Phe-tRNA(Phe)

Chain w: 



- Molecule 57: Elongation factor G

Chain x: 





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	6168	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	30	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	59000	Depositor
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	10.963	Depositor
Minimum map value	-5.358	Depositor
Average map value	0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	1.5	Depositor
Map size ($\text{\AA}$)	334.08, 334.08, 334.08	wwPDB
Map dimensions	288, 288, 288	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.16, 1.16, 1.16	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: OMC, MIA, 3TD, 5MC, 2MG, 4OC, GDP, MA6, PSU, FME, 5MU, 4SU, 6MZ, ZN, 2MA, UR3, G7M, 1MG, AM2, OMU, OMG, H2U

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	0	0.85	0/450	1.22	0/599
2	1	0.83	0/416	1.34	2/554 (0.4%)
3	2	0.91	0/380	1.21	0/498
4	3	0.91	0/513	1.26	3/676 (0.4%)
5	4	0.83	0/303	1.40	2/397 (0.5%)
6	5	0.31	0/646	0.76	0/898
7	6	0.78	0/531	1.24	1/709 (0.1%)
8	A	0.84	0/69266	0.89	44/108055 (0.0%)
9	B	0.87	0/2873	0.92	0/4478
10	C	0.80	0/2121	1.17	4/2852 (0.1%)
11	D	0.79	0/1586	1.09	1/2134 (0.0%)
12	E	0.82	0/1571	1.13	1/2113 (0.0%)
13	F	0.83	0/1434	1.11	2/1926 (0.1%)
14	G	0.83	0/1343	1.17	5/1816 (0.3%)
15	H	0.64	0/1122	1.03	2/1515 (0.1%)
16	I	0.41	0/692	0.90	1/960 (0.1%)
17	J	0.89	0/1152	1.17	1/1551 (0.1%)
18	K	0.79	0/947	1.17	1/1268 (0.1%)
19	L	0.80	0/1054	1.33	3/1403 (0.2%)
20	M	0.87	0/1093	1.18	2/1460 (0.1%)
21	N	0.87	1/973 (0.1%)	1.26	2/1301 (0.2%)
22	O	0.79	0/902	1.04	1/1209 (0.1%)
23	P	0.86	0/929	1.14	1/1242 (0.1%)
24	Q	0.99	0/960	1.18	1/1278 (0.1%)
25	R	0.82	0/829	1.11	1/1107 (0.1%)
26	S	0.91	0/864	1.23	5/1156 (0.4%)
27	T	0.91	0/744	1.20	0/994
28	U	0.97	0/787	1.23	0/1051
29	V	0.98	0/766	1.11	0/1025
30	W	0.82	0/582	1.20	0/769
31	X	0.90	0/635	1.25	1/848 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	Y	0.95	0/510	1.20	0/677
33	Z	0.96	0/453	1.24	3/605 (0.5%)
34	a	0.77	2/36725 (0.0%)	0.85	25/57285 (0.0%)
35	b	0.64	0/1735	0.93	0/2338
36	c	0.78	0/1651	1.00	1/2225 (0.0%)
37	d	0.74	0/1665	1.06	0/2227
38	e	0.80	0/1154	1.11	1/1554 (0.1%)
39	f	0.75	0/835	0.99	0/1128
40	g	0.68	0/1195	0.96	1/1602 (0.1%)
41	h	0.72	0/989	0.95	0/1326
42	i	0.70	0/1034	1.07	0/1375
43	j	0.72	0/796	1.00	1/1077 (0.1%)
44	k	0.73	0/885	1.04	0/1195
45	l	0.84	0/969	1.23	0/1300
46	m	0.76	0/892	1.02	1/1193 (0.1%)
47	n	0.73	0/811	1.08	0/1081
48	o	0.78	0/722	1.04	0/964
49	p	0.75	0/659	1.04	0/884
50	q	0.83	0/657	1.08	1/881 (0.1%)
51	r	0.76	1/544 (0.2%)	1.08	1/731 (0.1%)
52	s	0.69	0/675	1.16	4/908 (0.4%)
53	t	0.99	0/671	1.05	0/888
54	u	0.65	0/512	1.08	0/683
55	v	0.73	0/1745	0.87	0/2716
56	w	0.59	0/1650	0.95	12/2569 (0.5%)
57	x	0.75	0/5288	1.09	7/7152 (0.1%)
58	y	0.31	0/11	0.86	0/13
59	z	0.50	0/230	0.80	1/355 (0.3%)
All	All	0.81	4/164127 (0.0%)	0.95	146/244774 (0.1%)

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
4	3	0	1
25	R	0	1
28	U	0	1
32	Y	0	1
35	b	0	1
37	d	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
54	u	0	1
57	x	0	1
All	All	0	10

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	a	1081	A	O3'-P	6.75	1.71	1.61
51	r	64	LEU	CA-C	-5.76	1.42	1.52
21	N	107	ASN	C-N	-5.35	1.22	1.33
34	a	921	U	C5'-C4'	5.15	1.58	1.51

All (146) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	w	9	A	C4'-C3'-O3'	12.57	128.25	109.40
8	A	2381	A	C4'-C3'-O3'	12.54	131.81	113.00
8	A	1789	A	C2'-C3'-O3'	11.62	131.13	113.70
56	w	45	U	C4'-C3'-O3'	10.83	125.64	109.40
8	A	2289	G	C3'-C2'-O2'	10.02	125.73	110.70
56	w	16	U	C1'-C2'-O2'	9.43	125.94	111.80
15	H	30	LEU	CA-C-N	8.98	125.90	120.24
15	H	30	LEU	C-N-CA	8.98	125.90	120.24
8	A	2382	G	C2'-C3'-O3'	-8.90	100.35	113.70
34	a	1081	A	O3'-P-O5'	8.60	116.90	104.00
34	a	920	U	P-O3'-C3'	8.50	132.95	120.20
56	w	16	U	C3'-C2'-O2'	8.46	127.30	114.60
14	G	109	SER	N-CA-C	-8.33	104.25	114.75
34	a	920	U	OP1-P-O3'	8.31	132.93	108.00
34	a	920	U	OP2-P-O3'	-8.20	83.39	108.00
56	w	45	U	C2'-C3'-O3'	8.18	121.77	109.50
34	a	1081	A	P-O3'-C3'	8.16	132.44	120.20
8	A	2289	G	C1'-C2'-O2'	-7.96	96.45	108.40
31	X	32	LEU	N-CA-C	7.79	123.05	109.96
8	A	2208	C	C2'-C3'-O3'	7.61	125.11	113.70
56	w	19	G	C4'-C3'-O3'	7.47	120.61	109.40
8	A	362	A	C2'-C3'-O3'	-7.45	102.52	113.70
26	S	42	LYS	CA-CB-CG	7.43	128.97	114.10
52	s	28	LYS	CB-CG-CD	-7.29	94.52	111.30
56	w	13	C	C2'-C3'-O3'	7.11	124.36	113.70
13	F	132	ARG	CA-CB-CG	-6.93	100.24	114.10
34	a	921	U	P-O5'-C5'	6.83	131.14	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	2134	A	C5'-C4'-C3'	-6.81	105.78	116.00
10	C	17	LYS	CA-CB-CG	6.74	127.59	114.10
7	6	62	LYS	N-CA-C	-6.72	105.37	113.97
43	j	100	ILE	N-CA-C	6.67	116.32	106.85
2	1	38	PHE	CA-C-O	-6.45	114.78	121.87
8	A	2381	A	C2'-C3'-O3'	6.44	123.36	113.70
51	r	12	PHE	N-CA-C	-6.36	104.72	113.18
56	w	13	C	C4'-C3'-O3'	6.31	122.47	113.00
5	4	12	ARG	N-CA-C	-6.30	104.69	112.38
34	a	921	U	O4'-C1'-N1	6.29	117.93	108.50
26	S	42	LYS	N-CA-CB	-6.25	100.94	110.12
34	a	211	G	P-O5'-C5'	-6.22	111.57	120.90
20	M	97	GLN	CA-CB-CG	-6.21	101.68	114.10
8	A	2208	C	C4'-C3'-O3'	6.16	122.25	113.00
8	A	2159	G	O3'-P-O5'	-6.11	94.84	104.00
8	A	162	U	O3'-P-O5'	6.06	113.09	104.00
56	w	47	U	C5'-C4'-C3'	6.05	124.27	115.20
8	A	2168	G	P-O3'-C3'	-6.00	111.20	120.20
8	A	1972	G	C5'-C4'-C3'	5.98	124.97	116.00
8	A	1972	G	C2'-C3'-O3'	-5.96	104.75	113.70
57	x	370	ARG	N-CA-C	-5.91	103.31	111.28
8	A	469	G	N9-C1'-C2'	-5.88	103.18	112.00
14	G	2	ARG	N-CA-C	-5.84	104.91	111.28
21	N	31	HIS	CA-C-N	5.82	132.66	121.54
21	N	31	HIS	C-N-CA	5.82	132.66	121.54
16	I	15	GLY	N-CA-C	-5.82	105.61	113.24
40	g	144	ALA	N-CA-C	-5.79	102.73	110.55
8	A	2127	G	O5'-C5'-C4'	-5.79	102.82	111.50
14	G	66	THR	N-CA-C	-5.78	104.98	111.28
5	4	8	LYS	N-CA-CB	-5.75	101.68	111.69
34	a	1081	A	N9-C1'-C2'	5.74	120.61	112.00
34	a	158	G	O4'-C1'-N9	-5.73	99.90	108.50
56	w	20	U	C2'-C3'-O3'	5.69	122.24	113.70
8	A	2135	A	O3'-P-O5'	-5.67	95.49	104.00
34	a	921	U	OP1-P-OP2	-5.65	102.65	119.60
26	S	9	HIS	N-CA-C	-5.64	104.13	111.74
46	m	96	VAL	N-CA-C	-5.59	107.36	112.96
26	S	82	MET	N-CA-CB	5.59	120.56	110.83
59	z	3	G	O3'-P-O5'	5.58	112.37	104.00
25	R	60	LYS	CA-CB-CG	-5.58	102.95	114.10
34	a	1082	A	O5'-C5'-C4'	5.53	119.79	111.50
17	J	58	ASN	N-CA-CB	-5.51	103.54	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	O	16	ARG	CG-CD-NE	-5.51	99.87	112.00
8	A	2572	A	O3'-P-O5'	-5.51	95.73	104.00
19	L	104	GLN	N-CA-CB	-5.49	102.16	111.17
26	S	92	ARG	CB-CG-CD	5.49	123.93	111.30
52	s	27	LYS	CA-C-N	-5.48	111.33	122.45
52	s	27	LYS	C-N-CA	-5.48	111.33	122.45
8	A	1178	C	O3'-P-O5'	-5.46	95.80	104.00
34	a	1037	C	O3'-P-O5'	-5.45	95.82	104.00
8	A	1671	U	C5'-C4'-C3'	-5.44	107.83	116.00
34	a	1401	G	C5'-C4'-C3'	-5.44	107.83	116.00
14	G	72	ASN	CA-C-N	5.44	127.57	120.28
14	G	72	ASN	C-N-CA	5.44	127.57	120.28
10	C	268	ARG	CA-CB-CG	-5.43	103.24	114.10
50	q	75	VAL	N-CA-C	-5.42	106.38	111.48
56	w	9	A	C2'-C3'-O3'	5.41	117.62	109.50
57	x	12	ILE	N-CA-CB	-5.39	102.38	112.36
57	x	402	PRO	N-CA-C	-5.39	101.36	112.47
8	A	2215	C	O3'-P-O5'	-5.38	95.92	104.00
34	a	738	C	C5'-C4'-C3'	-5.38	107.92	116.00
4	3	2	LYS	N-CA-CB	5.38	117.94	110.04
34	a	1012	A	O3'-P-O5'	-5.37	95.94	104.00
11	D	155	VAL	N-CA-C	5.37	115.98	108.89
23	P	37	LYS	N-CA-C	-5.36	98.25	108.17
8	A	2755	C	C3'-C2'-O2'	5.36	118.74	110.70
34	a	188	C	N1-C1'-C2'	-5.35	105.98	114.00
19	L	53	GLY	N-CA-C	5.33	125.82	113.18
33	Z	5	LYS	CA-CB-CG	-5.32	103.45	114.10
34	a	1011	C	O3'-P-O5'	-5.32	96.02	104.00
8	A	97	C	O3'-P-O5'	-5.32	96.02	104.00
13	F	139	GLU	N-CA-C	-5.29	106.78	113.18
57	x	645	GLU	N-CA-C	5.29	122.07	110.80
8	A	359	G	O3'-P-O5'	-5.28	96.07	104.00
57	x	578	HIS	N-CA-CB	-5.28	102.41	110.07
8	A	2178	C	N1-C1'-C2'	5.28	119.92	112.00
33	Z	47	ILE	N-CA-CB	-5.28	102.66	110.58
8	A	752	A	O4'-C1'-N9	5.28	116.11	108.20
52	s	17	LYS	CB-CG-CD	5.27	123.42	111.30
8	A	1577	C	C5'-C4'-C3'	-5.27	108.09	116.00
8	A	1524	G	O3'-P-O5'	-5.26	96.11	104.00
34	a	1081	A	C4-N9-C1'	5.25	142.06	126.30
10	C	216	ARG	CG-CD-NE	5.24	123.52	112.00
34	a	1457	G	O3'-P-O5'	-5.23	96.15	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	159	G	C4'-C3'-O3'	-5.23	105.16	113.00
12	E	49	ARG	N-CA-C	-5.22	106.74	113.01
8	A	126	A	O3'-P-O5'	-5.22	96.17	104.00
8	A	1226	A	C5'-C4'-C3'	-5.20	108.20	116.00
8	A	2251	OMG	O3'-P-O5'	-5.20	96.21	104.00
18	K	93	GLN	CB-CA-C	5.19	116.89	109.26
57	x	187	MET	N-CA-C	-5.17	106.55	112.86
34	a	798	U	C5'-C4'-C3'	-5.16	108.25	116.00
34	a	1081	A	C8-N9-C1'	-5.16	112.21	127.70
34	a	1107	C	O3'-P-O5'	-5.16	96.26	104.00
33	Z	26	LEU	N-CA-CB	-5.15	101.57	110.32
8	A	2225	A	O3'-P-O5'	-5.14	96.28	104.00
57	x	102	MET	N-CA-C	-5.14	106.96	113.43
20	M	46	ILE	N-CA-CB	-5.13	104.00	110.57
8	A	93	G	O3'-P-O5'	-5.13	96.31	104.00
34	a	1082	A	OP1-P-OP2	-5.12	104.23	119.60
8	A	614	A	P-O5'-C5'	-5.10	113.25	120.90
8	A	449	A	O3'-P-O5'	-5.10	96.36	104.00
56	w	16	U	C5'-C4'-C3'	5.09	122.83	115.20
24	Q	10	ARG	CB-CG-CD	5.08	123.00	111.30
8	A	780	G	O5'-C5'-C4'	-5.08	103.88	111.50
4	3	9	ALA	N-CA-C	-5.08	106.93	113.23
2	1	37	LYS	CA-C-O	-5.07	116.11	121.94
8	A	2749	A	C2'-C3'-O3'	-5.06	106.11	113.70
38	e	120	HIS	N-CA-CB	-5.06	103.63	110.67
19	L	19	LEU	N-CA-C	5.06	117.22	109.07
8	A	2210	U	C4'-C3'-O3'	5.05	116.97	109.40
8	A	1923	U	C5'-C4'-C3'	-5.04	108.45	116.00
8	A	2114	A	P-O3'-C3'	-5.04	112.65	120.20
8	A	2755	C	C2'-C3'-O3'	5.03	121.25	113.70
10	C	175	LEU	CA-CB-CG	5.03	133.92	116.30
8	A	1090	A	P-O3'-C3'	5.03	127.75	120.20
4	3	7	ARG	CB-CG-CD	5.02	122.85	111.30
36	c	168	ARG	CA-CB-CG	-5.01	104.08	114.10
34	a	957	U	C5'-C4'-C3'	-5.00	108.50	116.00

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	3	30	HIS	Peptide
25	R	51	VAL	Peptide

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Mol	Chain	Res	Type	Group
28	U	97	SER	Peptide
32	Y	19	LEU	Peptide
35	b	87	ASP	Peptide
37	d	34	GLU	Peptide
37	d	71	PHE	Peptide
37	d	79	ALA	Peptide
54	u	12	ASP	Peptide
57	x	646	SER	Peptide

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	0	444	0	461	90	0
2	1	409	0	440	89	0
3	2	377	0	418	93	0
4	3	504	0	574	86	0
5	4	302	0	341	71	0
6	5	647	0	336	49	0
7	6	522	0	521	128	0
8	A	62338	0	31367	10600	0
9	B	2570	0	1301	492	0
10	C	2082	0	2157	391	0
11	D	1565	0	1616	278	0
12	E	1552	0	1619	218	0
13	F	1410	0	1447	286	0
14	G	1323	0	1374	202	0
15	H	1111	0	1148	184	0
16	I	693	0	347	51	0
17	J	1129	0	1162	197	0
18	K	938	0	1012	149	0
19	L	1045	0	1117	208	0
20	M	1074	0	1157	185	0
21	N	960	0	1000	185	0
22	O	892	0	923	147	0
23	P	917	0	965	158	0
24	Q	947	0	1022	162	0
25	R	816	0	839	140	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
26	S	857	0	922	151	0
27	T	738	0	807	119	0
28	U	779	0	834	177	0
29	V	753	0	780	149	0
30	W	575	0	592	103	0
31	X	625	0	655	96	0
32	Y	509	0	543	80	0
33	Z	449	0	491	74	0
34	a	33050	0	16651	5697	0
35	b	1704	0	1732	238	0
36	c	1624	0	1699	280	0
37	d	1643	0	1710	309	0
38	e	1141	0	1170	209	0
39	f	817	0	808	132	0
40	g	1181	0	1240	189	0
41	h	979	0	1034	161	0
42	i	1022	0	1070	169	0
43	j	786	0	828	161	0
44	k	869	0	878	116	0
45	l	955	0	1019	164	0
46	m	883	0	944	156	0
47	n	799	0	841	151	0
48	o	714	0	737	108	0
49	p	649	0	666	100	0
50	q	648	0	691	128	0
51	r	535	0	552	74	0
52	s	658	0	685	127	0
53	t	665	0	714	112	0
54	u	506	0	502	63	0
55	v	1642	0	839	202	0
56	w	1631	0	837	153	0
57	x	5192	0	5187	883	0
58	y	21	0	19	5	0
59	z	208	0	104	19	0
60	6	1	0	0	0	0
61	a	37	0	41	4	0
62	x	28	0	11	13	0
All	All	152440	0	103497	23374	0

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 95.

All (23374) 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)
5:4:11:CYS:SG	5:4:27:CYS:SG	1.34	1.33
56:w:5:G:N2	56:w:68:C:O2	1.70	1.24
34:a:246:A:C8	34:a:281:G:N2	2.09	1.21
8:A:529:A:N6	8:A:2041:U:O2	1.78	1.17
8:A:1915:3TD:O4'	8:A:1915:3TD:C1'	1.67	1.17
8:A:1299:G:N2	8:A:1641:A:N7	1.91	1.16
8:A:373:U:O2	8:A:401:A:N6	1.77	1.16
8:A:2125:G:O2'	8:A:2173:A:N6	1.78	1.16
8:A:1299:G:N3	8:A:1641:A:N6	1.92	1.15
8:A:2788:C:O2'	8:A:2809:A:N3	1.81	1.13
34:a:152:A:N7	34:a:170:U:N3	1.93	1.13
8:A:446:G:N2	8:A:454:A:N1	1.95	1.13
34:a:1259:C:O2'	34:a:1283:U:O2	1.67	1.13
57:x:14:ILE:O	57:x:88:THR:OG1	1.65	1.13
21:N:2:ARG:NH2	21:N:5:LYS:O	1.80	1.13
8:A:1778:U:O2	8:A:1785:A:N6	1.81	1.12
8:A:1869:G:N2	8:A:1872:A:N7	1.98	1.12
34:a:122:G:O6	34:a:239:U:C2	2.03	1.12
8:A:1858:A:N6	8:A:1884:G:O2'	1.83	1.12
9:B:37:C:N3	9:B:48:U:O2'	1.83	1.12
34:a:37:U:OP1	45:l:119:LYS:NZ	1.83	1.12
8:A:51:G:N2	8:A:118:A:N7	1.97	1.11
8:A:340:A:O2'	12:E:162:ARG:NH1	1.82	1.11
34:a:151:A:N6	34:a:170:U:C2	2.19	1.11
34:a:188:C:O2'	34:a:189:A:O4'	1.63	1.11
8:A:2646:C:OP2	8:A:2732:G:O2'	1.68	1.11
9:B:31:C:O2	9:B:53:A:N6	1.83	1.11
24:Q:25:GLY:O	24:Q:29:ARG:NH1	1.83	1.11
34:a:151:A:N7	34:a:170:U:C4	2.18	1.11
34:a:582:C:O2	34:a:759:A:N6	1.83	1.11
34:a:246:A:N7	34:a:281:G:C2	2.18	1.10
34:a:1309:G:OP2	46:m:97:ARG:NE	1.83	1.10
43:j:16:ARG:O	43:j:20:GLN:NE2	1.84	1.10
34:a:836:G:O6	34:a:850:U:O2	1.69	1.09
8:A:83:A:O2'	8:A:103:A:N6	1.85	1.09
10:C:250:GLN:NE2	10:C:251:THR:O	1.83	1.09
34:a:126:G:OP1	34:a:605:U:O2'	1.69	1.09
34:a:520:A:N6	34:a:529:G:N3	2.01	1.09
9:B:36:C:N4	9:B:49:C:O2	1.86	1.08
17:J:109:LEU:O	17:J:111:LYS:NZ	1.85	1.08
34:a:1:A:N6	34:a:614:C:O2'	1.85	1.08
8:A:306:U:O2	8:A:310:A:N6	1.87	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2723:C:OP1	11:D:114:LYS:NZ	1.87	1.08
34:a:836:G:O6	34:a:850:U:C2	2.06	1.08
57:x:195:ALA:O	57:x:271:ASN:ND2	1.86	1.08
8:A:1858:A:N6	8:A:1884:G:HO2'	1.49	1.07
8:A:1799:G:OP2	10:C:269:ARG:NH2	1.85	1.07
34:a:119:A:C6	34:a:287:U:O2	2.07	1.07
34:a:1418:A:N6	34:a:1482:G:O2'	1.88	1.07
34:a:979:C:OP1	34:a:1223:C:N4	1.87	1.07
34:a:1160:G:N7	34:a:1182:G:N2	2.02	1.07
8:A:1069:A:OP1	8:A:1075:C:N4	1.87	1.07
34:a:343:U:O2'	34:a:346:G:O6	1.73	1.07
8:A:1204:A:N6	8:A:1241:A:N7	2.02	1.06
8:A:2114:A:O4'	8:A:2167:U:O2'	1.73	1.06
34:a:246:A:N1	34:a:278:G:O2'	1.86	1.06
34:a:464:U:C2	34:a:466:A:N7	2.23	1.06
8:A:1717:A:N6	8:A:1743:G:O2'	1.88	1.06
34:a:464:U:O2	34:a:466:A:N7	1.89	1.06
8:A:617:G:OP1	12:E:102:ARG:NH2	1.87	1.06
8:A:995:C:O2	24:Q:92:LYS:NZ	1.88	1.06
8:A:223:A:O2'	8:A:420:C:O2	1.74	1.06
8:A:865:C:N3	8:A:909:A:N6	2.03	1.06
6:5:54:VAL:O	8:A:1084:A:N6	1.89	1.05
8:A:2821:A:OP2	21:N:3:HIS:NE2	1.89	1.05
23:P:50:ARG:NH1	23:P:55:HIS:O	1.88	1.05
34:a:145:G:N3	34:a:178:C:N4	2.05	1.05
8:A:2139:U:O2	8:A:2152:G:C2	2.09	1.05
14:G:15:ASP:O	14:G:17:LYS:NZ	1.88	1.05
13:F:27:VAL:O	13:F:29:ARG:NH1	1.90	1.05
22:O:50:ALA:O	22:O:81:ARG:NH2	1.90	1.05
34:a:411:A:N6	34:a:430:A:N7	2.04	1.05
34:a:920:U:H3'	34:a:1082:A:P	1.96	1.05
39:f:38:ARG:NH2	39:f:99:ALA:O	1.90	1.05
41:h:26:MET:O	41:h:58:LEU:N	1.88	1.05
8:A:2667:C:N3	14:G:109:SER:OG	1.89	1.05
13:F:109:ARG:NH1	13:F:135:ILE:O	1.90	1.05
8:A:2314:A:H1'	13:F:154:THR:HG21	1.39	1.04
8:A:52:A:N7	8:A:119:A:N6	2.05	1.04
8:A:481:G:O2'	8:A:506:G:N2	1.90	1.04
8:A:1078:U:O2'	8:A:1080:A:N7	1.88	1.04
10:C:67:LYS:NZ	10:C:148:GLY:O	1.88	1.04
36:c:134:LYS:NZ	36:c:169:GLU:OE1	1.90	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1857:G:O2'	8:A:1885:A:N6	1.89	1.04
2:1:25:ASN:ND2	8:A:2285:C:OP1	1.90	1.04
8:A:2099:U:O2	8:A:2190:G:N1	1.91	1.04
34:a:2:A:N3	34:a:613:C:O2'	1.91	1.04
8:A:1359:A:N6	8:A:1372:U:O2	1.90	1.03
8:A:1565:C:O2'	8:A:1567:G:N7	1.90	1.03
34:a:1403:C:O2'	34:a:1499:A:N1	1.89	1.03
8:A:1354:A:N7	8:A:1377:G:N2	2.07	1.03
13:F:120:SER:OG	13:F:128:SER:O	1.74	1.03
34:a:176:C:O3'	53:t:23:ARG:NH2	1.90	1.03
34:a:1404:C:O2'	34:a:1519:MA6:O3'	1.75	1.03
8:A:2849:U:O2'	8:A:2866:U:O2	1.77	1.03
34:a:640:A:O2'	41:h:107:LYS:NZ	1.89	1.03
34:a:1176:A:N6	34:a:1181:G:N7	2.07	1.03
8:A:2106:U:O4	8:A:2184:A:N6	1.92	1.03
34:a:140:U:O2'	34:a:183:C:N4	1.90	1.03
46:m:80:MET:O	46:m:91:ARG:NH2	1.91	1.03
8:A:1266:G:O2'	8:A:2012:G:O6	1.78	1.02
17:J:13:ARG:NH1	17:J:49:ASP:O	1.92	1.02
34:a:152:A:C6	34:a:170:U:O2	2.11	1.02
34:a:211:G:N1	34:a:213:G:OP2	1.92	1.02
8:A:388:G:O6	8:A:390:U:O2'	1.77	1.02
8:A:1688:U:O2'	8:A:1700:A:N7	1.91	1.02
8:A:2061:G:OP2	12:E:63:LYS:NZ	1.93	1.02
8:A:2146:C:O2'	8:A:2147:A:N7	1.92	1.02
34:a:94:G:N2	34:a:97:G:N7	2.07	1.02
34:a:109:A:N7	34:a:324:G:N2	2.06	1.02
57:x:235:LYS:NZ	57:x:241:GLU:O	1.91	1.02
10:C:164:VAL:HG21	10:C:180:MET:HE1	1.39	1.02
34:a:605:U:O2	34:a:633:G:N1	1.93	1.02
8:A:811:U:H2'	19:L:21:ARG:HA	1.41	1.02
42:i:122:ARG:NH1	42:i:123:ARG:O	1.93	1.02
8:A:371:A:N6	8:A:402:A:N7	2.08	1.01
8:A:1287:A:O4'	21:N:103:ARG:NH1	1.91	1.01
10:C:268:ARG:NH1	10:C:269:ARG:O	1.92	1.01
34:a:149:A:N1	34:a:172:A:N6	2.08	1.01
34:a:438:U:C2	34:a:496:A:N6	2.28	1.01
34:a:1375:A:OP1	40:g:24:LYS:NZ	1.91	1.01
8:A:2139:U:C2	8:A:2152:G:N1	2.28	1.01
8:A:2405:G:O2'	8:A:2411:A:N6	1.93	1.01
57:x:557:GLN:O	57:x:561:LYS:NZ	1.92	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2683:C:OP1	23:P:50:ARG:NH2	1.92	1.01
9:B:31:C:O2'	9:B:53:A:N1	1.93	1.01
34:a:959:A:O2'	34:a:984:C:O2'	1.76	1.01
34:a:1317:C:N3	47:n:53:ARG:NH1	2.09	1.01
1:0:3:GLN:NE2	8:A:2016:U:O2	1.94	1.01
8:A:1475:G:HO2'	8:A:1476:U:H6	1.01	1.01
8:A:2295:C:OP1	22:O:10:ARG:NH1	1.94	1.01
34:a:438:U:C2	34:a:496:A:C6	2.48	1.01
34:a:438:U:O2	34:a:496:A:C6	2.14	1.01
33:Z:2:LYS:NZ	33:Z:39:ASP:O	1.94	1.00
34:a:104:G:OP1	53:t:15:LYS:NZ	1.94	1.00
34:a:1305:G:N2	34:a:1332:A:OP2	1.94	1.00
56:w:6:G:N2	56:w:67:C:O2	1.93	1.00
8:A:484:C:OP2	28:U:46:LYS:NZ	1.94	1.00
8:A:813:U:O3'	25:R:86:GLN:NE2	1.94	1.00
8:A:2133:G:N7	8:A:2155:U:O2'	1.94	1.00
8:A:2375:G:N2	8:A:2378:A:N7	2.08	1.00
10:C:132:ARG:NE	10:C:186:ASP:OD1	1.94	1.00
34:a:119:A:C5	34:a:287:U:O2	2.14	1.00
34:a:264:C:O2'	50:q:65:PRO:O	1.78	1.00
50:q:59:GLU:OE2	50:q:76:ARG:NH1	1.94	1.00
57:x:633:ASP:OD1	57:x:636:ARG:NH2	1.95	1.00
34:a:373:A:N1	34:a:391:G:O2'	1.93	0.99
57:x:621:GLU:OE1	57:x:652:LYS:NZ	1.93	0.99
9:B:11:C:O2	9:B:109:A:N6	1.95	0.99
34:a:996:A:N6	34:a:1045:C:O2	1.93	0.99
10:C:87:SER:O	10:C:196:ASN:ND2	1.93	0.99
10:C:106:PRO:HD2	10:C:109:LEU:HD22	1.44	0.99
34:a:152:A:C6	34:a:170:U:C2	2.50	0.99
8:A:228:C:N4	8:A:417:C:O2	1.93	0.99
8:A:371:A:N7	8:A:402:A:N6	2.11	0.99
8:A:1651:G:OP1	21:N:40:LYS:NZ	1.95	0.99
34:a:1160:G:C6	34:a:1176:A:N6	2.31	0.99
34:a:921:U:O5'	34:a:1082:A:O5'	1.79	0.99
22:O:64:TYR:O	22:O:67:ASN:ND2	1.96	0.99
34:a:249:U:N3	34:a:275:G:O6	1.95	0.99
34:a:1432:G:N2	34:a:1468:A:OP2	1.95	0.99
56:w:52:G:N2	56:w:62:C:O2	1.94	0.99
8:A:1721:G:O2'	8:A:1739:A:N6	1.96	0.99
8:A:1818:U:O2'	10:C:152:GLN:O	1.78	0.99
19:L:79:LEU:N	19:L:113:ALA:O	1.96	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1716:U:N3	8:A:1744:A:N7	2.10	0.99
9:B:66:A:O5'	9:B:108:A:N6	1.95	0.99
23:P:53:GLY:O	23:P:76:HIS:NE2	1.96	0.99
8:A:989:G:OP2	33:Z:11:SER:OG	1.81	0.99
8:A:2165:C:N4	8:A:2171:A:N7	2.11	0.99
34:a:1432:G:O2'	34:a:1468:A:N6	1.95	0.98
8:A:831:G:O2'	19:L:38:GLN:OE1	1.81	0.98
8:A:441:U:O2'	12:E:41:GLN:OE1	1.81	0.98
8:A:1385:A:O2'	8:A:1396:U:O2	1.80	0.98
8:A:1918:A:O2'	8:A:1919:A:N7	1.97	0.98
34:a:152:A:C5	34:a:170:U:N3	2.30	0.98
34:a:992:U:O2'	34:a:1043:G:N7	1.95	0.98
57:x:544:ILE:O	57:x:546:GLY:N	1.96	0.98
8:A:1496:A:O2'	8:A:1577:C:O2'	1.79	0.98
8:A:1210:G:O4'	8:A:1237:A:N6	1.97	0.98
8:A:328:U:N3	8:A:332:A:N7	2.10	0.98
8:A:1071:G:N3	8:A:1089:A:N6	2.11	0.98
34:a:122:G:O6	34:a:239:U:O2	1.81	0.98
8:A:1807:G:N2	8:A:1810:A:N7	2.10	0.98
8:A:2142:A:C2	8:A:2149:U:C2	2.52	0.98
8:A:2768:U:O2'	17:J:95:ARG:NH1	1.96	0.98
34:a:1157:A:N1	34:a:1178:G:N2	2.10	0.98
7:6:25:ARG:O	13:F:101:ARG:NH2	1.96	0.98
8:A:1825:U:O2	10:C:252:LYS:NZ	1.97	0.98
8:A:67:U:N3	8:A:74:A:N7	2.13	0.97
26:S:82:MET:SD	26:S:84:ARG:NH1	2.37	0.97
56:w:5:G:N1	56:w:68:C:N3	2.10	0.97
34:a:119:A:N6	34:a:287:U:O2	1.96	0.97
46:m:78:ARG:NE	52:s:64:GLU:OE1	1.96	0.97
8:A:1428:C:O2'	8:A:1569:A:OP2	1.81	0.97
8:A:2590:A:O3'	10:C:237:ARG:NH1	1.96	0.97
34:a:1219:A:HO2'	52:s:33:TRP:CD1	1.82	0.97
8:A:1223:G:OP1	25:R:68:ARG:NH2	1.98	0.97
34:a:187:G:N2	34:a:190:A:N7	2.12	0.97
34:a:673:A:O3'	39:f:86:ARG:NH2	1.97	0.97
8:A:1426:G:O2'	8:A:1572:A:N6	1.96	0.97
8:A:2352:A:N7	8:A:2365:G:N2	2.11	0.97
34:a:1213:A:O2'	34:a:1215:G:N7	1.97	0.97
34:a:119:A:N7	34:a:287:U:C2	2.32	0.97
8:A:476:G:N1	8:A:479:A:OP2	1.97	0.97
8:A:2639:A:N7	8:A:2775:G:N2	2.12	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:867:C:N4	8:A:912:C:O2	1.98	0.97
8:A:1059:G:N7	8:A:1088:A:N6	2.13	0.97
34:a:920:U:O2	34:a:1081:A:O2'	1.80	0.97
34:a:1458:G:OP1	53:t:29:THR:OG1	1.82	0.97
57:x:297:ILE:N	57:x:404:ILE:O	1.97	0.97
34:a:675:A:O2'	44:k:115:ILE:O	1.82	0.97
4:3:29:ARG:NH1	8:A:2394:C:OP1	1.96	0.97
8:A:999:U:O2	8:A:1155:A:N6	1.97	0.97
34:a:246:A:N7	34:a:281:G:N2	2.12	0.97
34:a:1147:C:O2	42:i:17:ARG:NH1	1.98	0.96
8:A:1847:G:HO2'	8:A:1848:A:H8	1.03	0.96
34:a:244:U:O4	34:a:893:C:N3	1.97	0.96
8:A:58:G:O2'	8:A:73:A:N1	1.97	0.96
34:a:1379:G:N2	34:a:1381:U:O4	1.99	0.96
8:A:1058:U:N3	8:A:1060:U:O4	1.99	0.96
34:a:563:A:O2'	34:a:566:G:O3'	1.84	0.96
34:a:1074:G:O2'	34:a:1101:A:N1	1.98	0.96
8:A:607:U:O2	8:A:621:A:N6	1.99	0.96
8:A:2458:G:O2'	8:A:2490:G:N1	1.98	0.96
34:a:1262:C:N4	34:a:1273:C:O2	1.98	0.96
8:A:601:C:O2'	12:E:99:LYS:NZ	1.98	0.96
8:A:1047:G:N2	8:A:1110:G:O2'	1.98	0.96
36:c:122:GLN:OE1	36:c:125:ARG:NH2	1.99	0.96
8:A:627:A:OP1	19:L:78:ARG:NH1	1.98	0.96
34:a:935:A:N3	34:a:1383:C:N4	2.13	0.96
34:a:1320:C:N3	52:s:35:ARG:NH1	2.14	0.96
34:a:420:U:O2'	34:a:423:G:O6	1.84	0.96
8:A:729:G:O4'	10:C:206:LYS:NZ	1.99	0.95
34:a:1:A:N6	34:a:614:C:HO2'	1.62	0.95
34:a:151:A:C6	34:a:170:U:C2	2.52	0.95
8:A:714:U:O2'	8:A:716:A:N7	2.00	0.95
8:A:1664:A:N3	18:K:67:LYS:NZ	2.14	0.95
12:E:22:ASP:O	12:E:107:SER:OG	1.82	0.95
34:a:527:G7M:O2'	34:a:535:A:N1	1.99	0.95
8:A:1217:U:O2	8:A:1232:G:N2	1.99	0.95
8:A:1378:A:O2'	8:A:1379:U:OP2	1.84	0.95
27:T:65:GLY:O	27:T:76:ARG:NH2	1.98	0.95
49:p:18:GLN:OE1	49:p:35:ARG:NE	2.00	0.95
57:x:551:ALA:O	57:x:593:LYS:NZ	1.98	0.95
8:A:538:A:N7	8:A:555:G:N2	2.14	0.95
8:A:2092:U:O4	8:A:2228:G:N1	2.00	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2562:U:O2	8:A:2566:A:N6	1.98	0.95
34:a:448:A:N7	34:a:486:U:N3	2.14	0.95
34:a:1060:U:OP2	36:c:1:GLY:N	1.98	0.95
57:x:692:ASN:OD1	57:x:695:GLN:NE2	1.99	0.95
8:A:643:A:N1	8:A:2369:A:O2'	2.00	0.95
24:Q:99:VAL:O	24:Q:102:LYS:NZ	1.99	0.95
34:a:461:A:N7	34:a:470:C:N4	2.14	0.95
34:a:991:U:O2	34:a:1213:A:N7	1.99	0.95
34:a:1166:G:N1	34:a:1169:A:OP1	2.00	0.95
36:c:113:LYS:NZ	36:c:185:THR:O	1.99	0.95
55:v:8:4SU:O2'	55:v:21:A:N1	2.00	0.95
8:A:1022:G:N2	8:A:1023:U:O4	2.00	0.95
34:a:362:G:O3'	45:l:29:LYS:NZ	2.00	0.95
34:a:957:U:OP1	52:s:80:ARG:NH1	1.99	0.95
8:A:1179:G:N2	8:A:1180:U:O4'	1.99	0.94
34:a:1374:A:OP1	40:g:35:LYS:NZ	2.00	0.94
8:A:465:G:N2	8:A:683:U:O2	2.00	0.94
34:a:1055:A:O2'	36:c:160:GLU:O	1.85	0.94
34:a:1157:A:N6	34:a:1178:G:N3	2.15	0.94
8:A:2561:U:O3'	18:K:40:LYS:NZ	1.99	0.94
34:a:673:A:H2'	34:a:674:G:C8	2.02	0.94
8:A:537:G:O2'	8:A:556:A:N6	1.99	0.94
15:H:8:LYS:NZ	15:H:60:GLU:OE1	2.00	0.94
34:a:1073:U:O2	35:b:102:ASN:ND2	1.98	0.94
34:a:1313:U:O4	52:s:1:PRO:N	2.00	0.94
19:L:80:SER:N	19:L:114:GLY:O	2.01	0.94
56:w:20:U:H2'	56:w:21:A:H5'	1.50	0.94
34:a:438:U:N3	34:a:496:A:N7	2.14	0.94
8:A:776:G:N7	8:A:793:A:O2'	2.01	0.94
8:A:1942:C:OP2	8:A:1943:U:O2'	1.86	0.94
40:g:39:GLU:OE2	42:i:40:ARG:NH1	2.01	0.94
8:A:1003:G:O2'	8:A:1010:A:N1	2.01	0.94
8:A:1323:C:OP1	26:S:98:LYS:NZ	2.00	0.94
8:A:1936:A:O2'	8:A:1945:G:N7	1.99	0.94
8:A:2294:G:OP1	22:O:94:ARG:NH1	1.99	0.94
8:A:2469:A:N6	8:A:2481:G:O2'	2.00	0.94
8:A:2684:U:O4'	18:K:70:ARG:NH1	1.99	0.94
8:A:2835:A:N1	8:A:2880:C:N4	2.15	0.94
9:B:37:C:N4	9:B:48:U:O2	2.01	0.94
34:a:950:U:O5'	46:m:100:ARG:NH1	2.00	0.94
34:a:1380:U:O2	34:a:1382:C:N4	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:e:135:VAL:O	38:e:139:THR:HG23	1.66	0.94
45:l:2:THR:O	45:l:5:GLN:N	1.99	0.94
8:A:819:A:OP2	8:A:1187:G:N2	2.00	0.94
8:A:1187:G:OP1	25:R:85:LYS:NZ	2.00	0.94
34:a:544:G:OP1	37:d:55:ARG:NH2	2.01	0.93
8:A:482:A:O2'	8:A:497:A:N1	2.00	0.93
9:B:80:U:O4	29:V:14:LYS:NZ	2.01	0.93
34:a:162:A:N7	34:a:343:U:O2'	2.01	0.93
55:v:8:4SU:N3	55:v:14:A:N7	2.16	0.93
34:a:1033:G:N7	34:a:1037:C:N4	2.14	0.93
8:A:2683:C:O2	18:K:70:ARG:NH2	2.02	0.93
8:A:2849:U:N3	8:A:2867:G:O4'	2.01	0.93
34:a:1156:G:N2	34:a:1179:A:N1	2.16	0.93
56:w:5:G:N2	56:w:68:C:C2	2.35	0.93
8:A:2177:C:H2'	8:A:2178:C:O4'	1.68	0.93
40:g:23:ALA:O	40:g:27:ASN:ND2	2.00	0.93
11:D:124:ARG:NH1	11:D:161:MET:O	2.01	0.93
34:a:582:C:C2	34:a:759:A:N6	2.33	0.93
8:A:1125:G:OP2	8:A:1126:A:O2'	1.85	0.93
34:a:1301:U:OP2	34:a:1303:C:N4	2.01	0.93
1:0:49:ARG:NH1	8:A:2884:U:O4'	2.02	0.93
8:A:2100:G:N1	8:A:2189:U:C2	2.36	0.92
8:A:2144:G:O2'	8:A:2147:A:N6	2.02	0.92
21:N:59:SER:OG	21:N:62:ASN:OD1	1.87	0.92
8:A:858:G:N1	8:A:919:U:O4	2.00	0.92
8:A:1139:G:O2'	8:A:1143:A:N1	2.01	0.92
8:A:2308:G:O6	8:A:2311:A:N6	2.02	0.92
34:a:921:U:O2'	38:e:22:LYS:NZ	2.02	0.92
29:V:1:MET:N	29:V:59:GLU:OE1	2.02	0.92
34:a:9:G:OP2	38:e:125:LYS:NZ	2.00	0.92
4:3:2:LYS:NZ	8:A:241:A:O3'	2.01	0.92
8:A:290:U:O2	8:A:350:G:N1	2.03	0.92
8:A:457:A:N7	8:A:471:A:N6	2.16	0.92
8:A:2250:G:OP1	8:A:2275:C:O2'	1.88	0.92
34:a:131:A:O2'	34:a:262:A:N3	2.01	0.92
34:a:1260:G:N2	34:a:1275:A:N7	2.18	0.92
8:A:981:A:OP2	8:A:982:C:N4	2.02	0.92
8:A:457:A:N6	8:A:471:A:N7	2.17	0.92
8:A:2320:U:O2'	8:A:2322:A:N7	2.02	0.92
8:A:2627:G:O2'	8:A:2781:A:N1	2.01	0.92
34:a:996:A:N1	34:a:1045:C:O2'	2.01	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1376:U:O3'	40:g:94:ARG:NH1	2.01	0.92
54:u:30:GLU:OE1	54:u:33:ARG:NH2	2.02	0.92
8:A:242:G:N2	8:A:255:A:OP2	2.02	0.92
8:A:1283:G:N2	8:A:1286:A:O5'	2.02	0.92
8:A:2139:U:O2	8:A:2152:G:N2	2.01	0.92
8:A:2143:C:N3	8:A:2148:G:O2'	2.02	0.92
10:C:132:ARG:NH1	10:C:184:GLU:OE2	2.03	0.92
34:a:1160:G:N1	34:a:1176:A:C6	2.38	0.92
8:A:495:G:N3	26:S:61:ASN:ND2	2.17	0.92
8:A:545:U:O2	8:A:548:G:O6	1.88	0.92
8:A:1170:C:N3	8:A:1178:C:N4	2.18	0.92
8:A:1288:G:OP1	8:A:1289:C:N4	2.01	0.92
8:A:2100:G:O6	8:A:2189:U:C4	2.23	0.92
8:A:2450:A:OP1	8:A:2497:A:O2'	1.88	0.92
8:A:818:G:N1	8:A:1188:U:OP2	2.02	0.92
8:A:1713:A:N1	8:A:1745:A:N6	2.16	0.92
8:A:488:G:N2	8:A:492:A:N7	2.18	0.91
34:a:588:G:N7	34:a:753:A:O2'	2.02	0.91
8:A:500:G:N1	8:A:503:A:OP2	2.02	0.91
8:A:1326:U:O2'	8:A:2010:G:O2'	1.72	0.91
8:A:2131:U:O2	8:A:2133:G:N2	2.03	0.91
8:A:2391:G:O2'	8:A:2429:G:N2	2.03	0.91
18:K:108:ARG:NH2	34:a:346:G:OP2	2.03	0.91
8:A:529:A:N7	8:A:2041:U:N3	2.18	0.91
8:A:1012:U:N3	8:A:1143:A:N7	2.19	0.91
8:A:2379:G:O3'	22:O:17:LYS:NZ	2.03	0.91
34:a:1346:A:N7	34:a:1375:A:N6	2.19	0.91
8:A:1206:G:O6	8:A:1240:U:C4	2.22	0.91
8:A:1529:G:N1	8:A:1542:U:O2	2.01	0.91
9:B:75:G:HO2'	29:V:88:HIS:HE2	0.95	0.91
9:B:8:C:O3'	22:O:25:ARG:NH1	2.02	0.91
8:A:573:U:O4	8:A:2029:G:O2'	1.88	0.91
8:A:1527:G:N1	8:A:1544:A:OP2	2.04	0.91
8:A:1941:C:N4	8:A:1965:C:O4'	2.04	0.91
8:A:821:A:N6	8:A:972:A:N3	2.18	0.91
14:G:40:VAL:O	14:G:54:ARG:NH2	2.03	0.91
34:a:151:A:C5	34:a:170:U:C4	2.58	0.91
34:a:151:A:C5	34:a:170:U:N3	2.38	0.91
34:a:1056:U:N3	34:a:1205:U:O2	2.03	0.91
8:A:404:A:N1	8:A:421:C:O2'	2.01	0.91
26:S:77:ASP:O	26:S:102:HIS:N	2.02	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:451:A:H61	34:a:481:G:H5'	1.35	0.91
8:A:307:G:N1	8:A:310:A:OP2	2.04	0.90
8:A:851:C:O2'	33:Z:42:ALA:O	1.88	0.90
34:a:164:G:O2'	34:a:165:G:O4'	1.87	0.90
49:p:5:ARG:NH2	49:p:23:ASP:O	2.03	0.90
15:H:46:PHE:O	15:H:51:ARG:NH2	2.02	0.90
8:A:883:G:N2	8:A:894:U:OP1	2.04	0.90
8:A:2092:U:OP2	15:H:27:ARG:NE	2.04	0.90
34:a:119:A:N7	34:a:287:U:N3	2.19	0.90
3:2:22:MET:O	3:2:28:ARG:NH1	2.04	0.90
8:A:482:A:OP2	8:A:507:A:N6	2.03	0.90
8:A:345:A:N3	8:A:346:A:N6	2.20	0.90
8:A:658:U:O3'	12:E:95:LYS:NZ	2.04	0.90
8:A:1028:A:N3	8:A:2486:C:O2'	2.04	0.90
34:a:254:G:O2'	50:q:16:MET:O	1.87	0.90
34:a:1200:C:O2'	34:a:1201:A:OP2	1.90	0.90
44:k:22:ILE:HD12	44:k:85:VAL:HG22	1.50	0.90
8:A:1218:G:OP2	24:Q:14:LYS:NZ	2.05	0.90
8:A:458:G:HO2'	8:A:469:G:H1	1.10	0.90
34:a:1345:U:OP1	42:i:121:ARG:NH1	2.05	0.90
8:A:555:G:O2'	8:A:556:A:O5'	1.90	0.90
8:A:833:A:O2'	19:L:51:GLU:OE2	1.88	0.90
8:A:2006:C:O2'	8:A:2823:A:N3	2.05	0.90
8:A:2839:G:O2'	21:N:49:GLU:OE1	1.90	0.90
8:A:547:A:O2'	8:A:548:G:N7	2.04	0.90
8:A:837:C:N3	8:A:941:A:N6	2.19	0.90
8:A:2850:A:N7	8:A:2868:A:O2'	2.05	0.90
34:a:166:U:O4	34:a:167:A:N6	2.05	0.90
8:A:453:A:N3	8:A:457:A:O2'	2.04	0.89
8:A:2142:A:N1	8:A:2149:U:N3	2.19	0.89
34:a:37:U:O2'	34:a:547:A:N1	2.04	0.89
34:a:920:U:H2'	34:a:1081:A:O2'	1.72	0.89
34:a:1375:A:N7	40:g:9:ARG:NH2	2.20	0.89
8:A:1061:U:O2'	8:A:1070:A:O4'	1.89	0.89
8:A:1217:U:O2	8:A:1232:G:C2	2.25	0.89
43:j:27:GLU:O	43:j:31:ARG:NH1	2.05	0.89
8:A:1025:G:N2	8:A:1139:G:O6	2.05	0.89
1:0:39:ARG:NH2	8:A:2885:G:N7	2.19	0.89
8:A:1340:U:OP1	27:T:84:TYR:OH	1.88	0.89
8:A:2121:G:O6	8:A:2178:C:O2'	1.89	0.89
8:A:2521:C:O2'	8:A:2564:A:N3	2.03	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:109:ARG:NE	13:F:136:ILE:O	2.04	0.89
8:A:1800:C:O2	8:A:1817:G:N2	2.05	0.89
8:A:2776:A:O2'	8:A:2782:G:N7	2.05	0.89
8:A:2865:U:OP2	8:A:2866:U:O2'	1.88	0.89
44:k:14:GLN:NE2	44:k:75:GLU:O	2.04	0.89
8:A:72:U:O2	8:A:75:G:N2	2.06	0.89
8:A:400:G:OP2	31:X:56:ARG:NH2	2.05	0.89
8:A:463:G:N2	8:A:466:A:OP2	2.05	0.89
8:A:480:A:OP2	28:U:60:LYS:NZ	2.05	0.89
42:i:29:ILE:N	42:i:32:ARG:O	2.03	0.89
57:x:669:LEU:O	57:x:673:THR:HG22	1.71	0.89
8:A:642:U:O2'	8:A:644:A:N7	2.05	0.89
9:B:12:C:O2'	30:W:70:PRO:O	1.91	0.89
49:p:9:HIS:N	49:p:16:PHE:O	2.06	0.89
8:A:2074:U:O2	8:A:2597:G:N2	2.06	0.89
34:a:889:A:N6	34:a:908:A:N7	2.20	0.89
45:l:29:LYS:O	45:l:80:LEU:HD12	1.73	0.89
8:A:1131:G:O6	8:A:2024:G:O2'	1.90	0.89
11:D:16:THR:O	11:D:19:GLY:N	2.06	0.89
17:J:16:TYR:N	17:J:53:TYR:O	2.05	0.89
17:J:106:LYS:O	17:J:111:LYS:NZ	2.05	0.89
34:a:107:G:N7	53:t:9:ARG:NH1	2.21	0.89
34:a:1279:G:O2'	34:a:1282:C:N4	2.06	0.89
42:i:4:GLN:OE1	42:i:21:LYS:NZ	2.05	0.89
47:n:32:ASP:O	47:n:41:ARG:NH2	2.05	0.89
56:w:31:A:N6	56:w:39:PSU:O2	2.06	0.89
43:j:6:ILE:HD12	43:j:102:LEU:HG	1.54	0.89
23:P:26:GLU:O	23:P:84:SER:OG	1.89	0.88
34:a:363:A:OP2	45:l:30:ARG:NH2	2.06	0.88
34:a:1093:A:N3	34:a:1109:C:O2'	2.05	0.88
34:a:1256:A:O2'	34:a:1278:G:O6	1.91	0.88
8:A:2822:G:OP1	11:D:164:GLN:NE2	2.06	0.88
35:b:33:ALA:HA	35:b:39:ILE:HG22	1.55	0.88
8:A:698:C:O2'	8:A:734:A:N6	2.07	0.88
8:A:2099:U:O2	8:A:2190:G:N2	2.06	0.88
34:a:152:A:N6	34:a:170:U:C2	2.42	0.88
34:a:1233:G:OP1	42:i:118:ARG:NH1	2.07	0.88
8:A:1671:U:O2'	8:A:1673:G:N7	2.05	0.88
34:a:192:A:N3	53:t:54:GLN:NE2	2.21	0.88
34:a:411:A:N1	34:a:430:A:N6	2.22	0.88
34:a:836:G:C6	34:a:850:U:O2	2.26	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1092:A:OP2	40:g:3:ARG:NH1	2.07	0.88
57:x:545:PRO:O	57:x:547:GLU:N	2.05	0.88
8:A:1750:G:O2'	8:A:2860:A:N1	2.06	0.88
14:G:21:GLN:OE1	14:G:54:ARG:NH2	2.05	0.88
14:G:29:ASN:N	14:G:78:VAL:O	2.05	0.88
34:a:1:A:O2'	34:a:2:A:O4'	1.90	0.88
34:a:14:U:N3	34:a:17:U:OP2	2.07	0.88
8:A:820:A:N3	8:A:943:A:O2'	2.06	0.88
13:F:115:GLY:O	13:F:177:ARG:NH2	2.06	0.88
22:O:7:ARG:NH1	22:O:95:SER:O	2.05	0.88
34:a:210:C:H5'	34:a:211:G:H5'	1.56	0.88
8:A:1093:G:O2'	8:A:1095:A:N7	2.05	0.88
34:a:261:U:O2'	34:a:263:A:N7	2.05	0.88
44:k:25:SER:OG	44:k:28:ASN:O	1.90	0.88
55:v:15:G:N2	55:v:48:C:O2	2.07	0.88
56:w:16:U:OP1	56:w:17:C:OP2	1.92	0.88
2:1:43:ARG:NH1	8:A:2370:G:H4'	1.87	0.88
8:A:998:C:OP1	24:Q:83:LYS:NZ	2.07	0.88
14:G:139:VAL:O	14:G:143:VAL:HG23	1.74	0.88
34:a:158:G:N7	34:a:159:G:N2	2.21	0.88
57:x:602:GLU:OE1	57:x:606:LYS:NZ	2.06	0.88
8:A:205:G:N2	8:A:206:U:O4	2.07	0.88
8:A:1141:U:H2'	17:J:65:THR:HG21	1.56	0.88
8:A:1217:U:O2	8:A:1232:G:N1	2.06	0.88
17:J:58:ASN:OD1	17:J:61:LYS:NZ	2.06	0.88
17:J:70:THR:OG1	17:J:71:ASP:OD1	1.91	0.88
22:O:83:LEU:HD11	22:O:114:GLY:HA3	1.54	0.88
34:a:867:G:O2'	34:a:873:A:N1	2.05	0.88
34:a:944:G:N1	34:a:1338:G:OP2	2.07	0.88
37:d:34:GLU:OE1	37:d:35:GLN:NE2	2.07	0.88
8:A:1178:C:O2	8:A:1179:G:N1	2.06	0.87
8:A:2069:G7M:N2	8:A:2442:C:O2	2.06	0.87
8:A:2199:A:N6	8:A:2224:G:O2'	2.06	0.87
8:A:2809:A:OP2	8:A:2890:G:N1	2.06	0.87
33:Z:39:ASP:OD1	33:Z:44:ARG:NH2	2.06	0.87
48:o:20:ASP:OD2	48:o:23:SER:OG	1.92	0.87
8:A:270:A:N6	8:A:369:U:O2'	2.06	0.87
8:A:2681:C:O2	8:A:2725:A:N6	2.07	0.87
9:B:24:G:O2'	9:B:56:G:N7	2.08	0.87
34:a:447:G:O2'	34:a:487:A:N6	2.08	0.87
34:a:674:G:N2	34:a:717:U:O2	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1073:U:O2'	35:b:102:ASN:OD1	1.91	0.87
8:A:138:U:O2'	8:A:141:G:O6	1.93	0.87
8:A:483:A:H5''	28:U:46:LYS:HD2	1.56	0.87
8:A:1568:G:N7	10:C:27:LYS:NZ	2.20	0.87
8:A:2049:G:N2	11:D:161:MET:SD	2.47	0.87
19:L:127:VAL:O	19:L:132:ARG:NH2	2.07	0.87
8:A:7:G:O4'	17:J:135:GLN:NE2	2.07	0.87
8:A:635:C:OP2	19:L:126:ARG:NH1	2.08	0.87
8:A:1059:G:N2	16:I:127:SER:O	2.07	0.87
8:A:1133:A:N6	8:A:2025:C:O2'	2.06	0.87
8:A:1417:C:O2'	8:A:1587:G:O2'	1.82	0.87
8:A:1478:G:N2	8:A:1513:U:O2	2.07	0.87
8:A:1724:G:O6	8:A:1737:G:N2	2.08	0.87
8:A:2267:A:N6	8:A:2272:U:O2	2.07	0.87
9:B:76:G:N3	29:V:78:GLN:NE2	2.22	0.87
34:a:64:G:O6	34:a:101:A:N6	2.06	0.87
34:a:151:A:C8	34:a:170:U:C4	2.63	0.87
8:A:2574:G:O2'	11:D:148:GLN:O	1.93	0.87
34:a:561:U:O2'	45:l:14:LYS:NZ	2.08	0.87
34:a:1151:A:H5''	43:j:44:THR:HG22	1.56	0.87
3:2:24:THR:O	3:2:28:ARG:NE	2.07	0.87
7:6:27:THR:OG1	13:F:58:ALA:O	1.91	0.87
8:A:2512:C:OP2	11:D:128:ARG:NH2	2.07	0.87
30:W:62:LYS:N	30:W:79:GLU:O	2.08	0.87
34:a:1527:U:OP2	54:u:41:THR:OG1	1.91	0.87
36:c:121:SER:OG	36:c:125:ARG:NH2	2.06	0.87
8:A:1006:C:O2'	17:J:108:MET:O	1.92	0.87
8:A:2100:G:N1	8:A:2189:U:N3	2.23	0.87
25:R:69:GLY:O	25:R:90:ARG:NH1	2.08	0.87
47:n:63:ARG:NH1	47:n:68:GLY:O	2.07	0.87
57:x:15:SER:HB2	57:x:125:VAL:HG21	1.56	0.87
2:1:39:ASP:O	2:1:43:ARG:N	2.08	0.87
8:A:1353:A:OP2	8:A:1377:G:N1	2.07	0.87
8:A:2092:U:O4	8:A:2227:A:N6	2.07	0.87
8:A:2123:G:O2'	8:A:2124:G:N7	2.07	0.87
34:a:362:G:O2'	34:a:364:A:N7	2.06	0.87
36:c:190:THR:HG23	36:c:192:TYR:H	1.40	0.87
39:f:49:TYR:OH	51:r:62:ARG:O	1.93	0.87
4:3:13:PHE:O	4:3:14:LYS:NZ	2.07	0.86
8:A:249:C:O2'	19:L:63:LYS:NZ	2.06	0.86
8:A:1652:A:N6	21:N:11:ASN:OD1	2.07	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2438:U:O2	8:A:2440:C:N4	2.06	0.86
57:x:10:ARG:NH2	57:x:282:ILE:O	2.08	0.86
34:a:409:U:O2	34:a:433:G:N1	2.08	0.86
8:A:345:A:O2'	8:A:347:A:N6	2.08	0.86
34:a:192:A:O2'	53:t:54:GLN:OE1	1.93	0.86
34:a:1046:A:N6	34:a:1211:U:O2	2.07	0.86
34:a:1095:U:OP1	34:a:1108:G:N2	2.08	0.86
1:0:18:HIS:NE2	8:A:2045:C:O2	2.09	0.86
8:A:66:C:O4'	8:A:456:C:N4	2.08	0.86
8:A:1193:G:OP1	19:L:14:LYS:NZ	2.09	0.86
8:A:1482:G:O2'	8:A:1509:A:N1	2.07	0.86
13:F:137:PHE:O	13:F:140:ILE:HG22	1.75	0.86
18:K:43:ILE:HD12	18:K:56:ASP:HB2	1.57	0.86
17:J:12:LYS:NZ	17:J:14:ASP:OD1	2.09	0.86
34:a:654:G:O6	34:a:752:G:N2	2.07	0.86
45:l:3:VAL:O	45:l:7:VAL:HG23	1.76	0.86
52:s:35:ARG:O	52:s:71:GLY:N	2.09	0.86
1:0:15:ARG:NH1	8:A:1266:G:OP2	2.09	0.86
3:2:19:ARG:NE	8:A:125:A:OP2	2.08	0.86
8:A:1668:A:O2'	8:A:1674:G:N7	2.06	0.86
27:T:63:VAL:N	27:T:80:TRP:O	2.09	0.86
34:a:182:A:N6	34:a:194:C:O2	2.08	0.86
34:a:1134:G:O2'	34:a:1135:U:O4'	1.93	0.86
8:A:2198:A:N3	8:A:2225:A:N6	2.24	0.86
34:a:356:A:O4'	34:a:388:G:N2	2.09	0.86
34:a:959:A:HO2'	34:a:984:C:HO2'	1.09	0.86
4:3:38:LYS:NZ	8:A:2365:G:N7	2.23	0.86
55:v:15:G:N2	55:v:48:C:C2	2.43	0.86
3:2:39:ARG:NH1	8:A:468:G:O6	2.08	0.85
8:A:535:G:O3'	24:Q:52:ARG:NH1	2.09	0.85
8:A:1072:C:O2'	8:A:1089:A:O2'	1.89	0.85
8:A:1418:G:N1	8:A:1579:A:OP2	2.08	0.85
8:A:2082:A:N6	8:A:2237:G:O2'	2.09	0.85
34:a:50:A:O2'	34:a:360:G:N2	2.09	0.85
8:A:1283:G:N1	8:A:1286:A:OP2	2.08	0.85
8:A:2306:C:N4	13:F:38:GLY:O	2.09	0.85
8:A:2688:G:N1	8:A:2720:U:OP2	2.08	0.85
21:N:103:ARG:N	21:N:108:ALA:O	2.09	0.85
34:a:1091:U:O2'	34:a:1093:A:N7	2.08	0.85
8:A:1419:A:O2'	8:A:1421:G:N7	2.10	0.85
8:A:1470:A:N6	8:A:1521:G:O2'	2.08	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2117:A:N6	8:A:2163:A:OP1	2.08	0.85
34:a:278:G:OP2	50:q:42:LYS:NZ	2.09	0.85
34:a:578:C:O2'	34:a:728:A:N3	2.10	0.85
34:a:1125:U:OP2	34:a:1145:A:N6	2.08	0.85
34:a:1328:C:H5''	46:m:27:THR:HG21	1.55	0.85
8:A:635:C:O2'	8:A:639:U:OP1	1.94	0.85
8:A:1217:U:C2	8:A:1232:G:N1	2.45	0.85
8:A:1955:U:O4	8:A:2556:C:N4	2.10	0.85
55:v:55:PSU:N1	55:v:58:A:OP2	2.09	0.85
8:A:370:G:O2'	8:A:424:G:OP1	1.94	0.85
8:A:2093:G:N7	8:A:2225:A:H2'	1.91	0.85
20:M:26:VAL:O	20:M:133:LYS:HE2	1.77	0.85
15:H:96:THR:OG1	15:H:112:LYS:O	1.95	0.85
34:a:404:G:O2'	34:a:498:A:N1	2.09	0.85
34:a:859:G:OP2	34:a:869:G:N1	2.08	0.85
57:x:520:ASP:OD2	57:x:576:ARG:NH1	2.09	0.85
8:A:2245:U:O2'	8:A:2436:G:OP2	1.95	0.85
29:V:59:GLU:O	29:V:73:LYS:NZ	2.08	0.85
34:a:993:G:N7	34:a:1213:A:N6	2.23	0.85
34:a:1108:G:OP1	36:c:174:LEU:N	2.09	0.85
53:t:28:ARG:HA	53:t:31:ILE:HD12	1.59	0.85
8:A:301:G:O4'	8:A:317:G:N2	2.08	0.85
8:A:1000:A:OP2	8:A:1154:G:N1	2.10	0.85
8:A:1100:C:H3'	8:A:1101:U:H5''	1.56	0.85
8:A:1166:G:N2	8:A:1183:U:O2	2.10	0.85
8:A:2094:A:O4'	8:A:2198:A:N6	2.10	0.85
57:x:168:LEU:HD13	57:x:262:LEU:HD13	1.57	0.85
12:E:148:ILE:O	12:E:170:ARG:N	2.10	0.85
34:a:1015:G:N3	34:a:1218:C:O2'	2.08	0.85
8:A:1064:C:O2'	8:A:1076:C:N3	2.09	0.85
28:U:76:THR:O	28:U:78:LYS:NZ	2.10	0.85
8:A:320:A:OP1	12:E:130:LYS:NZ	2.09	0.84
8:A:2136:G:N7	8:A:2154:A:N6	2.24	0.84
10:C:165:ALA:O	10:C:171:VAL:HG13	1.76	0.84
34:a:397:A:O2'	34:a:399:G:OP2	1.93	0.84
34:a:1223:C:OP2	52:s:77:ARG:NH1	2.10	0.84
8:A:2099:U:O2	8:A:2190:G:C2	2.30	0.84
34:a:1152:A:OP1	43:j:70:HIS:ND1	2.10	0.84
44:k:45:THR:OG1	44:k:48:GLY:N	2.11	0.84
57:x:10:ARG:NH1	57:x:287:SER:OG	2.09	0.84
57:x:168:LEU:HD22	57:x:262:LEU:HB3	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1358:G:N1	8:A:1372:U:OP2	2.11	0.84
8:A:2355:G:O4'	30:W:32:ILE:HD12	1.77	0.84
24:Q:49:ARG:O	24:Q:53:LYS:NZ	2.10	0.84
8:A:1174:U:H2'	8:A:1175:A:C4	2.13	0.84
32:Y:46:VAL:O	32:Y:50:VAL:HG23	1.78	0.84
57:x:518:VAL:HG22	57:x:579:PHE:O	1.77	0.84
8:A:2138:G:O6	8:A:2156:G:N1	2.11	0.84
41:h:63:LYS:HG2	41:h:70:VAL:HG21	1.60	0.84
8:A:792:A:N6	8:A:2440:C:O4'	2.10	0.84
8:A:1417:C:HO2'	8:A:1587:G:HO2'	1.07	0.84
8:A:2113:U:O2'	8:A:2168:G:OP2	1.95	0.84
8:A:2251:OMG:O6	56:w:75:C:N4	2.10	0.84
29:V:73:LYS:O	29:V:92:VAL:N	2.11	0.84
34:a:835:U:O2	34:a:851:G:N1	2.08	0.84
57:x:96:ILE:HD13	57:x:410:PHE:HA	1.60	0.84
8:A:2140:G:N2	8:A:2148:G:O6	2.10	0.84
8:A:2184:A:N6	8:A:2185:U:O2	2.10	0.84
34:a:789:U:O2'	34:a:791:G:N7	2.10	0.84
34:a:1159:U:O2	34:a:1161:C:N4	2.10	0.84
8:A:182:A:N6	8:A:215:G:O6	2.10	0.84
8:A:1168:G:N1	8:A:1181:U:O2	2.11	0.84
8:A:1796:U:O2'	10:C:253:GLY:N	2.11	0.84
8:A:2162:G:H2'	8:A:2163:A:O4'	1.76	0.84
34:a:82:G:N1	34:a:84:U:O4	2.11	0.84
8:A:567:U:O3'	19:L:36:LYS:NZ	2.11	0.84
8:A:2142:A:N6	8:A:2144:G:N7	2.26	0.84
34:a:494:G:N2	34:a:497:G:O6	2.11	0.84
34:a:1009:U:N3	34:a:1020:G:O6	2.10	0.84
8:A:1568:G:OP1	10:C:62:ARG:NH2	2.10	0.84
34:a:145:G:N2	34:a:146:G:O6	2.09	0.84
37:d:171:GLU:OE1	37:d:180:THR:OG1	1.95	0.84
44:k:29:THR:HG22	44:k:46:ALA:HB2	1.60	0.84
57:x:135:PRO:HB3	57:x:255:VAL:O	1.78	0.84
57:x:316:PHE:N	57:x:398:ASP:OD2	2.11	0.84
8:A:2116:G:N2	8:A:2163:A:OP2	2.10	0.83
34:a:273:U:O4	34:a:274:A:N6	2.12	0.83
36:c:35:ASP:OD1	36:c:39:ARG:NE	2.11	0.83
8:A:220:G:N2	8:A:428:A:OP2	2.09	0.83
8:A:396:G:O2'	31:X:29:LEU:O	1.95	0.83
34:a:1289:A:N1	34:a:1371:G:O2'	2.11	0.83
43:j:6:ILE:HG23	43:j:102:LEU:HA	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:199:A:O2'	8:A:2433:A:N6	2.11	0.83
8:A:534:U:O2'	24:Q:48:ASP:OD2	1.94	0.83
8:A:1858:A:OP2	8:A:1884:G:N2	2.11	0.83
8:A:1980:G:O2'	8:A:1982:U:OP2	1.96	0.83
8:A:2472:G:O2'	8:A:2478:A:N6	2.09	0.83
29:V:20:LEU:HD23	29:V:26:PHE:C	2.03	0.83
34:a:1048:G:O6	34:a:1210:C:N4	2.11	0.83
37:d:168:THR:HG23	37:d:183:ARG:HH11	1.42	0.83
46:m:21:ILE:HB	46:m:24:VAL:HG12	1.60	0.83
57:x:100:ARG:NH1	57:x:392:THR:OG1	2.10	0.83
8:A:644:A:H2'	8:A:645:C:O4'	1.77	0.83
8:A:1176:U:H2'	8:A:1177:G:O4'	1.78	0.83
8:A:1715:G:N2	8:A:1744:A:OP2	2.11	0.83
8:A:1800:C:HO2'	8:A:1818:U:H3	1.24	0.83
22:O:94:ARG:NH2	22:O:97:PHE:O	2.11	0.83
32:Y:20:ASN:OD1	32:Y:23:ARG:NH1	2.11	0.83
34:a:151:A:N7	34:a:170:U:C5	2.45	0.83
34:a:202:G:N2	34:a:203:G:H1'	1.93	0.83
34:a:410:G:O2'	34:a:432:A:N6	2.10	0.83
37:d:84:ASN:O	37:d:88:ASN:OD1	1.97	0.83
43:j:32:THR:OG1	43:j:83:THR:HG21	1.77	0.83
8:A:243:U:N3	8:A:255:A:C8	2.45	0.83
8:A:335:C:O2	28:U:67:SER:OG	1.97	0.83
8:A:372:G:O4'	31:X:60:LYS:NZ	2.12	0.83
12:E:6:LYS:O	12:E:9:GLN:NE2	2.10	0.83
26:S:81:SER:O	26:S:83:LYS:NZ	2.11	0.83
34:a:352:C:O2	34:a:355:C:N4	2.12	0.83
34:a:1251:A:O2'	34:a:1369:C:O2'	1.95	0.83
57:x:522:TYR:OH	57:x:534:GLU:OE2	1.95	0.83
6:5:33:VAL:HA	8:A:1055:G:H4'	1.59	0.83
8:A:2298:A:OP1	13:F:70:ARG:NH2	2.12	0.83
14:G:155:PRO:O	14:G:171:LYS:N	2.11	0.83
34:a:68:G:O6	34:a:101:A:N6	2.11	0.83
8:A:194:G:H2'	8:A:195:A:O4'	1.79	0.83
8:A:1206:G:O6	8:A:1240:U:N3	2.12	0.83
8:A:2076:U:OP2	8:A:2238:G:N2	2.12	0.83
9:B:75:G:O2'	29:V:88:HIS:NE2	2.03	0.83
26:S:26:GLY:N	26:S:71:VAL:O	2.12	0.83
57:x:168:LEU:HB3	57:x:262:LEU:HD22	1.61	0.83
8:A:240:C:OP2	8:A:241:A:O2'	1.96	0.83
9:B:9:G:N1	9:B:111:U:O2	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2141:G:N7	8:A:2142:A:N6	2.27	0.83
8:A:2850:A:OP2	8:A:2866:U:N3	2.11	0.83
20:M:17:ASN:O	20:M:38:ARG:NH1	2.11	0.83
34:a:157:U:O2'	34:a:159:G:C6	2.32	0.83
34:a:1255:G:O2'	34:a:1258:G:N3	2.10	0.83
8:A:1889:A:O2'	8:A:2086:U:O2'	1.97	0.82
48:o:28:VAL:HG11	48:o:66:LEU:HD21	1.60	0.82
57:x:138:ALA:HB3	57:x:263:VAL:HG12	1.61	0.82
8:A:377:G:N2	8:A:397:U:O2	2.13	0.82
18:K:71:ARG:N	18:K:75:SER:O	2.12	0.82
34:a:722:G:O2'	34:a:724:G:O5'	1.97	0.82
8:A:221:A:H1'	8:A:233:A:H1'	1.59	0.82
8:A:1315:C:O2'	8:A:1392:A:N3	2.11	0.82
8:A:2831:G:OP2	11:D:59:ARG:NH1	2.11	0.82
13:F:74:ALA:O	13:F:77:LYS:NZ	2.13	0.82
34:a:7:A:H2'	38:e:123:LEU:HD22	1.60	0.82
34:a:547:A:OP2	37:d:1:ALA:N	2.11	0.82
34:a:984:C:N3	34:a:1222:G:N2	2.26	0.82
47:n:34:ASN:O	47:n:41:ARG:NH2	2.12	0.82
8:A:764:A:N3	10:C:211:ARG:NH2	2.27	0.82
8:A:871:U:OP1	20:M:5:LYS:NZ	2.12	0.82
8:A:1658:C:OP1	11:D:140:HIS:NE2	2.13	0.82
8:A:1798:U:O5'	10:C:270:ARG:NH2	2.12	0.82
8:A:2308:G:O2'	8:A:2309:A:OP1	1.97	0.82
8:A:2530:A:N7	14:G:171:LYS:NZ	2.26	0.82
8:A:2857:G:N2	8:A:2860:A:OP2	2.11	0.82
15:H:80:ILE:O	15:H:147:VAL:N	2.11	0.82
29:V:51:GLN:OE1	29:V:57:TYR:OH	1.97	0.82
6:5:32:GLY:N	8:A:1054:A:O2'	2.12	0.82
8:A:1800:C:C2	8:A:1817:G:N2	2.48	0.82
34:a:835:U:O2	34:a:851:G:N2	2.12	0.82
34:a:913:A:OP1	45:l:87:LYS:NZ	2.12	0.82
1:0:12:ARG:NH1	8:A:1263:U:OP1	2.12	0.82
8:A:13:A:N6	8:A:526:A:OP2	2.11	0.82
8:A:823:C:N4	8:A:944:C:O2	2.12	0.82
34:a:605:U:O2	34:a:633:G:N2	2.12	0.82
34:a:920:U:H2'	34:a:1081:A:C2'	2.08	0.82
57:x:308:ARG:NH1	57:x:317:SER:OG	2.12	0.82
3:2:12:ARG:NH1	8:A:464:U:O3'	2.12	0.82
8:A:200:U:O2	8:A:386:G:N2	2.12	0.82
8:A:2204:G:O5'	10:C:146:LYS:NZ	2.11	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:14:LYS:O	13:F:17:THR:OG1	1.97	0.82
34:a:2:A:N6	34:a:3:A:N1	2.27	0.82
8:A:630:G:N2	8:A:633:A:OP2	2.12	0.82
8:A:885:C:H2'	8:A:887:A:OP2	1.80	0.82
8:A:2599:G:O6	10:C:238:ASN:ND2	2.12	0.82
34:a:130:A:N3	34:a:263:A:O2'	2.12	0.82
34:a:690:G:N2	34:a:697:U:O4	2.12	0.82
8:A:564:C:O4'	24:Q:36:GLN:NE2	2.11	0.82
17:J:80:HIS:O	17:J:83:GLY:N	2.11	0.82
34:a:103:U:OP2	53:t:8:LYS:NZ	2.12	0.82
39:f:38:ARG:HD2	39:f:97:THR:HA	1.59	0.82
57:x:96:ILE:HD12	57:x:99:GLU:HB2	1.61	0.82
8:A:320:A:N3	12:E:163:ASN:OD1	2.13	0.82
34:a:563:A:H3'	45:l:11:ARG:HE	1.45	0.82
34:a:891:U:OP2	34:a:906:A:N6	2.13	0.82
34:a:1287:A:N6	34:a:1371:G:O4'	2.12	0.82
51:r:20:ILE:HD12	51:r:53:GLN:HB2	1.60	0.82
8:A:585:G:N7	24:Q:5:ARG:NH1	2.27	0.81
8:A:715:A:OP2	48:o:88:ARG:NH2	2.13	0.81
8:A:2278:A:OP2	30:W:8:ASN:ND2	2.11	0.81
34:a:587:G:OP1	41:h:83:ARG:NH2	2.13	0.81
8:A:1835:2MG:O6	8:A:1930:G:N2	2.12	0.81
22:O:52:SER:OG	22:O:54:VAL:HG22	1.80	0.81
34:a:437:U:N3	34:a:495:A:C8	2.47	0.81
34:a:1074:G:N1	34:a:1083:U:O4	2.13	0.81
34:a:1098:C:OP2	35:b:142:LYS:NZ	2.12	0.81
7:6:1:MET:N	9:B:44:G:OP1	2.13	0.81
13:F:24:VAL:O	13:F:29:ARG:NH1	2.14	0.81
24:Q:88:GLU:O	25:R:11:GLN:NE2	2.14	0.81
34:a:122:G:O6	34:a:239:U:N3	2.12	0.81
34:a:558:G:OP2	34:a:559:A:O2'	1.98	0.81
34:a:1269:A:O2'	34:a:1313:U:O2	1.98	0.81
41:h:8:ASP:OD2	41:h:12:ARG:NE	2.13	0.81
41:h:21:LYS:O	41:h:64:TYR:OH	1.97	0.81
10:C:137:GLY:N	10:C:163:ILE:O	2.12	0.81
34:a:148:G:O2'	34:a:1446:A:N3	2.13	0.81
8:A:711:G:N1	8:A:720:U:O2	2.14	0.81
8:A:1692:U:O2	8:A:1695:G:N1	2.12	0.81
15:H:82:SER:O	15:H:149:GLU:N	2.12	0.81
18:K:49:ARG:NH1	34:a:1422:G:O3'	2.12	0.81
8:A:637:A:N1	8:A:651:G:O2'	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2636:C:O2'	11:D:45:TYR:OH	1.98	0.81
8:A:2830:C:OP1	11:D:55:LYS:NZ	2.12	0.81
34:a:696:A:N1	34:a:797:C:O2'	2.13	0.81
45:l:80:LEU:HB2	45:l:101:LEU:HD22	1.62	0.81
50:q:26:ARG:O	50:q:39:ARG:N	2.12	0.81
8:A:1275:A:N1	8:A:1295:C:O2'	2.13	0.81
8:A:2660:A:H2'	8:A:2661:G:O4'	1.80	0.81
15:H:83:LYS:O	15:H:91:PHE:N	2.14	0.81
27:T:23:ALA:O	27:T:27:SER:OG	1.99	0.81
29:V:73:LYS:N	29:V:92:VAL:O	2.13	0.81
11:D:115:GLY:HA2	11:D:167:ASN:HB2	1.63	0.81
34:a:8:A:N6	37:d:201:GLU:O	2.12	0.81
34:a:152:A:N7	34:a:170:U:C4	2.47	0.81
34:a:1077:G:N2	34:a:1080:A:OP2	2.13	0.81
55:v:55:PSU:O2'	55:v:57:A:N7	2.14	0.81
8:A:1496:A:H2'	8:A:1498:C:C4	2.16	0.81
8:A:2083:G:N2	8:A:2236:U:O2	2.14	0.81
8:A:2666:C:N4	14:G:108:PHE:O	2.12	0.81
31:X:26:ARG:NH2	31:X:27:ARG:O	2.14	0.81
34:a:868:C:H2'	34:a:869:G:O4'	1.79	0.81
34:a:1178:G:N7	42:i:98:ARG:NH1	2.29	0.81
8:A:579:G:O2'	8:A:2019:A:OP1	1.99	0.81
8:A:1992:G:O4'	8:A:1994:C:N4	2.14	0.81
13:F:51:ASN:OD1	13:F:149:ARG:NH1	2.12	0.81
33:Z:15:ARG:O	33:Z:20:LYS:NZ	2.12	0.81
8:A:78:U:O2	8:A:108:G:N2	2.13	0.80
34:a:324:G:O2'	34:a:326:G:N7	2.12	0.80
34:a:438:U:C2	34:a:496:A:C5	2.69	0.80
3:2:19:ARG:N	8:A:126:A:OP2	2.14	0.80
8:A:1143:A:OP1	17:J:27:ARG:NH1	2.14	0.80
8:A:1528:A:N6	8:A:1543:G:O2'	2.14	0.80
8:A:2689:U:OP1	8:A:2719:G:N1	2.14	0.80
20:M:47:GLU:OE2	20:M:50:ARG:NE	2.13	0.80
27:T:37:ASP:O	27:T:81:LYS:NZ	2.15	0.80
34:a:1151:A:O4'	43:j:41:PRO:HB2	1.81	0.80
34:a:1372:U:O2'	40:g:33:GLY:O	1.98	0.80
34:a:1399:C:O2	34:a:1502:A:N6	2.14	0.80
36:c:83:VAL:O	36:c:100:ILE:HD11	1.81	0.80
39:f:46:GLN:OE1	39:f:56:LYS:NZ	2.14	0.80
55:v:16:C:O2'	55:v:61:C:OP1	1.98	0.80
8:A:2287:A:O2'	8:A:2288:A:O5'	1.98	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1042:G:N2	8:A:1113:U:O2	2.15	0.80
8:A:1175:A:H5'	8:A:1176:U:C6	2.17	0.80
8:A:1195:G:O2'	8:A:1226:A:N1	2.15	0.80
34:a:1133:G:O6	34:a:1139:G:N2	2.15	0.80
8:A:2746:U:N3	8:A:2756:U:O4	2.13	0.80
57:x:297:ILE:HD13	57:x:305:PRO:HG2	1.63	0.80
8:A:585:G:N1	8:A:1253:A:OP2	2.14	0.80
17:J:78:THR:HG21	17:J:85:LYS:HE2	1.64	0.80
34:a:152:A:C5	34:a:170:U:C2	2.70	0.80
34:a:1052:U:N3	34:a:1206:G:O6	2.14	0.80
8:A:6:A:O2'	17:J:135:GLN:OE1	1.98	0.80
8:A:1928:A:H2'	8:A:1929:G:O4'	1.82	0.80
8:A:2282:G:N2	8:A:2390:U:O2	2.14	0.80
8:A:2825:G:N2	8:A:2825:G:OP2	2.14	0.80
8:A:2839:G:N1	8:A:2878:U:O2	2.14	0.80
19:L:110:VAL:HG23	19:L:125:LEU:HD23	1.64	0.80
34:a:1238:A:N6	34:a:1301:U:O2	2.13	0.80
36:c:147:GLY:O	36:c:202:PHE:N	2.14	0.80
57:x:545:PRO:HD3	57:x:582:TYR:CD1	2.17	0.80
8:A:877:A:O2'	8:A:899:A:O2'	1.82	0.80
8:A:959:A:N6	8:A:2495:G:O2'	2.15	0.80
8:A:1454:C:O2'	8:A:1455:G:N7	2.15	0.80
8:A:1636:U:HO2'	8:A:1760:C:HO2'	1.13	0.80
8:A:2655:G:O2'	8:A:2664:G:O6	1.97	0.80
23:P:88:ARG:O	23:P:112:ARG:N	2.15	0.80
34:a:127:G:O2'	50:q:5:ARG:NH2	2.14	0.80
34:a:323:U:OP1	53:t:24:ARG:NH2	2.15	0.80
34:a:492:C:O2	34:a:493:A:N6	2.12	0.80
36:c:39:ARG:NH1	36:c:54:ILE:O	2.15	0.80
37:d:96:ARG:NH1	37:d:98:ASP:OD1	2.14	0.80
48:o:3:SER:OG	48:o:5:GLU:OE2	1.98	0.80
8:A:69:C:O2	8:A:73:A:O2'	2.00	0.80
8:A:1405:U:H2'	8:A:1406:U:C6	2.17	0.80
8:A:1819:A:N1	10:C:270:ARG:NH1	2.28	0.80
8:A:2100:G:N2	8:A:2189:U:O2	2.14	0.80
8:A:2139:U:N3	8:A:2152:G:C6	2.50	0.80
18:K:71:ARG:HE	18:K:77:ILE:HD12	1.46	0.80
21:N:44:LEU:O	21:N:48:VAL:HG22	1.82	0.80
57:x:514:TYR:N	57:x:586:ASP:O	2.14	0.80
8:A:458:G:H2'	8:A:469:G:O6	1.81	0.80
8:A:608:A:OP2	8:A:619:G:N1	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2139:U:C2	8:A:2152:G:C2	2.68	0.80
8:A:2514:U:H2'	8:A:2515:C:C6	2.17	0.80
27:T:33:LYS:HG2	27:T:80:TRP:CZ3	2.16	0.80
34:a:933:G:OP2	40:g:2:ARG:N	2.14	0.80
34:a:1134:G:N2	34:a:1141:C:O2	2.14	0.80
57:x:534:GLU:HB3	57:x:574:GLY:HA2	1.64	0.80
8:A:412:A:N6	8:A:2412:A:O4'	2.15	0.79
8:A:447:A:O2'	8:A:473:G:N7	2.13	0.79
8:A:2100:G:C6	8:A:2189:U:N3	2.50	0.79
15:H:71:LYS:HA	15:H:74:ALA:HB2	1.64	0.79
34:a:197:A:N1	34:a:220:G:O2'	2.14	0.79
34:a:246:A:N6	34:a:281:G:O4'	2.16	0.79
34:a:1137:C:OP2	34:a:1138:G:N1	2.15	0.79
4:3:26:ALA:HB2	19:L:62:PRO:HD3	1.61	0.79
8:A:1056:G:O2'	8:A:1086:A:O4'	1.98	0.79
8:A:1418:G:H1'	8:A:1580:A:H61	1.46	0.79
34:a:781:A:N6	34:a:801:U:O2	2.15	0.79
34:a:921:U:C5'	34:a:1081:A:H3'	2.11	0.79
34:a:1290:G:H5'	40:g:34:LYS:HE3	1.64	0.79
34:a:1456:A:H2'	34:a:1457:G:O4'	1.83	0.79
36:c:154:GLY:O	36:c:163:ARG:N	2.14	0.79
8:A:75:G:N1	8:A:111:A:C2	2.51	0.79
11:D:131:ASP:OD1	11:D:132:ALA:N	2.15	0.79
14:G:151:ARG:O	14:G:161:VAL:N	2.14	0.79
30:W:46:ASN:O	30:W:58:LYS:N	2.15	0.79
34:a:64:G:N1	34:a:68:G:O6	2.15	0.79
34:a:409:U:O2	34:a:433:G:N2	2.15	0.79
34:a:1131:G:O6	34:a:1143:G:N2	2.15	0.79
8:A:732:C:H2'	8:A:733:G:O4'	1.83	0.79
8:A:1267:U:OP2	8:A:2012:G:N1	2.15	0.79
8:A:1798:U:OP1	10:C:269:ARG:NH1	2.14	0.79
34:a:122:G:C6	34:a:239:U:O2	2.35	0.79
34:a:713:G:H2'	34:a:714:G:C8	2.17	0.79
34:a:1405:G:O2'	34:a:1518:MA6:O2'	1.76	0.79
37:d:138:PRO:HA	37:d:181:PHE:HB3	1.63	0.79
57:x:414:VAL:HG22	57:x:460:MET:O	1.83	0.79
8:A:219:A:N6	8:A:428:A:OP2	2.16	0.79
8:A:2576:G:O2'	8:A:2579:C:OP2	1.99	0.79
8:A:2692:G:O2'	8:A:2847:U:O2'	2.00	0.79
8:A:993:G:N3	25:R:91:GLN:NE2	2.30	0.79
44:k:23:HIS:HB3	44:k:30:ILE:HB	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:500:G:N2	8:A:503:A:O5'	2.12	0.79
8:A:845:A:N6	8:A:932:U:O2	2.11	0.79
8:A:1528:A:OP2	8:A:1543:G:N2	2.15	0.79
8:A:2202:U:O2'	8:A:2204:G:OP1	2.00	0.79
10:C:198:GLU:HA	10:C:201:LEU:HD12	1.65	0.79
10:C:245:THR:N	10:C:249:VAL:O	2.13	0.79
31:X:73:ARG:NH2	31:X:75:GLU:OE2	2.13	0.79
34:a:216:U:H2'	34:a:217:C:C6	2.17	0.79
34:a:1079:G:H2'	34:a:1080:A:C8	2.17	0.79
34:a:1377:A:H5'	34:a:1378:C:H5'	1.65	0.79
8:A:1799:G:N2	8:A:1819:A:OP2	2.13	0.79
8:A:2303:G:O2'	13:F:120:SER:OG	2.00	0.79
26:S:25:ARG:NH2	26:S:74:ILE:O	2.14	0.79
8:A:1925:C:O2	8:A:1929:G:N1	2.16	0.79
9:B:44:G:O4'	9:B:47:C:N4	2.15	0.79
34:a:367:U:OP1	57:x:358:ARG:NH1	2.16	0.79
34:a:401:C:O2'	34:a:621:A:N3	2.16	0.79
53:t:30:PHE:O	53:t:34:VAL:HG23	1.81	0.79
8:A:1628:G:O6	8:A:1639:C:N4	2.16	0.79
19:L:91:ASP:OD1	19:L:92:LEU:N	2.15	0.79
34:a:300:A:O2'	34:a:564:C:N3	2.16	0.79
34:a:674:G:H2'	34:a:675:A:H8	1.47	0.79
5:4:2:LYS:NZ	5:4:32:LYS:O	2.16	0.78
8:A:994:C:O2'	8:A:996:A:OP1	2.01	0.78
8:A:1840:G:O6	8:A:1901:A:N6	2.16	0.78
13:F:29:ARG:N	13:F:158:THR:OG1	2.14	0.78
34:a:415:A:N6	34:a:428:G:O6	2.14	0.78
34:a:1206:G:O2'	36:c:191:THR:O	1.99	0.78
34:a:1227:A:N3	52:s:82:HIS:ND1	2.31	0.78
43:j:66:GLU:HB2	47:n:99:ALA:HB2	1.64	0.78
8:A:529:A:C6	8:A:2041:U:O2	2.35	0.78
8:A:2220:U:O3'	15:H:112:LYS:NZ	2.16	0.78
19:L:96:LYS:HG3	19:L:101:ILE:HD11	1.63	0.78
34:a:685:G:N1	34:a:704:A:OP2	2.16	0.78
34:a:1498:UR3:H6	34:a:1499:A:N7	1.98	0.78
36:c:104:GLU:O	36:c:106:ARG:NH2	2.14	0.78
8:A:301:G:O5'	28:U:81:ARG:NH1	2.16	0.78
8:A:887:A:OP2	8:A:891:G:N1	2.17	0.78
10:C:77:VAL:O	10:C:112:GLY:N	2.16	0.78
39:f:73:GLU:O	39:f:77:THR:HG23	1.83	0.78
57:x:100:ARG:HB3	57:x:407:ARG:CZ	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1294:U:O2	21:N:23:ASN:ND2	2.17	0.78
8:A:2186:G:H2'	8:A:2187:U:O4'	1.84	0.78
34:a:661:G:O2'	34:a:662:U:OP1	2.00	0.78
34:a:846:G:H2'	34:a:847:G:C8	2.18	0.78
34:a:160:A:O2'	34:a:161:A:O5'	2.02	0.78
42:i:23:GLY:H	42:i:60:LEU:HA	1.49	0.78
44:k:51:PHE:O	44:k:56:LYS:N	2.16	0.78
8:A:306:U:H2'	8:A:307:G:O4'	1.83	0.78
8:A:1171:G:H22	8:A:1177:G:H1	1.28	0.78
8:A:1490:A:O2'	8:A:1491:G:OP1	2.00	0.78
8:A:1887:C:H2'	8:A:1888:G:O4'	1.83	0.78
23:P:87:ARG:NH2	23:P:109:ILE:O	2.16	0.78
34:a:245:U:O2	34:a:283:U:N3	2.16	0.78
34:a:458:U:O2	34:a:474:G:N1	2.16	0.78
34:a:564:C:OP1	45:l:11:ARG:NE	2.17	0.78
34:a:1314:C:N4	52:s:1:PRO:O	2.17	0.78
38:e:87:VAL:HG22	38:e:92:ARG:HG3	1.64	0.78
47:n:46:LEU:O	47:n:50:THR:HG23	1.84	0.78
50:q:46:HIS:NE2	50:q:48:GLU:OE2	2.17	0.78
57:x:501:GLU:HG3	57:x:518:VAL:HG12	1.63	0.78
7:6:2:LYS:HE3	9:B:40:U:H2'	1.66	0.78
8:A:340:A:HO2'	12:E:162:ARG:NH1	1.77	0.78
8:A:1269:A:H2'	8:A:1270:C:C6	2.19	0.78
9:B:24:G:O6	9:B:59:A:N6	2.16	0.78
34:a:1401:G:OP2	34:a:1402:4OC:N4	2.17	0.78
35:b:187:ASP:OD1	35:b:190:SER:N	2.15	0.78
8:A:310:A:H5''	28:U:14:THR:HG23	1.66	0.78
8:A:1496:A:HO2'	8:A:1577:C:HO2'	1.13	0.78
8:A:1853:A:H2'	8:A:1854:A:C8	2.18	0.78
8:A:2123:G:N2	8:A:2125:G:O6	2.16	0.78
8:A:2637:U:H2'	8:A:2638:G:O4'	1.82	0.78
10:C:158:GLY:O	10:C:176:ARG:NH2	2.16	0.78
34:a:1297:G:N2	34:a:1298:U:O4	2.16	0.78
43:j:6:ILE:HB	43:j:76:ILE:HG23	1.66	0.78
8:A:2065:C:H42	8:A:2445:2MG:HN1	1.32	0.78
8:A:2511:U:O2	11:D:145:SER:N	2.16	0.78
12:E:194:LYS:O	12:E:198:GLU:HG2	1.84	0.78
17:J:14:ASP:O	17:J:53:TYR:N	2.13	0.78
34:a:255:G:OP1	50:q:70:LYS:NZ	2.15	0.78
34:a:358:U:O2'	57:x:327:PRO:O	2.01	0.78
35:b:56:LEU:HD21	35:b:220:VAL:CG1	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:j:52:LEU:O	47:n:81:ARG:NH1	2.16	0.78
8:A:68:G:H2'	8:A:69:C:C6	2.18	0.78
8:A:1299:G:N1	8:A:1640:A:OP2	2.16	0.78
10:C:32:LEU:HA	10:C:63:ILE:HD12	1.66	0.78
38:e:91:SER:OG	38:e:129:SER:O	2.02	0.78
51:r:10:CYS:SG	51:r:47:ARG:NH1	2.57	0.78
57:x:348:VAL:HG12	57:x:398:ASP:HA	1.65	0.78
8:A:603:A:N6	8:A:655:A:O4'	2.17	0.77
8:A:2356:U:O2	8:A:2361:G:N2	2.17	0.77
9:B:103:U:O2'	29:V:31:TYR:OH	1.90	0.77
34:a:188:C:O2'	34:a:189:A:O5'	2.02	0.77
34:a:464:U:O2	34:a:466:A:C5	2.37	0.77
34:a:675:A:H2'	34:a:676:A:O4'	1.84	0.77
57:x:15:SER:OG	57:x:110:MET:SD	2.41	0.77
2:1:29:LYS:NZ	8:A:2286:G:O5'	2.17	0.77
8:A:139:U:C2	27:T:1:MET:HE1	2.19	0.77
8:A:1802:A:H2'	8:A:1803:A:C8	2.18	0.77
8:A:2142:A:C6	8:A:2149:U:N3	2.52	0.77
34:a:151:A:C6	34:a:170:U:N3	2.51	0.77
34:a:1088:G:N2	34:a:1098:C:O2	2.18	0.77
8:A:1172:C:N3	8:A:1176:U:O4	2.17	0.77
8:A:1216:G:N2	8:A:1233:C:O2	2.17	0.77
8:A:1310:G:O6	8:A:1605:C:N4	2.17	0.77
8:A:1962:5MC:O2'	8:A:1964:G:OP2	2.01	0.77
28:U:73:ASN:N	28:U:78:LYS:O	2.17	0.77
34:a:260:G:N2	34:a:265:G:O6	2.17	0.77
34:a:972:C:O5'	43:j:59:LYS:NZ	2.17	0.77
8:A:400:G:N7	31:X:56:ARG:NH1	2.32	0.77
26:S:42:LYS:O	26:S:46:LEU:HD23	1.85	0.77
34:a:780:A:N6	34:a:801:U:OP2	2.17	0.77
34:a:1009:U:C4	34:a:1020:G:O6	2.37	0.77
34:a:1516:2MG:N2	34:a:1519:MA6:OP2	2.18	0.77
55:v:18:G:N2	55:v:58:A:O5'	2.18	0.77
57:x:28:ARG:NE	57:x:268:ALA:O	2.17	0.77
8:A:33:C:O2	8:A:447:A:N6	2.17	0.77
8:A:265:A:O2'	8:A:428:A:N6	2.16	0.77
8:A:1005:C:O2	17:J:30:THR:HG21	1.84	0.77
34:a:50:A:N1	34:a:360:G:O2'	2.17	0.77
38:e:86:GLY:O	38:e:138:ALA:HB1	1.85	0.77
38:e:94:PHE:CZ	38:e:96:GLN:HB3	2.18	0.77
41:h:22:ALA:O	41:h:62:LEU:N	2.13	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:i:11:ARG:O	42:i:14:SER:OG	2.02	0.77
57:x:353:LYS:NZ	57:x:394:ASP:OD2	2.17	0.77
1:0:37:HIS:ND1	1:0:38:LEU:O	2.16	0.77
3:2:40:ALA:N	8:A:459:U:OP1	2.18	0.77
8:A:1120:G:H2'	8:A:1121:C:C6	2.19	0.77
34:a:1146:A:H2'	34:a:1147:C:O4'	1.85	0.77
34:a:1260:G:O2'	34:a:1275:A:N6	2.17	0.77
5:4:11:CYS:SG	5:4:14:CYS:N	2.57	0.77
8:A:383:C:O2	8:A:391:A:N6	2.18	0.77
8:A:458:G:O2'	8:A:459:U:OP2	2.03	0.77
8:A:499:U:H2'	8:A:500:G:O4'	1.84	0.77
8:A:882:G:N1	8:A:895:U:O2	2.18	0.77
8:A:2391:G:H2'	8:A:2424:C:H41	1.50	0.77
34:a:54:C:N4	34:a:353:A:OP2	2.16	0.77
34:a:450:G:N1	34:a:484:G:O6	2.18	0.77
36:c:155:ARG:NE	36:c:160:GLU:O	2.18	0.77
57:x:350:ASN:O	57:x:354:ALA:N	2.16	0.77
8:A:265:A:N1	8:A:427:U:O2'	2.17	0.77
8:A:1138:G:N2	17:J:108:MET:SD	2.56	0.77
9:B:76:G:N1	9:B:100:G:O6	2.17	0.77
20:M:35:ALA:O	20:M:99:GLY:N	2.14	0.77
34:a:263:A:OP1	53:t:73:ARG:NH2	2.18	0.77
34:a:979:C:O2	47:n:59:ARG:NH2	2.17	0.77
8:A:189:G:H1	8:A:205:G:HO2'	1.28	0.77
8:A:1093:G:N2	8:A:1097:U:O5'	2.18	0.77
8:A:1954:G:O2'	8:A:1956:U:O4	2.02	0.77
8:A:1992:G:N1	8:A:1996:C:O2	2.16	0.77
8:A:2312:U:H5'	13:F:84:ILE:HD11	1.67	0.77
8:A:2519:U:O4'	8:A:2542:A:N6	2.18	0.77
34:a:765:G:N2	34:a:813:U:OP2	2.18	0.77
34:a:946:A:H2'	34:a:947:G:C8	2.20	0.77
34:a:973:G:H1'	43:j:56:HIS:CD2	2.19	0.77
34:a:1254:A:OP1	43:j:45:ARG:NH2	2.17	0.77
57:x:507:GLN:HA	57:x:512:GLY:HA3	1.67	0.77
8:A:603:A:O5'	8:A:655:A:N6	2.13	0.77
8:A:1206:G:C6	8:A:1240:U:N3	2.52	0.77
8:A:2656:U:O2	8:A:2665:A:N7	2.18	0.77
9:B:73:A:N7	9:B:103:U:O2	2.18	0.77
34:a:689:C:OP2	44:k:52:ARG:NH1	2.18	0.77
34:a:1015:G:N2	34:a:1218:C:O2	2.17	0.77
35:b:43:GLU:N	35:b:43:GLU:OE1	2.16	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:v:40:C:O2'	55:v:41:C:O5'	2.02	0.77
5:4:14:CYS:HA	5:4:27:CYS:HA	1.67	0.76
8:A:564:C:OP2	25:R:79:ARG:NH2	2.18	0.76
8:A:779:U:O2	8:A:785:G:N2	2.18	0.76
8:A:2131:U:H2'	8:A:2132:U:H4'	1.67	0.76
34:a:1003:G:N1	34:a:1033:G:O6	2.17	0.76
8:A:446:G:N2	8:A:454:A:C2	2.53	0.76
8:A:2029:G:N1	8:A:2033:A:OP2	2.18	0.76
8:A:2734:A:N6	8:A:2770:G:O2'	2.18	0.76
34:a:691:G:N7	44:k:56:LYS:NZ	2.32	0.76
34:a:1261:A:N6	34:a:1274:A:O2'	2.17	0.76
34:a:1351:U:O2	34:a:1371:G:N2	2.18	0.76
34:a:1417:G:O2'	34:a:1483:A:N6	2.17	0.76
41:h:86:LYS:N	41:h:122:GLY:O	2.18	0.76
4:3:53:ASP:O	4:3:57:VAL:HG23	1.84	0.76
8:A:1339:G:O3'	27:T:19:LYS:NZ	2.13	0.76
8:A:1342:A:OP1	27:T:40:LYS:NZ	2.14	0.76
8:A:1453:A:O3'	21:N:63:ARG:NH1	2.17	0.76
8:A:2485:G:OP1	20:M:45:GLN:NE2	2.18	0.76
9:B:40:U:N3	9:B:44:G:OP2	2.15	0.76
18:K:105:ARG:HD3	18:K:108:ARG:HD2	1.66	0.76
32:Y:1:MET:HB3	32:Y:6:LEU:HD11	1.67	0.76
34:a:251:G:N1	34:a:254:G:O6	2.18	0.76
8:A:2142:A:N1	8:A:2149:U:C4	2.52	0.76
8:A:2687:U:H2'	8:A:2688:G:O4'	1.86	0.76
12:E:111:GLU:OE1	12:E:114:ARG:NE	2.16	0.76
34:a:921:U:P	34:a:1081:A:H3'	2.26	0.76
34:a:1129:C:O2'	34:a:1139:G:N7	2.18	0.76
34:a:1319:A:O2'	34:a:1323:G:N7	2.16	0.76
36:c:156:LEU:HD11	36:c:164:THR:HA	1.68	0.76
57:x:251:LEU:HD22	57:x:260:ILE:HD11	1.66	0.76
57:x:343:ASN:N	57:x:346:ASP:OD2	2.13	0.76
57:x:612:LEU:HB3	57:x:686:TYR:HB3	1.66	0.76
8:A:1055:G:N2	8:A:1104:C:O2	2.17	0.76
8:A:1181:U:H2'	8:A:1182:G:C8	2.21	0.76
8:A:2483:C:N3	20:M:123:LYS:NZ	2.33	0.76
13:F:135:ILE:HA	13:F:140:ILE:HG21	1.67	0.76
34:a:204:G:C2	34:a:204:G:OP2	2.39	0.76
34:a:925:G:N2	34:a:1391:U:O2	2.19	0.76
34:a:1349:A:H1'	34:a:1374:A:N6	2.00	0.76
34:a:1422:G:N1	34:a:1478:U:O2	2.16	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:e:76:ASN:N	38:e:79:THR:O	2.17	0.76
8:A:27:G:N2	8:A:513:A:OP2	2.18	0.76
8:A:859:G:O2'	8:A:916:G:N1	2.18	0.76
8:A:1466:U:O3'	8:A:1546:G:O2'	2.03	0.76
8:A:2305:U:H5''	13:F:130:GLY:HA3	1.67	0.76
34:a:1160:G:N1	34:a:1176:A:N6	2.34	0.76
35:b:45:THR:HA	35:b:48:MET:HE2	1.66	0.76
56:w:5:G:C2	56:w:68:C:O2	2.38	0.76
8:A:886:A:O2'	8:A:891:G:N2	2.18	0.76
8:A:2404:U:O2	8:A:2413:G:N2	2.18	0.76
34:a:691:G:N2	34:a:696:A:OP2	2.18	0.76
34:a:794:A:H2'	34:a:795:C:C6	2.20	0.76
34:a:861:G:O6	34:a:869:G:N2	2.18	0.76
34:a:1284:C:OP2	34:a:1285:A:O2'	2.03	0.76
34:a:1398:A:N6	38:e:24:VAL:O	2.17	0.76
57:x:93:ASP:HB3	57:x:464:HIS:HB2	1.66	0.76
8:A:749:A:N1	8:A:753:A:O2'	2.19	0.76
8:A:947:A:H2'	8:A:948:C:C6	2.20	0.76
8:A:1091:G:N1	8:A:1101:U:H1'	2.00	0.76
34:a:539:A:OP2	45:l:111:GLN:NE2	2.19	0.76
34:a:933:G:O6	40:g:2:ARG:NH2	2.18	0.76
8:A:144:A:H2'	8:A:145:C:C6	2.21	0.76
8:A:280:U:O4	8:A:360:U:N3	2.15	0.76
8:A:1058:U:H2'	8:A:1059:G:H5''	1.68	0.76
12:E:168:ASP:OD2	12:E:170:ARG:NE	2.19	0.76
34:a:184:G:H4'	34:a:224:U:O3'	1.86	0.76
34:a:511:C:O2'	34:a:512:U:O5'	2.04	0.76
34:a:666:G:H5'	34:a:726:C:H1'	1.68	0.76
34:a:1347:G:N1	34:a:1374:A:OP2	2.12	0.76
34:a:1359:C:H3'	47:n:75:ARG:NH2	2.01	0.76
47:n:35:ALA:HB1	47:n:41:ARG:H	1.50	0.76
6:5:56:ARG:O	8:A:1106:G:H5''	1.86	0.76
8:A:1062:G:H2'	8:A:1063:G:N7	2.01	0.76
8:A:1769:U:O2'	8:A:1958:C:OP1	2.04	0.76
10:C:24:HIS:N	10:C:80:LEU:O	2.16	0.76
20:M:57:VAL:HG12	20:M:112:LEU:HG	1.68	0.76
34:a:151:A:C8	34:a:170:U:O4	2.39	0.76
34:a:925:G:O2'	34:a:927:G:OP1	2.04	0.76
34:a:1157:A:N7	34:a:1180:A:N6	2.34	0.76
57:x:345:GLY:N	57:x:359:PHE:O	2.19	0.76
19:L:29:LYS:O	19:L:30:THR:OG1	2.04	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:41:ILE:HB	25:R:48:LYS:HB2	1.68	0.75
34:a:119:A:O2'	34:a:240:G:N7	2.18	0.75
34:a:684:U:O2'	44:k:40:ALA:O	2.04	0.75
34:a:1130:A:N6	34:a:1144:G:O4'	2.19	0.75
34:a:1435:G:H2'	34:a:1436:U:C6	2.21	0.75
37:d:99:ASN:OD1	37:d:110:ARG:NH2	2.19	0.75
41:h:11:THR:HG22	41:h:14:ARG:HH12	1.52	0.75
57:x:12:ILE:HA	57:x:105:LEU:HD11	1.66	0.75
8:A:60:G:N1	8:A:88:G:O6	2.15	0.75
8:A:2401:U:N3	8:A:2415:G:O6	2.20	0.75
38:e:106:ALA:O	38:e:111:ARG:NH2	2.18	0.75
8:A:676:A:N1	8:A:2069:G7M:O2'	2.19	0.75
8:A:1175:A:OP2	8:A:1176:U:N3	2.19	0.75
13:F:70:ARG:O	13:F:80:GLN:HG3	1.86	0.75
34:a:96:U:O2'	34:a:97:G:O4'	2.04	0.75
37:d:27:ILE:HD12	37:d:30:LYS:HB2	1.68	0.75
38:e:90:GLY:O	38:e:129:SER:N	2.16	0.75
57:x:673:THR:O	57:x:676:ARG:NE	2.20	0.75
8:A:903:C:H2'	8:A:904:G:H8	1.52	0.75
8:A:1089:A:N3	8:A:1090:A:N6	2.34	0.75
8:A:1394:U:H2'	8:A:1395:A:O4'	1.85	0.75
8:A:1851:U:O2'	55:v:71:C:O2	2.02	0.75
8:A:2139:U:N3	8:A:2152:G:N1	2.34	0.75
8:A:2644:G:H3'	8:A:2645:G:H21	1.52	0.75
9:B:74:U:O2'	29:V:37:PRO:HB2	1.86	0.75
33:Z:9:THR:OG1	33:Z:53:MET:O	2.03	0.75
34:a:458:U:O2	34:a:474:G:N2	2.18	0.75
55:v:13:C:O2	55:v:22:G:N2	2.18	0.75
1:O:37:HIS:ND1	1:O:41:HIS:O	2.19	0.75
8:A:684:G:O3'	8:A:788:A:N6	2.19	0.75
8:A:1128:G:N2	8:A:2517:C:O4'	2.18	0.75
8:A:1292:G:H2'	8:A:1293:C:C6	2.21	0.75
8:A:1439:A:N6	8:A:1552:A:O2'	2.19	0.75
34:a:442:G:H2'	34:a:443:C:O4'	1.87	0.75
34:a:768:A:N3	34:a:1512:U:O2'	2.20	0.75
34:a:1131:G:H2'	34:a:1132:C:C6	2.21	0.75
7:6:20:ASN:N	7:6:20:ASN:HD22	1.85	0.75
8:A:1856:U:O2	8:A:1886:U:N3	2.19	0.75
8:A:2077:A:OP1	8:A:2238:G:N2	2.17	0.75
8:A:2531:A:N3	8:A:2658:C:O2'	2.20	0.75
34:a:321:A:N7	34:a:328:C:O2'	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:582:C:N3	34:a:759:A:N7	2.35	0.75
43:j:87:LEU:HA	43:j:90:LEU:HD12	1.68	0.75
55:v:69:C:H2'	55:v:70:G:C8	2.21	0.75
6:5:59:LEU:N	8:A:1107:G:OP1	2.20	0.75
8:A:72:U:O4	8:A:111:A:O2'	2.00	0.75
8:A:1028:A:H2'	8:A:1029:A:C8	2.21	0.75
34:a:1368:A:OP1	42:i:112:ARG:NH2	2.20	0.75
6:5:1:MET:N	8:A:1105:U:O5'	2.20	0.75
8:A:25:U:O2	8:A:515:A:N6	2.19	0.75
15:H:46:PHE:HA	15:H:50:ARG:HG3	1.67	0.75
23:P:98:TYR:CE2	23:P:99:LEU:HD21	2.22	0.75
8:A:1667:G:O2'	8:A:1991:U:O4	2.03	0.75
34:a:507:C:OP2	34:a:508:U:O2'	2.03	0.75
57:x:557:GLN:HA	57:x:560:LEU:HD13	1.69	0.75
6:5:81:LEU:N	8:A:1107:G:H4'	2.02	0.74
8:A:183:C:O2'	8:A:432:A:N3	2.19	0.74
8:A:298:G:O2'	8:A:322:A:N1	2.18	0.74
8:A:1878:G:H2'	8:A:1879:C:C6	2.21	0.74
20:M:73:ILE:HG21	20:M:91:TYR:CZ	2.23	0.74
34:a:652:U:O4	34:a:752:G:O2'	2.05	0.74
34:a:979:C:N3	47:n:59:ARG:NE	2.33	0.74
41:h:17:GLN:HG2	41:h:62:LEU:HD13	1.67	0.74
8:A:705:A:OP2	8:A:726:G:N2	2.17	0.74
8:A:1094:U:O2'	8:A:1095:A:H3'	1.87	0.74
29:V:71:LYS:O	29:V:94:ALA:N	2.19	0.74
34:a:158:G:C8	34:a:163:C:H5''	2.21	0.74
34:a:243:A:H2	34:a:246:A:H5'	1.53	0.74
36:c:59:PRO:O	36:c:62:SER:OG	2.05	0.74
8:A:300:A:N1	8:A:333:G:O2'	2.19	0.74
8:A:739:A:N3	8:A:740:C:N4	2.34	0.74
8:A:1225:G:O2'	8:A:1226:A:O4'	2.03	0.74
8:A:1799:G:OP1	10:C:257:ARG:NH1	2.21	0.74
8:A:2807:U:O2	8:A:2891:U:N3	2.17	0.74
14:G:28:LYS:N	14:G:78:VAL:O	2.20	0.74
17:J:16:TYR:O	17:J:55:ILE:N	2.19	0.74
34:a:605:U:O2	34:a:633:G:C2	2.40	0.74
8:A:545:U:O2	8:A:548:G:C6	2.41	0.74
8:A:684:G:O2'	8:A:788:A:N7	2.19	0.74
8:A:851:C:H1'	33:Z:46:MET:HE2	1.67	0.74
8:A:1071:G:O2'	8:A:1088:A:O2'	2.05	0.74
24:Q:28:SER:OG	24:Q:29:ARG:NH1	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:105:PHE:HA	24:Q:108:LEU:HD12	1.70	0.74
34:a:187:G:O2'	34:a:190:A:N6	2.20	0.74
34:a:921:U:O5'	34:a:1082:A:C5'	2.36	0.74
40:g:29:LEU:HA	40:g:108:ARG:NH2	2.02	0.74
20:M:31:PHE:HD1	20:M:132:THR:HG22	1.52	0.74
34:a:158:G:N7	34:a:163:C:H5''	2.01	0.74
34:a:1080:A:C8	34:a:1081:A:H1'	2.22	0.74
35:b:183:PHE:HB3	35:b:197:PHE:HB2	1.69	0.74
36:c:57:GLU:OE1	36:c:64:ARG:NH2	2.19	0.74
39:f:14:GLN:HA	39:f:16:GLU:OE1	1.87	0.74
8:A:13:A:O2'	8:A:15:G:O6	2.05	0.74
8:A:910:A:H2'	8:A:911:A:C8	2.21	0.74
8:A:1789:A:H3'	8:A:1790:C:C6	2.23	0.74
8:A:2771:C:H2'	8:A:2772:C:C6	2.23	0.74
29:V:21:ARG:NE	29:V:87:GLN:O	2.20	0.74
33:Z:8:GLN:O	33:Z:32:GLY:N	2.13	0.74
34:a:79:G:O2'	34:a:80:A:N3	2.21	0.74
34:a:157:U:H1'	34:a:164:G:C6	2.22	0.74
57:x:78:TYR:OH	57:x:283:ASP:OD1	2.04	0.74
8:A:1012:U:N3	8:A:1143:A:C8	2.53	0.74
8:A:1653:G:N1	21:N:11:ASN:OD1	2.20	0.74
8:A:2111:U:O2'	8:A:2115:G:N2	2.21	0.74
8:A:2521:C:C2	8:A:2545:G:N2	2.56	0.74
8:A:2762:C:H2'	8:A:2763:G:O4'	1.88	0.74
8:A:2845:U:O3'	23:P:52:ARG:NH1	2.21	0.74
9:B:37:C:O2	22:O:100:HIS:NE2	2.19	0.74
34:a:574:A:O2'	34:a:882:C:O2'	2.05	0.74
36:c:72:PRO:O	36:c:76:ILE:HD12	1.88	0.74
49:p:46:LYS:HB2	49:p:48:GLU:HG3	1.68	0.74
1:O:6:LYS:NZ	8:A:1263:U:O4'	2.19	0.74
6:5:4:ASN:N	8:A:1044:C:OP1	2.21	0.74
8:A:370:G:O2'	8:A:423:A:H3'	1.87	0.74
8:A:612:G:OP2	8:A:614:A:N6	2.21	0.74
9:B:31:C:H2'	9:B:53:A:H61	1.53	0.74
24:Q:46:TYR:O	24:Q:50:ARG:NH1	2.18	0.74
34:a:211:G:H3'	34:a:211:G:N3	2.03	0.74
34:a:362:G:N2	34:a:365:U:OP2	2.20	0.74
34:a:1330:U:H3'	34:a:1331:G:H4'	1.69	0.74
7:6:20:ASN:ND2	7:6:20:ASN:H	1.86	0.74
8:A:529:A:N7	8:A:2041:U:C2	2.56	0.74
8:A:685:A:O2'	8:A:773:U:O4	2.02	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1432:G:H2'	8:A:1433:A:C8	2.22	0.74
24:Q:23:TYR:HB3	24:Q:27:ARG:HB3	1.68	0.74
25:R:21:ARG:HD3	25:R:93:PHE:CG	2.22	0.74
34:a:127:G:O3'	50:q:5:ARG:NH2	2.20	0.74
34:a:438:U:O2'	34:a:494:G:O6	2.04	0.74
34:a:921:U:H3'	34:a:1082:A:OP2	1.87	0.74
34:a:1228:C:OP2	46:m:109:LYS:NZ	2.21	0.74
40:g:104:VAL:O	40:g:108:ARG:HG3	1.87	0.74
42:i:57:VAL:HG13	42:i:58:GLU:H	1.52	0.74
42:i:82:ILE:O	42:i:86:LEU:HD13	1.87	0.74
8:A:658:U:O2'	12:E:95:LYS:NZ	2.17	0.74
8:A:833:A:H2'	8:A:834:G:C8	2.22	0.74
8:A:1062:G:C5	8:A:1064:C:O2	2.41	0.74
8:A:1586:A:H2'	8:A:1587:G:O4'	1.88	0.74
8:A:1772:A:N6	8:A:1980:G:O6	2.21	0.74
8:A:2746:U:O2	8:A:2758:A:N6	2.20	0.74
12:E:15:SER:HG	12:E:17:THR:HG1	1.31	0.74
18:K:71:ARG:HE	18:K:77:ILE:CD1	2.00	0.74
34:a:953:G:O6	46:m:102:LYS:NZ	2.21	0.74
57:x:170:LEU:HB3	57:x:182:VAL:HB	1.68	0.74
57:x:495:GLN:HA	57:x:523:PRO:HG3	1.69	0.74
8:A:1665:A:OP1	18:K:66:LYS:NZ	2.19	0.73
34:a:202:G:N2	34:a:216:U:C2	2.56	0.73
38:e:76:ASN:O	38:e:79:THR:OG1	2.05	0.73
8:A:866:A:N6	8:A:913:U:O4'	2.21	0.73
8:A:1005:C:H1'	8:A:1012:U:C4	2.23	0.73
9:B:13:G:N2	9:B:16:G:N3	2.36	0.73
31:X:34:SER:HA	31:X:48:LEU:O	1.88	0.73
34:a:323:U:H2'	34:a:324:G:O4'	1.87	0.73
34:a:536:C:N4	34:a:537:G:O6	2.21	0.73
51:r:70:THR:HG23	51:r:72:ARG:H	1.53	0.73
57:x:316:PHE:HA	57:x:340:GLY:HA3	1.68	0.73
8:A:594:U:O2	8:A:663:G:N2	2.21	0.73
8:A:1597:A:H5''	8:A:1598:A:H5'	1.69	0.73
8:A:2655:G:N2	8:A:2656:U:O4	2.17	0.73
13:F:45:ASP:HB3	13:F:48:LEU:HD23	1.71	0.73
34:a:298:A:H2'	34:a:299:G:O4'	1.88	0.73
34:a:356:A:N3	34:a:368:U:O2'	2.18	0.73
34:a:719:C:O2'	51:r:38:ILE:O	2.06	0.73
8:A:1394:U:H4'	8:A:1603:A:H4'	1.70	0.73
8:A:2689:U:O4'	8:A:2713:U:N3	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2835:A:O4'	8:A:2879:A:N6	2.21	0.73
19:L:37:GLY:N	19:L:40:SER:OG	2.21	0.73
34:a:472:U:O2'	34:a:473:U:O4'	2.06	0.73
34:a:1360:A:OP2	47:n:75:ARG:NH2	2.21	0.73
45:l:28:GLN:HB3	45:l:80:LEU:HD11	1.69	0.73
1:O:16:ARG:NE	8:A:1266:G:OP2	2.21	0.73
8:A:451:U:H4'	12:E:47:LYS:HZ3	1.54	0.73
8:A:871:U:H2'	8:A:872:U:C6	2.24	0.73
8:A:899:A:O3'	8:A:900:A:H8	1.72	0.73
8:A:1847:G:O2'	8:A:1848:A:O5'	2.05	0.73
8:A:1967:C:H2'	8:A:1968:G:O4'	1.89	0.73
8:A:1973:G:H2'	8:A:1974:C:C6	2.23	0.73
8:A:2114:A:N3	8:A:2167:U:H2'	2.04	0.73
34:a:1419:G:N2	34:a:1481:U:O2	2.20	0.73
46:m:6:ILE:HD11	46:m:21:ILE:HG12	1.68	0.73
50:q:57:VAL:O	50:q:78:VAL:N	2.20	0.73
53:t:47:GLN:NE2	53:t:51:ASN:OD1	2.21	0.73
57:x:190:ILE:HD11	57:x:201:PHE:HA	1.70	0.73
8:A:458:G:N2	8:A:459:U:O4	2.16	0.73
8:A:594:U:H2'	8:A:595:C:C6	2.23	0.73
8:A:817:C:H2'	8:A:818:G:O4'	1.88	0.73
8:A:2387:U:O4'	30:W:37:ARG:NH1	2.22	0.73
8:A:2391:G:N2	8:A:2425:A:OP1	2.21	0.73
34:a:381:C:H2'	34:a:382:A:O4'	1.88	0.73
34:a:483:C:OP2	34:a:484:G:O2'	2.05	0.73
40:g:72:VAL:HG12	40:g:89:GLU:HA	1.70	0.73
43:j:65:TYR:CG	47:n:96:LEU:HD21	2.23	0.73
8:A:779:U:H2'	8:A:780:G:O4'	1.89	0.73
23:P:30:TRP:CG	23:P:37:LYS:HE3	2.23	0.73
29:V:25:LYS:HA	29:V:42:LEU:O	1.88	0.73
34:a:246:A:O4'	34:a:282:A:N6	2.21	0.73
34:a:438:U:O2	34:a:496:A:C5	2.41	0.73
34:a:1249:C:N4	34:a:1288:A:OP2	2.19	0.73
53:t:30:PHE:O	53:t:33:LYS:HB3	1.88	0.73
5:4:11:CYS:CB	5:4:27:CYS:SG	2.73	0.73
8:A:1223:G:N2	8:A:1226:A:OP2	2.21	0.73
8:A:1703:G:H2'	8:A:1704:C:C6	2.24	0.73
8:A:2077:A:OP1	8:A:2238:G:N1	2.22	0.73
8:A:2820:A:OP1	21:N:2:ARG:NH1	2.20	0.73
13:F:109:ARG:HE	13:F:136:ILE:C	1.95	0.73
24:Q:67:ALA:O	24:Q:71:ASN:ND2	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:581:G:N1	34:a:759:A:OP2	2.20	0.73
36:c:19:SER:OG	36:c:21:TRP:NE1	2.22	0.73
40:g:22:LEU:O	40:g:26:VAL:HG23	1.88	0.73
57:x:96:ILE:HD13	57:x:410:PHE:CB	2.18	0.73
3:2:14:ARG:NH2	8:A:771:G:OP1	2.22	0.73
8:A:6:A:H5''	17:J:131:ASN:ND2	2.04	0.73
8:A:1141:U:H4'	8:A:1142:A:O4'	1.87	0.73
8:A:1217:U:N3	8:A:1218:G:N7	2.37	0.73
8:A:1720:U:H2'	8:A:1721:G:O4'	1.87	0.73
8:A:1857:G:N2	8:A:1884:G:H2'	2.02	0.73
8:A:2822:G:OP1	11:D:117:GLY:N	2.21	0.73
14:G:26:LYS:HD3	14:G:27:GLY:N	2.03	0.73
28:U:6:ARG:NH2	28:U:25:LYS:O	2.22	0.73
34:a:161:A:H2'	34:a:162:A:H5''	1.70	0.73
34:a:1013:G:OP1	52:s:17:LYS:NZ	2.21	0.73
35:b:87:ASP:OD2	35:b:224:ARG:NH2	2.22	0.73
37:d:139:ASN:ND2	37:d:181:PHE:O	2.22	0.73
8:A:62:U:H2'	8:A:63:A:N7	2.04	0.73
8:A:298:G:O2'	8:A:340:A:N6	2.22	0.73
8:A:870:U:O2	8:A:907:G:N2	2.22	0.73
34:a:881:G:OP2	45:l:5:GLN:NE2	2.22	0.73
8:A:13:A:O4'	8:A:526:A:N6	2.21	0.72
8:A:315:G:H2'	8:A:316:C:C6	2.24	0.72
8:A:697:G:H2'	8:A:698:C:C6	2.24	0.72
8:A:898:C:OP2	8:A:899:A:N6	2.21	0.72
8:A:2740:A:OP2	8:A:2763:G:N1	2.20	0.72
8:A:2885:G:C5	8:A:2886:A:H1'	2.24	0.72
34:a:207:C:H1'	34:a:212:G:O4'	1.89	0.72
34:a:463:U:N3	34:a:467:U:OP2	2.20	0.72
34:a:921:U:P	34:a:1082:A:O5'	2.47	0.72
34:a:1227:A:O3'	46:m:114:PRO:HG2	1.89	0.72
34:a:1423:G:N2	34:a:1477:U:O2	2.21	0.72
37:d:124:VAL:N	37:d:127:ARG:O	2.21	0.72
41:h:28:SER:HB3	41:h:56:PRO:HB2	1.70	0.72
42:i:25:GLY:HA2	42:i:60:LEU:O	1.89	0.72
45:l:55:ARG:NH2	45:l:59:GLY:O	2.21	0.72
8:A:1024:G:O2'	8:A:1144:A:O2'	2.06	0.72
8:A:1064:C:H4'	16:I:89:SER:C	2.14	0.72
8:A:1879:C:H2'	8:A:1880:U:O4'	1.89	0.72
8:A:2291:U:H2'	8:A:2292:U:C6	2.24	0.72
34:a:188:C:H2'	34:a:189:A:C8	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:e:45:VAL:O	38:e:71:ILE:N	2.22	0.72
4:3:22:LYS:NZ	8:A:631:A:OP2	2.18	0.72
8:A:112:U:H2'	8:A:113:U:O4'	1.89	0.72
8:A:429:A:H2'	8:A:430:A:C8	2.23	0.72
8:A:1339:G:H5''	27:T:19:LYS:HD3	1.71	0.72
8:A:1370:C:H2'	8:A:1371:G:O4'	1.90	0.72
8:A:2185:U:H2'	8:A:2186:G:C8	2.24	0.72
9:B:31:C:H1'	9:B:54:G:H1	1.53	0.72
10:C:3:VAL:HG23	10:C:17:LYS:HB2	1.71	0.72
10:C:167:ASP:N	10:C:170:TYR:O	2.16	0.72
17:J:16:TYR:HB2	17:J:54:ILE:HG12	1.71	0.72
20:M:42:THR:HA	20:M:93:VAL:HG12	1.71	0.72
34:a:67:C:O2'	34:a:171:A:O2'	1.99	0.72
34:a:380:G:N1	34:a:384:G:O6	2.21	0.72
34:a:390:U:O3'	49:p:28:ARG:NH2	2.22	0.72
34:a:1053:G:N7	34:a:1199:U:H3'	2.03	0.72
57:x:411:PRO:HG2	57:x:443:SER:HB2	1.69	0.72
8:A:522:A:H2'	8:A:523:C:C6	2.24	0.72
8:A:1022:G:O6	17:J:68:LYS:NZ	2.22	0.72
8:A:1964:G:O2'	8:A:1967:C:OP2	2.03	0.72
8:A:2376:A:H2'	8:A:2377:A:O4'	1.88	0.72
8:A:2476:A:H2'	8:A:2477:U:O4'	1.88	0.72
8:A:2849:U:O4	23:P:20:ARG:NH2	2.23	0.72
34:a:750:C:O2'	48:o:20:ASP:OD1	2.05	0.72
34:a:865:A:H2'	34:a:866:C:C6	2.24	0.72
34:a:911:U:H2'	34:a:912:C:C6	2.25	0.72
37:d:5:GLY:O	37:d:7:LYS:NZ	2.13	0.72
55:v:58:A:O2'	55:v:60:U:OP2	2.05	0.72
57:x:511[B]:ARG:NH2	59:z:6:U:O3'	2.22	0.72
57:x:560:LEU:O	57:x:570:VAL:N	2.22	0.72
8:A:1475:G:H1'	8:A:1732:C:H41	1.53	0.72
8:A:2731:G:H2'	8:A:2732:G:C8	2.25	0.72
14:G:26:LYS:HG2	14:G:31:GLU:HG2	1.71	0.72
34:a:73:C:H2'	34:a:74:A:O4'	1.88	0.72
34:a:292:G:OP2	34:a:305:G:N1	2.21	0.72
34:a:1181:G:H1'	34:a:1182:G:C4	2.24	0.72
43:j:63:ASP:OD1	47:n:98:LYS:NZ	2.20	0.72
57:x:489:TYR:HH	57:x:660:SER:HG	1.30	0.72
17:J:56:VAL:O	17:J:125:TYR:N	2.19	0.72
28:U:9:GLU:HA	28:U:23:LYS:HA	1.69	0.72
34:a:6:G:H2'	38:e:123:LEU:HD21	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:685:G:N2	34:a:704:A:OP2	2.22	0.72
34:a:933:G:N2	34:a:935:A:O4'	2.23	0.72
57:x:647:GLU:HG3	57:x:648:VAL:H	1.53	0.72
8:A:250:G:O6	8:A:386:G:N1	2.18	0.72
8:A:593:U:H2'	8:A:594:U:C6	2.24	0.72
8:A:659:G:P	12:E:95:LYS:HZ2	2.11	0.72
8:A:974:G:O2'	8:A:989:G:N2	2.20	0.72
9:B:16:G:N2	9:B:69:G:H1'	2.04	0.72
9:B:29:A:H2'	9:B:30:C:O4'	1.90	0.72
34:a:1116:U:O2'	42:i:109:GLN:OE1	2.07	0.72
34:a:1299:A:H2'	34:a:1301:U:C6	2.25	0.72
49:p:3:THR:O	49:p:22:ALA:N	2.22	0.72
8:A:324:A:H2'	8:A:325:G:O4'	1.89	0.72
8:A:1676:A:H2'	8:A:1677:A:O4'	1.88	0.72
8:A:1907:G:O6	8:A:1924:C:N4	2.23	0.72
22:O:33:ARG:HA	22:O:65:THR:O	1.89	0.72
34:a:404:G:OP2	37:d:114:ARG:NH2	2.23	0.72
34:a:741:G:H2'	34:a:742:G:O4'	1.89	0.72
36:c:107:LYS:HD3	36:c:110:LEU:HD12	1.71	0.72
36:c:132:ALA:HA	36:c:135:ARG:HD3	1.72	0.72
48:o:78:THR:O	48:o:82:GLU:HG2	1.90	0.72
57:x:287:SER:O	57:x:291:VAL:HG12	1.90	0.72
8:A:545:U:C2	8:A:548:G:O6	2.43	0.72
8:A:679:C:C2	8:A:799:G:N2	2.58	0.72
8:A:843:G:H2'	8:A:844:A:C8	2.24	0.72
8:A:2284:A:O2'	8:A:2288:A:N6	2.23	0.72
8:A:2831:G:H1'	8:A:2883:A:H2'	1.72	0.72
9:B:76:G:OP1	29:V:12:GLN:HB2	1.89	0.72
17:J:76:HIS:O	17:J:85:LYS:N	2.20	0.72
30:W:27:VAL:N	30:W:61:GLY:O	2.20	0.72
35:b:162:VAL:HG12	35:b:164:ASP:H	1.53	0.72
47:n:52:PRO:O	47:n:55:SER:OG	2.08	0.72
8:A:1317:G:C6	8:A:1336:A:C6	2.78	0.72
8:A:1360:G:N2	8:A:2214:C:C2	2.57	0.72
8:A:2061:G:H1	58:y:101:FME:H	1.37	0.72
8:A:2289:G:H5''	8:A:2384:U:O3'	1.89	0.72
8:A:2745:C:O2'	14:G:138:GLN:O	2.08	0.72
10:C:77:VAL:HG22	10:C:93:VAL:HG22	1.71	0.72
26:S:72:THR:HG21	26:S:108:SER:HB3	1.70	0.72
34:a:255:G:H2'	34:a:256:U:C6	2.25	0.72
34:a:789:U:N3	34:a:792:A:OP2	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:975:A:N1	34:a:1366:C:O2'	2.17	0.72
35:b:212:TYR:O	35:b:216:VAL:HG23	1.89	0.72
36:c:11:LEU:HD11	47:n:91:GLY:HA2	1.72	0.72
39:f:47:LEU:HD12	39:f:55:HIS:HA	1.71	0.72
4:3:7:ARG:O	4:3:11:LYS:HG3	1.90	0.71
7:6:63:ARG:O	7:6:65:ASN:N	2.23	0.71
8:A:8:C:H2'	8:A:9:G:O4'	1.89	0.71
8:A:243:U:C2	8:A:255:A:N7	2.58	0.71
8:A:1670:C:H2'	8:A:1671:U:O4'	1.90	0.71
8:A:2229:U:O2	31:X:33:HIS:NE2	2.23	0.71
8:A:2250:G:C2	20:M:83:GLY:HA3	2.25	0.71
34:a:119:A:C8	34:a:287:U:N3	2.57	0.71
35:b:89:PHE:CD2	35:b:153:MET:HG3	2.25	0.71
40:g:27:ASN:OD1	40:g:35:LYS:NZ	2.20	0.71
51:r:25:ILE:O	51:r:29:LYS:HG3	1.90	0.71
55:v:21:A:N6	55:v:46:A:H1'	2.04	0.71
2:1:24:LYS:HD3	2:1:26:LYS:HG2	1.72	0.71
8:A:793:A:N6	8:A:2073:C:OP1	2.23	0.71
8:A:1174:U:O2'	8:A:1175:A:O4'	2.07	0.71
8:A:1408:G:N2	8:A:1594:U:O2	2.23	0.71
8:A:2091:C:OP2	8:A:2092:U:O2'	2.08	0.71
8:A:2197:U:C2	8:A:2225:A:N7	2.58	0.71
8:A:2278:A:OP1	20:M:10:ARG:NH2	2.22	0.71
8:A:2572:A:N6	11:D:150:GLN:OE1	2.22	0.71
34:a:421:U:O2'	34:a:423:G:N7	2.23	0.71
34:a:581:G:N2	34:a:759:A:OP2	2.22	0.71
34:a:622:A:H2'	34:a:623:C:H5'	1.73	0.71
34:a:782:A:N6	34:a:800:G:O2'	2.23	0.71
8:A:756:A:H2'	8:A:757:G:O4'	1.90	0.71
8:A:1091:G:H2'	8:A:1092:C:O4'	1.89	0.71
8:A:2251:OMG:OP1	20:M:81:ARG:NH1	2.20	0.71
8:A:2314:A:C1'	13:F:154:THR:HG21	2.18	0.71
11:D:3:GLY:C	11:D:4:LEU:HD22	2.14	0.71
19:L:25:SER:OG	19:L:27:LEU:O	2.08	0.71
34:a:151:A:N6	34:a:170:U:H2'	2.05	0.71
34:a:429:U:H4'	34:a:430:A:H5'	1.71	0.71
34:a:1252:A:N1	34:a:1285:A:N6	2.38	0.71
56:w:20:U:C2'	56:w:21:A:H5'	2.20	0.71
57:x:96:ILE:HB	57:x:411:PRO:HD2	1.72	0.71
57:x:594:LEU:HD12	57:x:594:LEU:N	2.05	0.71
5:4:11:CYS:SG	5:4:27:CYS:CB	2.76	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:532:A:H5'	24:Q:27:ARG:NH2	2.05	0.71
8:A:555:G:HO2'	8:A:556:A:P	2.13	0.71
8:A:673:C:OP1	12:E:49:ARG:NH2	2.22	0.71
8:A:1282:U:H2'	8:A:1283:G:O4'	1.91	0.71
8:A:2154:A:N6	8:A:2156:G:N3	2.36	0.71
8:A:2692:G:HO2'	8:A:2847:U:HO2'	1.35	0.71
8:A:2723:C:H2'	8:A:2724:U:O4'	1.90	0.71
15:H:54:LEU:O	15:H:58:LEU:HD23	1.90	0.71
22:O:27:VAL:HG21	22:O:40:ILE:HD12	1.71	0.71
34:a:94:G:N1	34:a:97:G:O6	2.24	0.71
34:a:451:A:OP2	49:p:70:ARG:NH2	2.23	0.71
34:a:1160:G:O6	34:a:1182:G:N1	2.23	0.71
34:a:1184:G:C6	34:a:1185:G:N7	2.58	0.71
35:b:22:TRP:CZ3	35:b:24:PRO:HA	2.26	0.71
35:b:48:MET:HE3	35:b:200:PRO:HD3	1.72	0.71
8:A:1152:C:H2'	8:A:1153:C:H6	1.54	0.71
8:A:1182:G:H2'	8:A:1183:U:O4'	1.89	0.71
8:A:2306:C:OP2	8:A:2307:G:O2'	2.05	0.71
10:C:137:GLY:O	10:C:162:GLN:NE2	2.20	0.71
20:M:20:LEU:HD13	29:V:81:PRO:CG	2.21	0.71
21:N:33:ILE:HG13	21:N:113:ILE:O	1.90	0.71
25:R:51:VAL:O	25:R:53:PHE:N	2.22	0.71
33:Z:10:ARG:O	33:Z:31:ILE:HG12	1.90	0.71
34:a:594:U:H2'	34:a:595:A:O4'	1.90	0.71
34:a:662:U:H2'	34:a:663:A:C8	2.26	0.71
34:a:1093:A:OP2	40:g:3:ARG:NH1	2.23	0.71
56:w:6:G:H2'	56:w:7:A:C8	2.25	0.71
8:A:271:G:O4'	8:A:367:G:N2	2.23	0.71
8:A:368:A:H2'	8:A:369:U:O4'	1.91	0.71
8:A:656:G:H2'	8:A:657:U:C6	2.26	0.71
8:A:929:U:H1'	33:Z:25:GLY:O	1.90	0.71
8:A:1007:C:OP1	17:J:37:ARG:NH1	2.21	0.71
8:A:1536:C:H4'	8:A:1537:G:C2	2.24	0.71
8:A:1718:G:N2	8:A:1742:U:O2	2.24	0.71
8:A:1724:G:N2	8:A:1736:U:O2	2.24	0.71
8:A:2328:A:H2'	8:A:2329:U:C6	2.24	0.71
8:A:2422:C:O5'	55:v:76:A:N6	2.22	0.71
8:A:2513:A:C6	8:A:2574:G:C6	2.78	0.71
15:H:129:GLU:HA	15:H:143:ILE:HG22	1.70	0.71
23:P:12:MET:O	23:P:14:GLN:NE2	2.24	0.71
30:W:7:ARG:O	30:W:10:ARG:NH1	2.18	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1004:A:O2'	34:a:1005:A:O4'	2.07	0.71
34:a:1160:G:H4'	35:b:130:LYS:CD	2.21	0.71
35:b:104:LYS:O	35:b:107:ARG:NH2	2.24	0.71
35:b:117:GLU:O	35:b:120:SER:OG	2.08	0.71
8:A:85:G:C4	8:A:98:G:N2	2.59	0.71
8:A:735:A:OP2	8:A:736:C:N4	2.22	0.71
8:A:1252:G:N3	24:Q:32:ARG:HD3	2.05	0.71
14:G:75:VAL:O	14:G:79:THR:HG22	1.90	0.71
34:a:593:U:H2'	34:a:594:U:C6	2.25	0.71
34:a:1349:A:H5''	42:i:119:LYS:HD2	1.73	0.71
56:w:52:G:N1	56:w:62:C:N3	2.34	0.71
8:A:13:A:N3	8:A:14:A:N6	2.39	0.71
8:A:2122:U:O2	8:A:2176:A:N6	2.23	0.71
8:A:2251:OMG:N1	56:w:75:C:N3	2.34	0.71
8:A:2275:C:C2	20:M:84:LYS:HE3	2.25	0.71
11:D:46:ARG:NH2	11:D:88:GLU:O	2.24	0.71
15:H:78:VAL:HG12	15:H:144:VAL:HG12	1.73	0.71
25:R:27:ILE:O	25:R:66:HIS:CE1	2.44	0.71
34:a:130:A:O2'	34:a:131:A:O5'	2.09	0.71
34:a:582:C:H2'	34:a:583:A:O4'	1.91	0.71
34:a:1236:A:H2'	34:a:1237:C:C6	2.26	0.71
38:e:15:ILE:HG12	38:e:35:LEU:O	1.90	0.71
57:x:2:ARG:NE	57:x:312:ASP:OD2	2.24	0.71
1:0:52:LYS:HE2	1:0:55:ALA:HA	1.73	0.71
8:A:1035:U:O2	8:A:1120:G:N2	2.24	0.71
8:A:1242:U:H2'	8:A:1243:C:C6	2.26	0.71
8:A:1441:G:H2'	8:A:1442:U:C6	2.26	0.71
8:A:2071:A:H2'	8:A:2072:C:C6	2.25	0.71
8:A:2745:C:O2	14:G:138:GLN:OE1	2.08	0.71
10:C:107:LYS:HZ3	10:C:197:ALA:H	1.39	0.71
14:G:100:ASN:ND2	14:G:115:GLN:OE1	2.24	0.71
15:H:62:LEU:O	15:H:66:ASN:HB2	1.90	0.71
34:a:292:G:OP2	34:a:305:G:N2	2.23	0.71
34:a:1004:A:H5'	34:a:1033:G:H22	1.55	0.71
34:a:1221:G:OP1	52:s:35:ARG:NH1	2.24	0.71
45:l:67:GLY:O	45:l:98:ARG:NH1	2.23	0.71
57:x:521:MET:HE2	57:x:573:MET:HE1	1.71	0.71
7:6:41:HIS:O	7:6:45:THR:HG22	1.90	0.71
8:A:1230:A:H2'	8:A:1231:U:O4'	1.91	0.71
8:A:1682:G:H2'	8:A:1683:U:C6	2.26	0.71
8:A:2075:U:O4'	8:A:2597:G:N2	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2809:A:OP2	8:A:2890:G:C6	2.44	0.71
34:a:686:U:H2'	34:a:687:A:C8	2.26	0.71
50:q:10:ARG:HG3	50:q:56:ASP:O	1.90	0.71
50:q:14:ASP:CB	50:q:20:ILE:HG22	2.21	0.71
8:A:2:G:N1	8:A:2902:C:N3	2.39	0.70
8:A:321:U:H1'	12:E:162:ARG:NH1	2.06	0.70
8:A:2099:U:C2	8:A:2190:G:N1	2.52	0.70
8:A:2262:U:H2'	8:A:2263:C:H6	1.55	0.70
50:q:16:MET:HG3	50:q:19:SER:HB3	1.72	0.70
3:2:2:LYS:HZ3	8:A:687:C:H5''	1.56	0.70
8:A:202:U:H2'	8:A:203:A:O4'	1.92	0.70
8:A:2572:A:H2'	11:D:149:ASN:ND2	2.05	0.70
9:B:114:C:O4'	22:O:47:VAL:HB	1.91	0.70
16:I:91:LYS:O	16:I:95:ASP:N	2.24	0.70
34:a:722:G:H2'	34:a:724:G:O4'	1.91	0.70
34:a:1009:U:N3	34:a:1020:G:C6	2.59	0.70
34:a:1235:U:O2'	34:a:1305:G:OP1	2.09	0.70
41:h:17:GLN:NE2	41:h:63:LYS:O	2.23	0.70
50:q:57:VAL:HB	50:q:78:VAL:HG23	1.72	0.70
57:x:443:SER:O	57:x:464:HIS:NE2	2.24	0.70
8:A:312:G:H5'	8:A:331:C:O2'	1.91	0.70
8:A:394:C:H2'	8:A:395:U:O4'	1.89	0.70
8:A:699:A:H2'	8:A:700:G:O4'	1.92	0.70
8:A:783:A:O2'	8:A:785:G:OP1	2.05	0.70
8:A:1169:A:H2'	8:A:1170:C:C6	2.27	0.70
8:A:2698:U:H2'	8:A:2699:C:C6	2.26	0.70
17:J:57:LEU:HD23	17:J:125:TYR:HB2	1.73	0.70
30:W:79:GLU:O	30:W:81:GLU:N	2.24	0.70
34:a:410:G:C2'	34:a:432:A:H61	2.04	0.70
34:a:950:U:C6	46:m:100:ARG:NH1	2.59	0.70
36:c:133:MET:O	36:c:137:VAL:HG23	1.90	0.70
43:j:11:LYS:HA	43:j:70:HIS:O	1.91	0.70
57:x:492:THR:OG1	57:x:571:VAL:O	2.06	0.70
8:A:372:G:O2'	8:A:400:G:O6	2.10	0.70
8:A:569:U:H2'	8:A:570:G:O4'	1.92	0.70
8:A:1452:G:O2'	8:A:2702:G:O6	2.09	0.70
8:A:2353:G:O2'	30:W:29:ALA:O	2.08	0.70
9:B:66:A:C5'	9:B:108:A:H61	2.02	0.70
10:C:139:THR:OG1	10:C:160:TYR:HB2	1.92	0.70
13:F:62:GLN:NE2	13:F:89:THR:O	2.24	0.70
20:M:33:LEU:HD12	20:M:129:THR:O	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:145:G:N2	34:a:177:G:O6	2.24	0.70
34:a:302:G:H5''	45:l:13:ARG:HH21	1.56	0.70
34:a:1103:C:H4'	35:b:96:LEU:HD13	1.74	0.70
34:a:1125:U:H2'	34:a:1126:U:H2'	1.73	0.70
8:A:1545:A:H2'	8:A:1546:G:O4'	1.91	0.70
15:H:47:PHE:O	15:H:52:ALA:N	2.25	0.70
18:K:34:GLY:N	18:K:37:ASP:OD2	2.24	0.70
18:K:98:ARG:NH1	34:a:339:C:OP2	2.24	0.70
34:a:261:U:N3	34:a:264:C:OP2	2.24	0.70
34:a:1157:A:N6	34:a:1178:G:H1'	2.07	0.70
8:A:15:G:N2	8:A:525:U:O2	2.24	0.70
8:A:1061:U:H4'	8:A:1070:A:O3'	1.90	0.70
8:A:1141:U:C2'	17:J:65:THR:HG21	2.22	0.70
8:A:2839:G:H2'	8:A:2840:C:C6	2.25	0.70
34:a:8:A:H1'	38:e:107:GLY:HA2	1.74	0.70
34:a:396:C:O2'	34:a:398:U:OP1	2.08	0.70
34:a:1368:A:OP2	42:i:113:LYS:NZ	2.18	0.70
8:A:1000:A:H2'	8:A:1001:A:C8	2.27	0.70
8:A:1137:G:H2'	8:A:1138:G:O4'	1.91	0.70
8:A:1829:A:C8	8:A:1830:C:C5	2.80	0.70
8:A:2471:A:N6	8:A:2476:A:O2'	2.25	0.70
8:A:2859:G:H2'	8:A:2860:A:C8	2.27	0.70
17:J:36:LEU:HD21	17:J:54:ILE:HD12	1.73	0.70
30:W:46:ASN:HB2	30:W:78:ILE:HB	1.74	0.70
31:X:26:ARG:NE	31:X:27:ARG:O	2.25	0.70
34:a:5:U:O2'	34:a:6:G:OP2	2.10	0.70
34:a:1073:U:O2'	35:b:104:LYS:NZ	2.22	0.70
34:a:1250:A:C8	34:a:1287:A:C8	2.79	0.70
46:m:10:ASP:HA	46:m:44:ILE:HB	1.74	0.70
56:w:62:C:H2'	56:w:63:G:C8	2.26	0.70
8:A:451:U:OP1	12:E:47:LYS:NZ	2.25	0.70
8:A:1022:G:H1'	8:A:1024:G:C6	2.26	0.70
8:A:1039:A:N1	8:A:1116:G:N2	2.40	0.70
8:A:1742:U:H2'	8:A:1743:G:O4'	1.91	0.70
8:A:2364:C:H2'	8:A:2365:G:O4'	1.92	0.70
8:A:2638:G:OP1	11:D:83:ARG:NH1	2.24	0.70
9:B:39:A:H2'	9:B:40:U:C6	2.27	0.70
9:B:74:U:O4	9:B:102:G:N1	2.25	0.70
13:F:110:ILE:HB	13:F:113:PHE:HB2	1.74	0.70
16:I:79:LEU:CB	16:I:83:ALA:HB3	2.21	0.70
21:N:77:ALA:O	21:N:81:ASN:HB2	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Y:31:GLN:HG3	32:Y:36:GLN:HB2	1.74	0.70
34:a:246:A:N7	34:a:281:G:N3	2.40	0.70
34:a:920:U:H3'	34:a:1082:A:OP1	1.92	0.70
34:a:1296:C:N4	34:a:1297:G:O6	2.24	0.70
6:5:57:ASN:N	6:5:82:ILE:O	2.23	0.70
8:A:452:G:N2	8:A:457:A:H1'	2.07	0.70
8:A:493:G:H2'	8:A:494:G:O4'	1.91	0.70
8:A:1526:C:H2'	8:A:1527:G:O4'	1.92	0.70
8:A:1641:A:H2'	8:A:1642:G:O4'	1.91	0.70
8:A:2090:A:N6	8:A:2230:G:O6	2.24	0.70
8:A:2405:G:H1'	8:A:2412:A:H61	1.57	0.70
8:A:2625:G:H2'	8:A:2626:C:C6	2.27	0.70
14:G:106:LEU:O	14:G:151:ARG:NH2	2.18	0.70
34:a:667:G:O2'	48:o:48:ASP:OD1	2.08	0.70
45:l:3:VAL:HA	45:l:6:LEU:HD13	1.73	0.70
57:x:350:ASN:HB3	57:x:353:LYS:HB2	1.74	0.70
57:x:376:VAL:C	57:x:377:ARG:HD2	2.17	0.70
57:x:646:SER:HA	57:x:651:VAL:HG12	1.72	0.70
8:A:419:U:H2'	8:A:420:C:C6	2.27	0.70
8:A:1202:G:O6	8:A:1244:A:N6	2.25	0.70
8:A:1204:A:N6	8:A:1242:U:O4	2.24	0.70
8:A:1688:U:O2	8:A:1700:A:H5''	1.92	0.70
8:A:1859:U:H2'	8:A:1860:G:O4'	1.91	0.70
8:A:2627:G:H2'	8:A:2628:C:C6	2.26	0.70
10:C:141:HIS:N	10:C:190:THR:O	2.17	0.70
22:O:35:ILE:O	22:O:53:THR:HG23	1.91	0.70
28:U:98:ASN:O	28:U:100:GLU:N	2.25	0.70
34:a:203:G:N7	34:a:212:G:N1	2.39	0.70
34:a:696:A:O2'	34:a:786:G:O2'	2.09	0.70
38:e:93:VAL:HG13	38:e:110:MET:HE2	1.71	0.70
51:r:28:LEU:O	51:r:32:ILE:HG23	1.92	0.70
57:x:554:LYS:HB2	57:x:593:LYS:HZ1	1.56	0.70
57:x:695:GLN:N	57:x:695:GLN:OE1	2.25	0.70
4:3:7:ARG:NH1	8:A:243:U:OP2	2.25	0.69
8:A:728:G:C4	8:A:730:A:C8	2.80	0.69
8:A:2299:U:O4	8:A:2318:G:N2	2.25	0.69
29:V:8:VAL:O	29:V:10:LYS:NZ	2.15	0.69
34:a:12:U:O2'	34:a:914:A:OP2	2.10	0.69
34:a:179:A:H61	34:a:196:A:H62	1.39	0.69
34:a:606:G:N2	34:a:632:U:OP1	2.25	0.69
34:a:996:A:N7	34:a:1046:A:O2'	2.24	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1048:G:O2'	34:a:1050:G:OP1	2.10	0.69
34:a:1078:U:H4'	38:e:137:ARG:CZ	2.22	0.69
34:a:1434:A:H2'	34:a:1435:G:O4'	1.92	0.69
36:c:110:LEU:HD21	36:c:143:LEU:HD23	1.74	0.69
57:x:102:MET:HB3	57:x:132:TYR:CD2	2.26	0.69
57:x:590:LEU:C	57:x:594:LEU:HD13	2.16	0.69
4:3:4:LYS:HZ1	8:A:253:C:H3'	1.57	0.69
5:4:27:CYS:HB2	5:4:33:HIS:HB2	1.74	0.69
8:A:2243:U:H2'	8:A:2244:U:C6	2.28	0.69
8:A:2576:G:H3'	8:A:2576:G:N3	2.07	0.69
10:C:72:GLY:N	10:C:117:SER:O	2.23	0.69
15:H:3:VAL:O	15:H:18:GLN:HA	1.91	0.69
27:T:65:GLY:O	27:T:76:ARG:CZ	2.39	0.69
34:a:159:G:H5'	34:a:160:A:H2'	1.72	0.69
34:a:410:G:N1	34:a:431:A:OP2	2.24	0.69
34:a:458:U:H2'	34:a:459:A:C8	2.28	0.69
35:b:100:LEU:HB2	35:b:174:GLU:HG2	1.73	0.69
7:6:16:CYS:CB	7:6:37:CYS:SG	2.79	0.69
8:A:379:G:C6	8:A:396:G:O6	2.44	0.69
8:A:728:G:H4'	10:C:12:ARG:CZ	2.22	0.69
8:A:1078:U:H2'	8:A:1080:A:H62	1.57	0.69
8:A:1944:U:C2	8:A:1955:U:O4'	2.45	0.69
11:D:34:VAL:O	11:D:93:GLY:N	2.22	0.69
11:D:115:GLY:CA	11:D:167:ASN:HB2	2.22	0.69
34:a:110:C:H2'	34:a:111:G:O4'	1.92	0.69
34:a:181:A:H61	34:a:194:C:H3'	1.57	0.69
34:a:335:C:H4'	34:a:1434:A:H4'	1.74	0.69
41:h:1:SER:HB2	41:h:3:GLN:HE22	1.55	0.69
49:p:57:ILE:O	49:p:61:VAL:HG22	1.92	0.69
8:A:228:C:N3	8:A:417:C:O2'	2.23	0.69
8:A:582:A:OP1	24:Q:13:HIS:CD2	2.45	0.69
8:A:1071:G:H2'	8:A:1089:A:N7	2.07	0.69
8:A:1438:U:OP2	8:A:1552:A:N6	2.24	0.69
8:A:2303:G:H2'	8:A:2304:G:O4'	1.91	0.69
28:U:87:GLU:OE1	28:U:101:THR:OG1	2.07	0.69
34:a:130:A:O5'	50:q:64:ARG:HD3	1.92	0.69
34:a:832:G:C6	34:a:855:U:C4	2.80	0.69
57:x:12:ILE:HA	57:x:105:LEU:CD1	2.22	0.69
8:A:17:G:H2'	8:A:18:U:C6	2.28	0.69
8:A:288:U:H2'	8:A:289:G:C8	2.27	0.69
8:A:311:A:O4'	8:A:332:A:C4	2.45	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1057:A:N6	8:A:1080:A:N1	2.40	0.69
8:A:1225:G:H2'	8:A:1226:A:C8	2.26	0.69
8:A:1838:C:O2	8:A:1901:A:N6	2.25	0.69
8:A:2024:G:O3'	11:D:154:LYS:NZ	2.22	0.69
25:R:16:GLU:HG3	25:R:101:ILE:HG13	1.74	0.69
26:S:66:ILE:HA	26:S:69:LEU:HD12	1.74	0.69
34:a:356:A:H2'	34:a:357:G:O4'	1.93	0.69
34:a:451:A:N6	34:a:481:G:H5'	2.05	0.69
34:a:629:A:H2'	34:a:630:A:O4'	1.92	0.69
34:a:921:U:P	34:a:1081:A:H2'	2.32	0.69
34:a:1445:U:O2	34:a:1457:G:N2	2.26	0.69
38:e:56:PRO:HA	38:e:59:ILE:HD12	1.74	0.69
45:l:23:LEU:HD13	45:l:26:CYS:O	1.92	0.69
57:x:501:GLU:CG	57:x:518:VAL:HG12	2.21	0.69
4:3:11:LYS:NZ	8:A:249:C:O2	2.21	0.69
8:A:13:A:O2'	8:A:15:G:N7	2.24	0.69
8:A:220:G:N1	8:A:428:A:OP2	2.25	0.69
8:A:1313:U:O3'	8:A:1332:G:H4'	1.93	0.69
8:A:1747:U:H2'	8:A:1748:C:C6	2.26	0.69
8:A:2175:C:N4	8:A:2176:A:N7	2.40	0.69
8:A:2758:A:H2'	8:A:2759:G:O4'	1.92	0.69
27:T:57:VAL:O	27:T:86:THR:N	2.19	0.69
28:U:95:PHE:O	28:U:99:SER:HA	1.91	0.69
34:a:205:A:H5'	34:a:206:C:C6	2.28	0.69
34:a:537:G:H5''	45:l:109:ARG:CZ	2.22	0.69
34:a:921:U:O5'	34:a:1081:A:H3'	1.92	0.69
34:a:1038:C:H2'	34:a:1039:G:C8	2.27	0.69
45:l:89:LEU:N	45:l:89:LEU:HD22	2.07	0.69
48:o:31:LEU:HD13	48:o:62:ARG:HB2	1.73	0.69
8:A:30:G:H2'	8:A:31:C:C6	2.27	0.69
8:A:52:A:OP2	8:A:117:G:N2	2.25	0.69
8:A:321:U:OP1	12:E:130:LYS:NZ	2.24	0.69
8:A:374:A:N6	8:A:400:G:O2'	2.26	0.69
8:A:632:A:H2'	8:A:633:A:C8	2.28	0.69
8:A:679:C:C2	8:A:680:C:C5	2.81	0.69
8:A:883:G:H1'	8:A:884:U:H2'	1.74	0.69
8:A:1667:G:N1	8:A:1992:G:OP2	2.25	0.69
8:A:2114:A:H5''	8:A:2119:A:C2	2.28	0.69
29:V:80:HIS:ND1	29:V:83:LYS:HB2	2.07	0.69
34:a:359:G:H2'	34:a:360:G:O4'	1.92	0.69
46:m:94:LEU:O	46:m:108:ARG:NE	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:36:ARG:NE	8:A:2742:G:OP1	2.25	0.69
7:6:7:PRO:HG2	13:F:61:GLY:HA2	1.74	0.69
8:A:310:A:O2'	8:A:311:A:O5'	2.10	0.69
8:A:636:G:N1	19:L:76:GLU:OE1	2.25	0.69
8:A:784:G:N2	8:A:792:A:O4'	2.25	0.69
8:A:878:A:N6	8:A:899:A:H4'	2.08	0.69
8:A:1308:A:N6	8:A:1606:C:H1'	2.08	0.69
8:A:1322:A:N1	8:A:1333:G:O2'	2.24	0.69
8:A:2882:A:OP1	21:N:96:ARG:NE	2.26	0.69
9:B:22:U:O2	9:B:61:G:N2	2.25	0.69
9:B:27:C:OP1	22:O:34:HIS:NE2	2.26	0.69
11:D:106:LYS:NZ	11:D:174:SER:O	2.23	0.69
12:E:61:ARG:NE	12:E:63:LYS:O	2.26	0.69
14:G:136:ASP:HB3	14:G:139:VAL:HG12	1.75	0.69
21:N:2:ARG:O	21:N:2:ARG:HD3	1.92	0.69
30:W:17:LEU:HD22	30:W:35:ARG:HB3	1.74	0.69
34:a:246:A:H8	34:a:281:G:N2	1.85	0.69
34:a:720:C:O2	51:r:59:LYS:NZ	2.15	0.69
34:a:769:G:H4'	34:a:1513:A:H4'	1.73	0.69
34:a:921:U:C3'	34:a:1082:A:OP2	2.41	0.69
34:a:1137:C:H4'	34:a:1138:G:H5''	1.75	0.69
34:a:1486:G:H2'	34:a:1487:G:O4'	1.93	0.69
41:h:28:SER:N	41:h:56:PRO:O	2.23	0.69
43:j:22:THR:O	43:j:26:VAL:HG22	1.92	0.69
57:x:252:ARG:NH2	57:x:285:LEU:O	2.25	0.69
57:x:590:LEU:HD23	57:x:590:LEU:H	1.56	0.69
8:A:807:U:O2'	8:A:2060:A:N1	2.26	0.69
8:A:2317:A:H2'	8:A:2318:G:O4'	1.91	0.69
10:C:160:TYR:HB3	10:C:193:GLU:HA	1.74	0.69
14:G:85:LYS:HG2	14:G:164:ALA:HB2	1.75	0.69
17:J:17:VAL:HG23	17:J:137:PRO:HB2	1.75	0.69
28:U:8:ASP:O	28:U:24:VAL:N	2.22	0.69
34:a:157:U:O2'	34:a:159:G:O6	2.11	0.69
34:a:392:C:OP1	49:p:8:ARG:NH2	2.26	0.69
34:a:1033:G:H4'	34:a:1034:G:C6	2.27	0.69
34:a:1442:G:C6	34:a:1461:G:C2	2.81	0.69
44:k:44:ALA:HB3	44:k:69:CYS:HB2	1.73	0.69
46:m:1:ALA:HA	46:m:8:ILE:HG12	1.75	0.69
57:x:363:VAL:HA	57:x:371:GLU:O	1.92	0.69
8:A:39:G:H1'	12:E:43:THR:HG21	1.74	0.69
8:A:68:G:N2	8:A:74:A:O5'	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:134:G:H2'	8:A:135:U:C6	2.28	0.69
8:A:558:U:H5'	17:J:114:LEU:HD22	1.74	0.69
8:A:898:C:H2'	8:A:899:A:H5'	1.74	0.69
8:A:1264:A:OP2	8:A:1265:A:O2'	2.11	0.69
8:A:1353:A:H2'	8:A:1354:A:C8	2.29	0.69
8:A:1722:A:OP2	8:A:1738:G:N2	2.25	0.69
8:A:2128:G:H21	8:A:2173:A:H4'	1.58	0.69
8:A:2537:U:H2'	8:A:2538:C:C6	2.28	0.69
8:A:2547:A:H4'	18:K:29:HIS:CE1	2.28	0.69
13:F:47:LYS:O	13:F:51:ASN:N	2.23	0.69
13:F:118:ALA:O	13:F:166:ARG:NH2	2.25	0.69
24:Q:77:LYS:O	24:Q:116:LEU:HD11	1.91	0.69
34:a:574:A:N3	34:a:883:C:H1'	2.08	0.69
34:a:593:U:O2	34:a:646:G:N2	2.26	0.69
34:a:1240:U:P	40:g:115:MET:HB2	2.32	0.69
35:b:113:LEU:HD13	35:b:143:LEU:HB3	1.74	0.69
57:x:619:GLU:HB3	57:x:652:LYS:HD2	1.75	0.69
2:1:8:ILE:HG22	2:1:26:LYS:NZ	2.08	0.68
8:A:483:A:O2'	28:U:56:GLY:N	2.23	0.68
8:A:862:G:H2'	8:A:863:A:O4'	1.93	0.68
8:A:1930:G:N2	8:A:1968:G:H2'	2.08	0.68
8:A:2107:G:N7	8:A:2182:U:O2	2.26	0.68
8:A:2412:A:H2'	8:A:2413:G:O4'	1.93	0.68
8:A:2461:A:H2'	8:A:2462:C:C6	2.27	0.68
8:A:2788:C:H5'	11:D:62:LYS:HZ3	1.58	0.68
34:a:74:A:H2'	34:a:75:G:O4'	1.93	0.68
34:a:951:G:OP2	46:m:100:ARG:NH2	2.26	0.68
34:a:1043:G:H2'	34:a:1044:A:C8	2.28	0.68
34:a:1124:G:N2	34:a:1125:U:O4	2.25	0.68
46:m:69:ARG:O	46:m:72:ILE:HG13	1.93	0.68
55:v:22:G:H2'	55:v:23:C:C6	2.28	0.68
56:w:5:G:N1	56:w:68:C:C2	2.61	0.68
56:w:6:G:N1	56:w:67:C:N3	2.36	0.68
57:x:144:ASP:OD1	62:x:801:GDP:N1	2.20	0.68
1:0:28:SER:OG	1:0:39:ARG:HG2	1.93	0.68
3:2:11:LYS:HZ3	8:A:686:U:C4'	2.06	0.68
8:A:70:G:H2'	8:A:113:U:O2'	1.92	0.68
8:A:365:U:H2'	8:A:366:C:C6	2.28	0.68
8:A:377:G:N1	8:A:398:C:N3	2.40	0.68
8:A:612:G:H2'	8:A:614:A:C8	2.28	0.68
8:A:2319:G:O2'	8:A:2321:U:O4	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2592:G:N1	8:A:2603:G:C6	2.62	0.68
10:C:132:ARG:O	10:C:166:ARG:NH2	2.24	0.68
11:D:168:GLU:HG2	11:D:169:ARG:N	2.09	0.68
13:F:4:HIS:ND1	13:F:93:GLU:OE1	2.26	0.68
34:a:181:A:H61	34:a:194:C:C3'	2.06	0.68
34:a:565:U:OP2	34:a:566:G:O2'	2.08	0.68
34:a:575:G:O2'	34:a:821:G:H5'	1.92	0.68
34:a:981:U:H2'	34:a:982:U:C5	2.28	0.68
34:a:1237:C:HO2'	34:a:1300:G:H1	1.41	0.68
34:a:1401:G:H2'	34:a:1402:4OC:O4'	1.93	0.68
38:e:59:ILE:O	38:e:63:MET:HG2	1.92	0.68
42:i:54:VAL:HG22	42:i:55:ASP:H	1.58	0.68
43:j:54:SER:O	47:n:81:ARG:NH2	2.27	0.68
57:x:119:GLN:N	57:x:122:SER:OG	2.26	0.68
57:x:197:GLN:C	57:x:199:VAL:H	2.01	0.68
7:6:24:ILE:HD12	13:F:101:ARG:HD3	1.73	0.68
8:A:475:C:N3	8:A:479:A:N7	2.41	0.68
8:A:597:G:N2	19:L:12:SER:OG	2.26	0.68
8:A:954:G:OP2	20:M:16:ARG:NH2	2.26	0.68
8:A:1084:A:O4'	8:A:1105:U:O2'	2.07	0.68
8:A:1275:A:OP2	8:A:1646:C:N4	2.25	0.68
8:A:1497:U:OP2	8:A:1498:C:N4	2.25	0.68
9:B:74:U:O2	29:V:29:ILE:HG12	1.93	0.68
10:C:68:ARG:NH1	10:C:126:GLY:O	2.26	0.68
10:C:257:ARG:NH2	10:C:262:THR:OG1	2.26	0.68
34:a:80:A:N6	34:a:91:U:O2	2.26	0.68
34:a:417:G:H2'	34:a:418:C:C6	2.28	0.68
34:a:1312:G:C2	34:a:1326:U:C2	2.80	0.68
40:g:92:PRO:HA	40:g:95:ARG:HD2	1.76	0.68
50:q:8:GLN:OE1	50:q:59:GLU:HG2	1.93	0.68
56:w:5:G:C2	56:w:68:C:C2	2.81	0.68
3:2:5:PHE:CZ	3:2:7:PRO:HB3	2.29	0.68
8:A:1563:U:H2'	8:A:1564:C:C6	2.28	0.68
8:A:2373:G:H2'	8:A:2374:C:C6	2.27	0.68
22:O:92:PHE:CZ	22:O:107:ALA:HB2	2.28	0.68
23:P:63:ILE:HA	23:P:68:GLY:HA2	1.76	0.68
34:a:63:C:N4	34:a:105:G:O6	2.27	0.68
34:a:428:G:H5''	37:d:9:LYS:CD	2.23	0.68
34:a:581:G:H3'	34:a:758:C:H42	1.58	0.68
34:a:723:U:O4'	54:u:48:LYS:NZ	2.24	0.68
34:a:735:C:H2'	34:a:736:C:C6	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:921:U:O4'	34:a:1081:A:H5'	1.94	0.68
34:a:951:G:C6	34:a:1231:G:C6	2.81	0.68
34:a:1309:G:P	46:m:97:ARG:HE	2.15	0.68
42:i:91:GLU:N	42:i:91:GLU:OE1	2.25	0.68
53:t:14:GLU:O	53:t:18:LYS:HG3	1.93	0.68
57:x:670:ARG:O	57:x:675:GLY:N	2.25	0.68
1:0:9:ARG:HE	8:A:517:C:P	2.17	0.68
8:A:247:G:OP2	8:A:249:C:N4	2.22	0.68
8:A:546:U:C2	8:A:547:A:N3	2.62	0.68
8:A:626:A:H2'	19:L:78:ARG:NH1	2.09	0.68
8:A:643:A:C6	8:A:644:A:C6	2.81	0.68
8:A:678:C:H2'	8:A:679:C:H6	1.58	0.68
8:A:1011:G:P	24:Q:69:ARG:HH11	2.17	0.68
8:A:1042:G:H2'	8:A:1043:C:C6	2.28	0.68
8:A:2341:G:H2'	8:A:2342:C:C6	2.29	0.68
8:A:2769:U:H2'	8:A:2770:G:O4'	1.92	0.68
27:T:33:LYS:HG2	27:T:80:TRP:CE3	2.27	0.68
34:a:958:A:N3	34:a:985:C:O2'	2.25	0.68
34:a:980:C:C5	34:a:981:U:C2	2.81	0.68
34:a:1004:A:N1	34:a:1026:G:O2'	2.18	0.68
36:c:152:VAL:N	36:c:165:GLU:O	2.22	0.68
38:e:11:GLN:OE1	38:e:41:GLY:N	2.26	0.68
1:0:36:LYS:O	26:S:38:TYR:OH	2.11	0.68
8:A:753:A:H2'	8:A:754:U:C6	2.29	0.68
8:A:877:A:O2'	8:A:900:A:N7	2.27	0.68
8:A:1007:C:OP1	17:J:37:ARG:NE	2.26	0.68
8:A:1103:A:H2'	8:A:1104:C:C6	2.28	0.68
8:A:2550:G:C6	8:A:2551:C:N4	2.62	0.68
34:a:673:A:H4'	39:f:86:ARG:CZ	2.23	0.68
34:a:921:U:OP2	34:a:1082:A:O4'	2.11	0.68
34:a:1457:G:H2'	34:a:1458:G:O4'	1.94	0.68
34:a:1506:U:O2	44:k:127:ARG:NH1	2.26	0.68
35:b:33:ALA:CA	35:b:39:ILE:HG22	2.22	0.68
38:e:13:LYS:HD3	38:e:112:ALA:HB1	1.75	0.68
40:g:102:TRP:HB3	40:g:136:LYS:HE3	1.76	0.68
43:j:82:LYS:HG3	43:j:83:THR:HG23	1.75	0.68
57:x:96:ILE:HD13	57:x:410:PHE:CA	2.24	0.68
57:x:256:LEU:HD13	57:x:290:ASP:HB3	1.76	0.68
8:A:1:G:N2	8:A:2902:C:O2	2.18	0.68
8:A:77:G:OP1	32:Y:52:ARG:NE	2.27	0.68
8:A:457:A:N1	8:A:470:A:H5''	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:733:G:H3'	8:A:761:A:H61	1.58	0.68
8:A:936:A:H2'	8:A:937:C:C6	2.29	0.68
8:A:1131:G:H5'	17:J:84:ILE:HG21	1.76	0.68
8:A:1508:A:H2'	8:A:1509:A:O4'	1.94	0.68
8:A:1715:G:N2	8:A:1716:U:O4	2.26	0.68
8:A:1738:G:HO2'	8:A:1739:A:H8	1.41	0.68
8:A:2386:A:H2'	8:A:2387:U:C6	2.29	0.68
8:A:2492:U:H2'	8:A:2493:U:C6	2.28	0.68
13:F:5:ASP:HA	13:F:8:LYS:HE3	1.75	0.68
13:F:134:GLN:N	13:F:134:GLN:OE1	2.26	0.68
34:a:123:U:OP1	34:a:311:C:O2'	2.10	0.68
34:a:170:U:H3'	34:a:171:A:O4'	1.94	0.68
34:a:685:G:H2'	34:a:686:U:C6	2.28	0.68
34:a:939:G:H2'	34:a:940:C:C6	2.29	0.68
5:4:19:ARG:NE	8:A:2755:C:H3'	2.08	0.68
8:A:197:A:O4'	8:A:2068:U:N3	2.27	0.68
8:A:956:G:N7	20:M:14:LYS:NZ	2.38	0.68
8:A:1607:C:H42	8:A:1622:G:P	2.15	0.68
8:A:2233:U:H2'	8:A:2234:G:C8	2.28	0.68
8:A:2743:U:H2'	8:A:2744:G:O4'	1.94	0.68
9:B:48:U:H2'	9:B:49:C:C6	2.28	0.68
21:N:8:ARG:NH2	21:N:43:GLU:OE1	2.26	0.68
23:P:29:VAL:O	23:P:39:LEU:HD12	1.93	0.68
26:S:43:ALA:O	26:S:47:VAL:HG23	1.93	0.68
32:Y:10:SER:N	32:Y:13:GLU:OE2	2.27	0.68
34:a:72:A:H2'	34:a:73:C:C6	2.29	0.68
34:a:105:G:H2'	34:a:106:C:C6	2.28	0.68
34:a:456:A:C2	34:a:477:C:N3	2.62	0.68
34:a:929:G:N1	34:a:1389:C:N3	2.42	0.68
34:a:935:A:C2	40:g:2:ARG:NH2	2.61	0.68
34:a:977:A:H1'	34:a:982:U:O4	1.94	0.68
38:e:38:VAL:HG12	38:e:66:ALA:HB1	1.75	0.68
46:m:21:ILE:HB	46:m:24:VAL:CG1	2.23	0.68
57:x:187:MET:HG3	57:x:206:ILE:HG22	1.76	0.68
57:x:403:ILE:HB	57:x:404:ILE:HD12	1.76	0.68
8:A:672:C:OP2	19:L:42:SER:OG	2.11	0.68
8:A:959:A:H2'	8:A:960:A:C8	2.29	0.68
8:A:1477:A:N6	8:A:1514:G:O2'	2.25	0.68
8:A:1721:G:N1	8:A:1738:G:N7	2.41	0.68
8:A:2677:G:H2'	8:A:2678:C:C6	2.29	0.68
24:Q:39:ILE:O	24:Q:43:GLN:HG3	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:82:MET:HB3	26:S:84:ARG:NH2	2.08	0.68
34:a:1125:U:O3'	43:j:7:ARG:NH2	2.23	0.68
34:a:1157:A:H62	34:a:1178:G:H1'	1.58	0.68
4:3:44:ARG:N	4:3:45:PRO:HD2	2.09	0.68
8:A:142:A:N3	27:T:1:MET:N	2.41	0.68
8:A:2809:A:H2'	8:A:2810:A:C8	2.29	0.68
34:a:119:A:H5''	34:a:288:A:N1	2.09	0.68
34:a:591:U:OP1	41:h:30:LYS:HE2	1.94	0.68
34:a:714:G:H2'	34:a:715:A:C8	2.29	0.68
34:a:743:A:OP1	48:o:57:ARG:NH2	2.27	0.68
34:a:932:C:P	40:g:2:ARG:HB3	2.34	0.68
34:a:1316:G:N2	34:a:1319:A:O4'	2.26	0.68
36:c:76:ILE:HG23	36:c:80:GLY:HA2	1.75	0.68
8:A:29:U:H2'	8:A:30:G:C8	2.29	0.67
8:A:221:A:C4	8:A:266:G:N7	2.62	0.67
8:A:492:A:H2'	8:A:493:G:O4'	1.94	0.67
8:A:1010:A:OP1	24:Q:65:ASN:ND2	2.27	0.67
8:A:1143:A:H2'	17:J:27:ARG:HH22	1.60	0.67
8:A:1819:A:OP1	10:C:155:ARG:N	2.24	0.67
8:A:2146:C:H1'	8:A:2148:G:N2	2.10	0.67
8:A:2204:G:O4'	10:C:146:LYS:NZ	2.26	0.67
8:A:2528:U:O2'	8:A:2530:A:OP1	2.11	0.67
20:M:17:ASN:O	20:M:38:ARG:HD3	1.94	0.67
23:P:88:ARG:O	23:P:111:GLU:HG2	1.94	0.67
26:S:4:ILE:HA	26:S:105:VAL:O	1.94	0.67
34:a:860:A:H2'	34:a:861:G:O4'	1.93	0.67
34:a:1014:A:H2'	34:a:1015:G:N9	2.08	0.67
34:a:1119:C:H2'	34:a:1120:C:C6	2.29	0.67
34:a:1238:A:H5'	34:a:1336:C:H41	1.58	0.67
34:a:1280:A:OP2	43:j:9:ARG:NH2	2.25	0.67
38:e:103:GLY:N	38:e:121:ASN:OD1	2.27	0.67
39:f:7:VAL:HG22	39:f:61:LEU:HA	1.76	0.67
54:u:19:LYS:O	54:u:23:GLU:HG2	1.94	0.67
57:x:28:ARG:HD2	57:x:271:ASN:OD1	1.94	0.67
3:2:3:ARG:O	3:2:6:GLN:NE2	2.25	0.67
8:A:441:U:O2	12:E:41:GLN:NE2	2.28	0.67
8:A:696:G:N2	8:A:766:U:O2	2.25	0.67
8:A:714:U:O5'	48:o:88:ARG:NH2	2.27	0.67
8:A:1567:G:P	10:C:84:PRO:HB3	2.34	0.67
8:A:1808:A:O2'	31:X:2:ARG:NH2	2.26	0.67
8:A:2314:A:H2'	8:A:2315:G:C8	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2856:A:C6	8:A:2862:G:C6	2.82	0.67
15:H:84:ALA:HA	15:H:90:LEU:HA	1.76	0.67
33:Z:50:VAL:O	33:Z:54:VAL:HG22	1.93	0.67
34:a:836:G:N7	34:a:851:G:C6	2.62	0.67
34:a:1074:G:H5'	35:b:104:LYS:NZ	2.09	0.67
35:b:93:HIS:ND1	35:b:145:ASN:O	2.26	0.67
37:d:170:LEU:HB2	37:d:172:VAL:HG23	1.75	0.67
45:l:5:GLN:HG2	45:l:8:ARG:HH21	1.59	0.67
56:w:63:G:H2'	56:w:64:A:H8	1.59	0.67
57:x:622:THR:O	57:x:650:GLY:HA3	1.94	0.67
8:A:805:G:O4'	19:L:38:GLN:HG3	1.93	0.67
8:A:887:A:C2	8:A:887:A:OP1	2.46	0.67
8:A:903:C:H2'	8:A:904:G:C8	2.29	0.67
8:A:1410:G:C6	8:A:1593:A:C6	2.82	0.67
8:A:1814:G:OP2	8:A:1815:A:O2'	2.04	0.67
9:B:119:A:H2'	9:B:120:U:O4'	1.94	0.67
14:G:9:VAL:HA	14:G:48:THR:HA	1.76	0.67
34:a:991:U:C2	34:a:1213:A:N7	2.63	0.67
34:a:1133:G:H2'	34:a:1134:G:C5	2.29	0.67
34:a:1179:A:H2'	34:a:1180:A:O4'	1.94	0.67
34:a:1452:C:H4'	34:a:1453:G:H5'	1.76	0.67
37:d:191:SER:OG	37:d:193:ASP:OD2	2.13	0.67
42:i:20:ILE:HB	42:i:60:LEU:HD21	1.76	0.67
2:1:33:LEU:HD21	8:A:2286:G:H2'	1.76	0.67
3:2:45:SER:OG	8:A:126:A:OP1	2.13	0.67
5:4:24:ARG:HG2	5:4:36:ARG:HA	1.75	0.67
8:A:26:G:N2	8:A:513:A:OP2	2.27	0.67
8:A:774:G:O2'	8:A:775:G:O4'	2.12	0.67
8:A:881:G:O6	8:A:895:U:N3	2.27	0.67
8:A:1198:U:H2'	8:A:1199:U:C6	2.29	0.67
8:A:1252:G:H1'	24:Q:32:ARG:NH2	2.09	0.67
8:A:1279:G:C6	8:A:1292:G:C6	2.83	0.67
8:A:1364:G:OP2	31:X:1:SER:N	2.15	0.67
8:A:1450:G:H2'	8:A:1451:C:C6	2.29	0.67
8:A:1642:G:H2'	8:A:1643:G:O4'	1.95	0.67
8:A:1842:G:H2'	8:A:1843:C:H6	1.60	0.67
8:A:2128:G:N3	8:A:2173:A:H1'	2.10	0.67
8:A:2744:G:N2	14:G:142:GLN:OE1	2.28	0.67
8:A:2899:A:H2'	8:A:2900:A:C8	2.30	0.67
9:B:66:A:N6	9:B:108:A:OP2	2.28	0.67
9:B:104:A:H2'	9:B:105:G:O4'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:106:LYS:HG2	11:D:176:ASP:HA	1.75	0.67
17:J:122:LEU:HG	17:J:124:VAL:HG23	1.76	0.67
20:M:29:GLY:O	20:M:133:LYS:NZ	2.26	0.67
34:a:946:A:H2'	34:a:947:G:H8	1.56	0.67
34:a:973:G:H1'	43:j:56:HIS:HD2	1.57	0.67
45:l:98:ARG:HA	45:l:103:CYS:HB3	1.76	0.67
46:m:10:ASP:O	46:m:12:LYS:HG2	1.94	0.67
46:m:22:TYR:N	46:m:65:GLU:OE2	2.22	0.67
57:x:96:ILE:HG12	57:x:442:PRO:HG2	1.76	0.67
8:A:839:U:O2	8:A:939:G:N2	2.23	0.67
8:A:1009:A:OP2	17:J:39:LYS:NZ	2.23	0.67
8:A:1178:C:C4	8:A:1180:U:C4	2.82	0.67
8:A:1607:C:N4	8:A:1622:G:OP2	2.22	0.67
8:A:1716:U:O4	8:A:1743:G:H2'	1.94	0.67
8:A:1854:A:N6	8:A:1888:G:O2'	2.27	0.67
8:A:1932:A:H2'	8:A:1933:G:O4'	1.94	0.67
8:A:2458:G:O2'	8:A:2460:U:O4	2.07	0.67
9:B:52:A:H1'	9:B:53:A:N7	2.10	0.67
11:D:34:VAL:HA	11:D:50:VAL:HG12	1.75	0.67
28:U:84:PHE:CE2	28:U:93:ARG:HG2	2.30	0.67
34:a:155:A:C6	34:a:156:C:N4	2.62	0.67
34:a:350:G:OP1	53:t:2:ASN:ND2	2.27	0.67
34:a:945:G:C2	34:a:946:A:C8	2.82	0.67
34:a:1029:U:O2	34:a:1032:G:N2	2.27	0.67
34:a:1204:A:H2'	34:a:1205:U:O4'	1.93	0.67
34:a:1397:C:OP2	38:e:28:ARG:NH2	2.27	0.67
42:i:95:SER:O	42:i:99:LYS:HG2	1.94	0.67
43:j:83:THR:O	43:j:87:LEU:HG	1.95	0.67
55:v:51:C:C2	55:v:64:G:C2	2.83	0.67
8:A:545:U:H2'	8:A:546:U:O4'	1.94	0.67
8:A:748:G:C8	8:A:750:A:C8	2.82	0.67
8:A:1067:A:C2	57:x:641:LEU:HD23	2.30	0.67
8:A:1363:C:O2'	8:A:1809:A:N3	2.24	0.67
8:A:1458:U:O4'	8:A:1459:G:C2	2.48	0.67
11:D:178:VAL:HB	11:D:188:LEU:C	2.19	0.67
13:F:7:TYR:OH	13:F:28:PRO:O	2.13	0.67
30:W:37:ARG:O	30:W:53:HIS:ND1	2.26	0.67
34:a:17:U:H2'	34:a:18:C:C6	2.30	0.67
34:a:683:G:N1	34:a:707:U:C2	2.62	0.67
34:a:1067:A:N3	34:a:1068:G:H1'	2.10	0.67
37:d:75:TYR:CZ	37:d:203:TYR:HB3	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:f:92:THR:O	39:f:93:LYS:HG2	1.95	0.67
46:m:70:ARG:O	46:m:73:SER:OG	2.10	0.67
53:t:57:VAL:HG21	53:t:75:LYS:HD3	1.76	0.67
57:x:525:GLU:HB2	57:x:528:SER:HB3	1.75	0.67
6:5:32:GLY:O	8:A:1055:G:H4'	1.94	0.67
8:A:305:C:C2	8:A:313:G:C2	2.82	0.67
8:A:632:A:O2'	8:A:2403:C:O2'	2.11	0.67
8:A:1005:C:C4	8:A:1143:A:C4	2.82	0.67
8:A:1040:A:N1	8:A:1115:G:N2	2.40	0.67
8:A:1080:A:H1'	16:I:127:SER:HA	1.76	0.67
8:A:1083:U:O2	8:A:1086:A:N1	2.27	0.67
8:A:1213:A:OP2	8:A:1235:G:N1	2.24	0.67
8:A:1268:A:H2'	8:A:1269:A:O4'	1.95	0.67
8:A:2526:G:C6	8:A:2538:C:N3	2.63	0.67
8:A:2531:A:C4	8:A:2532:G:C8	2.83	0.67
8:A:2657:A:N6	8:A:2664:G:O2'	2.27	0.67
12:E:101:TYR:O	12:E:105:LEU:HD13	1.95	0.67
34:a:369:G:OP2	34:a:388:G:N1	2.26	0.67
34:a:489:C:H2'	34:a:490:C:C6	2.30	0.67
34:a:587:G:N1	34:a:754:C:OP2	2.28	0.67
34:a:634:C:H2'	34:a:635:A:C8	2.29	0.67
34:a:1063:C:OP2	34:a:1064:G:O2'	2.12	0.67
34:a:1091:U:N3	34:a:1094:G:OP2	2.26	0.67
35:b:8:MET:SD	35:b:10:LYS:HD3	2.35	0.67
42:i:84:ARG:HA	42:i:87:MET:HG2	1.77	0.67
45:l:35:ARG:HB2	45:l:53:ARG:HB3	1.77	0.67
47:n:25:GLU:O	47:n:29:ILE:HG13	1.95	0.67
50:q:46:HIS:HA	50:q:70:LYS:HE3	1.77	0.67
3:2:30:VAL:HG22	3:2:33:ARG:HH12	1.59	0.67
8:A:849:A:H2'	8:A:850:U:C6	2.29	0.67
8:A:952:G:C6	8:A:966:G:C6	2.83	0.67
8:A:1020:A:O4'	8:A:1021:A:C6	2.48	0.67
8:A:1036:G:O6	8:A:1119:U:O2	2.13	0.67
8:A:1040:A:H61	8:A:1115:G:H1	1.43	0.67
8:A:2113:U:H2'	8:A:2168:G:H21	1.58	0.67
8:A:2355:G:C1'	30:W:32:ILE:HD12	2.25	0.67
8:A:2519:U:O2	8:A:2520:C:N4	2.27	0.67
8:A:2785:C:H2'	8:A:2786:U:H6	1.60	0.67
9:B:39:A:H2'	9:B:40:U:C5	2.30	0.67
11:D:34:VAL:HG22	11:D:48:ILE:HD12	1.77	0.67
15:H:7:ASP:OD1	15:H:8:LYS:N	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:79:LEU:C	19:L:114:GLY:O	2.37	0.67
20:M:29:GLY:O	20:M:133:LYS:HE3	1.93	0.67
21:N:29:VAL:O	21:N:78:LYS:NZ	2.25	0.67
26:S:23:LEU:O	26:S:27:LYS:NZ	2.27	0.67
34:a:186:C:H2'	34:a:187:G:O4'	1.94	0.67
34:a:684:U:H2'	34:a:685:G:O4'	1.94	0.67
34:a:689:C:O2'	34:a:690:G:OP1	2.13	0.67
34:a:776:G:H22	34:a:802:A:P	2.17	0.67
37:d:120:LYS:HG3	37:d:130:ASN:HB3	1.76	0.67
37:d:123:MET:HA	37:d:128:VAL:HA	1.76	0.67
40:g:70:PRO:O	40:g:95:ARG:NH1	2.28	0.67
49:p:7:ALA:HB3	49:p:18:GLN:H	1.59	0.67
57:x:434:LEU:HD13	57:x:446:VAL:HG13	1.77	0.67
7:6:50:ASP:O	7:6:51:VAL:HG23	1.95	0.67
8:A:122:G:N1	8:A:130:C:N3	2.43	0.67
8:A:182:A:N1	8:A:215:G:N1	2.34	0.67
8:A:1104:C:H2'	8:A:1105:U:C6	2.30	0.67
8:A:1542:U:H2'	8:A:1543:G:O4'	1.95	0.67
8:A:1567:G:H5'	10:C:57:HIS:ND1	2.10	0.67
8:A:1798:U:C6	10:C:270:ARG:NH2	2.63	0.67
8:A:1860:G:N2	8:A:1882:U:O2	2.26	0.67
9:B:31:C:H1'	9:B:54:G:N1	2.09	0.67
10:C:239:PHE:O	10:C:241:LYS:NZ	2.28	0.67
34:a:119:A:H62	34:a:287:U:H2'	1.58	0.67
34:a:841:C:H4'	34:a:843:U:C1'	2.25	0.67
34:a:1109:C:P	36:c:175:HIS:ND1	2.68	0.67
35:b:96:LEU:H	35:b:99:MET:HE3	1.59	0.67
36:c:72:PRO:HB3	36:c:102:ILE:HG21	1.77	0.67
57:x:8:ARG:HB3	57:x:81:HIS:CD2	2.29	0.67
57:x:471:ARG:NE	57:x:475:GLU:OE2	2.28	0.67
57:x:616:MET:N	57:x:657:VAL:O	2.25	0.67
8:A:382:A:C2	8:A:393:C:N3	2.63	0.67
8:A:814:C:C2	8:A:1194:A:C2	2.83	0.67
8:A:1658:C:H5'	11:D:138:LEU:HD22	1.76	0.67
8:A:1675:C:H2'	8:A:1676:A:O4'	1.93	0.67
8:A:2135:A:N6	8:A:2160:C:H5''	2.10	0.67
8:A:2258:C:O2'	8:A:2426:A:H4'	1.94	0.67
18:K:69:VAL:HG22	18:K:77:ILE:HB	1.76	0.67
23:P:24:THR:O	23:P:86:LYS:N	2.28	0.67
27:T:51:PHE:O	27:T:93:LEU:HB2	1.94	0.67
28:U:25:LYS:HB2	28:U:34:ILE:O	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:429:U:P	37:d:12:ARG:HH22	2.18	0.67
34:a:500:G:H2'	34:a:501:C:C6	2.30	0.67
34:a:1107:C:OP1	36:c:171:ARG:NH2	2.28	0.67
34:a:1140:C:H2'	34:a:1141:C:C6	2.30	0.67
34:a:1373:G:H5''	40:g:35:LYS:HD3	1.77	0.67
35:b:113:LEU:HD13	35:b:143:LEU:CB	2.25	0.67
37:d:149:LYS:O	37:d:150:LYS:HG2	1.95	0.67
40:g:85:GLN:O	40:g:147:ASN:OD1	2.13	0.67
45:l:36:VAL:N	45:l:75:GLU:OE2	2.26	0.67
8:A:371:A:C6	8:A:401:A:C8	2.83	0.66
8:A:660:C:H4'	12:E:94:GLN:NE2	2.10	0.66
8:A:1109:C:H2'	8:A:1110:G:O4'	1.95	0.66
8:A:1318:U:O2	8:A:1334:G:N2	2.28	0.66
8:A:1537:G:N1	8:A:1538:G:C4	2.64	0.66
9:B:15:A:H1'	9:B:109:A:C8	2.30	0.66
11:D:178:VAL:N	11:D:188:LEU:O	2.26	0.66
19:L:136:GLU:OE2	19:L:142:ILE:HD12	1.94	0.66
26:S:95:ARG:O	26:S:95:ARG:HD2	1.95	0.66
27:T:65:GLY:N	27:T:79:ASP:OD1	2.24	0.66
30:W:44:GLY:N	30:W:76:ILE:O	2.28	0.66
34:a:552:U:H2'	34:a:553:A:O4'	1.95	0.66
34:a:745:G:H5''	34:a:851:G:O2'	1.95	0.66
34:a:1097:C:H2'	34:a:1098:C:C6	2.30	0.66
34:a:1347:G:N2	34:a:1373:G:H2'	2.10	0.66
34:a:1527:U:OP2	54:u:44:ARG:NH2	2.28	0.66
38:e:105:ILE:O	38:e:124:ALA:N	2.28	0.66
54:u:47:ALA:O	54:u:50:SER:OG	2.11	0.66
57:x:495:GLN:CA	57:x:523:PRO:HG3	2.25	0.66
6:5:45:GLY:HA2	6:5:49:GLY:O	1.96	0.66
8:A:633:A:H5''	19:L:70:LYS:HD3	1.76	0.66
8:A:1071:G:C2'	8:A:1089:A:N7	2.58	0.66
8:A:1532:A:H2'	8:A:1533:C:O4'	1.95	0.66
8:A:2514:U:O2	8:A:2570:G:N2	2.24	0.66
8:A:2536:G:H2'	8:A:2537:U:C6	2.30	0.66
8:A:2874:C:H2'	8:A:2875:C:C6	2.30	0.66
15:H:66:ASN:OD1	15:H:134:VAL:HG13	1.95	0.66
15:H:137:GLU:N	15:H:137:GLU:OE1	2.28	0.66
34:a:160:A:O2'	34:a:161:A:H3'	1.94	0.66
34:a:161:A:O2'	34:a:162:A:O4'	2.09	0.66
34:a:202:G:C2	34:a:203:G:H1'	2.31	0.66
34:a:728:A:N7	48:o:53:ARG:NE	2.42	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:979:C:OP2	34:a:980:C:N4	2.25	0.66
42:i:74:GLN:O	42:i:78:ILE:HG12	1.95	0.66
45:l:5:GLN:HG2	45:l:8:ARG:NH2	2.10	0.66
6:5:33:VAL:HA	8:A:1055:G:C4'	2.25	0.66
7:6:2:LYS:HG3	9:B:43:C:P	2.35	0.66
8:A:693:A:H1'	8:A:1354:A:H1'	1.76	0.66
8:A:884:U:H1'	8:A:894:U:O5'	1.94	0.66
8:A:934:U:H2'	8:A:935:C:C6	2.30	0.66
8:A:940:G:H2'	8:A:941:A:O4'	1.95	0.66
8:A:1029:A:H2'	8:A:1030:C:O4'	1.96	0.66
8:A:1103:A:H2'	8:A:1104:C:O4'	1.96	0.66
8:A:1217:U:P	24:Q:14:LYS:HE2	2.34	0.66
8:A:1889:A:H2'	8:A:1890:A:O4'	1.94	0.66
8:A:2133:G:H1'	8:A:2158:A:C2	2.31	0.66
8:A:2279:G:N7	30:W:10:ARG:NH2	2.43	0.66
8:A:2586:U:H2'	8:A:2587:A:O4'	1.94	0.66
8:A:2658:C:H2'	8:A:2659:G:O4'	1.95	0.66
9:B:24:G:C8	9:B:56:G:H2'	2.30	0.66
9:B:30:C:O2'	9:B:57:A:N1	2.25	0.66
10:C:106:PRO:CD	10:C:109:LEU:HD22	2.23	0.66
19:L:88:GLY:O	19:L:121:THR:N	2.27	0.66
34:a:76:G:N2	34:a:93:U:O2	2.27	0.66
34:a:323:U:N3	34:a:327:A:C8	2.62	0.66
34:a:546:A:O2'	34:a:548:G:O2'	2.07	0.66
34:a:1500:A:H5''	34:a:1508:A:H5''	1.78	0.66
36:c:17:TRP:CD1	47:n:93:ILE:O	2.48	0.66
41:h:38:VAL:O	41:h:41:GLU:HG3	1.94	0.66
57:x:639:GLY:HA2	57:x:657:VAL:HG22	1.76	0.66
8:A:7:G:H2'	8:A:8:C:C6	2.31	0.66
8:A:242:G:O2'	8:A:243:U:O5'	2.12	0.66
8:A:577:G:H2'	8:A:578:G:C8	2.30	0.66
8:A:667:U:H2'	8:A:668:A:O4'	1.94	0.66
8:A:760:G:H2'	8:A:761:A:O4'	1.95	0.66
8:A:884:U:H1'	8:A:894:U:P	2.36	0.66
8:A:1925:C:O2	8:A:1929:G:C6	2.48	0.66
8:A:2100:G:C6	8:A:2189:U:C4	2.83	0.66
8:A:2134:A:H5'	8:A:2158:A:H5'	1.76	0.66
8:A:2377:A:H2'	8:A:2378:A:C8	2.29	0.66
10:C:75:ALA:HB1	10:C:93:VAL:CG1	2.26	0.66
19:L:27:LEU:HD12	19:L:27:LEU:H	1.60	0.66
28:U:17:ASP:HA	28:U:20:LYS:HE2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:439:U:O3'	37:d:120:LYS:NZ	2.28	0.66
34:a:455:G:H2'	34:a:456:A:C8	2.30	0.66
34:a:1135:U:OP2	34:a:1137:C:N4	2.27	0.66
35:b:69:VAL:HG22	35:b:162:VAL:HA	1.76	0.66
37:d:71:PHE:HA	37:d:74:TYR:HB2	1.77	0.66
43:j:32:THR:CG2	43:j:83:THR:HG21	2.24	0.66
46:m:12:LYS:HB2	46:m:17:ALA:HB2	1.77	0.66
57:x:518:VAL:HG22	57:x:579:PHE:H	1.58	0.66
8:A:1064:C:H2'	8:A:1075:C:N3	2.09	0.66
8:A:1271:G:C2	8:A:1617:C:H4'	2.30	0.66
8:A:1384:A:O2'	8:A:1404:C:O2	2.12	0.66
8:A:1926:U:N3	8:A:1929:G:OP2	2.21	0.66
8:A:2526:G:O6	8:A:2538:C:N4	2.28	0.66
8:A:2683:C:N3	8:A:2727:A:O2'	2.24	0.66
10:C:257:ARG:HB3	10:C:269:ARG:NH1	2.10	0.66
13:F:72:SER:CB	13:F:79:ARG:HE	2.09	0.66
14:G:94:ARG:HG2	14:G:105:SER:HB3	1.77	0.66
19:L:123:ARG:HB2	19:L:143:GLU:HG2	1.78	0.66
20:M:112:LEU:O	20:M:115:GLU:HG3	1.95	0.66
34:a:437:U:C2	34:a:495:A:N7	2.63	0.66
34:a:510:A:O2'	34:a:542:G:O2'	2.11	0.66
34:a:598:U:H2'	34:a:599:C:C6	2.31	0.66
38:e:105:ILE:HB	38:e:123:LEU:HA	1.76	0.66
43:j:9:ARG:NE	43:j:99:GLN:OE1	2.28	0.66
55:v:15:G:H2'	55:v:59:A:N1	2.11	0.66
57:x:232:LEU:HD11	57:x:242:LEU:HD21	1.78	0.66
7:6:1:MET:HB2	9:B:43:C:H5''	1.77	0.66
8:A:242:G:O2'	8:A:243:U:P	2.53	0.66
8:A:1100:C:H3'	8:A:1101:U:C5'	2.25	0.66
8:A:1117:C:H2'	8:A:1118:C:C6	2.31	0.66
8:A:1263:U:H2'	8:A:1264:A:N9	2.11	0.66
8:A:2082:A:N6	8:A:2237:G:H1'	2.11	0.66
8:A:2097:A:H2'	8:A:2098:U:C6	2.30	0.66
8:A:2193:G:H2'	8:A:2194:U:H6	1.59	0.66
8:A:2197:U:O2	8:A:2198:A:O2'	2.13	0.66
8:A:2553:G:N1	8:A:2554:U:O2	2.29	0.66
8:A:2880:C:O3'	21:N:90:ARG:NH1	2.28	0.66
9:B:73:A:N7	9:B:103:U:C2	2.64	0.66
12:E:21:ARG:HG3	12:E:107:SER:HA	1.77	0.66
13:F:62:GLN:HE21	13:F:90:LEU:HD23	1.61	0.66
29:V:78:GLN:O	29:V:87:GLN:N	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:785:G:C2	34:a:798:U:C2	2.84	0.66
34:a:1290:G:H5'	40:g:34:LYS:CE	2.26	0.66
34:a:1343:G:H4'	42:i:123:ARG:HB2	1.77	0.66
37:d:8:LEU:HD22	37:d:27:ILE:HG12	1.77	0.66
38:e:15:ILE:HD11	38:e:35:LEU:HG	1.76	0.66
46:m:18:LEU:O	46:m:24:VAL:HG11	1.96	0.66
6:5:55:VAL:N	8:A:1083:U:H5'	2.10	0.66
8:A:155:A:H2'	8:A:156:A:C8	2.31	0.66
8:A:713:G:C2'	8:A:718:A:H61	2.08	0.66
8:A:861:A:H2'	8:A:862:G:O4'	1.96	0.66
8:A:1468:U:O2	8:A:1524:G:N2	2.26	0.66
8:A:2557:G:H2'	8:A:2558:C:C6	2.31	0.66
8:A:2798:U:H1'	8:A:2799:A:N6	2.10	0.66
8:A:2882:A:P	21:N:96:ARG:HE	2.18	0.66
9:B:66:A:H61	9:B:107:G:H3'	1.61	0.66
27:T:24:MET:HE1	27:T:87:LEU:HD12	1.77	0.66
27:T:69:ARG:HD2	27:T:72:GLN:OE1	1.96	0.66
29:V:80:HIS:CD2	29:V:81:PRO:HD2	2.30	0.66
34:a:181:A:N6	34:a:194:C:H3'	2.09	0.66
34:a:524:G:H2'	34:a:525:C:C6	2.31	0.66
34:a:697:U:H4'	34:a:786:G:H4'	1.78	0.66
34:a:698:G:H2'	34:a:699:C:C6	2.31	0.66
34:a:1149:C:H2'	34:a:1150:A:H8	1.61	0.66
7:6:16:CYS:HB3	7:6:37:CYS:SG	2.36	0.66
8:A:1036:G:C6	8:A:1119:U:O2	2.48	0.66
8:A:2650:U:H2'	8:A:2651:C:C6	2.31	0.66
17:J:74:TYR:O	17:J:86:GLN:HA	1.95	0.66
19:L:108:ALA:HB3	19:L:125:LEU:HG	1.78	0.66
33:Z:16:LEU:HD12	33:Z:19:HIS:CE1	2.31	0.66
34:a:193:C:H2'	34:a:194:C:C6	2.30	0.66
34:a:978:A:O2'	34:a:1322:C:N3	2.29	0.66
34:a:1160:G:N2	34:a:1176:A:C2	2.64	0.66
45:l:32:VAL:HG12	45:l:55:ARG:H	1.60	0.66
57:x:362:ILE:HB	57:x:373:ILE:O	1.95	0.66
8:A:92:U:H2'	8:A:93:G:O4'	1.95	0.66
8:A:226:A:O2'	8:A:229:C:N4	2.26	0.66
8:A:311:A:HO2'	8:A:331:C:HO2'	1.44	0.66
8:A:563:A:N1	8:A:578:G:N2	2.44	0.66
8:A:585:G:H2'	8:A:1251:C:H42	1.61	0.66
8:A:1935:G:H3'	8:A:1962:5MC:HN41	1.59	0.66
8:A:2784:U:H2'	8:A:2785:C:C6	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:62:C:H2'	9:B:63:C:C6	2.31	0.66
9:B:76:G:O3'	29:V:21:ARG:NH2	2.27	0.66
10:C:208:GLY:HA2	10:C:211:ARG:HB2	1.78	0.66
12:E:126:VAL:HG22	12:E:128:ALA:H	1.59	0.66
14:G:17:LYS:HE2	14:G:24:THR:HB	1.76	0.66
34:a:147:G:O2'	34:a:148:G:N7	2.25	0.66
34:a:320:A:H2'	34:a:321:A:O4'	1.95	0.66
34:a:429:U:O2'	37:d:21:LYS:NZ	2.29	0.66
34:a:1264:U:C2	34:a:1272:G:C2	2.84	0.66
34:a:1396:A:N3	38:e:23:THR:HG21	2.10	0.66
35:b:90:PHE:CD1	35:b:149:GLY:HA3	2.31	0.66
51:r:41:SER:HG	51:r:51:GLN:CD	2.02	0.66
8:A:120:U:H5''	8:A:122:G:OP2	1.96	0.66
8:A:597:G:O2'	19:L:11:GLY:O	2.13	0.66
8:A:1072:C:O4'	8:A:1089:A:C8	2.49	0.66
8:A:1075:C:H2'	8:A:1076:C:C6	2.31	0.66
8:A:1244:A:O2'	12:E:29:HIS:NE2	2.27	0.66
8:A:1497:U:N3	8:A:1578:U:O5'	2.29	0.66
8:A:2785:C:H2'	8:A:2786:U:C6	2.31	0.66
21:N:85:PRO:HA	21:N:88:ALA:HB2	1.76	0.66
26:S:15:GLN:O	26:S:19:LEU:HG	1.96	0.66
34:a:270:A:H2'	34:a:271:C:C6	2.30	0.66
34:a:420:U:H2'	34:a:422:C:C4	2.31	0.66
34:a:779:C:H2'	34:a:780:A:O4'	1.96	0.66
34:a:1057:G:H2'	34:a:1058:G:O4'	1.96	0.66
34:a:1266:G:N2	34:a:1269:A:OP2	2.28	0.66
34:a:1346:A:N7	40:g:9:ARG:NH2	2.43	0.66
53:t:50:PHE:O	53:t:53:MET:HG3	1.96	0.66
57:x:297:ILE:O	57:x:404:ILE:N	2.25	0.66
8:A:527:C:O2'	8:A:2779:U:O2'	2.13	0.65
8:A:748:G:C8	26:S:89:ALA:HB1	2.32	0.65
8:A:1168:G:C6	8:A:1182:G:C6	2.84	0.65
8:A:1178:C:O2	8:A:1179:G:C2	2.48	0.65
8:A:1846:G:N1	8:A:1895:C:N3	2.43	0.65
8:A:2139:U:H2'	8:A:2140:G:H4'	1.78	0.65
8:A:2531:A:O4'	14:G:173:ALA:HB1	1.96	0.65
9:B:106:G:H2'	9:B:107:G:O4'	1.95	0.65
13:F:4:HIS:CG	13:F:8:LYS:HE2	2.31	0.65
21:N:94:TYR:C	21:N:116:VAL:HG22	2.21	0.65
34:a:16:A:N6	34:a:919:A:N1	2.44	0.65
34:a:99:C:HO2'	34:a:100:G:H8	1.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:888:G:H1'	34:a:909:A:H61	1.62	0.65
34:a:974:A:OP1	47:n:69:ARG:NH2	2.29	0.65
34:a:1404:C:O2	34:a:1519:MA6:O2'	2.10	0.65
41:h:4:ASP:OD2	41:h:76:ARG:NE	2.29	0.65
45:l:58:ASN:ND2	45:l:60:PHE:CD1	2.64	0.65
57:x:73:GLY:HA2	57:x:279:ASP:OD1	1.96	0.65
1:0:9:ARG:NE	8:A:517:C:OP2	2.27	0.65
8:A:221:A:C1'	8:A:233:A:H1'	2.26	0.65
8:A:247:G:H4'	8:A:386:G:C4	2.30	0.65
8:A:337:C:OP2	28:U:3:LYS:NZ	2.28	0.65
8:A:535:G:H2'	8:A:536:G:O4'	1.96	0.65
8:A:1016:G:O6	8:A:1147:A:N6	2.28	0.65
8:A:1034:G:H2'	8:A:1035:U:C6	2.32	0.65
8:A:1087:G:H21	8:A:1102:C:H5	1.44	0.65
8:A:1614:A:N6	26:S:92:ARG:O	2.29	0.65
8:A:1831:G:C6	8:A:1975:G:C6	2.84	0.65
8:A:2037:A:H2'	8:A:2038:G:C8	2.32	0.65
8:A:2704:C:H2'	8:A:2705:A:O4'	1.95	0.65
8:A:2820:A:N6	11:D:197:THR:O	2.29	0.65
20:M:54:THR:O	20:M:59:ARG:NH1	2.27	0.65
32:Y:17:GLU:O	32:Y:18:LEU:HB3	1.95	0.65
34:a:509:A:H5'	37:d:50:TYR:HD2	1.61	0.65
34:a:921:U:H6	34:a:1082:A:OP2	1.79	0.65
34:a:1103:C:C5'	35:b:96:LEU:HD13	2.26	0.65
34:a:1117:A:N1	34:a:1184:G:C6	2.64	0.65
34:a:1133:G:C6	34:a:1142:G:C5	2.84	0.65
34:a:1160:G:C2	34:a:1176:A:N1	2.64	0.65
34:a:1297:G:N2	40:g:113:LYS:O	2.28	0.65
36:c:169:GLU:N	36:c:169:GLU:OE2	2.28	0.65
39:f:12:PRO:HB3	39:f:56:LYS:O	1.96	0.65
42:i:14:SER:OG	42:i:77:ALA:HB2	1.97	0.65
55:v:30:G:C2	55:v:41:C:C2	2.85	0.65
8:A:322:A:O4'	8:A:340:A:H1'	1.95	0.65
8:A:1342:A:O2'	8:A:1345:C:N4	2.26	0.65
8:A:1549:A:H2'	8:A:1550:C:C6	2.30	0.65
8:A:1752:C:H2'	8:A:1753:G:C8	2.31	0.65
8:A:2314:A:OP1	13:F:87:LYS:NZ	2.29	0.65
8:A:2409:G:H2'	8:A:2410:G:O4'	1.96	0.65
9:B:11:C:H2'	9:B:12:C:O4'	1.96	0.65
15:H:9:VAL:H	15:H:13:GLY:HA3	1.61	0.65
23:P:5:LYS:O	23:P:9:GLN:HG2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:258:G:N2	34:a:268:U:O2	2.29	0.65
34:a:464:U:O4	34:a:467:U:OP2	2.13	0.65
34:a:1161:C:C2	34:a:1162:C:C5	2.85	0.65
35:b:160:LEU:HD23	35:b:160:LEU:C	2.21	0.65
36:c:63:ILE:CD1	36:c:96:VAL:HB	2.26	0.65
43:j:67:ILE:HG12	47:n:96:LEU:HA	1.79	0.65
44:k:125:LYS:HG3	44:k:126:ARG:N	2.11	0.65
56:w:6:G:N2	56:w:67:C:C2	2.56	0.65
8:A:1087:G:H3'	8:A:1088:A:H4'	1.78	0.65
8:A:1378:A:O2'	8:A:1380:G:OP2	2.15	0.65
8:A:1387:A:C6	8:A:1401:G:N1	2.64	0.65
8:A:1509:A:H2'	8:A:1510:G:C8	2.32	0.65
8:A:1860:G:H2'	8:A:1861:G:O4'	1.96	0.65
34:a:189:A:H2'	34:a:190:A:O4'	1.95	0.65
34:a:592:G:C6	34:a:648:A:C6	2.85	0.65
34:a:921:U:P	34:a:1081:A:C3'	2.84	0.65
34:a:974:A:H5'	47:n:71:HIS:HB3	1.78	0.65
37:d:54:LEU:O	37:d:58:GLN:HG2	1.96	0.65
40:g:42:VAL:O	40:g:46:LEU:HD13	1.96	0.65
55:v:12:G:H2'	55:v:13:C:O4'	1.96	0.65
1:0:38:LEU:HB2	1:0:41:HIS:CG	2.31	0.65
8:A:224:U:H2'	8:A:225:C:O4'	1.96	0.65
8:A:671:C:OP1	19:L:43:GLY:N	2.29	0.65
8:A:691:C:O4'	10:C:42:ARG:NH2	2.30	0.65
8:A:1047:G:H22	8:A:1110:G:C2'	2.08	0.65
8:A:1422:G:N2	8:A:1576:U:O2	2.29	0.65
8:A:2151:U:H2'	8:A:2152:G:C8	2.32	0.65
8:A:2170:A:H2'	8:A:2171:A:C5	2.32	0.65
8:A:2298:A:H2'	8:A:2299:U:O4'	1.95	0.65
8:A:2318:G:H2'	8:A:2319:G:C1'	2.27	0.65
9:B:5:U:H2'	9:B:6:G:C8	2.31	0.65
15:H:131:SER:OG	15:H:141:LYS:NZ	2.30	0.65
26:S:3:THR:HG21	26:S:58:ALA:N	2.11	0.65
34:a:1409:C:H2'	34:a:1410:A:C8	2.32	0.65
34:a:1477:U:H2'	34:a:1478:U:C6	2.31	0.65
37:d:171:GLU:O	37:d:180:THR:OG1	2.13	0.65
47:n:13:VAL:HG12	47:n:60:GLN:CD	2.22	0.65
50:q:10:ARG:H	50:q:22:VAL:HG13	1.61	0.65
55:v:1:C:N4	55:v:73:A:N1	2.45	0.65
6:5:55:VAL:HA	8:A:1084:A:C5	2.32	0.65
8:A:116:C:H2'	8:A:117:G:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:687:C:H2'	8:A:688:U:O4'	1.97	0.65
8:A:1016:G:C6	8:A:1147:A:C6	2.85	0.65
8:A:1417:C:H2'	8:A:1418:G:O4'	1.97	0.65
8:A:1428:C:N4	8:A:1570:A:OP2	2.25	0.65
8:A:1666:G:P	18:K:66:LYS:HD3	2.36	0.65
8:A:1690:A:H2'	8:A:1691:C:O4'	1.96	0.65
8:A:1866:A:H2'	8:A:1867:G:O4'	1.96	0.65
8:A:1936:A:OP2	8:A:1962:5MC:N4	2.28	0.65
8:A:1941:C:C4	8:A:1965:C:O4'	2.48	0.65
8:A:2331:G:O2'	8:A:2336:A:N6	2.29	0.65
8:A:2729:G:H2'	8:A:2730:C:C6	2.32	0.65
8:A:2840:C:H2'	8:A:2841:C:H6	1.62	0.65
14:G:103:ASN:HA	14:G:113:ASP:OD1	1.96	0.65
33:Z:3:THR:OG1	33:Z:37:ARG:O	2.07	0.65
34:a:71:A:N6	34:a:99:C:H1'	2.11	0.65
34:a:96:U:HO2'	34:a:97:G:H8	1.44	0.65
34:a:299:G:H2'	34:a:300:A:C8	2.31	0.65
34:a:764:C:H2'	34:a:765:G:O4'	1.97	0.65
34:a:781:A:OP2	34:a:800:G:N1	2.30	0.65
34:a:921:U:OP2	34:a:1082:A:C8	2.49	0.65
34:a:1004:A:C2	34:a:1026:G:H1'	2.31	0.65
34:a:1368:A:OP2	42:i:113:LYS:HG2	1.95	0.65
35:b:13:VAL:HG12	35:b:16:GLY:O	1.97	0.65
37:d:69:ARG:HA	37:d:72:ARG:HB3	1.78	0.65
38:e:85:LYS:HE2	38:e:94:PHE:CD1	2.32	0.65
45:l:34:THR:N	45:l:53:ARG:O	2.30	0.65
7:6:36:VAL:HG23	7:6:40:CYS:O	1.97	0.65
8:A:85:G:C6	8:A:98:G:N1	2.65	0.65
8:A:375:G:N2	8:A:399:U:O2	2.30	0.65
8:A:418:C:H2'	8:A:419:U:C6	2.32	0.65
8:A:483:A:H5''	28:U:46:LYS:CD	2.24	0.65
8:A:572:A:OP2	25:R:80:ARG:NH1	2.25	0.65
8:A:616:A:H4'	12:E:101:TYR:OH	1.97	0.65
8:A:881:G:H3'	8:A:882:G:H8	1.62	0.65
8:A:1059:G:N2	8:A:1080:A:N3	2.45	0.65
8:A:1367:A:C5	8:A:1368:G:H1'	2.30	0.65
8:A:1385:A:H1'	8:A:1386:C:C6	2.32	0.65
8:A:1506:U:H2'	8:A:1507:C:C6	2.32	0.65
8:A:1684:G:C6	8:A:1705:A:N6	2.65	0.65
8:A:2332:C:O2'	8:A:2335:A:O2'	2.06	0.65
8:A:2637:U:H5''	11:D:83:ARG:NH2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2818:U:O2	8:A:2828:G:N2	2.29	0.65
10:C:245:THR:HG23	10:C:249:VAL:O	1.96	0.65
15:H:25:TYR:CD2	15:H:30:LEU:HD11	2.32	0.65
15:H:31:VAL:N	15:H:32:PRO:HD2	2.12	0.65
20:M:27:SER:N	20:M:104:GLU:OE2	2.29	0.65
28:U:12:VAL:N	28:U:20:LYS:O	2.23	0.65
34:a:736:C:C4'	39:f:88:MET:HE2	2.27	0.65
34:a:975:A:N1	34:a:1366:C:H1'	2.11	0.65
34:a:1366:C:O2'	43:j:62:ARG:NH1	2.29	0.65
34:a:1391:U:H2'	34:a:1392:G:C8	2.32	0.65
38:e:80:LEU:HD12	38:e:97:PRO:HD3	1.79	0.65
42:i:98:ARG:HB2	42:i:103:VAL:HG11	1.79	0.65
52:s:19:GLU:O	52:s:23:GLU:HG2	1.96	0.65
57:x:350:ASN:CB	57:x:353:LYS:HB2	2.27	0.65
7:6:1:MET:CB	9:B:43:C:H5''	2.27	0.65
8:A:39:G:H2'	8:A:40:U:C6	2.32	0.65
8:A:476:G:H4'	8:A:502:A:N1	2.11	0.65
8:A:630:G:N2	8:A:632:A:H3'	2.12	0.65
8:A:706:A:N6	8:A:725:G:H1'	2.10	0.65
8:A:882:G:H22	8:A:894:U:H4'	1.61	0.65
8:A:1074:G:H5''	8:A:1075:C:H5''	1.79	0.65
8:A:1297:C:H2'	8:A:1298:C:C6	2.31	0.65
8:A:1515:A:H1'	8:A:1557:C:H1'	1.78	0.65
8:A:2104:C:N4	8:A:2105:U:HO2'	1.95	0.65
8:A:2473:U:OP1	8:A:2529:G:N2	2.30	0.65
8:A:2515:C:H2'	8:A:2516:A:H8	1.62	0.65
11:D:117:GLY:O	11:D:164:GLN:HA	1.97	0.65
14:G:106:LEU:HB2	14:G:108:PHE:CE2	2.31	0.65
18:K:49:ARG:HH12	34:a:1423:G:P	2.20	0.65
34:a:269:C:H2'	34:a:270:A:C8	2.31	0.65
34:a:683:G:N2	34:a:707:U:O2	2.30	0.65
34:a:1521:C:H2'	34:a:1522:U:C6	2.32	0.65
43:j:12:ALA:HB2	43:j:96:VAL:HG13	1.79	0.65
53:t:43:LYS:HD2	53:t:86:ALA:HA	1.78	0.65
53:t:43:LYS:HE3	53:t:82:ILE:O	1.97	0.65
56:w:35:A:O4'	57:x:585:VAL:HG21	1.97	0.65
57:x:364:GLN:O	57:x:371:GLU:HB2	1.96	0.65
2:1:43:ARG:HH11	8:A:2370:G:H4'	1.60	0.65
3:2:27:GLY:O	3:2:31:LEU:HG	1.95	0.65
8:A:711:G:H2'	8:A:712:G:O4'	1.97	0.65
8:A:780:G:H2'	8:A:782:A:N7	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:852:U:H2'	8:A:853:C:C6	2.31	0.65
8:A:858:G:O6	8:A:920:A:N6	2.30	0.65
8:A:875:G:C2	8:A:903:C:C2	2.85	0.65
8:A:1415:U:O4	8:A:1587:G:O6	2.14	0.65
8:A:1416:G:H2'	8:A:1417:C:C6	2.32	0.65
8:A:1809:A:H2'	8:A:1810:A:C8	2.32	0.65
8:A:1841:U:C2	8:A:1842:G:C8	2.85	0.65
8:A:2447:G:O2'	8:A:2500:U:OP2	2.13	0.65
8:A:2789:C:O2'	8:A:2891:U:O2'	2.10	0.65
9:B:30:C:H1'	9:B:57:A:H61	1.61	0.65
9:B:71:C:H2'	9:B:72:G:O4'	1.97	0.65
10:C:77:VAL:HG22	10:C:93:VAL:CG2	2.27	0.65
31:X:30:PRO:HB2	31:X:32:LEU:HG	1.79	0.65
34:a:470:C:H2'	34:a:471:U:O2	1.97	0.65
34:a:487:A:OP2	34:a:488:C:N4	2.30	0.65
34:a:582:C:C4	34:a:759:A:N7	2.65	0.65
34:a:668:G:H4'	48:o:47:LYS:HB2	1.79	0.65
34:a:977:A:OP1	47:n:61:ARG:NH1	2.30	0.65
34:a:1111:A:N6	36:c:175:HIS:O	2.28	0.65
34:a:1249:C:O2	34:a:1289:A:N6	2.30	0.65
34:a:1451:U:OP2	34:a:1452:C:N4	2.30	0.65
36:c:110:LEU:CD2	36:c:143:LEU:HD23	2.27	0.65
42:i:79:ARG:O	42:i:83:THR:HG23	1.97	0.65
43:j:50:THR:HG22	43:j:62:ARG:HD2	1.78	0.65
57:x:197:GLN:O	57:x:199:VAL:N	2.30	0.65
2:1:26:LYS:O	2:1:27:ARG:NH2	2.30	0.65
8:A:7:G:H4'	17:J:15:TRP:CH2	2.32	0.65
8:A:14:A:N6	8:A:15:G:C2	2.65	0.65
8:A:189:G:OP2	31:X:25:LYS:NZ	2.30	0.65
8:A:482:A:H4'	28:U:44:HIS:HB2	1.77	0.65
8:A:607:U:N3	8:A:608:A:N7	2.45	0.65
8:A:822:G:H2'	8:A:823:C:C6	2.32	0.65
8:A:911:A:N1	8:A:2277:G:O2'	2.27	0.65
8:A:1500:G:O2'	10:C:98:GLY:O	2.14	0.65
8:A:1682:G:OP2	8:A:1699:G:N2	2.29	0.65
8:A:1727:C:N3	8:A:1734:G:N1	2.45	0.65
8:A:2399:G:C6	8:A:2418:A:C6	2.85	0.65
27:T:12:ARG:HG2	27:T:34:VAL:C	2.21	0.65
34:a:42:G:N1	34:a:401:C:N3	2.45	0.65
34:a:1324:A:H2'	34:a:1325:C:C6	2.31	0.65
34:a:1373:G:O6	42:i:12:LYS:NZ	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:c:52:SER:OG	36:c:111:ASP:OD2	2.15	0.65
37:d:149:LYS:HD2	37:d:177:MET:HG2	1.79	0.65
57:x:346:ASP:O	57:x:358:ARG:HA	1.96	0.65
57:x:639:GLY:CA	57:x:657:VAL:HG22	2.26	0.65
8:A:46:G:C6	8:A:180:G:N1	2.65	0.64
8:A:1935:G:N2	8:A:1962:5MC:O2'	2.30	0.64
8:A:2025:C:H2'	8:A:2026:U:C6	2.31	0.64
15:H:78:VAL:CG1	15:H:144:VAL:HG12	2.27	0.64
30:W:66:GLU:N	30:W:75:PHE:O	2.24	0.64
34:a:751:U:H2'	34:a:752:G:O4'	1.97	0.64
34:a:1020:G:H2'	34:a:1021:A:C8	2.32	0.64
35:b:48:MET:HE3	35:b:200:PRO:CD	2.27	0.64
37:d:27:ILE:HG23	37:d:33:ILE:HG13	1.79	0.64
40:g:30:MET:HE3	40:g:33:GLY:H	1.62	0.64
57:x:324:ALA:HB3	57:x:332:LEU:HB3	1.80	0.64
57:x:491:GLU:O	57:x:570:VAL:HA	1.96	0.64
5:4:11:CYS:N	5:4:14:CYS:SG	2.70	0.64
8:A:72:U:O4'	32:Y:54:LYS:HD3	1.96	0.64
8:A:150:U:H2'	8:A:151:C:C6	2.32	0.64
8:A:299:A:N3	8:A:319:G:O2'	2.29	0.64
8:A:352:A:H2'	8:A:353:C:C6	2.33	0.64
8:A:600:G:O4'	12:E:100:MET:HE3	1.97	0.64
8:A:805:G:N2	8:A:831:G:N3	2.45	0.64
8:A:813:U:O5'	19:L:24:GLY:HA3	1.97	0.64
8:A:865:C:C2	8:A:909:A:N6	2.65	0.64
8:A:971:G:H2'	8:A:972:A:O4'	1.98	0.64
8:A:1277:G:H2'	8:A:1278:C:C6	2.32	0.64
8:A:2197:U:O2	8:A:2225:A:N7	2.31	0.64
8:A:2247:A:H2'	8:A:2248:C:H6	1.61	0.64
8:A:2295:C:O5'	22:O:9:ARG:NH2	2.30	0.64
8:A:2595:G:N2	8:A:2598:A:OP2	2.29	0.64
9:B:51:G:H5'	22:O:63:LYS:HZ1	1.62	0.64
17:J:14:ASP:HB2	17:J:16:TYR:CE2	2.32	0.64
18:K:69:VAL:O	18:K:76:VAL:HA	1.98	0.64
24:Q:78:PHE:O	24:Q:82:LEU:HG	1.97	0.64
34:a:89:U:H5''	34:a:90:C:H5	1.62	0.64
34:a:350:G:H2'	34:a:351:G:C8	2.32	0.64
34:a:687:A:H2'	34:a:701:U:O4	1.98	0.64
34:a:736:C:H2'	34:a:737:C:C6	2.32	0.64
34:a:1151:A:O4'	43:j:41:PRO:CB	2.44	0.64
34:a:1466:C:H2'	34:a:1467:C:O4'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:k:85:VAL:HG12	44:k:92:ARG:HH21	1.63	0.64
50:q:26:ARG:N	50:q:39:ARG:O	2.25	0.64
57:x:459:GLY:CA	57:x:465:LEU:HD23	2.26	0.64
8:A:196:A:N7	19:L:38:GLN:NE2	2.45	0.64
8:A:289:G:H2'	8:A:290:U:C6	2.32	0.64
8:A:301:G:C4	8:A:302:C:C5	2.85	0.64
8:A:367:G:C6	8:A:368:A:C2	2.85	0.64
8:A:533:G:H5'	24:Q:23:TYR:CD1	2.32	0.64
8:A:911:A:N6	20:M:11:LYS:O	2.29	0.64
8:A:1361:G:H2'	8:A:1362:C:C6	2.31	0.64
8:A:1786:A:C4	8:A:1938:A:C6	2.85	0.64
8:A:2307:G:O4'	8:A:2308:G:C5	2.51	0.64
8:A:2637:U:OP1	11:D:83:ARG:NH2	2.30	0.64
9:B:57:A:OP2	9:B:58:A:OP2	2.16	0.64
13:F:64:PRO:HA	13:F:88:VAL:HG12	1.78	0.64
14:G:153:PRO:HD3	14:G:161:VAL:O	1.97	0.64
22:O:31:THR:O	22:O:102:ARG:NH2	2.29	0.64
28:U:73:ASN:HB2	28:U:78:LYS:O	1.98	0.64
34:a:21:G:H2'	34:a:22:G:C8	2.32	0.64
34:a:483:C:O2'	49:p:13:LYS:NZ	2.28	0.64
34:a:716:A:H1'	44:k:118:ASN:O	1.97	0.64
34:a:934:C:O2'	34:a:1344:C:OP2	2.15	0.64
34:a:1007:U:H2'	34:a:1008:U:C6	2.32	0.64
34:a:1190:G:OP1	36:c:4:VAL:N	2.28	0.64
34:a:1258:G:H2'	34:a:1259:C:H6	1.63	0.64
34:a:1261:A:H61	34:a:1274:A:C2'	2.09	0.64
35:b:96:LEU:HB2	35:b:99:MET:HG3	1.79	0.64
43:j:32:THR:O	43:j:80:THR:HG21	1.97	0.64
8:A:409:G:H2'	8:A:410:G:C8	2.33	0.64
8:A:639:U:H2'	8:A:640:C:C6	2.32	0.64
8:A:657:U:H2'	8:A:658:U:C6	2.31	0.64
8:A:708:G:H2'	8:A:709:U:C6	2.32	0.64
8:A:866:A:H61	8:A:913:U:C4'	2.10	0.64
8:A:1215:G:N2	8:A:1234:U:O2	2.31	0.64
8:A:1312:U:O2	8:A:1339:G:N2	2.30	0.64
8:A:1402:U:O2'	8:A:1470:A:N1	2.31	0.64
8:A:1909:C:C2	8:A:1922:G:C2	2.85	0.64
8:A:2105:U:H2'	8:A:2106:U:C5	2.31	0.64
15:H:46:PHE:HA	15:H:50:ARG:CG	2.26	0.64
18:K:98:ARG:NH1	34:a:339:C:O5'	2.31	0.64
23:P:50:ARG:O	23:P:56:SER:OG	2.04	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:261:U:O4	53:t:73:ARG:NH1	2.30	0.64
34:a:285:C:H2'	34:a:286:C:C6	2.32	0.64
34:a:318:G:C6	34:a:336:A:C6	2.86	0.64
34:a:418:C:H2'	34:a:419:C:C6	2.32	0.64
34:a:1116:U:H2'	34:a:1117:A:C8	2.32	0.64
34:a:1498:UR3:O2'	34:a:1499:A:OP2	2.16	0.64
35:b:89:PHE:CG	35:b:153:MET:HG3	2.31	0.64
39:f:23:GLU:O	39:f:26:THR:OG1	2.16	0.64
42:i:27:ILE:HG12	42:i:62:LEU:HD12	1.79	0.64
45:l:80:LEU:O	45:l:97:VAL:HG22	1.98	0.64
57:x:141:ASN:ND2	62:x:801:GDP:O6	2.31	0.64
57:x:615:ILE:HB	57:x:685:LYS:HG3	1.79	0.64
8:A:61:C:O4'	32:Y:40:SER:HB3	1.96	0.64
8:A:850:U:H2'	8:A:851:C:C6	2.32	0.64
8:A:1038:G:C2	8:A:1118:C:C2	2.86	0.64
8:A:1168:G:H2'	8:A:1169:A:C8	2.33	0.64
8:A:1912:A:N6	8:A:1918:A:H1'	2.13	0.64
8:A:2130:U:N3	8:A:2158:A:N3	2.43	0.64
8:A:2216:G:H2'	8:A:2217:G:H8	1.62	0.64
8:A:2413:G:C2	8:A:2414:G:C4	2.85	0.64
15:H:82:SER:N	15:H:147:VAL:O	2.31	0.64
19:L:110:VAL:CG2	19:L:125:LEU:HD23	2.26	0.64
23:P:96:LEU:HB3	23:P:99:LEU:HD12	1.79	0.64
25:R:34:GLU:HA	25:R:59:ILE:O	1.97	0.64
34:a:562:U:H2'	45:l:14:LYS:HE3	1.80	0.64
34:a:780:A:H3'	34:a:800:G:H1	1.62	0.64
34:a:1004:A:OP1	34:a:1025:U:O2	2.16	0.64
41:h:112:ASP:N	41:h:112:ASP:OD1	2.30	0.64
43:j:42:LEU:HB2	43:j:71:LEU:O	1.97	0.64
55:v:17:C:H3'	55:v:17(A):U:H2'	1.79	0.64
8:A:1:G:C6	8:A:2903:U:N3	2.66	0.64
8:A:21:A:C6	8:A:520:G:C6	2.86	0.64
8:A:132:G:H2'	8:A:133:U:C6	2.33	0.64
8:A:203:A:OP2	8:A:204:A:O2'	2.16	0.64
8:A:627:A:N6	8:A:637:A:O5'	2.22	0.64
8:A:885:C:C2	8:A:894:U:H5	2.15	0.64
8:A:1086:A:H4'	8:A:1087:G:C4	2.31	0.64
8:A:1234:U:H2'	8:A:1235:G:O4'	1.98	0.64
8:A:1386:C:H2'	8:A:1387:A:C8	2.33	0.64
8:A:1906:G:C8	8:A:1929:G:H2'	2.31	0.64
8:A:2114:A:N1	8:A:2119:A:O2'	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2771:C:H2'	8:A:2772:C:H6	1.63	0.64
9:B:37:C:C2	9:B:48:U:O2'	2.44	0.64
9:B:79:G:O6	29:V:14:LYS:NZ	2.20	0.64
13:F:116:LEU:H	13:F:175:PRO:HB2	1.62	0.64
20:M:6:ARG:HD3	20:M:6:ARG:O	1.96	0.64
33:Z:2:LYS:CE	33:Z:39:ASP:O	2.46	0.64
34:a:64:G:N2	34:a:68:G:N7	2.40	0.64
34:a:309:A:H2'	34:a:310:G:H8	1.63	0.64
34:a:413:G:O2'	34:a:428:G:N2	2.31	0.64
34:a:456:A:H2	34:a:476:U:H3	1.43	0.64
34:a:573:A:O2'	34:a:574:A:O4'	2.13	0.64
34:a:697:U:C4'	34:a:786:G:H4'	2.28	0.64
34:a:720:C:H5	34:a:721:G:HO2'	1.45	0.64
34:a:1346:A:H1'	34:a:1348:U:C1'	2.28	0.64
38:e:43:GLY:O	38:e:73:VAL:HG12	1.97	0.64
46:m:71:GLU:HA	46:m:74:MET:HE2	1.80	0.64
48:o:67:ASP:O	48:o:71:ARG:HG3	1.98	0.64
49:p:37:GLY:HA3	49:p:51:ARG:O	1.98	0.64
57:x:518:VAL:O	57:x:577:LEU:HD12	1.98	0.64
57:x:597:SER:O	57:x:601:LYS:HG2	1.96	0.64
4:3:7:ARG:NH1	8:A:244:A:OP2	2.28	0.64
8:A:361:G:O2'	8:A:362:A:H5'	1.96	0.64
8:A:377:G:C6	8:A:398:C:N3	2.66	0.64
8:A:992:C:C2	8:A:1163:G:C2	2.86	0.64
8:A:1012:U:O4	17:J:27:ARG:HA	1.98	0.64
8:A:1223:G:N1	8:A:1226:A:OP2	2.29	0.64
8:A:1468:U:H2'	8:A:1522:A:N1	2.13	0.64
8:A:2399:G:O6	8:A:2418:A:N6	2.30	0.64
8:A:2900:A:H2'	8:A:2901:C:C6	2.33	0.64
11:D:28:GLU:HA	11:D:186:LEU:HD23	1.80	0.64
13:F:92:GLY:H	13:F:95:MET:HE2	1.62	0.64
34:a:35:G:C6	34:a:550:G:N1	2.66	0.64
34:a:81:A:H5''	34:a:86:G:H1	1.61	0.64
34:a:152:A:OP2	34:a:153:C:N4	2.23	0.64
34:a:896:C:H2'	34:a:897:C:C6	2.33	0.64
34:a:919:A:H2'	34:a:920:U:C6	2.32	0.64
57:x:489:TYR:HB3	57:x:611:LEU:HD21	1.80	0.64
4:3:38:LYS:HA	4:3:41:ARG:CZ	2.27	0.64
8:A:52:A:OP2	8:A:117:G:N1	2.30	0.64
8:A:298:G:C2	8:A:339:U:C4	2.85	0.64
8:A:1312:U:O4'	8:A:1313:U:N3	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1709:U:C2	8:A:1750:G:C2	2.85	0.64
8:A:2085:U:O2	8:A:2234:G:N2	2.30	0.64
8:A:2350:C:H2'	8:A:2351:G:O4'	1.97	0.64
8:A:2356:U:H2'	8:A:2357:G:O4'	1.98	0.64
8:A:2728:U:H2'	8:A:2729:G:H8	1.62	0.64
8:A:2848:G:O2'	8:A:2849:U:O5'	2.15	0.64
8:A:2854:G:C6	8:A:2864:G:C6	2.86	0.64
13:F:62:GLN:NE2	13:F:90:LEU:HD23	2.12	0.64
15:H:15:LEU:O	15:H:15:LEU:HD23	1.98	0.64
18:K:17:ARG:HB3	18:K:45:GLU:CD	2.23	0.64
18:K:99:ILE:HD13	18:K:115:ILE:HG23	1.80	0.64
20:M:25:ASP:O	20:M:66:ARG:NH1	2.28	0.64
21:N:49:GLU:HA	21:N:52:ILE:HD12	1.78	0.64
22:O:4:LYS:O	22:O:8:ILE:HG13	1.98	0.64
23:P:90:ALA:HB2	23:P:112:ARG:HA	1.80	0.64
34:a:147:G:O2'	34:a:148:G:C8	2.51	0.64
34:a:585:G:OP1	50:q:38:LYS:NZ	2.24	0.64
34:a:713:G:N2	34:a:777:A:O2'	2.31	0.64
34:a:1227:A:C2	34:a:1228:C:C6	2.85	0.64
34:a:1496:C:O2	34:a:1518:MA6:H2	1.98	0.64
46:m:48:SER:O	46:m:52:ILE:HG12	1.98	0.64
5:4:15:LYS:HB2	5:4:26:ILE:HG13	1.80	0.64
8:A:689:A:H2'	8:A:690:G:C8	2.32	0.64
8:A:1223:G:C6	8:A:1227:G:C6	2.86	0.64
8:A:1341:G:OP2	8:A:1394:U:O2'	2.08	0.64
8:A:1548:A:H2'	8:A:1549:A:H8	1.63	0.64
8:A:1680:U:H2'	8:A:1681:G:O4'	1.97	0.64
8:A:1769:U:H4'	8:A:1958:C:H5''	1.80	0.64
8:A:1846:G:C2	8:A:1895:C:C2	2.86	0.64
8:A:2184:A:N6	8:A:2185:U:C2	2.65	0.64
8:A:2532:G:O2'	8:A:2657:A:N1	2.29	0.64
8:A:2659:G:H1'	8:A:2662:A:N6	2.12	0.64
8:A:2816:G:N3	8:A:2883:A:O2'	2.27	0.64
10:C:43:ASN:HD22	10:C:43:ASN:H	1.45	0.64
12:E:147:LEU:HB3	12:E:186:VAL:HG22	1.78	0.64
14:G:11:PRO:HD2	14:G:14:VAL:HG21	1.80	0.64
14:G:98:LYS:NZ	14:G:103:ASN:HB2	2.12	0.64
18:K:64:ARG:O	18:K:82:ASN:HA	1.98	0.64
27:T:63:VAL:HG21	27:T:80:TRP:CZ3	2.32	0.64
34:a:223:A:H2'	34:a:224:U:C6	2.32	0.64
34:a:661:G:C6	34:a:745:G:C6	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:988:G:C2	34:a:1218:C:C2	2.86	0.64
34:a:1095:U:OP2	34:a:1108:G:N1	2.23	0.64
36:c:139:ASN:OD1	36:c:142:ARG:NH2	2.30	0.64
41:h:95:MET:O	41:h:98:LEU:HG	1.97	0.64
53:t:24:ARG:O	53:t:28:ARG:HG2	1.98	0.64
57:x:28:ARG:CD	57:x:271:ASN:OD1	2.46	0.64
57:x:468:ILE:HA	57:x:471:ARG:HB2	1.79	0.64
8:A:58:G:H2'	8:A:59:U:C6	2.33	0.64
8:A:250:G:H2'	8:A:251:A:C8	2.33	0.64
8:A:396:G:H1'	31:X:28:PHE:HB3	1.80	0.64
8:A:820:A:OP2	8:A:973:A:N6	2.27	0.64
8:A:868:U:C4	8:A:869:G:N7	2.65	0.64
8:A:1366:A:H2'	8:A:1367:A:O4'	1.97	0.64
8:A:1837:C:O2'	8:A:1927:A:H1'	1.98	0.64
8:A:2451:A:H1'	56:w:76:A:H2'	1.79	0.64
8:A:2468:A:HO2'	8:A:2469:A:H8	1.46	0.64
8:A:2773:C:OP1	11:D:169:ARG:NH2	2.31	0.64
14:G:10:VAL:HG22	14:G:47:ASN:O	1.98	0.64
22:O:41:ALA:HB3	22:O:43:ASN:OD1	1.98	0.64
27:T:6:ARG:O	27:T:10:VAL:HG23	1.98	0.64
27:T:9:LYS:O	27:T:12:ARG:NH1	2.31	0.64
30:W:27:VAL:O	30:W:61:GLY:N	2.30	0.64
34:a:159:G:H5'	34:a:160:A:N3	2.14	0.64
34:a:196:A:N3	34:a:222:C:H1'	2.13	0.64
34:a:406:G:O5'	37:d:4:LEU:HD13	1.97	0.64
34:a:803:G:H2'	34:a:804:U:O4'	1.98	0.64
34:a:890:G:H4'	34:a:891:U:O5'	1.98	0.64
34:a:921:U:H3'	34:a:1082:A:H5''	1.80	0.64
37:d:71:PHE:H	37:d:74:TYR:H	1.46	0.64
37:d:160:LEU:O	37:d:164:ARG:HD3	1.97	0.64
57:x:141:ASN:OD1	57:x:268:ALA:N	2.27	0.64
8:A:410:G:N1	8:A:418:C:N3	2.45	0.63
8:A:428:A:H2'	8:A:429:A:C8	2.33	0.63
8:A:529:A:C5	8:A:2041:U:O2	2.51	0.63
8:A:1142:A:C4	8:A:1144:A:N7	2.66	0.63
8:A:1212:G:O2'	8:A:1236:G:N1	2.31	0.63
8:A:1266:G:C8	26:S:16:LYS:HE3	2.33	0.63
8:A:2051:A:N6	8:A:2614:A:O2'	2.31	0.63
8:A:2293:G:C6	8:A:2340:A:C6	2.86	0.63
8:A:2316:G:H4'	13:F:124:ARG:NH2	2.14	0.63
8:A:2531:A:C2	8:A:2659:G:O4'	2.50	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2732:G:H5'	11:D:208:LYS:NZ	2.13	0.63
10:C:132:ARG:O	10:C:166:ARG:NH1	2.31	0.63
19:L:37:GLY:O	19:L:40:SER:OG	2.16	0.63
34:a:195:A:H2'	34:a:196:A:C8	2.33	0.63
34:a:921:U:OP1	34:a:1081:A:C2'	2.45	0.63
34:a:1118:U:H1'	34:a:1179:A:C5	2.33	0.63
34:a:1148:U:H2'	34:a:1149:C:O4'	1.99	0.63
37:d:97:LEU:O	37:d:101:VAL:HG23	1.98	0.63
38:e:14:LEU:HA	38:e:36:THR:HG22	1.80	0.63
44:k:106:ILE:HB	54:u:7:GLU:OE2	1.97	0.63
57:x:114:ALA:HB3	57:x:148:ALA:HB1	1.80	0.63
1:0:45:ASP:O	1:0:52:LYS:HE2	1.98	0.63
3:2:37:LYS:HE2	3:2:39:ARG:HE	1.63	0.63
8:A:781:A:C8	10:C:217:PRO:HG2	2.33	0.63
8:A:1286:A:N1	8:A:1329:U:O2'	2.27	0.63
8:A:1448:G:H2'	8:A:1449:G:O4'	1.98	0.63
8:A:1869:G:H2'	8:A:1871:A:N1	2.13	0.63
8:A:2226:C:H2'	8:A:2227:A:O4'	1.98	0.63
8:A:2313:C:O4'	13:F:36:ASN:ND2	2.31	0.63
8:A:2340:A:H2'	8:A:2341:G:H8	1.63	0.63
8:A:2349:G:C6	8:A:2369:A:C6	2.86	0.63
8:A:2578:G:C2	8:A:2579:C:C5	2.87	0.63
8:A:2661:G:H2'	8:A:2662:A:O4'	1.97	0.63
8:A:2746:U:H1'	14:G:138:GLN:HG3	1.78	0.63
8:A:2845:U:H2'	8:A:2846:G:O4'	1.98	0.63
8:A:2846:G:H2'	8:A:2847:U:C6	2.32	0.63
8:A:2900:A:H2'	8:A:2901:C:O4'	1.99	0.63
22:O:79:ALA:HB1	22:O:115:LEU:HD13	1.80	0.63
22:O:85:LYS:CB	22:O:87:ILE:HG12	2.29	0.63
34:a:142:G:O2'	34:a:196:A:N1	2.31	0.63
34:a:181:A:H61	34:a:194:C:C2'	2.12	0.63
34:a:253:A:O4'	34:a:275:G:N2	2.27	0.63
34:a:1048:G:OP1	47:n:1:ALA:N	2.24	0.63
34:a:1296:C:H4'	34:a:1302:C:C5	2.32	0.63
34:a:1401:G:O6	34:a:1504:G:N2	2.31	0.63
41:h:40:LYS:CE	41:h:47:ASP:HA	2.27	0.63
44:k:28:ASN:OD1	44:k:29:THR:N	2.31	0.63
57:x:173:GLY:HA2	57:x:177:HIS:CD2	2.33	0.63
57:x:209:ASP:OD1	57:x:210:MET:N	2.31	0.63
5:4:7:VAL:O	5:4:8:LYS:HG3	1.99	0.63
8:A:106:C:H2'	8:A:107:G:O4'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:241:A:N6	8:A:256:A:OP2	2.27	0.63
8:A:623:C:H2'	8:A:624:C:C6	2.33	0.63
8:A:1118:C:H2'	8:A:1119:U:O4'	1.98	0.63
8:A:2109:U:OP1	8:A:2143:C:H5''	1.99	0.63
8:A:2126:A:N6	8:A:2164:C:OP1	2.32	0.63
8:A:2600:A:H2'	8:A:2601:C:C6	2.32	0.63
8:A:2798:U:O2'	8:A:2799:A:N7	2.31	0.63
9:B:61:G:H2'	9:B:62:C:C6	2.34	0.63
10:C:259:ASN:ND2	10:C:261:ARG:HB3	2.13	0.63
34:a:377:G:H2'	34:a:378:G:C8	2.33	0.63
34:a:581:G:H3'	34:a:758:C:N4	2.13	0.63
34:a:616:G:O3'	49:p:46:LYS:NZ	2.31	0.63
34:a:745:G:H2'	34:a:746:A:H8	1.63	0.63
34:a:895:G:H2'	34:a:896:C:C6	2.34	0.63
34:a:1029:U:O2'	34:a:1030:U:C5	2.51	0.63
34:a:1080:A:H3'	34:a:1081:A:O4'	1.99	0.63
34:a:1091:U:C2	34:a:1095:U:C4	2.87	0.63
34:a:1347:G:O2'	34:a:1348:U:P	2.56	0.63
34:a:1476:A:H2'	34:a:1477:U:O4'	1.97	0.63
35:b:34:ARG:HG3	35:b:35:ASN:H	1.64	0.63
42:i:30:ASN:OD1	42:i:66:VAL:N	2.24	0.63
46:m:67:ASP:HA	46:m:70:ARG:NH2	2.13	0.63
53:t:53:MET:CE	53:t:57:VAL:HG11	2.27	0.63
1:0:15:ARG:HH11	8:A:1266:G:P	2.22	0.63
8:A:262:A:H2'	8:A:263:G:O4'	1.97	0.63
8:A:441:U:H2'	8:A:442:G:C8	2.34	0.63
8:A:565:C:H4'	8:A:1253:A:N6	2.14	0.63
8:A:636:G:N7	19:L:109:LYS:NZ	2.46	0.63
8:A:645:C:H2'	8:A:647:G:C8	2.33	0.63
8:A:720:U:H2'	8:A:721:A:C8	2.33	0.63
8:A:751:A:O4'	26:S:90:LYS:HA	1.98	0.63
8:A:751:A:H5'	26:S:90:LYS:HA	1.79	0.63
8:A:1210:G:O6	8:A:1237:A:O2'	2.14	0.63
8:A:1469:A:OP2	8:A:1522:A:N6	2.31	0.63
8:A:2014:A:OP1	26:S:95:ARG:CZ	2.46	0.63
8:A:2378:A:H8	8:A:2378:A:O5'	1.81	0.63
15:H:101:ASP:HA	15:H:107:GLY:CA	2.28	0.63
17:J:78:THR:HG21	17:J:85:LYS:CE	2.28	0.63
20:M:121:ALA:HA	20:M:124:LEU:HD12	1.80	0.63
29:V:2:PHE:CE1	29:V:53:LYS:HD2	2.34	0.63
34:a:192:A:H2'	34:a:193:C:C6	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:385:C:H2'	34:a:386:C:C6	2.33	0.63
34:a:766:A:H2'	34:a:767:A:O4'	1.99	0.63
34:a:835:U:O2	34:a:851:G:C2	2.50	0.63
34:a:923:A:H2'	34:a:924:C:C6	2.33	0.63
34:a:940:C:H2'	34:a:941:G:O4'	1.99	0.63
34:a:1112:C:H1'	36:c:178:ARG:HE	1.63	0.63
34:a:1258:G:H2'	34:a:1259:C:C6	2.33	0.63
34:a:1267:C:H2'	34:a:1268:G:C4	2.34	0.63
34:a:1309:G:C8	46:m:97:ARG:NH2	2.67	0.63
34:a:1471:U:H2'	34:a:1472:U:O4'	1.99	0.63
34:a:1530:G:N7	54:u:45:LYS:NZ	2.47	0.63
37:d:86:GLY:O	37:d:90:LEU:HG	1.98	0.63
38:e:24:VAL:HG23	38:e:27:GLY:H	1.62	0.63
49:p:56:ARG:HA	49:p:56:ARG:NE	2.14	0.63
51:r:20:ILE:HD12	51:r:53:GLN:CB	2.26	0.63
55:v:37:A:C2	55:v:38:A:H1'	2.33	0.63
56:w:62:C:H2'	56:w:63:G:H8	1.64	0.63
3:2:11:LYS:HZ1	8:A:686:U:P	2.22	0.63
8:A:37:C:H4'	8:A:451:U:OP1	1.98	0.63
8:A:564:C:P	25:R:79:ARG:HH21	2.20	0.63
8:A:690:G:H2'	8:A:691:C:C6	2.33	0.63
8:A:901:C:H2'	8:A:902:C:O4'	1.97	0.63
8:A:1420:A:N3	8:A:2211:A:N6	2.47	0.63
8:A:1839:G:H1'	8:A:1927:A:C8	2.33	0.63
8:A:1851:U:H1'	55:v:71:C:H1'	1.80	0.63
8:A:2250:G:N2	8:A:2275:C:O2'	2.31	0.63
8:A:2286:G:C8	8:A:2287:A:N6	2.66	0.63
8:A:2581:G:O2'	8:A:2610:C:N4	2.28	0.63
18:K:113:MET:HE3	18:K:114:LYS:HE3	1.80	0.63
19:L:77:ILE:HB	19:L:110:VAL:HG22	1.81	0.63
34:a:556:C:H2'	34:a:557:G:O4'	1.98	0.63
34:a:587:G:C2	34:a:755:G:C5	2.87	0.63
34:a:736:C:H4'	39:f:88:MET:HE2	1.81	0.63
34:a:839:C:H2'	34:a:840:C:C1'	2.29	0.63
34:a:921:U:O5'	34:a:1082:A:P	2.56	0.63
34:a:928:G:C2	34:a:1390:U:C2	2.86	0.63
34:a:1074:G:O3'	35:b:101:THR:OG1	2.12	0.63
34:a:1126:U:C4	34:a:1281:C:N4	2.67	0.63
55:v:5:G:O6	55:v:69:C:N4	2.32	0.63
8:A:15:G:H2'	8:A:16:C:C6	2.34	0.63
8:A:84:A:N1	8:A:98:G:O2'	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:134:G:C6	8:A:146:A:C6	2.86	0.63
8:A:350:G:H2'	8:A:351:C:O4'	1.98	0.63
8:A:636:G:C2	19:L:111:ILE:HD13	2.33	0.63
8:A:675:A:N3	8:A:2443:C:O2'	2.19	0.63
8:A:729:G:C5	10:C:206:LYS:HD2	2.34	0.63
8:A:742:A:H2'	8:A:743:A:C8	2.34	0.63
8:A:843:G:C6	8:A:936:A:C6	2.86	0.63
8:A:1463:C:H2'	8:A:1464:G:C8	2.34	0.63
8:A:1528:A:N6	8:A:1529:G:N3	2.47	0.63
8:A:1925:C:C2	8:A:1929:G:N1	2.63	0.63
8:A:2463:C:H2'	8:A:2464:G:O4'	1.99	0.63
8:A:2480:C:H2'	8:A:2481:G:O4'	1.98	0.63
8:A:2590:A:H2'	8:A:2591:C:H6	1.63	0.63
9:B:114:C:C4'	22:O:47:VAL:HB	2.28	0.63
10:C:68:ARG:NH2	10:C:116:GLN:O	2.32	0.63
12:E:148:ILE:HB	12:E:169:VAL:HA	1.80	0.63
15:H:1:MET:O	15:H:21:VAL:N	2.31	0.63
15:H:4:ILE:HA	15:H:17:ASP:O	1.97	0.63
17:J:131:ASN:OD1	17:J:132:HIS:CD2	2.52	0.63
21:N:2:ARG:CZ	21:N:5:LYS:O	2.45	0.63
21:N:12:ARG:O	21:N:17:ARG:NH2	2.31	0.63
22:O:2:ASP:OD1	22:O:3:LYS:N	2.31	0.63
23:P:13:LYS:NZ	23:P:75:THR:O	2.27	0.63
26:S:72:THR:OG1	26:S:106:VAL:O	2.16	0.63
28:U:9:GLU:OE1	28:U:23:LYS:HB3	1.99	0.63
33:Z:43:ILE:O	33:Z:47:ILE:HG13	1.99	0.63
34:a:421:U:OP2	34:a:422:C:N4	2.28	0.63
34:a:586:C:H2'	34:a:587:G:O4'	1.98	0.63
34:a:656:G:H2'	34:a:657:U:H6	1.62	0.63
34:a:936:C:O2'	34:a:1382:C:N3	2.24	0.63
34:a:1133:G:H2'	34:a:1134:G:C8	2.34	0.63
34:a:1241:G:C2	34:a:1242:G:N7	2.67	0.63
37:d:142:VAL:HG23	37:d:179:GLY:O	1.98	0.63
37:d:149:LYS:C	37:d:150:LYS:HG2	2.23	0.63
57:x:496:LYS:HE3	57:x:608:LYS:HZ2	1.64	0.63
57:x:623:PRO:HD2	57:x:677:ALA:HB2	1.79	0.63
6:5:32:GLY:O	8:A:1055:G:C4'	2.46	0.63
8:A:143:C:H2'	8:A:144:A:C8	2.34	0.63
8:A:548:G:C8	8:A:549:G:O4'	2.52	0.63
8:A:576:U:H2'	8:A:577:G:C8	2.33	0.63
8:A:640:C:H2'	8:A:641:U:H6	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:669:G:H2'	8:A:669:G:N3	2.12	0.63
8:A:813:U:C2	8:A:1195:G:C2	2.86	0.63
8:A:1551:A:H2'	8:A:1552:A:O4'	1.99	0.63
8:A:1751:U:H2'	8:A:1752:C:C6	2.34	0.63
8:A:2115:G:O3'	8:A:2117:A:OP2	2.17	0.63
8:A:2556:C:H2'	8:A:2557:G:O4'	1.98	0.63
9:B:2:G:C6	9:B:119:A:C6	2.86	0.63
9:B:12:C:O2	9:B:12:C:O5'	2.17	0.63
10:C:141:HIS:O	10:C:190:THR:N	2.27	0.63
14:G:16:VAL:CG1	14:G:23:ILE:HD11	2.28	0.63
22:O:51:ALA:HB3	22:O:78:VAL:HB	1.81	0.63
34:a:406:G:H1'	34:a:495:A:C6	2.34	0.63
34:a:409:U:O2	34:a:433:G:C2	2.52	0.63
34:a:595:A:N3	34:a:596:A:N6	2.47	0.63
34:a:825:A:H2'	34:a:826:C:C6	2.34	0.63
34:a:841:C:O3'	34:a:843:U:O4'	2.17	0.63
34:a:1284:C:H3'	34:a:1285:A:H2'	1.79	0.63
34:a:1413:A:N6	34:a:1488:G:C6	2.67	0.63
41:h:9:MET:O	41:h:13:ILE:HG12	1.99	0.63
57:x:364:GLN:OE1	57:x:380:ASP:OD1	2.15	0.63
3:2:30:VAL:HG22	3:2:33:ARG:NH1	2.13	0.63
8:A:538:A:H2'	8:A:539:G:O4'	1.98	0.63
8:A:876:C:H2'	8:A:877:A:H5'	1.80	0.63
8:A:1110:G:O2'	8:A:1111:A:N7	2.32	0.63
8:A:1183:U:O3'	33:Z:29:ARG:NH2	2.32	0.63
8:A:1532:A:C6	8:A:1540:G:C6	2.87	0.63
8:A:1569:A:H5''	10:C:58:LYS:HZ3	1.64	0.63
8:A:2135:A:OP2	8:A:2157:G:OP1	2.17	0.63
8:A:2168:G:O2'	55:v:56:C:C6	2.47	0.63
8:A:2283:C:O5'	8:A:2389:G:O2'	2.17	0.63
8:A:2294:G:C2	8:A:2339:C:C2	2.86	0.63
8:A:2646:C:H2'	8:A:2647:U:O4'	1.99	0.63
12:E:148:ILE:HB	12:E:169:VAL:HG12	1.80	0.63
19:L:91:ASP:HB3	19:L:94:THR:OG1	1.99	0.63
20:M:29:GLY:O	20:M:133:LYS:CE	2.47	0.63
29:V:30:ILE:O	29:V:37:PRO:HA	1.99	0.63
34:a:263:A:H2'	34:a:264:C:C5	2.34	0.63
34:a:411:A:H4'	34:a:412:A:H5'	1.81	0.63
34:a:499:A:N1	34:a:546:A:H2'	2.14	0.63
34:a:516:PSU:H2'	34:a:517:G:O4'	1.99	0.63
34:a:664:G:H22	34:a:741:G:H1	1.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:921:U:H6	34:a:1082:A:P	2.22	0.63
34:a:1283:U:H2'	34:a:1284:C:C6	2.34	0.63
34:a:1507:A:H2'	34:a:1508:A:C8	2.33	0.63
36:c:22:PHE:HA	43:j:13:PHE:CE2	2.34	0.63
38:e:104:ILE:HD11	38:e:119:VAL:O	1.98	0.63
45:l:118:VAL:HG12	45:l:119:LYS:O	1.98	0.63
57:x:645:GLU:CD	57:x:646:SER:H	2.07	0.63
2:1:9:LYS:O	2:1:51:ALA:N	2.32	0.63
4:3:4:LYS:NZ	8:A:254:G:N7	2.46	0.63
8:A:822:G:H2'	8:A:823:C:H6	1.62	0.63
8:A:1028:A:N6	8:A:1125:G:H2'	2.13	0.63
8:A:1353:A:H2'	8:A:1354:A:O4'	1.98	0.63
8:A:1416:G:H2'	8:A:1417:C:H6	1.64	0.63
8:A:2074:U:H2'	8:A:2075:U:C6	2.34	0.63
8:A:2247:A:H2'	8:A:2248:C:C6	2.34	0.63
8:A:2803:G:C2	8:A:2804:U:C5	2.86	0.63
10:C:129:LEU:HA	10:C:188:ARG:NH1	2.14	0.63
15:H:48:GLU:HA	15:H:52:ALA:HB2	1.81	0.63
15:H:77:THR:HB	15:H:143:ILE:HG13	1.81	0.63
15:H:111:ALA:N	15:H:114:GLU:OE2	2.31	0.63
17:J:55:ILE:HD11	17:J:132:HIS:HB2	1.80	0.63
24:Q:105:PHE:O	24:Q:109:VAL:HG23	1.98	0.63
28:U:28:LEU:HB2	28:U:32:LYS:O	1.99	0.63
34:a:128:G:C2	34:a:234:C:C2	2.87	0.63
34:a:554:A:H2'	34:a:555:U:C6	2.33	0.63
34:a:606:G:H1'	34:a:633:G:C2	2.34	0.63
34:a:636:U:H2'	34:a:637:C:C6	2.34	0.63
34:a:834:U:O2	34:a:852:G:N2	2.25	0.63
34:a:1006:G:N2	34:a:1023:U:O2'	2.25	0.63
34:a:1014:A:O2'	34:a:1219:A:H4'	1.97	0.63
34:a:1244:G:C6	34:a:1294:G:C6	2.87	0.63
36:c:72:PRO:HD3	36:c:104:GLU:HG2	1.80	0.63
57:x:501:GLU:HG3	57:x:518:VAL:CG1	2.28	0.63
57:x:678:SER:OG	57:x:679:TYR:N	2.30	0.63
6:5:33:VAL:HA	8:A:1055:G:C5'	2.29	0.62
7:6:49:ARG:HE	7:6:52:ALA:HA	1.64	0.62
8:A:26:G:H2'	8:A:27:G:O4'	1.99	0.62
8:A:634:C:P	19:L:70:LYS:HE2	2.38	0.62
8:A:695:G:N2	8:A:767:U:O2	2.31	0.62
8:A:897:C:H2'	8:A:898:C:O4'	1.99	0.62
8:A:1029:A:H61	8:A:1125:G:H1'	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1056:G:H2'	8:A:1087:G:N2	2.14	0.62
8:A:1358:G:H3'	8:A:1371:G:O6	1.99	0.62
8:A:1631:G:N1	8:A:1634:A:OP2	2.26	0.62
8:A:1723:G:O6	8:A:1737:G:H1'	1.98	0.62
8:A:1770:G:C6	8:A:1983:G:C6	2.87	0.62
8:A:2032:G:N2	11:D:151:THR:OG1	2.31	0.62
8:A:2638:G:H22	8:A:2775:G:H2'	1.64	0.62
34:a:35:G:H2'	34:a:36:C:C6	2.34	0.62
34:a:108:G:P	34:a:326:G:H22	2.22	0.62
34:a:656:G:H2'	34:a:657:U:C6	2.34	0.62
34:a:707:U:H2'	34:a:708:C:C6	2.34	0.62
34:a:1012:A:H3'	34:a:1013:G:C8	2.34	0.62
34:a:1071:C:H5''	38:e:53:ARG:NH2	2.14	0.62
36:c:120:THR:HG23	36:c:188:ALA:HA	1.81	0.62
38:e:64:GLU:OE2	38:e:68:ARG:NH2	2.32	0.62
55:v:54:5MU:H3'	55:v:55:PSU:O4	1.99	0.62
57:x:17:HIS:HA	57:x:121:GLN:HB2	1.81	0.62
57:x:23:THR:OG1	62:x:801:GDP:PB	2.57	0.62
57:x:114:ALA:HB2	57:x:140:VAL:HG12	1.80	0.62
57:x:252:ARG:O	57:x:256:LEU:HG	1.98	0.62
2:1:24:LYS:HD3	2:1:26:LYS:CG	2.29	0.62
8:A:291:G:N2	8:A:349:U:O2	2.32	0.62
8:A:303:G:C6	8:A:315:G:C6	2.86	0.62
8:A:788:A:H3'	8:A:790:U:C4	2.34	0.62
8:A:834:G:H2'	8:A:835:C:O4'	1.98	0.62
8:A:1769:U:C2	8:A:1984:G:N1	2.67	0.62
8:A:2246:G:H2'	8:A:2247:A:H8	1.65	0.62
13:F:56:LEU:HD12	13:F:86:CYS:SG	2.39	0.62
18:K:64:ARG:HD2	18:K:79:PHE:CD1	2.34	0.62
29:V:51:GLN:HA	29:V:56:PHE:CG	2.33	0.62
32:Y:6:LEU:O	32:Y:9:LYS:HB2	1.99	0.62
34:a:438:U:O2	34:a:494:G:C2	2.52	0.62
34:a:622:A:C8	34:a:623:C:C5	2.87	0.62
34:a:838:G:C5	34:a:849:G:C2	2.87	0.62
34:a:900:A:H2'	34:a:901:A:O4'	1.98	0.62
34:a:1014:A:H2'	34:a:1015:G:C1'	2.30	0.62
34:a:1413:A:N1	34:a:1487:G:N2	2.45	0.62
45:l:99:GLY:N	45:l:103:CYS:O	2.32	0.62
56:w:72:C:H2'	56:w:73:A:O4'	1.99	0.62
57:x:490:ARG:NH1	57:x:612:LEU:HD13	2.13	0.62
8:A:404:A:H1'	8:A:406:G:N3	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:636:G:C8	19:L:109:LYS:NZ	2.67	0.62
8:A:1054:A:H2'	8:A:1055:G:O4'	2.00	0.62
8:A:2090:A:C6	8:A:2230:G:C6	2.87	0.62
8:A:2183:A:N1	8:A:2184:A:N6	2.47	0.62
8:A:2510:C:C4	8:A:2511:U:C4	2.87	0.62
8:A:2834:G:H2'	8:A:2879:A:N6	2.13	0.62
9:B:74:U:O4	9:B:102:G:N2	2.30	0.62
13:F:4:HIS:CD2	13:F:8:LYS:HE2	2.35	0.62
34:a:207:C:H2'	34:a:208:U:H4'	1.80	0.62
34:a:323:U:O4'	53:t:13:SER:OG	2.18	0.62
34:a:616:G:C6	34:a:625:U:N3	2.67	0.62
34:a:814:A:H5''	34:a:816:A:N7	2.14	0.62
34:a:855:U:OP2	34:a:871:U:N3	2.33	0.62
34:a:972:C:P	43:j:59:LYS:HZ3	2.22	0.62
34:a:1269:A:H1'	34:a:1312:G:H21	1.64	0.62
41:h:49:LYS:HZ2	41:h:51:GLU:N	1.97	0.62
48:o:28:VAL:HG13	48:o:62:ARG:HG3	1.80	0.62
49:p:67:ILE:HG23	49:p:71:VAL:HG12	1.80	0.62
57:x:184:LEU:O	57:x:218:HIS:HB2	1.99	0.62
57:x:312:ASP:HA	57:x:340:GLY:H	1.64	0.62
57:x:602:GLU:O	57:x:606:LYS:HE3	1.99	0.62
8:A:128:C:H2'	8:A:129:C:C6	2.34	0.62
8:A:588:U:H2'	8:A:589:U:C6	2.34	0.62
8:A:616:A:H2'	8:A:617:G:O4'	1.99	0.62
8:A:1009:A:H2'	8:A:1010:A:C8	2.34	0.62
8:A:1016:G:C6	8:A:1147:A:N6	2.68	0.62
8:A:1165:A:H2'	8:A:1166:G:C8	2.34	0.62
8:A:1398:C:H5''	27:T:59:ASN:ND2	2.13	0.62
8:A:1786:A:N6	8:A:2606:C:O4'	2.32	0.62
8:A:2209:G:H5'	8:A:2210:U:H5''	1.81	0.62
8:A:2386:A:O3'	30:W:51:ARG:NH2	2.30	0.62
8:A:2631:G:C2	8:A:2788:C:C2	2.88	0.62
13:F:131:VAL:O	13:F:150:GLY:HA3	1.99	0.62
17:J:56:VAL:HB	17:J:124:VAL:HG13	1.81	0.62
20:M:4:PRO:HG3	20:M:70:ASP:HA	1.81	0.62
22:O:34:HIS:CE1	22:O:65:THR:HG1	2.14	0.62
29:V:44:HIS:O	29:V:48:MET:HB2	1.97	0.62
31:X:16:ASN:ND2	31:X:26:ARG:HB3	2.14	0.62
32:Y:37:LEU:HD21	32:Y:39:GLN:O	2.00	0.62
34:a:162:A:C8	34:a:346:G:C6	2.87	0.62
34:a:253:A:C6	34:a:274:A:N1	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:447:G:C2'	34:a:487:A:N6	2.63	0.62
34:a:911:U:OP2	45:l:93:ARG:NH1	2.32	0.62
34:a:967:5MC:OP2	34:a:968:A:H2'	1.99	0.62
34:a:1222:G:H2'	34:a:1223:C:O4'	1.99	0.62
34:a:1300:G:H4'	34:a:1301:U:O5'	1.99	0.62
34:a:1309:G:OP1	46:m:90:HIS:NE2	2.26	0.62
34:a:1526:G:N7	54:u:39:LYS:NZ	2.47	0.62
35:b:18:GLN:O	35:b:38:HIS:HB2	1.99	0.62
37:d:26:ALA:O	37:d:30:LYS:HE3	1.98	0.62
40:g:43:TYR:O	40:g:47:GLU:HG2	1.99	0.62
41:h:21:LYS:O	41:h:62:LEU:HD12	1.98	0.62
46:m:18:LEU:HD22	46:m:33:LEU:HD13	1.80	0.62
56:w:29:G:N1	56:w:42:C:N3	2.47	0.62
57:x:613:GLU:O	57:x:686:TYR:HA	1.99	0.62
7:6:59:ARG:HB3	7:6:63:ARG:NH2	2.15	0.62
8:A:221:A:N7	8:A:427:U:O2	2.32	0.62
8:A:527:C:C2'	8:A:2779:U:HO2'	2.12	0.62
8:A:711:G:C6	8:A:721:A:C6	2.87	0.62
8:A:911:A:H2'	20:M:9:PHE:CZ	2.35	0.62
8:A:950:G:H2'	8:A:951:C:C6	2.34	0.62
8:A:1011:G:C6	8:A:1151:A:C6	2.87	0.62
8:A:1138:G:H2'	17:J:108:MET:HE2	1.82	0.62
8:A:1281:G:H2'	8:A:1282:U:C6	2.34	0.62
8:A:1707:G:O4'	8:A:1756:G:H1'	1.99	0.62
8:A:2114:A:C1'	8:A:2167:U:O2'	2.48	0.62
8:A:2116:G:N1	8:A:2117:A:N7	2.48	0.62
8:A:2287:A:HO2'	8:A:2288:A:P	2.22	0.62
9:B:24:G:N7	9:B:56:G:O2'	2.31	0.62
10:C:143:VAL:HG22	10:C:189:ALA:CB	2.30	0.62
10:C:160:TYR:CG	10:C:193:GLU:HG2	2.34	0.62
28:U:23:LYS:C	28:U:35:VAL:HG13	2.24	0.62
30:W:37:ARG:HH22	30:W:52:ASP:HB2	1.65	0.62
34:a:22:G:O2'	34:a:913:A:N1	2.27	0.62
34:a:42:G:C2	34:a:401:C:C2	2.88	0.62
34:a:67:C:HO2'	34:a:171:A:C2'	2.11	0.62
34:a:834:U:H2'	34:a:835:U:C6	2.35	0.62
34:a:920:U:H2'	34:a:1081:A:H2'	1.82	0.62
34:a:937:A:O2'	34:a:1378:C:N4	2.32	0.62
34:a:1417:G:H2'	34:a:1482:G:N2	2.14	0.62
41:h:60:LEU:HD12	41:h:60:LEU:O	2.00	0.62
2:1:4:ILE:N	8:A:2284:A:OP1	2.25	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:35:G:H1'	8:A:454:A:C4	2.34	0.62
8:A:75:G:H4'	32:Y:48:ARG:NH2	2.15	0.62
8:A:301:G:C5	8:A:317:G:C6	2.87	0.62
8:A:311:A:O2'	8:A:331:C:O2'	2.16	0.62
8:A:391:A:C5	8:A:392:U:C5	2.88	0.62
8:A:511:U:H2'	8:A:512:G:O4'	2.00	0.62
8:A:1068:G:N7	8:A:1074:G:N2	2.47	0.62
8:A:1081:U:O2'	8:A:1082:U:OP1	2.16	0.62
8:A:1313:U:O2'	8:A:1332:G:O4'	2.18	0.62
8:A:1338:G:C2	8:A:1339:G:C4	2.87	0.62
8:A:1373:A:H2'	8:A:1374:G:O4'	1.98	0.62
8:A:1870:C:C4	8:A:1871:A:C5	2.87	0.62
8:A:1927:A:H2'	8:A:1928:A:C8	2.35	0.62
8:A:2193:G:H2'	8:A:2194:U:C6	2.34	0.62
8:A:2266:A:H1'	8:A:2272:U:N3	2.13	0.62
8:A:2294:G:N1	8:A:2339:C:N3	2.46	0.62
8:A:2352:A:H2'	8:A:2353:G:O4'	2.00	0.62
11:D:119:ALA:N	11:D:163:GLY:O	2.19	0.62
14:G:108:PHE:CE2	14:G:112:VAL:HG21	2.35	0.62
19:L:96:LYS:NZ	19:L:103:ILE:O	2.29	0.62
30:W:33:ILE:HB	30:W:55:LEU:O	2.00	0.62
30:W:41:PHE:CD1	30:W:74:LYS:HE2	2.34	0.62
30:W:52:ASP:CG	30:W:54:THR:HG1	2.07	0.62
34:a:343:U:H5''	34:a:344:A:OP1	2.00	0.62
34:a:363:A:H2'	34:a:364:A:O4'	1.99	0.62
34:a:464:U:N3	34:a:466:A:C8	2.68	0.62
34:a:474:G:H2'	34:a:475:C:C6	2.35	0.62
34:a:695:A:H2'	34:a:696:A:O4'	1.99	0.62
34:a:718:A:H5'	44:k:118:ASN:HB2	1.82	0.62
34:a:792:A:O2'	34:a:794:A:N7	2.32	0.62
34:a:1368:A:H5''	42:i:112:ARG:HH21	1.64	0.62
37:d:162:GLU:OE1	37:d:163:GLN:N	2.32	0.62
8:A:383:C:N4	8:A:386:G:OP2	2.33	0.62
8:A:813:U:H2'	8:A:814:C:H6	1.64	0.62
8:A:852:U:O4'	33:Z:42:ALA:HA	2.00	0.62
8:A:2014:A:H2'	8:A:2015:A:N9	2.15	0.62
8:A:2365:G:H2'	8:A:2366:A:C8	2.35	0.62
8:A:2533:U:H2'	8:A:2534:A:O4'	1.99	0.62
8:A:2650:U:C2	8:A:2671:G:C2	2.88	0.62
8:A:2821:A:OP2	21:N:3:HIS:CD2	2.53	0.62
8:A:2838:G:H4'	21:N:45:ARG:NH2	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:6:G:H2'	9:B:7:G:C8	2.35	0.62
11:D:25:THR:OG1	11:D:191:GLY:O	2.18	0.62
14:G:10:VAL:HG22	14:G:47:ASN:C	2.25	0.62
30:W:64:LYS:O	30:W:76:ILE:HG23	1.99	0.62
34:a:210:C:C5'	34:a:211:G:H5'	2.29	0.62
34:a:232:G:O2'	34:a:263:A:N1	2.33	0.62
34:a:497:G:H2'	34:a:498:A:C8	2.35	0.62
34:a:516:PSU:H3'	34:a:517:G:C8	2.34	0.62
34:a:876:C:H1'	41:h:11:THR:HG21	1.79	0.62
40:g:14:ASP:O	40:g:18:GLY:N	2.27	0.62
43:j:32:THR:HG21	43:j:83:THR:HG21	1.81	0.62
48:o:6:ALA:O	48:o:10:ILE:HG12	2.00	0.62
57:x:252:ARG:HA	57:x:255:VAL:HB	1.81	0.62
57:x:534:GLU:OE1	57:x:536:ILE:N	2.33	0.62
2:1:43:ARG:HH11	8:A:2370:G:C4'	2.13	0.62
8:A:35:G:C6	8:A:36:G:C5	2.88	0.62
8:A:440:C:H2'	8:A:441:U:H6	1.65	0.62
8:A:661:A:H2'	8:A:662:G:O4'	1.98	0.62
8:A:705:A:OP2	8:A:725:G:N1	2.33	0.62
8:A:1067:A:H2'	8:A:1068:G:C5	2.33	0.62
8:A:1078:U:O2'	8:A:1079:C:OP1	2.18	0.62
8:A:1879:C:C4	8:A:1880:U:C4	2.88	0.62
8:A:1910:G:H2'	8:A:1911:PSU:O4'	1.99	0.62
8:A:1972:G:C2	8:A:1973:G:N7	2.68	0.62
8:A:2284:A:C2	8:A:2325:G:O6	2.53	0.62
8:A:2471:A:H2'	8:A:2472:G:O4'	1.98	0.62
8:A:2729:G:H4'	11:D:190:LYS:HE2	1.80	0.62
13:F:127:TYR:HE2	13:F:129:MET:HB3	1.63	0.62
15:H:37:VAL:CG1	15:H:43:ASN:ND2	2.62	0.62
26:S:1:MET:SD	26:S:109:ASP:N	2.73	0.62
28:U:11:ILE:HA	28:U:21:ARG:HA	1.82	0.62
34:a:62:U:H2'	34:a:63:C:C6	2.34	0.62
34:a:164:G:H2'	34:a:165:G:C8	2.35	0.62
34:a:207:C:H1'	34:a:212:G:C1'	2.28	0.62
34:a:216:U:H5''	34:a:464:U:O2'	2.00	0.62
34:a:438:U:N3	34:a:496:A:C5	2.67	0.62
34:a:590:U:H2'	34:a:591:U:C6	2.35	0.62
34:a:999:C:H2'	34:a:1000:A:C8	2.34	0.62
34:a:1084:G:O2'	34:a:1103:C:N4	2.32	0.62
34:a:1119:C:H2'	34:a:1120:C:H6	1.65	0.62
34:a:1123:U:O3'	43:j:37:ARG:O	2.18	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1375:A:O2'	34:a:1376:U:O4'	2.17	0.62
57:x:71:TRP:O	57:x:80:PRO:HA	2.00	0.62
8:A:17:G:C6	8:A:524:G:C6	2.88	0.62
8:A:209:C:C2	8:A:210:C:C5	2.87	0.62
8:A:783:A:H2'	8:A:784:G:H4'	1.81	0.62
8:A:983:A:N7	8:A:984:A:N6	2.48	0.62
8:A:1561:C:H2'	8:A:1562:U:C6	2.34	0.62
8:A:1656:C:H2'	8:A:1657:U:C6	2.34	0.62
8:A:2308:G:H2'	8:A:2310:C:C5	2.34	0.62
8:A:2345:G:H5''	8:A:2346:A:H5'	1.81	0.62
8:A:2552:OMU:H5	8:A:2557:G:C6	2.34	0.62
10:C:263:ASP:N	10:C:263:ASP:OD1	2.31	0.62
34:a:158:G:C8	34:a:158:G:H3'	2.34	0.62
34:a:1320:C:C2	52:s:71:GLY:HA3	2.34	0.62
34:a:1478:U:H2'	34:a:1479:C:C6	2.34	0.62
35:b:99:MET:N	35:b:174:GLU:OE2	2.32	0.62
35:b:105:THR:O	35:b:108:GLN:OE1	2.16	0.62
36:c:22:PHE:HB2	43:j:95:GLY:O	1.99	0.62
42:i:44:ARG:HA	42:i:47:VAL:HG12	1.81	0.62
48:o:78:THR:O	48:o:81:ILE:HG12	2.00	0.62
55:v:15:G:C2	55:v:48:C:O2	2.52	0.62
57:x:461:GLY:H	57:x:464:HIS:HB3	1.65	0.62
2:1:8:ILE:CG1	2:1:22:THR:HG23	2.30	0.62
2:1:39:ASP:N	2:1:44:GLN:O	2.33	0.62
5:4:6:SER:HB2	5:4:8:LYS:HZ1	1.65	0.62
8:A:13:A:C2	8:A:14:A:N6	2.68	0.62
8:A:220:G:O2'	8:A:233:A:N3	2.30	0.62
8:A:243:U:O2	8:A:255:A:N7	2.33	0.62
8:A:399:U:H2'	8:A:400:G:C8	2.35	0.62
8:A:635:C:OP2	19:L:109:LYS:HE3	2.00	0.62
8:A:1005:C:C2	8:A:1006:C:C5	2.88	0.62
8:A:1006:C:C2	8:A:1138:G:N2	2.68	0.62
8:A:1007:C:P	8:A:1008:A:H3'	2.40	0.62
8:A:1087:G:N3	8:A:1102:C:N4	2.48	0.62
8:A:1495:A:H2'	8:A:1496:A:C8	2.35	0.62
8:A:1779:U:P	8:A:1784:A:H61	2.23	0.62
8:A:1785:A:C6	8:A:1787:A:C4	2.88	0.62
8:A:1851:U:H2'	8:A:1852:U:O4'	2.00	0.62
8:A:2051:A:H2'	8:A:2614:A:H61	1.64	0.62
8:A:2100:G:O6	8:A:2189:U:O4	2.18	0.62
8:A:2656:U:OP2	8:A:2664:G:N1	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:184:ARG:NH2	23:P:7:LEU:HD12	2.14	0.62
14:G:21:GLN:OE1	14:G:54:ARG:NH1	2.33	0.62
17:J:58:ASN:HA	17:J:126:ALA:O	2.00	0.62
18:K:69:VAL:O	18:K:77:ILE:N	2.30	0.62
25:R:68:ARG:HD3	25:R:90:ARG:HE	1.65	0.62
34:a:264:C:H2'	34:a:265:G:O4'	2.00	0.62
34:a:462:G:C8	34:a:463:U:O4'	2.53	0.62
34:a:601:G:C2	34:a:638:U:C2	2.88	0.62
34:a:1309:G:C6	34:a:1329:A:C6	2.88	0.62
34:a:1401:G:C2	34:a:1402:4OC:H1'	2.34	0.62
34:a:1422:G:O6	34:a:1478:U:N3	2.30	0.62
35:b:67:LEU:HD21	35:b:150:ILE:HD11	1.82	0.62
35:b:161:PHE:HB2	35:b:183:PHE:CE2	2.35	0.62
47:n:22:LYS:O	47:n:26:LEU:HD13	2.00	0.62
52:s:44:ILE:HA	52:s:61:VAL:HG12	1.82	0.62
57:x:351:SER:O	57:x:403:ILE:HG23	2.00	0.62
57:x:544:ILE:O	57:x:544:ILE:HG13	1.99	0.62
8:A:1:G:C2	8:A:2903:U:C2	2.88	0.61
8:A:175:G:H2'	8:A:176:A:C8	2.35	0.61
8:A:192:C:H42	8:A:203:A:C2'	2.13	0.61
8:A:231:A:H3'	8:A:232:G:C8	2.35	0.61
8:A:445:C:H5''	24:Q:2:ARG:H	1.65	0.61
8:A:479:A:O2'	8:A:481:G:O4'	2.15	0.61
8:A:744:U:H3'	8:A:745:1MG:H8	1.64	0.61
8:A:1202:G:C6	8:A:1244:A:C6	2.88	0.61
8:A:1796:U:H2'	8:A:1797:G:C8	2.35	0.61
8:A:1797:G:C6	8:A:1823:G:C6	2.88	0.61
8:A:2550:G:C6	8:A:2559:C:N3	2.68	0.61
8:A:2607:G:H2'	8:A:2608:G:O4'	2.00	0.61
8:A:2808:G:C2	8:A:2891:U:C6	2.88	0.61
8:A:2840:C:H2'	8:A:2841:C:C6	2.35	0.61
10:C:74:PRO:HD2	10:C:96:LYS:HZ2	1.65	0.61
34:a:181:A:H61	34:a:194:C:H2'	1.65	0.61
34:a:409:U:H2'	34:a:410:G:O4'	1.99	0.61
34:a:460:A:C5	34:a:461:A:N1	2.68	0.61
34:a:599:C:O2'	41:h:121:GLY:N	2.33	0.61
34:a:1129:C:C2	34:a:1144:G:N2	2.68	0.61
34:a:1350:A:OP2	42:i:119:LYS:NZ	2.33	0.61
34:a:1385:G:H2'	34:a:1386:G:C8	2.34	0.61
34:a:1396:A:C2	38:e:23:THR:HG21	2.35	0.61
35:b:92:ASN:OD1	35:b:93:HIS:ND1	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:c:10:ARG:NE	36:c:179:ALA:O	2.33	0.61
37:d:24:VAL:HG23	37:d:25:ARG:H	1.64	0.61
46:m:52:ILE:O	46:m:56:ARG:HG2	1.99	0.61
57:x:167:PRO:O	57:x:184:LEU:HD12	2.00	0.61
8:A:91:A:H4'	8:A:92:U:H5'	1.83	0.61
8:A:247:G:N7	8:A:249:C:C2	2.68	0.61
8:A:531:C:C5	8:A:2035:G:C2	2.88	0.61
8:A:604:G:C6	8:A:625:G:C6	2.88	0.61
8:A:678:C:H2'	8:A:679:C:C6	2.34	0.61
8:A:878:A:H62	8:A:899:A:H4'	1.64	0.61
8:A:960:A:C8	8:A:962:G:C8	2.88	0.61
8:A:1220:G:C6	8:A:1230:A:C6	2.88	0.61
8:A:1274:A:H3'	8:A:1646:C:N4	2.14	0.61
8:A:1425:G:H2'	8:A:1426:G:C8	2.35	0.61
8:A:1956:U:C2	8:A:1957:C:C6	2.88	0.61
8:A:2413:G:H2'	8:A:2414:G:O4'	2.00	0.61
8:A:2655:G:N2	8:A:2664:G:H2'	2.15	0.61
9:B:32:U:C2	9:B:51:G:C2	2.88	0.61
9:B:61:G:H2'	9:B:62:C:H6	1.64	0.61
10:C:74:PRO:HA	10:C:115:ILE:O	2.00	0.61
18:K:5:GLN:HA	18:K:20:MET:SD	2.39	0.61
26:S:70:LYS:HB2	26:S:110:ARG:HD2	1.82	0.61
28:U:28:LEU:HG	28:U:33:VAL:HA	1.82	0.61
32:Y:16:THR:O	32:Y:20:ASN:ND2	2.33	0.61
34:a:212:G:H2'	34:a:213:G:C8	2.35	0.61
34:a:428:G:H5'	34:a:430:A:O4'	2.00	0.61
34:a:494:G:H2'	34:a:496:A:C8	2.35	0.61
34:a:921:U:C6	34:a:1082:A:OP2	2.53	0.61
34:a:1078:U:H4'	38:e:137:ARG:NH2	2.14	0.61
34:a:1151:A:H5''	43:j:44:THR:H	1.64	0.61
34:a:1225:A:H1'	52:s:77:ARG:HD2	1.83	0.61
34:a:1237:C:O2'	34:a:1300:G:N1	2.29	0.61
34:a:1309:G:O6	34:a:1329:A:C6	2.54	0.61
39:f:66:ALA:HB3	39:f:71:ILE:HD11	1.82	0.61
49:p:39:PHE:HA	49:p:49:GLY:O	2.00	0.61
53:t:27:MET:HG2	53:t:31:ILE:HD11	1.82	0.61
7:6:13:THR:HG22	7:6:23:LYS:HD3	1.80	0.61
8:A:25:U:OP1	26:S:8:ARG:NH2	2.32	0.61
8:A:96:C:H2'	8:A:97:C:C6	2.36	0.61
8:A:956:G:OP2	20:M:86:LYS:NZ	2.32	0.61
8:A:1213:A:N6	8:A:1236:G:O4'	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1800:C:O2	8:A:1817:G:C2	2.52	0.61
8:A:2327:A:H2'	8:A:2328:A:C8	2.34	0.61
8:A:2521:C:H2'	8:A:2522:U:O4'	1.99	0.61
13:F:63:LYS:HG3	13:F:64:PRO:HD2	1.82	0.61
13:F:98:PHE:HD2	13:F:101:ARG:HH11	1.49	0.61
22:O:55:GLU:OE1	22:O:81:ARG:NH1	2.28	0.61
33:Z:6:ILE:HA	33:Z:56:VAL:HG12	1.81	0.61
34:a:466:A:H2'	34:a:468:A:C5'	2.30	0.61
34:a:502:A:C6	34:a:544:G:C6	2.88	0.61
34:a:617:G:H5'	49:p:46:LYS:HE3	1.81	0.61
34:a:918:A:H2'	34:a:919:A:C8	2.35	0.61
34:a:1016:A:H1'	34:a:1218:C:H1'	1.82	0.61
34:a:1267:C:O2'	34:a:1268:G:O4'	2.11	0.61
34:a:1353:G:C2	34:a:1370:G:C2	2.88	0.61
34:a:1531:A:H2'	34:a:1532:U:C6	2.35	0.61
36:c:152:VAL:O	36:c:165:GLU:N	2.30	0.61
37:d:22:SER:HB2	37:d:108:ALA:HB1	1.82	0.61
38:e:13:LYS:HD2	38:e:116:VAL:CG1	2.30	0.61
44:k:62:ALA:CB	44:k:91:GLY:HA3	2.29	0.61
53:t:35:TYR:O	53:t:39:GLU:HG2	2.00	0.61
7:6:1:MET:HE2	9:B:43:C:C5'	2.30	0.61
8:A:669:G:OP1	8:A:670:A:N6	2.30	0.61
8:A:811:U:OP2	19:L:29:LYS:N	2.34	0.61
8:A:909:A:H2'	8:A:912:C:H5	1.65	0.61
8:A:975:A:C5	8:A:976:G:C8	2.88	0.61
8:A:1023:U:OP2	8:A:1025:G:O2'	2.18	0.61
8:A:1028:A:H2'	8:A:1029:A:H8	1.62	0.61
8:A:1143:A:C8	17:J:27:ARG:NH1	2.68	0.61
8:A:1869:G:H2'	8:A:1871:A:C2	2.34	0.61
8:A:2618:G:O2'	11:D:155:VAL:HB	2.01	0.61
12:E:49:ARG:O	12:E:74:LYS:HE3	2.01	0.61
12:E:115:GLN:OE1	12:E:117:ARG:HD3	2.00	0.61
13:F:70:ARG:O	13:F:80:GLN:NE2	2.34	0.61
21:N:35:LYS:HB2	21:N:112:TYR:CZ	2.35	0.61
34:a:511:C:C2	34:a:512:U:C5	2.88	0.61
34:a:635:A:C4	34:a:636:U:C5	2.89	0.61
34:a:853:C:H2'	34:a:854:U:O4'	2.01	0.61
34:a:1320:C:H2'	34:a:1321:U:C6	2.35	0.61
34:a:1358:U:OP2	34:a:1359:C:N4	2.20	0.61
40:g:5:VAL:O	40:g:5:VAL:HG13	2.01	0.61
41:h:45:ILE:HG22	41:h:46:GLU:O	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:v:14:A:N1	55:v:21:A:O2'	2.32	0.61
56:w:6:G:C2	56:w:68:C:C2	2.88	0.61
57:x:296:GLY:O	57:x:305:PRO:HG2	1.99	0.61
57:x:351:SER:C	57:x:403:ILE:HG23	2.25	0.61
57:x:413:PRO:HB3	57:x:458:ALA:C	2.25	0.61
57:x:524:LEU:HD12	57:x:532:GLY:O	2.00	0.61
8:A:144:A:H4'	27:T:3:ARG:HH12	1.65	0.61
8:A:170:U:H2'	8:A:171:U:C6	2.36	0.61
8:A:481:G:H2'	8:A:507:A:C6	2.35	0.61
8:A:554:U:H2'	8:A:555:G:O4'	2.00	0.61
8:A:859:G:O2'	8:A:916:G:O6	2.07	0.61
8:A:890:C:H2'	8:A:891:G:C8	2.35	0.61
8:A:1213:A:H2'	8:A:1214:A:O4'	2.01	0.61
8:A:1420:A:C4	8:A:2211:A:C6	2.89	0.61
8:A:1453:A:O2'	21:N:63:ARG:NH1	2.34	0.61
8:A:1637:A:H5'	8:A:1760:C:O2'	2.01	0.61
8:A:1684:G:N1	8:A:1705:A:C6	2.68	0.61
8:A:1716:U:N3	8:A:1744:A:C8	2.64	0.61
8:A:1766:G:C6	8:A:1987:A:C6	2.89	0.61
8:A:2215:C:H2'	8:A:2216:G:O4'	2.01	0.61
8:A:2415:G:H2'	8:A:2416:C:C6	2.36	0.61
8:A:2886:A:C2	8:A:2887:A:H1'	2.36	0.61
9:B:57:A:H2'	9:B:58:A:O4'	2.01	0.61
10:C:230:PRO:HG2	10:C:245:THR:O	2.00	0.61
14:G:94:ARG:HH22	14:G:96:ALA:HB2	1.66	0.61
15:H:72:ILE:HG13	15:H:141:LYS:H	1.66	0.61
34:a:41:G:H2'	34:a:42:G:H8	1.64	0.61
34:a:153:C:H2'	34:a:154:U:C6	2.36	0.61
34:a:458:U:O2	34:a:474:G:C2	2.53	0.61
34:a:640:A:C3'	41:h:107:LYS:HZ1	2.12	0.61
34:a:949:A:C6	34:a:950:U:C4	2.88	0.61
34:a:1012:A:N6	34:a:1018:G:O6	2.34	0.61
34:a:1108:G:P	36:c:173:PRO:HA	2.40	0.61
34:a:1171:A:H2'	34:a:1172:C:C6	2.35	0.61
34:a:1306:A:N6	34:a:1331:G:O2'	2.31	0.61
39:f:4:TYR:CE2	39:f:91:ARG:HD2	2.35	0.61
40:g:24:LYS:HA	40:g:27:ASN:HD22	1.66	0.61
43:j:47:GLU:HG2	43:j:49:PHE:CZ	2.35	0.61
45:l:53:ARG:HE	45:l:61:GLU:HG2	1.65	0.61
48:o:28:VAL:O	48:o:32:THR:HG23	2.00	0.61
57:x:192:TRP:HA	57:x:200:THR:O	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:317:SER:HB2	57:x:339:SER:OG	2.00	0.61
1:0:3:GLN:HA	8:A:2615:U:C2	2.36	0.61
7:6:11:GLU:HG3	7:6:24:ILE:C	2.26	0.61
8:A:85:G:C6	8:A:86:G:C5	2.88	0.61
8:A:441:U:HO2'	12:E:41:GLN:CD	2.01	0.61
8:A:465:G:N3	8:A:683:U:O2'	2.30	0.61
8:A:774:G:O2'	8:A:775:G:H5''	2.01	0.61
8:A:932:U:O2'	8:A:934:U:O4	2.09	0.61
8:A:963:U:H2'	8:A:964:C:C6	2.35	0.61
8:A:1314:C:C2	8:A:1315:C:C5	2.89	0.61
8:A:1315:C:O2'	8:A:1392:A:H1'	2.00	0.61
8:A:1478:G:H2'	8:A:1479:G:C8	2.35	0.61
8:A:1571:A:H2'	8:A:1572:A:C8	2.35	0.61
8:A:1667:G:H22	8:A:1991:U:H3'	1.64	0.61
8:A:1730:C:H1'	8:A:1731:G:C2	2.35	0.61
8:A:2134:A:H2'	8:A:2135:A:H5''	1.81	0.61
8:A:2513:A:C5	8:A:2574:G:C6	2.88	0.61
8:A:2591:C:H2'	8:A:2592:G:C8	2.35	0.61
8:A:2811:G:H2'	8:A:2812:G:O4'	2.01	0.61
13:F:47:LYS:HA	13:F:50:ASP:HB2	1.82	0.61
14:G:108:PHE:HE2	14:G:112:VAL:HG21	1.64	0.61
20:M:74:THR:HA	20:M:89:VAL:HA	1.83	0.61
26:S:84:ARG:O	26:S:95:ARG:HA	2.00	0.61
29:V:31:TYR:O	29:V:92:VAL:HA	2.00	0.61
34:a:203:G:H3'	34:a:205:A:OP2	2.00	0.61
34:a:375:U:O3'	49:p:6:LEU:HD12	2.01	0.61
34:a:409:U:OP1	37:d:22:SER:N	2.33	0.61
34:a:481:G:H2'	34:a:481:G:N3	2.15	0.61
34:a:563:A:C2	34:a:567:G:C4	2.88	0.61
37:d:75:TYR:CE2	37:d:203:TYR:HB3	2.35	0.61
38:e:55:VAL:O	38:e:59:ILE:HG13	2.01	0.61
39:f:59:TYR:CE2	51:r:66:LEU:HD21	2.36	0.61
40:g:13:PRO:HA	40:g:20:GLU:HA	1.81	0.61
53:t:45:ALA:HA	53:t:48:LYS:HE2	1.81	0.61
53:t:66:ILE:HB	53:t:70:LYS:HD3	1.83	0.61
57:x:413:PRO:HB3	57:x:459:GLY:N	2.15	0.61
8:A:7:G:H5'	17:J:132:HIS:ND1	2.16	0.61
8:A:27:G:H1	8:A:512:G:HO2'	0.64	0.61
8:A:327:G:N2	28:U:67:SER:OG	2.33	0.61
8:A:460:A:N6	8:A:469:G:O2'	2.34	0.61
8:A:483:A:N6	8:A:497:A:O2'	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:563:A:OP2	25:R:79:ARG:NH1	2.30	0.61
8:A:569:U:O2'	8:A:983:A:N6	2.33	0.61
8:A:635:C:H3'	19:L:109:LYS:HZ1	1.64	0.61
8:A:1036:G:C6	8:A:1120:G:C5	2.89	0.61
8:A:1083:U:O2'	8:A:1085:A:H5''	2.00	0.61
8:A:1216:G:OP1	24:Q:7:VAL:HG13	1.99	0.61
8:A:1319:C:C4	8:A:1334:G:N1	2.69	0.61
8:A:1341:G:OP1	8:A:1602:U:O2'	2.16	0.61
8:A:1426:G:OP2	8:A:1427:A:O2'	2.17	0.61
8:A:1464:G:H2'	8:A:1465:G:C8	2.36	0.61
8:A:1656:C:H2'	8:A:1657:U:H6	1.65	0.61
8:A:2295:C:H3'	22:O:9:ARG:NH2	2.16	0.61
9:B:9:G:C5	9:B:112:G:C6	2.89	0.61
14:G:126:THR:HB	14:G:129:GLU:HG2	1.83	0.61
17:J:17:VAL:HG22	17:J:55:ILE:HB	1.82	0.61
17:J:45:THR:HB	17:J:48:VAL:HB	1.83	0.61
21:N:2:ARG:HG2	21:N:5:LYS:HB2	1.82	0.61
34:a:1:A:H2'	34:a:2:A:C8	2.35	0.61
34:a:26:A:H61	34:a:558:G:C2'	2.13	0.61
34:a:188:C:HO2'	34:a:189:A:C1'	2.13	0.61
34:a:368:U:O5'	57:x:361:ARG:HD2	2.00	0.61
34:a:490:C:H2'	34:a:491:G:H8	1.66	0.61
34:a:515:G:N3	34:a:516:PSU:C6	2.68	0.61
34:a:767:A:H2'	34:a:768:A:O4'	1.99	0.61
34:a:826:C:O2	41:h:15:ASN:OD1	2.18	0.61
34:a:1133:G:O6	34:a:1139:G:C2	2.53	0.61
34:a:1374:A:C6	34:a:1375:A:C6	2.88	0.61
34:a:1402:4OC:H6	34:a:1402:4OC:O5'	2.01	0.61
34:a:1436:U:H2'	34:a:1437:A:C8	2.35	0.61
34:a:1455:G:H2'	34:a:1456:A:O4'	2.00	0.61
40:g:71:THR:HG1	40:g:141:HIS:CE1	2.18	0.61
53:t:8:LYS:HA	53:t:11:ILE:HG12	1.82	0.61
55:v:64:G:H2'	55:v:65:C:C6	2.36	0.61
8:A:503:A:H4'	8:A:504:A:H5''	1.81	0.61
8:A:546:U:O2	8:A:548:G:O6	2.17	0.61
8:A:839:U:H2'	8:A:840:C:C6	2.35	0.61
8:A:878:A:N7	8:A:899:A:O2'	2.34	0.61
8:A:1001:A:H61	8:A:1154:G:H1'	1.66	0.61
8:A:1020:A:O4'	8:A:1021:A:C5	2.54	0.61
8:A:1418:G:O6	8:A:1578:U:H5''	2.01	0.61
8:A:1445:G:H2'	8:A:1446:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2075:U:C1'	8:A:2597:G:N2	2.63	0.61
8:A:2097:A:H2'	8:A:2098:U:H6	1.65	0.61
8:A:2707:U:O2	21:N:71:ARG:NH2	2.30	0.61
9:B:86:G:C2	9:B:91:C:C2	2.89	0.61
17:J:28:LEU:O	17:J:32:LEU:HG	2.01	0.61
30:W:25:GLU:O	30:W:63:VAL:N	2.24	0.61
34:a:157:U:O2'	34:a:159:G:N1	2.34	0.61
34:a:181:A:H2'	34:a:182:A:C8	2.36	0.61
34:a:920:U:H2'	34:a:1081:A:HO2'	1.64	0.61
34:a:935:A:O2'	34:a:1383:C:N3	2.30	0.61
34:a:1006:G:C6	34:a:1024:G:O4'	2.54	0.61
34:a:1292:G:H2'	34:a:1293:C:C6	2.36	0.61
34:a:1516:2MG:H2'	34:a:1518:MA6:OP2	1.99	0.61
35:b:66:ILE:N	35:b:88:GLN:OE1	2.30	0.61
35:b:185:ILE:HA	35:b:199:ILE:O	2.01	0.61
38:e:103:GLY:O	38:e:121:ASN:HA	2.01	0.61
45:l:33:CYS:O	45:l:75:GLU:O	2.18	0.61
47:n:65:ARG:HB2	47:n:79:LEU:HD21	1.81	0.61
57:x:136:ARG:O	57:x:261:ILE:HG13	2.00	0.61
8:A:155:A:H2'	8:A:156:A:H8	1.63	0.61
8:A:301:G:C6	8:A:317:G:C6	2.88	0.61
8:A:381:G:C2	8:A:394:C:N3	2.68	0.61
8:A:527:C:N4	8:A:2777:G:O2'	2.33	0.61
8:A:627:A:H61	8:A:637:A:C5'	2.13	0.61
8:A:737:C:H2'	8:A:738:G:O4'	2.00	0.61
8:A:1061:U:O2'	8:A:1070:A:C1'	2.48	0.61
8:A:1099:G:H2'	8:A:1100:C:O4'	2.00	0.61
8:A:1178:C:H2'	8:A:1180:U:C6	2.36	0.61
8:A:1204:A:O4'	8:A:1206:G:C8	2.54	0.61
8:A:1450:G:C2	8:A:1462:C:C2	2.88	0.61
8:A:1779:U:C5	8:A:1784:A:N7	2.69	0.61
8:A:1810:A:H8	8:A:1810:A:O5'	1.84	0.61
8:A:1932:A:H61	8:A:1968:G:HI'	1.66	0.61
8:A:1946:U:H2'	8:A:1947:C:H6	1.65	0.61
8:A:2126:A:N7	8:A:2163:A:H2'	2.16	0.61
8:A:2596:U:H2'	8:A:2597:G:O4'	2.01	0.61
9:B:53:A:H2'	9:B:54:G:C8	2.35	0.61
10:C:156:SER:HB2	10:C:159:THR:HG21	1.83	0.61
11:D:3:GLY:O	11:D:4:LEU:HD22	2.01	0.61
13:F:21:TYR:CE2	13:F:28:PRO:HD3	2.36	0.61
14:G:26:LYS:NZ	14:G:27:GLY:O	2.27	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:3:VAL:HG21	15:H:36:ALA:HB1	1.83	0.61
18:K:35:VAL:HG13	18:K:63:VAL:HA	1.82	0.61
21:N:52:ILE:HD13	21:N:94:TYR:CD2	2.36	0.61
22:O:30:ARG:HA	22:O:35:ILE:HG13	1.82	0.61
26:S:92:ARG:HG2	26:S:93:ALA:H	1.66	0.61
34:a:213:G:H1'	34:a:214:C:H2'	1.82	0.61
34:a:283:U:H2'	34:a:284:C:C6	2.36	0.61
34:a:402:G:H2'	34:a:403:C:C6	2.36	0.61
34:a:464:U:H2'	34:a:465:A:C8	2.36	0.61
34:a:510:A:N3	34:a:543:U:H1'	2.15	0.61
34:a:831:A:H5'	35:b:20:ARG:CZ	2.30	0.61
34:a:861:G:H2'	34:a:862:C:C6	2.36	0.61
34:a:1088:G:N2	34:a:1167:A:H61	1.98	0.61
34:a:1130:A:H3'	34:a:1131:G:C8	2.36	0.61
34:a:1397:C:O2'	59:z:9:U:N3	2.29	0.61
35:b:56:LEU:HD21	35:b:220:VAL:HG12	1.81	0.61
36:c:69:THR:C	36:c:105:VAL:HG22	2.26	0.61
38:e:148:SER:HB2	38:e:150:GLU:OE1	2.01	0.61
39:f:16:GLU:CD	39:f:16:GLU:H	2.09	0.61
50:q:27:PHE:CZ	50:q:36:PHE:HB3	2.36	0.61
7:6:35:ASP:OD1	7:6:36:VAL:N	2.34	0.61
8:A:77:G:H5'	32:Y:52:ARG:HG3	1.83	0.61
8:A:103:A:H2'	8:A:104:A:O4'	2.01	0.61
8:A:140:C:H4'	8:A:141:G:O5'	2.00	0.61
8:A:221:A:C8	8:A:266:G:C6	2.88	0.61
8:A:300:A:H1'	8:A:319:G:H1'	1.82	0.61
8:A:303:G:H2'	8:A:304:U:C6	2.36	0.61
8:A:440:C:H2'	8:A:441:U:C6	2.35	0.61
8:A:563:A:C6	8:A:2018:G:C4	2.88	0.61
8:A:625:G:H2'	8:A:626:A:C8	2.36	0.61
8:A:727:A:H2'	8:A:728:G:C8	2.36	0.61
8:A:895:U:H2'	8:A:897:C:H41	1.66	0.61
8:A:966:G:H2'	8:A:967:U:C6	2.35	0.61
8:A:1288:G:OP2	8:A:1288:G:N2	2.28	0.61
8:A:1447:C:C2	8:A:1465:G:C2	2.88	0.61
8:A:1613:G:C6	8:A:1619:G:O6	2.54	0.61
8:A:2507:C:C2	8:A:2583:G:C2	2.88	0.61
8:A:2638:G:H1'	8:A:2778:A:H61	1.66	0.61
11:D:108:ASP:O	11:D:204:LYS:HG2	2.01	0.61
13:F:106:ALA:HB1	13:F:136:ILE:CD1	2.31	0.61
20:M:49:ALA:HB1	20:M:120:ALA:HB1	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:27:VAL:HA	28:U:33:VAL:HG12	1.83	0.61
34:a:129:A:H2	34:a:232:G:H22	1.48	0.61
34:a:427:U:OP1	37:d:37:PRO:HB3	2.01	0.61
34:a:438:U:N1	34:a:496:A:N6	2.48	0.61
34:a:514:C:C2	34:a:538:G:C2	2.88	0.61
34:a:692:U:O2	34:a:695:A:C8	2.54	0.61
34:a:860:A:H61	34:a:869:G:H1'	1.65	0.61
34:a:1412:C:H2'	34:a:1413:A:C8	2.35	0.61
39:f:69:GLU:HG2	39:f:70:VAL:N	2.16	0.61
41:h:85:TYR:HA	41:h:123:GLU:HA	1.83	0.61
57:x:410:PHE:CG	57:x:442:PRO:HB2	2.36	0.61
6:5:28:ALA:HA	6:5:81:LEU:O	2.00	0.60
8:A:370:G:C6	8:A:424:G:C8	2.89	0.60
8:A:376:G:H2'	8:A:377:G:C8	2.36	0.60
8:A:396:G:C1'	31:X:28:PHE:HB3	2.31	0.60
8:A:608:A:H2'	8:A:609:A:H8	1.66	0.60
8:A:621:A:OP2	19:L:99:ASN:ND2	2.34	0.60
8:A:635:C:H3'	19:L:109:LYS:NZ	2.16	0.60
8:A:679:C:H2'	8:A:680:C:C6	2.35	0.60
8:A:780:G:C2	8:A:785:G:C6	2.88	0.60
8:A:887:A:P	8:A:891:G:H1	2.24	0.60
8:A:1753:G:N1	8:A:1756:G:OP2	2.34	0.60
8:A:1753:G:N2	8:A:1756:G:O5'	2.34	0.60
8:A:2799:A:C6	8:A:2801:G:C5	2.89	0.60
9:B:85:G:C2	9:B:92:C:C2	2.89	0.60
27:T:55:VAL:O	27:T:88:LYS:HE3	2.00	0.60
29:V:27:PRO:O	29:V:88:HIS:HA	2.01	0.60
32:Y:18:LEU:O	32:Y:19:LEU:HB2	2.00	0.60
34:a:1309:G:O5'	46:m:97:ARG:NH2	2.33	0.60
34:a:1402:4OC:HM22	34:a:1500:A:N1	2.16	0.60
45:l:112:ALA:HB1	45:l:115:LYS:HD3	1.81	0.60
47:n:26:LEU:HA	47:n:29:ILE:HD12	1.82	0.60
52:s:52:ASN:OD1	52:s:55:GLN:HG2	2.01	0.60
55:v:70:G:H2'	55:v:71:C:C6	2.36	0.60
57:x:306:ALA:CB	57:x:402:PRO:HB3	2.30	0.60
57:x:367:ALA:O	57:x:369:LYS:NZ	2.19	0.60
2:1:24:LYS:HE2	2:1:29:LYS:O	2.02	0.60
3:2:25:LYS:NZ	3:2:26:ASN:OD1	2.23	0.60
3:2:28:ARG:HA	3:2:31:LEU:HD12	1.81	0.60
8:A:458:G:N2	8:A:470:A:O5'	2.27	0.60
8:A:532:A:OP1	8:A:561:G:N2	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1090:A:C6	8:A:1102:C:H1'	2.35	0.60
8:A:1798:U:H5'	10:C:256:THR:OG1	2.01	0.60
8:A:1872:A:N6	8:A:1873:G:C2	2.69	0.60
8:A:1880:U:H2'	8:A:1881:C:C6	2.36	0.60
8:A:1925:C:H2'	8:A:1926:U:C6	2.36	0.60
8:A:2112:G:H2'	8:A:2112:G:N3	2.16	0.60
8:A:2185:U:N3	8:A:2186:G:O6	2.34	0.60
8:A:2325:G:C6	8:A:2326:C:N4	2.69	0.60
8:A:2721:A:H2'	8:A:2722:G:O4'	2.01	0.60
8:A:2859:G:O2'	8:A:2860:A:O4'	2.18	0.60
9:B:17:C:H2'	9:B:18:G:O4'	2.01	0.60
10:C:143:VAL:HG22	10:C:189:ALA:HB1	1.83	0.60
11:D:9:VAL:HB	11:D:26:VAL:O	2.00	0.60
11:D:116:LYS:HB2	11:D:165:MET:O	2.01	0.60
13:F:106:ALA:HB1	13:F:136:ILE:HD12	1.81	0.60
13:F:159:ALA:C	13:F:160:LYS:HD2	2.26	0.60
14:G:89:VAL:O	14:G:160:GLY:N	2.23	0.60
24:Q:8:ILE:HG13	24:Q:9:ALA:N	2.14	0.60
25:R:6:GLN:N	25:R:37:GLU:OE2	2.31	0.60
34:a:221:C:H2'	34:a:222:C:H6	1.67	0.60
34:a:447:G:C2'	34:a:487:A:H61	2.14	0.60
34:a:596:A:H2'	34:a:597:G:O4'	2.00	0.60
34:a:604:G:N1	34:a:635:A:C6	2.70	0.60
34:a:1060:U:H5''	43:j:53:ILE:HG21	1.83	0.60
34:a:1095:U:P	34:a:1108:G:H1	2.24	0.60
34:a:1363:A:C4	34:a:1365:G:C6	2.88	0.60
34:a:1367:C:H5'	43:j:62:ARG:NH2	2.16	0.60
35:b:19:THR:HG22	35:b:36:LYS:O	2.01	0.60
40:g:47:GLU:O	40:g:51:GLN:HG2	2.01	0.60
46:m:95:PRO:HD3	46:m:108:ARG:HB2	1.83	0.60
47:n:96:LEU:HD23	47:n:96:LEU:C	2.26	0.60
47:n:96:LEU:HD23	47:n:97:LYS:N	2.17	0.60
57:x:16:ALA:HB3	57:x:22:LYS:HE3	1.82	0.60
57:x:554:LYS:CB	57:x:593:LYS:HZ1	2.14	0.60
4:3:7:ARG:NH2	8:A:245:G:N7	2.50	0.60
8:A:495:G:O4'	26:S:57:ASN:ND2	2.34	0.60
8:A:768:G:H2'	8:A:769:U:C6	2.35	0.60
8:A:1340:U:H3'	27:T:61:LEU:HD22	1.83	0.60
8:A:1408:G:H2'	8:A:1409:U:H6	1.67	0.60
8:A:1482:G:N1	8:A:1483:G:C5	2.69	0.60
8:A:1713:A:N6	8:A:1746:A:N1	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2071:A:H2	8:A:2440:C:H42	1.49	0.60
8:A:2114:A:C4	8:A:2116:G:N7	2.69	0.60
8:A:2130:U:H2'	8:A:2131:U:H4'	1.83	0.60
8:A:2464:G:C6	8:A:2487:G:C6	2.89	0.60
8:A:2690:U:N3	21:N:6:SER:O	2.35	0.60
8:A:2774:C:H2'	8:A:2775:G:O4'	2.00	0.60
10:C:8:THR:OG1	10:C:12:ARG:HG2	2.01	0.60
10:C:160:TYR:HB3	10:C:193:GLU:HG2	1.82	0.60
24:Q:67:ALA:O	24:Q:70:GLN:HB3	2.01	0.60
34:a:59:A:H4'	34:a:388:G:OP1	2.02	0.60
34:a:145:G:HO2'	34:a:146:G:H8	1.49	0.60
34:a:145:G:H1'	34:a:178:C:N4	2.17	0.60
34:a:576:C:H2'	34:a:578:C:OP2	2.01	0.60
34:a:771:G:C6	34:a:809:G:C6	2.89	0.60
34:a:828:U:OP1	41:h:21:LYS:NZ	2.29	0.60
34:a:910:C:H2'	34:a:911:U:C6	2.35	0.60
34:a:1328:C:O2'	46:m:28:ARG:CZ	2.49	0.60
37:d:70:GLN:HG2	37:d:70:GLN:O	2.00	0.60
38:e:89:THR:O	38:e:134:ASN:OD1	2.19	0.60
8:A:36:G:C6	8:A:37:C:C4	2.88	0.60
8:A:451:U:O4	8:A:454:A:H5'	2.02	0.60
8:A:455:C:N3	8:A:472:A:H2'	2.16	0.60
8:A:458:G:O2'	8:A:469:G:N1	2.08	0.60
8:A:479:A:H1'	8:A:481:G:H5''	1.83	0.60
8:A:852:U:H2'	8:A:853:C:H6	1.65	0.60
8:A:1009:A:N3	8:A:1153:C:O2'	2.28	0.60
8:A:1073:A:H2'	8:A:1074:G:H5'	1.82	0.60
8:A:1091:G:C6	8:A:1101:U:H1'	2.36	0.60
8:A:1217:U:N3	8:A:1232:G:C6	2.69	0.60
8:A:1539:U:H2'	8:A:1540:G:C8	2.36	0.60
8:A:1667:G:N2	8:A:1991:U:H3'	2.16	0.60
8:A:1858:A:C2	8:A:1859:U:H1'	2.37	0.60
8:A:2051:A:H2'	8:A:2614:A:N6	2.16	0.60
8:A:2059:A:H2'	8:A:2503:2MA:HM23	1.83	0.60
8:A:2086:U:H2'	8:A:2087:G:O4'	2.00	0.60
8:A:2136:G:C8	8:A:2156:G:H1'	2.36	0.60
8:A:2177:C:C5	8:A:2178:C:C4	2.89	0.60
8:A:2648:G:C6	8:A:2673:G:C5	2.89	0.60
8:A:2847:U:H2'	8:A:2848:G:O4'	2.00	0.60
12:E:107:SER:O	12:E:110:SER:OG	2.17	0.60
23:P:21:PRO:HD3	23:P:49:ILE:HD12	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:12:VAL:CG2	31:X:28:PHE:HB2	2.32	0.60
34:a:216:U:N3	34:a:217:C:C4	2.70	0.60
34:a:431:A:C2	34:a:432:A:H1'	2.36	0.60
34:a:670:G:N1	34:a:737:C:N3	2.48	0.60
34:a:690:G:C6	34:a:691:G:C6	2.89	0.60
34:a:950:U:P	46:m:100:ARG:NH1	2.74	0.60
34:a:1083:U:H3'	34:a:1084:G:C8	2.37	0.60
34:a:1260:G:H4'	34:a:1283:U:O2'	2.00	0.60
34:a:1347:G:O2'	34:a:1348:U:O5'	2.20	0.60
49:p:9:HIS:ND1	49:p:18:GLN:HG3	2.16	0.60
53:t:81:GLN:N	53:t:84:LYS:HZ3	1.99	0.60
57:x:93:ASP:O	57:x:460:MET:CB	2.49	0.60
57:x:318:ALA:HB2	57:x:337:VAL:HG22	1.83	0.60
3:2:39:ARG:NH2	8:A:469:G:C6	2.69	0.60
4:3:2:LYS:HD3	8:A:242:G:C8	2.35	0.60
8:A:126:A:H2'	8:A:127:A:C8	2.37	0.60
8:A:151:C:H2'	8:A:152:A:H8	1.67	0.60
8:A:324:A:H61	8:A:338:G:C2'	2.14	0.60
8:A:843:G:H2'	8:A:844:A:H8	1.67	0.60
8:A:1418:G:O2'	8:A:1580:A:N1	2.34	0.60
8:A:1539:U:H2'	8:A:1540:G:H8	1.67	0.60
8:A:1632:A:H2'	8:A:1633:G:O4'	2.01	0.60
8:A:2128:G:O2'	8:A:2173:A:O2'	2.18	0.60
8:A:2305:U:H4'	13:F:132:ARG:HH11	1.67	0.60
8:A:2657:A:H1'	8:A:2665:A:C6	2.36	0.60
8:A:2848:G:N2	8:A:2867:G:N3	2.50	0.60
9:B:28:C:O2'	9:B:29:A:H5'	2.02	0.60
9:B:48:U:H2'	9:B:49:C:H6	1.67	0.60
11:D:28:GLU:HA	11:D:185:ASN:O	2.00	0.60
14:G:108:PHE:CE1	14:G:151:ARG:CZ	2.84	0.60
17:J:49:ASP:OD1	17:J:121:LYS:NZ	2.34	0.60
19:L:57:LEU:HA	19:L:60:ARG:HB2	1.83	0.60
19:L:115:GLU:N	19:L:115:GLU:OE1	2.34	0.60
21:N:2:ARG:HA	21:N:5:LYS:HD2	1.84	0.60
34:a:1:A:H8	34:a:2:A:C4	2.20	0.60
34:a:68:G:O2'	34:a:170:U:O2'	2.05	0.60
34:a:155:A:H2'	34:a:156:C:C6	2.36	0.60
34:a:642:A:C5	41:h:106:SER:HA	2.36	0.60
34:a:875:U:O2'	41:h:14:ARG:NH1	2.35	0.60
34:a:1117:A:O3'	42:i:105:ARG:HG2	2.01	0.60
34:a:1416:G:N1	34:a:1485:U:C2	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1532:U:H2'	34:a:1533:C:C6	2.36	0.60
41:h:26:MET:N	41:h:58:LEU:O	2.30	0.60
43:j:6:ILE:HB	43:j:76:ILE:CG2	2.30	0.60
43:j:67:ILE:HD11	47:n:96:LEU:HB2	1.82	0.60
56:w:33:U:N3	56:w:36:A:OP2	2.33	0.60
4:3:5:THR:OG1	8:A:242:G:O3'	2.19	0.60
8:A:48:G:O2'	8:A:118:A:N1	2.34	0.60
8:A:372:G:H22	8:A:400:G:H3'	1.67	0.60
8:A:475:C:H2'	8:A:476:G:O4'	2.00	0.60
8:A:609:A:C8	8:A:610:C:C5	2.90	0.60
8:A:751:A:C5'	26:S:90:LYS:HA	2.31	0.60
8:A:754:U:H2'	8:A:755:U:C6	2.36	0.60
8:A:999:U:H5''	8:A:1154:G:O6	2.01	0.60
8:A:1103:A:C6	8:A:1104:C:C2	2.90	0.60
8:A:1180:U:H2'	8:A:1181:U:O4'	2.01	0.60
8:A:1365:A:OP2	31:X:2:ARG:N	2.28	0.60
8:A:1572:A:C4	8:A:1573:G:C8	2.90	0.60
8:A:1726:C:H2'	8:A:1727:C:C6	2.36	0.60
8:A:1891:G:H2'	8:A:1892:C:C6	2.36	0.60
8:A:2122:U:H1'	8:A:2177:C:C2	2.36	0.60
8:A:2144:G:O2'	8:A:2148:G:N2	2.34	0.60
8:A:2182:U:H2'	8:A:2183:A:O4'	2.01	0.60
8:A:2227:A:H2'	8:A:2228:G:O4'	2.00	0.60
8:A:2228:G:H2'	8:A:2229:U:C6	2.37	0.60
8:A:2289:G:H4'	8:A:2384:U:O4'	2.02	0.60
8:A:2458:G:O2'	8:A:2490:G:C6	2.54	0.60
8:A:2521:C:C4	8:A:2522:U:C4	2.89	0.60
8:A:2526:G:N1	8:A:2538:C:N3	2.49	0.60
8:A:2552:OMU:H5	8:A:2557:G:O6	2.02	0.60
9:B:15:A:H3'	9:B:16:G:H8	1.67	0.60
11:D:7:LYS:HA	11:D:199:SER:O	2.02	0.60
21:N:2:ARG:HG2	21:N:5:LYS:HD2	1.83	0.60
27:T:31:VAL:HG22	27:T:84:TYR:HA	1.83	0.60
28:U:94:PHE:HB2	28:U:100:GLU:C	2.26	0.60
29:V:63:ILE:HG22	29:V:65:VAL:HG23	1.84	0.60
34:a:28:A:O2'	34:a:296:U:H5''	2.01	0.60
34:a:605:U:C2	34:a:633:G:N1	2.56	0.60
34:a:704:A:C4	34:a:705:G:C8	2.90	0.60
34:a:1129:C:H4'	42:i:17:ARG:HH22	1.66	0.60
34:a:1151:A:C4'	43:j:41:PRO:HB2	2.31	0.60
34:a:1296:C:H4'	34:a:1302:C:C4	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1374:A:N6	34:a:1375:A:C6	2.69	0.60
37:d:100:VAL:HG22	37:d:104:MET:HE2	1.82	0.60
37:d:168:THR:HG23	37:d:183:ARG:NH1	2.15	0.60
53:t:47:GLN:NE2	53:t:47:GLN:O	2.35	0.60
8:A:56:A:C2	8:A:115:C:C2	2.89	0.60
8:A:220:G:C2	8:A:428:A:OP2	2.54	0.60
8:A:481:G:H2'	8:A:507:A:N1	2.16	0.60
8:A:503:A:C5	8:A:506:G:C5	2.89	0.60
8:A:729:G:C1'	10:C:206:LYS:HZ2	2.14	0.60
8:A:848:C:H2'	8:A:849:A:H8	1.65	0.60
8:A:910:A:H62	20:M:12:MET:HA	1.66	0.60
8:A:1007:C:H5''	17:J:37:ARG:CZ	2.31	0.60
8:A:1145:C:H2'	8:A:1146:C:H6	1.67	0.60
8:A:1299:G:H1'	8:A:1641:A:H61	1.67	0.60
8:A:1636:U:HO2'	8:A:1760:C:C2'	2.15	0.60
8:A:1703:G:H2'	8:A:1704:C:H6	1.66	0.60
8:A:1840:G:C6	8:A:1841:U:C4	2.90	0.60
8:A:1844:C:C2	8:A:1897:G:C2	2.89	0.60
8:A:1867:G:C6	8:A:1875:G:C2	2.90	0.60
8:A:2014:A:H2'	8:A:2015:A:C8	2.36	0.60
8:A:2024:G:H2'	8:A:2025:C:H6	1.65	0.60
8:A:2077:A:H1'	8:A:2435:A:O4'	2.01	0.60
10:C:173:LEU:O	10:C:180:MET:HA	2.01	0.60
14:G:151:ARG:O	14:G:161:VAL:HG23	2.01	0.60
20:M:28:PHE:N	20:M:104:GLU:OE1	2.33	0.60
22:O:58:ILE:HG21	22:O:74:VAL:CG2	2.31	0.60
24:Q:35:PHE:O	24:Q:39:ILE:HG12	2.02	0.60
25:R:40:MET:HE3	25:R:47:VAL:HG23	1.82	0.60
32:Y:39:GLN:HB3	32:Y:41:HIS:CE1	2.36	0.60
34:a:31:G:O2'	34:a:48:C:N4	2.32	0.60
34:a:64:G:C2'	34:a:99:C:H41	2.15	0.60
34:a:601:G:H2'	34:a:602:A:H8	1.65	0.60
34:a:691:G:H22	34:a:695:A:H3'	1.66	0.60
34:a:802:A:N6	34:a:803:G:C2	2.70	0.60
34:a:963:G:C2	34:a:964:A:C8	2.89	0.60
34:a:977:A:O2'	34:a:981:U:O2	2.16	0.60
34:a:1080:A:OP1	38:e:51:LYS:NZ	2.31	0.60
34:a:1175:G:H2'	34:a:1176:A:O4'	2.02	0.60
34:a:1248:A:H2'	34:a:1249:C:C6	2.37	0.60
34:a:1277:C:H1'	34:a:1282:C:O2	2.02	0.60
36:c:33:ASP:O	36:c:37:LYS:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:170:LEU:HA	37:d:181:PHE:HA	1.83	0.60
39:f:8:PHE:HB3	39:f:87:SER:OG	2.02	0.60
40:g:53:SER:O	40:g:55:LYS:N	2.32	0.60
48:o:31:LEU:HD13	48:o:62:ARG:CB	2.31	0.60
55:v:18:G:H1	55:v:55:PSU:H1'	1.67	0.60
57:x:459:GLY:HA3	57:x:465:LEU:HD23	1.83	0.60
57:x:487:VAL:HG13	57:x:659:LEU:HD22	1.84	0.60
57:x:614:PRO:HB3	57:x:683:PHE:CD1	2.37	0.60
8:A:79:C:C2	8:A:108:G:C2	2.90	0.60
8:A:190:A:O5'	8:A:205:G:N2	2.23	0.60
8:A:220:G:N2	8:A:427:U:H2'	2.17	0.60
8:A:600:G:H2'	8:A:601:C:C6	2.36	0.60
8:A:659:G:O5'	12:E:95:LYS:HD3	2.02	0.60
8:A:828:U:H2'	8:A:829:A:C8	2.36	0.60
8:A:1048:A:N7	8:A:1111:A:C6	2.70	0.60
8:A:1075:C:C2	8:A:1076:C:C5	2.90	0.60
8:A:1464:G:H2'	8:A:1465:G:H8	1.66	0.60
8:A:1711:A:C2	8:A:1748:C:C2	2.90	0.60
8:A:2013:A:H4'	26:S:96:ILE:HD13	1.84	0.60
8:A:2038:G:H2'	8:A:2039:U:O4'	2.02	0.60
8:A:2137:U:C2	8:A:2138:G:C8	2.90	0.60
8:A:2202:U:O2	8:A:2221:G:N2	2.32	0.60
8:A:2472:G:C2'	8:A:2478:A:H61	2.14	0.60
8:A:2516:A:C6	8:A:2517:C:N4	2.70	0.60
9:B:34:A:C2	9:B:49:C:C2	2.90	0.60
11:D:32:ASN:HB3	11:D:50:VAL:HG21	1.84	0.60
19:L:82:LEU:O	19:L:85:VAL:HG12	2.01	0.60
20:M:62:LYS:O	20:M:105:MET:HA	2.01	0.60
25:R:32:THR:HA	25:R:61:ALA:O	2.01	0.60
28:U:41:VAL:CG2	28:U:60:LYS:HG3	2.32	0.60
34:a:284:C:H2'	34:a:285:C:C6	2.36	0.60
34:a:600:A:N6	34:a:639:G:C6	2.70	0.60
34:a:679:C:H2'	34:a:680:C:H6	1.67	0.60
34:a:921:U:OP1	34:a:1081:A:C4	2.55	0.60
34:a:1032:G:H3'	34:a:1034:G:H1	1.66	0.60
34:a:1050:G:C2	34:a:1051:C:C5	2.90	0.60
34:a:1269:A:C2'	34:a:1313:U:H1'	2.32	0.60
34:a:1374:A:N6	34:a:1375:A:N1	2.49	0.60
38:e:102:THR:OG1	38:e:121:ASN:HB3	2.01	0.60
44:k:23:HIS:N	44:k:30:ILE:O	2.27	0.60
45:l:97:VAL:HG23	45:l:100:ALA:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:m:51:GLN:O	46:m:55:LEU:HD23	2.01	0.60
3:2:37:LYS:HE2	8:A:469:G:O6	2.02	0.60
8:A:380:G:C2	8:A:395:U:O2	2.55	0.60
8:A:528:A:C2	8:A:2042:A:H2'	2.37	0.60
8:A:1010:A:H5''	24:Q:65:ASN:ND2	2.16	0.60
8:A:1231:U:H2'	8:A:1232:G:H8	1.67	0.60
8:A:1715:G:H1	8:A:1743:G:H3'	1.65	0.60
8:A:1780:A:OP1	8:A:1782:U:OP1	2.20	0.60
8:A:2131:U:C2'	8:A:2132:U:H4'	2.32	0.60
8:A:2142:A:C2	8:A:2150:C:C4	2.90	0.60
8:A:2221:G:H2'	8:A:2222:C:C6	2.37	0.60
8:A:2451:A:H4'	56:w:76:A:C6	2.37	0.60
8:A:2552:OMU:H2'	8:A:2554:U:OP2	2.02	0.60
8:A:2627:G:C6	8:A:2777:G:C6	2.90	0.60
8:A:2694:G:C6	8:A:2716:C:N3	2.70	0.60
8:A:2852:G:H2'	8:A:2853:C:C6	2.37	0.60
11:D:46:ARG:HB3	11:D:84:LEU:HB2	1.84	0.60
13:F:35:LEU:O	13:F:87:LYS:HA	2.02	0.60
21:N:35:LYS:HB2	21:N:112:TYR:CE1	2.37	0.60
34:a:207:C:H2'	34:a:208:U:C4'	2.32	0.60
34:a:234:C:H2'	34:a:235:C:H6	1.67	0.60
34:a:243:A:C2	34:a:245:U:H2'	2.37	0.60
34:a:413:G:O6	37:d:31:CYS:HA	2.02	0.60
34:a:417:G:C2	34:a:427:U:O2	2.55	0.60
34:a:429:U:H3'	37:d:8:LEU:CD1	2.30	0.60
34:a:495:A:O4'	34:a:496:A:C8	2.55	0.60
34:a:555:U:H2'	34:a:556:C:C6	2.37	0.60
34:a:603:U:C5	34:a:635:A:N1	2.70	0.60
34:a:734:G:H2'	34:a:735:C:C6	2.37	0.60
34:a:883:C:C2	34:a:884:U:C5	2.90	0.60
34:a:908:A:H2'	34:a:909:A:H8	1.66	0.60
34:a:1009:U:O4	34:a:1020:G:O6	2.20	0.60
34:a:1027:C:N3	34:a:1035:A:C8	2.70	0.60
34:a:1147:C:C2'	42:i:17:ARG:HH11	2.14	0.60
34:a:1328:C:O2'	46:m:28:ARG:NE	2.34	0.60
34:a:1369:C:OP2	42:i:113:LYS:N	2.31	0.60
34:a:1387:G:H2'	34:a:1388:C:H6	1.67	0.60
37:d:68:GLU:HA	37:d:71:PHE:CE1	2.37	0.60
37:d:169:TRP:CD2	37:d:185:PRO:HB3	2.37	0.60
40:g:107:ALA:HA	40:g:122:GLU:HG3	1.84	0.60
42:i:44:ARG:HG2	42:i:45:MET:HE2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:m:14:ALA:HB3	46:m:33:LEU:HD21	1.83	0.60
57:x:146:MET:CA	57:x:175:GLU:HG3	2.32	0.60
57:x:362:ILE:O	57:x:373:ILE:N	2.35	0.60
57:x:683:PHE:CE1	57:x:685:LYS:O	2.54	0.60
3:2:12:ARG:NH2	8:A:464:U:O2'	2.35	0.60
8:A:200:U:O4	8:A:250:G:N2	2.35	0.60
8:A:414:C:H2'	8:A:415:A:C8	2.37	0.60
8:A:451:U:P	12:E:47:LYS:HZ2	2.25	0.60
8:A:458:G:C2'	8:A:469:G:O6	2.49	0.60
8:A:561:G:H1'	24:Q:44:TYR:CE1	2.37	0.60
8:A:688:U:HO2'	8:A:786:C:HO2'	1.49	0.60
8:A:707:G:H2'	8:A:708:G:O4'	2.02	0.60
8:A:1058:U:C2	8:A:1060:U:O4	2.55	0.60
8:A:1224:U:H2'	8:A:1225:G:C8	2.37	0.60
8:A:1322:A:O3'	26:S:82:MET:HE1	2.01	0.60
8:A:1479:G:N1	8:A:1513:U:C2	2.70	0.60
8:A:1692:U:H3'	8:A:1694:C:N4	2.17	0.60
8:A:1842:G:H2'	8:A:1843:C:C6	2.36	0.60
8:A:2093:G:OP1	15:H:24:GLY:N	2.35	0.60
8:A:2097:A:C6	8:A:2193:G:C6	2.90	0.60
8:A:2153:C:H42	8:A:2156:G:H1	1.48	0.60
8:A:2312:U:H5'	13:F:84:ILE:CD1	2.32	0.60
8:A:2580:PSU:H2'	8:A:2581:G:C4	2.37	0.60
8:A:2604:PSU:H2'	8:A:2605:PSU:H6	1.66	0.60
8:A:2898:U:H2'	8:A:2899:A:C8	2.37	0.60
9:B:2:G:C6	9:B:3:C:C4	2.90	0.60
10:C:239:PHE:CE2	10:C:241:LYS:O	2.55	0.60
14:G:21:GLN:OE1	14:G:54:ARG:CZ	2.49	0.60
14:G:43:LYS:O	14:G:49:LEU:HD23	2.02	0.60
33:Z:55:LYS:HG2	33:Z:56:VAL:N	2.15	0.60
34:a:146:G:N1	34:a:177:G:C8	2.70	0.60
34:a:158:G:H2'	34:a:163:C:OP1	2.02	0.60
34:a:356:A:C2'	34:a:368:U:O2'	2.50	0.60
34:a:544:G:H5''	37:d:54:LEU:HD11	1.84	0.60
34:a:891:U:N3	34:a:907:A:C8	2.67	0.60
34:a:1091:U:O2	34:a:1093:A:H8	1.85	0.60
34:a:1247:U:O2	34:a:1290:G:C6	2.55	0.60
34:a:1409:C:H2'	34:a:1410:A:H8	1.67	0.60
36:c:113:LYS:N	36:c:184:ASN:HB2	2.17	0.60
39:f:45:ARG:HD3	39:f:59:TYR:HB2	1.82	0.60
43:j:10:LEU:O	43:j:71:LEU:HA	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:j:21:ALA:HA	43:j:92:LEU:HD13	1.83	0.60
51:r:16:GLY:O	51:r:18:GLN:NE2	2.35	0.60
3:2:46:LYS:NZ	8:A:127:A:N7	2.42	0.59
4:3:32:LEU:HD12	8:A:2419:U:H3'	1.84	0.59
6:5:58:THR:CB	8:A:1107:G:H5''	2.31	0.59
8:A:266:G:C6	8:A:267:C:C5	2.90	0.59
8:A:361:G:C2'	8:A:362:A:H5'	2.32	0.59
8:A:560:C:H2'	8:A:561:G:O4'	2.02	0.59
8:A:608:A:C4	8:A:609:A:C8	2.90	0.59
8:A:893:C:H4'	8:A:894:U:C4	2.37	0.59
8:A:1435:G:H2'	8:A:1436:G:C8	2.36	0.59
8:A:1465:G:H2'	8:A:1466:U:O4'	2.02	0.59
8:A:2108:A:O2'	8:A:2181:U:O2'	1.58	0.59
8:A:2256:G:C6	8:A:2257:U:C4	2.90	0.59
8:A:2316:G:H4'	13:F:124:ARG:CZ	2.32	0.59
8:A:2553:G:N3	8:A:2583:G:H1'	2.18	0.59
8:A:2625:G:C2	8:A:2626:C:C2	2.90	0.59
8:A:2717:C:H2'	8:A:2718:G:O4'	2.02	0.59
8:A:2862:G:H2'	8:A:2863:C:H6	1.67	0.59
10:C:9:SER:OG	10:C:12:ARG:HB2	2.02	0.59
11:D:120:GLY:HA2	11:D:162:ALA:HB1	1.84	0.59
22:O:26:LEU:HD12	22:O:38:GLN:O	2.02	0.59
23:P:30:TRP:CD2	23:P:39:LEU:HD13	2.37	0.59
28:U:95:PHE:CE1	28:U:102:ILE:HG12	2.37	0.59
34:a:68:G:N7	34:a:69:G:C8	2.70	0.59
34:a:81:A:OP2	34:a:86:G:O6	2.20	0.59
34:a:137:U:C2	34:a:227:G:C2	2.90	0.59
34:a:144:G:N2	34:a:196:A:N7	2.50	0.59
34:a:758:C:H4'	34:a:880:C:H4'	1.84	0.59
34:a:810:C:HO2'	34:a:899:C:H5	1.49	0.59
34:a:1002:G:C6	34:a:1039:G:N1	2.69	0.59
34:a:1387:G:H2'	34:a:1388:C:C6	2.37	0.59
38:e:153:ALA:O	38:e:156:ARG:O	2.19	0.59
57:x:318:ALA:C	57:x:396:LEU:HB2	2.27	0.59
8:A:59:U:H1'	8:A:73:A:H2'	1.84	0.59
8:A:74:A:O2'	8:A:88:G:C8	2.54	0.59
8:A:260:G:H4'	8:A:621:A:H4'	1.84	0.59
8:A:637:A:H5''	19:L:112:LEU:HD23	1.84	0.59
8:A:746:PSU:O4'	8:A:748:G:N2	2.34	0.59
8:A:987:C:H2'	8:A:988:A:O4'	2.02	0.59
8:A:1131:G:C2	8:A:2025:C:H1'	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1273:U:N3	8:A:2003:A:O4'	2.35	0.59
8:A:1696:G:H8	8:A:1696:G:OP2	1.83	0.59
8:A:1734:G:H2'	8:A:1735:A:H8	1.66	0.59
8:A:2200:C:O2'	8:A:2227:A:N1	2.36	0.59
8:A:2545:G:C2	8:A:2546:U:C2	2.90	0.59
10:C:131:MET:SD	10:C:189:ALA:HB2	2.42	0.59
10:C:158:GLY:HA2	10:C:194:VAL:O	2.02	0.59
18:K:63:VAL:HG11	18:K:85:VAL:HG23	1.83	0.59
18:K:70:ARG:HA	18:K:76:VAL:HA	1.84	0.59
23:P:23:ASP:HA	23:P:88:ARG:HA	1.84	0.59
23:P:87:ARG:NH2	23:P:111:GLU:N	2.50	0.59
28:U:25:LYS:HD2	28:U:36:GLU:HA	1.84	0.59
34:a:20:U:H2'	34:a:21:G:O4'	2.02	0.59
34:a:55:A:OP2	34:a:352:C:N4	2.35	0.59
34:a:171:A:H2'	34:a:172:A:N9	2.17	0.59
34:a:175:C:O2'	34:a:1447:A:N6	2.35	0.59
34:a:627:G:H2'	34:a:628:G:O4'	2.01	0.59
34:a:891:U:N3	34:a:892:A:N7	2.50	0.59
34:a:933:G:C2	34:a:935:A:O4'	2.55	0.59
34:a:972:C:O3'	43:j:59:LYS:HD3	2.02	0.59
34:a:1043:G:H2'	34:a:1044:A:H8	1.65	0.59
34:a:1210:C:O4'	34:a:1214:C:C4	2.55	0.59
34:a:1317:C:H4'	47:n:48:LEU:HD21	1.83	0.59
35:b:8:MET:O	35:b:10:LYS:NZ	2.33	0.59
40:g:16:LYS:HG3	40:g:43:TYR:CE2	2.37	0.59
56:w:41:C:H2'	56:w:42:C:C6	2.37	0.59
57:x:225:ALA:N	57:x:251:LEU:HD21	2.17	0.59
8:A:143:C:H2'	8:A:144:A:H8	1.67	0.59
8:A:228:C:N3	8:A:418:C:O4'	2.36	0.59
8:A:433:C:H2'	8:A:434:U:C6	2.37	0.59
8:A:562:U:O4'	8:A:2036:C:H5'	2.02	0.59
8:A:640:C:H2'	8:A:641:U:C6	2.37	0.59
8:A:806:C:H3'	19:L:41:ARG:HH12	1.67	0.59
8:A:877:A:N3	8:A:899:A:H2'	2.16	0.59
8:A:1068:G:H1'	8:A:1070:A:C8	2.37	0.59
8:A:1152:C:H2'	8:A:1153:C:C6	2.35	0.59
8:A:1408:G:H2'	8:A:1409:U:C6	2.37	0.59
8:A:1485:U:H2'	8:A:1486:U:C6	2.38	0.59
8:A:1544:A:H2'	8:A:1545:A:C8	2.37	0.59
8:A:1637:A:H2'	8:A:1638:C:H6	1.67	0.59
8:A:1726:C:H2'	8:A:1727:C:H6	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1746:A:H2'	8:A:1747:U:C6	2.38	0.59
8:A:1857:G:H2'	8:A:1884:G:N2	2.17	0.59
8:A:2528:U:H2'	8:A:2530:A:O5'	2.01	0.59
8:A:2895:G:H2'	8:A:2896:C:C6	2.38	0.59
13:F:7:TYR:HA	13:F:11:VAL:HB	1.84	0.59
28:U:6:ARG:CZ	28:U:25:LYS:O	2.50	0.59
34:a:437:U:O2'	37:d:119:HIS:ND1	2.03	0.59
34:a:757:U:O2'	34:a:879:C:H1'	2.02	0.59
34:a:921:U:P	34:a:1082:A:C8	2.95	0.59
34:a:1074:G:N3	34:a:1101:A:H2	1.99	0.59
34:a:1092:A:H2'	34:a:1093:A:C8	2.37	0.59
43:j:49:PHE:O	43:j:64:GLN:HA	2.02	0.59
46:m:24:VAL:O	46:m:24:VAL:HG13	2.02	0.59
50:q:8:GLN:HE22	50:q:78:VAL:HG21	1.66	0.59
57:x:15:SER:HB2	57:x:125:VAL:CG2	2.30	0.59
57:x:105:LEU:CG	57:x:107:GLY:O	2.50	0.59
3:2:14:ARG:NH2	8:A:770:G:O3'	2.36	0.59
7:6:18:CYS:SG	7:6:40:CYS:SG	3.00	0.59
8:A:60:G:C8	8:A:62:U:C5	2.90	0.59
8:A:885:C:C2'	8:A:887:A:OP2	2.50	0.59
8:A:935:C:H2'	8:A:936:A:H8	1.67	0.59
8:A:1099:G:C6	8:A:1100:C:N4	2.70	0.59
8:A:1139:G:N3	8:A:1143:A:H2	1.98	0.59
8:A:1212:G:O2'	8:A:1236:G:N2	2.32	0.59
8:A:1310:G:H3'	8:A:1311:G:C8	2.37	0.59
8:A:1795:C:O2	10:C:252:LYS:NZ	2.26	0.59
8:A:2027:G:H2'	8:A:2028:U:C6	2.37	0.59
8:A:2032:G:C5	11:D:150:GLN:NE2	2.70	0.59
8:A:2043:C:C2	8:A:2044:C:C5	2.90	0.59
8:A:2065:C:N4	8:A:2445:2MG:HN1	2.00	0.59
8:A:2144:G:H3'	8:A:2144:G:N3	2.17	0.59
8:A:2244:U:H2'	8:A:2245:U:C6	2.37	0.59
8:A:2572:A:O5'	8:A:2574:G:H4'	2.02	0.59
8:A:2578:G:C6	11:D:145:SER:HB2	2.38	0.59
8:A:2684:U:C4	8:A:2685:G:N7	2.70	0.59
8:A:2800:A:C2	8:A:2895:G:H1'	2.37	0.59
8:A:2804:U:H2'	8:A:2805:C:C6	2.37	0.59
10:C:198:GLU:CA	10:C:201:LEU:HD12	2.32	0.59
25:R:4:VAL:HA	25:R:12:HIS:O	2.02	0.59
28:U:21:ARG:HD3	28:U:72:PHE:CD1	2.37	0.59
34:a:146:G:H2'	34:a:147:G:O4'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:394:G:H2'	34:a:395:C:C6	2.37	0.59
34:a:440:C:H2'	34:a:441:A:O4'	2.02	0.59
34:a:448:A:N7	34:a:486:U:C2	2.69	0.59
34:a:466:A:H2'	34:a:468:A:H5'	1.84	0.59
34:a:499:A:C2	34:a:546:A:N3	2.70	0.59
34:a:499:A:H61	34:a:547:A:H5''	1.67	0.59
34:a:1178:G:N7	42:i:98:ARG:CZ	2.65	0.59
34:a:1299:A:C5	34:a:1301:U:C2	2.90	0.59
34:a:1500:A:OP1	34:a:1505:G:OP1	2.20	0.59
37:d:131:ILE:HG22	37:d:133:SER:H	1.66	0.59
38:e:87:VAL:HG13	38:e:92:ARG:HD3	1.85	0.59
39:f:21:MET:HA	39:f:24:ARG:HD3	1.85	0.59
44:k:34:THR:HA	44:k:41:LEU:HG	1.84	0.59
53:t:81:GLN:HA	53:t:84:LYS:HE2	1.84	0.59
55:v:39:C:C2'	55:v:40:C:H5'	2.31	0.59
57:x:365:MET:HB3	57:x:368:ASN:OD1	2.01	0.59
57:x:437:LEU:HD21	57:x:475:GLU:OE1	2.02	0.59
57:x:518:VAL:HG23	57:x:578:HIS:HB3	1.83	0.59
8:A:68:G:C5	8:A:69:C:C4	2.91	0.59
8:A:528:A:H3'	17:J:116:ARG:NH2	2.17	0.59
8:A:553:G:C6	8:A:554:U:C4	2.91	0.59
8:A:722:A:H2'	8:A:723:C:C6	2.37	0.59
8:A:813:U:H2'	8:A:814:C:C6	2.37	0.59
8:A:881:G:H2'	8:A:882:G:O4'	2.03	0.59
8:A:997:G:H5''	24:Q:91:ARG:NH1	2.18	0.59
8:A:1095:A:H2'	8:A:1096:A:O4'	2.02	0.59
8:A:1168:G:H2'	8:A:1169:A:H8	1.67	0.59
8:A:1171:G:N1	8:A:1172:C:C5	2.70	0.59
8:A:1447:C:O2'	8:A:1544:A:N3	2.33	0.59
8:A:1565:C:H2'	8:A:1567:G:O6	2.02	0.59
8:A:1681:G:H21	8:A:1762:A:H3'	1.67	0.59
8:A:1851:U:H5''	55:v:3:C:O2'	2.02	0.59
8:A:2105:U:H3	8:A:2183:A:H61	1.50	0.59
8:A:2324:U:H5''	8:A:2325:G:O5'	2.02	0.59
8:A:2445:2MG:H5''	8:A:2445:2MG:H8	1.67	0.59
8:A:2558:C:H2'	8:A:2559:C:H6	1.67	0.59
8:A:2749:A:C5'	8:A:2750:A:H5''	2.32	0.59
10:C:254:LYS:O	10:C:256:THR:HG23	2.03	0.59
11:D:124:ARG:HD3	11:D:161:MET:O	2.02	0.59
11:D:151:THR:HB	11:D:152:PRO:HD3	1.83	0.59
15:H:133:GLN:HG2	15:H:138:VAL:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:96:ARG:NH1	17:J:99:ARG:HD3	2.17	0.59
19:L:79:LEU:HD11	19:L:112:LEU:HA	1.84	0.59
28:U:73:ASN:C	28:U:75:ALA:H	2.11	0.59
29:V:20:LEU:HD21	29:V:41:GLU:HA	1.83	0.59
29:V:25:LYS:HG2	29:V:43:ASP:HA	1.84	0.59
32:Y:18:LEU:O	32:Y:18:LEU:HD23	2.03	0.59
34:a:98:A:H2'	34:a:99:C:O4'	2.02	0.59
34:a:179:A:H3'	34:a:180:U:C6	2.38	0.59
34:a:410:G:H1'	34:a:433:G:C2	2.38	0.59
34:a:560:A:N6	34:a:566:G:C8	2.71	0.59
34:a:582:C:OP2	34:a:758:C:N4	2.34	0.59
34:a:592:G:C6	34:a:593:U:C4	2.91	0.59
34:a:675:A:H1'	44:k:117:HIS:CD2	2.37	0.59
34:a:756:C:H2'	34:a:757:U:C6	2.38	0.59
34:a:933:G:OP2	40:g:2:ARG:HG3	2.01	0.59
34:a:1028:C:N3	34:a:1034:G:C8	2.70	0.59
34:a:1067:A:H1'	34:a:1068:G:C1'	2.33	0.59
34:a:1406:U:H2'	34:a:1407:5MC:O4'	2.02	0.59
37:d:123:MET:O	37:d:143:SER:HB2	2.03	0.59
38:e:88:HIS:NE2	38:e:137:ARG:HD3	2.18	0.59
38:e:132:PRO:O	38:e:136:VAL:HG23	2.03	0.59
39:f:19:PRO:HA	39:f:22:ILE:HD12	1.85	0.59
39:f:29:ILE:HB	39:f:36:ILE:HD11	1.83	0.59
41:h:53:ASP:OD1	41:h:54:THR:N	2.34	0.59
45:l:33:CYS:N	45:l:54:VAL:HG12	2.18	0.59
50:q:6:THR:HG23	50:q:60:ILE:O	2.01	0.59
57:x:23:THR:OG1	62:x:801:GDP:O1B	2.18	0.59
7:6:59:ARG:HA	7:6:62:LYS:HB3	1.83	0.59
8:A:67:U:N3	8:A:74:A:C8	2.67	0.59
8:A:75:G:H2'	8:A:75:G:N3	2.17	0.59
8:A:290:U:O2	8:A:350:G:N2	2.33	0.59
8:A:404:A:H1'	8:A:406:G:C4	2.38	0.59
8:A:484:C:H2'	8:A:485:C:H6	1.67	0.59
8:A:636:G:H4'	8:A:638:G:O3'	2.01	0.59
8:A:780:G:H2'	8:A:782:A:C5	2.38	0.59
8:A:856:G:H2'	8:A:857:G:C8	2.38	0.59
8:A:877:A:C2'	8:A:899:A:H2'	2.33	0.59
8:A:1081:U:H5'	8:A:1082:U:C4	2.37	0.59
8:A:1169:A:N1	8:A:1181:U:C2	2.71	0.59
8:A:1530:G:H2'	8:A:1531:C:C6	2.37	0.59
8:A:1663:G:C6	8:A:1998:A:N6	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1710:G:H2'	8:A:1711:A:C8	2.37	0.59
8:A:1737:G:H2'	8:A:1738:G:C1'	2.33	0.59
8:A:1753:G:H22	8:A:1756:G:P	2.26	0.59
8:A:1818:U:OP2	10:C:155:ARG:NH2	2.35	0.59
8:A:1905:C:H2'	8:A:1930:G:H5'	1.85	0.59
8:A:1906:G:N1	8:A:1925:C:N3	2.50	0.59
8:A:2230:G:H1'	31:X:31:ASN:HA	1.83	0.59
8:A:2625:G:C5	8:A:2626:C:C4	2.90	0.59
9:B:6:G:H2'	9:B:7:G:H8	1.68	0.59
9:B:13:G:O2'	9:B:15:A:OP2	2.17	0.59
9:B:73:A:H2	29:V:37:PRO:HG3	1.66	0.59
11:D:13:ARG:NH2	23:P:74:GLN:OE1	2.31	0.59
12:E:4:VAL:HG12	12:E:11:ALA:HB2	1.85	0.59
15:H:104:THR:HG21	15:H:109:GLU:HG3	1.84	0.59
34:a:169:C:H2'	34:a:170:U:H4'	1.84	0.59
34:a:177:G:C2	34:a:178:C:C6	2.89	0.59
34:a:197:A:H4'	34:a:198:G:H5'	1.85	0.59
34:a:200:G:O2'	34:a:201:G:OP1	2.17	0.59
34:a:226:G:C6	34:a:227:G:C5	2.90	0.59
34:a:283:U:H2'	34:a:284:C:H6	1.68	0.59
34:a:517:G:C8	34:a:531:U:C4	2.90	0.59
34:a:596:A:C4	34:a:597:G:C8	2.90	0.59
34:a:990:C:C4	34:a:1216:A:N1	2.71	0.59
34:a:1046:A:N1	34:a:1213:A:N1	2.51	0.59
34:a:1107:C:C4	34:a:1108:G:C8	2.91	0.59
34:a:1128:C:N3	34:a:1145:A:N1	2.50	0.59
35:b:151:LYS:HG2	35:b:152:ASP:H	1.68	0.59
49:p:23:ASP:HB3	49:p:26:ASN:OD1	2.03	0.59
50:q:13:SER:HA	50:q:54:ILE:CD1	2.32	0.59
56:w:68:C:H2'	56:w:69:G:C8	2.37	0.59
57:x:647:GLU:HG2	57:x:651:VAL:CA	2.32	0.59
1:0:18:HIS:CE1	8:A:2045:C:O2	2.56	0.59
8:A:220:G:H1	8:A:427:U:H3'	1.66	0.59
8:A:586:A:H4'	12:E:84:THR:HG21	1.85	0.59
8:A:792:A:C4	8:A:2440:C:C2	2.90	0.59
8:A:806:C:OP2	19:L:41:ARG:NH1	2.35	0.59
8:A:882:G:H2'	8:A:884:U:H3	1.68	0.59
8:A:1443:U:C2	8:A:1549:A:C2	2.91	0.59
8:A:1654:A:O2'	11:D:118:PHE:HB3	2.03	0.59
8:A:1747:U:H2'	8:A:1748:C:H6	1.64	0.59
8:A:1780:A:H3'	8:A:1781:U:H2'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2379:G:H2'	8:A:2380:C:C6	2.37	0.59
8:A:2396:G:C2	8:A:2397:G:C8	2.91	0.59
8:A:2683:C:O2	18:K:70:ARG:CZ	2.49	0.59
8:A:2817:U:O2'	8:A:2837:A:H1'	2.03	0.59
9:B:2:G:C6	9:B:119:A:N1	2.71	0.59
9:B:21:G:N1	9:B:63:C:N3	2.51	0.59
13:F:135:ILE:HG21	13:F:142:TYR:CD1	2.37	0.59
14:G:95:ALA:HA	14:G:104:LEU:HD23	1.84	0.59
18:K:1:MET:HA	18:K:32:TYR:HB3	1.83	0.59
25:R:51:VAL:HG12	25:R:52:PRO:CD	2.32	0.59
27:T:63:VAL:HG21	27:T:80:TRP:CH2	2.38	0.59
30:W:41:PHE:CE1	30:W:74:LYS:HE2	2.38	0.59
31:X:2:ARG:HG2	31:X:49:ARG:NH2	2.18	0.59
34:a:518:C:C5	34:a:529:G:H3'	2.37	0.59
34:a:681:A:N6	34:a:710:G:O6	2.36	0.59
34:a:712:A:H2'	34:a:713:G:C8	2.38	0.59
34:a:1218:C:H2'	34:a:1219:A:C8	2.37	0.59
34:a:1312:G:H5'	52:s:4:LEU:HD11	1.84	0.59
34:a:1328:C:O2'	46:m:28:ARG:NH2	2.35	0.59
40:g:16:LYS:HE2	42:i:42:THR:OG1	2.02	0.59
47:n:73:PHE:CZ	47:n:78:GLY:HA2	2.37	0.59
48:o:43:ALA:C	48:o:46:LYS:HE3	2.27	0.59
50:q:4:ILE:HG12	50:q:6:THR:OG1	2.02	0.59
57:x:191:ASN:HB2	57:x:202:GLU:OE2	2.03	0.59
57:x:302:LYS:N	57:x:305:PRO:HG3	2.17	0.59
5:4:32:LYS:HD3	8:A:2478:A:H5'	1.84	0.59
8:A:25:U:C2	8:A:515:A:N6	2.71	0.59
8:A:208:C:H2'	8:A:209:C:C6	2.37	0.59
8:A:270:A:C4	8:A:370:G:C2	2.90	0.59
8:A:307:G:H1'	8:A:330:A:N6	2.17	0.59
8:A:439:A:H2'	8:A:440:C:C6	2.37	0.59
8:A:845:A:H2'	8:A:847:U:H5'	1.83	0.59
8:A:974:G:C8	8:A:1186:G:H1'	2.38	0.59
8:A:1451:C:HO2'	8:A:1452:G:N2	2.00	0.59
8:A:1490:A:C2	10:C:73:ILE:HG12	2.38	0.59
8:A:1779:U:O2'	8:A:1783:A:N6	2.35	0.59
8:A:1905:C:H3'	8:A:1930:G:C8	2.38	0.59
8:A:2074:U:H2'	8:A:2597:G:H21	1.67	0.59
8:A:2102:G:H2'	8:A:2103:C:H6	1.67	0.59
8:A:2199:A:C8	8:A:2200:C:C5	2.90	0.59
8:A:2229:U:H1'	31:X:33:HIS:HE1	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2311:A:H1'	13:F:84:ILE:HD12	1.84	0.59
8:A:2455:G:H2'	8:A:2456:C:C6	2.38	0.59
8:A:2549:G:N1	8:A:2560:A:C6	2.71	0.59
8:A:2562:U:P	18:K:40:LYS:HZ3	2.23	0.59
8:A:2576:G:N3	8:A:2576:G:C3'	2.66	0.59
8:A:2594:C:H2'	8:A:2595:G:O4'	2.02	0.59
9:B:46:A:C5	9:B:47:C:C5	2.91	0.59
12:E:184:ASP:HA	19:L:2:ARG:HH12	1.68	0.59
15:H:5:LEU:HB2	15:H:16:GLY:H	1.68	0.59
17:J:59:ALA:HB3	17:J:126:ALA:HA	1.85	0.59
20:M:63:ILE:HG12	20:M:105:MET:HG2	1.83	0.59
20:M:74:THR:HA	20:M:88:ASN:O	2.02	0.59
21:N:48:VAL:O	21:N:51:LEU:HB2	2.02	0.59
26:S:29:VAL:HG11	26:S:69:LEU:HB3	1.84	0.59
26:S:77:ASP:N	26:S:102:HIS:O	2.33	0.59
28:U:85:ARG:NH1	28:U:99:SER:O	2.36	0.59
32:Y:11:VAL:O	32:Y:15:ASN:OD1	2.20	0.59
34:a:35:G:C6	34:a:550:G:C6	2.91	0.59
34:a:187:G:N2	34:a:191:G:C5	2.71	0.59
34:a:517:G:H1	34:a:533:A:P	2.25	0.59
34:a:961:U:O2	34:a:983:A:H2'	2.03	0.59
34:a:1070:U:C2	34:a:1106:G:C2	2.91	0.59
34:a:1125:U:C2	34:a:1127:G:C8	2.91	0.59
36:c:110:LEU:CG	36:c:143:LEU:HD23	2.33	0.59
37:d:169:TRP:HB3	37:d:183:ARG:CZ	2.33	0.59
38:e:41:GLY:N	38:e:116:VAL:O	2.33	0.59
48:o:73:ASP:OD2	48:o:76:ARG:HG3	2.02	0.59
57:x:536:ILE:O	57:x:576:ARG:HA	2.01	0.59
8:A:374:A:N6	8:A:400:G:H1'	2.18	0.59
8:A:672:C:H2'	8:A:673:C:C6	2.38	0.59
8:A:955:PSU:H5'	20:M:86:LYS:HD2	1.85	0.59
8:A:1021:A:C2'	8:A:1023:U:O4'	2.50	0.59
8:A:1112:G:H2'	8:A:1113:U:O4'	2.02	0.59
8:A:1144:A:H2'	8:A:1145:C:H6	1.68	0.59
8:A:1165:A:C2	8:A:1166:G:C5	2.90	0.59
8:A:1183:U:H2'	8:A:1184:U:C6	2.38	0.59
8:A:2128:G:H1'	8:A:2173:A:C2'	2.32	0.59
8:A:2199:A:H3'	8:A:2200:C:C6	2.37	0.59
8:A:2294:G:OP1	22:O:10:ARG:HD3	2.02	0.59
8:A:2467:C:H2'	8:A:2468:A:O4'	2.03	0.59
8:A:2526:G:H2'	8:A:2527:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2799:A:C6	8:A:2801:G:C4	2.90	0.59
8:A:2849:U:C6	8:A:2867:G:N2	2.71	0.59
9:B:51:G:H5''	22:O:64:TYR:CD2	2.38	0.59
9:B:83:G:C6	9:B:94:A:N6	2.71	0.59
10:C:66:PHE:HB3	10:C:150:GLY:O	2.02	0.59
13:F:68:LYS:HE3	13:F:83:PRO:HB3	1.85	0.59
15:H:9:VAL:H	15:H:13:GLY:CA	2.16	0.59
18:K:98:ARG:NH1	34:a:339:C:P	2.76	0.59
21:N:59:SER:O	21:N:63:ARG:HG2	2.02	0.59
28:U:85:ARG:NH2	28:U:87:GLU:OE2	2.36	0.59
34:a:138:G:C6	34:a:226:G:C6	2.91	0.59
34:a:283:U:H2'	34:a:284:C:O4'	2.02	0.59
34:a:551:U:H2'	34:a:552:U:H6	1.68	0.59
34:a:601:G:H2'	34:a:602:A:C8	2.38	0.59
34:a:642:A:N7	41:h:106:SER:HA	2.17	0.59
34:a:827:U:H2'	34:a:870:U:O4	2.03	0.59
34:a:973:G:O4'	43:j:57:VAL:HG12	2.03	0.59
34:a:1009:U:C2	34:a:1021:A:N1	2.70	0.59
34:a:1056:U:OP1	36:c:162:ALA:N	2.33	0.59
34:a:1233:G:H2'	34:a:1234:C:C6	2.38	0.59
34:a:1346:A:H1'	34:a:1348:U:H1'	1.83	0.59
34:a:1414:U:H2'	34:a:1415:G:H8	1.68	0.59
36:c:133:MET:HB3	36:c:167:TYR:HD2	1.67	0.59
38:e:45:VAL:HG22	38:e:46:GLY:N	2.16	0.59
40:g:106:ALA:HB1	40:g:122:GLU:OE1	2.03	0.59
52:s:3:SER:OG	52:s:6:LYS:HB2	2.02	0.59
4:3:7:ARG:NH2	8:A:244:A:OP2	2.36	0.59
7:6:20:ASN:HD22	7:6:20:ASN:H	1.45	0.59
8:A:57:C:H2'	8:A:58:G:O4'	2.03	0.59
8:A:558:U:H5'	17:J:114:LEU:CD2	2.33	0.59
8:A:812:C:H5''	8:A:1250:G:O2'	2.03	0.59
8:A:1064:C:N4	8:A:1068:G:O3'	2.36	0.59
8:A:1178:C:O2'	8:A:1179:G:N3	2.29	0.59
8:A:1290:C:C2	8:A:1291:C:C5	2.90	0.59
8:A:1657:U:H2'	8:A:1658:C:H6	1.68	0.59
8:A:1684:G:H2'	8:A:1685:C:C6	2.38	0.59
8:A:1722:A:H2'	8:A:1723:G:O4'	2.02	0.59
8:A:1883:U:H2'	8:A:1884:G:H1'	1.85	0.59
8:A:2093:G:H1'	8:A:2198:A:C2	2.38	0.59
8:A:2093:G:O2'	8:A:2198:A:N1	2.21	0.59
8:A:2249:U:N3	8:A:2253:G:OP2	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2297:A:C4	8:A:2320:U:C2	2.91	0.59
8:A:2357:G:C2	8:A:2361:G:C5	2.91	0.59
8:A:2465:C:C2	8:A:2466:C:C5	2.91	0.59
8:A:2644:G:H3'	8:A:2645:G:N2	2.18	0.59
8:A:2667:C:N4	14:G:109:SER:OG	2.35	0.59
8:A:2824:C:H3'	8:A:2825:G:H21	1.68	0.59
10:C:70:LYS:HD3	10:C:95:TYR:CZ	2.38	0.59
11:D:34:VAL:CG1	11:D:92:VAL:HA	2.33	0.59
13:F:107:VAL:O	13:F:110:ILE:HD12	2.02	0.59
22:O:64:TYR:HB3	22:O:67:ASN:HD22	1.68	0.59
25:R:24:LYS:HD3	25:R:92:TRP:CB	2.33	0.59
27:T:64:LYS:N	27:T:64:LYS:HD2	2.17	0.59
32:Y:18:LEU:O	32:Y:19:LEU:CB	2.50	0.59
34:a:156:C:H2'	34:a:164:G:H22	1.66	0.59
34:a:260:G:H2'	34:a:261:U:C6	2.38	0.59
34:a:285:C:H2'	34:a:286:C:H6	1.66	0.59
34:a:504:C:O4'	34:a:510:A:C5	2.56	0.59
34:a:1317:C:N3	47:n:53:ARG:CZ	2.65	0.59
34:a:1399:C:C2	34:a:1502:A:N6	2.71	0.59
34:a:1439:G:C2	34:a:1463:U:C2	2.90	0.59
34:a:1513:A:C6	34:a:1523:G:C6	2.91	0.59
35:b:113:LEU:HD22	35:b:143:LEU:HB3	1.85	0.59
43:j:36:VAL:HG22	43:j:76:ILE:HA	1.84	0.59
47:n:81:ARG:NH1	47:n:82:ILE:HD11	2.17	0.59
54:u:10:PRO:HB2	54:u:14:ALA:HB2	1.83	0.59
57:x:123:GLU:HG2	57:x:161:LEU:HD21	1.85	0.59
5:4:20:ASP:N	8:A:2757:A:OP1	2.29	0.58
8:A:4:U:C2	8:A:2900:A:N1	2.71	0.58
8:A:28:A:N6	8:A:511:U:O2	2.36	0.58
8:A:77:G:N2	8:A:110:G:H1'	2.17	0.58
8:A:191:A:H2'	8:A:192:C:H6	1.68	0.58
8:A:326:G:C2	8:A:337:C:C2	2.91	0.58
8:A:1163:G:H5''	25:R:24:LYS:HE2	1.85	0.58
8:A:1219:U:H2'	8:A:1220:G:C8	2.38	0.58
8:A:1401:G:H2'	8:A:1402:U:C6	2.38	0.58
8:A:1424:G:H2'	8:A:1425:G:C8	2.38	0.58
8:A:1637:A:H2'	8:A:1638:C:C6	2.37	0.58
8:A:1684:G:C6	8:A:1685:C:C4	2.90	0.58
8:A:2415:G:H2'	8:A:2416:C:H6	1.68	0.58
9:B:44:G:H4'	9:B:45:A:OP2	2.02	0.58
9:B:116:G:H2'	9:B:117:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:175:LEU:HD12	10:C:179:GLU:HB3	1.83	0.58
21:N:52:ILE:HD13	21:N:94:TYR:CG	2.37	0.58
25:R:58:VAL:O	25:R:102:SER:OG	2.20	0.58
27:T:44:LYS:O	27:T:48:GLN:HG3	2.02	0.58
34:a:10:A:HO2'	34:a:507:C:HO2'	1.23	0.58
34:a:39:G:C2	34:a:404:G:C4	2.91	0.58
34:a:41:G:N1	34:a:402:G:C6	2.71	0.58
34:a:158:G:OP2	34:a:159:G:C2	2.56	0.58
34:a:227:G:H2'	34:a:228:A:O4'	2.03	0.58
34:a:429:U:H4'	34:a:430:A:C5'	2.32	0.58
34:a:560:A:H4'	34:a:561:U:H5''	1.84	0.58
34:a:606:G:H21	34:a:631:C:H3'	1.67	0.58
34:a:953:G:O6	46:m:102:LYS:CE	2.51	0.58
34:a:977:A:C8	34:a:1223:C:C6	2.91	0.58
34:a:1081:A:O4'	34:a:1081:A:OP2	2.20	0.58
34:a:1522:U:H2'	34:a:1523:G:H8	1.67	0.58
35:b:149:GLY:O	35:b:151:LYS:NZ	2.34	0.58
37:d:169:TRP:CD1	37:d:185:PRO:HD3	2.38	0.58
48:o:28:VAL:HG13	48:o:62:ARG:CG	2.33	0.58
53:t:52:GLU:O	53:t:56:ILE:HG12	2.02	0.58
57:x:638:ARG:CD	57:x:658:PRO:HG2	2.33	0.58
1:0:39:ARG:NH1	8:A:2885:G:OP2	2.36	0.58
3:2:37:LYS:CE	8:A:469:G:O6	2.50	0.58
8:A:568:U:O2'	8:A:570:G:N7	2.35	0.58
8:A:601:C:O2'	8:A:605:G:H5''	2.03	0.58
8:A:729:G:H5'	8:A:730:A:H5''	1.84	0.58
8:A:814:C:OP2	19:L:24:GLY:HA2	2.03	0.58
8:A:1056:G:H4'	8:A:1085:A:H2'	1.85	0.58
8:A:1145:C:C2	8:A:1146:C:C5	2.91	0.58
8:A:1773:A:C5	8:A:1774:C:C6	2.91	0.58
8:A:1850:G:C6	8:A:1851:U:C4	2.91	0.58
8:A:2016:U:H2'	8:A:2017:U:C6	2.38	0.58
8:A:2051:A:H4'	11:D:146:ILE:HD13	1.84	0.58
8:A:2261:C:C2	8:A:2262:U:C5	2.92	0.58
8:A:2464:G:H2'	8:A:2465:C:H6	1.68	0.58
8:A:2543:G:C2	8:A:2544:G:C4	2.91	0.58
8:A:2547:A:C6	8:A:2562:U:C4	2.90	0.58
8:A:2734:A:C5	8:A:2735:G:C8	2.91	0.58
11:D:120:GLY:HA2	11:D:162:ALA:CB	2.33	0.58
13:F:123:GLY:N	13:F:162:ASP:OD1	2.30	0.58
19:L:96:LYS:HE2	19:L:102:GLY:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:15:SER:N	25:R:18:GLN:OE1	2.28	0.58
28:U:73:ASN:HA	28:U:95:PHE:CE2	2.38	0.58
34:a:57:G:H2'	34:a:58:C:C6	2.38	0.58
34:a:575:G:C6	34:a:881:G:C6	2.91	0.58
34:a:615:G:N3	34:a:615:G:H2'	2.17	0.58
34:a:738:C:C2	34:a:739:C:C5	2.91	0.58
34:a:786:G:C2	34:a:797:C:C2	2.91	0.58
34:a:793:U:H5'	34:a:794:A:H5''	1.84	0.58
34:a:929:G:C6	34:a:1389:C:N3	2.71	0.58
34:a:1074:G:N3	34:a:1101:A:C2	2.71	0.58
34:a:1125:U:C4	34:a:1127:G:C4	2.91	0.58
34:a:1157:A:H4'	34:a:1158:C:O4'	2.03	0.58
34:a:1177:G:N2	34:a:1181:G:C6	2.71	0.58
34:a:1307:U:H2'	34:a:1308:U:C6	2.37	0.58
34:a:1333:A:H2'	34:a:1334:G:O4'	2.02	0.58
34:a:1425:U:C2	34:a:1476:A:N1	2.71	0.58
34:a:1511:G:C6	34:a:1525:G:C6	2.91	0.58
36:c:17:TRP:CD1	47:n:94:PRO:HA	2.38	0.58
38:e:105:ILE:N	38:e:122:VAL:O	2.32	0.58
41:h:86:LYS:NZ	41:h:90:GLU:O	2.35	0.58
43:j:36:VAL:HG12	43:j:38:GLY:H	1.68	0.58
53:t:11:ILE:HG13	53:t:12:GLN:N	2.18	0.58
57:x:308:ARG:HD3	57:x:339:SER:OG	2.02	0.58
57:x:533:TYR:CD1	57:x:560:LEU:HD21	2.37	0.58
57:x:616:MET:SD	57:x:659:LEU:HB2	2.43	0.58
57:x:664:GLY:O	57:x:668:GLN:OE1	2.21	0.58
7:6:5:ILE:HG13	7:6:6:HIS:CD2	2.38	0.58
8:A:93:G:C2	8:A:94:A:C4	2.91	0.58
8:A:98:G:C2	8:A:99:U:C2	2.90	0.58
8:A:123:G:H2'	8:A:124:G:C8	2.37	0.58
8:A:271:G:H1'	8:A:272:A:C8	2.39	0.58
8:A:324:A:C2	8:A:325:G:H1'	2.38	0.58
8:A:728:G:C2	8:A:730:A:C4	2.91	0.58
8:A:888:C:H6	52:s:27:LYS:HZ3	1.52	0.58
8:A:900:A:H2'	8:A:901:C:O4'	2.04	0.58
8:A:1066:U:O2	16:I:80:LYS:CB	2.50	0.58
8:A:1318:U:H2'	8:A:1319:C:C5	2.38	0.58
8:A:1332:G:C6	8:A:1609:A:C5	2.92	0.58
8:A:1359:A:OP2	8:A:1371:G:N1	2.36	0.58
8:A:1843:C:H2'	8:A:1844:C:H6	1.68	0.58
8:A:2030:6MZ:H2	8:A:2499:C:H5''	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2135:A:H4'	8:A:2156:G:C8	2.38	0.58
8:A:2170:A:H2'	8:A:2171:A:C4	2.38	0.58
8:A:2196:C:O2'	8:A:2197:U:H5'	2.02	0.58
8:A:2313:C:H2'	8:A:2314:A:H8	1.68	0.58
8:A:2331:G:N3	8:A:2336:A:C2	2.71	0.58
8:A:2415:G:C4	8:A:2416:C:C5	2.91	0.58
8:A:2436:G:O2'	8:A:2598:A:N1	2.31	0.58
8:A:2509:G:N1	8:A:2580:PSU:N3	2.50	0.58
8:A:2526:G:N2	8:A:2537:U:O2	2.34	0.58
8:A:2788:C:H5'	11:D:62:LYS:NZ	2.18	0.58
9:B:29:A:C2	9:B:56:G:C2	2.90	0.58
9:B:71:C:C2	9:B:106:G:C2	2.91	0.58
21:N:37:THR:OG1	21:N:40:LYS:HG3	2.03	0.58
34:a:38:G:C2	34:a:397:A:C2	2.90	0.58
34:a:322:C:H2'	34:a:323:U:C6	2.38	0.58
34:a:377:G:H2'	34:a:378:G:H8	1.68	0.58
34:a:683:G:H2'	34:a:684:U:C6	2.39	0.58
34:a:719:C:O2	51:r:38:ILE:N	2.28	0.58
34:a:883:C:H2'	34:a:884:U:C6	2.38	0.58
34:a:931:C:N3	34:a:1387:G:N1	2.51	0.58
34:a:1053:G:O2'	34:a:1199:U:OP2	2.22	0.58
34:a:1061:G:C6	34:a:1197:A:C6	2.90	0.58
34:a:1292:G:H2'	34:a:1293:C:H6	1.67	0.58
34:a:1448:C:H2'	34:a:1449:C:C6	2.39	0.58
34:a:1473:G:H2'	34:a:1474:U:C6	2.38	0.58
35:b:161:PHE:HD1	35:b:183:PHE:CD2	2.21	0.58
36:c:119:ILE:HA	36:c:122:GLN:HG2	1.85	0.58
37:d:113:ALA:O	37:d:117:VAL:HG23	2.03	0.58
37:d:114:ARG:HG3	37:d:132:ALA:HB1	1.85	0.58
37:d:146:GLU:O	37:d:147:LYS:HB3	2.01	0.58
39:f:14:GLN:O	39:f:18:VAL:HG23	2.02	0.58
41:h:95:MET:HB2	41:h:99:GLY:N	2.17	0.58
43:j:22:THR:HA	43:j:25:ILE:HG22	1.85	0.58
47:n:39:GLU:O	47:n:43:ASN:ND2	2.37	0.58
57:x:92:VAL:O	57:x:95:THR:HB	2.02	0.58
57:x:447:TRP:HB2	57:x:456:ILE:HB	1.83	0.58
57:x:500:VAL:HB	57:x:602:GLU:OE2	2.03	0.58
57:x:560:LEU:HA	57:x:570:VAL:HB	1.85	0.58
3:2:14:ARG:NH2	8:A:771:G:P	2.77	0.58
5:4:13:ASN:OD1	5:4:29:ALA:HB2	2.04	0.58
8:A:95:A:H4'	32:Y:38:GLN:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:177:G:H3'	8:A:178:G:H8	1.67	0.58
8:A:730:A:C2	8:A:731:C:C5	2.91	0.58
8:A:1170:C:H2'	8:A:1171:G:C8	2.38	0.58
8:A:1223:G:C4	8:A:1225:G:OP2	2.56	0.58
8:A:1682:G:C8	8:A:1757:A:C2	2.92	0.58
8:A:1818:U:OP2	10:C:155:ARG:NE	2.37	0.58
8:A:1841:U:N3	8:A:1842:G:N7	2.52	0.58
12:E:117:ARG:HA	12:E:185:LYS:CD	2.33	0.58
14:G:89:VAL:HG12	14:G:159:LYS:HA	1.85	0.58
19:L:110:VAL:N	19:L:126:ARG:O	2.28	0.58
21:N:92:GLY:HA2	21:N:94:TYR:CE2	2.38	0.58
21:N:96:ARG:NH2	21:N:116:VAL:HG12	2.19	0.58
29:V:24:ASN:O	29:V:44:HIS:N	2.31	0.58
34:a:74:A:H2'	34:a:75:G:C1'	2.34	0.58
34:a:151:A:N6	34:a:170:U:N1	2.51	0.58
34:a:179:A:H3'	34:a:180:U:H6	1.69	0.58
34:a:355:C:O2'	34:a:388:G:N3	2.25	0.58
34:a:414:A:H2'	34:a:415:A:O4'	2.03	0.58
34:a:520:A:N7	34:a:521:G:C8	2.71	0.58
34:a:938:A:C6	34:a:939:G:C5	2.92	0.58
34:a:1019:A:H2'	34:a:1020:G:O4'	2.03	0.58
34:a:1130:A:P	42:i:63:TYR:HE2	2.27	0.58
34:a:1433:A:H2'	34:a:1434:A:O4'	2.03	0.58
34:a:1457:G:C2	34:a:1458:G:C4	2.92	0.58
37:d:173:ASP:HB2	37:d:178:GLU:HB2	1.86	0.58
52:s:29:PRO:HG3	52:s:47:THR:HG23	1.85	0.58
8:A:340:A:H2'	8:A:341:C:O4'	2.03	0.58
8:A:458:G:C2'	8:A:469:G:H1	2.17	0.58
8:A:563:A:OP1	24:Q:40:LYS:NZ	2.34	0.58
8:A:594:U:H3	8:A:663:G:H1	1.51	0.58
8:A:627:A:C5	19:L:111:ILE:HD12	2.39	0.58
8:A:636:G:H3'	19:L:128:THR:HG21	1.84	0.58
8:A:655:A:H4'	8:A:656:G:H5'	1.86	0.58
8:A:929:U:H2'	8:A:930:G:O4'	2.03	0.58
8:A:962:G:H2'	8:A:963:U:C6	2.38	0.58
8:A:1066:U:P	8:A:1074:G:O6	2.61	0.58
8:A:1098:A:H3'	8:A:1099:G:C8	2.38	0.58
8:A:1106:G:H2'	8:A:1106:G:N3	2.17	0.58
8:A:1174:U:H2'	8:A:1175:A:C5	2.38	0.58
8:A:1357:C:H2'	8:A:1358:G:O4'	2.04	0.58
8:A:1429:G:H2'	8:A:1430:G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1636:U:O2'	8:A:1760:C:O2'	1.95	0.58
8:A:1804:C:N4	8:A:1814:G:N2	2.51	0.58
8:A:1835:2MG:H2'	8:A:1836:C:C6	2.38	0.58
8:A:1869:G:C2	8:A:1873:G:C6	2.92	0.58
8:A:2047:C:H2'	8:A:2048:G:H8	1.68	0.58
8:A:2671:G:H2'	8:A:2672:U:C6	2.38	0.58
8:A:2697:G:C6	8:A:2711:A:N1	2.71	0.58
8:A:2798:U:O2'	8:A:2799:A:C5	2.52	0.58
10:C:166:ARG:HA	10:C:171:VAL:HG22	1.86	0.58
15:H:3:VAL:CG2	15:H:36:ALA:HB1	2.32	0.58
15:H:76:GLU:HG3	15:H:77:THR:HG22	1.86	0.58
17:J:44:TYR:C	17:J:44:TYR:CD2	2.80	0.58
17:J:77:HIS:HA	17:J:84:ILE:HA	1.85	0.58
21:N:100:CYS:SG	21:N:111:ALA:CA	2.92	0.58
34:a:228:A:H5'	49:p:63:GLN:NE2	2.17	0.58
34:a:256:U:H2'	34:a:257:G:O4'	2.03	0.58
34:a:439:U:O3'	37:d:120:LYS:CE	2.51	0.58
34:a:450:G:H3'	34:a:481:G:O6	2.03	0.58
34:a:527:G7M:N2	34:a:528:C:C2	2.71	0.58
34:a:533:A:O2'	34:a:535:A:OP2	2.12	0.58
34:a:757:U:O2'	34:a:879:C:O2	2.22	0.58
34:a:931:C:H2'	34:a:932:C:C6	2.39	0.58
34:a:962:C:H2'	34:a:963:G:O4'	2.03	0.58
34:a:1047:G:C6	34:a:1211:U:O2	2.56	0.58
34:a:1089:G:H1'	34:a:1167:A:N6	2.18	0.58
34:a:1238:A:C5	34:a:1303:C:O4'	2.56	0.58
34:a:1269:A:H2'	34:a:1313:U:H1'	1.86	0.58
36:c:17:TRP:NE1	47:n:93:ILE:O	2.36	0.58
36:c:81:GLU:O	36:c:85:LYS:HG3	2.04	0.58
56:w:36:A:H2'	56:w:37:MIA:O4'	2.03	0.58
57:x:93:ASP:O	57:x:460:MET:HB2	2.03	0.58
57:x:184:LEU:HD13	57:x:217:TRP:C	2.29	0.58
57:x:456:ILE:HD12	57:x:485:PRO:HB3	1.86	0.58
57:x:562:ALA:O	57:x:568:TYR:N	2.36	0.58
4:3:23:HIS:CG	19:L:61:LEU:HD11	2.39	0.58
7:6:41:HIS:CD2	13:F:108:PRO:HA	2.39	0.58
8:A:33:C:C2	8:A:447:A:N6	2.67	0.58
8:A:591:U:N3	8:A:592:A:N7	2.52	0.58
8:A:635:C:O2	8:A:639:U:H4'	2.03	0.58
8:A:656:G:C5	8:A:657:U:C4	2.92	0.58
8:A:870:U:N3	8:A:871:U:C5	2.70	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:930:G:H1'	33:Z:24:LEU:HD21	1.85	0.58
8:A:1037:G:C6	8:A:1119:U:O2	2.56	0.58
8:A:1171:G:N2	8:A:1179:G:O6	2.31	0.58
8:A:1320:C:N4	8:A:1333:G:N1	2.51	0.58
8:A:1425:G:H2'	8:A:1426:G:O4'	2.03	0.58
8:A:1452:G:H2'	8:A:1452:G:N3	2.19	0.58
8:A:1566:A:H5'	10:C:213:ARG:NH2	2.19	0.58
8:A:1713:A:N6	8:A:1746:A:C6	2.72	0.58
8:A:1716:U:C2	8:A:1744:A:N7	2.70	0.58
8:A:1873:G:H2'	8:A:1874:C:C6	2.39	0.58
8:A:1909:C:N3	8:A:1922:G:N1	2.52	0.58
8:A:2114:A:C2'	8:A:2166:U:O4	2.51	0.58
8:A:2122:U:H1'	8:A:2177:C:N1	2.19	0.58
8:A:2291:U:O2'	8:A:2374:C:O2	2.21	0.58
8:A:2619:C:O2	11:D:161:MET:HE1	2.03	0.58
8:A:2709:G:H2'	8:A:2710:C:C6	2.39	0.58
9:B:51:G:OP1	22:O:63:LYS:NZ	2.35	0.58
9:B:112:G:H2'	9:B:113:C:C6	2.38	0.58
11:D:40:LEU:HD23	11:D:44:GLY:C	2.28	0.58
14:G:26:LYS:HG2	14:G:31:GLU:CG	2.33	0.58
21:N:47:VAL:O	21:N:51:LEU:HG	2.04	0.58
22:O:34:HIS:O	22:O:36:TYR:CE1	2.57	0.58
34:a:532:A:O2'	34:a:533:A:H5''	2.04	0.58
34:a:558:G:H2'	34:a:559:A:C2	2.38	0.58
34:a:653:U:C1'	41:h:55:LYS:HD2	2.33	0.58
34:a:657:U:O2	48:o:21:THR:OG1	2.20	0.58
34:a:921:U:P	34:a:1081:A:C2'	2.91	0.58
34:a:1160:G:H4'	35:b:130:LYS:HE3	1.84	0.58
34:a:1432:G:H22	34:a:1467:C:H3'	1.68	0.58
35:b:46:VAL:N	35:b:47:PRO:HD2	2.19	0.58
37:d:8:LEU:HB3	37:d:33:ILE:HD11	1.86	0.58
37:d:73:ASN:O	37:d:77:GLU:HG2	2.04	0.58
41:h:9:MET:HA	41:h:26:MET:SD	2.44	0.58
46:m:2:ARG:NH1	46:m:6:ILE:O	2.37	0.58
1:O:38:LEU:HB2	1:O:41:HIS:HB2	1.84	0.58
8:A:154:U:H2'	8:A:155:A:C8	2.39	0.58
8:A:475:C:H1'	8:A:509:C:C2	2.38	0.58
8:A:514:A:H2'	8:A:515:A:O4'	2.03	0.58
8:A:543:G:C6	8:A:551:G:N1	2.72	0.58
8:A:689:A:H2'	8:A:690:G:O4'	2.03	0.58
8:A:767:U:H2'	8:A:768:G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:793:A:N7	8:A:2072:C:H4'	2.18	0.58
8:A:976:G:H5'	8:A:1156:A:N6	2.18	0.58
8:A:1042:G:C2	8:A:1114:C:C2	2.92	0.58
8:A:1107:G:C2	8:A:1108:U:C6	2.92	0.58
8:A:1251:C:C5	24:Q:5:ARG:NH1	2.72	0.58
8:A:1316:U:O4'	8:A:1392:A:C2	2.57	0.58
8:A:1548:A:H2'	8:A:1549:A:C8	2.39	0.58
8:A:1690:A:H61	8:A:1697:G:H1'	1.68	0.58
8:A:2199:A:C4'	15:H:28:ASN:HB3	2.34	0.58
8:A:2259:U:O4'	8:A:2427:C:H2'	2.03	0.58
8:A:2282:G:N3	8:A:2425:A:N6	2.51	0.58
8:A:2314:A:H2'	8:A:2315:G:H8	1.67	0.58
8:A:2443:C:H2'	8:A:2444:G:H8	1.68	0.58
8:A:2461:A:C1'	8:A:2492:U:N3	2.67	0.58
8:A:2728:U:O2'	8:A:2729:G:O5'	2.20	0.58
10:C:70:LYS:HD2	10:C:101:ARG:NH2	2.18	0.58
17:J:106:LYS:O	17:J:111:LYS:CE	2.51	0.58
22:O:63:LYS:HG3	22:O:64:TYR:N	2.18	0.58
25:R:1:MET:HE1	25:R:41:ILE:HD12	1.85	0.58
25:R:77:PHE:CE2	25:R:79:ARG:HA	2.39	0.58
34:a:42:G:C6	34:a:43:C:C4	2.91	0.58
34:a:345:C:O4'	34:a:346:G:C5	2.56	0.58
34:a:432:A:C5	34:a:433:G:C8	2.92	0.58
34:a:657:U:C4'	48:o:27:GLN:OE1	2.52	0.58
34:a:975:A:H8	34:a:1357:A:O2'	1.86	0.58
34:a:1048:G:N2	34:a:1214:C:O2	2.36	0.58
34:a:1118:U:H1'	34:a:1179:A:C4	2.38	0.58
34:a:1157:A:N7	34:a:1180:A:C6	2.71	0.58
34:a:1428:A:H2'	34:a:1429:A:O4'	2.03	0.58
37:d:170:LEU:N	37:d:170:LEU:HD22	2.18	0.58
45:l:33:CYS:CA	45:l:54:VAL:HG12	2.34	0.58
45:l:34:THR:HG21	45:l:61:GLU:CD	2.29	0.58
47:n:63:ARG:HH12	47:n:70:PRO:HD3	1.68	0.58
49:p:8:ARG:CZ	49:p:15:PRO:HB3	2.34	0.58
57:x:410:PHE:CD2	57:x:442:PRO:HB2	2.38	0.58
7:6:39:LYS:O	7:6:40:CYS:SG	2.62	0.58
8:A:245:G:O2'	8:A:384:A:N1	2.36	0.58
8:A:373:U:H2'	8:A:374:A:H8	1.68	0.58
8:A:529:A:N7	8:A:2041:U:O2	2.36	0.58
8:A:823:C:H2'	8:A:824:U:C6	2.39	0.58
8:A:1178:C:O2'	8:A:1179:G:O5'	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1197:G:H2'	8:A:1198:U:H6	1.68	0.58
8:A:1299:G:O2'	8:A:1640:A:N6	2.37	0.58
8:A:1356:G:H1	8:A:1375:U:H3	1.52	0.58
8:A:1520:U:H2'	8:A:1521:G:O4'	2.03	0.58
8:A:1661:G:O6	8:A:2000:C:N4	2.37	0.58
8:A:1715:G:H22	8:A:1743:G:C3'	2.15	0.58
8:A:1799:G:C6	8:A:1819:A:C8	2.92	0.58
8:A:1858:A:C2	8:A:1885:A:H1'	2.38	0.58
8:A:1957:C:H2'	8:A:1958:C:C6	2.38	0.58
8:A:2515:C:C2	8:A:2570:G:C2	2.92	0.58
8:A:2543:G:C4	8:A:2765:A:H2'	2.39	0.58
8:A:2680:U:O2'	8:A:2681:C:H5'	2.04	0.58
8:A:2694:G:C6	8:A:2695:U:C4	2.92	0.58
8:A:2806:C:H2'	8:A:2807:U:O4'	2.04	0.58
11:D:107:VAL:O	11:D:175:LEU:HB2	2.04	0.58
14:G:79:THR:HG23	14:G:80:GLU:N	2.19	0.58
29:V:48:MET:HE2	29:V:85:LYS:HA	1.86	0.58
34:a:283:U:C4	34:a:284:C:C4	2.91	0.58
34:a:428:G:OP2	37:d:9:LYS:NZ	2.21	0.58
34:a:504:C:H5'	34:a:510:A:N6	2.19	0.58
34:a:752:G:H4'	48:o:68:TYR:OH	2.03	0.58
34:a:768:A:C5	34:a:769:G:C8	2.92	0.58
34:a:854:U:C6	34:a:871:U:O4	2.57	0.58
34:a:890:G:N2	34:a:891:U:O4	2.20	0.58
34:a:1303:C:C4	34:a:1304:G:N7	2.72	0.58
36:c:49:ALA:HA	36:c:74:ILE:CD1	2.33	0.58
48:o:84:LEU:HB3	48:o:86:LEU:HD13	1.85	0.58
51:r:33:THR:HG21	51:r:37:LYS:HB2	1.86	0.58
57:x:114:ALA:CB	57:x:148:ALA:HB1	2.34	0.58
57:x:565:LEU:HD13	57:x:609:PRO:HG2	1.85	0.58
8:A:132:G:H2'	8:A:133:U:H6	1.68	0.58
8:A:519:U:C2	8:A:520:G:C8	2.92	0.58
8:A:527:C:C2	8:A:2779:U:H2'	2.39	0.58
8:A:533:G:OP1	24:Q:24:TYR:N	2.27	0.58
8:A:630:G:C4	8:A:632:A:OP2	2.57	0.58
8:A:867:C:N3	8:A:912:C:O2'	2.30	0.58
8:A:876:C:C2'	8:A:877:A:H5'	2.33	0.58
8:A:881:G:O6	8:A:895:U:C2	2.57	0.58
8:A:1300:G:N3	8:A:1626:A:C6	2.72	0.58
8:A:1422:G:C2	8:A:1577:C:C2	2.92	0.58
8:A:1454:C:H5''	8:A:1455:G:OP1	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1565:C:O2	8:A:1566:A:O2'	2.19	0.58
8:A:1817:G:OP1	10:C:86:ARG:NH2	2.37	0.58
8:A:1996:C:H5	18:K:32:TYR:HH	1.52	0.58
8:A:2002:G:OP1	21:N:17:ARG:NH1	2.33	0.58
8:A:2094:A:H5'	15:H:25:TYR:CD1	2.39	0.58
8:A:2127:G:O2'	8:A:2128:G:O4'	2.21	0.58
8:A:2185:U:C4	8:A:2186:G:O6	2.57	0.58
8:A:2460:U:O2	8:A:2493:U:N3	2.36	0.58
8:A:2563:U:O2'	8:A:2565:A:N7	2.32	0.58
8:A:2572:A:OP2	11:D:149:ASN:HB3	2.03	0.58
8:A:2590:A:H2'	8:A:2591:C:C6	2.39	0.58
8:A:2798:U:H4'	8:A:2799:A:C2	2.38	0.58
8:A:2835:A:N6	8:A:2879:A:O5'	2.37	0.58
9:B:33:G:H2'	9:B:34:A:C8	2.38	0.58
11:D:178:VAL:HB	11:D:188:LEU:O	2.04	0.58
12:E:130:LYS:HB2	12:E:133:LEU:CD1	2.33	0.58
14:G:143:VAL:O	14:G:147:LEU:HG	2.04	0.58
15:H:84:ALA:HB3	15:H:148:ALA:CB	2.34	0.58
19:L:123:ARG:HB2	19:L:143:GLU:CG	2.34	0.58
20:M:26:VAL:HG21	20:M:132:THR:C	2.29	0.58
22:O:67:ASN:OD1	22:O:69:ASP:N	2.36	0.58
29:V:9:ARG:HG2	29:V:41:GLU:HG3	1.85	0.58
32:Y:19:LEU:N	32:Y:22:LEU:HD12	2.19	0.58
34:a:126:G:N1	34:a:236:A:C6	2.72	0.58
34:a:306:A:C5	34:a:307:C:C6	2.91	0.58
34:a:604:G:C6	34:a:635:A:N6	2.72	0.58
34:a:751:U:H5'	48:o:16:ARG:NH2	2.19	0.58
34:a:886:G:N1	34:a:912:C:N3	2.52	0.58
34:a:923:A:H5'	38:e:25:LYS:CB	2.33	0.58
34:a:1057:G:C6	34:a:1204:A:C6	2.92	0.58
34:a:1347:G:N2	34:a:1374:A:O5'	2.34	0.58
36:c:121:SER:CB	36:c:125:ARG:HH21	2.17	0.58
37:d:202:LEU:HD23	37:d:203:TYR:N	2.18	0.58
40:g:29:LEU:HA	40:g:108:ARG:HH22	1.68	0.58
44:k:122:PRO:HG2	54:u:37:TYR:N	2.18	0.58
46:m:39:ALA:O	46:m:42:VAL:HG22	2.03	0.58
57:x:213:LEU:O	57:x:216:GLU:HG3	2.03	0.58
57:x:235:LYS:O	57:x:240:GLU:OE1	2.21	0.58
1:0:1:ALA:HB2	8:A:2614:A:C8	2.39	0.58
1:0:32:THR:HB	1:0:50:GLY:HA2	1.85	0.58
7:6:18:CYS:HB3	7:6:20:ASN:HD21	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:96:C:H2'	8:A:97:C:H6	1.69	0.58
8:A:210:C:H2'	8:A:211:C:H6	1.68	0.58
8:A:220:G:N1	8:A:427:U:H3'	2.19	0.58
8:A:415:A:C6	8:A:2409:G:C6	2.91	0.58
8:A:504:A:H2'	8:A:504:A:N3	2.19	0.58
8:A:626:A:H2'	19:L:78:ARG:CZ	2.34	0.58
8:A:714:U:C2'	8:A:716:A:N7	2.66	0.58
8:A:722:A:H2'	8:A:723:C:H6	1.68	0.58
8:A:737:C:C2	8:A:738:G:C8	2.91	0.58
8:A:1000:A:P	8:A:1154:G:H1	2.26	0.58
8:A:1024:G:OP1	8:A:1026:G:H5'	2.04	0.58
8:A:1351:C:O2'	8:A:1572:A:O4'	2.22	0.58
8:A:1786:A:C2	8:A:1938:A:C5	2.92	0.58
8:A:2079:U:H2'	8:A:2080:A:O4'	2.04	0.58
8:A:2114:A:OP1	8:A:2119:A:H2'	2.02	0.58
8:A:2199:A:H61	8:A:2224:G:C2'	2.15	0.58
8:A:2229:U:O2	31:X:33:HIS:CE1	2.56	0.58
8:A:2375:G:C5	8:A:2377:A:OP2	2.57	0.58
8:A:2401:U:C2	8:A:2415:G:O6	2.57	0.58
8:A:2512:C:H2'	8:A:2513:A:O4'	2.03	0.58
8:A:2600:A:N7	10:C:235:GLU:HB2	2.19	0.58
9:B:27:C:H5''	22:O:34:HIS:CD2	2.38	0.58
10:C:167:ASP:OD2	10:C:182:LYS:NZ	2.35	0.58
11:D:3:GLY:HA3	11:D:203:VAL:O	2.03	0.58
21:N:14:SER:HA	21:N:17:ARG:CZ	2.33	0.58
23:P:90:ALA:HB3	23:P:110:LYS:HG3	1.85	0.58
26:S:40:ASN:O	26:S:41:LYS:HG2	2.03	0.58
26:S:82:MET:HB3	26:S:84:ARG:CZ	2.32	0.58
29:V:77:VAL:HG22	29:V:89:ILE:HG23	1.85	0.58
32:Y:31:GLN:CG	32:Y:36:GLN:HB2	2.33	0.58
34:a:119:A:N7	34:a:287:U:O2	2.26	0.58
34:a:137:U:O2'	34:a:138:G:H5'	2.04	0.58
34:a:599:C:N3	34:a:640:A:C2	2.71	0.58
34:a:621:A:H2'	34:a:622:A:C8	2.38	0.58
34:a:666:G:O4'	34:a:726:C:O2'	2.22	0.58
34:a:1013:G:O2'	34:a:1015:G:N7	2.37	0.58
34:a:1042:A:H2'	34:a:1043:G:O4'	2.03	0.58
34:a:1282:C:C2	34:a:1283:U:C5	2.92	0.58
34:a:1321:U:OP2	34:a:1322:C:O2'	2.22	0.58
34:a:1442:G:N2	34:a:1461:G:H1'	2.19	0.58
35:b:68:PHE:HB3	35:b:79:VAL:HG13	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:b:95:TRP:CZ2	35:b:99:MET:HB2	2.39	0.58
37:d:69:ARG:HB2	37:d:70:GLN:OE1	2.02	0.58
39:f:15:SER:O	39:f:19:PRO:HD3	2.04	0.58
40:g:71:THR:O	40:g:95:ARG:NH2	2.37	0.58
50:q:27:PHE:CE2	50:q:36:PHE:HB3	2.38	0.58
57:x:415:ILE:HD12	57:x:664:GLY:HA2	1.86	0.58
57:x:525:GLU:HB2	57:x:528:SER:CB	2.33	0.58
2:1:5:ARG:HH11	8:A:2285:C:P	2.27	0.57
7:6:11:GLU:HA	7:6:25:ARG:HA	1.86	0.57
7:6:45:THR:HG21	7:6:50:ASP:HB3	1.85	0.57
8:A:270:A:N6	8:A:369:U:HO2'	2.02	0.57
8:A:377:G:O6	8:A:398:C:N4	2.36	0.57
8:A:586:A:C2	8:A:1254:A:C2	2.92	0.57
8:A:818:G:OP2	8:A:1187:G:O6	2.22	0.57
8:A:839:U:H3	8:A:939:G:H1	1.51	0.57
8:A:999:U:C4	8:A:1155:A:N7	2.72	0.57
8:A:1025:G:C2	8:A:1139:G:O6	2.57	0.57
8:A:1178:C:H1'	8:A:1179:G:C2	2.39	0.57
8:A:1295:C:O4'	21:N:23:ASN:ND2	2.36	0.57
8:A:1359:A:OP2	8:A:1371:G:N2	2.37	0.57
8:A:1477:A:N6	8:A:1514:G:H1'	2.18	0.57
8:A:1530:G:C2	8:A:1542:U:O2	2.57	0.57
8:A:2849:U:C2	8:A:2867:G:O4'	2.56	0.57
9:B:45:A:C4	9:B:46:A:C8	2.92	0.57
10:C:116:GLN:NE2	10:C:121:ALA:HA	2.19	0.57
10:C:134:ILE:HD11	10:C:138:SER:OG	2.04	0.57
12:E:21:ARG:O	12:E:110:SER:OG	2.20	0.57
13:F:120:SER:CB	13:F:128:SER:O	2.51	0.57
14:G:25:ILE:O	14:G:78:VAL:HG11	2.04	0.57
23:P:13:LYS:CE	23:P:76:HIS:HA	2.34	0.57
26:S:82:MET:HE3	26:S:98:LYS:HG3	1.86	0.57
31:X:53:LYS:HA	31:X:56:ARG:HG3	1.85	0.57
34:a:106:C:H2'	34:a:107:G:O4'	2.03	0.57
34:a:176:C:C2	34:a:177:G:H8	2.22	0.57
34:a:203:G:N2	34:a:216:U:H5'	2.19	0.57
34:a:429:U:O3'	37:d:21:LYS:NZ	2.26	0.57
34:a:456:A:H2	34:a:476:U:N3	2.01	0.57
34:a:469:C:N4	34:a:470:C:O2'	2.37	0.57
34:a:921:U:O4'	34:a:1082:A:P	2.62	0.57
34:a:946:A:OP1	46:m:112:ARG:NH2	2.36	0.57
34:a:953:G:C5	34:a:954:G:C8	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1103:C:H5''	35:b:96:LEU:HD13	1.86	0.57
34:a:1241:G:C2	34:a:1242:G:C5	2.92	0.57
34:a:1442:G:H2'	34:a:1443:C:C6	2.39	0.57
35:b:45:THR:O	35:b:49:PHE:HB2	2.04	0.57
35:b:177:ASN:C	35:b:178:LEU:HD22	2.28	0.57
36:c:10:ARG:HB3	36:c:14:VAL:HG22	1.86	0.57
36:c:49:ALA:O	36:c:69:THR:OG1	2.21	0.57
36:c:53:ARG:HB3	36:c:68:HIS:HB2	1.85	0.57
38:e:86:GLY:O	38:e:138:ALA:CB	2.52	0.57
44:k:71:ASP:OD1	44:k:71:ASP:N	2.36	0.57
52:s:14:LEU:O	52:s:18:VAL:HG23	2.04	0.57
55:v:10:G:C2	55:v:26:G:H1'	2.39	0.57
55:v:49:G:C2	55:v:66:C:C2	2.91	0.57
55:v:52:G:C2	55:v:63:G:C2	2.92	0.57
8:A:9:G:H1'	8:A:2895:G:N2	2.19	0.57
8:A:17:G:C6	8:A:524:G:N1	2.72	0.57
8:A:67:U:C2	8:A:68:G:C8	2.92	0.57
8:A:317:G:H2'	8:A:318:C:C6	2.39	0.57
8:A:374:A:H2'	8:A:375:G:O4'	2.04	0.57
8:A:376:G:H2'	8:A:377:G:H8	1.68	0.57
8:A:494:G:N2	26:S:57:ASN:OD1	2.37	0.57
8:A:593:U:H2'	8:A:594:U:H6	1.69	0.57
8:A:629:G:H4'	8:A:650:C:O2	2.04	0.57
8:A:634:C:H2'	8:A:635:C:C6	2.39	0.57
8:A:1149:G:H2'	8:A:1150:C:C6	2.39	0.57
8:A:1160:G:H2'	8:A:1161:C:C6	2.39	0.57
8:A:1176:U:C4	8:A:1177:G:C5	2.92	0.57
8:A:1182:G:C6	8:A:1183:U:C4	2.92	0.57
8:A:1218:G:P	24:Q:14:LYS:NZ	2.76	0.57
8:A:1222:U:C2	8:A:1228:G:N1	2.71	0.57
8:A:1408:G:N1	8:A:1594:U:C2	2.71	0.57
8:A:1416:G:O2'	8:A:1417:C:O4'	2.21	0.57
8:A:1476:U:OP2	8:A:1514:G:O6	2.23	0.57
8:A:1579:A:H2'	8:A:1580:A:O4'	2.04	0.57
8:A:1730:C:O2'	8:A:1731:G:O5'	2.23	0.57
8:A:1745:A:H2'	8:A:1746:A:O4'	2.04	0.57
8:A:1813:G:O2'	10:C:49:THR:OG1	2.18	0.57
8:A:2036:C:H2'	8:A:2037:A:H8	1.69	0.57
8:A:2092:U:O4	8:A:2228:G:C6	2.57	0.57
8:A:2232:C:H2'	8:A:2233:U:O4'	2.04	0.57
8:A:2266:A:H1'	8:A:2272:U:H3	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2405:G:O2'	8:A:2406:A:P	2.62	0.57
8:A:2740:A:H2'	8:A:2741:A:C8	2.39	0.57
8:A:2784:U:H2'	8:A:2785:C:H6	1.67	0.57
8:A:2850:A:C6	8:A:2851:A:C5	2.91	0.57
9:B:42:C:C5	13:F:65:LEU:HD22	2.39	0.57
9:B:54:G:H2'	9:B:55:U:C6	2.38	0.57
10:C:229:HIS:CG	10:C:230:PRO:HD2	2.39	0.57
12:E:106:LYS:HE2	12:E:200:LEU:CB	2.34	0.57
19:L:111:ILE:HA	19:L:128:THR:CG2	2.35	0.57
23:P:25:VAL:HG22	23:P:85:VAL:HA	1.86	0.57
23:P:46:VAL:HG11	23:P:49:ILE:HD11	1.86	0.57
23:P:70:GLU:OE2	23:P:100:ARG:HG2	2.04	0.57
29:V:34:LYS:HE3	29:V:35:GLU:HG3	1.84	0.57
34:a:301:G:C2	34:a:302:G:C4	2.93	0.57
34:a:366:A:H1'	34:a:394:G:H22	1.69	0.57
34:a:453:G:O6	34:a:479:U:C4	2.58	0.57
34:a:646:G:C6	34:a:647:C:C4	2.92	0.57
34:a:825:A:O2'	41:h:8:ASP:OD1	2.20	0.57
34:a:878:A:OP1	41:h:79:ARG:NH1	2.25	0.57
34:a:1150:A:H4'	43:j:43:PRO:HG3	1.84	0.57
34:a:1230:C:O2'	34:a:1231:G:H5'	2.04	0.57
34:a:1302:C:C5	46:m:16:ILE:HG13	2.38	0.57
34:a:1316:G:N7	52:s:6:LYS:NZ	2.51	0.57
34:a:1316:G:C6	34:a:1318:A:H5''	2.39	0.57
34:a:1332:A:H2'	34:a:1333:A:C8	2.37	0.57
35:b:72:LYS:HZ2	35:b:163:ILE:HD11	1.70	0.57
36:c:84:GLU:O	36:c:88:LYS:HG2	2.04	0.57
38:e:85:LYS:HG2	38:e:94:PHE:HD1	1.69	0.57
41:h:94:VAL:O	41:h:99:GLY:N	2.34	0.57
49:p:9:HIS:O	49:p:16:PHE:N	2.37	0.57
57:x:2:ARG:HH21	57:x:377:ARG:HG3	1.67	0.57
57:x:25:THR:HG22	57:x:268:ALA:HB2	1.84	0.57
57:x:544:ILE:O	57:x:545:PRO:C	2.48	0.57
2:1:13:SER:HA	2:1:49:LYS:HE3	1.85	0.57
6:5:54:VAL:N	8:A:1083:U:O5'	2.36	0.57
8:A:77:G:P	32:Y:52:ARG:HE	2.27	0.57
8:A:273:G:N1	8:A:365:U:N3	2.52	0.57
8:A:335:C:H5''	28:U:81:ARG:HD3	1.85	0.57
8:A:417:C:C2	8:A:2407:A:N1	2.71	0.57
8:A:495:G:H21	26:S:61:ASN:CG	2.12	0.57
8:A:539:G:H2'	8:A:540:C:C6	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:545:U:N3	8:A:549:G:N1	2.53	0.57
8:A:593:U:H3	8:A:664:G:H1	1.52	0.57
8:A:649:G:H2'	8:A:650:C:C6	2.40	0.57
8:A:814:C:C2	8:A:815:C:C5	2.92	0.57
8:A:828:U:H4'	8:A:831:G:N1	2.19	0.57
8:A:995:C:C4	24:Q:56:PHE:CZ	2.92	0.57
8:A:1740:G:H2'	8:A:1741:C:C6	2.40	0.57
8:A:1827:U:O2'	8:A:1828:G:H5'	2.04	0.57
8:A:2014:A:OP1	26:S:95:ARG:NE	2.38	0.57
8:A:2077:A:C8	8:A:2435:A:C4	2.91	0.57
8:A:2088:A:H2'	8:A:2089:C:C6	2.39	0.57
8:A:2127:G:H1	8:A:2161:C:N4	2.01	0.57
8:A:2311:A:O3'	13:F:84:ILE:HD11	2.04	0.57
8:A:2450:A:C2	8:A:2451:A:C4	2.92	0.57
8:A:2521:C:N3	8:A:2545:G:C2	2.72	0.57
8:A:2619:C:H2'	8:A:2620:C:H6	1.70	0.57
8:A:2708:G:O4'	21:N:71:ARG:NH2	2.37	0.57
8:A:2838:G:C4	8:A:2839:G:C8	2.92	0.57
8:A:2847:U:OP1	23:P:95:LYS:NZ	2.37	0.57
9:B:21:G:C2	9:B:63:C:C2	2.93	0.57
9:B:62:C:H2'	9:B:63:C:H6	1.69	0.57
12:E:18:THR:HG23	12:E:200:LEU:HB3	1.87	0.57
14:G:153:PRO:HB3	14:G:168:VAL:HG21	1.86	0.57
20:M:106:ASP:OD1	20:M:107:GLY:N	2.37	0.57
24:Q:60:TRP:CZ3	24:Q:92:LYS:HB2	2.39	0.57
28:U:23:LYS:O	28:U:35:VAL:HG13	2.04	0.57
29:V:31:TYR:CE2	29:V:90:ASP:HB3	2.40	0.57
34:a:49:U:C2	34:a:361:G:N2	2.72	0.57
34:a:77:A:C2	34:a:93:U:C2	2.92	0.57
34:a:257:G:N1	34:a:270:A:C6	2.72	0.57
34:a:265:G:C2	34:a:267:C:O4'	2.58	0.57
34:a:439:U:C4	34:a:440:C:C4	2.92	0.57
34:a:602:A:H2'	34:a:603:U:O2	2.04	0.57
34:a:825:A:N6	34:a:876:C:N4	2.53	0.57
34:a:1178:G:O2'	34:a:1180:A:N7	2.38	0.57
34:a:1210:C:C4	34:a:1211:U:C4	2.92	0.57
34:a:1223:C:P	52:s:77:ARG:NH1	2.76	0.57
34:a:1242:G:H2'	34:a:1243:C:H6	1.68	0.57
34:a:1268:G:O2'	34:a:1269:A:O4'	2.20	0.57
34:a:1288:A:H2'	34:a:1289:A:C8	2.39	0.57
34:a:1419:G:C5	34:a:1482:G:C2	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:c:44:LYS:HD2	36:c:44:LYS:C	2.30	0.57
43:j:11:LYS:HG2	43:j:97:ASP:HB3	1.86	0.57
57:x:10:ARG:NE	57:x:285:LEU:O	2.37	0.57
2:1:6:GLU:HB3	2:1:26:LYS:HD2	1.84	0.57
8:A:23:G:C6	8:A:518:G:C6	2.92	0.57
8:A:239:C:N4	8:A:259:G:O6	2.36	0.57
8:A:300:A:H1'	8:A:319:G:C1'	2.33	0.57
8:A:396:G:OP2	31:X:9:LYS:NZ	2.37	0.57
8:A:623:C:H2'	8:A:624:C:H6	1.68	0.57
8:A:980:A:H2'	8:A:981:A:C8	2.39	0.57
8:A:1004:U:H5'	8:A:1010:A:N6	2.20	0.57
8:A:1039:A:H61	8:A:1116:G:H1	1.52	0.57
8:A:1064:C:C5	8:A:1069:A:P	2.97	0.57
8:A:1295:C:C2	8:A:1296:G:C8	2.93	0.57
8:A:1447:C:N3	8:A:1465:G:N1	2.51	0.57
8:A:1473:G:C6	8:A:1519:G:C6	2.92	0.57
8:A:1778:U:C5	8:A:1784:A:C2	2.93	0.57
8:A:2100:G:C2	8:A:2189:U:O2	2.57	0.57
8:A:2464:G:H2'	8:A:2465:C:C6	2.39	0.57
8:A:2572:A:N7	11:D:150:GLN:HB3	2.18	0.57
8:A:2862:G:H2'	8:A:2863:C:C6	2.38	0.57
9:B:78:A:H61	9:B:98:G:C2'	2.17	0.57
10:C:146:LYS:HB2	10:C:149:LYS:HB2	1.86	0.57
11:D:125:TRP:CD2	11:D:160:LYS:HD3	2.38	0.57
12:E:22:ASP:OD1	12:E:22:ASP:N	2.37	0.57
15:H:37:VAL:HG11	15:H:43:ASN:ND2	2.19	0.57
17:J:76:HIS:N	17:J:85:LYS:O	2.25	0.57
19:L:96:LYS:HD3	19:L:103:ILE:HA	1.87	0.57
21:N:14:SER:OG	21:N:17:ARG:NH1	2.35	0.57
22:O:89:ASP:HA	22:O:116:GLN:HB2	1.86	0.57
31:X:17:ARG:HB3	31:X:21:LEU:HD23	1.86	0.57
33:Z:40:THR:O	33:Z:44:ARG:HG2	2.04	0.57
34:a:66:A:H4'	34:a:173:U:C5	2.39	0.57
34:a:71:A:N9	34:a:100:G:H1'	2.20	0.57
34:a:131:A:H2'	34:a:132:C:C6	2.39	0.57
34:a:255:G:H2'	34:a:256:U:H6	1.67	0.57
34:a:343:U:C2	34:a:347:G:C2	2.91	0.57
34:a:399:G:H2'	34:a:400:C:C6	2.39	0.57
34:a:616:G:N2	34:a:617:G:C2	2.73	0.57
34:a:696:A:C2'	34:a:786:G:O2'	2.51	0.57
34:a:705:G:C6	34:a:706:A:C4	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:865:A:H2'	34:a:866:C:O4'	2.05	0.57
34:a:872:A:C5	34:a:874:G:C8	2.92	0.57
34:a:881:G:C6	34:a:882:C:C4	2.92	0.57
34:a:900:A:H2'	34:a:901:A:C8	2.39	0.57
34:a:929:G:C2	34:a:1389:C:C2	2.92	0.57
34:a:1102:A:H2'	34:a:1103:C:C6	2.39	0.57
34:a:1166:G:H1'	34:a:1170:A:H61	1.69	0.57
34:a:1428:A:C6	34:a:1473:G:N1	2.72	0.57
34:a:1444:U:C2	34:a:1459:G:C2	2.93	0.57
36:c:158:GLY:HA2	36:c:192:TYR:CD2	2.39	0.57
37:d:8:LEU:HD21	37:d:21:LYS:HG2	1.85	0.57
39:f:2:ARG:HD3	39:f:91:ARG:NE	2.19	0.57
39:f:79:ARG:HD2	39:f:80:PHE:CZ	2.39	0.57
43:j:41:PRO:HA	43:j:72:ARG:HD3	1.86	0.57
45:l:55:ARG:NH2	45:l:59:GLY:C	2.63	0.57
49:p:3:THR:N	49:p:22:ALA:O	2.36	0.57
57:x:350:ASN:HB2	57:x:355:ALA:H	1.68	0.57
8:A:68:G:C2	8:A:74:A:C4	2.92	0.57
8:A:247:G:N2	8:A:250:G:H3'	2.19	0.57
8:A:460:A:H2'	8:A:461:C:O4'	2.04	0.57
8:A:465:G:H2'	8:A:466:A:C8	2.39	0.57
8:A:569:U:C4	8:A:570:G:C6	2.91	0.57
8:A:608:A:H2'	8:A:609:A:C8	2.39	0.57
8:A:611:C:C2	8:A:618:G:N2	2.73	0.57
8:A:611:C:H2'	8:A:612:G:O4'	2.04	0.57
8:A:884:U:O2	8:A:894:U:H5''	2.04	0.57
8:A:1034:G:C5	8:A:1035:U:C4	2.93	0.57
8:A:1055:G:N1	8:A:1104:C:N3	2.49	0.57
8:A:1317:G:O6	8:A:1336:A:N6	2.38	0.57
8:A:1412:U:N3	8:A:1591:A:C6	2.72	0.57
8:A:1615:C:C4	8:A:1617:C:C2	2.92	0.57
8:A:1717:A:C2	8:A:1718:G:H1'	2.38	0.57
8:A:2114:A:H3'	8:A:2115:G:C5'	2.34	0.57
8:A:2122:U:H2'	8:A:2176:A:C6	2.40	0.57
8:A:2154:A:H62	8:A:2156:G:C1'	2.18	0.57
8:A:2277:G:H3'	30:W:8:ASN:ND2	2.19	0.57
8:A:2294:G:O6	8:A:2339:C:N4	2.38	0.57
8:A:2486:C:P	20:M:125:PRO:HB3	2.44	0.57
8:A:2561:U:H4'	18:K:40:LYS:HE2	1.86	0.57
8:A:2567:G:H2'	8:A:2568:U:C6	2.40	0.57
9:B:23:G:H8	9:B:23:G:O5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:244:VAL:HG12	10:C:250:GLN:HA	1.86	0.57
13:F:121:PHE:HB3	13:F:162:ASP:OD1	2.04	0.57
15:H:113:SER:O	15:H:116:ARG:NH2	2.35	0.57
18:K:73:ASP:O	23:P:74:GLN:HG3	2.05	0.57
20:M:35:ALA:N	20:M:100:LYS:O	2.31	0.57
20:M:53:MET:O	20:M:57:VAL:HG22	2.04	0.57
29:V:84:PRO:O	29:V:85:LYS:HG3	2.05	0.57
30:W:17:LEU:HD22	30:W:35:ARG:HE	1.68	0.57
34:a:148:G:H1'	34:a:1446:A:C2	2.39	0.57
34:a:243:A:C5	34:a:245:U:C4	2.92	0.57
34:a:440:C:C2	34:a:441:A:C8	2.93	0.57
34:a:464:U:H2'	34:a:465:A:H8	1.68	0.57
34:a:482:A:H2'	34:a:483:C:O4'	2.04	0.57
34:a:580:C:H2'	34:a:581:G:O4'	2.05	0.57
34:a:821:G:H2'	34:a:822:U:C6	2.39	0.57
34:a:921:U:OP2	34:a:1082:A:N9	2.37	0.57
34:a:1027:C:C4	34:a:1028:C:C2	2.93	0.57
34:a:1130:A:N7	34:a:1144:G:N3	2.52	0.57
34:a:1266:G:C2	34:a:1270:G:C6	2.91	0.57
35:b:102:ASN:O	35:b:106:VAL:HG23	2.05	0.57
35:b:205:ALA:O	35:b:209:VAL:HG23	2.03	0.57
36:c:118:SER:O	36:c:121:SER:OG	2.19	0.57
37:d:26:ALA:HB1	37:d:28:ASP:OD1	2.05	0.57
37:d:53:GLN:CG	37:d:198:LEU:HD11	2.34	0.57
41:h:3:GLN:O	41:h:80:PRO:HG3	2.04	0.57
54:u:40:PRO:O	54:u:43:GLU:HG2	2.05	0.57
57:x:102:MET:CB	57:x:132:TYR:CD2	2.87	0.57
4:3:23:HIS:CG	19:L:61:LEU:CD1	2.88	0.57
8:A:13:A:H61	8:A:525:U:H3'	1.69	0.57
8:A:66:C:C2	8:A:67:U:C6	2.93	0.57
8:A:310:A:OP2	28:U:18:LYS:NZ	2.29	0.57
8:A:382:A:C2	8:A:383:C:H1'	2.39	0.57
8:A:413:C:H2'	8:A:414:C:H6	1.70	0.57
8:A:475:C:H4'	8:A:510:C:H5'	1.86	0.57
8:A:479:A:N6	8:A:505:A:C2	2.72	0.57
8:A:495:G:H2'	8:A:496:G:O4'	2.05	0.57
8:A:774:G:O2'	8:A:775:G:C8	2.55	0.57
8:A:784:G:C6	8:A:792:A:C4	2.92	0.57
8:A:868:U:O2'	20:M:8:LYS:NZ	2.29	0.57
8:A:957:C:OP2	20:M:76:LYS:HG2	2.03	0.57
8:A:997:G:C2	8:A:1159:U:C2	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1140:C:H5'	17:J:26:GLY:HA3	1.86	0.57
8:A:1217:U:N3	8:A:1232:G:N1	2.52	0.57
8:A:1655:A:C8	8:A:1656:C:C5	2.93	0.57
8:A:1711:A:H2'	8:A:1712:U:O4'	2.05	0.57
8:A:1851:U:C4	8:A:1852:U:C4	2.92	0.57
8:A:2295:C:P	22:O:10:ARG:HH11	2.27	0.57
8:A:2313:C:H2'	8:A:2314:A:C8	2.40	0.57
8:A:2526:G:C6	8:A:2527:C:N4	2.72	0.57
8:A:2639:A:H2'	8:A:2640:G:O4'	2.05	0.57
8:A:2661:G:C6	8:A:2662:A:C2	2.92	0.57
8:A:2856:A:C6	8:A:2857:G:C5	2.92	0.57
10:C:53:ILE:O	10:C:216:ARG:HD3	2.05	0.57
10:C:80:LEU:HD23	10:C:111:ALA:HB2	1.86	0.57
14:G:154:GLU:OE2	14:G:157:LYS:N	2.37	0.57
17:J:76:HIS:NE2	17:J:85:LYS:HB2	2.18	0.57
24:Q:24:TYR:O	24:Q:27:ARG:HB2	2.04	0.57
24:Q:57:ARG:NH2	24:Q:91:ARG:NE	2.53	0.57
29:V:81:PRO:HB2	29:V:82:TYR:CD1	2.38	0.57
30:W:67:VAL:HA	30:W:74:LYS:HA	1.86	0.57
34:a:66:A:C2	34:a:104:G:H1'	2.40	0.57
34:a:150:U:O4	34:a:170:U:C5'	2.52	0.57
34:a:324:G:C2'	34:a:326:G:N7	2.67	0.57
34:a:371:A:C6	34:a:391:G:N1	2.72	0.57
34:a:408:A:H2'	34:a:409:U:O4'	2.04	0.57
34:a:439:U:O4	34:a:497:G:N1	2.36	0.57
34:a:521:G:O5'	45:l:69:GLU:HG2	2.04	0.57
34:a:595:A:O2'	34:a:641:U:O4	2.12	0.57
34:a:651:C:H2'	34:a:652:U:C6	2.40	0.57
34:a:836:G:C5	34:a:851:G:C5	2.92	0.57
34:a:846:G:C6	34:a:847:G:C6	2.92	0.57
34:a:878:A:OP1	41:h:79:ARG:HD2	2.03	0.57
34:a:954:G:C6	34:a:955:U:C4	2.93	0.57
34:a:1003:G:C6	34:a:1033:G:O6	2.57	0.57
34:a:1045:C:N4	34:a:1046:A:C5	2.73	0.57
34:a:1075:U:N3	34:a:1083:U:O4	2.37	0.57
34:a:1163:A:H2'	34:a:1164:G:C8	2.38	0.57
34:a:1307:U:H2'	34:a:1308:U:O4'	2.04	0.57
34:a:1358:U:H3'	34:a:1359:C:C6	2.39	0.57
36:c:53:ARG:HE	36:c:55:VAL:CG2	2.17	0.57
36:c:54:ILE:HG12	36:c:67:ILE:HG12	1.85	0.57
37:d:182:LYS:NZ	37:d:183:ARG:HG2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:q:59:GLU:O	50:q:75:VAL:HB	2.04	0.57
57:x:74:MET:C	57:x:76:LYS:N	2.63	0.57
57:x:78:TYR:O	57:x:79:GLU:HB2	2.03	0.57
3:2:18:PHE:H	8:A:126:A:P	2.28	0.57
7:6:42:PRO:HD3	7:6:50:ASP:OD2	2.05	0.57
8:A:102:U:O4	32:Y:4:LYS:HD2	2.04	0.57
8:A:121:G:C4	8:A:131:A:C6	2.93	0.57
8:A:371:A:H61	8:A:401:A:H3'	1.70	0.57
8:A:501:A:H8	8:A:501:A:O5'	1.88	0.57
8:A:530:G:N3	8:A:2035:G:H4'	2.18	0.57
8:A:554:U:C4	8:A:555:G:C6	2.93	0.57
8:A:627:A:O2'	19:L:76:GLU:OE2	2.19	0.57
8:A:712:G:N2	8:A:720:U:H1'	2.20	0.57
8:A:771:G:O2'	8:A:1355:G:H4'	2.05	0.57
8:A:784:G:H5'	8:A:785:G:OP1	2.05	0.57
8:A:814:C:H2'	8:A:815:C:H6	1.68	0.57
8:A:1011:G:C4	8:A:1013:C:C5	2.93	0.57
8:A:1051:G:N1	8:A:1108:U:C2	2.72	0.57
8:A:1056:G:C4	8:A:1103:A:N6	2.73	0.57
8:A:1116:G:O2'	8:A:1117:C:H5'	2.04	0.57
8:A:1346:G:C6	8:A:1601:G:C6	2.92	0.57
8:A:1535:A:N7	8:A:1537:G:O6	2.37	0.57
8:A:1748:C:H2'	8:A:1749:A:C8	2.40	0.57
8:A:1773:A:C5	8:A:1829:A:H1'	2.39	0.57
8:A:2229:U:H2'	8:A:2230:G:H8	1.68	0.57
8:A:2507:C:H5''	8:A:2573:C:N4	2.20	0.57
8:A:2547:A:C8	8:A:2566:A:C5	2.93	0.57
8:A:2659:G:H1'	8:A:2662:A:H61	1.67	0.57
9:B:10:G:C5	9:B:11:C:C4	2.93	0.57
9:B:90:C:H5'	20:M:18:ARG:HG2	1.86	0.57
10:C:107:LYS:NZ	10:C:197:ALA:H	2.01	0.57
15:H:27:ARG:HG2	15:H:28:ASN:OD1	2.05	0.57
15:H:81:ALA:HA	15:H:147:VAL:HB	1.86	0.57
18:K:14:SER:HA	18:K:51:LYS:HE2	1.87	0.57
34:a:509:A:O2'	34:a:510:A:C8	2.58	0.57
34:a:736:C:H2'	34:a:737:C:H6	1.69	0.57
34:a:1148:U:OP1	42:i:8:THR:OG1	2.22	0.57
34:a:1151:A:HO2'	34:a:1152:A:H8	1.52	0.57
34:a:1239:A:C4	34:a:1241:G:C2	2.93	0.57
34:a:1352:C:H2'	34:a:1353:G:O4'	2.05	0.57
36:c:69:THR:O	36:c:104:GLU:HA	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:176:GLU:OE2	57:x:177:HIS:ND1	2.37	0.57
2:1:42:VAL:O	2:1:44:GLN:HG2	2.05	0.57
4:3:30:HIS:HE2	8:A:2392:A:P	2.27	0.57
8:A:80:G:C2	8:A:107:G:C2	2.93	0.57
8:A:247:G:H22	8:A:250:G:H3'	1.69	0.57
8:A:372:G:N2	8:A:400:G:C8	2.72	0.57
8:A:1071:G:O2'	8:A:1089:A:N7	2.37	0.57
8:A:1090:A:N1	8:A:1102:C:O4'	2.38	0.57
8:A:1153:C:H2'	8:A:1154:G:O4'	2.04	0.57
8:A:1310:G:N7	8:A:1311:G:C6	2.73	0.57
8:A:1356:G:O6	8:A:1376:C:N4	2.37	0.57
8:A:1412:U:H2'	8:A:1413:A:C8	2.40	0.57
8:A:1689:A:N6	8:A:1697:G:H2'	2.19	0.57
8:A:1750:G:H2'	8:A:1751:U:C6	2.39	0.57
8:A:1769:U:C4'	8:A:1958:C:H5''	2.34	0.57
8:A:1794:A:H2'	8:A:1795:C:H6	1.69	0.57
8:A:1912:A:OP2	8:A:1918:A:N6	2.35	0.57
8:A:2377:A:H2'	8:A:2378:A:O4'	2.05	0.57
8:A:2391:G:H2'	8:A:2424:C:N4	2.18	0.57
8:A:2685:G:H2'	8:A:2686:G:H8	1.69	0.57
9:B:36:C:N4	9:B:49:C:H1'	2.19	0.57
9:B:52:A:HO2'	9:B:53:A:P	2.27	0.57
12:E:131:THR:HG21	12:E:163:ASN:HB3	1.86	0.57
14:G:42:VAL:HA	14:G:50:THR:O	2.03	0.57
17:J:45:THR:OG1	24:Q:63:ARG:NH2	2.38	0.57
20:M:20:LEU:HD13	29:V:81:PRO:HG2	1.87	0.57
34:a:67:C:H4'	34:a:172:A:O4'	2.04	0.57
34:a:67:C:H2'	34:a:68:G:C8	2.39	0.57
34:a:86:G:N3	34:a:88:U:O2	2.37	0.57
34:a:235:C:H2'	34:a:236:A:H8	1.68	0.57
34:a:524:G:C2	34:a:525:C:C4	2.93	0.57
34:a:742:G:H2'	34:a:743:A:H8	1.70	0.57
34:a:765:G:N2	34:a:812:G:O2'	2.35	0.57
34:a:842:U:H4'	34:a:846:G:O6	2.05	0.57
34:a:846:G:H2'	34:a:847:G:O4'	2.04	0.57
34:a:1100:C:N4	34:a:1103:C:OP1	2.37	0.57
34:a:1321:U:P	34:a:1322:C:H3'	2.45	0.57
34:a:1372:U:C4	34:a:1373:G:C5	2.93	0.57
34:a:1394:A:C6	34:a:1501:C:H4'	2.39	0.57
34:a:1416:G:C2	34:a:1485:U:O2	2.56	0.57
34:a:1421:G:C6	34:a:1480:A:C6	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:c:133:MET:HB3	36:c:167:TYR:CD2	2.40	0.57
37:d:16:THR:OG1	37:d:17:ASP:N	2.38	0.57
39:f:1:MET:SD	39:f:67:PRO:HD3	2.45	0.57
39:f:3:HIS:CE1	39:f:65:GLU:OE1	2.58	0.57
43:j:8:ILE:HD13	43:j:100:ILE:HA	1.85	0.57
49:p:12:LYS:C	49:p:14:ARG:H	2.13	0.57
52:s:80:ARG:HD3	52:s:80:ARG:N	2.20	0.57
53:t:20:ASN:O	53:t:24:ARG:HG3	2.04	0.57
54:u:7:GLU:HG3	54:u:14:ALA:HB3	1.86	0.57
57:x:158:LYS:HB2	57:x:165:PRO:HG3	1.87	0.57
6:5:65:GLU:CB	8:A:1046:A:C8	2.88	0.57
8:A:54:G:H2'	8:A:55:G:O4'	2.04	0.57
8:A:72:U:H6	32:Y:54:LYS:HD3	1.68	0.57
8:A:319:G:C4	8:A:333:G:N2	2.73	0.57
8:A:635:C:H2'	8:A:636:G:O4'	2.04	0.57
8:A:706:A:H2'	8:A:707:G:O4'	2.05	0.57
8:A:715:A:N6	8:A:716:A:N1	2.52	0.57
8:A:814:C:H2'	8:A:815:C:C6	2.40	0.57
8:A:1012:U:C4	8:A:1143:A:N7	2.72	0.57
8:A:1129:A:O2'	8:A:2515:C:O2	2.17	0.57
8:A:1292:G:C6	8:A:1293:C:N4	2.73	0.57
8:A:1484:U:H2'	8:A:1485:U:C6	2.40	0.57
8:A:1540:G:C6	8:A:1541:C:C4	2.92	0.57
8:A:1717:A:H1'	8:A:1744:A:N6	2.20	0.57
8:A:1819:A:H1'	8:A:1821:A:C6	2.40	0.57
8:A:1937:A:C2	8:A:1939:5MU:C4	2.92	0.57
8:A:2048:G:C6	8:A:2621:G:C6	2.93	0.57
8:A:2271:G:H2'	8:A:2272:U:C6	2.40	0.57
8:A:2331:G:O2'	8:A:2336:A:N1	2.37	0.57
8:A:2581:G:N3	8:A:2581:G:H2'	2.18	0.57
8:A:2590:A:H5''	10:C:237:ARG:CZ	2.34	0.57
8:A:2682:A:O4'	11:D:11:MET:HB3	2.05	0.57
8:A:2831:G:OP1	11:D:56:LYS:NZ	2.37	0.57
11:D:22:ILE:O	11:D:24:VAL:HG13	2.05	0.57
11:D:62:LYS:HB2	11:D:63:PRO:HD3	1.85	0.57
21:N:114:GLU:OE1	21:N:118:ARG:NH1	2.34	0.57
28:U:6:ARG:NH2	28:U:7:ASP:OD1	2.38	0.57
33:Z:38:GLU:CD	33:Z:38:GLU:H	2.12	0.57
34:a:35:G:C6	34:a:36:C:N4	2.73	0.57
34:a:216:U:H4'	34:a:464:U:C1'	2.35	0.57
34:a:402:G:C6	34:a:403:C:C4	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:639:G:C6	34:a:640:A:C5	2.93	0.57
34:a:692:U:C2	34:a:694:A:H5''	2.39	0.57
34:a:967:5MC:H3'	34:a:968:A:C8	2.40	0.57
34:a:973:G:OP2	34:a:974:A:O2'	2.21	0.57
34:a:1347:G:H22	34:a:1374:A:P	2.27	0.57
34:a:1359:C:C5	47:n:75:ARG:NH1	2.73	0.57
34:a:1437:A:H2'	34:a:1438:G:H8	1.70	0.57
34:a:1510:C:N3	34:a:1526:G:N1	2.53	0.57
38:e:113:VAL:HG13	38:e:114:LEU:HG	1.86	0.57
40:g:132:THR:O	40:g:135:LYS:HB3	2.04	0.57
41:h:25:THR:OG1	41:h:59:GLU:HG3	2.03	0.57
45:l:85:ARG:O	45:l:95:HIS:HE1	1.88	0.57
48:o:57:ARG:O	48:o:61:GLN:HG2	2.05	0.57
56:w:2:C:H2'	56:w:3:C:C6	2.39	0.57
57:x:95:THR:HG23	57:x:411:PRO:HG3	1.87	0.57
5:4:18:LYS:HA	5:4:22:VAL:O	2.04	0.57
8:A:84:A:H62	8:A:101:A:H2	1.51	0.57
8:A:213:A:H2'	8:A:214:G:C8	2.40	0.57
8:A:287:G:C2	8:A:354:A:C2	2.93	0.57
8:A:298:G:C2'	8:A:340:A:N6	2.68	0.57
8:A:410:G:N3	8:A:2407:A:N7	2.53	0.57
8:A:503:A:C6	8:A:505:A:C6	2.93	0.57
8:A:621:A:P	19:L:99:ASN:ND2	2.78	0.57
8:A:640:C:C2	8:A:641:U:C5	2.93	0.57
8:A:779:U:H2'	8:A:780:G:C8	2.38	0.57
8:A:819:A:N6	8:A:1189:A:H1'	2.20	0.57
8:A:855:G:C6	8:A:923:G:C6	2.93	0.57
8:A:887:A:OP2	8:A:891:G:N2	2.38	0.57
8:A:888:C:C4	8:A:889:C:H1'	2.39	0.57
8:A:1034:G:C6	8:A:1122:G:C6	2.93	0.57
8:A:1065:U:H3'	8:A:1074:G:O6	2.05	0.57
8:A:1144:A:C4	8:A:1145:C:C5	2.93	0.57
8:A:1279:G:H2'	8:A:1280:G:O4'	2.04	0.57
8:A:1486:U:H2'	8:A:1487:U:H6	1.69	0.57
8:A:1671:U:N3	8:A:1674:G:OP2	2.19	0.57
8:A:1910:G:C2	8:A:1921:G:C2	2.92	0.57
8:A:1952:A:C2	8:A:2560:A:H1'	2.39	0.57
8:A:2012:G:O3'	26:S:96:ILE:HD12	2.04	0.57
8:A:2102:G:N1	8:A:2188:U:C4	2.73	0.57
8:A:2123:G:H2'	8:A:2125:G:N7	2.20	0.57
8:A:2230:G:H2'	8:A:2231:U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2472:G:H3'	8:A:2475:C:N4	2.20	0.57
8:A:2516:A:N6	8:A:2569:G:C6	2.73	0.57
8:A:2857:G:C5	8:A:2859:G:OP2	2.58	0.57
9:B:76:G:OP1	29:V:9:ARG:NH1	2.31	0.57
10:C:159:THR:O	10:C:194:VAL:N	2.37	0.57
13:F:33:ILE:HG12	13:F:155:ILE:HG23	1.87	0.57
18:K:113:MET:HA	18:K:116:ILE:HG22	1.86	0.57
24:Q:99:VAL:C	24:Q:102:LYS:NZ	2.62	0.57
26:S:69:LEU:HD23	26:S:108:SER:C	2.30	0.57
27:T:76:ARG:HG2	27:T:77:ARG:O	2.05	0.57
29:V:21:ARG:NH2	29:V:87:GLN:O	2.37	0.57
33:Z:52:PHE:CE2	33:Z:53:MET:HB3	2.40	0.57
34:a:79:G:H2'	34:a:80:A:H5''	1.87	0.57
34:a:472:U:H2'	34:a:473:U:C6	2.40	0.57
34:a:517:G:N1	34:a:533:A:OP2	2.36	0.57
34:a:596:A:OP2	34:a:597:G:OP2	2.23	0.57
34:a:704:A:C5	34:a:705:G:C5	2.93	0.57
34:a:754:C:H1'	48:o:68:TYR:CD1	2.40	0.57
34:a:1071:C:H2'	34:a:1072:G:H8	1.70	0.57
34:a:1112:C:O2	36:c:178:ARG:HG2	2.05	0.57
34:a:1190:G:OP1	36:c:3:LYS:HA	2.05	0.57
34:a:1272:G:N2	34:a:1273:C:H1'	2.20	0.57
34:a:1296:C:OP1	46:m:13:HIS:NE2	2.36	0.57
34:a:1476:A:H2'	34:a:1477:U:C6	2.39	0.57
39:f:5:GLU:HB2	39:f:92:THR:HG21	1.87	0.57
45:l:50:LYS:N	45:l:50:LYS:HD2	2.20	0.57
53:t:26:MET:O	53:t:30:PHE:HD2	1.88	0.57
57:x:252:ARG:HG3	57:x:256:LEU:HD21	1.85	0.57
8:A:149:A:H2'	8:A:150:U:C6	2.40	0.56
8:A:220:G:H8	8:A:220:G:O5'	1.88	0.56
8:A:291:G:N1	8:A:349:U:C2	2.71	0.56
8:A:319:G:C6	8:A:320:A:C6	2.93	0.56
8:A:549:G:C6	8:A:550:C:C4	2.93	0.56
8:A:607:U:O4	8:A:619:G:H2'	2.05	0.56
8:A:794:A:H2'	8:A:795:C:C6	2.40	0.56
8:A:867:C:C4	8:A:868:U:C4	2.92	0.56
8:A:1007:C:H4'	17:J:110:PRO:HD3	1.86	0.56
8:A:1021:A:N6	8:A:1142:A:H61	2.03	0.56
8:A:1399:C:H2'	8:A:1400:U:C6	2.40	0.56
8:A:1562:U:H2'	8:A:1563:U:C6	2.39	0.56
8:A:1692:U:H2'	8:A:1694:C:C5	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1799:G:O2'	10:C:181:ARG:NH1	2.37	0.56
8:A:2086:U:H2'	8:A:2087:G:C8	2.40	0.56
8:A:2123:G:O3'	8:A:2124:G:C8	2.58	0.56
8:A:2128:G:C2'	8:A:2173:A:O2'	2.53	0.56
8:A:2282:G:C2	8:A:2425:A:C6	2.93	0.56
8:A:2312:U:O2'	13:F:36:ASN:OD1	2.18	0.56
8:A:2472:G:H2'	8:A:2529:G:N2	2.20	0.56
8:A:2488:G:H2'	8:A:2489:U:C6	2.40	0.56
8:A:2889:C:H2'	8:A:2890:G:C8	2.39	0.56
12:E:147:LEU:HB2	12:E:183:PHE:CD2	2.39	0.56
18:K:2:ILE:HB	18:K:33:ALA:HB3	1.86	0.56
26:S:27:LYS:O	26:S:71:VAL:HG23	2.05	0.56
29:V:64:VAL:HA	29:V:68:LYS:O	2.05	0.56
34:a:34:C:H2'	34:a:35:G:H8	1.70	0.56
34:a:405:U:O4	37:d:1:ALA:N	2.30	0.56
34:a:454:G:N2	34:a:478:A:N1	2.48	0.56
34:a:461:A:C4	34:a:471:U:O4	2.58	0.56
34:a:692:U:O2	34:a:694:A:H5''	2.05	0.56
34:a:749:A:H2'	34:a:750:C:C6	2.40	0.56
34:a:842:U:H5'	34:a:843:U:H4'	1.85	0.56
34:a:920:U:O2'	34:a:1080:A:N6	2.37	0.56
34:a:1107:C:OP1	36:c:171:ARG:CZ	2.53	0.56
34:a:1111:A:N1	36:c:176:THR:HG23	2.19	0.56
34:a:1135:U:O3'	34:a:1136:C:C5	2.58	0.56
34:a:1213:A:C6	34:a:1215:G:H1'	2.40	0.56
34:a:1299:A:C4	34:a:1301:U:C2	2.93	0.56
34:a:1486:G:H2'	34:a:1487:G:C8	2.39	0.56
35:b:70:GLY:O	35:b:92:ASN:HA	2.05	0.56
35:b:206:ILE:O	35:b:210:THR:HG23	2.05	0.56
37:d:25:ARG:HG3	37:d:26:ALA:N	2.19	0.56
57:x:514:TYR:C	57:x:591:ALA:HB1	2.30	0.56
6:5:92:ALA:HA	6:5:96:PHE:CB	2.36	0.56
8:A:522:A:H2'	8:A:523:C:H6	1.69	0.56
8:A:644:A:C6	8:A:645:C:C4	2.92	0.56
8:A:704:G:C2	8:A:726:G:C4	2.92	0.56
8:A:811:U:OP2	19:L:20:GLY:HA2	2.05	0.56
8:A:1131:G:N2	8:A:1132:U:O4	2.38	0.56
8:A:1172:C:C4	8:A:1175:A:OP1	2.58	0.56
8:A:1189:A:H2'	8:A:1190:G:O4'	2.04	0.56
8:A:1282:U:C2	8:A:1286:A:N7	2.73	0.56
8:A:1323:C:C4	8:A:1324:G:N7	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1395:A:C4	8:A:1398:C:C5	2.93	0.56
8:A:1505:A:H2'	8:A:1506:U:O4'	2.05	0.56
8:A:1767:G:O6	8:A:1986:C:N4	2.37	0.56
8:A:1861:G:C2	8:A:1882:U:C2	2.93	0.56
8:A:1951:U:H2'	8:A:1953:A:OP2	2.05	0.56
8:A:1957:C:C2	8:A:1958:C:C5	2.94	0.56
8:A:2397:G:C2	8:A:2420:C:C2	2.93	0.56
8:A:2801:G:C2	8:A:2802:G:C4	2.93	0.56
8:A:2831:G:H2'	8:A:2884:U:OP1	2.05	0.56
9:B:32:U:H2'	9:B:33:G:O4'	2.06	0.56
9:B:47:C:P	22:O:3:LYS:HE3	2.45	0.56
9:B:60:C:H2'	9:B:61:G:C8	2.40	0.56
10:C:42:ARG:HA	10:C:47:ARG:O	2.04	0.56
13:F:39:VAL:O	13:F:41:GLU:N	2.37	0.56
14:G:21:GLN:HE21	14:G:36:LEU:HB2	1.70	0.56
14:G:136:ASP:HB3	14:G:139:VAL:CG1	2.34	0.56
17:J:57:LEU:HD13	17:J:128:ASN:O	2.05	0.56
18:K:69:VAL:O	18:K:76:VAL:HG23	2.05	0.56
28:U:43:LYS:HD2	28:U:60:LYS:NZ	2.20	0.56
34:a:19:A:H2'	34:a:20:U:C6	2.40	0.56
34:a:94:G:N1	34:a:98:A:C2	2.73	0.56
34:a:100:G:H3'	34:a:101:A:H8	1.71	0.56
34:a:112:G:O2'	34:a:354:G:O2'	2.22	0.56
34:a:158:G:C8	34:a:158:G:C3'	2.88	0.56
34:a:205:A:C2	34:a:206:C:H1'	2.39	0.56
34:a:262:A:H2'	34:a:263:A:C8	2.40	0.56
34:a:307:C:C4	34:a:308:C:C5	2.93	0.56
34:a:637:C:H2'	34:a:638:U:C6	2.39	0.56
34:a:833:G:C6	34:a:834:U:C4	2.93	0.56
34:a:1039:G:H2'	34:a:1040:U:H6	1.70	0.56
34:a:1056:U:H4'	36:c:162:ALA:HB2	1.87	0.56
34:a:1137:C:OP2	34:a:1138:G:C6	2.57	0.56
34:a:1155:A:H2'	34:a:1156:G:O4'	2.05	0.56
34:a:1301:U:C6	34:a:1303:C:C5	2.93	0.56
37:d:9:LYS:HG2	37:d:37:PRO:CG	2.35	0.56
40:g:31:VAL:HG12	40:g:32:ASP:HB2	1.87	0.56
41:h:71:VAL:O	41:h:71:VAL:HG13	2.06	0.56
46:m:12:LYS:O	46:m:43:LYS:HA	2.05	0.56
52:s:34:SER:O	52:s:70:LEU:HD12	2.05	0.56
55:v:13:C:N3	55:v:22:G:N1	2.47	0.56
3:2:11:LYS:NZ	8:A:686:U:C4'	2.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:23:HIS:HB2	19:L:61:LEU:CD1	2.35	0.56
8:A:7:G:C1'	17:J:135:GLN:NE2	2.67	0.56
8:A:204:A:H5'	8:A:206:U:O4'	2.06	0.56
8:A:301:G:OP2	28:U:81:ARG:NH1	2.38	0.56
8:A:303:G:C6	8:A:304:U:C4	2.93	0.56
8:A:307:G:O2'	8:A:309:A:N7	2.26	0.56
8:A:315:G:H2'	8:A:316:C:H6	1.69	0.56
8:A:375:G:C4	8:A:376:G:C8	2.93	0.56
8:A:445:C:H2'	8:A:446:G:O4'	2.06	0.56
8:A:483:A:HO2'	28:U:56:GLY:H	1.53	0.56
8:A:673:C:H5''	12:E:49:ARG:HH22	1.68	0.56
8:A:705:A:H2'	8:A:706:A:O4'	2.05	0.56
8:A:768:G:H2'	8:A:769:U:H6	1.70	0.56
8:A:969:G:H2'	8:A:970:U:C6	2.40	0.56
8:A:971:G:C6	8:A:972:A:C2	2.93	0.56
8:A:975:A:H1'	8:A:990:A:C6	2.40	0.56
8:A:991:C:OP2	8:A:1186:G:OP2	2.22	0.56
8:A:1011:G:C2	8:A:1013:C:C2	2.92	0.56
8:A:1051:G:C2	8:A:1052:C:C2	2.93	0.56
8:A:1142:A:C4	8:A:1144:A:C8	2.94	0.56
8:A:1212:G:C2	8:A:1236:G:C4	2.93	0.56
8:A:1483:G:C6	8:A:1484:U:C4	2.94	0.56
8:A:1487:U:H2'	8:A:1488:C:C6	2.40	0.56
8:A:1581:G:H2'	8:A:1582:C:C6	2.39	0.56
8:A:1603:A:C6	8:A:1604:C:C2	2.93	0.56
8:A:1722:A:C4	8:A:1723:G:C8	2.94	0.56
8:A:1726:C:N4	8:A:1735:A:H61	2.03	0.56
8:A:1731:G:C2	8:A:1733:G:C4	2.94	0.56
8:A:1801:A:H5''	8:A:2203:U:O2'	2.04	0.56
8:A:1856:U:H2'	8:A:1857:G:O4'	2.05	0.56
8:A:2024:G:H2'	8:A:2025:C:C6	2.40	0.56
8:A:2065:C:N3	8:A:2445:2MG:N2	2.51	0.56
8:A:2136:G:H2'	8:A:2137:U:O4'	2.04	0.56
8:A:2232:C:H2'	8:A:2233:U:C6	2.40	0.56
8:A:2308:G:O6	8:A:2311:A:N7	2.38	0.56
8:A:2351:G:H2'	8:A:2365:G:H22	1.70	0.56
8:A:2505:G:C2	8:A:2576:G:N7	2.73	0.56
8:A:2516:A:H2'	8:A:2517:C:C6	2.40	0.56
8:A:2549:G:H2'	8:A:2550:G:H8	1.70	0.56
8:A:2550:G:O6	8:A:2559:C:N4	2.38	0.56
8:A:2574:G:C6	8:A:2575:C:C4	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2794:C:C2	8:A:2803:G:C2	2.94	0.56
8:A:2805:C:H2'	8:A:2806:C:C6	2.40	0.56
8:A:2848:G:H8	23:P:94:ALA:HB2	1.70	0.56
8:A:2849:U:O4	23:P:20:ARG:NH1	2.37	0.56
8:A:2851:A:C5	8:A:2852:G:C5	2.93	0.56
9:B:113:C:H1'	22:O:46:GLU:HA	1.87	0.56
11:D:13:ARG:HA	11:D:22:ILE:O	2.06	0.56
12:E:176:ASP:O	12:E:180:LEU:HG	2.05	0.56
14:G:26:LYS:CG	14:G:31:GLU:HG2	2.35	0.56
14:G:163:TYR:HB2	14:G:166:GLU:HB2	1.86	0.56
15:H:8:LYS:HA	15:H:13:GLY:HA3	1.88	0.56
17:J:58:ASN:CG	17:J:61:LYS:HZ1	2.09	0.56
18:K:49:ARG:NH2	34:a:1423:G:OP1	2.35	0.56
20:M:59:ARG:HA	20:M:59:ARG:NE	2.20	0.56
22:O:31:THR:C	22:O:102:ARG:HH12	2.13	0.56
23:P:29:VAL:C	23:P:39:LEU:HD12	2.30	0.56
23:P:45:VAL:O	23:P:60:VAL:HA	2.04	0.56
23:P:95:LYS:C	23:P:96:LEU:HD23	2.30	0.56
25:R:24:LYS:HB2	25:R:92:TRP:HB3	1.87	0.56
28:U:41:VAL:HG22	28:U:60:LYS:O	2.06	0.56
33:Z:19:HIS:O	33:Z:23:LEU:HG	2.04	0.56
34:a:179:A:H61	34:a:196:A:N6	2.02	0.56
34:a:195:A:C5	34:a:196:A:C6	2.93	0.56
34:a:295:C:C2	34:a:303:A:C2	2.93	0.56
34:a:363:A:C8	45:l:29:LYS:HE2	2.40	0.56
34:a:391:G:C6	34:a:392:C:C4	2.93	0.56
34:a:414:A:N7	34:a:430:A:N1	2.53	0.56
34:a:451:A:H1'	34:a:452:A:C2	2.40	0.56
34:a:558:G:O5'	34:a:559:A:H3'	2.05	0.56
34:a:780:A:C2	34:a:803:G:N1	2.74	0.56
34:a:781:A:OP2	34:a:800:G:N2	2.39	0.56
34:a:795:C:O2'	44:k:127:ARG:O	2.21	0.56
34:a:796:C:H4'	44:k:126:ARG:NH1	2.19	0.56
34:a:838:G:C6	34:a:849:G:C4	2.93	0.56
34:a:918:A:H2'	34:a:919:A:O4'	2.06	0.56
34:a:1004:A:C2'	34:a:1005:A:O4'	2.52	0.56
34:a:1175:G:O6	34:a:1182:G:O6	2.24	0.56
34:a:1246:A:C6	34:a:1292:G:O6	2.58	0.56
34:a:1284:C:C4	34:a:1285:A:C2	2.93	0.56
34:a:1360:A:C1'	47:n:58:SER:HG	2.18	0.56
34:a:1401:G:H3'	34:a:1402:4OC:H6	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1402:4OC:H2'	34:a:1403:C:C6	2.40	0.56
34:a:1422:G:C2	34:a:1479:C:C2	2.93	0.56
34:a:1423:G:N1	34:a:1478:U:C2	2.73	0.56
34:a:1430:A:C2	34:a:1471:U:C2	2.93	0.56
35:b:34:ARG:NH2	35:b:39:ILE:HD12	2.20	0.56
37:d:70:GLN:N	37:d:73:ASN:OD1	2.35	0.56
37:d:117:VAL:O	37:d:130:ASN:HA	2.06	0.56
40:g:30:MET:SD	40:g:35:LYS:HD2	2.46	0.56
40:g:74:VAL:HB	40:g:85:GLN:HB3	1.87	0.56
41:h:93:LYS:HE2	41:h:116:ARG:CZ	2.35	0.56
42:i:57:VAL:HG13	42:i:58:GLU:N	2.18	0.56
46:m:54:THR:O	46:m:57:ASP:OD1	2.23	0.56
55:v:52:G:N3	55:v:63:G:C2	2.74	0.56
57:x:318:ALA:HA	57:x:337:VAL:HA	1.86	0.56
57:x:384:ALA:O	57:x:385:ILE:HD13	2.06	0.56
57:x:459:GLY:N	57:x:465:LEU:HD23	2.20	0.56
57:x:571:VAL:HG12	57:x:572:ASP:N	2.20	0.56
8:A:94:A:H2'	8:A:95:A:C8	2.40	0.56
8:A:327:G:C2	8:A:336:C:C2	2.94	0.56
8:A:337:C:H2'	8:A:338:G:O4'	2.06	0.56
8:A:347:A:H2'	8:A:348:A:C8	2.39	0.56
8:A:471:A:C6	8:A:472:A:C6	2.94	0.56
8:A:539:G:N2	8:A:554:U:O2	2.37	0.56
8:A:607:U:C5	8:A:620:G:C4	2.93	0.56
8:A:703:U:H2'	8:A:704:G:O4'	2.06	0.56
8:A:764:A:H5'	10:C:208:GLY:CA	2.35	0.56
8:A:884:U:O2'	8:A:894:U:OP1	2.24	0.56
8:A:1017:G:O6	8:A:1146:C:N4	2.39	0.56
8:A:1294:U:H2'	21:N:23:ASN:ND2	2.21	0.56
8:A:1387:A:C6	8:A:1388:G:C5	2.93	0.56
8:A:1415:U:C4	8:A:1587:G:O6	2.57	0.56
8:A:1421:G:N2	8:A:1578:U:O2	2.38	0.56
8:A:1587:G:H2'	8:A:1588:G:C8	2.40	0.56
8:A:1667:G:N2	8:A:1992:G:OP2	2.38	0.56
8:A:1687:G:H2'	8:A:1688:U:C6	2.41	0.56
8:A:1799:G:C5	10:C:175:LEU:HD13	2.40	0.56
8:A:1906:G:C8	8:A:1929:G:C4	2.94	0.56
8:A:1957:C:H2'	8:A:1958:C:H6	1.71	0.56
8:A:2146:C:H4'	8:A:2147:A:C6	2.41	0.56
8:A:2206:C:H2'	8:A:2207:C:C6	2.41	0.56
8:A:2242:G:C6	8:A:2243:U:C4	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2309:A:H61	13:F:75:GLY:HA2	1.70	0.56
8:A:2444:G:C2	8:A:2445:2MG:C4	2.93	0.56
8:A:2466:C:C4	8:A:2485:G:N1	2.73	0.56
8:A:2530:A:O2'	8:A:2534:A:N6	2.37	0.56
8:A:2590:A:H4'	10:C:237:ARG:NH2	2.21	0.56
8:A:2697:G:C5	8:A:2698:U:C4	2.94	0.56
8:A:2839:G:H2'	8:A:2840:C:H6	1.67	0.56
8:A:2848:G:H1'	8:A:2868:A:H61	1.70	0.56
10:C:2:VAL:HG21	10:C:201:LEU:HB3	1.87	0.56
10:C:239:PHE:O	10:C:241:LYS:HG3	2.04	0.56
12:E:87:ALA:O	12:E:88:ARG:NH2	2.39	0.56
22:O:30:ARG:HH11	22:O:102:ARG:NH1	2.03	0.56
34:a:51:A:C4	34:a:353:A:C6	2.93	0.56
34:a:119:A:N6	34:a:288:A:O4'	2.38	0.56
34:a:159:G:C4	34:a:164:G:O5'	2.59	0.56
34:a:657:U:H2'	34:a:658:C:H6	1.70	0.56
34:a:687:A:C6	34:a:704:A:C8	2.94	0.56
34:a:690:G:H2'	34:a:691:G:C8	2.40	0.56
34:a:878:A:H2'	34:a:879:C:C6	2.41	0.56
34:a:973:G:O4'	43:j:57:VAL:CG1	2.54	0.56
34:a:1320:C:N3	52:s:71:GLY:HA3	2.20	0.56
34:a:1329:A:C6	34:a:1330:U:C4	2.93	0.56
35:b:22:TRP:HB3	35:b:38:HIS:NE2	2.21	0.56
37:d:12:ARG:HB2	37:d:35:GLN:H	1.70	0.56
38:e:43:GLY:O	38:e:72:ASN:HA	2.06	0.56
44:k:33:ILE:O	44:k:41:LEU:N	2.24	0.56
48:o:11:VAL:HG12	48:o:26:VAL:HG21	1.85	0.56
48:o:11:VAL:HA	48:o:26:VAL:HG21	1.87	0.56
55:v:9:G:H4'	55:v:46:A:H4'	1.86	0.56
57:x:331:ASN:O	57:x:385:ILE:HG23	2.05	0.56
7:6:16:CYS:HB3	7:6:20:ASN:HD21	1.71	0.56
8:A:102:U:O4	32:Y:2:LYS:HB3	2.06	0.56
8:A:227:A:C2	8:A:228:C:C5	2.93	0.56
8:A:244:A:H2'	8:A:245:G:O4'	2.05	0.56
8:A:417:C:H6	8:A:417:C:O5'	1.89	0.56
8:A:565:C:P	25:R:80:ARG:H	2.28	0.56
8:A:590:A:H2'	8:A:591:U:C6	2.40	0.56
8:A:647:G:H2'	8:A:648:G:O4'	2.04	0.56
8:A:655:A:O3'	8:A:656:G:H8	1.89	0.56
8:A:738:G:H2'	8:A:739:A:C8	2.41	0.56
8:A:763:G:C2	8:A:765:C:C2	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:901:C:H3'	8:A:902:C:H6	1.70	0.56
8:A:962:G:H2'	8:A:963:U:H6	1.70	0.56
8:A:1081:U:C4	16:I:118:GLY:HA2	2.40	0.56
8:A:1310:G:C6	8:A:1311:G:C2	2.94	0.56
8:A:1341:G:N2	8:A:1398:C:H4'	2.20	0.56
8:A:1349:C:C2	8:A:1350:C:C5	2.93	0.56
8:A:1360:G:C8	8:A:1361:G:C8	2.93	0.56
8:A:1431:A:H2'	8:A:1432:G:O4'	2.06	0.56
8:A:1442:U:H2'	8:A:1443:U:H6	1.71	0.56
8:A:1471:G:N2	8:A:1520:U:O2	2.36	0.56
8:A:1477:A:H2'	8:A:1478:G:O4'	2.05	0.56
8:A:1628:G:H2'	8:A:1629:U:C6	2.41	0.56
8:A:2063:C:O2	8:A:2450:A:N1	2.38	0.56
8:A:2093:G:C5	8:A:2225:A:H2'	2.40	0.56
8:A:2137:U:O4	8:A:2156:G:C4	2.59	0.56
8:A:2312:U:H5'	13:F:84:ILE:CG1	2.36	0.56
8:A:2457:PSU:H2'	8:A:2458:G:O4'	2.04	0.56
8:A:2686:G:H2'	8:A:2687:U:C6	2.40	0.56
8:A:2852:G:H2'	8:A:2853:C:H6	1.68	0.56
8:A:2888:C:C2	8:A:2889:C:C5	2.94	0.56
9:B:37:C:C4	9:B:49:C:O4'	2.59	0.56
10:C:67:LYS:HD3	10:C:150:GLY:HA2	1.87	0.56
11:D:19:GLY:HA2	23:P:78:PRO:HD2	1.86	0.56
12:E:110:SER:O	12:E:114:ARG:HG3	2.06	0.56
12:E:176:ASP:OD1	12:E:179:SER:OG	2.21	0.56
17:J:51:GLY:C	17:J:121:LYS:HZ2	2.13	0.56
18:K:4:GLU:O	18:K:5:GLN:HB2	2.05	0.56
21:N:35:LYS:HG3	21:N:100:CYS:SG	2.45	0.56
26:S:82:MET:HB3	26:S:84:ARG:HH22	1.70	0.56
31:X:26:ARG:CZ	31:X:27:ARG:O	2.54	0.56
34:a:1:A:C8	34:a:2:A:C4	2.94	0.56
34:a:212:G:N7	34:a:213:G:O2'	2.39	0.56
34:a:244:U:C4	34:a:893:C:N3	2.73	0.56
34:a:685:G:C2	34:a:704:A:OP2	2.57	0.56
34:a:715:A:H2'	34:a:716:A:C8	2.41	0.56
34:a:922:G:O5'	38:e:22:LYS:NZ	2.38	0.56
34:a:1033:G:O2'	34:a:1034:G:C8	2.59	0.56
34:a:1102:A:H2'	34:a:1103:C:H6	1.70	0.56
34:a:1397:C:P	38:e:28:ARG:NH2	2.78	0.56
34:a:1460:C:H2'	34:a:1461:G:O4'	2.05	0.56
34:a:1521:C:H2'	34:a:1522:U:H6	1.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:b:191:ASP:O	35:b:193:ASP:N	2.37	0.56
36:c:106:ARG:HD3	36:c:106:ARG:N	2.20	0.56
36:c:155:ARG:O	36:c:158:GLY:N	2.38	0.56
48:o:32:THR:O	48:o:36:ASN:ND2	2.39	0.56
56:w:11:C:H2'	56:w:12:U:C6	2.41	0.56
57:x:31:PHE:CZ	57:x:196:ASP:O	2.58	0.56
57:x:228:ALA:HA	57:x:254:ARG:CZ	2.35	0.56
3:2:23:ALA:O	3:2:28:ARG:NH2	2.38	0.56
4:3:25:HIS:NE2	4:3:47:ALA:HB2	2.21	0.56
8:A:32:C:N3	8:A:474:G:N1	2.54	0.56
8:A:141:G:C8	8:A:142:A:C8	2.93	0.56
8:A:197:A:O4'	8:A:2068:U:C2	2.59	0.56
8:A:271:G:C5	8:A:367:G:N1	2.74	0.56
8:A:551:G:C6	8:A:552:U:C4	2.94	0.56
8:A:555:G:O2'	8:A:556:A:P	2.63	0.56
8:A:919:U:H2'	8:A:920:A:O4'	2.04	0.56
8:A:979:A:H2'	8:A:982:C:H42	1.69	0.56
8:A:1022:G:N2	8:A:1142:A:C2	2.67	0.56
8:A:1037:G:N2	8:A:1119:U:H1'	2.21	0.56
8:A:1256:G:C2	8:A:1257:C:C4	2.93	0.56
8:A:1297:C:H2'	8:A:1298:C:H6	1.69	0.56
8:A:1317:G:H2'	8:A:1318:U:C6	2.40	0.56
8:A:1346:G:H2'	8:A:1347:A:O4'	2.05	0.56
8:A:1364:G:H3'	31:X:1:SER:HA	1.88	0.56
8:A:1577:C:H2'	8:A:1578:U:O4'	2.06	0.56
8:A:1637:A:C6	8:A:1638:C:N4	2.74	0.56
8:A:1779:U:C2'	8:A:1783:A:H62	2.19	0.56
8:A:1817:G:H3'	10:C:155:ARG:HH21	1.70	0.56
8:A:2192:U:H2'	8:A:2193:G:O4'	2.05	0.56
8:A:2286:G:H4'	8:A:2287:A:O4'	2.06	0.56
8:A:2307:G:O4'	8:A:2308:G:C8	2.59	0.56
8:A:2329:U:H2'	8:A:2330:G:C8	2.41	0.56
8:A:2378:A:C5	8:A:2379:G:H1'	2.41	0.56
8:A:2553:G:C2	8:A:2554:U:O2	2.59	0.56
8:A:2572:A:N7	11:D:150:GLN:CB	2.69	0.56
15:H:42:LYS:HG3	15:H:43:ASN:N	2.21	0.56
18:K:22:ILE:HG12	18:K:40:LYS:O	2.05	0.56
23:P:28:LYS:HB3	23:P:39:LEU:HG	1.88	0.56
27:T:14:PRO:HA	27:T:32:LEU:HD23	1.87	0.56
34:a:390:U:H2'	34:a:391:G:O4'	2.05	0.56
34:a:853:C:H2'	34:a:854:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1087:G:H2'	34:a:1088:G:C8	2.39	0.56
34:a:1125:U:O2'	43:j:7:ARG:NH1	2.36	0.56
34:a:1194:U:H2'	34:a:1195:C:C6	2.40	0.56
34:a:1523:G:H2'	34:a:1524:C:C6	2.40	0.56
35:b:8:MET:N	35:b:10:LYS:HZ1	2.04	0.56
35:b:168:GLU:O	35:b:172:ILE:HG13	2.06	0.56
35:b:183:PHE:N	35:b:183:PHE:CD1	2.73	0.56
37:d:106:PHE:CD1	37:d:158:LEU:HD11	2.41	0.56
38:e:12:GLU:N	38:e:12:GLU:OE1	2.39	0.56
40:g:107:ALA:HB1	40:g:119:LEU:HA	1.88	0.56
52:s:39:ILE:HA	52:s:43:MET:CE	2.35	0.56
54:u:40:PRO:HA	54:u:43:GLU:HG2	1.88	0.56
57:x:333:THR:HG22	57:x:384:ALA:O	2.05	0.56
57:x:518:VAL:CG2	57:x:579:PHE:H	2.19	0.56
1:0:16:ARG:HH21	8:A:1266:G:P	2.28	0.56
8:A:38:A:C6	8:A:39:G:C5	2.94	0.56
8:A:287:G:C6	8:A:354:A:N1	2.74	0.56
8:A:415:A:N1	8:A:2409:G:C6	2.73	0.56
8:A:458:G:O2'	8:A:459:U:P	2.63	0.56
8:A:471:A:H2'	8:A:472:A:O4'	2.05	0.56
8:A:595:C:N3	8:A:663:G:C6	2.74	0.56
8:A:753:A:H2'	8:A:754:U:H6	1.67	0.56
8:A:754:U:H2'	8:A:755:U:H6	1.70	0.56
8:A:781:A:H2	8:A:1776:G:N3	2.03	0.56
8:A:881:G:C2	8:A:882:G:C4	2.93	0.56
8:A:1013:C:H2'	8:A:1014:A:H8	1.70	0.56
8:A:1056:G:H2'	8:A:1087:G:H22	1.71	0.56
8:A:1141:U:H2'	17:J:65:THR:CG2	2.32	0.56
8:A:1220:G:H2'	8:A:1221:C:C6	2.41	0.56
8:A:1278:C:H2'	8:A:1279:G:C8	2.39	0.56
8:A:1358:G:H1'	8:A:1373:A:H61	1.71	0.56
8:A:1410:G:C4	8:A:1593:A:C2	2.94	0.56
8:A:1484:U:H2'	8:A:1485:U:H6	1.69	0.56
8:A:1532:A:N6	8:A:1540:G:C6	2.74	0.56
8:A:1569:A:H2'	8:A:1570:A:C8	2.40	0.56
8:A:1642:G:C2	8:A:1643:G:C4	2.93	0.56
8:A:1686:C:N4	8:A:1703:G:O6	2.39	0.56
8:A:1710:G:C6	8:A:1749:A:C6	2.94	0.56
8:A:1711:A:N1	8:A:1748:C:N3	2.54	0.56
8:A:1716:U:OP2	8:A:1743:G:N1	2.37	0.56
8:A:1831:G:C6	8:A:1975:G:N1	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1863:G:H2'	8:A:1864:U:C6	2.40	0.56
8:A:1916:A:H2'	8:A:1917:PSU:O4'	2.05	0.56
8:A:1945:G:C4	8:A:1946:U:C5	2.94	0.56
8:A:2108:A:H1'	8:A:2181:U:H1'	1.88	0.56
8:A:2250:G:C8	20:M:82:MET:HB2	2.40	0.56
8:A:2410:G:H2'	8:A:2411:A:O4'	2.06	0.56
8:A:2509:G:N1	8:A:2580:PSU:C2	2.73	0.56
8:A:2512:C:H5'	11:D:127:PHE:CE2	2.41	0.56
8:A:2625:G:H2'	8:A:2626:C:O4'	2.05	0.56
8:A:2722:G:H2'	8:A:2723:C:C6	2.41	0.56
8:A:2758:A:C2	8:A:2759:G:H1'	2.41	0.56
8:A:2788:C:C1'	8:A:2810:A:H1'	2.36	0.56
8:A:2790:U:H5'	8:A:2791:G:OP1	2.05	0.56
8:A:2847:U:O2	8:A:2869:G:N2	2.36	0.56
13:F:59:ILE:HG12	13:F:98:PHE:HE2	1.71	0.56
15:H:103:VAL:HG13	15:H:104:THR:N	2.21	0.56
25:R:28:ALA:O	25:R:63:VAL:HG11	2.06	0.56
26:S:2:GLU:OE2	26:S:106:VAL:HG11	2.06	0.56
26:S:13:SER:O	26:S:17:VAL:HG23	2.05	0.56
27:T:63:VAL:O	27:T:80:TRP:N	2.38	0.56
30:W:25:GLU:O	30:W:62:LYS:HA	2.06	0.56
30:W:61:GLY:HA3	30:W:80:ALA:HA	1.87	0.56
32:Y:1:MET:HE3	32:Y:9:LYS:HE3	1.87	0.56
34:a:2:A:C6	34:a:3:A:N1	2.73	0.56
34:a:158:G:O6	34:a:163:C:C6	2.58	0.56
34:a:204:G:H8	34:a:205:A:O4'	1.89	0.56
34:a:431:A:C6	34:a:432:A:C4	2.94	0.56
34:a:464:U:N3	34:a:468:A:C8	2.74	0.56
34:a:520:A:N6	34:a:529:G:C2	2.62	0.56
34:a:562:U:H1'	45:l:11:ARG:HD3	1.88	0.56
34:a:602:A:N1	34:a:637:C:N3	2.53	0.56
34:a:635:A:O2'	34:a:636:U:OP2	2.19	0.56
34:a:682:G:H2'	34:a:683:G:H8	1.70	0.56
34:a:750:C:H5'	48:o:19:ASN:ND2	2.21	0.56
34:a:1017:U:H2'	34:a:1018:G:H8	1.70	0.56
34:a:1080:A:P	38:e:51:LYS:HZ2	2.29	0.56
34:a:1101:A:H4'	34:a:1102:A:H5'	1.86	0.56
34:a:1151:A:H5'	43:j:43:PRO:HA	1.88	0.56
34:a:1157:A:C6	34:a:1177:G:N2	2.74	0.56
34:a:1162:C:H2'	34:a:1163:A:C8	2.41	0.56
34:a:1360:A:C4	34:a:1361:G:C8	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1411:C:H2'	34:a:1412:C:H6	1.71	0.56
35:b:46:VAL:O	35:b:49:PHE:HB3	2.05	0.56
46:m:9:PRO:O	46:m:44:ILE:HG13	2.05	0.56
55:v:2:G:C6	55:v:3:C:C4	2.94	0.56
55:v:62:C:H2'	55:v:63:G:C8	2.41	0.56
57:x:92:VAL:HB	57:x:124:THR:HG21	1.88	0.56
57:x:190:ILE:HA	57:x:203:TYR:HA	1.87	0.56
57:x:256:LEU:HD22	57:x:286:PRO:CA	2.36	0.56
57:x:287:SER:HB2	57:x:289:VAL:HG22	1.88	0.56
57:x:314:GLU:HB2	57:x:339:SER:HB2	1.87	0.56
2:1:5:ARG:NH1	8:A:2285:C:O5'	2.39	0.56
7:6:1:MET:HA	9:B:40:U:C4	2.40	0.56
8:A:30:G:C5	8:A:31:C:C4	2.94	0.56
8:A:138:U:C2'	8:A:141:G:O6	2.54	0.56
8:A:153:U:OP1	31:X:76:LYS:NZ	2.24	0.56
8:A:181:A:H1'	8:A:435:C:H5'	1.88	0.56
8:A:318:C:O2	8:A:334:C:O2	2.24	0.56
8:A:452:G:C6	8:A:453:A:C6	2.94	0.56
8:A:488:G:H1'	8:A:492:A:N6	2.21	0.56
8:A:601:C:H2'	8:A:602:A:O4'	2.05	0.56
8:A:677:A:N6	8:A:802:A:C8	2.74	0.56
8:A:785:G:H2'	8:A:786:C:C6	2.41	0.56
8:A:1097:U:C5	8:A:1098:A:C5	2.94	0.56
8:A:1203:U:OP2	8:A:1204:A:O2'	2.21	0.56
8:A:1289:C:H2'	8:A:1290:C:H6	1.70	0.56
8:A:1315:C:N3	8:A:1338:G:C2	2.74	0.56
8:A:1470:A:H3'	8:A:1471:G:H8	1.71	0.56
8:A:1869:G:C2	8:A:1871:A:OP2	2.59	0.56
8:A:1952:A:H2'	8:A:1953:A:C8	2.40	0.56
8:A:2078:C:H2'	8:A:2079:U:C6	2.41	0.56
8:A:2141:G:H2'	8:A:2142:A:C8	2.41	0.56
8:A:2260:C:C2	8:A:2261:C:C5	2.93	0.56
8:A:2323:G:H2'	8:A:2324:U:C6	2.41	0.56
8:A:2345:G:C5'	8:A:2346:A:H5'	2.36	0.56
8:A:2416:C:H2'	8:A:2417:C:H6	1.71	0.56
8:A:2473:U:O4'	57:x:636:ARG:HG2	2.06	0.56
8:A:2657:A:H61	8:A:2664:G:C2'	2.18	0.56
8:A:2732:G:H5'	11:D:208:LYS:HZ3	1.70	0.56
12:E:149:ILE:HD11	12:E:186:VAL:HG11	1.88	0.56
18:K:113:MET:O	18:K:116:ILE:HG22	2.06	0.56
21:N:79:LEU:O	21:N:80:PHE:HB2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:42:LYS:HG2	28:U:59:GLU:OE1	2.06	0.56
31:X:1:SER:O	31:X:49:ARG:NH1	2.39	0.56
34:a:76:G:N2	34:a:95:C:C4	2.74	0.56
34:a:343:U:C2'	34:a:346:G:O6	2.53	0.56
34:a:680:C:N4	34:a:711:G:O6	2.39	0.56
34:a:842:U:O2'	34:a:846:G:OP1	2.23	0.56
34:a:852:G:C6	34:a:853:C:C4	2.94	0.56
34:a:923:A:O4'	34:a:1398:A:C2	2.58	0.56
34:a:1042:A:H2'	34:a:1043:G:C8	2.41	0.56
34:a:1051:C:N3	34:a:1207:2MG:N2	2.53	0.56
34:a:1113:C:C2	34:a:1114:C:C5	2.94	0.56
34:a:1117:A:C2	34:a:1184:G:C2	2.94	0.56
34:a:1131:G:H2'	34:a:1132:C:C5	2.41	0.56
34:a:1240:U:O4	40:g:108:ARG:HG2	2.05	0.56
34:a:1399:C:C4	34:a:1401:G:C2	2.94	0.56
36:c:154:GLY:C	36:c:162:ALA:HB1	2.29	0.56
41:h:46:GLU:HG2	41:h:63:LYS:HA	1.88	0.56
43:j:5:ARG:HB2	43:j:77:VAL:HG13	1.87	0.56
43:j:54:SER:O	47:n:81:ARG:NH1	2.36	0.56
55:v:2:G:C6	55:v:72:A:N1	2.74	0.56
1:0:4:GLN:HG2	8:A:2054:A:C2	2.41	0.56
3:2:26:ASN:O	3:2:30:VAL:HG23	2.05	0.56
5:4:9:LYS:HG2	5:4:14:CYS:HB2	1.88	0.56
8:A:141:G:H4'	8:A:142:A:OP1	2.06	0.56
8:A:321:U:O3'	12:E:162:ARG:NH1	2.33	0.56
8:A:359:G:H2'	8:A:360:U:O4'	2.06	0.56
8:A:413:C:H2'	8:A:414:C:C6	2.40	0.56
8:A:463:G:N1	8:A:466:A:OP2	2.39	0.56
8:A:481:G:OP1	8:A:481:G:H4'	2.05	0.56
8:A:528:A:H3'	17:J:116:ARG:HH22	1.71	0.56
8:A:613:A:O2'	8:A:614:A:H5''	2.06	0.56
8:A:707:G:N2	8:A:724:U:O2	2.39	0.56
8:A:743:A:H2'	8:A:744:U:C6	2.41	0.56
8:A:796:C:H5''	12:E:57:LYS:NZ	2.21	0.56
8:A:839:U:H2'	8:A:840:C:H6	1.71	0.56
8:A:893:C:H1'	8:A:894:U:H2'	1.86	0.56
8:A:910:A:C5	20:M:13:HIS:CD2	2.94	0.56
8:A:1005:C:O4'	8:A:1012:U:C2	2.59	0.56
8:A:1070:A:N7	8:A:1095:A:O2'	2.30	0.56
8:A:1197:G:C2	8:A:1250:G:C6	2.93	0.56
8:A:1674:G:N2	8:A:1991:U:O2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1717:A:H2'	8:A:1718:G:O4'	2.05	0.56
8:A:1831:G:H2'	8:A:1832:C:C6	2.41	0.56
8:A:1930:G:O2'	8:A:1968:G:O6	2.18	0.56
8:A:1987:A:H2'	8:A:1988:G:H8	1.71	0.56
8:A:2155:U:O2	8:A:2157:G:C8	2.59	0.56
8:A:2192:U:O2'	8:A:2193:G:P	2.64	0.56
8:A:2230:G:C6	8:A:2231:U:O4	2.59	0.56
8:A:2399:G:C6	8:A:2418:A:N6	2.74	0.56
8:A:2688:G:H1	8:A:2720:U:P	2.26	0.56
8:A:2720:U:O4'	8:A:2872:A:N6	2.38	0.56
8:A:2839:G:C2	8:A:2840:C:C2	2.93	0.56
9:B:16:G:C5	9:B:69:G:C2	2.94	0.56
10:C:207:ALA:O	10:C:211:ARG:HG2	2.04	0.56
12:E:130:LYS:HB2	12:E:133:LEU:HD12	1.86	0.56
16:I:61:TYR:N	16:I:65:SER:O	2.31	0.56
16:I:79:LEU:HA	16:I:83:ALA:H	1.71	0.56
19:L:79:LEU:HB2	19:L:114:GLY:C	2.31	0.56
29:V:20:LEU:HG	29:V:25:LYS:HB2	1.88	0.56
30:W:49:CYS:SG	30:W:53:HIS:HA	2.46	0.56
33:Z:50:VAL:HA	33:Z:52:PHE:CE1	2.41	0.56
34:a:116:A:OP2	34:a:289:G:OP2	2.24	0.56
34:a:159:G:OP2	34:a:160:A:H2'	2.05	0.56
34:a:203:G:H22	34:a:215:C:H4'	1.71	0.56
34:a:453:G:OP1	49:p:76:LYS:NZ	2.25	0.56
34:a:604:G:H2'	34:a:605:U:O4'	2.05	0.56
34:a:628:G:C2	34:a:629:A:C4	2.93	0.56
34:a:748:G:N1	34:a:749:A:C5	2.74	0.56
34:a:773:G:C6	34:a:807:A:N6	2.74	0.56
34:a:864:A:H2'	34:a:865:A:C8	2.41	0.56
34:a:978:A:C5	34:a:1318:A:N6	2.73	0.56
34:a:1167:A:H2'	34:a:1169:A:N7	2.21	0.56
34:a:1237:C:C4	34:a:1336:C:N3	2.74	0.56
34:a:1370:G:C2	34:a:1371:G:C8	2.93	0.56
34:a:1405:G:H1'	34:a:1519:MA6:C1'	2.36	0.56
38:e:11:GLN:OE1	38:e:39:GLY:O	2.24	0.56
40:g:16:LYS:HG2	42:i:42:THR:HG23	1.88	0.56
42:i:83:THR:O	42:i:87:MET:HE2	2.05	0.56
44:k:62:ALA:HB2	44:k:91:GLY:HA3	1.88	0.56
45:l:6:LEU:HB3	50:q:33:TYR:CZ	2.41	0.56
47:n:5:MET:HG2	47:n:63:ARG:NH2	2.21	0.56
50:q:13:SER:HA	50:q:54:ILE:HD13	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:q:26:ARG:HG3	50:q:39:ARG:HB2	1.88	0.56
54:u:40:PRO:HB2	54:u:44:ARG:NH1	2.21	0.56
57:x:216:GLU:HA	57:x:219:GLN:HG2	1.87	0.56
4:3:12:ARG:NH2	8:A:250:G:OP2	2.37	0.56
8:A:51:G:N2	8:A:118:A:C8	2.73	0.56
8:A:189:G:N2	8:A:206:U:C5	2.74	0.56
8:A:266:G:C6	8:A:267:C:C4	2.94	0.56
8:A:370:G:H2'	8:A:423:A:N7	2.19	0.56
8:A:594:U:H2'	8:A:595:C:H6	1.69	0.56
8:A:609:A:H2'	8:A:610:C:O4'	2.05	0.56
8:A:1014:A:H2'	8:A:1015:U:H6	1.71	0.56
8:A:1018:U:H2'	8:A:1019:U:C6	2.41	0.56
8:A:1093:G:C5	8:A:1098:A:N6	2.74	0.56
8:A:1266:G:N2	8:A:2012:G:H2'	2.20	0.56
8:A:1319:C:O2'	8:A:1320:C:H5'	2.05	0.56
8:A:1445:G:H2'	8:A:1446:C:H6	1.71	0.56
8:A:1492:G:C2	8:A:1499:C:C2	2.93	0.56
8:A:1655:A:C6	8:A:1656:C:C2	2.94	0.56
8:A:1779:U:O2	8:A:1783:A:C6	2.58	0.56
8:A:1785:A:C2	8:A:1787:A:H1'	2.41	0.56
8:A:1992:G:N2	8:A:1996:C:O2'	2.38	0.56
8:A:2063:C:C4	8:A:2064:C:C4	2.93	0.56
8:A:2107:G:C5	8:A:2182:U:O2	2.59	0.56
8:A:2142:A:C2	8:A:2150:C:N3	2.74	0.56
8:A:2168:G:H8	8:A:2169:A:H5''	1.69	0.56
8:A:2175:C:C4	8:A:2176:A:N7	2.74	0.56
8:A:2216:G:H2'	8:A:2217:G:C8	2.40	0.56
8:A:2404:U:H2'	8:A:2405:G:O4'	2.06	0.56
8:A:2650:U:H2'	8:A:2651:C:H6	1.69	0.56
8:A:2675:A:H2'	8:A:2676:C:C6	2.41	0.56
8:A:2683:C:C4	8:A:2684:U:C4	2.94	0.56
9:B:13:G:HO2'	9:B:15:A:P	2.29	0.56
9:B:33:G:H2'	9:B:34:A:H8	1.71	0.56
9:B:94:A:H2'	9:B:95:U:O4'	2.05	0.56
10:C:180:MET:HB2	10:C:267:VAL:HB	1.87	0.56
11:D:5:VAL:HA	11:D:201:LEU:O	2.06	0.56
12:E:190:ALA:O	12:E:194:LYS:HG2	2.05	0.56
13:F:115:GLY:O	13:F:177:ARG:CZ	2.54	0.56
29:V:34:LYS:HD2	29:V:34:LYS:C	2.31	0.56
34:a:3:A:O4'	34:a:613:C:O4'	2.24	0.56
34:a:87:C:H6	34:a:87:C:O5'	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:144:G:C6	34:a:145:G:C4	2.94	0.56
34:a:144:G:O6	34:a:178:C:H5	1.89	0.56
34:a:177:G:C2	34:a:178:C:C5	2.94	0.56
34:a:413:G:O3'	34:a:428:G:N2	2.27	0.56
34:a:1233:G:H2'	34:a:1234:C:H6	1.70	0.56
34:a:1237:C:H3'	34:a:1238:A:H5'	1.88	0.56
34:a:1317:C:H4'	47:n:48:LEU:HD11	1.89	0.56
34:a:1355:G:H2'	34:a:1356:G:H8	1.71	0.56
34:a:1385:G:C2	34:a:1386:G:C4	2.94	0.56
36:c:11:LEU:O	36:c:15:LYS:O	2.24	0.56
44:k:62:ALA:HB1	44:k:95:THR:CG2	2.36	0.56
46:m:55:LEU:O	46:m:59:VAL:HG13	2.05	0.56
47:n:65:ARG:H	47:n:79:LEU:HD23	1.71	0.56
56:w:41:C:H2'	56:w:42:C:H6	1.70	0.56
57:x:514:TYR:O	57:x:587:SER:HA	2.05	0.56
57:x:549:ILE:HB	57:x:550:PRO:HD3	1.88	0.56
2:1:8:ILE:HG22	2:1:26:LYS:HZ1	1.71	0.55
5:4:6:SER:HB2	5:4:8:LYS:NZ	2.19	0.55
7:6:30:HIS:ND1	7:6:31:ASP:O	2.32	0.55
8:A:15:G:H2'	8:A:16:C:H6	1.71	0.55
8:A:191:A:H2'	8:A:192:C:C6	2.41	0.55
8:A:477:A:H2'	8:A:478:A:C8	2.41	0.55
8:A:628:G:C6	8:A:636:G:C2	2.94	0.55
8:A:630:G:N1	8:A:633:A:OP2	2.39	0.55
8:A:706:A:C2	8:A:707:G:H1'	2.41	0.55
8:A:759:G:C2	8:A:760:G:C4	2.94	0.55
8:A:766:U:H2'	8:A:767:U:H6	1.70	0.55
8:A:811:U:O2'	19:L:21:ARG:HD2	2.07	0.55
8:A:859:G:O2'	8:A:916:G:C6	2.45	0.55
8:A:985:C:C2	8:A:986:C:C5	2.94	0.55
8:A:1040:A:C6	8:A:1116:G:C6	2.94	0.55
8:A:1040:A:N6	8:A:1115:G:H1	2.03	0.55
8:A:1422:G:H4'	8:A:1493:C:OP2	2.05	0.55
8:A:1425:G:C6	8:A:1426:G:C2	2.94	0.55
8:A:1426:G:H2'	8:A:1427:A:C8	2.41	0.55
8:A:1459:G:C2	8:A:1461:C:C2	2.94	0.55
8:A:1506:U:C2	8:A:1507:C:C5	2.94	0.55
8:A:1515:A:H3'	8:A:1516:G:H8	1.70	0.55
8:A:1582:C:C4	8:A:1583:A:C5	2.94	0.55
8:A:1711:A:OP1	8:A:1714:U:H4'	2.05	0.55
8:A:1862:G:H1	8:A:1880:U:H3	1.53	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1906:G:C6	8:A:1925:C:N3	2.74	0.55
8:A:2043:C:C4	8:A:2777:G:C4	2.94	0.55
8:A:2127:G:H2'	8:A:2128:G:C8	2.41	0.55
8:A:2315:G:O2'	13:F:124:ARG:HD2	2.06	0.55
8:A:2447:G:C4	8:A:2501:C:C5	2.94	0.55
8:A:2595:G:N1	8:A:2599:G:C6	2.74	0.55
8:A:2626:C:C2	8:A:2627:G:C8	2.95	0.55
8:A:2642:G:H4'	17:J:80:HIS:CE1	2.41	0.55
8:A:2845:U:H2'	8:A:2846:G:C8	2.41	0.55
9:B:52:A:N6	22:O:64:TYR:OH	2.32	0.55
9:B:57:A:C4	13:F:25:MET:HB3	2.41	0.55
10:C:79:ARG:O	10:C:80:LEU:HD22	2.05	0.55
11:D:110:THR:O	11:D:202:ILE:HD12	2.06	0.55
12:E:28:VAL:HG13	12:E:108:ILE:HD11	1.87	0.55
13:F:69:ALA:N	13:F:82:TYR:O	2.33	0.55
15:H:2:GLN:NE2	15:H:18:GLN:O	2.39	0.55
15:H:133:GLN:HG2	15:H:138:VAL:HG23	1.87	0.55
21:N:13:ASN:O	21:N:17:ARG:HB3	2.05	0.55
26:S:92:ARG:HG2	26:S:93:ALA:N	2.22	0.55
28:U:10:VAL:O	28:U:21:ARG:HG3	2.05	0.55
34:a:144:G:C8	34:a:179:A:H1'	2.41	0.55
34:a:152:A:N7	34:a:170:U:O4	2.39	0.55
34:a:231:U:O2'	34:a:232:G:H5'	2.07	0.55
34:a:401:C:H2'	34:a:402:G:C8	2.41	0.55
34:a:406:G:H21	37:d:115:GLN:HE22	1.54	0.55
34:a:537:G:H5''	45:l:109:ARG:NH1	2.20	0.55
34:a:543:U:OP1	37:d:13:ARG:HD3	2.05	0.55
34:a:562:U:C5	34:a:884:U:C2	2.94	0.55
34:a:613:C:H2'	34:a:614:C:C6	2.41	0.55
34:a:687:A:N1	34:a:704:A:C8	2.75	0.55
34:a:812:G:OP1	34:a:902:G:N2	2.39	0.55
34:a:842:U:O5'	34:a:846:G:C6	2.58	0.55
34:a:886:G:H2'	34:a:887:G:O4'	2.04	0.55
34:a:954:G:H2'	34:a:955:U:C6	2.41	0.55
34:a:1004:A:OP1	34:a:1025:U:H1'	2.06	0.55
34:a:1292:G:C6	34:a:1293:C:N4	2.74	0.55
34:a:1330:U:H4'	46:m:22:TYR:CD2	2.41	0.55
34:a:1343:G:H2'	34:a:1344:C:C6	2.41	0.55
34:a:1411:C:H2'	34:a:1412:C:C6	2.41	0.55
34:a:1417:G:N2	34:a:1482:G:H2'	2.20	0.55
34:a:1423:G:C6	34:a:1424:U:C4	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:b:95:TRP:NE1	35:b:174:GLU:OE1	2.25	0.55
37:d:146:GLU:OE1	37:d:149:LYS:HD3	2.05	0.55
41:h:40:LYS:HE2	41:h:47:ASP:HA	1.87	0.55
41:h:40:LYS:HE3	41:h:47:ASP:HA	1.88	0.55
50:q:14:ASP:HB3	50:q:20:ILE:HG22	1.87	0.55
57:x:418:ALA:HB2	57:x:485:PRO:HA	1.88	0.55
57:x:421:PRO:HG3	57:x:427:GLN:N	2.20	0.55
57:x:587:SER:HB2	57:x:592:PHE:HE1	1.70	0.55
6:5:33:VAL:CA	8:A:1055:G:H4'	2.35	0.55
7:6:9:TYR:OH	13:F:101:ARG:NH1	2.34	0.55
8:A:83:A:HO2'	8:A:103:A:N6	2.00	0.55
8:A:291:G:C5	8:A:350:G:C6	2.94	0.55
8:A:337:C:OP1	28:U:3:LYS:HE3	2.07	0.55
8:A:377:G:C2	8:A:398:C:C2	2.94	0.55
8:A:481:G:H5'	28:U:43:LYS:NZ	2.20	0.55
8:A:489:G:C6	8:A:491:G:C2	2.94	0.55
8:A:533:G:H2'	8:A:534:U:C6	2.41	0.55
8:A:587:C:N3	19:L:33:ARG:NE	2.52	0.55
8:A:809:G:H2'	8:A:810:U:C6	2.41	0.55
8:A:818:G:H3'	8:A:1187:G:H22	1.71	0.55
8:A:906:U:O2'	20:M:66:ARG:NE	2.35	0.55
8:A:947:A:C6	8:A:971:G:C6	2.95	0.55
8:A:955:PSU:P	20:M:86:LYS:HZ3	2.30	0.55
8:A:1066:U:C4	16:I:86:LYS:CB	2.88	0.55
8:A:1071:G:C2	8:A:1089:A:N6	2.72	0.55
8:A:1165:A:C6	8:A:1185:G:C6	2.94	0.55
8:A:1389:G:C6	8:A:1390:U:C4	2.94	0.55
8:A:1406:U:C2	8:A:1407:G:C8	2.95	0.55
8:A:1487:U:H2'	8:A:1488:C:H6	1.71	0.55
8:A:1684:G:C6	8:A:1705:A:C6	2.94	0.55
8:A:2126:A:N3	8:A:2172:U:OP1	2.40	0.55
8:A:2130:U:N3	8:A:2158:A:H1'	2.21	0.55
8:A:2570:G:H2'	8:A:2571:U:O4'	2.06	0.55
8:A:2596:U:C4	8:A:2597:G:C6	2.94	0.55
8:A:2840:C:C2	8:A:2841:C:C5	2.95	0.55
9:B:7:G:N1	9:B:114:C:N3	2.55	0.55
9:B:45:A:O4'	13:F:91:ARG:CZ	2.54	0.55
14:G:27:GLY:HA3	14:G:78:VAL:HG23	1.88	0.55
15:H:9:VAL:HG23	15:H:12:LEU:H	1.70	0.55
28:U:85:ARG:O	28:U:92:VAL:HG22	2.05	0.55
34:a:81:A:N6	34:a:90:C:C4	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:235:C:H2'	34:a:236:A:C8	2.41	0.55
34:a:429:U:H3'	37:d:8:LEU:HD12	1.88	0.55
34:a:442:G:C6	34:a:443:C:C5	2.94	0.55
34:a:568:G:N1	34:a:883:C:C4	2.74	0.55
34:a:618:C:H5''	34:a:620:C:OP1	2.06	0.55
34:a:666:G:N2	48:o:51:SER:OG	2.36	0.55
34:a:838:G:C4	34:a:849:G:C2	2.93	0.55
34:a:1061:G:C5	34:a:1062:U:C4	2.95	0.55
34:a:1182:G:O2'	34:a:1183:U:H5''	2.06	0.55
34:a:1348:U:OP1	42:i:111:GLU:N	2.32	0.55
34:a:1405:G:H1'	34:a:1519:MA6:H1'	1.88	0.55
34:a:1461:G:C6	34:a:1462:C:C4	2.95	0.55
35:b:95:TRP:CH2	35:b:100:LEU:HD21	2.41	0.55
35:b:128:LEU:HD13	35:b:132:GLU:HB2	1.88	0.55
36:c:28:PHE:O	36:c:32:LEU:HG	2.06	0.55
37:d:160:LEU:HD12	37:d:163:GLN:HB3	1.88	0.55
40:g:71:THR:HA	40:g:95:ARG:HH12	1.71	0.55
46:m:2:ARG:HA	46:m:6:ILE:O	2.06	0.55
46:m:84:CYS:O	46:m:88:LEU:HG	2.05	0.55
57:x:184:LEU:HB3	57:x:218:HIS:HB2	1.89	0.55
57:x:298:LEU:O	57:x:404:ILE:HD13	2.06	0.55
57:x:531:LYS:HE2	57:x:533:TYR:C	2.31	0.55
57:x:579:PHE:CZ	57:x:580:GLY:O	2.60	0.55
57:x:692:ASN:O	57:x:695:GLN:HB2	2.05	0.55
8:A:335:C:OP2	28:U:81:ARG:NE	2.39	0.55
8:A:391:A:H1'	8:A:411:G:C1'	2.37	0.55
8:A:537:G:H22	8:A:555:G:H2'	1.72	0.55
8:A:582:A:C6	8:A:1259:G:C6	2.94	0.55
8:A:696:G:C2	8:A:767:U:C2	2.94	0.55
8:A:742:A:H2'	8:A:743:A:H8	1.71	0.55
8:A:1372:U:H2'	8:A:1373:A:C8	2.41	0.55
8:A:1469:A:C4	8:A:1470:A:C8	2.94	0.55
8:A:1478:G:C2	8:A:1513:U:O2	2.60	0.55
8:A:1799:G:H21	10:C:153:LEU:HD23	1.71	0.55
8:A:2250:G:P	20:M:84:LYS:HZ2	2.29	0.55
8:A:2700:A:H2	21:N:71:ARG:NH1	2.05	0.55
8:A:2729:G:H2'	8:A:2730:C:H6	1.70	0.55
8:A:2842:G:H2'	8:A:2843:G:O4'	2.06	0.55
8:A:2843:G:H2'	8:A:2844:G:O4'	2.05	0.55
10:C:159:THR:O	10:C:194:VAL:HG23	2.07	0.55
10:C:268:ARG:HG2	10:C:269:ARG:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:96:ARG:CZ	17:J:99:ARG:HD3	2.37	0.55
21:N:57:THR:O	21:N:57:THR:HG23	2.06	0.55
23:P:13:LYS:CD	23:P:76:HIS:HA	2.36	0.55
24:Q:60:TRP:HA	24:Q:95:ALA:HB2	1.88	0.55
32:Y:18:LEU:HD13	32:Y:57:LEU:HD11	1.89	0.55
34:a:10:A:O2'	34:a:507:C:O2'	2.03	0.55
34:a:98:A:H2'	34:a:99:C:C6	2.42	0.55
34:a:150:U:O4	34:a:170:U:O5'	2.25	0.55
34:a:195:A:O2'	34:a:196:A:O4'	2.08	0.55
34:a:211:G:H2'	34:a:212:G:O5'	2.06	0.55
34:a:316:C:C5	34:a:351:G:C4	2.94	0.55
34:a:430:A:H2'	34:a:431:A:O4'	2.06	0.55
34:a:455:G:C2	34:a:478:A:N1	2.73	0.55
34:a:459:A:N1	34:a:474:G:C6	2.74	0.55
34:a:953:G:C6	34:a:1229:A:N6	2.75	0.55
34:a:956:U:H2'	34:a:957:U:O4'	2.06	0.55
34:a:1115:U:H3	34:a:1185:G:H1	1.54	0.55
34:a:1221:G:N1	34:a:1222:G:N2	2.54	0.55
34:a:1231:G:C6	34:a:1232:U:C4	2.94	0.55
34:a:1354:U:H2'	34:a:1355:G:C8	2.41	0.55
34:a:1363:A:C5	34:a:1365:G:N1	2.75	0.55
34:a:1488:G:H2'	34:a:1489:G:C8	2.41	0.55
43:j:10:LEU:C	43:j:18:ILE:HD11	2.32	0.55
43:j:54:SER:OG	43:j:58:ASN:HB2	2.05	0.55
45:l:81:ILE:HD11	45:l:94:TYR:CB	2.37	0.55
49:p:15:PRO:HB2	49:p:17:TYR:CZ	2.42	0.55
53:t:80:ALA:O	53:t:84:LYS:HE2	2.06	0.55
57:x:78:TYR:OH	57:x:282:ILE:HG22	2.07	0.55
8:A:38:A:H2'	8:A:39:G:O4'	2.06	0.55
8:A:64:A:C6	8:A:65:U:C4	2.94	0.55
8:A:72:U:C6	32:Y:54:LYS:HD3	2.41	0.55
8:A:193:U:O4	8:A:203:A:C2	2.60	0.55
8:A:295:G:C6	8:A:344:A:C6	2.94	0.55
8:A:309:A:H4'	28:U:15:GLY:HA2	1.87	0.55
8:A:442:G:C4	8:A:444:C:C5	2.94	0.55
8:A:458:G:C2'	8:A:459:U:OP2	2.54	0.55
8:A:483:A:C8	8:A:484:C:C5	2.95	0.55
8:A:541:A:C6	8:A:553:G:C6	2.95	0.55
8:A:745:1MG:C6	8:A:746:PSU:N3	2.74	0.55
8:A:815:C:N4	8:A:1193:G:C6	2.74	0.55
8:A:821:A:H2'	8:A:946:C:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:847:U:C4	8:A:932:U:C4	2.94	0.55
8:A:971:G:OP1	8:A:974:G:O2'	2.25	0.55
8:A:1151:A:C6	8:A:1152:C:C4	2.95	0.55
8:A:1557:C:O5'	8:A:1557:C:H6	1.89	0.55
8:A:1661:G:N1	8:A:2000:C:N3	2.55	0.55
8:A:2113:U:H2'	8:A:2168:G:N2	2.21	0.55
8:A:2116:G:N7	8:A:2167:U:O2	2.39	0.55
8:A:2116:G:C6	8:A:2165:C:N3	2.74	0.55
8:A:2133:G:H2'	8:A:2157:G:O4'	2.06	0.55
8:A:2167:U:H5	8:A:2170:A:N6	2.03	0.55
8:A:2223:G:C6	8:A:2224:G:C4	2.94	0.55
8:A:2229:U:H1'	31:X:33:HIS:CE1	2.42	0.55
8:A:2286:G:C8	8:A:2287:A:C6	2.94	0.55
8:A:2552:OMU:HM23	8:A:2554:U:H5''	1.88	0.55
8:A:2635:A:H2'	8:A:2636:C:O4'	2.07	0.55
8:A:2848:G:OP2	23:P:94:ALA:HB3	2.06	0.55
9:B:21:G:N2	9:B:63:C:C2	2.75	0.55
9:B:42:C:O2'	13:F:62:GLN:HG2	2.07	0.55
10:C:107:LYS:HZ3	10:C:196:ASN:N	2.03	0.55
14:G:55:ASP:OD1	14:G:55:ASP:N	2.33	0.55
19:L:20:GLY:HA2	19:L:28:GLY:HA2	1.88	0.55
20:M:4:PRO:HG2	20:M:92:TRP:CZ3	2.41	0.55
23:P:30:TRP:CE3	23:P:37:LYS:HG2	2.42	0.55
28:U:12:VAL:HG11	28:U:17:ASP:C	2.31	0.55
31:X:17:ARG:NH1	31:X:21:LEU:O	2.40	0.55
34:a:102:G:H2'	34:a:103:U:C6	2.40	0.55
34:a:152:A:C5	34:a:170:U:O2	2.56	0.55
34:a:157:U:H5'	34:a:158:G:O6	2.06	0.55
34:a:160:A:H62	34:a:161:A:H62	1.54	0.55
34:a:179:A:N6	34:a:196:A:H62	2.03	0.55
34:a:249:U:C2	34:a:275:G:O6	2.57	0.55
34:a:380:G:C2	34:a:384:G:C6	2.94	0.55
34:a:427:U:OP2	34:a:428:G:O2'	2.21	0.55
34:a:563:A:H3'	45:l:11:ARG:NE	2.18	0.55
34:a:594:U:N3	34:a:646:G:C6	2.75	0.55
34:a:633:G:H2'	34:a:634:C:H6	1.72	0.55
34:a:744:C:H2'	34:a:745:G:C8	2.41	0.55
34:a:792:A:N3	34:a:794:A:C5	2.75	0.55
34:a:927:G:O3'	34:a:1503:A:N6	2.40	0.55
34:a:1080:A:H4'	38:e:20:VAL:CG1	2.35	0.55
34:a:1129:C:C2	34:a:1139:G:C6	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1140:C:H2'	34:a:1141:C:O4'	2.06	0.55
34:a:1312:G:N1	34:a:1326:U:C4	2.75	0.55
34:a:1501:C:OP2	34:a:1504:G:H2'	2.06	0.55
36:c:18:ASN:O	36:c:55:VAL:HA	2.07	0.55
36:c:132:ALA:O	36:c:135:ARG:HG2	2.05	0.55
36:c:187:GLU:N	36:c:187:GLU:OE2	2.39	0.55
37:d:25:ARG:HG3	37:d:26:ALA:H	1.71	0.55
44:k:19:VAL:HG21	44:k:36:ARG:HA	1.89	0.55
44:k:111:ASP:H	54:u:3:ILE:HG23	1.72	0.55
57:x:228:ALA:HA	57:x:254:ARG:NH1	2.22	0.55
3:2:2:LYS:HE2	8:A:687:C:H5''	1.89	0.55
7:6:65:ASN:HB3	47:n:42:TRP:CZ3	2.41	0.55
8:A:21:A:C6	8:A:22:C:C4	2.95	0.55
8:A:35:G:H2'	8:A:36:G:O4'	2.07	0.55
8:A:72:U:O4	8:A:112:U:O4'	2.25	0.55
8:A:373:U:C2	8:A:374:A:C8	2.95	0.55
8:A:396:G:P	31:X:9:LYS:HZ3	2.30	0.55
8:A:536:G:C2	8:A:558:U:C2	2.95	0.55
8:A:719:C:H2'	8:A:720:U:O4'	2.06	0.55
8:A:785:G:C6	8:A:786:C:N4	2.75	0.55
8:A:787:C:H3'	8:A:791:C:H41	1.71	0.55
8:A:816:C:N4	8:A:1192:G:C6	2.74	0.55
8:A:1008:A:H5''	17:J:37:ARG:HH12	1.71	0.55
8:A:1172:C:N3	8:A:1176:U:C4	2.75	0.55
8:A:1178:C:H1'	8:A:1179:G:C6	2.41	0.55
8:A:1232:G:C6	8:A:1233:C:C4	2.95	0.55
8:A:1389:G:N1	8:A:1399:C:C4	2.74	0.55
8:A:1434:A:H2'	8:A:1435:G:C8	2.42	0.55
8:A:1485:U:C2	8:A:1505:A:C2	2.95	0.55
8:A:1920:C:H2'	8:A:1921:G:O4'	2.07	0.55
8:A:2060:A:O4'	8:A:2502:G:H1'	2.05	0.55
8:A:2093:G:P	15:H:24:GLY:H	2.29	0.55
8:A:2207:C:C2	8:A:2218:G:C2	2.93	0.55
8:A:2513:A:C5	8:A:2574:G:N1	2.75	0.55
8:A:2604:PSU:H2'	8:A:2605:PSU:C6	2.42	0.55
8:A:2680:U:C5'	11:D:194:PRO:HA	2.35	0.55
8:A:2714:G:C6	8:A:2715:C:C4	2.95	0.55
8:A:2772:C:H2'	8:A:2773:C:H6	1.71	0.55
8:A:2815:C:C2	8:A:2816:G:C8	2.94	0.55
9:B:77:U:OP1	29:V:17:SER:HB2	2.07	0.55
9:B:116:G:H2'	9:B:117:G:H8	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:87:SER:HB2	10:C:199:HIS:CG	2.41	0.55
10:C:132:ARG:HG2	15:H:123:ARG:NH2	2.22	0.55
10:C:229:HIS:HB3	10:C:231:HIS:O	2.07	0.55
15:H:58:LEU:HA	15:H:61:VAL:HG12	1.89	0.55
22:O:93:ASP:OD2	22:O:95:SER:OG	2.20	0.55
34:a:34:C:H2'	34:a:35:G:C8	2.41	0.55
34:a:78:A:H2'	34:a:79:G:O4'	2.07	0.55
34:a:81:A:H61	34:a:88:U:H2'	1.71	0.55
34:a:429:U:O2	34:a:430:A:C8	2.60	0.55
34:a:448:A:H3'	34:a:449:G:H8	1.72	0.55
34:a:500:G:H5''	45:l:120:ARG:NH1	2.22	0.55
34:a:597:G:C8	34:a:598:U:C5	2.95	0.55
34:a:642:A:H2'	34:a:643:C:C6	2.42	0.55
34:a:686:U:O4	34:a:703:G:H2'	2.06	0.55
34:a:896:C:H2'	34:a:897:C:H6	1.71	0.55
34:a:1067:A:N1	34:a:1191:A:C5	2.75	0.55
34:a:1097:C:H2'	34:a:1098:C:O4'	2.06	0.55
34:a:1103:C:OP1	35:b:94:ARG:NH1	2.40	0.55
34:a:1202:U:C5	34:a:1203:C:C5	2.95	0.55
34:a:1252:A:H2'	34:a:1253:G:O4'	2.06	0.55
34:a:1269:A:N3	34:a:1326:U:H1'	2.21	0.55
34:a:1358:U:H5'	47:n:74:LEU:HD23	1.88	0.55
34:a:1430:A:N1	34:a:1471:U:C4	2.74	0.55
35:b:184:ALA:O	35:b:199:ILE:HB	2.06	0.55
39:f:8:PHE:CB	39:f:87:SER:HA	2.37	0.55
48:o:40:GLY:O	48:o:43:ALA:HB3	2.07	0.55
53:t:82:ILE:O	53:t:85:LEU:HB3	2.05	0.55
56:w:36:A:C2	59:z:5:U:C2	2.94	0.55
59:z:4:U:H2'	59:z:5:U:C6	2.41	0.55
3:2:27:GLY:O	3:2:31:LEU:N	2.27	0.55
3:2:39:ARG:NH2	8:A:469:G:C5	2.74	0.55
8:A:146:A:H2'	8:A:147:C:C6	2.41	0.55
8:A:248:G:N7	8:A:250:G:N3	2.55	0.55
8:A:288:U:H2'	8:A:289:G:O4'	2.05	0.55
8:A:347:A:H2'	8:A:348:A:H8	1.71	0.55
8:A:407:G:N1	8:A:421:C:N3	2.55	0.55
8:A:637:A:C5'	19:L:112:LEU:HB3	2.37	0.55
8:A:660:C:H5''	12:E:94:GLN:HG3	1.89	0.55
8:A:706:A:OP1	10:C:6:LYS:NZ	2.40	0.55
8:A:876:C:C3'	8:A:877:A:H5'	2.36	0.55
8:A:901:C:H3'	8:A:902:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:918:A:C6	8:A:919:U:C2	2.95	0.55
8:A:974:G:O2'	8:A:989:G:N1	2.39	0.55
8:A:1039:A:N6	8:A:1116:G:H1	2.04	0.55
8:A:1137:G:C6	8:A:1138:G:C5	2.94	0.55
8:A:1253:A:P	24:Q:32:ARG:NH1	2.80	0.55
8:A:1314:C:C2	8:A:1339:G:N2	2.75	0.55
8:A:1321:A:C2	8:A:1322:A:H1'	2.41	0.55
8:A:1631:G:H22	8:A:1633:G:H3'	1.72	0.55
8:A:1703:G:C6	8:A:1704:C:N4	2.75	0.55
8:A:2077:A:HO2'	8:A:2434:A:HO2'	1.52	0.55
8:A:2082:A:H62	8:A:2237:G:H1'	1.71	0.55
8:A:2299:U:OP1	13:F:71:LYS:NZ	2.33	0.55
8:A:2697:G:H2'	8:A:2698:U:C6	2.42	0.55
9:B:31:C:C2'	9:B:53:A:H61	2.18	0.55
11:D:108:ASP:OD2	11:D:207:VAL:HG12	2.06	0.55
20:M:121:ALA:C	20:M:123:LYS:H	2.14	0.55
21:N:90:ARG:HB2	21:N:94:TYR:CD1	2.41	0.55
22:O:85:LYS:HB2	22:O:87:ILE:HG12	1.86	0.55
23:P:51:ASN:O	23:P:52:ARG:NH1	2.30	0.55
25:R:60:LYS:O	25:R:99:THR:OG1	2.19	0.55
30:W:33:ILE:HD12	30:W:47:VAL:HG13	1.89	0.55
31:X:70:LEU:HG	31:X:73:ARG:NH2	2.21	0.55
32:Y:14:LEU:HA	32:Y:17:GLU:CG	2.37	0.55
34:a:37:U:P	45:l:119:LYS:NZ	2.79	0.55
34:a:47:C:O2	34:a:49:U:C5	2.60	0.55
34:a:246:A:C2	34:a:282:A:C5	2.95	0.55
34:a:590:U:H2'	34:a:591:U:H6	1.71	0.55
34:a:616:G:O3'	49:p:46:LYS:HE3	2.07	0.55
34:a:970:C:H4'	34:a:972:C:C5	2.41	0.55
34:a:1006:G:N2	34:a:1024:G:H5'	2.21	0.55
34:a:1162:C:H2'	34:a:1163:A:H8	1.72	0.55
34:a:1366:C:HO2'	43:j:62:ARG:HH12	1.50	0.55
35:b:62:ARG:O	35:b:63:LYS:HB2	2.06	0.55
36:c:110:LEU:HG	36:c:143:LEU:HD23	1.89	0.55
38:e:13:LYS:NZ	38:e:115:GLU:HB2	2.21	0.55
43:j:65:TYR:HB3	47:n:96:LEU:HD21	1.89	0.55
56:w:52:G:C6	56:w:63:G:C6	2.95	0.55
57:x:194:ASP:O	57:x:198:GLY:N	2.39	0.55
57:x:302:LYS:H	57:x:305:PRO:HG3	1.72	0.55
57:x:525:GLU:CB	57:x:528:SER:HB3	2.36	0.55
4:3:54:LEU:O	4:3:58:ILE:HG13	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:150:U:H2'	8:A:151:C:H6	1.70	0.55
8:A:198:C:O5'	8:A:198:C:H6	1.88	0.55
8:A:289:G:C2	8:A:352:A:C2	2.95	0.55
8:A:372:G:N2	8:A:400:G:H3'	2.21	0.55
8:A:497:A:H2'	8:A:498:G:O4'	2.07	0.55
8:A:499:U:O4'	28:U:44:HIS:CE1	2.60	0.55
8:A:668:A:C6	8:A:670:A:C4	2.95	0.55
8:A:679:C:H2'	8:A:680:C:H6	1.70	0.55
8:A:737:C:C2	8:A:760:G:N2	2.75	0.55
8:A:1086:A:H5''	8:A:1087:G:O4'	2.07	0.55
8:A:1168:G:C6	8:A:1182:G:N1	2.75	0.55
8:A:1358:G:H3'	8:A:1371:G:C6	2.42	0.55
8:A:1410:G:H2'	8:A:1411:U:C6	2.42	0.55
8:A:1567:G:OP2	10:C:82:TYR:OH	2.11	0.55
8:A:1619:G:C4	8:A:1620:G:C8	2.94	0.55
8:A:1749:A:H2'	8:A:1750:G:C8	2.42	0.55
8:A:1922:G:H2'	8:A:1923:U:O4'	2.06	0.55
8:A:2049:G:C6	8:A:2050:C:N4	2.75	0.55
8:A:2077:A:OP1	8:A:2238:G:C2	2.59	0.55
8:A:2097:A:C6	8:A:2193:G:N1	2.74	0.55
8:A:2162:G:N1	8:A:2163:A:C2	2.75	0.55
8:A:2598:A:OP1	10:C:238:ASN:HB2	2.06	0.55
8:A:2673:G:C2	8:A:2674:G:C8	2.95	0.55
8:A:2686:G:H2'	8:A:2687:U:O4'	2.06	0.55
9:B:5:U:H2'	9:B:6:G:H8	1.71	0.55
9:B:38:C:O4'	22:O:100:HIS:NE2	2.40	0.55
13:F:36:ASN:O	13:F:151:LEU:HB2	2.06	0.55
15:H:78:VAL:O	15:H:144:VAL:HA	2.07	0.55
17:J:34:ARG:HG3	17:J:39:LYS:HB2	1.89	0.55
17:J:65:THR:H	17:J:68:LYS:HE3	1.71	0.55
17:J:77:HIS:HD2	17:J:84:ILE:HB	1.71	0.55
18:K:7:MET:CE	18:K:19:VAL:O	2.55	0.55
18:K:43:ILE:CD1	18:K:56:ASP:HB2	2.35	0.55
19:L:127:VAL:HB	19:L:132:ARG:CZ	2.37	0.55
22:O:7:ARG:HG2	22:O:96:GLY:HA3	1.88	0.55
30:W:17:LEU:CD2	30:W:35:ARG:HE	2.20	0.55
30:W:27:VAL:O	30:W:60:ASP:HA	2.07	0.55
34:a:112:G:C2	34:a:330:C:C5	2.94	0.55
34:a:204:G:H2'	34:a:205:A:H4'	1.88	0.55
34:a:241:G:C2	34:a:286:C:C2	2.95	0.55
34:a:292:G:C2	34:a:309:A:C2	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:390:U:H2'	34:a:391:G:C8	2.41	0.55
34:a:608:A:H3'	34:a:609:A:H8	1.72	0.55
34:a:1151:A:O3'	43:j:72:ARG:NH2	2.34	0.55
34:a:1170:A:H2'	34:a:1171:A:O4'	2.07	0.55
34:a:1219:A:C4	34:a:1220:G:C8	2.95	0.55
34:a:1497:G:H3'	34:a:1498:UR3:H3U3	1.89	0.55
34:a:1497:G:N3	34:a:1519:MA6:H2	2.22	0.55
36:c:68:HIS:HA	36:c:103:ALA:HB3	1.88	0.55
36:c:142:ARG:HG3	36:c:143:LEU:N	2.22	0.55
37:d:124:VAL:O	37:d:125:ASN:C	2.50	0.55
39:f:10:VAL:HG21	39:f:18:VAL:HG22	1.89	0.55
39:f:67:PRO:O	39:f:71:ILE:HG12	2.06	0.55
45:l:28:GLN:O	45:l:29:LYS:HG2	2.06	0.55
46:m:14:ALA:N	46:m:40:GLU:O	2.40	0.55
46:m:71:GLU:HA	46:m:74:MET:CE	2.37	0.55
57:x:96:ILE:HD13	57:x:410:PHE:HB3	1.87	0.55
57:x:141:ASN:HA	57:x:266:GLY:O	2.07	0.55
57:x:496:LYS:HB3	57:x:607:ALA:C	2.32	0.55
5:4:34:LYS:NZ	8:A:2526:G:O3'	2.39	0.55
8:A:3:U:H2'	8:A:4:U:C6	2.42	0.55
8:A:404:A:C4	8:A:406:G:C2	2.95	0.55
8:A:458:G:C4	8:A:469:G:O6	2.60	0.55
8:A:528:A:C2	8:A:2043:C:H4'	2.42	0.55
8:A:543:G:C6	8:A:544:C:N4	2.74	0.55
8:A:555:G:O2'	8:A:556:A:H8	1.89	0.55
8:A:631:A:N6	8:A:632:A:N1	2.55	0.55
8:A:633:A:C5'	19:L:70:LYS:HD3	2.37	0.55
8:A:748:G:C4	8:A:750:A:C5	2.94	0.55
8:A:813:U:H1'	8:A:1226:A:N3	2.21	0.55
8:A:814:C:N3	8:A:1194:A:C2	2.75	0.55
8:A:872:U:H2'	8:A:873:C:C6	2.42	0.55
8:A:955:PSU:OP1	20:M:86:LYS:NZ	2.30	0.55
8:A:1001:A:H2'	8:A:1002:G:O4'	2.06	0.55
8:A:1248:G:C6	24:Q:2:ARG:HB2	2.41	0.55
8:A:1257:C:H4'	12:E:78:TRP:NE1	2.22	0.55
8:A:1336:A:C2	8:A:1337:G:C4	2.95	0.55
8:A:1341:G:P	8:A:1394:U:HO2'	2.28	0.55
8:A:1361:G:C6	8:A:1362:C:N4	2.75	0.55
8:A:1366:A:C6	8:A:1367:A:C4	2.94	0.55
8:A:1443:U:H2'	8:A:1444:G:H8	1.72	0.55
8:A:1517:G:H2'	8:A:1518:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1596:A:H2'	8:A:1597:A:C8	2.42	0.55
8:A:2012:G:OP1	26:S:11:ARG:NH2	2.40	0.55
8:A:2102:G:H2'	8:A:2103:C:C6	2.41	0.55
8:A:2187:U:H2'	8:A:2188:U:C6	2.42	0.55
8:A:2407:A:C4	8:A:2408:U:C5	2.95	0.55
8:A:2525:G:C2	8:A:2539:C:C2	2.95	0.55
8:A:2562:U:C4	8:A:2566:A:N7	2.74	0.55
9:B:20:G:C6	9:B:64:G:C6	2.95	0.55
9:B:23:G:C6	9:B:61:G:C6	2.95	0.55
9:B:39:A:C2	9:B:44:G:N3	2.75	0.55
12:E:83:VAL:HG11	12:E:86:ALA:HA	1.88	0.55
13:F:72:SER:HB3	13:F:80:GLN:H	1.70	0.55
18:K:99:ILE:HD11	18:K:115:ILE:HG12	1.88	0.55
20:M:73:ILE:HD11	20:M:93:VAL:HG22	1.88	0.55
21:N:90:ARG:HB2	21:N:94:TYR:CE1	2.41	0.55
31:X:4:CYS:HB3	31:X:9:LYS:H	1.72	0.55
34:a:39:G:C6	34:a:404:G:C6	2.94	0.55
34:a:142:G:C2	34:a:222:C:N3	2.75	0.55
34:a:247:G:C5	34:a:278:G:C2	2.95	0.55
34:a:738:C:H2'	34:a:739:C:H6	1.72	0.55
34:a:890:G:N2	34:a:906:A:H2'	2.22	0.55
34:a:949:A:C5	34:a:950:U:C5	2.95	0.55
34:a:1106:G:H5''	36:c:171:ARG:HD2	1.88	0.55
34:a:1176:A:H3'	34:a:1177:G:H8	1.70	0.55
34:a:1236:A:H4'	34:a:1304:G:H4'	1.89	0.55
34:a:1288:A:N3	34:a:1352:C:O2'	2.40	0.55
34:a:1426:G:H2'	34:a:1427:C:O4'	2.07	0.55
37:d:58:GLN:O	37:d:62:ARG:HG3	2.07	0.55
37:d:117:VAL:HG12	37:d:130:ASN:C	2.31	0.55
37:d:181:PHE:CZ	37:d:184:LYS:HD2	2.42	0.55
43:j:32:THR:CB	43:j:83:THR:HG21	2.37	0.55
45:l:81:ILE:HG13	45:l:95:HIS:O	2.06	0.55
55:v:50:U:O2	55:v:64:G:N2	2.39	0.55
56:w:36:A:N3	57:x:510:GLY:HA2	2.22	0.55
57:x:96:ILE:CD1	57:x:410:PHE:HB3	2.35	0.55
57:x:105:LEU:HG	57:x:107:GLY:O	2.06	0.55
1:0:9:ARG:NE	8:A:517:C:P	2.80	0.55
8:A:108:G:H2'	8:A:109:C:C6	2.42	0.55
8:A:136:G:N1	8:A:144:A:C6	2.75	0.55
8:A:290:U:C2	8:A:350:G:N1	2.63	0.55
8:A:321:U:OP2	12:E:130:LYS:HD3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:615:U:C4	12:E:35:TYR:CE1	2.94	0.55
8:A:815:C:C4	8:A:1193:G:N1	2.74	0.55
8:A:818:G:N1	8:A:1187:G:H2'	2.22	0.55
8:A:821:A:C8	8:A:946:C:C5	2.94	0.55
8:A:893:C:O2	8:A:894:U:H2'	2.05	0.55
8:A:1021:A:H2'	8:A:1023:U:O4'	2.07	0.55
8:A:1031:G:C6	8:A:1124:G:N1	2.75	0.55
8:A:1038:G:H2'	8:A:1039:A:C8	2.41	0.55
8:A:1064:C:H5''	8:A:1065:U:OP2	2.06	0.55
8:A:1087:G:N3	8:A:1089:A:N1	2.55	0.55
8:A:1427:A:H4'	8:A:1428:C:O4'	2.06	0.55
8:A:1587:G:H2'	8:A:1588:G:H8	1.72	0.55
8:A:1599:U:H2'	8:A:1600:C:C6	2.41	0.55
8:A:1812:U:H2'	8:A:1813:G:C8	2.42	0.55
8:A:1870:C:N4	8:A:1871:A:N7	2.55	0.55
8:A:1877:A:H2'	8:A:1878:G:O4'	2.05	0.55
8:A:2083:G:C2	8:A:2236:U:O2	2.60	0.55
8:A:2127:G:H1	8:A:2161:C:H42	1.55	0.55
8:A:2243:U:H2'	8:A:2244:U:H6	1.71	0.55
8:A:2305:U:H4'	13:F:132:ARG:NH1	2.21	0.55
8:A:2472:G:H3'	8:A:2475:C:H42	1.72	0.55
10:C:209:ALA:HA	10:C:212:TRP:CE2	2.42	0.55
13:F:124:ARG:HB2	13:F:126:ASN:ND2	2.22	0.55
15:H:8:LYS:H	15:H:8:LYS:HD2	1.71	0.55
15:H:93:SER:HA	15:H:122:LEU:O	2.07	0.55
17:J:16:TYR:CD1	17:J:138:GLN:HB2	2.42	0.55
18:K:38:ILE:HA	18:K:60:ALA:O	2.07	0.55
18:K:59:LYS:HE3	18:K:89:ASN:O	2.07	0.55
25:R:34:GLU:HB3	25:R:60:LYS:HG2	1.89	0.55
29:V:25:LYS:CA	29:V:42:LEU:O	2.55	0.55
34:a:145:G:N2	34:a:146:G:C6	2.75	0.55
34:a:271:C:H2'	34:a:272:C:H6	1.72	0.55
34:a:384:G:C6	34:a:385:C:N4	2.75	0.55
34:a:466:A:C6	34:a:468:A:O4'	2.59	0.55
34:a:515:G:C4	34:a:516:PSU:C6	2.95	0.55
34:a:717:U:H2'	34:a:734:G:O4'	2.06	0.55
34:a:720:C:H6	34:a:720:C:O5'	1.90	0.55
34:a:745:G:H2'	34:a:746:A:C8	2.41	0.55
34:a:819:A:C8	34:a:1529:G:C2	2.95	0.55
34:a:832:G:C6	34:a:833:G:C5	2.95	0.55
34:a:945:G:C2	34:a:1337:G:C2	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:956:U:H2'	34:a:957:U:C6	2.42	0.55
34:a:957:U:P	52:s:80:ARG:NH1	2.79	0.55
34:a:1032:G:H3'	34:a:1034:G:H22	1.72	0.55
41:h:88:LYS:HB2	41:h:120:LEU:C	2.32	0.55
42:i:96:GLU:HA	42:i:99:LYS:HG2	1.87	0.55
48:o:20:ASP:CG	48:o:23:SER:OG	2.50	0.55
49:p:26:ASN:ND2	49:p:31:ARG:HB3	2.21	0.55
54:u:29:ALA:HA	54:u:32:ARG:CZ	2.37	0.55
57:x:74:MET:O	57:x:76:LYS:N	2.39	0.55
57:x:548:TYR:O	57:x:552:VAL:HG23	2.06	0.55
5:4:2:LYS:HD3	5:4:4:ARG:HE	1.72	0.55
7:6:9:TYR:CD1	13:F:61:GLY:HA3	2.42	0.55
8:A:310:A:OP1	28:U:18:LYS:HD3	2.07	0.55
8:A:382:A:C2	8:A:393:C:C2	2.95	0.55
8:A:543:G:C6	8:A:551:G:C6	2.95	0.55
8:A:580:U:H2'	8:A:581:C:C6	2.42	0.55
8:A:672:C:O2'	8:A:673:C:H5'	2.06	0.55
8:A:740:C:C6	8:A:1981:A:C6	2.95	0.55
8:A:752:A:C8	8:A:1781:U:C6	2.95	0.55
8:A:788:A:OP1	8:A:791:C:N4	2.35	0.55
8:A:795:C:H2'	8:A:796:C:H6	1.71	0.55
8:A:1039:A:H2'	8:A:1040:A:O4'	2.06	0.55
8:A:1063:G:C8	8:A:1064:C:O4'	2.59	0.55
8:A:1301:A:O2'	8:A:1302:A:H3'	2.07	0.55
8:A:1486:U:C2	8:A:1504:A:C2	2.95	0.55
8:A:1545:A:N6	8:A:1546:G:C2	2.75	0.55
8:A:1571:A:H2'	8:A:1572:A:H8	1.72	0.55
8:A:1655:A:H1'	11:D:118:PHE:CE1	2.42	0.55
8:A:1689:A:C4	8:A:1700:A:C6	2.94	0.55
8:A:1712:U:P	8:A:1713:A:H3'	2.47	0.55
8:A:1844:C:N3	8:A:1897:G:N1	2.55	0.55
8:A:1846:G:C6	8:A:1847:G:N1	2.75	0.55
8:A:1846:G:H2'	8:A:1847:G:C8	2.42	0.55
8:A:1930:G:N2	8:A:1931:U:O4	2.36	0.55
8:A:1946:U:H2'	8:A:1947:C:C6	2.41	0.55
8:A:2061:G:N7	8:A:2501:C:H1'	2.22	0.55
8:A:2248:C:H3'	8:A:2249:U:C6	2.41	0.55
8:A:2297:A:N1	8:A:2321:U:C5	2.75	0.55
8:A:2308:G:O6	8:A:2311:A:C6	2.61	0.55
8:A:2418:A:C6	8:A:2419:U:C4	2.95	0.55
8:A:2463:C:C2	8:A:2464:G:C8	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2507:C:C4	8:A:2583:G:N1	2.75	0.55
8:A:2652:C:H2'	8:A:2653:U:O4'	2.07	0.55
8:A:2677:G:C6	8:A:2731:G:C6	2.94	0.55
8:A:2720:U:H2'	8:A:2721:A:C8	2.42	0.55
9:B:24:G:N3	9:B:27:C:N4	2.41	0.55
10:C:29:PHE:N	10:C:102:TYR:OH	2.37	0.55
13:F:106:ALA:HB1	13:F:136:ILE:HG13	1.89	0.55
21:N:54:LEU:O	21:N:54:LEU:HG	2.06	0.55
28:U:97:SER:OG	28:U:97:SER:O	2.23	0.55
29:V:21:ARG:HA	29:V:25:LYS:O	2.06	0.55
34:a:139:A:C2	34:a:225:C:C2	2.95	0.55
34:a:214:C:H4'	34:a:215:C:O4'	2.07	0.55
34:a:272:C:C2	34:a:273:U:C5	2.94	0.55
34:a:447:G:H2'	34:a:486:U:O4	2.07	0.55
34:a:546:A:P	37:d:67:LEU:HB3	2.47	0.55
34:a:562:U:H1'	45:l:11:ARG:HB3	1.89	0.55
34:a:594:U:C4	34:a:595:A:C6	2.95	0.55
34:a:652:U:O2'	34:a:653:U:H6	1.90	0.55
34:a:737:C:H2'	34:a:738:C:C6	2.42	0.55
34:a:872:A:C4	34:a:874:G:N7	2.75	0.55
34:a:921:U:H5'	34:a:1081:A:H3'	1.89	0.55
34:a:958:A:C6	52:s:54:ARG:NH1	2.75	0.55
34:a:1004:A:C4'	34:a:1033:G:H1	2.21	0.55
34:a:1012:A:H8	34:a:1012:A:OP2	1.90	0.55
34:a:1166:G:C2	34:a:1171:A:N6	2.75	0.55
34:a:1240:U:O4	40:g:108:ARG:NH1	2.39	0.55
34:a:1242:G:H2'	34:a:1243:C:C6	2.42	0.55
34:a:1248:A:O2'	34:a:1249:C:O5'	2.19	0.55
34:a:1306:A:H62	34:a:1331:G:C2'	2.20	0.55
34:a:1307:U:O4'	46:m:107:THR:HG21	2.07	0.55
34:a:1350:A:OP2	42:i:119:LYS:CE	2.53	0.55
34:a:1366:C:O3'	43:j:62:ARG:NH2	2.39	0.55
34:a:1405:G:C6	34:a:1497:G:O6	2.60	0.55
34:a:1405:G:O6	34:a:1497:G:O6	2.25	0.55
34:a:1461:G:C2	34:a:1462:C:C2	2.95	0.55
34:a:1480:A:H2'	34:a:1481:U:O4'	2.06	0.55
36:c:72:PRO:HB3	36:c:102:ILE:CG2	2.36	0.55
36:c:152:VAL:HG22	36:c:197:VAL:HG23	1.89	0.55
44:k:88:PRO:HA	44:k:92:ARG:NH1	2.22	0.55
49:p:38:PHE:O	49:p:50:THR:HG23	2.07	0.55
50:q:26:ARG:CG	50:q:39:ARG:HB2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:q:48:GLU:O	50:q:49:ASN:C	2.50	0.55
53:t:53:MET:HE2	53:t:57:VAL:HG11	1.88	0.55
53:t:58:ASP:OD1	53:t:75:LYS:NZ	2.40	0.55
55:v:19:G:H4'	55:v:20:H2U:OP2	2.05	0.55
57:x:96:ILE:HB	57:x:411:PRO:CD	2.36	0.55
57:x:662:MET:HE1	57:x:681:MET:HB3	1.89	0.55
57:x:668:GLN:O	57:x:672:LEU:HD13	2.07	0.55
57:x:691:SER:C	57:x:693:VAL:H	2.13	0.55
5:4:1:MET:HB3	5:4:34:LYS:HE2	1.88	0.54
6:5:55:VAL:H	8:A:1083:U:H5'	1.70	0.54
8:A:124:G:N2	8:A:128:C:C2	2.75	0.54
8:A:173:A:H2'	8:A:174:U:C6	2.42	0.54
8:A:385:C:O2'	8:A:388:G:N2	2.39	0.54
8:A:410:G:N2	8:A:418:C:C2	2.75	0.54
8:A:608:A:C4	8:A:621:A:C2	2.95	0.54
8:A:675:A:OP1	12:E:58:LYS:NZ	2.32	0.54
8:A:684:G:C6	8:A:774:G:C4	2.95	0.54
8:A:774:G:N2	8:A:787:C:O2'	2.39	0.54
8:A:778:G:H5'	10:C:47:ARG:NH1	2.22	0.54
8:A:905:A:C6	8:A:906:U:C4	2.94	0.54
8:A:916:G:H8	8:A:916:G:O5'	1.90	0.54
8:A:939:G:H2'	8:A:940:G:O4'	2.07	0.54
8:A:959:A:O2'	8:A:960:A:H5'	2.06	0.54
8:A:973:A:O4'	8:A:1188:U:N1	2.40	0.54
8:A:1005:C:H1'	8:A:1012:U:N3	2.21	0.54
8:A:1006:C:H1'	17:J:108:MET:HB3	1.88	0.54
8:A:1299:G:H2'	8:A:1640:A:H62	1.72	0.54
8:A:1324:G:C4	8:A:1328:A:N6	2.75	0.54
8:A:1417:C:C4	8:A:1418:G:C5	2.95	0.54
8:A:1511:G:C6	8:A:1512:C:C4	2.95	0.54
8:A:1532:A:C6	8:A:1533:C:C4	2.94	0.54
8:A:1771:C:H2'	8:A:1772:A:H8	1.73	0.54
8:A:1848:A:C2	8:A:1849:G:H1'	2.42	0.54
8:A:1891:G:C2	8:A:1892:C:C2	2.95	0.54
8:A:1956:U:C4	8:A:1957:C:C5	2.96	0.54
8:A:2080:A:C6	8:A:2241:A:C6	2.95	0.54
8:A:2127:G:O2'	8:A:2173:A:C2	2.59	0.54
8:A:2526:G:C2	8:A:2538:C:C2	2.95	0.54
8:A:2574:G:O2'	11:D:148:GLN:C	2.49	0.54
8:A:2682:A:C5	8:A:2683:C:C5	2.95	0.54
8:A:2818:U:N3	8:A:2829:A:N6	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2838:G:N2	8:A:2839:G:H1'	2.22	0.54
8:A:2898:U:N3	8:A:2899:A:N7	2.55	0.54
9:B:44:G:N3	9:B:47:C:N4	2.46	0.54
9:B:45:A:C2	9:B:46:A:H1'	2.41	0.54
11:D:33:ARG:HH22	11:D:53:GLY:N	2.05	0.54
12:E:157:LEU:HG	12:E:169:VAL:HG11	1.89	0.54
14:G:148:ARG:HA	14:G:161:VAL:HB	1.89	0.54
18:K:18:ARG:HB2	18:K:45:GLU:HB3	1.89	0.54
23:P:30:TRP:HZ3	23:P:37:LYS:O	1.90	0.54
25:R:36:ALA:HA	25:R:58:VAL:HG22	1.89	0.54
28:U:61:GLU:OE1	28:U:61:GLU:N	2.35	0.54
31:X:48:LEU:HB3	31:X:50:VAL:HG13	1.89	0.54
34:a:99:C:O2'	34:a:100:G:H8	1.90	0.54
34:a:250:A:C2	34:a:274:A:C6	2.95	0.54
34:a:414:A:C5	34:a:431:A:C2	2.94	0.54
34:a:809:G:C2	34:a:810:C:C6	2.95	0.54
34:a:891:U:P	34:a:906:A:H61	2.29	0.54
34:a:931:C:N4	34:a:1387:G:O6	2.40	0.54
34:a:1103:C:C4'	35:b:96:LEU:HD13	2.37	0.54
34:a:1160:G:C6	34:a:1161:C:C4	2.95	0.54
34:a:1326:U:H2'	34:a:1327:C:C6	2.41	0.54
34:a:1345:U:C2	34:a:1377:A:C6	2.96	0.54
34:a:1347:G:H1'	34:a:1348:U:H5	1.71	0.54
34:a:1386:G:H2'	34:a:1387:G:H8	1.72	0.54
37:d:123:MET:HE2	37:d:145:ARG:HG3	1.90	0.54
37:d:169:TRP:HB2	37:d:183:ARG:O	2.08	0.54
38:e:43:GLY:O	38:e:73:VAL:N	2.39	0.54
41:h:10:LEU:HD12	41:h:76:ARG:HB2	1.89	0.54
53:t:81:GLN:HA	53:t:84:LYS:CE	2.36	0.54
57:x:232:LEU:HD11	57:x:242:LEU:CD2	2.36	0.54
57:x:359:PHE:HD2	57:x:387:LEU:HD21	1.71	0.54
57:x:471:ARG:HE	57:x:475:GLU:CD	2.14	0.54
57:x:583:HIS:O	57:x:587:SER:N	2.38	0.54
8:A:226:A:N6	8:A:419:U:O4'	2.40	0.54
8:A:255:A:H2'	8:A:256:A:O4'	2.07	0.54
8:A:631:A:H2'	8:A:632:A:O4'	2.07	0.54
8:A:633:A:O3'	19:L:70:LYS:HE2	2.07	0.54
8:A:877:A:O2'	8:A:899:A:C2'	2.54	0.54
8:A:967:U:H2'	8:A:968:C:C6	2.42	0.54
8:A:1022:G:N7	17:J:68:LYS:HD3	2.22	0.54
8:A:1028:A:OP2	8:A:1126:A:N6	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1056:G:H4'	8:A:1086:A:C8	2.42	0.54
8:A:1057:A:N6	8:A:1080:A:C6	2.75	0.54
8:A:1173:U:H1'	8:A:1174:U:H4'	1.88	0.54
8:A:1364:G:N2	8:A:1367:A:OP2	2.33	0.54
8:A:1436:G:N2	8:A:1557:C:O2	2.40	0.54
8:A:1444:G:C4	8:A:1445:G:C8	2.96	0.54
8:A:1470:A:H2'	8:A:1471:G:O4'	2.06	0.54
8:A:1535:A:OP2	8:A:1536:C:C2	2.60	0.54
8:A:1692:U:H3'	8:A:1694:C:H41	1.73	0.54
8:A:1744:A:C4	8:A:1745:A:C8	2.95	0.54
8:A:1778:U:H2'	8:A:1784:A:C6	2.42	0.54
8:A:1942:C:H2'	8:A:1943:U:C5	2.42	0.54
8:A:2070:A:H2'	8:A:2071:A:O4'	2.07	0.54
8:A:2109:U:P	8:A:2143:C:OP1	2.65	0.54
8:A:2116:G:C6	8:A:2117:A:N7	2.75	0.54
8:A:2513:A:C6	8:A:2514:U:C4	2.95	0.54
8:A:2581:G:N2	8:A:2581:G:OP2	2.41	0.54
8:A:2745:C:H2'	8:A:2746:U:C6	2.42	0.54
9:B:14:U:H5'	9:B:71:C:O4'	2.06	0.54
11:D:184:ARG:NH1	23:P:6:GLN:HB3	2.21	0.54
12:E:48:THR:O	12:E:52:VAL:HG23	2.07	0.54
12:E:170:ARG:HD2	12:E:174:GLY:O	2.06	0.54
18:K:22:ILE:HG12	18:K:40:LYS:C	2.32	0.54
22:O:33:ARG:HA	22:O:66:GLY:HA3	1.89	0.54
22:O:77:ALA:O	22:O:81:ARG:HG3	2.07	0.54
28:U:3:LYS:HG2	28:U:84:PHE:CZ	2.42	0.54
29:V:2:PHE:HB3	29:V:50:MET:HE3	1.88	0.54
29:V:14:LYS:O	29:V:18:ARG:HG3	2.07	0.54
33:Z:6:ILE:O	33:Z:34:THR:HA	2.07	0.54
34:a:41:G:C6	34:a:402:G:C6	2.95	0.54
34:a:419:C:C4	34:a:420:U:C4	2.95	0.54
34:a:495:A:H4'	34:a:496:A:H5'	1.88	0.54
34:a:616:G:C2	34:a:625:U:C2	2.95	0.54
34:a:647:C:H2'	34:a:648:A:C8	2.42	0.54
34:a:949:A:C6	34:a:1233:G:C6	2.94	0.54
34:a:1036:A:C2	34:a:1037:C:H1'	2.43	0.54
34:a:1120:C:H2'	34:a:1121:U:H6	1.71	0.54
34:a:1133:G:H2'	34:a:1134:G:N7	2.22	0.54
34:a:1134:G:O2'	34:a:1135:U:O5'	2.25	0.54
34:a:1239:A:C2	34:a:1241:G:N1	2.75	0.54
34:a:1361:G:C2	34:a:1362:A:C4	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1376:U:O4	40:g:9:ARG:NH2	2.40	0.54
34:a:1486:G:C6	34:a:1487:G:C6	2.95	0.54
36:c:83:VAL:O	36:c:100:ILE:CD1	2.51	0.54
38:e:78:GLY:O	38:e:119:VAL:HG13	2.07	0.54
38:e:96:GLN:O	38:e:122:VAL:HG23	2.07	0.54
39:f:90:MET:O	39:f:92:THR:HG23	2.07	0.54
48:o:41:HIS:CE1	48:o:45:HIS:ND1	2.76	0.54
57:x:424:LYS:HE2	57:x:424:LYS:HA	1.89	0.54
1:0:37:HIS:HE1	8:A:2884:U:O4	1.90	0.54
6:5:31:ARG:HA	8:A:1054:A:C1'	2.37	0.54
6:5:89:PRO:O	6:5:93:ALA:HB2	2.08	0.54
8:A:66:C:C1'	8:A:456:C:N4	2.70	0.54
8:A:83:A:OP1	28:U:1:ALA:HB2	2.08	0.54
8:A:95:A:H4'	32:Y:39:GLN:HA	1.89	0.54
8:A:122:G:C2	8:A:130:C:C2	2.96	0.54
8:A:136:G:C6	8:A:137:U:C4	2.95	0.54
8:A:289:G:C6	8:A:290:U:C4	2.96	0.54
8:A:393:C:H2'	8:A:394:C:C6	2.43	0.54
8:A:477:A:C8	8:A:501:A:N6	2.75	0.54
8:A:619:G:H3'	8:A:620:G:N2	2.22	0.54
8:A:774:G:HO2'	8:A:775:G:H8	1.51	0.54
8:A:878:A:H3'	8:A:879:G:C8	2.42	0.54
8:A:1044:C:C2	8:A:1112:G:C2	2.95	0.54
8:A:1151:A:H2'	8:A:1152:C:C6	2.42	0.54
8:A:1172:C:N4	8:A:1175:A:OP1	2.41	0.54
8:A:1317:G:C6	8:A:1318:U:C4	2.95	0.54
8:A:1343:G:H2'	8:A:1343:G:N3	2.21	0.54
8:A:1444:G:C6	8:A:1548:A:C6	2.95	0.54
8:A:1529:G:C2	8:A:1542:U:O2	2.60	0.54
8:A:1579:A:H2'	8:A:1580:A:C8	2.42	0.54
8:A:1737:G:H2'	8:A:1738:G:H1'	1.89	0.54
8:A:1799:G:N1	8:A:1819:A:C8	2.75	0.54
8:A:1823:G:H2'	8:A:1824:G:H8	1.73	0.54
8:A:1975:G:C6	8:A:1976:U:N3	2.75	0.54
8:A:2064:C:H2'	8:A:2065:C:C6	2.42	0.54
8:A:2077:A:H2'	8:A:2078:C:C6	2.42	0.54
8:A:2157:G:N3	8:A:2158:A:N6	2.55	0.54
8:A:2262:U:C2	8:A:2263:C:C5	2.95	0.54
8:A:2286:G:O4'	8:A:2287:A:C5	2.61	0.54
8:A:2297:A:C2	8:A:2321:U:H5	2.26	0.54
8:A:2572:A:H3'	8:A:2574:G:H5''	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:86:G:N1	9:B:91:C:N3	2.55	0.54
9:B:91:C:H2'	9:B:92:C:H6	1.72	0.54
9:B:96:G:H2'	9:B:97:C:O4'	2.07	0.54
10:C:131:MET:C	10:C:185:ALA:O	2.51	0.54
18:K:13:ASN:O	18:K:51:LYS:NZ	2.38	0.54
19:L:77:ILE:HG12	19:L:108:ALA:HB1	1.89	0.54
20:M:31:PHE:CD1	20:M:132:THR:HG22	2.37	0.54
25:R:3:ALA:HB2	25:R:41:ILE:HD13	1.88	0.54
26:S:70:LYS:CB	26:S:110:ARG:HH21	2.20	0.54
27:T:8:LEU:HD13	32:Y:22:LEU:C	2.32	0.54
27:T:19:LYS:HE2	27:T:84:TYR:OH	2.08	0.54
34:a:68:G:C8	34:a:69:G:C8	2.95	0.54
34:a:167:A:C6	34:a:168:G:C6	2.96	0.54
34:a:180:U:H2'	34:a:181:A:C8	2.42	0.54
34:a:360:G:H2'	34:a:361:G:C8	2.43	0.54
34:a:368:U:C5	57:x:361:ARG:NH2	2.75	0.54
34:a:384:G:C2	34:a:385:C:C4	2.95	0.54
34:a:420:U:H3'	34:a:422:C:N4	2.22	0.54
34:a:463:U:H3	34:a:467:U:P	2.31	0.54
34:a:487:A:C8	34:a:488:C:C6	2.96	0.54
34:a:615:G:C5	34:a:626:G:C6	2.95	0.54
34:a:734:G:H2'	34:a:735:C:H6	1.70	0.54
34:a:753:A:O4'	34:a:754:C:C2	2.61	0.54
34:a:836:G:C5	34:a:837:U:C4	2.96	0.54
34:a:838:G:C6	34:a:849:G:C5	2.95	0.54
34:a:901:A:N7	34:a:902:G:H1'	2.23	0.54
34:a:1080:A:H4'	38:e:20:VAL:HG11	1.90	0.54
34:a:1092:A:H5''	40:g:3:ARG:NH1	2.22	0.54
34:a:1397:C:H1'	59:z:9:U:C5	2.42	0.54
34:a:1465:A:H2'	34:a:1466:C:C6	2.42	0.54
34:a:1497:G:H1'	34:a:1519:MA6:H2	1.90	0.54
35:b:48:MET:HA	35:b:51:GLU:HG3	1.89	0.54
35:b:128:LEU:HD11	35:b:133:ALA:HB2	1.89	0.54
36:c:119:ILE:O	36:c:123:LEU:HG	2.06	0.54
39:f:38:ARG:NE	39:f:61:LEU:HD21	2.22	0.54
42:i:119:LYS:HG2	42:i:122:ARG:HB2	1.89	0.54
49:p:4:ILE:HG12	49:p:21:VAL:HG22	1.89	0.54
56:w:27:G:H2'	56:w:28:G:C8	2.42	0.54
57:x:105:LEU:HD21	57:x:107:GLY:O	2.06	0.54
57:x:169:GLN:HG3	57:x:170:LEU:H	1.73	0.54
57:x:457:ILE:O	57:x:465:LEU:HD22	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:627:THR:O	57:x:631:ILE:HG13	2.07	0.54
1:0:52:LYS:CE	1:0:55:ALA:HA	2.37	0.54
3:2:19:ARG:NE	8:A:124:G:H2'	2.21	0.54
7:6:15:SER:CB	7:6:21:VAL:HG22	2.37	0.54
8:A:38:A:N1	8:A:442:G:C6	2.76	0.54
8:A:102:U:C4	32:Y:4:LYS:HD2	2.42	0.54
8:A:268:C:C4	8:A:425:G:N1	2.76	0.54
8:A:301:G:P	28:U:81:ARG:NH1	2.80	0.54
8:A:410:G:C2	8:A:2407:A:C5	2.96	0.54
8:A:572:A:H5''	8:A:573:U:OP2	2.07	0.54
8:A:608:A:P	8:A:619:G:H1	2.31	0.54
8:A:693:A:H2'	8:A:694:U:O4'	2.07	0.54
8:A:698:C:O3'	8:A:734:A:N6	2.40	0.54
8:A:721:A:H2'	8:A:722:A:H8	1.72	0.54
8:A:766:U:H2'	8:A:767:U:C6	2.43	0.54
8:A:995:C:H1'	24:Q:92:LYS:NZ	2.23	0.54
8:A:1065:U:H3'	8:A:1074:G:C6	2.43	0.54
8:A:1065:U:P	16:I:90:GLY:HA3	2.47	0.54
8:A:1068:G:H21	8:A:1070:A:H62	1.54	0.54
8:A:1084:A:H2'	8:A:1085:A:O4'	2.07	0.54
8:A:1171:G:C6	8:A:1172:C:C5	2.95	0.54
8:A:1343:G:N1	8:A:1405:U:C4	2.75	0.54
8:A:1435:G:C2	8:A:1436:G:C4	2.95	0.54
8:A:1632:A:C6	8:A:1633:G:C2	2.95	0.54
8:A:1686:C:C2	8:A:1703:G:C2	2.95	0.54
8:A:1709:U:H2'	8:A:1710:G:C8	2.42	0.54
8:A:1728:C:H4'	8:A:1729:U:C5	2.42	0.54
8:A:1819:A:H5''	10:C:156:SER:HB2	1.90	0.54
8:A:2260:C:H2'	8:A:2261:C:H6	1.73	0.54
8:A:2273:A:H2'	8:A:2274:A:C8	2.42	0.54
8:A:2550:G:N1	8:A:2559:C:N3	2.56	0.54
8:A:2553:G:C6	8:A:2554:U:C2	2.95	0.54
8:A:2580:PSU:N1	8:A:2581:G:O6	2.41	0.54
8:A:2737:G:C2	8:A:2768:U:C2	2.96	0.54
12:E:1:MET:SD	12:E:16:GLU:HA	2.47	0.54
13:F:31:GLU:HG2	13:F:156:THR:O	2.06	0.54
15:H:127:GLU:OE1	15:H:144:VAL:O	2.26	0.54
17:J:74:TYR:N	17:J:87:ALA:O	2.37	0.54
19:L:27:LEU:HD12	19:L:27:LEU:N	2.22	0.54
20:M:67:VAL:HG22	20:M:68:PHE:N	2.21	0.54
23:P:39:LEU:HD21	23:P:81:ASP:CG	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:60:LYS:C	25:R:99:THR:HG1	2.13	0.54
27:T:63:VAL:HG11	27:T:80:TRP:CE2	2.43	0.54
28:U:34:ILE:HG12	28:U:62:ALA:O	2.07	0.54
34:a:116:A:C2	34:a:117:G:H1'	2.42	0.54
34:a:116:A:C4	34:a:117:G:C8	2.95	0.54
34:a:404:G:C5	37:d:1:ALA:HB3	2.43	0.54
34:a:438:U:H5'	37:d:119:HIS:ND1	2.22	0.54
34:a:621:A:H2'	34:a:622:A:O4'	2.06	0.54
34:a:674:G:H2'	34:a:675:A:C8	2.37	0.54
34:a:1027:C:C4	34:a:1035:A:O4'	2.60	0.54
34:a:1055:A:N3	36:c:155:ARG:NH1	2.55	0.54
34:a:1130:A:O4'	34:a:1146:A:N1	2.41	0.54
34:a:1160:G:H4'	35:b:130:LYS:HD2	1.89	0.54
34:a:1200:C:O2'	34:a:1205:U:O4	2.25	0.54
34:a:1461:G:H2'	34:a:1462:C:C6	2.42	0.54
34:a:1489:G:C6	34:a:1490:U:C4	2.94	0.54
36:c:19:SER:HB2	36:c:39:ARG:NH2	2.21	0.54
53:t:3:ILE:HG22	53:t:4:LYS:HD2	1.87	0.54
57:x:103:ARG:CZ	57:x:407:ARG:HB2	2.38	0.54
57:x:144:ASP:OD1	57:x:144:ASP:N	2.39	0.54
57:x:644:GLN:N	57:x:644:GLN:OE1	2.40	0.54
2:1:13:SER:HA	2:1:49:LYS:CE	2.38	0.54
8:A:83:A:H2'	8:A:84:A:N7	2.23	0.54
8:A:270:A:C6	8:A:370:G:C6	2.95	0.54
8:A:296:U:O3'	28:U:91:LYS:NZ	2.23	0.54
8:A:330:A:N3	8:A:330:A:H2'	2.23	0.54
8:A:417:C:H2'	8:A:418:C:C6	2.43	0.54
8:A:445:C:OP1	24:Q:1:ALA:HA	2.08	0.54
8:A:479:A:H1'	8:A:480:A:H5''	1.89	0.54
8:A:510:C:C2	8:A:511:U:C6	2.96	0.54
8:A:568:U:O2	8:A:570:G:C8	2.61	0.54
8:A:595:C:N4	8:A:663:G:O6	2.40	0.54
8:A:682:G:N1	8:A:796:C:N3	2.56	0.54
8:A:712:G:C6	8:A:713:G:C4	2.96	0.54
8:A:962:G:OP1	8:A:963:U:OP2	2.24	0.54
8:A:1094:U:O2'	8:A:1096:A:O5'	2.24	0.54
8:A:1171:G:N2	8:A:1177:G:H1	2.01	0.54
8:A:1451:C:O2'	8:A:1452:G:N2	2.41	0.54
8:A:1470:A:C2	8:A:1471:G:H1'	2.42	0.54
8:A:1492:G:C4	8:A:1496:A:N6	2.75	0.54
8:A:1515:A:H1'	8:A:1557:C:C1'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1550:C:H2'	8:A:1551:A:O4'	2.08	0.54
8:A:1689:A:H61	8:A:1697:G:H2'	1.72	0.54
8:A:1841:U:C4	8:A:1842:G:N7	2.76	0.54
8:A:1871:A:C6	8:A:1872:A:C6	2.95	0.54
8:A:2044:C:C2	8:A:2045:C:C5	2.96	0.54
8:A:2056:G:C2	8:A:2057:G:C8	2.96	0.54
8:A:2082:A:C4	8:A:2239:G:C2	2.95	0.54
8:A:2144:G:C2'	8:A:2148:G:N2	2.70	0.54
8:A:2241:A:H2'	8:A:2242:G:H8	1.73	0.54
8:A:2353:G:C6	8:A:2365:G:C2	2.95	0.54
8:A:2416:C:C2	8:A:2417:C:C5	2.96	0.54
9:B:57:A:C4	9:B:58:A:C8	2.96	0.54
11:D:1:MET:HG2	11:D:205:PRO:CG	2.37	0.54
11:D:32:ASN:ND2	11:D:52:THR:HB	2.23	0.54
19:L:110:VAL:O	19:L:128:THR:N	2.35	0.54
20:M:69:PRO:HA	20:M:94:ALA:HB2	1.88	0.54
25:R:16:GLU:HG3	25:R:101:ILE:CG1	2.38	0.54
25:R:67:GLY:O	25:R:92:TRP:CE3	2.60	0.54
28:U:85:ARG:NH1	28:U:94:PHE:CG	2.76	0.54
34:a:3:A:N6	34:a:629:A:H4'	2.23	0.54
34:a:28:A:C5	34:a:29:U:C5	2.96	0.54
34:a:33:A:H2'	34:a:34:C:H6	1.73	0.54
34:a:255:G:C2	34:a:272:C:C2	2.96	0.54
34:a:262:A:C6	34:a:263:A:C6	2.95	0.54
34:a:371:A:H2'	34:a:372:C:O4'	2.07	0.54
34:a:406:G:N2	37:d:115:GLN:HE22	2.06	0.54
34:a:461:A:C5	34:a:470:C:N4	2.75	0.54
34:a:991:U:H3'	34:a:1212:U:C2	2.41	0.54
34:a:1013:G:H2'	34:a:1015:G:OP2	2.07	0.54
34:a:1206:G:C5	34:a:1207:2MG:C5	2.95	0.54
34:a:1359:C:H4'	34:a:1362:A:N6	2.23	0.54
34:a:1374:A:N1	34:a:1375:A:C2	2.75	0.54
36:c:31:ASN:OD1	36:c:58:ARG:NH1	2.40	0.54
39:f:14:GLN:N	39:f:14:GLN:OE1	2.40	0.54
42:i:79:ARG:HA	42:i:82:ILE:HD12	1.89	0.54
45:l:53:ARG:NE	45:l:61:GLU:HG2	2.22	0.54
46:m:85:TYR:CZ	46:m:89:ARG:HD3	2.43	0.54
47:n:26:LEU:HD21	47:n:47:LYS:HG3	1.89	0.54
47:n:83:LYS:O	47:n:86:GLU:HG2	2.07	0.54
48:o:35:ILE:HG13	48:o:58:MET:HE2	1.89	0.54
57:x:18:ILE:HD12	57:x:18:ILE:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:28:ARG:HG3	57:x:268:ALA:O	2.06	0.54
57:x:72:SER:C	57:x:77:GLN:HB2	2.32	0.54
57:x:130:ASN:OD1	57:x:136:ARG:NH2	2.41	0.54
57:x:145:ARG:HG3	62:x:801:GDP:N2	2.23	0.54
57:x:252:ARG:NH2	57:x:284:TYR:C	2.66	0.54
57:x:638:ARG:HD3	57:x:658:PRO:HG2	1.87	0.54
5:4:29:ALA:HB3	5:4:30:GLU:OE1	2.08	0.54
7:6:51:VAL:O	7:6:52:ALA:C	2.50	0.54
8:A:24:G:H2'	8:A:25:U:C6	2.42	0.54
8:A:63:A:H2	27:T:70:HIS:CD2	2.25	0.54
8:A:80:G:C6	8:A:107:G:N1	2.76	0.54
8:A:123:G:C2	8:A:129:C:N3	2.76	0.54
8:A:176:A:O2'	8:A:177:G:H5'	2.07	0.54
8:A:315:G:C6	8:A:316:C:C4	2.95	0.54
8:A:374:A:C4	8:A:401:A:C6	2.96	0.54
8:A:628:G:N1	8:A:629:G:C5	2.76	0.54
8:A:628:G:C5	8:A:636:G:C2	2.96	0.54
8:A:883:G:N3	8:A:884:U:O2'	2.36	0.54
8:A:1021:A:H3'	8:A:1022:G:H5''	1.90	0.54
8:A:1080:A:N1	8:A:1088:A:C2	2.76	0.54
8:A:1101:U:H3'	8:A:1102:C:C5'	2.37	0.54
8:A:1151:A:H2'	8:A:1152:C:O4'	2.08	0.54
8:A:1220:G:C6	8:A:1230:A:N6	2.76	0.54
8:A:1313:U:O2	8:A:1314:C:H6	1.91	0.54
8:A:1370:C:H2'	8:A:1371:G:C8	2.42	0.54
8:A:1452:G:C6	8:A:2702:G:C2	2.96	0.54
8:A:1626:A:H8	8:A:1626:A:OP2	1.90	0.54
8:A:2192:U:HO2'	8:A:2193:G:P	2.31	0.54
8:A:2385:C:H2'	8:A:2386:A:C8	2.42	0.54
8:A:2412:A:C6	8:A:2413:G:C4	2.96	0.54
8:A:2421:G:H2'	55:v:76:A:N7	2.22	0.54
8:A:2436:G:N1	8:A:2437:G:C5	2.76	0.54
8:A:2521:C:C2	8:A:2545:G:C2	2.95	0.54
8:A:2598:A:OP1	10:C:234:GLY:HA3	2.08	0.54
8:A:2691:C:C6	8:A:2872:A:C2	2.96	0.54
8:A:2705:A:H2'	8:A:2706:A:O4'	2.07	0.54
8:A:2786:U:O2	11:D:63:PRO:HB3	2.07	0.54
9:B:33:G:N1	9:B:50:A:C6	2.76	0.54
9:B:85:G:N1	9:B:92:C:C4	2.75	0.54
10:C:179:GLU:HG3	10:C:268:ARG:O	2.07	0.54
11:D:125:TRP:CE3	11:D:160:LYS:HE2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:103:ILE:HG13	13:F:104:THR:HG23	1.90	0.54
15:H:133:GLN:HA	15:H:138:VAL:HG23	1.88	0.54
20:M:27:SER:C	20:M:133:LYS:HZ3	2.13	0.54
20:M:59:ARG:HA	20:M:59:ARG:CZ	2.37	0.54
28:U:71:ILE:O	28:U:79:ALA:HA	2.07	0.54
29:V:20:LEU:HD21	29:V:41:GLU:CB	2.37	0.54
29:V:63:ILE:O	29:V:69:GLU:HA	2.06	0.54
31:X:12:VAL:HG23	31:X:28:PHE:HB2	1.90	0.54
34:a:75:G:N2	34:a:96:U:C2	2.76	0.54
34:a:296:U:O2'	34:a:556:C:O2	2.26	0.54
34:a:329:A:C4	34:a:332:G:C5	2.96	0.54
34:a:440:C:H2'	34:a:441:A:C8	2.43	0.54
34:a:639:G:H2'	34:a:640:A:O4'	2.08	0.54
34:a:779:C:H2'	34:a:780:A:C8	2.42	0.54
34:a:933:G:P	40:g:2:ARG:H	2.29	0.54
34:a:959:A:N1	34:a:1222:G:H5'	2.22	0.54
34:a:967:5MC:OP2	34:a:968:A:C2'	2.55	0.54
34:a:1006:G:H1	34:a:1023:U:C2'	2.21	0.54
34:a:1178:G:O6	42:i:98:ARG:NH2	2.40	0.54
34:a:1185:G:C6	34:a:1186:G:C5	2.95	0.54
34:a:1319:A:C2'	34:a:1323:G:N7	2.70	0.54
35:b:44:LYS:O	35:b:47:PRO:HD2	2.08	0.54
37:d:169:TRP:HB3	37:d:183:ARG:NH2	2.23	0.54
39:f:46:GLN:CD	39:f:56:LYS:HZ3	2.10	0.54
40:g:19:SER:HB3	40:g:58:LEU:HD11	1.89	0.54
55:v:39:C:C2	55:v:40:C:C5	2.95	0.54
57:x:615:ILE:HA	57:x:658:PRO:HA	1.90	0.54
8:A:26:G:H1'	8:A:514:A:N6	2.23	0.54
8:A:51:G:H1'	8:A:118:A:N6	2.23	0.54
8:A:289:G:H2'	8:A:290:U:H6	1.72	0.54
8:A:409:G:C2	8:A:410:G:C4	2.95	0.54
8:A:672:C:H2'	8:A:673:C:H6	1.70	0.54
8:A:749:A:H61	8:A:753:A:H1'	1.73	0.54
8:A:952:G:N1	8:A:966:G:C6	2.76	0.54
8:A:974:G:C5	8:A:1186:G:C4	2.96	0.54
8:A:1059:G:C4	8:A:1060:U:H5	2.25	0.54
8:A:1166:G:H2'	8:A:1167:C:C6	2.43	0.54
8:A:1223:G:C6	8:A:1227:G:C5	2.96	0.54
8:A:1274:A:H3'	8:A:1646:C:H42	1.73	0.54
8:A:1358:G:N2	8:A:1372:U:C5	2.76	0.54
8:A:1470:A:N6	8:A:1521:G:H1'	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1517:G:C4	8:A:1518:C:C5	2.96	0.54
8:A:1553:A:C8	8:A:1555:G:C6	2.96	0.54
8:A:1611:C:C2	8:A:1612:C:C5	2.96	0.54
8:A:1782:U:O4'	8:A:2609:U:C4	2.61	0.54
8:A:1799:G:OP2	10:C:270:ARG:NH1	2.37	0.54
8:A:1799:G:O5'	8:A:1819:A:N6	2.41	0.54
8:A:1850:G:C5	8:A:1851:U:C4	2.95	0.54
8:A:1874:C:H2'	8:A:1875:G:O4'	2.08	0.54
8:A:1877:A:H2'	8:A:1878:G:C8	2.42	0.54
8:A:2114:A:OP2	8:A:2168:G:P	2.66	0.54
8:A:2234:G:C4	8:A:2235:G:C8	2.96	0.54
8:A:2235:G:C6	8:A:2236:U:C4	2.96	0.54
8:A:2386:A:H2'	8:A:2387:U:O4'	2.07	0.54
8:A:2616:C:N3	8:A:2617:U:C5	2.76	0.54
8:A:2697:G:H2'	8:A:2698:U:O4'	2.06	0.54
8:A:2720:U:C1'	8:A:2872:A:N6	2.70	0.54
8:A:2846:G:OP2	23:P:51:ASN:ND2	2.35	0.54
8:A:2846:G:P	23:P:52:ARG:HH12	2.30	0.54
8:A:2888:C:H2'	8:A:2889:C:C6	2.42	0.54
9:B:1:U:H2'	9:B:2:G:H8	1.72	0.54
9:B:24:G:N7	9:B:56:G:H2'	2.23	0.54
9:B:113:C:H2'	9:B:114:C:H6	1.72	0.54
9:B:117:G:H2'	9:B:118:C:C6	2.43	0.54
11:D:46:ARG:CB	11:D:84:LEU:HB2	2.37	0.54
13:F:4:HIS:O	13:F:8:LYS:HE3	2.07	0.54
13:F:166:ARG:HG3	13:F:176:PHE:CE2	2.43	0.54
14:G:100:ASN:HA	14:G:116:LEU:HD12	1.88	0.54
14:G:154:GLU:HG3	14:G:159:LYS:N	2.23	0.54
17:J:28:LEU:HG	17:J:32:LEU:HD11	1.90	0.54
20:M:121:ALA:HA	20:M:124:LEU:CD1	2.37	0.54
23:P:8:GLU:O	23:P:12:MET:HG3	2.07	0.54
23:P:13:LYS:HE3	23:P:76:HIS:C	2.32	0.54
23:P:26:GLU:OE2	23:P:84:SER:OG	2.26	0.54
25:R:1:MET:SD	25:R:43:ASN:HA	2.47	0.54
26:S:60:HIS:ND1	26:S:61:ASN:OD1	2.41	0.54
33:Z:52:PHE:CD2	33:Z:53:MET:HB3	2.43	0.54
34:a:11:G:O2'	34:a:506:G:N2	2.41	0.54
34:a:676:A:H2'	34:a:677:U:H6	1.72	0.54
34:a:692:U:O4	44:k:53:GLY:C	2.51	0.54
34:a:733:G:O2'	34:a:734:G:OP1	2.19	0.54
34:a:869:G:H4'	34:a:872:A:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:908:A:H2'	34:a:909:A:C8	2.42	0.54
34:a:1016:A:C4'	34:a:1218:C:H4'	2.38	0.54
34:a:1074:G:O2'	35:b:101:THR:HG23	2.08	0.54
34:a:1246:A:C6	34:a:1292:G:C6	2.95	0.54
34:a:1313:U:OP1	52:s:4:LEU:HB2	2.08	0.54
34:a:1488:G:C2	34:a:1489:G:C4	2.96	0.54
36:c:154:GLY:N	36:c:163:ARG:O	2.37	0.54
38:e:156:ARG:NH2	41:h:44:PHE:CZ	2.75	0.54
39:f:14:GLN:HB3	39:f:17:GLN:HB2	1.89	0.54
40:g:71:THR:HA	40:g:95:ARG:NH1	2.23	0.54
40:g:94:ARG:O	40:g:98:LEU:HG	2.07	0.54
44:k:62:ALA:HB1	44:k:95:THR:HG23	1.90	0.54
48:o:13:GLU:HG2	48:o:83:ARG:NH2	2.22	0.54
49:p:40:ASN:O	49:p:49:GLY:HA2	2.08	0.54
50:q:46:HIS:CD2	50:q:48:GLU:OE2	2.60	0.54
51:r:41:SER:OG	51:r:51:GLN:OE1	2.04	0.54
55:v:14:A:H2'	55:v:15:G:O4'	2.08	0.54
57:x:281:VAL:HG13	57:x:285:LEU:HD12	1.90	0.54
57:x:581:SER:O	57:x:592:PHE:CE2	2.61	0.54
3:2:2:LYS:NZ	8:A:687:C:H5''	2.21	0.54
8:A:67:U:C2	8:A:74:A:C8	2.95	0.54
8:A:75:G:C6	8:A:111:A:N1	2.75	0.54
8:A:81:G:C6	8:A:82:U:C2	2.95	0.54
8:A:223:A:N1	8:A:407:G:O2'	2.41	0.54
8:A:260:G:O2'	8:A:608:A:N6	2.37	0.54
8:A:313:G:C6	8:A:314:C:C4	2.95	0.54
8:A:613:A:H3'	8:A:613:A:N3	2.23	0.54
8:A:628:G:C2	8:A:629:G:C4	2.96	0.54
8:A:812:C:C5	8:A:1250:G:C6	2.96	0.54
8:A:1020:A:C8	8:A:1141:U:C2	2.95	0.54
8:A:1047:G:C2	8:A:1110:G:C4	2.96	0.54
8:A:1121:C:H2'	8:A:1122:G:O4'	2.08	0.54
8:A:1399:C:H2'	8:A:1400:U:H6	1.71	0.54
8:A:1413:A:C6	8:A:1414:C:C4	2.95	0.54
8:A:1678:A:C5	8:A:1679:A:C8	2.96	0.54
8:A:1687:G:C2	8:A:1702:G:O6	2.60	0.54
8:A:1731:G:C6	8:A:1733:G:N7	2.76	0.54
8:A:2048:G:C6	8:A:2621:G:N1	2.76	0.54
8:A:2214:C:H2'	8:A:2215:C:O4'	2.07	0.54
8:A:2341:G:C5	8:A:2342:C:C4	2.96	0.54
8:A:2351:G:C2'	8:A:2366:A:H61	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2461:A:C6	8:A:2462:C:C4	2.96	0.54
8:A:2461:A:H1'	8:A:2492:U:N3	2.23	0.54
8:A:2496:C:C4	8:A:2497:A:C6	2.95	0.54
8:A:2513:A:C2	8:A:2514:U:C2	2.95	0.54
8:A:2598:A:OP1	10:C:234:GLY:CA	2.56	0.54
8:A:2688:G:N1	8:A:2719:G:H2'	2.23	0.54
8:A:2787:C:H1'	11:D:63:PRO:HG3	1.89	0.54
8:A:2856:A:H2'	8:A:2857:G:O4'	2.08	0.54
9:B:6:G:C6	9:B:115:A:C6	2.96	0.54
9:B:74:U:HO2'	29:V:37:PRO:HB2	1.73	0.54
9:B:77:U:H4'	29:V:87:GLN:OE1	2.08	0.54
9:B:113:C:H2'	9:B:114:C:C6	2.42	0.54
17:J:20:ALA:HB3	17:J:58:ASN:O	2.07	0.54
19:L:19:LEU:HD22	19:L:31:GLY:CA	2.38	0.54
24:Q:34:ALA:O	24:Q:38:VAL:HG23	2.07	0.54
25:R:17:GLY:O	25:R:97:LYS:HE3	2.06	0.54
27:T:36:LYS:O	27:T:81:LYS:HE3	2.08	0.54
34:a:61:G:H2'	34:a:62:U:C6	2.43	0.54
34:a:134:G:H2'	34:a:135:C:C6	2.42	0.54
34:a:134:G:H2'	34:a:135:C:O4'	2.07	0.54
34:a:273:U:N3	34:a:274:A:C5	2.76	0.54
34:a:324:G:N1	34:a:327:A:O5'	2.38	0.54
34:a:325:A:C5	34:a:326:G:C5	2.95	0.54
34:a:337:G:H2'	34:a:338:A:C8	2.42	0.54
34:a:374:A:C5	34:a:375:U:C5	2.96	0.54
34:a:413:G:H1'	34:a:428:G:H21	1.72	0.54
34:a:429:U:O2	34:a:431:A:C8	2.60	0.54
34:a:469:C:H3'	34:a:470:C:C5'	2.38	0.54
34:a:613:C:OP1	37:d:80:ARG:NE	2.40	0.54
34:a:626:G:H2'	34:a:627:G:O4'	2.08	0.54
34:a:688:G:C4	34:a:700:G:C2	2.96	0.54
34:a:752:G:H5''	48:o:72:LYS:HE2	1.89	0.54
34:a:818:G:C6	34:a:820:U:H2'	2.43	0.54
34:a:842:U:H4'	34:a:846:G:C6	2.43	0.54
34:a:843:U:H5'	34:a:844:G:C2	2.42	0.54
34:a:849:G:H2'	34:a:850:U:O4'	2.07	0.54
34:a:921:U:C6	34:a:1082:A:P	3.01	0.54
34:a:1061:G:O6	34:a:1197:A:N6	2.40	0.54
34:a:1107:C:OP1	36:c:171:ARG:NE	2.41	0.54
34:a:1211:U:H5''	34:a:1212:U:H5''	1.89	0.54
34:a:1287:A:H2	34:a:1353:G:H1'	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1298:U:O4'	34:a:1299:A:C5	2.61	0.54
34:a:1321:U:H2'	34:a:1322:C:C5	2.43	0.54
34:a:1376:U:P	40:g:24:LYS:HE2	2.48	0.54
34:a:1468:A:H2'	34:a:1469:C:O4'	2.08	0.54
36:c:190:THR:HG23	36:c:192:TYR:N	2.17	0.54
38:e:40:ASP:N	38:e:44:ARG:O	2.35	0.54
39:f:61:LEU:HD12	39:f:62:MET:N	2.23	0.54
41:h:17:GLN:OE1	41:h:64:TYR:CE2	2.61	0.54
48:o:74:VAL:O	48:o:78:THR:HG23	2.07	0.54
55:v:24:U:H2'	55:v:25:C:C6	2.43	0.54
57:x:168:LEU:HD21	57:x:264:THR:OG1	2.08	0.54
2:1:4:ILE:H	8:A:2284:A:P	2.29	0.54
3:2:32:ALA:O	3:2:36:ALA:N	2.40	0.54
8:A:13:A:N1	8:A:525:U:H2'	2.22	0.54
8:A:58:G:N3	8:A:70:G:C2	2.76	0.54
8:A:520:G:H2'	8:A:521:U:C6	2.43	0.54
8:A:533:G:H5'	24:Q:23:TYR:CE1	2.43	0.54
8:A:696:G:C6	8:A:767:U:N3	2.76	0.54
8:A:775:G:O4'	8:A:777:G:H1'	2.07	0.54
8:A:778:G:H2'	8:A:779:U:C6	2.43	0.54
8:A:871:U:OP1	20:M:5:LYS:CE	2.55	0.54
8:A:941:A:H2'	8:A:942:G:O4'	2.08	0.54
8:A:1006:C:N3	8:A:1138:G:C2	2.76	0.54
8:A:1022:G:C8	8:A:1140:C:N4	2.76	0.54
8:A:1048:A:C8	8:A:1111:A:N1	2.76	0.54
8:A:1064:C:H4'	16:I:89:SER:O	2.07	0.54
8:A:1067:A:C8	8:A:1074:G:N2	2.74	0.54
8:A:1116:G:H2'	8:A:1117:C:C6	2.43	0.54
8:A:1136:G:C2	8:A:1137:G:C4	2.96	0.54
8:A:1168:G:C2	8:A:1181:U:O2	2.60	0.54
8:A:1383:A:N3	8:A:1405:U:O2'	2.36	0.54
8:A:1445:G:O6	8:A:1466:U:C2	2.61	0.54
8:A:1567:G:H5'	10:C:57:HIS:CE1	2.43	0.54
8:A:2040:G:C6	8:A:2041:U:C4	2.96	0.54
8:A:2064:C:H2'	8:A:2065:C:H6	1.73	0.54
8:A:2065:C:H5'	8:A:2251:OMG:HN22	1.72	0.54
8:A:2094:A:H5'	15:H:25:TYR:CG	2.43	0.54
8:A:2270:A:C4	8:A:2271:G:C8	2.95	0.54
8:A:2399:G:C6	8:A:2400:G:C5	2.96	0.54
8:A:2494:G:C2	8:A:2495:G:C8	2.96	0.54
8:A:2556:C:C4	8:A:2557:G:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2574:G:C6	8:A:2575:C:N4	2.75	0.54
8:A:2657:A:N6	8:A:2664:G:C2'	2.71	0.54
8:A:2685:G:H2'	8:A:2686:G:C8	2.42	0.54
8:A:2900:A:H2'	8:A:2901:C:H6	1.72	0.54
9:B:15:A:O4'	9:B:109:A:O4'	2.25	0.54
10:C:131:MET:HB2	10:C:187:CYS:O	2.08	0.54
15:H:135:HIS:N	15:H:138:VAL:HG21	2.22	0.54
26:S:23:LEU:O	26:S:27:LYS:CE	2.54	0.54
29:V:80:HIS:CG	29:V:81:PRO:HD2	2.43	0.54
34:a:191:G:H2'	34:a:192:A:C8	2.43	0.54
34:a:254:G:H4'	50:q:16:MET:CE	2.37	0.54
34:a:258:G:C4	34:a:259:G:C8	2.96	0.54
34:a:300:A:C2'	34:a:564:C:H42	2.21	0.54
34:a:379:C:H2'	34:a:380:G:O4'	2.08	0.54
34:a:392:C:P	49:p:8:ARG:HH21	2.29	0.54
34:a:429:U:C2	34:a:431:A:N7	2.76	0.54
34:a:501:C:H2'	34:a:502:A:H8	1.72	0.54
34:a:537:G:OP1	45:l:109:ARG:NH2	2.41	0.54
34:a:557:G:H2'	34:a:558:G:O4'	2.08	0.54
34:a:646:G:H2'	34:a:647:C:H6	1.72	0.54
34:a:730:G:O2'	34:a:814:A:N6	2.41	0.54
34:a:917:G:H2'	34:a:918:A:C8	2.43	0.54
34:a:964:A:H3'	34:a:965:U:C5	2.43	0.54
34:a:973:G:H3'	34:a:974:A:H2'	1.89	0.54
34:a:1055:A:O2'	36:c:155:ARG:CZ	2.55	0.54
34:a:1072:G:H2'	34:a:1073:U:C6	2.43	0.54
34:a:1133:G:C6	34:a:1141:C:N4	2.76	0.54
34:a:1135:U:H2'	34:a:1137:C:P	2.47	0.54
34:a:1143:G:C6	34:a:1144:G:C6	2.95	0.54
34:a:1227:A:C2	34:a:1228:C:C5	2.96	0.54
34:a:1314:C:OP1	52:s:5:LYS:HD3	2.08	0.54
34:a:1317:C:OP1	47:n:23:ARG:NH2	2.41	0.54
34:a:1527:U:H2'	34:a:1528:U:C6	2.43	0.54
39:f:35:LYS:NZ	39:f:37:HIS:HA	2.23	0.54
39:f:47:LEU:HD21	39:f:57:ALA:HB3	1.89	0.54
48:o:32:THR:HG22	48:o:62:ARG:NH1	2.23	0.54
53:t:59:ARG:O	53:t:63:LYS:HG2	2.08	0.54
57:x:318:ALA:CB	57:x:337:VAL:HA	2.38	0.54
57:x:496:LYS:HD3	57:x:606:LYS:O	2.07	0.54
57:x:521:MET:SD	57:x:603:GLY:HA3	2.47	0.54
1:0:46:GLY:O	1:0:53:VAL:HG22	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:20:C:OP1	24:Q:21:LYS:NZ	2.26	0.54
8:A:98:G:H2'	8:A:99:U:C6	2.43	0.54
8:A:187:G:C6	8:A:188:G:C5	2.96	0.54
8:A:226:A:H2'	8:A:227:A:O4'	2.07	0.54
8:A:235:U:H2'	8:A:236:C:H6	1.73	0.54
8:A:422:A:H2'	8:A:423:A:O4'	2.07	0.54
8:A:537:G:N2	8:A:555:G:N3	2.55	0.54
8:A:543:G:O6	8:A:551:G:C6	2.60	0.54
8:A:631:A:C6	8:A:632:A:C2	2.96	0.54
8:A:729:G:C8	10:C:206:LYS:HD2	2.43	0.54
8:A:849:A:H2'	8:A:850:U:H6	1.72	0.54
8:A:858:G:H3'	8:A:859:G:C8	2.43	0.54
8:A:877:A:H4'	8:A:900:A:H62	1.73	0.54
8:A:891:G:O2'	8:A:893:C:OP1	2.25	0.54
8:A:970:U:O2'	8:A:984:A:H4'	2.08	0.54
8:A:990:A:OP2	8:A:991:C:OP2	2.26	0.54
8:A:1011:G:O6	8:A:1151:A:N6	2.41	0.54
8:A:1038:G:N1	8:A:1118:C:N3	2.56	0.54
8:A:1091:G:O2'	8:A:1092:C:OP1	2.21	0.54
8:A:1104:C:O5'	8:A:1104:C:H6	1.91	0.54
8:A:1287:A:H2'	8:A:1288:G:C4	2.43	0.54
8:A:1359:A:N6	8:A:1360:G:N3	2.56	0.54
8:A:1423:G:N1	8:A:1424:G:C5	2.76	0.54
8:A:1687:G:H1'	8:A:1701:A:H61	1.73	0.54
8:A:1707:G:C5	8:A:1756:G:C6	2.96	0.54
8:A:1820:U:C2	10:C:200:MET:SD	3.01	0.54
8:A:1834:U:O2	8:A:1970:A:C8	2.61	0.54
8:A:1965:C:OP1	8:A:1966:A:O2'	2.21	0.54
8:A:2061:G:O2'	8:A:2063:C:H5	1.91	0.54
8:A:2297:A:H8	8:A:2297:A:OP2	1.91	0.54
8:A:2304:G:O2'	13:F:129:MET:O	2.25	0.54
8:A:2462:C:C2	8:A:2463:C:C5	2.96	0.54
8:A:2527:C:H2'	8:A:2528:U:O4'	2.08	0.54
8:A:2528:U:C4	8:A:2530:A:H1'	2.43	0.54
8:A:2533:U:OP1	8:A:2665:A:O2'	2.25	0.54
8:A:2564:A:C6	8:A:2647:U:H4'	2.43	0.54
8:A:2616:C:C2	8:A:2617:U:C5	2.96	0.54
8:A:2657:A:H61	8:A:2664:G:H1'	1.73	0.54
8:A:2696:U:H2'	8:A:2697:G:C8	2.43	0.54
8:A:2732:G:H3'	8:A:2733:A:O4'	2.08	0.54
8:A:2814:A:C6	8:A:2815:C:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2830:C:H3'	11:D:59:ARG:HH11	1.73	0.54
8:A:2850:A:C4	8:A:2869:G:H4'	2.43	0.54
9:B:41:G:OP1	9:B:42:C:H5	1.91	0.54
10:C:264:LYS:HD2	10:C:265:PHE:CZ	2.42	0.54
11:D:88:GLU:OE1	11:D:88:GLU:N	2.41	0.54
13:F:49:LEU:O	13:F:53:ALA:N	2.38	0.54
13:F:174:PHE:CD2	13:F:175:PRO:HD2	2.43	0.54
14:G:24:THR:CB	14:G:33:THR:HG1	2.19	0.54
14:G:29:ASN:HB2	14:G:78:VAL:HA	1.90	0.54
15:H:137:GLU:HG2	15:H:137:GLU:O	2.08	0.54
18:K:64:ARG:NE	23:P:67:GLU:HG3	2.22	0.54
23:P:53:GLY:O	23:P:76:HIS:CE1	2.59	0.54
24:Q:16:ILE:HA	24:Q:19:GLN:NE2	2.23	0.54
28:U:5:ARG:HG2	28:U:93:ARG:NH2	2.24	0.54
28:U:10:VAL:HG21	28:U:69:VAL:HB	1.88	0.54
28:U:48:VAL:C	28:U:53:GLN:HB3	2.33	0.54
29:V:20:LEU:HD21	29:V:41:GLU:HB3	1.90	0.54
34:a:123:U:OP1	34:a:312:C:H5'	2.08	0.54
34:a:144:G:N2	34:a:196:A:C8	2.76	0.54
34:a:442:G:H8	34:a:442:G:O5'	1.90	0.54
34:a:833:G:C2	34:a:854:U:C2	2.96	0.54
34:a:949:A:H4'	34:a:1364:U:O4	2.08	0.54
34:a:1008:U:O2'	34:a:1009:U:OP1	2.26	0.54
34:a:1010:U:O2'	34:a:1011:C:OP1	2.16	0.54
34:a:1177:G:H2'	34:a:1178:G:C8	2.43	0.54
34:a:1277:C:O2'	34:a:1279:G:N3	2.38	0.54
34:a:1397:C:OP2	38:e:28:ARG:CZ	2.56	0.54
34:a:1469:C:H2'	34:a:1470:U:O4'	2.07	0.54
35:b:35:ASN:O	35:b:37:VAL:HG12	2.08	0.54
36:c:72:PRO:CB	36:c:102:ILE:HG21	2.37	0.54
45:l:109:ARG:O	45:l:113:ARG:HG3	2.08	0.54
52:s:62:THR:H	52:s:65:MET:HB3	1.72	0.54
57:x:98:VAL:HG12	57:x:128:GLN:HB3	1.90	0.54
57:x:167:PRO:HA	57:x:263:VAL:HG23	1.90	0.54
57:x:683:PHE:HE1	57:x:685:LYS:O	1.90	0.54
2:1:7:LYS:HA	2:1:23:THR:HA	1.90	0.53
3:2:39:ARG:HA	8:A:459:U:OP1	2.07	0.53
5:4:14:CYS:O	5:4:15:LYS:HG2	2.08	0.53
8:A:5:A:H2'	8:A:6:A:C8	2.42	0.53
8:A:9:G:C2	8:A:2895:G:C6	2.96	0.53
8:A:24:G:C2	8:A:517:C:C2	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:42:A:N6	8:A:438:G:O6	2.41	0.53
8:A:44:A:H2'	8:A:45:G:O4'	2.08	0.53
8:A:60:G:C8	8:A:62:U:H5	2.24	0.53
8:A:66:C:O4'	8:A:456:C:C4	2.61	0.53
8:A:80:G:C6	8:A:81:G:C5	2.97	0.53
8:A:203:A:H8	8:A:203:A:O5'	1.90	0.53
8:A:317:G:C6	8:A:318:C:C4	2.96	0.53
8:A:383:C:C2	8:A:391:A:N6	2.77	0.53
8:A:392:U:H2'	8:A:393:C:H6	1.72	0.53
8:A:452:G:C2	8:A:458:G:C4	2.96	0.53
8:A:481:G:C5'	28:U:43:LYS:NZ	2.71	0.53
8:A:571:U:H3'	25:R:80:ARG:NH1	2.23	0.53
8:A:705:A:P	8:A:726:G:H22	2.28	0.53
8:A:707:G:C2	8:A:708:G:C4	2.96	0.53
8:A:708:G:H2'	8:A:709:U:H6	1.73	0.53
8:A:748:G:C2	26:S:90:LYS:HE3	2.43	0.53
8:A:825:A:H2'	8:A:826:U:C6	2.43	0.53
8:A:841:G:C6	8:A:938:G:C6	2.96	0.53
8:A:866:A:O4'	8:A:914:G:C2	2.61	0.53
8:A:877:A:HO2'	8:A:899:A:C2'	2.18	0.53
8:A:956:G:O6	8:A:958:U:H4'	2.07	0.53
8:A:993:G:C6	8:A:994:C:N4	2.76	0.53
8:A:1036:G:O6	8:A:1119:U:C2	2.61	0.53
8:A:1090:A:N1	8:A:1102:C:C1'	2.71	0.53
8:A:1101:U:H3'	8:A:1102:C:H5''	1.89	0.53
8:A:1138:G:C6	8:A:1143:A:C2	2.97	0.53
8:A:1197:G:C2	8:A:1198:U:C5	2.97	0.53
8:A:1286:A:C6	8:A:1329:U:C2	2.96	0.53
8:A:1348:C:C5	8:A:1349:C:C5	2.95	0.53
8:A:1364:G:OP1	31:X:49:ARG:NH2	2.23	0.53
8:A:1386:C:H1'	8:A:1470:A:H1'	1.90	0.53
8:A:1749:A:H2'	8:A:1750:G:H8	1.74	0.53
8:A:1824:G:H2'	8:A:1825:U:C6	2.42	0.53
8:A:1824:G:P	10:C:51:ARG:HH21	2.30	0.53
8:A:1873:G:H2'	8:A:1874:C:H6	1.72	0.53
8:A:1936:A:N3	8:A:1945:G:C8	2.76	0.53
8:A:2054:A:N1	8:A:2616:C:C4	2.76	0.53
8:A:2092:U:H3'	15:H:27:ARG:NH2	2.22	0.53
8:A:2135:A:O2'	8:A:2137:U:OP2	2.26	0.53
8:A:2374:C:H2'	8:A:2375:G:O4'	2.08	0.53
8:A:2396:G:C6	8:A:2421:G:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2679:A:C6	8:A:2729:G:C6	2.97	0.53
8:A:2788:C:H2'	8:A:2789:C:C6	2.43	0.53
8:A:2790:U:OP2	8:A:2893:A:N6	2.41	0.53
8:A:2804:U:H2'	8:A:2805:C:H6	1.73	0.53
9:B:23:G:C2	9:B:24:G:O6	2.61	0.53
9:B:66:A:H61	9:B:107:G:C3'	2.21	0.53
10:C:92:LEU:HD12	10:C:101:ARG:O	2.08	0.53
16:I:92:PRO:CB	16:I:135:MET:C	2.81	0.53
17:J:58:ASN:N	17:J:127:GLY:O	2.30	0.53
21:N:35:LYS:HE3	21:N:100:CYS:SG	2.48	0.53
28:U:25:LYS:HD2	28:U:36:GLU:CA	2.39	0.53
31:X:4:CYS:O	31:X:8:GLY:N	2.40	0.53
34:a:41:G:C2	34:a:402:G:C2	2.95	0.53
34:a:124:C:C2	34:a:238:A:C2	2.96	0.53
34:a:148:G:H2'	34:a:149:A:O4'	2.08	0.53
34:a:161:A:H1'	34:a:162:A:C5	2.43	0.53
34:a:162:A:C6	34:a:344:A:H2'	2.43	0.53
34:a:212:G:C8	34:a:213:G:C4	2.96	0.53
34:a:451:A:H2'	34:a:481:G:O6	2.07	0.53
34:a:529:G:H4'	34:a:533:A:C4	2.42	0.53
34:a:633:G:H2'	34:a:634:C:C6	2.43	0.53
34:a:755:G:C2	34:a:756:C:C4	2.96	0.53
34:a:824:G:C6	34:a:877:G:C6	2.96	0.53
34:a:854:U:H3'	34:a:871:U:O4	2.09	0.53
34:a:960:U:O2'	34:a:1223:C:H5'	2.08	0.53
34:a:1027:C:C4	34:a:1028:C:N3	2.76	0.53
34:a:1027:C:N4	34:a:1034:G:H8	2.06	0.53
34:a:1090:U:H2'	34:a:1091:U:C6	2.43	0.53
34:a:1144:G:H21	34:a:1146:A:N6	2.06	0.53
34:a:1160:G:H4'	35:b:130:LYS:CE	2.37	0.53
34:a:1163:A:H2'	34:a:1164:G:H8	1.73	0.53
34:a:1321:U:O5'	34:a:1322:C:H2'	2.08	0.53
34:a:1348:U:O4	34:a:1374:A:C8	2.62	0.53
34:a:1368:A:H5''	42:i:112:ARG:NH2	2.22	0.53
34:a:1371:G:C6	34:a:1372:U:C4	2.96	0.53
35:b:108:GLN:O	35:b:112:ARG:HD2	2.08	0.53
37:d:169:TRP:HD1	37:d:181:PHE:CE2	2.26	0.53
42:i:32:ARG:NH2	42:i:36:GLN:O	2.41	0.53
46:m:84:CYS:SG	46:m:87:GLY:N	2.76	0.53
49:p:38:PHE:CE2	49:p:49:GLY:O	2.61	0.53
57:x:249:GLY:O	57:x:253:GLN:HG3	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:443:SER:CA	57:x:460:MET:HE3	2.38	0.53
57:x:536:ILE:HG22	57:x:575:ILE:O	2.08	0.53
1:0:40:HIS:CE1	8:A:2816:G:H1'	2.42	0.53
5:4:32:LYS:HE3	8:A:2528:U:C5'	2.39	0.53
8:A:27:G:H22	8:A:513:A:P	2.31	0.53
8:A:83:A:C6	8:A:101:A:C4	2.96	0.53
8:A:134:G:N1	8:A:146:A:C6	2.77	0.53
8:A:382:A:N1	8:A:393:C:C4	2.76	0.53
8:A:392:U:H2'	8:A:393:C:C6	2.44	0.53
8:A:414:C:H2'	8:A:415:A:H8	1.72	0.53
8:A:414:C:C2	8:A:415:A:C8	2.97	0.53
8:A:629:G:N3	8:A:639:U:O2'	2.38	0.53
8:A:747:5MC:H2'	26:S:88:ARG:NH1	2.23	0.53
8:A:780:G:H21	8:A:783:A:H62	1.54	0.53
8:A:828:U:O2'	8:A:829:A:O4'	2.21	0.53
8:A:856:G:N1	8:A:922:C:N3	2.56	0.53
8:A:860:U:C2	8:A:861:A:C8	2.96	0.53
8:A:1169:A:H2'	8:A:1170:C:H6	1.73	0.53
8:A:1173:U:O3'	8:A:1174:U:O4'	2.26	0.53
8:A:1350:C:N3	8:A:1351:C:C5	2.76	0.53
8:A:1418:G:HO2'	8:A:1580:A:N6	2.05	0.53
8:A:1486:U:H2'	8:A:1487:U:C6	2.42	0.53
8:A:1769:U:O2	8:A:1983:G:N2	2.38	0.53
8:A:1798:U:P	10:C:270:ARG:NH2	2.81	0.53
8:A:1809:A:C6	8:A:1810:A:C2	2.97	0.53
8:A:1925:C:O2	8:A:1929:G:O6	2.26	0.53
8:A:2217:G:H2'	8:A:2218:G:H8	1.73	0.53
8:A:2469:A:H2'	8:A:2470:G:O4'	2.07	0.53
8:A:2479:U:H2'	8:A:2480:C:O4'	2.08	0.53
8:A:2588:G:C4	8:A:2589:A:C8	2.96	0.53
8:A:2595:G:N1	8:A:2598:A:OP2	2.41	0.53
8:A:2677:G:C2	8:A:2731:G:C2	2.96	0.53
8:A:2846:G:H5'	23:P:52:ARG:HH22	1.73	0.53
8:A:2862:G:C6	8:A:2863:C:N4	2.76	0.53
9:B:100:G:C2	9:B:101:A:C4	2.96	0.53
10:C:40:GLY:HA2	10:C:53:ILE:HG22	1.91	0.53
11:D:113:SER:O	11:D:167:ASN:HA	2.08	0.53
11:D:131:ASP:OD1	11:D:133:THR:N	2.25	0.53
12:E:28:VAL:O	12:E:32:VAL:HG13	2.07	0.53
12:E:111:GLU:HA	12:E:114:ARG:HB2	1.89	0.53
14:G:126:THR:HG22	14:G:128:THR:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:113:PRO:HG3	17:J:116:ARG:NH2	2.23	0.53
24:Q:68:ALA:HB1	24:Q:73:ILE:CG2	2.39	0.53
26:S:1:MET:HG3	26:S:108:SER:OG	2.08	0.53
26:S:83:LYS:HG3	26:S:97:LEU:CD2	2.38	0.53
27:T:53:VAL:HA	27:T:93:LEU:HD12	1.88	0.53
27:T:54:GLU:HB2	27:T:88:LYS:HD2	1.90	0.53
29:V:60:VAL:HG23	29:V:94:ALA:OXT	2.08	0.53
32:Y:3:ALA:HA	32:Y:6:LEU:HB2	1.89	0.53
34:a:15:G:C4'	38:e:28:ARG:NH2	2.71	0.53
34:a:31:G:C8	34:a:306:A:H1'	2.44	0.53
34:a:144:G:O6	34:a:177:G:C6	2.61	0.53
34:a:155:A:N6	34:a:167:A:N6	2.56	0.53
34:a:205:A:O4'	34:a:205:A:N3	2.41	0.53
34:a:514:C:C2'	34:a:515:G:H5'	2.38	0.53
34:a:842:U:H2'	34:a:846:G:OP1	2.08	0.53
34:a:978:A:C6	34:a:1318:A:C5	2.96	0.53
34:a:994:A:H61	34:a:1046:A:H2	1.56	0.53
34:a:1053:G:N2	34:a:1058:G:O6	2.41	0.53
34:a:1074:G:C3'	34:a:1075:U:H5''	2.38	0.53
34:a:1093:A:P	40:g:3:ARG:HH22	2.30	0.53
34:a:1160:G:C2	34:a:1161:C:C2	2.96	0.53
34:a:1367:C:H5''	42:i:115:VAL:HG13	1.88	0.53
34:a:1404:C:N3	34:a:1498:UR3:H5	2.24	0.53
34:a:1423:G:H2'	34:a:1424:U:C6	2.42	0.53
34:a:1527:U:P	54:u:41:THR:HG1	2.23	0.53
37:d:66:VAL:HG12	37:d:67:LEU:O	2.09	0.53
39:f:38:ARG:HB2	39:f:97:THR:HA	1.90	0.53
42:i:32:ARG:HB3	42:i:36:GLN:HG2	1.90	0.53
42:i:98:ARG:HA	42:i:101:GLY:O	2.08	0.53
57:x:96:ILE:HG21	57:x:442:PRO:HD2	1.89	0.53
57:x:321:PHE:CZ	57:x:334:PHE:HB3	2.43	0.53
2:1:13:SER:HA	2:1:49:LYS:NZ	2.23	0.53
8:A:85:G:H2'	8:A:86:G:O4'	2.09	0.53
8:A:257:C:H2'	8:A:258:G:O4'	2.07	0.53
8:A:261:G:C2	8:A:262:A:C8	2.96	0.53
8:A:533:G:O5'	24:Q:27:ARG:NH1	2.41	0.53
8:A:541:A:N6	8:A:553:G:O6	2.41	0.53
8:A:599:A:C6	8:A:659:G:C6	2.97	0.53
8:A:758:C:O2'	8:A:1981:A:N3	2.33	0.53
8:A:834:G:C6	8:A:835:C:C4	2.96	0.53
8:A:880:G:O6	8:A:895:U:C5	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1051:G:N1	8:A:1108:U:N3	2.57	0.53
8:A:1097:U:C4	8:A:1098:A:C4	2.96	0.53
8:A:1271:G:OP2	8:A:1648:U:OP1	2.27	0.53
8:A:1292:G:H2'	8:A:1293:C:H6	1.70	0.53
8:A:1419:A:C2	8:A:1421:G:C1'	2.92	0.53
8:A:1586:A:C6	8:A:1587:G:C4	2.96	0.53
8:A:1681:G:O2'	8:A:1762:A:N3	2.27	0.53
8:A:1912:A:C8	8:A:1916:A:N6	2.76	0.53
8:A:1998:A:H2'	8:A:1999:C:H6	1.73	0.53
8:A:2092:U:C5'	15:H:27:ARG:HH21	2.21	0.53
8:A:2144:G:H1'	8:A:2148:G:C2	2.44	0.53
8:A:2249:U:O5'	8:A:2249:U:H6	1.91	0.53
8:A:2250:G:OP1	20:M:84:LYS:HD2	2.08	0.53
8:A:2297:A:H61	8:A:2319:G:H1'	1.72	0.53
8:A:2322:A:C6	8:A:2323:G:C4	2.96	0.53
8:A:2485:G:O3'	20:M:125:PRO:HB3	2.08	0.53
8:A:2661:G:H2'	8:A:2662:A:C8	2.44	0.53
8:A:2679:A:C6	8:A:2680:U:C4	2.97	0.53
8:A:2794:C:N3	8:A:2803:G:C2	2.76	0.53
8:A:2819:G:C6	8:A:2828:G:C6	2.97	0.53
8:A:2839:G:C4	8:A:2840:C:C5	2.97	0.53
15:H:83:LYS:CB	15:H:91:PHE:HB2	2.38	0.53
16:I:78:LEU:O	16:I:82:ALA:N	2.33	0.53
24:Q:84:LYS:NZ	24:Q:116:LEU:HA	2.23	0.53
27:T:22:THR:O	27:T:26:LYS:HG3	2.09	0.53
27:T:80:TRP:CZ3	27:T:82:LYS:HB2	2.43	0.53
28:U:25:LYS:HE2	28:U:61:GLU:OE2	2.09	0.53
29:V:30:ILE:HD12	29:V:38:LEU:HD23	1.90	0.53
29:V:80:HIS:HE1	29:V:82:TYR:CZ	2.25	0.53
31:X:54:GLY:O	31:X:58:ILE:HG13	2.08	0.53
34:a:123:U:H5''	34:a:311:C:O2'	2.09	0.53
34:a:179:A:C5	34:a:180:U:C5	2.96	0.53
34:a:221:C:H2'	34:a:222:C:C6	2.43	0.53
34:a:462:G:N7	34:a:463:U:C6	2.76	0.53
34:a:506:G:H2'	34:a:507:C:C6	2.43	0.53
34:a:509:A:C5'	37:d:50:TYR:HD2	2.21	0.53
34:a:570:G:O3'	34:a:819:A:O2'	2.27	0.53
34:a:684:U:C2	34:a:707:U:O2	2.62	0.53
34:a:842:U:OP2	34:a:846:G:N1	2.42	0.53
34:a:937:A:H1'	34:a:1379:G:C2	2.44	0.53
34:a:951:G:C6	34:a:952:U:C4	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1014:A:C5	52:s:33:TRP:CH2	2.95	0.53
34:a:1085:U:OP2	34:a:1086:U:O4	2.27	0.53
34:a:1093:A:OP2	40:g:3:ARG:NH2	2.39	0.53
34:a:1164:G:C2	34:a:1173:U:C2	2.96	0.53
34:a:1276:G:H2'	34:a:1277:C:C6	2.43	0.53
34:a:1306:A:H2'	34:a:1307:U:O4'	2.09	0.53
34:a:1315:U:C2	34:a:1319:A:N7	2.77	0.53
34:a:1385:G:H2'	34:a:1386:G:O4'	2.09	0.53
34:a:1404:C:C4	34:a:1498:UR3:H5	2.42	0.53
36:c:57:GLU:C	36:c:59:PRO:HD3	2.33	0.53
36:c:155:ARG:CD	36:c:160:GLU:O	2.56	0.53
37:d:28:ASP:OD1	37:d:28:ASP:N	2.36	0.53
39:f:46:GLN:HA	39:f:56:LYS:HA	1.91	0.53
40:g:21:LEU:HD22	40:g:61:PHE:HE2	1.73	0.53
41:h:46:GLU:HB2	41:h:61:THR:O	2.08	0.53
43:j:42:LEU:O	43:j:43:PRO:C	2.49	0.53
49:p:16:PHE:HE1	49:p:18:GLN:HE21	1.55	0.53
49:p:45:GLU:N	49:p:48:GLU:OE2	2.35	0.53
57:x:14:ILE:HD12	57:x:22:LYS:HA	1.89	0.53
7:6:6:HIS:NE2	9:B:43:C:OP1	2.41	0.53
7:6:16:CYS:SG	7:6:17:SER:N	2.81	0.53
8:A:7:G:H2'	8:A:8:C:H6	1.70	0.53
8:A:210:C:H2'	8:A:211:C:C6	2.42	0.53
8:A:269:C:C4	8:A:424:G:C2	2.96	0.53
8:A:290:U:O2	8:A:350:G:C2	2.62	0.53
8:A:312:G:C2	8:A:313:G:C8	2.96	0.53
8:A:372:G:OP2	31:X:61:LYS:CE	2.56	0.53
8:A:463:G:C2	8:A:466:A:OP2	2.61	0.53
8:A:671:C:C2	8:A:672:C:C5	2.97	0.53
8:A:690:G:H2'	8:A:691:C:H6	1.74	0.53
8:A:764:A:N7	8:A:1776:G:H1'	2.23	0.53
8:A:939:G:C2	8:A:940:G:C4	2.96	0.53
8:A:1067:A:H2'	8:A:1068:G:N7	2.23	0.53
8:A:1334:G:C6	8:A:1335:C:C4	2.97	0.53
8:A:1456:G:H2'	8:A:1457:U:C6	2.43	0.53
8:A:1494:A:H2'	8:A:1495:A:C8	2.42	0.53
8:A:1707:G:C4	8:A:1708:C:C5	2.96	0.53
8:A:1736:U:H2'	8:A:1737:G:O4'	2.08	0.53
8:A:1770:G:N2	8:A:1982:U:O2	2.34	0.53
8:A:1903:G:C2	8:A:1904:G:C8	2.96	0.53
8:A:1959:G:H2'	8:A:1960:A:O4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1998:A:C6	8:A:1999:C:C4	2.97	0.53
8:A:2027:G:H2'	8:A:2028:U:H6	1.73	0.53
8:A:2141:G:N7	8:A:2144:G:O6	2.41	0.53
8:A:2199:A:H2'	8:A:2200:C:O4'	2.08	0.53
8:A:2391:G:H1	8:A:2424:C:H3'	1.74	0.53
8:A:2425:A:O4'	8:A:2427:C:C6	2.62	0.53
8:A:2447:G:C2'	8:A:2500:U:OP2	2.56	0.53
8:A:2456:C:C2	8:A:2457:PSU:C6	2.97	0.53
8:A:2568:U:H2'	8:A:2569:G:O4'	2.07	0.53
8:A:2577:A:O4'	8:A:2612:C:N4	2.41	0.53
8:A:2626:C:H2'	8:A:2627:G:O4'	2.09	0.53
8:A:2656:U:C2	8:A:2665:A:N7	2.77	0.53
8:A:2660:A:N6	8:A:2661:G:C2	2.77	0.53
8:A:2693:G:N1	8:A:2717:C:C4	2.77	0.53
8:A:2700:A:H2'	8:A:2701:U:H6	1.73	0.53
8:A:2836:U:O4	8:A:2879:A:N7	2.42	0.53
10:C:107:LYS:HZ1	10:C:198:GLU:CD	2.15	0.53
11:D:47:ALA:HB2	11:D:83:ARG:HD2	1.90	0.53
12:E:29:HIS:ND1	19:L:8:PRO:HB3	2.24	0.53
17:J:15:TRP:HA	17:J:53:TYR:O	2.09	0.53
24:Q:84:LYS:HD3	24:Q:115:ALA:O	2.09	0.53
27:T:51:PHE:C	27:T:52:GLU:HG2	2.33	0.53
34:a:145:G:O6	34:a:197:A:OP2	2.26	0.53
34:a:182:A:N6	34:a:194:C:C2	2.66	0.53
34:a:499:A:C6	34:a:547:A:C8	2.97	0.53
34:a:575:G:C5	34:a:821:G:C8	2.96	0.53
34:a:596:A:C6	34:a:645:G:C2	2.96	0.53
34:a:895:G:N2	34:a:904:U:O2	2.42	0.53
34:a:899:C:H2'	34:a:900:A:O4'	2.09	0.53
34:a:938:A:O2'	40:g:94:ARG:NH2	2.33	0.53
34:a:1069:C:C5	34:a:1094:G:C6	2.96	0.53
34:a:1134:G:C5	34:a:1135:U:C4	2.95	0.53
34:a:1394:A:N6	34:a:1501:C:H4'	2.23	0.53
36:c:19:SER:O	47:n:94:PRO:HG3	2.09	0.53
39:f:11:HIS:HB3	39:f:14:GLN:OE1	2.08	0.53
40:g:106:ALA:O	40:g:109:LYS:N	2.42	0.53
41:h:23:ALA:HA	41:h:61:THR:HA	1.91	0.53
55:v:22:G:N7	55:v:46:A:N1	2.56	0.53
57:x:169:GLN:CG	57:x:264:THR:HG23	2.39	0.53
3:2:12:ARG:HB2	8:A:686:U:O4	2.09	0.53
4:3:23:HIS:C	4:3:23:HIS:ND1	2.67	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:250:G:O6	8:A:386:G:N2	2.40	0.53
8:A:324:A:N6	8:A:338:G:H2'	2.23	0.53
8:A:412:A:C4	8:A:413:C:C6	2.97	0.53
8:A:496:G:H1'	26:S:61:ASN:CG	2.34	0.53
8:A:571:U:C4	8:A:575:A:C8	2.97	0.53
8:A:843:G:N1	8:A:936:A:C6	2.77	0.53
8:A:991:C:O4'	8:A:1185:G:H2'	2.08	0.53
8:A:1065:U:C4	8:A:1074:G:H2'	2.43	0.53
8:A:1387:A:C4	8:A:1388:G:C8	2.96	0.53
8:A:1711:A:H2'	8:A:1712:U:C6	2.43	0.53
8:A:1758:U:C5	8:A:2696:U:H5'	2.44	0.53
8:A:1814:G:C6	8:A:1815:A:C6	2.96	0.53
8:A:2197:U:O2'	8:A:2198:A:H2'	2.09	0.53
8:A:2283:C:C5	8:A:2389:G:C4	2.96	0.53
8:A:2345:G:H21	8:A:2381:A:H3'	1.74	0.53
8:A:2416:C:H2'	8:A:2417:C:C6	2.43	0.53
8:A:2468:A:C8	8:A:2476:A:C2	2.97	0.53
8:A:2531:A:C2	8:A:2532:G:H1'	2.43	0.53
8:A:2619:C:C2	8:A:2620:C:C5	2.96	0.53
8:A:2812:G:H2'	8:A:2813:A:C8	2.43	0.53
10:C:1:ALA:HB3	10:C:19:VAL:HG23	1.89	0.53
13:F:25:MET:HA	13:F:29:ARG:NH2	2.22	0.53
13:F:74:ALA:O	13:F:77:LYS:CE	2.56	0.53
15:H:5:LEU:O	15:H:16:GLY:N	2.41	0.53
15:H:77:THR:CB	15:H:143:ILE:HG13	2.39	0.53
18:K:37:ASP:OD1	18:K:37:ASP:N	2.37	0.53
19:L:95:LEU:HB3	19:L:100:ILE:HB	1.90	0.53
22:O:33:ARG:HG3	22:O:65:THR:OG1	2.08	0.53
23:P:103:THR:HA	23:P:107:ALA:HB2	1.90	0.53
23:P:112:ARG:HE	23:P:114:ASN:ND2	2.07	0.53
24:Q:60:TRP:CD2	24:Q:92:LYS:HA	2.44	0.53
25:R:27:ILE:O	25:R:66:HIS:NE2	2.41	0.53
25:R:67:GLY:HA3	25:R:93:PHE:CZ	2.44	0.53
29:V:61:LEU:O	29:V:71:LYS:HA	2.09	0.53
34:a:14:U:H3	34:a:16:A:H3'	1.73	0.53
34:a:19:A:N3	34:a:572:A:C2	2.76	0.53
34:a:56:U:H2'	34:a:57:G:H8	1.74	0.53
34:a:60:A:C6	34:a:108:G:H4'	2.43	0.53
34:a:187:G:HO2'	34:a:190:A:N6	2.07	0.53
34:a:236:A:H2'	34:a:237:G:C8	2.43	0.53
34:a:294:U:OP1	34:a:610:U:O2'	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:602:A:C2	34:a:637:C:C2	2.97	0.53
34:a:664:G:O2'	34:a:725:G:O2'	2.14	0.53
34:a:681:A:C6	34:a:710:G:C6	2.97	0.53
34:a:894:G:C4	34:a:895:G:C8	2.97	0.53
34:a:1068:G:C6	34:a:1108:G:C2	2.95	0.53
34:a:1304:G:C2	34:a:1334:G:C6	2.97	0.53
34:a:1356:G:C2	34:a:1367:C:C2	2.96	0.53
34:a:1363:A:C2'	34:a:1365:G:N7	2.71	0.53
34:a:1439:G:C6	34:a:1440:U:C4	2.95	0.53
38:e:78:GLY:HA2	38:e:118:GLY:O	2.08	0.53
40:g:131:GLY:O	40:g:134:VAL:HG22	2.08	0.53
43:j:5:ARG:NE	43:j:6:ILE:HD11	2.24	0.53
45:l:29:LYS:O	45:l:81:ILE:HG22	2.08	0.53
50:q:10:ARG:HA	50:q:56:ASP:O	2.08	0.53
51:r:10:CYS:HA	51:r:46:THR:H	1.73	0.53
53:t:53:MET:O	53:t:57:VAL:HG13	2.07	0.53
57:x:373:ILE:HG22	57:x:375:GLU:H	1.74	0.53
57:x:560:LEU:HD12	57:x:600:PHE:CE1	2.44	0.53
2:1:18:HIS:CE1	2:1:40:PRO:HD2	2.44	0.53
2:1:29:LYS:HD2	8:A:2287:A:OP1	2.08	0.53
8:A:72:U:H5'	32:Y:54:LYS:HD2	1.90	0.53
8:A:176:A:H3'	8:A:177:G:N2	2.23	0.53
8:A:323:C:N4	8:A:333:G:C5	2.76	0.53
8:A:373:U:P	31:X:53:LYS:NZ	2.82	0.53
8:A:407:G:H2'	8:A:408:G:H8	1.74	0.53
8:A:638:G:H2'	8:A:639:U:C6	2.44	0.53
8:A:699:A:O3'	8:A:1554:U:N3	2.42	0.53
8:A:713:G:O2'	8:A:718:A:N6	2.36	0.53
8:A:836:G:C6	8:A:943:A:C2	2.97	0.53
8:A:956:G:N2	8:A:959:A:H3'	2.24	0.53
8:A:1030:C:N4	8:A:1125:G:N2	2.57	0.53
8:A:1299:G:N2	8:A:1640:A:C8	2.76	0.53
8:A:1321:A:C4	8:A:1322:A:C8	2.97	0.53
8:A:1398:C:C2	8:A:1399:C:C5	2.96	0.53
8:A:1499:C:C2	8:A:1500:G:C8	2.97	0.53
8:A:1583:A:H4'	8:A:1584:U:H5	1.72	0.53
8:A:1631:G:N2	8:A:1633:G:H3'	2.24	0.53
8:A:1750:G:C6	8:A:1751:U:C4	2.97	0.53
8:A:1772:A:H2'	8:A:1773:A:O3'	2.09	0.53
8:A:1813:G:H1'	10:C:49:THR:HG21	1.89	0.53
8:A:1878:G:C5	8:A:1879:C:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2047:C:H2'	8:A:2048:G:C8	2.42	0.53
8:A:2127:G:C6	8:A:2128:G:C6	2.96	0.53
8:A:2176:A:N7	8:A:2177:C:C5	2.77	0.53
8:A:2188:U:N3	8:A:2189:U:C4	2.76	0.53
8:A:2192:U:O2'	8:A:2193:G:OP1	2.20	0.53
8:A:2294:G:N1	8:A:2339:C:C4	2.76	0.53
8:A:2576:G:N2	8:A:2576:G:OP1	2.42	0.53
8:A:2651:C:C2	8:A:2652:C:C5	2.97	0.53
8:A:2677:G:H2'	8:A:2678:C:H6	1.73	0.53
8:A:2677:G:N1	8:A:2731:G:C6	2.77	0.53
8:A:2848:G:N2	8:A:2867:G:C4	2.76	0.53
8:A:2869:G:C6	8:A:2870:C:C4	2.96	0.53
8:A:2869:G:H2'	8:A:2870:C:C6	2.44	0.53
8:A:2898:U:C2	8:A:2899:A:N7	2.77	0.53
9:B:9:G:N1	9:B:111:U:C2	2.69	0.53
11:D:109:VAL:HG23	11:D:175:LEU:HD12	1.91	0.53
11:D:156:PHE:CE1	17:J:81:ILE:HD13	2.43	0.53
13:F:106:ALA:HA	13:F:109:ARG:HB2	1.91	0.53
15:H:101:ASP:HA	15:H:107:GLY:HA2	1.89	0.53
23:P:95:LYS:HG2	23:P:97:TYR:OH	2.08	0.53
28:U:16:LYS:HE3	28:U:17:ASP:OD2	2.08	0.53
28:U:98:ASN:ND2	28:U:100:GLU:HB3	2.23	0.53
32:Y:1:MET:HB3	32:Y:6:LEU:CD1	2.38	0.53
34:a:2:A:N7	34:a:3:A:C6	2.76	0.53
34:a:204:G:OP1	34:a:465:A:C2	2.61	0.53
34:a:231:U:C2	34:a:232:G:C8	2.97	0.53
34:a:261:U:C4	53:t:73:ARG:NH1	2.76	0.53
34:a:401:C:H2'	34:a:402:G:H8	1.74	0.53
34:a:520:A:C6	34:a:521:G:C4	2.96	0.53
34:a:637:C:H2'	34:a:638:U:H6	1.73	0.53
34:a:780:A:H1'	34:a:803:G:N2	2.23	0.53
34:a:786:G:C6	34:a:797:C:N4	2.77	0.53
34:a:821:G:C6	34:a:822:U:C4	2.97	0.53
34:a:896:C:C2	34:a:897:C:C5	2.97	0.53
34:a:953:G:O6	46:m:102:LYS:HE2	2.09	0.53
34:a:1013:G:O2'	34:a:1014:A:N7	2.37	0.53
34:a:1015:G:H2'	34:a:1016:A:C8	2.44	0.53
34:a:1087:G:C5	34:a:1099:G:C2	2.96	0.53
34:a:1137:C:H5'	34:a:1138:G:O5'	2.08	0.53
34:a:1146:A:C2	34:a:1147:C:H1'	2.44	0.53
34:a:1251:A:H2'	34:a:1252:A:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1259:C:C5	34:a:1260:G:C8	2.97	0.53
34:a:1312:G:C5	52:s:1:PRO:HD2	2.44	0.53
34:a:1356:G:N1	34:a:1367:C:N3	2.56	0.53
34:a:1426:G:H2'	34:a:1427:C:C6	2.43	0.53
35:b:95:TRP:CZ2	35:b:100:LEU:HD21	2.44	0.53
36:c:26:LYS:HB3	36:c:27:GLU:OE1	2.08	0.53
36:c:147:GLY:C	36:c:172:VAL:HG22	2.34	0.53
38:e:80:LEU:HD12	38:e:83:PRO:HA	1.89	0.53
39:f:38:ARG:HB3	39:f:63:ASN:HB2	1.89	0.53
42:i:28:VAL:CG1	42:i:63:TYR:HA	2.38	0.53
44:k:33:ILE:HG12	44:k:69:CYS:SG	2.49	0.53
50:q:25:GLU:HA	50:q:39:ARG:O	2.09	0.53
51:r:41:SER:C	51:r:43:ILE:H	2.15	0.53
55:v:4:G:N1	55:v:70:G:C6	2.77	0.53
56:w:36:A:H1'	57:x:510:GLY:O	2.08	0.53
56:w:40:C:C2	56:w:41:C:C5	2.97	0.53
57:x:10:ARG:HH21	57:x:252:ARG:NH2	2.07	0.53
57:x:142:LYS:HG2	62:x:801:GDP:C6	2.43	0.53
57:x:143:MET:N	57:x:267:SER:OG	2.42	0.53
57:x:489:TYR:O	57:x:568:TYR:HB3	2.09	0.53
1:0:40:HIS:HA	1:0:48:TYR:OH	2.08	0.53
7:6:6:HIS:HE1	9:B:43:C:H5'	1.73	0.53
7:6:59:ARG:O	7:6:62:LYS:HB3	2.08	0.53
8:A:49:A:O2'	8:A:177:G:O6	2.14	0.53
8:A:381:G:C2	8:A:394:C:C2	2.97	0.53
8:A:478:A:H62	8:A:502:A:N6	2.07	0.53
8:A:527:C:C5	8:A:2043:C:O4'	2.61	0.53
8:A:635:C:O2'	8:A:639:U:H5''	2.08	0.53
8:A:672:C:C2	8:A:673:C:C5	2.97	0.53
8:A:851:C:HO2'	33:Z:42:ALA:C	2.13	0.53
8:A:880:G:H2'	8:A:880:G:N3	2.24	0.53
8:A:886:A:O2'	8:A:887:A:H5''	2.09	0.53
8:A:888:C:N4	13:F:114:ARG:CZ	2.72	0.53
8:A:929:U:C2	8:A:930:G:C8	2.97	0.53
8:A:1206:G:O6	8:A:1240:U:O4	2.26	0.53
8:A:1311:G:H21	8:A:1603:A:H62	1.57	0.53
8:A:1385:A:C5	8:A:1403:A:C5	2.97	0.53
8:A:1385:A:C6	8:A:1403:A:C5	2.97	0.53
8:A:1490:A:O2'	8:A:1491:G:P	2.66	0.53
8:A:1501:G:H2'	8:A:1502:A:C8	2.43	0.53
8:A:1567:G:OP2	10:C:84:PRO:HB3	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1596:A:O2'	8:A:1597:A:H5'	2.08	0.53
8:A:1608:A:O2'	8:A:1611:C:N4	2.42	0.53
8:A:1803:A:H61	8:A:1814:G:C2'	2.21	0.53
8:A:1842:G:C4	8:A:1843:C:C5	2.96	0.53
8:A:1936:A:O4'	8:A:1940:U:C4	2.61	0.53
8:A:2074:U:H1'	8:A:2598:A:N3	2.23	0.53
8:A:2088:A:H2'	8:A:2089:C:H6	1.74	0.53
8:A:2531:A:OP2	14:G:174:LYS:HG3	2.07	0.53
8:A:2597:G:O2'	8:A:2598:A:O4'	2.25	0.53
8:A:2671:G:C2	8:A:2672:U:C2	2.96	0.53
8:A:2700:A:H2'	8:A:2701:U:C6	2.44	0.53
8:A:2725:A:C4	8:A:2727:A:C8	2.97	0.53
8:A:2734:A:H61	8:A:2770:G:C2'	2.20	0.53
8:A:2795:C:H2'	8:A:2796:U:H6	1.73	0.53
8:A:2830:C:H1'	8:A:2836:U:O4'	2.09	0.53
8:A:2854:G:N1	8:A:2864:G:C6	2.77	0.53
8:A:2897:U:H2'	8:A:2898:U:C6	2.43	0.53
11:D:9:VAL:HB	11:D:26:VAL:HB	1.90	0.53
12:E:29:HIS:CE1	19:L:8:PRO:HD3	2.43	0.53
14:G:104:LEU:HB2	14:G:112:VAL:HB	1.91	0.53
14:G:158:GLY:HA3	14:G:162:ARG:NH1	2.24	0.53
15:H:103:VAL:HG13	15:H:104:THR:H	1.74	0.53
21:N:114:GLU:HB2	21:N:118:ARG:NE	2.24	0.53
22:O:5:SER:HA	22:O:8:ILE:HD12	1.91	0.53
34:a:42:G:H2'	34:a:43:C:C6	2.43	0.53
34:a:86:G:H1'	34:a:88:U:H1'	1.91	0.53
34:a:144:G:C8	34:a:145:G:O4'	2.61	0.53
34:a:225:C:H2'	34:a:226:G:O4'	2.08	0.53
34:a:623:C:H2'	34:a:624:C:C6	2.44	0.53
34:a:778:G:H2'	34:a:779:C:C6	2.43	0.53
34:a:828:U:C2	34:a:859:G:H1'	2.44	0.53
34:a:851:G:C6	34:a:852:G:C6	2.97	0.53
34:a:870:U:C5	34:a:872:A:C6	2.97	0.53
34:a:973:G:H2'	34:a:974:A:C8	2.44	0.53
34:a:1030:U:N3	34:a:1032:G:O6	2.42	0.53
34:a:1151:A:O2'	34:a:1152:A:H8	1.91	0.53
34:a:1306:A:C2	34:a:1332:A:O4'	2.60	0.53
34:a:1356:G:H2'	34:a:1357:A:C8	2.44	0.53
34:a:1392:G:H2'	34:a:1393:U:C6	2.43	0.53
35:b:80:LYS:HD3	35:b:90:PHE:CZ	2.43	0.53
36:c:137:VAL:CG1	36:c:169:GLU:HB2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:c:152:VAL:O	36:c:164:THR:HA	2.09	0.53
37:d:129:VAL:HG12	37:d:131:ILE:H	1.73	0.53
38:e:87:VAL:HG13	38:e:92:ARG:CD	2.38	0.53
39:f:37:HIS:CD2	39:f:64:VAL:C	2.87	0.53
40:g:130:LYS:O	40:g:130:LYS:HD3	2.07	0.53
42:i:32:ARG:CZ	42:i:37:TYR:HA	2.38	0.53
43:j:41:PRO:C	43:j:71:LEU:O	2.51	0.53
55:v:55:PSU:C6	55:v:57:A:H3'	2.44	0.53
56:w:6:G:N1	56:w:68:C:C4	2.77	0.53
56:w:37:MIA:H153	56:w:38:A:C2	2.44	0.53
1:0:30:ASP:OD1	1:0:50:GLY:N	2.41	0.53
3:2:33:ARG:O	3:2:36:ALA:HB3	2.09	0.53
5:4:3:VAL:O	5:4:3:VAL:HG12	2.09	0.53
8:A:188:G:C2	8:A:209:C:N3	2.77	0.53
8:A:310:A:C5'	28:U:14:THR:HG23	2.39	0.53
8:A:371:A:N1	8:A:401:A:H5'	2.24	0.53
8:A:481:G:C2	8:A:507:A:C4	2.96	0.53
8:A:569:U:O2'	8:A:983:A:N1	2.40	0.53
8:A:833:A:H4'	19:L:51:GLU:HA	1.90	0.53
8:A:887:A:H5'	8:A:890:C:O2	2.09	0.53
8:A:888:C:H5	52:s:27:LYS:HE2	1.74	0.53
8:A:920:A:C6	8:A:921:C:C4	2.97	0.53
8:A:1062:G:C2	8:A:1078:U:C5	2.97	0.53
8:A:1228:G:C6	8:A:1229:C:N4	2.76	0.53
8:A:1329:U:OP2	8:A:1330:C:N4	2.41	0.53
8:A:1445:G:C2	8:A:1547:C:C2	2.97	0.53
8:A:1455:G:C2	8:A:1456:G:C4	2.97	0.53
8:A:1482:G:N1	8:A:1508:A:C2	2.77	0.53
8:A:1516:G:C2	8:A:1517:G:C4	2.97	0.53
8:A:1740:G:H2'	8:A:1741:C:H6	1.73	0.53
8:A:1786:A:C4	8:A:1938:A:N6	2.76	0.53
8:A:1868:C:H2'	8:A:1869:G:O4'	2.09	0.53
8:A:2604:PSU:O2'	8:A:2605:PSU:H5''	2.09	0.53
8:A:2628:C:H1'	8:A:2781:A:H2'	1.90	0.53
8:A:2704:C:C4	8:A:2705:A:C5	2.96	0.53
8:A:2836:U:H2'	8:A:2837:A:C8	2.44	0.53
9:B:60:C:H2'	9:B:61:G:H8	1.74	0.53
9:B:92:C:H2'	9:B:93:C:H6	1.74	0.53
10:C:159:THR:HA	10:C:176:ARG:NE	2.23	0.53
13:F:163:GLU:HG3	13:F:164:GLU:N	2.23	0.53
14:G:101:VAL:HG22	14:G:115:GLN:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:74:TYR:HD2	17:J:87:ALA:O	1.92	0.53
22:O:77:ALA:HA	22:O:80:GLU:OE1	2.09	0.53
23:P:8:GLU:HB3	23:P:12:MET:SD	2.49	0.53
33:Z:2:LYS:HE3	33:Z:39:ASP:O	2.09	0.53
34:a:3:A:N1	34:a:628:G:O2'	2.39	0.53
34:a:56:U:O2'	34:a:368:U:O4	2.15	0.53
34:a:82:G:C2	34:a:84:U:O4	2.62	0.53
34:a:100:G:H2'	34:a:101:A:O4'	2.09	0.53
34:a:150:U:O4	34:a:170:U:H5''	2.08	0.53
34:a:266:G:O4'	34:a:268:U:C5	2.62	0.53
34:a:293:G:N2	34:a:304:U:O2	2.39	0.53
34:a:447:G:N1	34:a:486:U:OP1	2.42	0.53
34:a:469:C:C4	34:a:470:C:O2'	2.59	0.53
34:a:532:A:N6	36:c:126:ARG:HE	2.06	0.53
34:a:781:A:H2'	34:a:782:A:H5'	1.91	0.53
34:a:930:C:H2'	34:a:931:C:H6	1.73	0.53
34:a:963:G:H1'	34:a:973:G:N2	2.23	0.53
34:a:1009:U:C2	34:a:1020:G:N1	2.76	0.53
34:a:1091:U:C2	34:a:1093:A:O5'	2.62	0.53
34:a:1152:A:OP1	43:j:70:HIS:HB3	2.08	0.53
34:a:1300:G:O6	34:a:1334:G:H3'	2.09	0.53
34:a:1405:G:C6	34:a:1497:G:C6	2.97	0.53
34:a:1423:G:H2'	34:a:1424:U:H6	1.72	0.53
34:a:1461:G:H2'	34:a:1462:C:H6	1.74	0.53
34:a:1491:G:C2	61:a:2001:AM2:HA8	2.44	0.53
36:c:137:VAL:HG11	36:c:169:GLU:CD	2.34	0.53
37:d:154:VAL:O	37:d:158:LEU:HD23	2.09	0.53
41:h:47:ASP:OD1	41:h:48:PHE:N	2.42	0.53
41:h:63:LYS:HG2	41:h:70:VAL:CG2	2.35	0.53
44:k:124:LYS:HG3	44:k:125:LYS:H	1.73	0.53
45:l:34:THR:HG22	45:l:53:ARG:O	2.08	0.53
46:m:39:ALA:HB3	46:m:42:VAL:HG13	1.89	0.53
50:q:61:ARG:HB3	50:q:75:VAL:CG2	2.39	0.53
55:v:51:C:C2	55:v:52:G:C8	2.96	0.53
3:2:39:ARG:HD3	8:A:459:U:P	2.49	0.53
8:A:10:A:C6	8:A:2800:A:C2	2.97	0.53
8:A:172:A:H2'	8:A:173:A:H8	1.74	0.53
8:A:190:A:OP2	31:X:25:LYS:HE2	2.09	0.53
8:A:242:G:C4	8:A:254:G:C6	2.97	0.53
8:A:271:G:C6	8:A:367:G:C6	2.96	0.53
8:A:322:A:O4'	8:A:340:A:C1'	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:323:C:N4	8:A:333:G:N7	2.56	0.53
8:A:374:A:C8	8:A:375:G:C8	2.97	0.53
8:A:500:G:H1'	8:A:505:A:N6	2.23	0.53
8:A:728:G:C6	8:A:730:A:C5	2.96	0.53
8:A:738:G:N1	8:A:759:G:C6	2.77	0.53
8:A:822:G:C4	8:A:823:C:C5	2.97	0.53
8:A:830:G:O4'	8:A:2448:A:C2	2.61	0.53
8:A:872:U:H2'	8:A:873:C:H6	1.73	0.53
8:A:911:A:H2'	20:M:9:PHE:HZ	1.74	0.53
8:A:924:G:H2'	8:A:925:A:H8	1.73	0.53
8:A:993:G:C6	8:A:1162:G:C6	2.97	0.53
8:A:1041:G:N1	8:A:1115:G:C6	2.77	0.53
8:A:1069:A:H5''	8:A:1074:G:C4	2.44	0.53
8:A:1165:A:H2'	8:A:1166:G:H8	1.74	0.53
8:A:1217:U:C2	8:A:1218:G:C8	2.96	0.53
8:A:1252:G:O3'	24:Q:32:ARG:NH1	2.42	0.53
8:A:1468:U:H2'	8:A:1522:A:C6	2.44	0.53
8:A:1696:G:C6	8:A:1697:G:C2	2.96	0.53
8:A:1776:G:C6	8:A:1789:A:C2	2.97	0.53
8:A:1795:C:C2	10:C:252:LYS:NZ	2.70	0.53
8:A:1796:U:H4'	10:C:252:LYS:C	2.34	0.53
8:A:1839:G:C4	8:A:1927:A:C5	2.97	0.53
8:A:1930:G:H22	8:A:1969:A:P	2.31	0.53
8:A:2071:A:H2'	8:A:2072:C:H6	1.73	0.53
8:A:2127:G:O2'	8:A:2128:G:O5'	2.27	0.53
8:A:2182:U:H2'	8:A:2183:A:C1'	2.38	0.53
8:A:2199:A:C2	8:A:2200:C:H1'	2.43	0.53
8:A:2232:C:C4	8:A:2233:U:C4	2.97	0.53
8:A:2672:U:H2'	8:A:2673:G:O4'	2.09	0.53
8:A:2739:U:O4	8:A:2763:G:H2'	2.09	0.53
8:A:2773:C:H2'	8:A:2774:C:C6	2.44	0.53
9:B:49:C:H2'	9:B:50:A:H8	1.73	0.53
10:C:94:LEU:HD12	10:C:95:TYR:N	2.24	0.53
13:F:72:SER:HB2	13:F:79:ARG:HE	1.73	0.53
14:G:10:VAL:O	14:G:47:ASN:ND2	2.40	0.53
20:M:33:LEU:O	20:M:102:LEU:HG	2.09	0.53
23:P:93:LYS:HB2	23:P:96:LEU:CD2	2.39	0.53
25:R:93:PHE:CD1	25:R:93:PHE:C	2.87	0.53
26:S:2:GLU:HG2	26:S:108:SER:HB2	1.90	0.53
26:S:81:SER:HA	26:S:98:LYS:O	2.09	0.53
27:T:8:LEU:CD1	32:Y:22:LEU:HB3	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:11:G:C2	34:a:24:U:C2	2.97	0.53
34:a:121:U:H6	34:a:121:U:O5'	1.91	0.53
34:a:257:G:H2'	34:a:258:G:H8	1.74	0.53
34:a:352:C:H4'	34:a:354:G:OP1	2.09	0.53
34:a:384:G:H2'	34:a:385:C:C6	2.43	0.53
34:a:410:G:C5	34:a:429:U:O2'	2.61	0.53
34:a:472:U:H2'	34:a:473:U:N1	2.24	0.53
34:a:527:G7M:C2'	34:a:535:A:N1	2.71	0.53
34:a:617:G:C2	34:a:618:C:C2	2.97	0.53
34:a:657:U:H1'	48:o:21:THR:O	2.08	0.53
34:a:657:U:H4'	48:o:27:GLN:OE1	2.08	0.53
34:a:785:G:N2	34:a:798:U:C2	2.77	0.53
34:a:859:G:H2'	34:a:860:A:C8	2.43	0.53
34:a:1014:A:H5''	52:s:13:HIS:CD2	2.43	0.53
34:a:1111:A:C6	34:a:1112:C:C4	2.97	0.53
34:a:1146:A:H2	42:i:19:PHE:HZ	1.56	0.53
34:a:1304:G:O2'	34:a:1305:G:O4'	2.26	0.53
34:a:1355:G:H2'	34:a:1356:G:C8	2.44	0.53
34:a:1418:A:C8	34:a:1482:G:N2	2.74	0.53
34:a:1495:U:C2	34:a:1496:C:C5	2.97	0.53
37:d:104:MET:SD	37:d:172:VAL:HG22	2.49	0.53
37:d:169:TRP:CE2	37:d:170:LEU:HD21	2.44	0.53
38:e:19:ARG:HD2	38:e:30:PHE:HB3	1.91	0.53
38:e:94:PHE:O	38:e:124:ALA:HA	2.09	0.53
42:i:11:ARG:NE	42:i:106:ASP:OD2	2.42	0.53
43:j:48:ARG:NE	47:n:101:TRP:CZ3	2.77	0.53
45:l:58:ASN:ND2	45:l:60:PHE:HD1	2.06	0.53
46:m:10:ASP:HA	46:m:44:ILE:CG2	2.39	0.53
48:o:52:ARG:O	48:o:56:LEU:HG	2.09	0.53
52:s:37:SER:OG	52:s:70:LEU:HD12	2.09	0.53
57:x:31:PHE:HZ	57:x:196:ASP:O	1.91	0.53
57:x:99:GLU:O	57:x:132:TYR:CZ	2.62	0.53
57:x:646:SER:CA	57:x:651:VAL:HG12	2.39	0.53
1:0:14:MET:HB3	8:A:2045:C:O3'	2.08	0.53
2:1:25:ASN:ND2	2:1:28:THR:HG21	2.24	0.53
3:2:25:LYS:HD3	3:2:29:GLN:NE2	2.24	0.53
8:A:8:C:C2	8:A:9:G:C8	2.97	0.53
8:A:40:U:H2'	8:A:41:C:C6	2.44	0.53
8:A:51:G:O2'	8:A:119:A:N1	2.35	0.53
8:A:156:A:C2	8:A:171:U:C2	2.97	0.53
8:A:281:C:H2'	8:A:282:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:458:G:N9	8:A:469:G:O6	2.42	0.53
8:A:460:A:C8	8:A:461:C:C5	2.97	0.53
8:A:480:A:O3'	28:U:43:LYS:HA	2.09	0.53
8:A:529:A:C2	8:A:2023:C:C6	2.97	0.53
8:A:684:G:C2	8:A:774:G:C2	2.97	0.53
8:A:706:A:C5'	10:C:6:LYS:HE3	2.38	0.53
8:A:780:G:C2	8:A:782:A:C2	2.97	0.53
8:A:851:C:H2'	8:A:852:U:C6	2.44	0.53
8:A:898:C:C2'	8:A:899:A:H5'	2.37	0.53
8:A:909:A:H2'	8:A:912:C:C5	2.44	0.53
8:A:962:G:C5	8:A:963:U:C4	2.97	0.53
8:A:1025:G:C4	8:A:1135:C:H1'	2.44	0.53
8:A:1089:A:H2	8:A:1102:C:C6	2.26	0.53
8:A:1153:C:C2	8:A:1154:G:C8	2.97	0.53
8:A:1311:G:H22	8:A:1604:C:N4	2.06	0.53
8:A:1352:U:O4	8:A:1380:G:O6	2.27	0.53
8:A:1378:A:HO2'	8:A:1379:U:P	2.22	0.53
8:A:1448:G:C6	8:A:1449:G:C5	2.97	0.53
8:A:1478:G:C6	8:A:1514:G:C2	2.97	0.53
8:A:1686:C:N3	8:A:1703:G:C6	2.77	0.53
8:A:1713:A:N6	8:A:1746:A:C2	2.77	0.53
8:A:1771:C:H2'	8:A:1772:A:C8	2.44	0.53
8:A:1794:A:H1'	8:A:1900:A:C2	2.43	0.53
8:A:1831:G:C6	8:A:1832:C:N4	2.77	0.53
8:A:1834:U:O2	8:A:1972:G:C2	2.62	0.53
8:A:1983:G:H2'	8:A:1984:G:H8	1.74	0.53
8:A:1998:A:H2'	8:A:1999:C:C6	2.44	0.53
8:A:2024:G:C3'	11:D:154:LYS:HZ3	2.20	0.53
8:A:2050:C:H2'	8:A:2051:A:O4'	2.09	0.53
8:A:2111:U:HO2'	8:A:2115:G:N2	2.01	0.53
8:A:2528:U:C2	8:A:2536:G:N1	2.77	0.53
8:A:2615:U:C2	8:A:2616:C:C5	2.97	0.53
8:A:2739:U:N3	8:A:2740:A:N7	2.57	0.53
8:A:2861:U:C2	8:A:2862:G:C8	2.98	0.53
8:A:2891:U:H2'	8:A:2892:G:C8	2.44	0.53
9:B:58:A:H2'	9:B:59:A:O4'	2.09	0.53
10:C:77:VAL:HA	10:C:93:VAL:HA	1.91	0.53
12:E:150:THR:OG1	12:E:171:ASP:HA	2.08	0.53
12:E:153:LEU:HD12	12:E:153:LEU:O	2.09	0.53
13:F:141:ASP:OD1	13:F:144:LYS:N	2.42	0.53
14:G:116:LEU:HD11	14:G:122:ALA:CB	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:19:GLY:O	20:M:97:GLN:HB3	2.09	0.53
21:N:113:ILE:O	21:N:113:ILE:HG23	2.09	0.53
23:P:28:LYS:HE2	23:P:39:LEU:HG	1.91	0.53
29:V:72:VAL:HA	29:V:94:ALA:N	2.23	0.53
30:W:67:VAL:O	30:W:72:ASN:HA	2.08	0.53
31:X:69:GLU:O	31:X:73:ARG:HG3	2.09	0.53
34:a:56:U:H2'	34:a:57:G:C8	2.44	0.53
34:a:71:A:C6	34:a:72:A:N7	2.77	0.53
34:a:124:C:N3	34:a:238:A:N1	2.57	0.53
34:a:171:A:H2'	34:a:172:A:C8	2.44	0.53
34:a:216:U:C2	34:a:217:C:C4	2.97	0.53
34:a:268:U:H2'	34:a:269:C:C6	2.44	0.53
34:a:463:U:O2	34:a:464:U:C5	2.62	0.53
34:a:642:A:C5	34:a:643:C:C4	2.97	0.53
34:a:686:U:H1'	44:k:43:TRP:HE1	1.74	0.53
34:a:738:C:H2'	34:a:739:C:C6	2.45	0.53
34:a:777:A:H3'	34:a:778:G:H8	1.73	0.53
34:a:946:A:C2	34:a:947:G:C5	2.97	0.53
34:a:952:U:H5'	34:a:972:C:H41	1.73	0.53
34:a:953:G:C2	34:a:954:G:H1'	2.44	0.53
34:a:1152:A:H2'	34:a:1153:G:O4'	2.08	0.53
34:a:1306:A:C6	34:a:1307:U:C2	2.97	0.53
34:a:1451:U:O2'	34:a:1453:G:C8	2.59	0.53
34:a:1516:2MG:N3	34:a:1518:MA6:OP2	2.42	0.53
36:c:183:TYR:O	36:c:184:ASN:ND2	2.42	0.53
37:d:172:VAL:HG12	37:d:173:ASP:N	2.24	0.53
40:g:119:LEU:O	40:g:123:LEU:HG	2.09	0.53
46:m:1:ALA:HB1	46:m:7:ASN:OD1	2.09	0.53
50:q:28:VAL:HG12	50:q:39:ARG:HG2	1.91	0.53
56:w:52:G:H2'	56:w:53:G:C8	2.44	0.53
57:x:324:ALA:HB3	57:x:332:LEU:O	2.09	0.53
57:x:349:LEU:HD23	57:x:349:LEU:H	1.73	0.53
57:x:375:GLU:HG3	57:x:377:ARG:NH1	2.24	0.53
57:x:594:LEU:N	57:x:594:LEU:CD1	2.70	0.53
1:0:32:THR:HB	1:0:50:GLY:CA	2.39	0.52
1:0:49:ARG:CZ	8:A:2884:U:C1'	2.87	0.52
8:A:55:G:C2	8:A:116:C:C2	2.98	0.52
8:A:129:C:H2'	8:A:130:C:C6	2.44	0.52
8:A:136:G:C6	8:A:144:A:C6	2.97	0.52
8:A:237:C:C2	8:A:238:C:C5	2.97	0.52
8:A:265:A:N7	8:A:428:A:C4	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:326:G:N1	8:A:337:C:N3	2.57	0.52
8:A:495:G:H1'	26:S:57:ASN:CG	2.34	0.52
8:A:664:G:C5	8:A:665:U:C5	2.97	0.52
8:A:679:C:C2	8:A:799:G:C2	2.97	0.52
8:A:691:C:H2'	8:A:692:C:H6	1.74	0.52
8:A:827:U:C4	8:A:2430:A:C4	2.97	0.52
8:A:864:G:N1	8:A:913:U:N3	2.56	0.52
8:A:877:A:H2'	8:A:899:A:H2'	1.91	0.52
8:A:902:C:H2'	8:A:903:C:C6	2.44	0.52
8:A:1028:A:N6	8:A:1125:G:C2'	2.71	0.52
8:A:1139:G:C6	8:A:1140:C:C4	2.98	0.52
8:A:1208:C:C4	8:A:1239:G:N1	2.77	0.52
8:A:1220:G:H2'	8:A:1221:C:H6	1.74	0.52
8:A:1450:G:C2	8:A:1462:C:N3	2.78	0.52
8:A:1475:G:C1'	8:A:1732:C:H41	2.22	0.52
8:A:1512:C:H2'	8:A:1513:U:O4'	2.09	0.52
8:A:1564:C:H2'	8:A:1565:C:C6	2.44	0.52
8:A:1587:G:C2	8:A:1588:G:C4	2.97	0.52
8:A:1609:A:C6	8:A:1616:A:C5	2.98	0.52
8:A:1878:G:C2	8:A:1879:C:C2	2.97	0.52
8:A:1947:C:H2'	8:A:1948:G:O4'	2.09	0.52
8:A:2108:A:H2'	8:A:2108:A:N3	2.23	0.52
8:A:2249:U:O3'	20:M:84:LYS:NZ	2.43	0.52
8:A:2315:G:H2'	8:A:2316:G:H8	1.74	0.52
8:A:2331:G:C2	8:A:2332:C:C2	2.97	0.52
8:A:2468:A:H2'	8:A:2481:G:N2	2.23	0.52
8:A:2540:C:H4'	8:A:2741:A:C4'	2.39	0.52
10:C:77:VAL:CG1	10:C:111:ALA:HA	2.39	0.52
10:C:160:TYR:CB	10:C:193:GLU:HG2	2.38	0.52
10:C:172:THR:N	10:C:182:LYS:HE3	2.24	0.52
11:D:13:ARG:HD3	11:D:21:SER:OG	2.09	0.52
14:G:38:ASP:OD1	14:G:38:ASP:N	2.41	0.52
17:J:13:ARG:HG2	17:J:51:GLY:O	2.09	0.52
18:K:49:ARG:HH22	34:a:1423:G:H5''	1.74	0.52
18:K:71:ARG:NE	18:K:77:ILE:HD12	2.21	0.52
19:L:23:ILE:HG21	25:R:84:ARG:H	1.74	0.52
21:N:22:ARG:NH2	21:N:71:ARG:HG2	2.23	0.52
25:R:1:MET:HA	25:R:43:ASN:H	1.73	0.52
30:W:27:VAL:HG22	30:W:61:GLY:O	2.09	0.52
34:a:253:A:OP1	50:q:68:LYS:NZ	2.41	0.52
34:a:284:C:H2'	34:a:285:C:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:322:C:N3	34:a:332:G:N2	2.57	0.52
34:a:406:G:H5'	37:d:4:LEU:HD22	1.91	0.52
34:a:462:G:N2	34:a:468:A:N6	2.56	0.52
34:a:504:C:C2	34:a:542:G:C2	2.97	0.52
34:a:684:U:O2	34:a:707:U:O2	2.27	0.52
34:a:831:A:N1	34:a:856:C:C4	2.76	0.52
34:a:922:G:C6	34:a:1396:A:N6	2.77	0.52
34:a:978:A:C5	34:a:1318:A:C6	2.97	0.52
34:a:1013:G:O2'	34:a:1014:A:C8	2.56	0.52
34:a:1052:U:C4	34:a:1206:G:O6	2.62	0.52
34:a:1091:U:O2	34:a:1093:A:C8	2.63	0.52
34:a:1213:A:C8	34:a:1215:G:C5	2.97	0.52
34:a:1347:G:O2'	34:a:1348:U:OP2	2.27	0.52
41:h:44:PHE:C	41:h:63:LYS:HD3	2.34	0.52
43:j:32:THR:O	43:j:80:THR:CG2	2.57	0.52
44:k:80:ASN:OD1	44:k:80:ASN:N	2.42	0.52
47:n:41:ARG:O	47:n:45:VAL:HG23	2.09	0.52
47:n:50:THR:HG22	52:s:12:LEU:CD2	2.39	0.52
55:v:39:C:O2'	55:v:40:C:H5'	2.09	0.52
57:x:150:PHE:HZ	57:x:263:VAL:O	1.91	0.52
57:x:384:ALA:C	57:x:385:ILE:HD13	2.33	0.52
57:x:612:LEU:CB	57:x:686:TYR:HB3	2.36	0.52
1:0:39:ARG:HD2	8:A:2884:U:C4	2.44	0.52
4:3:26:ALA:CB	19:L:62:PRO:HD3	2.37	0.52
8:A:1:G:H2'	8:A:2:G:C8	2.44	0.52
8:A:38:A:C6	8:A:442:G:C6	2.98	0.52
8:A:122:G:H2'	8:A:123:G:O4'	2.08	0.52
8:A:209:C:H2'	8:A:210:C:C6	2.44	0.52
8:A:242:G:O2'	8:A:243:U:OP2	2.27	0.52
8:A:246:C:C4	8:A:247:G:N7	2.77	0.52
8:A:306:U:O2'	8:A:1211:C:H5	1.92	0.52
8:A:382:A:H2'	8:A:383:C:O4'	2.08	0.52
8:A:518:G:H4'	26:S:18:ARG:CZ	2.39	0.52
8:A:546:U:O2'	8:A:547:A:C8	2.62	0.52
8:A:583:G:H2'	8:A:584:C:C6	2.45	0.52
8:A:647:G:C6	8:A:648:G:C5	2.98	0.52
8:A:814:C:C4	8:A:1194:A:N1	2.77	0.52
8:A:870:U:O2	8:A:907:G:C2	2.63	0.52
8:A:1081:U:H2'	8:A:1082:U:H5'	1.91	0.52
8:A:1214:A:C5	8:A:1215:G:C8	2.98	0.52
8:A:1216:G:H2'	8:A:1217:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1306:C:C2	8:A:1623:G:N1	2.77	0.52
8:A:1322:A:C5	8:A:1323:C:C5	2.96	0.52
8:A:1411:U:H2'	8:A:1412:U:H6	1.75	0.52
8:A:1450:G:N1	8:A:1462:C:C4	2.77	0.52
8:A:1452:G:H22	8:A:1457:U:H2'	1.73	0.52
8:A:1471:G:H2'	8:A:1472:C:C6	2.44	0.52
8:A:1614:A:C5	26:S:87:PRO:HB3	2.44	0.52
8:A:1670:C:C5	8:A:1671:U:C4	2.97	0.52
8:A:1731:G:N1	8:A:1733:G:C5	2.78	0.52
8:A:1935:G:H3'	8:A:1962:5MC:N4	2.24	0.52
8:A:1975:G:N1	8:A:1976:U:C2	2.77	0.52
8:A:2046:G:C4	8:A:2623:G:C2	2.97	0.52
8:A:2073:C:N3	8:A:2437:G:N1	2.58	0.52
8:A:2111:U:C4'	8:A:2118:U:O2	2.57	0.52
8:A:2154:A:N6	8:A:2156:G:C4	2.77	0.52
8:A:2374:C:C4	8:A:2375:G:N7	2.77	0.52
8:A:2386:A:H5''	30:W:51:ARG:NH2	2.23	0.52
8:A:2576:G:N2	8:A:2576:G:P	2.82	0.52
8:A:2650:U:C2	8:A:2651:C:C5	2.97	0.52
8:A:2663:G:H2'	8:A:2664:G:O4'	2.09	0.52
8:A:2729:G:C6	8:A:2730:C:N4	2.77	0.52
8:A:2743:U:N3	8:A:2744:G:C8	2.78	0.52
8:A:2807:U:N3	8:A:2891:U:O4	2.35	0.52
9:B:50:A:C6	9:B:51:G:N7	2.77	0.52
14:G:84:LYS:HE2	14:G:144:ALA:CB	2.39	0.52
16:I:71:LYS:HA	16:I:115:ASP:CB	2.38	0.52
17:J:122:LEU:HD21	17:J:124:VAL:CG2	2.40	0.52
25:R:29:THR:HG22	25:R:29:THR:O	2.08	0.52
26:S:88:ARG:N	26:S:92:ARG:O	2.28	0.52
31:X:6:VAL:HG23	31:X:50:VAL:CG1	2.39	0.52
34:a:63:C:N3	34:a:105:G:N1	2.57	0.52
34:a:175:C:O2'	34:a:1447:A:N1	2.30	0.52
34:a:241:G:N1	34:a:286:C:N3	2.58	0.52
34:a:446:G:C2	34:a:489:C:N3	2.78	0.52
34:a:464:U:C2	34:a:468:A:C8	2.97	0.52
34:a:505:G:C6	34:a:535:A:C2	2.98	0.52
34:a:563:A:O2'	34:a:567:G:P	2.66	0.52
34:a:861:G:C6	34:a:862:C:N4	2.78	0.52
34:a:1008:U:C4	34:a:1022:A:N1	2.77	0.52
34:a:1057:G:C5	34:a:1204:A:N1	2.77	0.52
34:a:1251:A:C6	34:a:1252:A:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1277:C:H2'	34:a:1279:G:H21	1.75	0.52
35:b:46:VAL:N	35:b:47:PRO:CD	2.72	0.52
36:c:153:SER:O	36:c:195:ILE:HG23	2.09	0.52
42:i:112:ARG:NE	47:n:101:TRP:CZ2	2.76	0.52
46:m:2:ARG:NH1	46:m:6:ILE:C	2.67	0.52
47:n:53:ARG:NH2	52:s:36:ARG:CZ	2.71	0.52
49:p:10:GLY:CA	49:p:16:PHE:HB3	2.38	0.52
55:v:6:G:O6	55:v:68:C:N4	2.41	0.52
55:v:59:A:H3'	55:v:60:U:C6	2.44	0.52
55:v:63:G:C2	55:v:64:G:C8	2.97	0.52
55:v:69:C:H2'	55:v:70:G:H8	1.72	0.52
57:x:315:PRO:O	57:x:316:PHE:C	2.49	0.52
57:x:342:VAL:HG23	57:x:346:ASP:HB2	1.91	0.52
57:x:583:HIS:H	57:x:587:SER:HB3	1.74	0.52
2:1:8:ILE:HD13	2:1:24:LYS:HB2	1.91	0.52
5:4:24:ARG:HH12	5:4:36:ARG:HE	1.57	0.52
7:6:43:PHE:CG	13:F:113:PHE:HE2	2.27	0.52
8:A:108:G:C6	8:A:109:C:C4	2.98	0.52
8:A:328:U:C2	8:A:332:A:N7	2.76	0.52
8:A:363:G:C4	8:A:364:C:C5	2.98	0.52
8:A:597:G:C6	8:A:661:A:C6	2.97	0.52
8:A:664:G:C6	8:A:665:U:C4	2.97	0.52
8:A:711:G:C6	8:A:721:A:N6	2.77	0.52
8:A:748:G:C2	8:A:750:A:C6	2.97	0.52
8:A:775:G:C4'	8:A:777:G:H1'	2.40	0.52
8:A:817:C:C4	8:A:818:G:C4	2.97	0.52
8:A:822:G:P	8:A:946:C:H5''	2.49	0.52
8:A:881:G:H3'	8:A:882:G:C8	2.44	0.52
8:A:892:A:O2'	8:A:893:C:H5''	2.08	0.52
8:A:1041:G:C2	8:A:1115:G:C2	2.98	0.52
8:A:1044:C:N3	8:A:1112:G:C6	2.77	0.52
8:A:1086:A:H5''	8:A:1102:C:H42	1.74	0.52
8:A:1197:G:H2'	8:A:1198:U:C6	2.43	0.52
8:A:1315:C:H2'	8:A:1316:U:C6	2.45	0.52
8:A:1489:C:C2	8:A:1501:G:C2	2.97	0.52
8:A:1558:C:H1'	8:A:1560:G:C8	2.44	0.52
8:A:1587:G:C6	8:A:1588:G:C5	2.97	0.52
8:A:1735:A:C6	8:A:1736:U:C4	2.97	0.52
8:A:1849:G:C2	8:A:1850:G:C5	2.97	0.52
8:A:2010:G:OP1	26:S:41:LYS:HD3	2.10	0.52
8:A:2100:G:C5	8:A:2190:G:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2127:G:C2'	8:A:2128:G:O4'	2.57	0.52
8:A:2307:G:O4'	8:A:2308:G:N7	2.43	0.52
8:A:2400:G:H2'	8:A:2401:U:O4'	2.08	0.52
8:A:2499:C:H2'	8:A:2500:U:C6	2.44	0.52
8:A:2631:G:C2	8:A:2788:C:N3	2.77	0.52
8:A:2699:C:N3	8:A:2709:G:C6	2.77	0.52
8:A:2784:U:C2	8:A:2785:C:C5	2.98	0.52
9:B:100:G:C6	9:B:101:A:C5	2.97	0.52
10:C:106:PRO:HG2	10:C:109:LEU:HB2	1.91	0.52
12:E:145:ASP:OD1	12:E:183:PHE:HD1	1.92	0.52
13:F:7:TYR:OH	13:F:29:ARG:HA	2.10	0.52
27:T:31:VAL:HA	27:T:83:ALA:O	2.09	0.52
28:U:70:ALA:CB	28:U:79:ALA:HB1	2.40	0.52
34:a:155:A:C6	34:a:156:C:C4	2.98	0.52
34:a:250:A:O4'	34:a:252:U:C1'	2.58	0.52
34:a:324:G:H2'	34:a:326:G:N7	2.24	0.52
34:a:459:A:C6	34:a:460:A:N1	2.78	0.52
34:a:504:C:C4	34:a:542:G:N1	2.78	0.52
34:a:505:G:H1'	34:a:535:A:N7	2.24	0.52
34:a:663:A:H2'	34:a:664:G:C8	2.44	0.52
34:a:706:A:C5	34:a:707:U:C4	2.98	0.52
34:a:718:A:H61	51:r:62:ARG:CZ	2.22	0.52
34:a:821:G:H2'	34:a:822:U:H6	1.72	0.52
34:a:847:G:H2'	34:a:848:C:C6	2.43	0.52
34:a:950:U:H3'	46:m:100:ARG:HH22	1.73	0.52
34:a:967:5MC:H2'	34:a:968:A:N7	2.24	0.52
34:a:976:G:H2'	34:a:1362:A:C2	2.44	0.52
34:a:976:G:N1	34:a:1362:A:H3'	2.25	0.52
34:a:1046:A:C6	34:a:1047:G:C4	2.98	0.52
34:a:1087:G:H21	54:u:66:ARG:CB	2.22	0.52
34:a:1119:C:C2	34:a:1155:A:C2	2.97	0.52
34:a:1179:A:C6	34:a:1180:A:C2	2.97	0.52
34:a:1256:A:H4'	34:a:1257:A:H5'	1.92	0.52
34:a:1261:A:C2	34:a:1274:A:C2	2.97	0.52
34:a:1286:U:H2'	34:a:1287:A:H4'	1.92	0.52
34:a:1290:G:O3'	40:g:36:SER:OG	2.23	0.52
34:a:1363:A:H2'	34:a:1365:G:N7	2.24	0.52
34:a:1510:C:C4	34:a:1526:G:N1	2.77	0.52
35:b:34:ARG:CG	35:b:37:VAL:HG13	2.40	0.52
37:d:96:ARG:O	37:d:100:VAL:HG12	2.10	0.52
38:e:24:VAL:HG23	38:e:26:GLY:H	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:h:57:GLU:HG3	41:h:57:GLU:O	2.08	0.52
42:i:32:ARG:HB3	42:i:36:GLN:CG	2.38	0.52
45:l:7:VAL:HG22	50:q:33:TYR:HD2	1.74	0.52
46:m:1:ALA:O	46:m:6:ILE:O	2.28	0.52
46:m:9:PRO:O	46:m:44:ILE:HG21	2.09	0.52
48:o:62:ARG:O	48:o:66:LEU:HG	2.10	0.52
49:p:5:ARG:NH2	49:p:26:ASN:O	2.42	0.52
52:s:79:TYR:C	52:s:80:ARG:HD3	2.34	0.52
57:x:17:HIS:CE1	57:x:120:PRO:HD2	2.44	0.52
57:x:97:GLU:O	57:x:101:SER:HB2	2.09	0.52
57:x:167:PRO:HA	57:x:263:VAL:CG2	2.39	0.52
57:x:267:SER:HB2	57:x:270:LYS:HB2	1.90	0.52
57:x:419:VAL:CG1	57:x:455:THR:HG23	2.39	0.52
57:x:616:MET:O	57:x:656:GLU:HA	2.09	0.52
2:1:27:ARG:HA	2:1:27:ARG:NE	2.24	0.52
5:4:6:SER:C	5:4:8:LYS:NZ	2.68	0.52
7:6:1:MET:C	9:B:40:U:O4	2.52	0.52
8:A:4:U:H2'	8:A:5:A:H8	1.75	0.52
8:A:17:G:H2'	8:A:18:U:H6	1.71	0.52
8:A:153:U:H2'	8:A:154:U:O4'	2.09	0.52
8:A:196:A:C5	8:A:805:G:C6	2.97	0.52
8:A:227:A:N1	8:A:418:C:H1'	2.25	0.52
8:A:239:C:N4	8:A:259:G:C6	2.77	0.52
8:A:242:G:H2'	8:A:254:G:H1	1.72	0.52
8:A:247:G:H5''	8:A:386:G:O2'	2.09	0.52
8:A:438:G:H2'	8:A:439:A:H8	1.74	0.52
8:A:520:G:H2'	8:A:521:U:H6	1.74	0.52
8:A:729:G:O2'	8:A:763:G:H4'	2.10	0.52
8:A:733:G:N2	8:A:734:A:N7	2.58	0.52
8:A:888:C:H6	52:s:27:LYS:NZ	2.07	0.52
8:A:1084:A:H1'	8:A:1105:U:O2	2.09	0.52
8:A:1098:A:C5	8:A:1099:G:C6	2.97	0.52
8:A:1389:G:N1	8:A:1399:C:N3	2.57	0.52
8:A:1403:A:C6	8:A:1404:C:C4	2.98	0.52
8:A:1440:U:H2'	8:A:1441:G:C8	2.44	0.52
8:A:1448:G:C2	8:A:1449:G:C4	2.97	0.52
8:A:1607:C:N4	8:A:1622:G:P	2.83	0.52
8:A:1655:A:H61	8:A:2005:A:H1'	1.73	0.52
8:A:1726:C:N3	8:A:1735:A:C6	2.77	0.52
8:A:1794:A:H2'	8:A:1795:C:C6	2.44	0.52
8:A:1930:G:N2	8:A:1969:A:O5'	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2105:U:H2'	8:A:2106:U:C6	2.45	0.52
8:A:2199:A:H3'	8:A:2200:C:H6	1.74	0.52
8:A:2431:U:N3	8:A:2434:A:OP2	2.38	0.52
8:A:2470:G:C6	8:A:2481:G:C2	2.97	0.52
8:A:2694:G:O6	8:A:2716:C:N4	2.43	0.52
8:A:2706:A:C6	8:A:2707:U:C4	2.96	0.52
9:B:92:C:C2	9:B:93:C:C5	2.97	0.52
9:B:114:C:O2'	22:O:50:ALA:HB2	2.09	0.52
10:C:52:HIS:HA	10:C:216:ARG:HB2	1.91	0.52
10:C:171:VAL:C	10:C:182:LYS:HE3	2.35	0.52
11:D:48:ILE:HG23	11:D:84:LEU:HD21	1.90	0.52
13:F:104:THR:OG1	13:F:105:ILE:HD12	2.09	0.52
15:H:47:PHE:HE1	15:H:55:GLU:OE2	1.92	0.52
16:I:11:GLN:O	16:I:53:PRO:CB	2.57	0.52
17:J:21:THR:O	17:J:23:LYS:HE3	2.09	0.52
19:L:110:VAL:O	19:L:128:THR:HG23	2.08	0.52
20:M:53:MET:HE1	20:M:103:TYR:CD1	2.44	0.52
25:R:6:GLN:HA	25:R:11:GLN:HA	1.91	0.52
34:a:44:A:C6	34:a:399:G:C6	2.97	0.52
34:a:63:C:N3	34:a:105:G:C6	2.78	0.52
34:a:94:G:H5''	34:a:95:C:C5	2.45	0.52
34:a:158:G:C8	34:a:159:G:N2	2.77	0.52
34:a:463:U:H4'	34:a:464:U:OP1	2.09	0.52
34:a:499:A:N1	34:a:546:A:C2'	2.72	0.52
34:a:521:G:H4'	45:l:69:GLU:CG	2.40	0.52
34:a:664:G:H2'	34:a:666:G:OP1	2.09	0.52
34:a:675:A:H5'	51:r:73:HIS:CE1	2.44	0.52
34:a:706:A:H5''	44:k:23:HIS:CE1	2.44	0.52
34:a:1074:G:C6	34:a:1083:U:O4	2.62	0.52
34:a:1074:G:H2'	34:a:1075:U:H5''	1.90	0.52
34:a:1177:G:H2'	34:a:1178:G:O4'	2.10	0.52
34:a:1272:G:C2	34:a:1273:C:H1'	2.44	0.52
34:a:1287:A:H2'	34:a:1288:A:C8	2.43	0.52
34:a:1314:C:OP2	52:s:3:SER:HB2	2.10	0.52
34:a:1349:A:C2	34:a:1374:A:C5	2.98	0.52
34:a:1363:A:O2'	34:a:1365:G:N7	2.39	0.52
35:b:71:THR:HG23	35:b:94:ARG:HA	1.92	0.52
36:c:148:ILE:HG13	36:c:200:TRP:O	2.10	0.52
37:d:70:GLN:O	37:d:71:PHE:HB3	2.09	0.52
42:i:10:ARG:HA	42:i:14:SER:O	2.09	0.52
50:q:8:GLN:NE2	50:q:78:VAL:HG21	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:q:58:VAL:HA	50:q:77:VAL:HA	1.91	0.52
54:u:40:PRO:HB2	54:u:44:ARG:HH12	1.75	0.52
57:x:316:PHE:HB3	57:x:398:ASP:OD1	2.10	0.52
57:x:636:ARG:HH21	57:x:637:ARG:HE	1.57	0.52
2:1:33:LEU:HD11	8:A:2286:G:C2	2.43	0.52
5:4:19:ARG:NE	8:A:2756:U:OP2	2.25	0.52
7:6:2:LYS:HB2	7:6:5:ILE:HD11	1.90	0.52
8:A:38:A:C2	8:A:442:G:C2	2.97	0.52
8:A:68:G:N2	8:A:74:A:N3	2.58	0.52
8:A:69:C:H2'	8:A:70:G:C8	2.44	0.52
8:A:102:U:O2'	8:A:103:A:OP1	2.24	0.52
8:A:297:G:C6	8:A:342:A:N6	2.78	0.52
8:A:310:A:H5''	28:U:14:THR:CG2	2.39	0.52
8:A:396:G:P	31:X:9:LYS:NZ	2.83	0.52
8:A:410:G:C2	8:A:418:C:C2	2.97	0.52
8:A:429:A:H8	8:A:429:A:O5'	1.93	0.52
8:A:485:C:H2'	8:A:486:C:C6	2.45	0.52
8:A:541:A:H2'	8:A:542:C:C6	2.45	0.52
8:A:571:U:O4'	8:A:2030:6MZ:C8	2.58	0.52
8:A:818:G:H8	8:A:818:G:O5'	1.92	0.52
8:A:875:G:N2	8:A:903:C:C2	2.77	0.52
8:A:996:A:N6	8:A:1160:G:C6	2.77	0.52
8:A:1036:G:C5	8:A:1120:G:C6	2.97	0.52
8:A:1077:A:C8	8:A:1078:U:C5	2.98	0.52
8:A:1288:G:P	8:A:1289:C:H41	2.29	0.52
8:A:1301:A:C4	8:A:1303:G:C8	2.97	0.52
8:A:1306:C:O2	8:A:1623:G:C2	2.63	0.52
8:A:1427:A:O4'	8:A:1428:C:C5	2.62	0.52
8:A:1532:A:N6	8:A:1540:G:O6	2.42	0.52
8:A:1798:U:OP2	10:C:270:ARG:NH2	2.43	0.52
8:A:1992:G:C2	8:A:1996:C:O2	2.62	0.52
8:A:2014:A:H2'	8:A:2015:A:C4	2.45	0.52
8:A:2199:A:C4	8:A:2225:A:C2	2.98	0.52
8:A:2278:A:N6	8:A:2279:G:C5	2.78	0.52
8:A:2322:A:H3'	8:A:2323:G:H8	1.74	0.52
8:A:2391:G:H22	8:A:2424:C:H3'	1.75	0.52
8:A:2564:A:N1	8:A:2647:U:H4'	2.24	0.52
8:A:2674:G:H5''	18:K:30:ARG:CZ	2.39	0.52
8:A:2850:A:C4	8:A:2851:A:C8	2.98	0.52
9:B:9:G:C4	9:B:10:G:C8	2.97	0.52
9:B:20:G:H2'	9:B:21:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:77:VAL:HA	10:C:93:VAL:HG22	1.91	0.52
11:D:13:ARG:HH11	23:P:55:HIS:HA	1.74	0.52
11:D:21:SER:H	18:K:73:ASP:HA	1.74	0.52
11:D:129:THR:HG22	11:D:130:GLN:O	2.09	0.52
13:F:96:TRP:O	13:F:99:PHE:HB3	2.10	0.52
14:G:121:THR:OG1	14:G:133:LYS:HB2	2.09	0.52
15:H:99:ILE:HG23	15:H:115:VAL:HG21	1.90	0.52
19:L:20:GLY:O	19:L:21:ARG:HD3	2.10	0.52
22:O:52:SER:HG	22:O:54:VAL:HG22	1.73	0.52
22:O:53:THR:CB	22:O:65:THR:HB	2.38	0.52
34:a:104:G:C2	34:a:105:G:C8	2.98	0.52
34:a:159:G:N1	34:a:164:G:OP1	2.43	0.52
34:a:289:G:C6	34:a:312:C:N3	2.77	0.52
34:a:327:A:H1'	34:a:329:A:O4'	2.10	0.52
34:a:437:U:HO2'	37:d:119:HIS:CE1	2.15	0.52
34:a:443:C:C4	34:a:444:G:N7	2.78	0.52
34:a:516:PSU:H2'	34:a:517:G:C8	2.45	0.52
34:a:612:C:C2	34:a:613:C:C5	2.97	0.52
34:a:618:C:H42	34:a:623:C:N4	2.08	0.52
34:a:661:G:N1	34:a:745:G:C6	2.77	0.52
34:a:721:G:H4'	34:a:722:G:O5'	2.10	0.52
34:a:766:A:OP2	34:a:812:G:N2	2.43	0.52
34:a:830:G:C2	34:a:857:C:C2	2.98	0.52
34:a:872:A:C8	34:a:874:G:C8	2.97	0.52
34:a:921:U:O2	38:e:22:LYS:O	2.28	0.52
34:a:938:A:N6	34:a:939:G:C6	2.78	0.52
34:a:949:A:H2'	34:a:950:U:H6	1.74	0.52
34:a:1028:C:H2'	34:a:1029:U:O4'	2.09	0.52
34:a:1053:G:N2	34:a:1058:G:C6	2.77	0.52
34:a:1092:A:C2	34:a:1110:A:H5'	2.43	0.52
34:a:1116:U:H3	34:a:1184:G:H1	1.57	0.52
34:a:1135:U:H2'	34:a:1137:C:OP2	2.10	0.52
34:a:1318:A:O3'	52:s:2:ARG:NH2	2.41	0.52
34:a:1488:G:N1	34:a:1489:G:C5	2.77	0.52
34:a:1525:G:H3'	54:u:39:LYS:HE3	1.91	0.52
39:f:4:TYR:CZ	39:f:91:ARG:HD2	2.44	0.52
39:f:98:GLU:N	39:f:98:GLU:OE1	2.43	0.52
43:j:35:GLN:HB2	43:j:77:VAL:O	2.09	0.52
46:m:68:LEU:O	46:m:72:ILE:HG12	2.09	0.52
47:n:61:ARG:HH21	47:n:71:HIS:HA	1.74	0.52
48:o:16:ARG:HE	48:o:20:ASP:CG	2.17	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:q:28:VAL:O	50:q:37:ILE:N	2.40	0.52
51:r:62:ARG:HB3	51:r:69:TYR:CE1	2.45	0.52
57:x:74:MET:HG2	57:x:275:GLN:HB3	1.92	0.52
57:x:103:ARG:HH21	57:x:406:GLU:HB2	1.72	0.52
57:x:435:GLY:O	57:x:439:LYS:HG2	2.10	0.52
57:x:673:THR:HG23	57:x:676:ARG:H	1.75	0.52
3:2:29:GLN:O	3:2:33:ARG:HG3	2.09	0.52
6:5:55:VAL:CB	8:A:1084:A:OP1	2.57	0.52
7:6:59:ARG:HE	7:6:62:LYS:HD2	1.75	0.52
8:A:12:U:O2	8:A:2626:C:H4'	2.09	0.52
8:A:67:U:N3	8:A:68:G:N7	2.58	0.52
8:A:112:U:C4	8:A:113:U:C2	2.98	0.52
8:A:136:G:C6	8:A:144:A:N6	2.77	0.52
8:A:152:A:H2'	8:A:153:U:C6	2.45	0.52
8:A:260:G:H4'	8:A:621:A:C4'	2.39	0.52
8:A:281:C:H2'	8:A:282:A:H8	1.75	0.52
8:A:323:C:C4	8:A:333:G:C8	2.98	0.52
8:A:376:G:N1	8:A:399:U:C2	2.77	0.52
8:A:443:A:N7	12:E:40:ARG:HG2	2.25	0.52
8:A:537:G:H22	8:A:555:G:C2'	2.23	0.52
8:A:544:C:H3'	8:A:545:U:C6	2.44	0.52
8:A:605:G:H2'	8:A:606:U:O4'	2.10	0.52
8:A:778:G:C5'	10:C:47:ARG:NH1	2.73	0.52
8:A:848:C:N3	8:A:933:A:C6	2.77	0.52
8:A:888:C:H41	13:F:114:ARG:CZ	2.23	0.52
8:A:898:C:H3'	8:A:899:A:H8	1.75	0.52
8:A:910:A:OP2	8:A:912:C:N4	2.42	0.52
8:A:954:G:C4	8:A:955:PSU:C6	2.98	0.52
8:A:1103:A:C5	8:A:1104:C:C2	2.97	0.52
8:A:1117:C:H2'	8:A:1118:C:H6	1.74	0.52
8:A:1166:G:C2	8:A:1184:U:C2	2.97	0.52
8:A:1173:U:H1'	8:A:1174:U:C4'	2.39	0.52
8:A:1224:U:H5''	25:R:71:LYS:NZ	2.25	0.52
8:A:1410:G:C5	8:A:1593:A:N1	2.78	0.52
8:A:1418:G:N2	8:A:1579:A:C8	2.78	0.52
8:A:1512:C:H2'	8:A:1513:U:C6	2.44	0.52
8:A:1656:C:C2	8:A:1657:U:C5	2.98	0.52
8:A:1906:G:C6	8:A:1907:G:N7	2.78	0.52
8:A:1947:C:C2	8:A:1948:G:C8	2.97	0.52
8:A:1990:C:H2'	8:A:1991:U:C1'	2.40	0.52
8:A:2260:C:C2	8:A:2281:A:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2270:A:C6	8:A:2271:G:C4	2.97	0.52
8:A:2421:G:H3'	55:v:76:A:N6	2.25	0.52
8:A:2486:C:OP1	20:M:125:PRO:HB3	2.10	0.52
8:A:2579:C:H2'	8:A:2580:PSU:H6	1.74	0.52
8:A:2679:A:H4'	11:D:194:PRO:HG3	1.92	0.52
8:A:2720:U:C2	8:A:2721:A:C8	2.98	0.52
8:A:2803:G:C2	8:A:2804:U:C4	2.97	0.52
9:B:10:G:N7	9:B:11:C:N4	2.58	0.52
9:B:114:C:O4'	22:O:47:VAL:CB	2.56	0.52
10:C:210:ALA:HA	10:C:213:ARG:HD2	1.91	0.52
15:H:121:VAL:HG12	15:H:122:LEU:H	1.75	0.52
20:M:53:MET:HE2	20:M:117:PHE:CD1	2.44	0.52
20:M:62:LYS:HE3	20:M:64:TRP:NE1	2.25	0.52
21:N:96:ARG:HB2	21:N:116:VAL:CG1	2.40	0.52
22:O:34:HIS:HA	22:O:53:THR:OG1	2.10	0.52
24:Q:60:TRP:HB3	24:Q:91:ARG:O	2.09	0.52
25:R:3:ALA:HA	25:R:40:MET:O	2.09	0.52
25:R:23:GLU:O	25:R:25:LEU:HG	2.10	0.52
25:R:37:GLU:HB2	25:R:53:PHE:CE1	2.44	0.52
27:T:48:GLN:O	27:T:52:GLU:HA	2.10	0.52
29:V:48:MET:HE2	29:V:84:PRO:O	2.09	0.52
29:V:77:VAL:HG13	29:V:89:ILE:HG12	1.92	0.52
34:a:136:C:C2	34:a:137:U:C6	2.97	0.52
34:a:146:G:O2'	34:a:147:G:H5'	2.09	0.52
34:a:160:A:H1'	34:a:161:A:OP1	2.09	0.52
34:a:347:G:H2'	34:a:348:G:O4'	2.10	0.52
34:a:476:U:H5''	34:a:477:C:H5	1.74	0.52
34:a:501:C:H2'	34:a:502:A:C8	2.45	0.52
34:a:577:G:C6	34:a:578:C:C4	2.98	0.52
34:a:611:C:H2'	34:a:612:C:H6	1.75	0.52
34:a:749:A:C6	34:a:750:C:C4	2.98	0.52
34:a:889:A:O4'	34:a:891:U:C1'	2.57	0.52
34:a:929:G:C6	34:a:930:C:C4	2.97	0.52
34:a:936:C:O2'	34:a:1382:C:C2	2.63	0.52
34:a:957:U:O2'	34:a:959:A:N7	2.39	0.52
34:a:1024:G:H2'	34:a:1025:U:C6	2.45	0.52
34:a:1103:C:P	35:b:94:ARG:HH12	2.33	0.52
34:a:1115:U:C2	34:a:1116:U:C5	2.97	0.52
34:a:1309:G:P	46:m:97:ARG:HH21	2.33	0.52
34:a:1318:A:H4'	52:s:9:PHE:CE1	2.45	0.52
38:e:86:GLY:O	38:e:138:ALA:CA	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:g:45:ALA:CB	40:g:119:LEU:HD13	2.39	0.52
42:i:41:GLU:N	42:i:41:GLU:OE1	2.42	0.52
48:o:5:GLU:HG2	48:o:6:ALA:N	2.25	0.52
49:p:7:ALA:O	49:p:29:ASN:ND2	2.40	0.52
55:v:73:A:C6	55:v:74:C:C5	2.97	0.52
57:x:95:THR:CG2	57:x:411:PRO:HG3	2.40	0.52
57:x:375:GLU:HB2	57:x:377:ARG:CZ	2.40	0.52
4:3:33:THR:OG1	8:A:2420:C:OP1	2.26	0.52
7:6:2:LYS:CB	7:6:5:ILE:HD11	2.39	0.52
8:A:10:A:C5	8:A:11:C:C5	2.98	0.52
8:A:14:A:C5	8:A:526:A:C2	2.97	0.52
8:A:21:A:H2'	8:A:22:C:O4'	2.09	0.52
8:A:235:U:C2	8:A:236:C:C5	2.97	0.52
8:A:307:G:H22	8:A:310:A:P	2.32	0.52
8:A:376:G:C6	8:A:399:U:N3	2.78	0.52
8:A:456:C:C5	27:T:73:ARG:NH1	2.78	0.52
8:A:630:G:H22	8:A:632:A:H3'	1.75	0.52
8:A:660:C:H5''	12:E:94:GLN:CG	2.39	0.52
8:A:749:A:C8	8:A:1618:6MZ:C6	2.93	0.52
8:A:809:G:H2'	8:A:810:U:O4'	2.10	0.52
8:A:811:U:C2	8:A:1251:C:C5	2.98	0.52
8:A:821:A:H61	8:A:972:A:H1'	1.75	0.52
8:A:947:A:C6	8:A:971:G:N1	2.77	0.52
8:A:1007:C:OP2	8:A:1008:A:O2'	2.21	0.52
8:A:1051:G:N2	8:A:1108:U:O2	2.43	0.52
8:A:1062:G:C8	8:A:1088:A:N7	2.78	0.52
8:A:1282:U:O2	8:A:1286:A:N7	2.42	0.52
8:A:1309:G:N1	8:A:1310:G:C5	2.77	0.52
8:A:1510:G:C6	8:A:1511:G:C5	2.98	0.52
8:A:1638:C:H4'	8:A:2710:C:O2	2.09	0.52
8:A:1658:C:OP1	11:D:140:HIS:CD2	2.63	0.52
8:A:1936:A:C4	8:A:1945:G:C5	2.97	0.52
8:A:1992:G:C2	8:A:1997:C:C4	2.98	0.52
8:A:2116:G:N1	8:A:2165:C:C2	2.78	0.52
8:A:2452:C:O2'	8:A:2453:A:H5'	2.10	0.52
8:A:2484:G:O2'	20:M:123:LYS:HB3	2.10	0.52
8:A:2552:OMU:O2	8:A:2552:OMU:O5'	2.28	0.52
8:A:2741:A:H2'	8:A:2742:G:O4'	2.09	0.52
9:B:27:C:C4	9:B:28:C:C4	2.98	0.52
10:C:9:SER:O	10:C:12:ARG:N	2.37	0.52
10:C:159:THR:HA	10:C:176:ARG:HE	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:85:ALA:H	11:D:88:GLU:CD	2.16	0.52
11:D:184:ARG:HB3	11:D:186:LEU:HG	1.91	0.52
13:F:106:ALA:HB1	13:F:136:ILE:CG1	2.39	0.52
14:G:38:ASP:O	14:G:54:ARG:HD2	2.09	0.52
15:H:111:ALA:HB3	15:H:114:GLU:OE1	2.10	0.52
19:L:80:SER:CA	19:L:114:GLY:O	2.57	0.52
20:M:36:VAL:O	20:M:98:PRO:HB3	2.09	0.52
22:O:24:THR:HG23	22:O:90:VAL:HG12	1.90	0.52
34:a:7:A:O4'	34:a:298:A:C8	2.62	0.52
34:a:37:U:C2	34:a:548:G:N1	2.78	0.52
34:a:79:G:N2	34:a:91:U:C2	2.78	0.52
34:a:131:A:H1'	34:a:263:A:H1'	1.92	0.52
34:a:177:G:H3'	34:a:177:G:N3	2.25	0.52
34:a:244:U:O4	34:a:893:C:C4	2.63	0.52
34:a:393:A:C2	34:a:394:G:C8	2.98	0.52
34:a:581:G:C2	34:a:759:A:OP2	2.63	0.52
34:a:646:G:H2'	34:a:647:C:C6	2.44	0.52
34:a:654:G:C6	34:a:655:A:C4	2.98	0.52
34:a:861:G:C6	34:a:862:C:C4	2.98	0.52
34:a:909:A:C5	34:a:910:C:C4	2.98	0.52
34:a:1007:U:H3	34:a:1023:U:H1'	1.75	0.52
34:a:1261:A:C6	34:a:1262:C:C5	2.98	0.52
34:a:1261:A:C8	34:a:1262:C:H1'	2.45	0.52
34:a:1316:G:N3	34:a:1318:A:C8	2.78	0.52
34:a:1323:G:C2	34:a:1324:A:C5	2.98	0.52
34:a:1338:G:N1	34:a:1339:A:C2	2.78	0.52
34:a:1526:G:C8	54:u:39:LYS:NZ	2.78	0.52
36:c:39:ARG:NH2	36:c:56:ILE:HG12	2.25	0.52
36:c:39:ARG:O	36:c:43:THR:HG23	2.09	0.52
39:f:2:ARG:O	39:f:65:GLU:HA	2.09	0.52
39:f:50:PRO:HD2	51:r:73:HIS:HB3	1.92	0.52
42:i:41:GLU:O	42:i:44:ARG:NH2	2.42	0.52
42:i:112:ARG:O	42:i:114:LYS:HD2	2.09	0.52
44:k:34:THR:OG1	44:k:39:ASN:N	2.42	0.52
46:m:80:MET:C	46:m:91:ARG:NH2	2.67	0.52
48:o:2:LEU:HD11	48:o:30:LEU:O	2.10	0.52
53:t:53:MET:O	53:t:57:VAL:N	2.30	0.52
55:v:38:A:C2	55:v:39:C:H1'	2.45	0.52
56:w:29:G:C4	56:w:30:G:C8	2.97	0.52
57:x:115:VAL:HG23	57:x:147:GLY:O	2.09	0.52
57:x:255:VAL:N	57:x:259:GLU:HG2	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:647:GLU:N	57:x:651:VAL:HA	2.24	0.52
2:1:32:LYS:HD3	2:1:50:GLU:CD	2.33	0.52
3:2:39:ARG:NH2	8:A:468:G:N7	2.57	0.52
4:3:25:HIS:HE2	4:3:47:ALA:HB2	1.73	0.52
4:3:32:LEU:HD12	8:A:2420:C:OP2	2.09	0.52
5:4:7:VAL:HG12	5:4:35:GLN:HB3	1.91	0.52
7:6:64:PHE:O	7:6:65:ASN:C	2.50	0.52
8:A:58:G:N3	8:A:73:A:C2	2.78	0.52
8:A:64:A:C2	8:A:91:A:N6	2.78	0.52
8:A:122:G:C2	8:A:123:G:C4	2.98	0.52
8:A:174:U:C2	8:A:175:G:C8	2.98	0.52
8:A:303:G:C2	8:A:315:G:C4	2.98	0.52
8:A:313:G:C2	8:A:314:C:C2	2.98	0.52
8:A:332:A:C5	8:A:335:C:C4	2.98	0.52
8:A:463:G:C4	8:A:465:G:OP2	2.63	0.52
8:A:592:A:H2'	8:A:593:U:C6	2.44	0.52
8:A:617:G:H5''	12:E:102:ARG:NH2	2.24	0.52
8:A:625:G:C6	8:A:626:A:C6	2.98	0.52
8:A:660:C:H4'	12:E:94:GLN:HE21	1.74	0.52
8:A:671:C:H2'	8:A:672:C:C6	2.45	0.52
8:A:673:C:H5''	12:E:49:ARG:NH2	2.25	0.52
8:A:752:A:C8	8:A:1781:U:C5	2.98	0.52
8:A:817:C:C4	8:A:818:G:C5	2.98	0.52
8:A:827:U:N3	8:A:2430:A:C5	2.78	0.52
8:A:1008:A:N6	8:A:1136:G:N1	2.58	0.52
8:A:1130:U:O4	11:D:151:THR:O	2.28	0.52
8:A:1215:G:C2	8:A:1216:G:C4	2.98	0.52
8:A:1233:C:C2	8:A:1234:U:C5	2.98	0.52
8:A:1315:C:H2'	8:A:1316:U:H6	1.75	0.52
8:A:1347:A:C2	8:A:1600:C:C2	2.98	0.52
8:A:1394:U:C4	8:A:1395:A:C5	2.97	0.52
8:A:1395:A:C5	8:A:1398:C:C4	2.97	0.52
8:A:1527:G:C2	8:A:1544:A:OP2	2.63	0.52
8:A:1695:G:N2	8:A:1696:G:C8	2.78	0.52
8:A:1717:A:N6	8:A:1743:G:HO2'	2.06	0.52
8:A:1721:G:N2	8:A:1738:G:H2'	2.24	0.52
8:A:1839:G:C1'	8:A:1927:A:C8	2.92	0.52
8:A:1859:U:H2'	8:A:1860:G:C8	2.44	0.52
8:A:1883:U:H2'	8:A:1884:G:C1'	2.40	0.52
8:A:2051:A:C2'	8:A:2614:A:H61	2.22	0.52
8:A:2073:C:N4	8:A:2437:G:O6	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2128:G:N3	8:A:2173:A:O2'	2.38	0.52
8:A:2243:U:O2'	8:A:2434:A:N1	2.26	0.52
8:A:2281:A:C2	8:A:2282:G:C5	2.98	0.52
8:A:2399:G:N1	8:A:2418:A:C6	2.78	0.52
8:A:2464:G:C6	8:A:2465:C:C4	2.98	0.52
8:A:2562:U:O4	8:A:2566:A:N7	2.42	0.52
8:A:2657:A:H2'	8:A:2658:C:O4'	2.09	0.52
8:A:2749:A:H5'	8:A:2750:A:H5''	1.91	0.52
8:A:2828:G:H2'	8:A:2829:A:H8	1.74	0.52
9:B:49:C:H5''	22:O:68:LYS:HE2	1.92	0.52
9:B:69:G:C4	9:B:70:C:C6	2.98	0.52
10:C:3:VAL:N	10:C:17:LYS:O	2.37	0.52
12:E:116:ASP:O	12:E:185:LYS:HE2	2.10	0.52
17:J:55:ILE:HD13	17:J:130:HIS:CB	2.40	0.52
28:U:98:ASN:C	28:U:100:GLU:N	2.67	0.52
34:a:144:G:H3'	34:a:145:G:H8	1.75	0.52
34:a:159:G:C2	34:a:164:G:O5'	2.63	0.52
34:a:246:A:C2	34:a:282:A:C4	2.97	0.52
34:a:358:U:H2'	34:a:359:G:C8	2.45	0.52
34:a:403:C:H2'	34:a:404:G:H8	1.75	0.52
34:a:445:G:C2	34:a:490:C:N3	2.77	0.52
34:a:448:A:C8	34:a:486:U:N3	2.66	0.52
34:a:524:G:H2'	34:a:525:C:C5	2.45	0.52
34:a:577:G:C2	34:a:578:C:C2	2.98	0.52
34:a:588:G:H2'	34:a:589:U:C6	2.45	0.52
34:a:603:U:H5	34:a:635:A:N1	2.06	0.52
34:a:617:G:P	49:p:46:LYS:HZ1	2.33	0.52
34:a:769:G:H4'	34:a:1513:A:C5'	2.39	0.52
34:a:795:C:C6	34:a:796:C:C5	2.98	0.52
34:a:920:U:C2'	34:a:1081:A:H2'	2.39	0.52
34:a:949:A:O2'	34:a:971:G:O6	2.25	0.52
34:a:954:G:C2	34:a:1228:C:N4	2.78	0.52
34:a:1050:G:C2	34:a:1209:C:C2	2.98	0.52
34:a:1057:G:C6	34:a:1058:G:C4	2.97	0.52
34:a:1110:A:C6	34:a:1111:A:C5	2.97	0.52
34:a:1347:G:H5''	42:i:108:ARG:HB2	1.91	0.52
34:a:1404:C:H2'	34:a:1519:MA6:O2'	2.10	0.52
34:a:1526:G:OP2	54:u:39:LYS:HE2	2.09	0.52
35:b:13:VAL:O	35:b:16:GLY:O	2.28	0.52
35:b:149:GLY:C	35:b:151:LYS:HZ2	2.16	0.52
36:c:171:ARG:HH21	36:c:173:PRO:HG3	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:22:SER:O	37:d:24:VAL:N	2.43	0.52
38:e:83:PRO:HB3	38:e:96:GLN:HB2	1.92	0.52
47:n:7:ALA:HA	47:n:10:VAL:HG12	1.92	0.52
47:n:13:VAL:HG12	47:n:60:GLN:OE1	2.10	0.52
48:o:20:ASP:CG	48:o:23:SER:HG	2.17	0.52
53:t:6:ALA:O	53:t:9:ARG:HB2	2.09	0.52
56:w:40:C:H2'	56:w:41:C:C6	2.45	0.52
57:x:357:GLU:HG3	57:x:358:ARG:H	1.74	0.52
57:x:444:PHE:CD2	57:x:468:ILE:HD13	2.45	0.52
57:x:492:THR:O	57:x:609:PRO:HA	2.10	0.52
57:x:552:VAL:HG13	57:x:596:ALA:HB2	1.92	0.52
57:x:553:ASP:O	57:x:557:GLN:HG2	2.10	0.52
2:1:8:ILE:HG12	2:1:22:THR:HG23	1.91	0.52
2:1:43:ARG:NH1	8:A:643:A:C5	2.77	0.52
8:A:196:A:C4	8:A:805:G:C6	2.98	0.52
8:A:237:C:H2'	8:A:238:C:C6	2.45	0.52
8:A:297:G:H2'	8:A:298:G:O4'	2.09	0.52
8:A:534:U:H2'	8:A:535:G:C8	2.45	0.52
8:A:539:G:H2'	8:A:540:C:H6	1.75	0.52
8:A:705:A:C2	8:A:727:A:O4'	2.63	0.52
8:A:830:G:C4	8:A:2448:A:C5	2.97	0.52
8:A:899:A:OP2	8:A:899:A:H3'	2.09	0.52
8:A:1212:G:N3	8:A:1236:G:C2	2.78	0.52
8:A:1436:G:N2	8:A:1557:C:C2	2.77	0.52
8:A:1455:G:C6	8:A:1456:G:C5	2.97	0.52
8:A:1844:C:H2'	8:A:1845:G:C8	2.44	0.52
8:A:1858:A:C6	8:A:1859:U:C2	2.98	0.52
8:A:1909:C:C4	8:A:1922:G:N1	2.78	0.52
8:A:2068:U:O4	8:A:2430:A:C8	2.63	0.52
8:A:2091:C:H3'	8:A:2092:U:H2'	1.92	0.52
8:A:2199:A:N1	8:A:2226:C:C5	2.78	0.52
8:A:2330:G:C6	8:A:2331:G:C5	2.98	0.52
8:A:2520:C:C5	8:A:2567:G:C4	2.98	0.52
8:A:2597:G:H2'	8:A:2598:A:C8	2.45	0.52
8:A:2645:G:O3'	8:A:2733:A:OP1	2.27	0.52
8:A:2838:G:H2'	8:A:2839:G:O4'	2.09	0.52
9:B:109:A:C5	9:B:110:C:C4	2.98	0.52
11:D:47:ALA:CA	11:D:84:LEU:HG	2.40	0.52
14:G:90:GLY:HA2	14:G:159:LYS:HG2	1.92	0.52
15:H:94:ILE:HD12	15:H:122:LEU:HB2	1.92	0.52
19:L:121:THR:HG22	19:L:143:GLU:OE2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:51:ALA:HB2	22:O:81:ARG:CZ	2.40	0.52
24:Q:12:ARG:HA	24:Q:15:LYS:HD3	1.90	0.52
26:S:59:GLU:OE1	26:S:66:ILE:HD11	2.10	0.52
29:V:48:MET:O	29:V:51:GLN:HG3	2.09	0.52
33:Z:4:ILE:HG13	33:Z:58:GLU:HA	1.91	0.52
34:a:107:G:N7	53:t:9:ARG:CZ	2.73	0.52
34:a:151:A:N6	34:a:170:U:C2'	2.72	0.52
34:a:208:U:H2'	34:a:209:U:H5''	1.90	0.52
34:a:262:A:H4'	53:t:69:ASN:HB2	1.91	0.52
34:a:295:C:H2'	34:a:296:U:O4'	2.10	0.52
34:a:324:G:C2	34:a:327:A:C8	2.98	0.52
34:a:340:U:H2'	34:a:341:C:C6	2.45	0.52
34:a:357:G:C2	34:a:358:U:C5	2.98	0.52
34:a:462:G:N7	34:a:463:U:O4'	2.43	0.52
34:a:755:G:H2'	34:a:756:C:C6	2.45	0.52
34:a:797:C:P	44:k:126:ARG:HE	2.33	0.52
34:a:888:G:H1'	34:a:909:A:N6	2.24	0.52
34:a:993:G:H2'	34:a:993:G:N3	2.24	0.52
34:a:1018:G:C2	34:a:1019:A:C8	2.97	0.52
34:a:1029:U:H2'	34:a:1031:C:O3'	2.09	0.52
34:a:1132:C:N3	34:a:1133:G:C8	2.77	0.52
34:a:1306:A:C2	34:a:1307:U:H1'	2.45	0.52
34:a:1319:A:C8	34:a:1323:G:C6	2.98	0.52
34:a:1330:U:C4	34:a:1331:G:N3	2.78	0.52
34:a:1343:G:H2'	34:a:1344:C:O4'	2.10	0.52
38:e:158:LYS:HG3	38:e:159:SER:H	1.75	0.52
39:f:51:ILE:HD11	51:r:65:SER:HB3	1.92	0.52
40:g:133:ALA:HA	40:g:136:LYS:CE	2.40	0.52
41:h:94:VAL:HG12	41:h:99:GLY:HA3	1.92	0.52
42:i:26:LYS:HZ1	42:i:27:ILE:C	2.18	0.52
44:k:93:GLU:OE2	44:k:93:GLU:N	2.29	0.52
45:l:112:ALA:HB1	45:l:115:LYS:CD	2.39	0.52
46:m:57:ASP:O	46:m:61:LYS:NZ	2.43	0.52
55:v:73:A:H2'	55:v:74:C:O4'	2.10	0.52
57:x:17:HIS:CG	57:x:119:GLN:HB2	2.44	0.52
57:x:96:ILE:HD11	57:x:407:ARG:HH21	1.74	0.52
57:x:152:LYS:O	57:x:156:GLN:HG2	2.10	0.52
57:x:286:PRO:HB2	57:x:291:VAL:HB	1.91	0.52
1:0:6:LYS:HE3	8:A:1263:U:H1'	1.90	0.52
1:0:26:SER:CB	8:A:2887:A:O2'	2.57	0.52
1:0:38:LEU:HB2	1:0:41:HIS:CB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:11:LYS:NZ	8:A:247:G:O6	2.42	0.52
5:4:27:CYS:CB	5:4:33:HIS:HB2	2.39	0.52
6:5:22:ALA:HB1	6:5:91:ALA:HB2	1.92	0.52
8:A:21:A:H2'	8:A:22:C:C6	2.45	0.52
8:A:24:G:N1	8:A:517:C:N3	2.58	0.52
8:A:36:G:C6	8:A:37:C:C5	2.98	0.52
8:A:38:A:N3	12:E:43:THR:HB	2.25	0.52
8:A:67:U:C4	8:A:68:G:N7	2.78	0.52
8:A:81:G:N1	8:A:106:C:C4	2.77	0.52
8:A:138:U:N3	8:A:140:C:N3	2.58	0.52
8:A:230:G:N3	8:A:231:A:C8	2.78	0.52
8:A:298:G:H1'	8:A:340:A:H61	1.75	0.52
8:A:460:A:H61	8:A:469:G:C2'	2.22	0.52
8:A:488:G:N2	8:A:491:G:H5''	2.25	0.52
8:A:602:A:C2	8:A:656:G:C6	2.98	0.52
8:A:619:G:P	8:A:620:G:H22	2.33	0.52
8:A:647:G:C6	8:A:648:G:C6	2.97	0.52
8:A:676:A:O2'	8:A:2442:C:O2'	2.28	0.52
8:A:697:G:C2	8:A:766:U:C2	2.98	0.52
8:A:704:G:H2'	8:A:726:G:N2	2.25	0.52
8:A:729:G:OP2	10:C:12:ARG:NH1	2.39	0.52
8:A:866:A:C8	8:A:914:G:C5	2.98	0.52
8:A:1018:U:H2'	8:A:1019:U:H6	1.75	0.52
8:A:1087:G:C4	8:A:1089:A:C6	2.98	0.52
8:A:1151:A:C5	8:A:1152:C:C4	2.98	0.52
8:A:1175:A:H5'	8:A:1176:U:C5	2.44	0.52
8:A:1283:G:H22	8:A:1286:A:P	2.32	0.52
8:A:1434:A:H2'	8:A:1435:G:H8	1.74	0.52
8:A:1567:G:N7	10:C:82:TYR:CZ	2.78	0.52
8:A:1637:A:C4	8:A:1638:C:C5	2.98	0.52
8:A:1715:G:N2	8:A:1743:G:H2'	2.25	0.52
8:A:1737:G:O5'	8:A:1737:G:C8	2.63	0.52
8:A:1780:A:C3'	8:A:1781:U:H2'	2.41	0.52
8:A:1895:C:H2'	8:A:1896:G:O4'	2.11	0.52
8:A:2006:C:C2	8:A:2007:U:C5	2.97	0.52
8:A:2079:U:C2	8:A:2080:A:C8	2.98	0.52
8:A:2117:A:N6	8:A:2171:A:C5	2.77	0.52
8:A:2187:U:H2'	8:A:2188:U:C5	2.45	0.52
8:A:2190:G:C2	8:A:2191:A:C4	2.97	0.52
8:A:2199:A:H1'	15:H:28:ASN:ND2	2.25	0.52
8:A:2231:U:C2	8:A:2232:C:C5	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2297:A:OP2	8:A:2297:A:C8	2.63	0.52
8:A:2323:G:C5	8:A:2324:U:C4	2.98	0.52
8:A:2445:2MG:H5''	8:A:2445:2MG:C8	2.45	0.52
8:A:2494:G:N3	8:A:2495:G:C8	2.78	0.52
8:A:2523:G:N1	8:A:2524:G:C5	2.78	0.52
8:A:2537:U:H2'	8:A:2538:C:H6	1.71	0.52
8:A:2556:C:C4	8:A:2557:G:C5	2.98	0.52
8:A:2592:G:H2'	8:A:2593:U:O4'	2.10	0.52
8:A:2693:G:C2	8:A:2717:C:C2	2.98	0.52
8:A:2722:G:C2	8:A:2723:C:C2	2.98	0.52
8:A:2809:A:C6	8:A:2810:A:C6	2.98	0.52
8:A:2896:C:C2	8:A:2897:U:C5	2.98	0.52
9:B:51:G:N2	9:B:53:A:H62	2.08	0.52
9:B:99:A:C4	9:B:100:G:C8	2.98	0.52
11:D:78:GLY:C	11:D:80:TRP:CZ3	2.88	0.52
12:E:61:ARG:NH1	12:E:65:THR:HG23	2.25	0.52
12:E:106:LYS:CE	12:E:200:LEU:HG	2.40	0.52
15:H:3:VAL:HG23	15:H:37:VAL:O	2.10	0.52
15:H:26:ALA:HA	15:H:30:LEU:HB2	1.92	0.52
18:K:14:SER:HA	18:K:51:LYS:CE	2.40	0.52
18:K:58:LEU:HD23	18:K:58:LEU:N	2.24	0.52
20:M:42:THR:O	20:M:46:ILE:HG13	2.10	0.52
20:M:64:TRP:O	20:M:103:TYR:HA	2.10	0.52
21:N:102:PHE:HA	21:N:108:ALA:O	2.10	0.52
22:O:30:ARG:HG2	22:O:31:THR:N	2.24	0.52
23:P:50:ARG:O	23:P:56:SER:HA	2.10	0.52
25:R:25:LEU:HD12	25:R:94:THR:HG21	1.92	0.52
27:T:26:LYS:C	27:T:26:LYS:HD2	2.34	0.52
27:T:58:VAL:HG22	27:T:85:VAL:HG13	1.92	0.52
34:a:32:A:C2	34:a:33:A:C5	2.97	0.52
34:a:65:A:N6	34:a:381:C:N3	2.58	0.52
34:a:118:U:H3'	34:a:288:A:H61	1.75	0.52
34:a:272:C:H2'	34:a:273:U:H6	1.75	0.52
34:a:390:U:O2'	49:p:28:ARG:NH2	2.43	0.52
34:a:438:U:H5'	37:d:119:HIS:HD1	1.74	0.52
34:a:447:G:C6	34:a:486:U:OP1	2.63	0.52
34:a:520:A:H2'	34:a:521:G:O4'	2.09	0.52
34:a:631:C:O5'	34:a:632:U:H5'	2.09	0.52
34:a:949:A:C6	34:a:1233:G:N1	2.78	0.52
34:a:1172:C:O2'	34:a:1173:U:H5'	2.09	0.52
34:a:1361:G:H8	34:a:1361:G:O5'	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1378:C:OP1	40:g:6:ILE:O	2.28	0.52
34:a:1450:U:H3'	34:a:1452:C:N3	2.25	0.52
34:a:1465:A:H2'	34:a:1466:C:H6	1.75	0.52
37:d:7:LYS:HB3	37:d:20:LEU:HB3	1.91	0.52
37:d:201:GLU:OE1	38:e:111:ARG:NH1	2.42	0.52
40:g:110:ARG:HD3	40:g:122:GLU:HG2	1.92	0.52
41:h:60:LEU:HD12	41:h:60:LEU:C	2.35	0.52
42:i:97:LEU:O	42:i:100:ALA:N	2.42	0.52
44:k:21:HIS:HE1	44:k:34:THR:HG21	1.75	0.52
44:k:62:ALA:O	44:k:95:THR:HG22	2.10	0.52
45:l:33:CYS:H	45:l:54:VAL:HG12	1.75	0.52
48:o:70:LYS:HD3	48:o:77:TYR:CE2	2.45	0.52
49:p:69:ASP:N	49:p:69:ASP:OD1	2.38	0.52
55:v:15:G:N2	55:v:59:A:C8	2.78	0.52
55:v:15:G:N2	55:v:59:A:N9	2.58	0.52
55:v:38:A:H3'	55:v:39:C:H6	1.75	0.52
57:x:158:LYS:HE3	57:x:165:PRO:CG	2.39	0.52
8:A:61:C:P	32:Y:47:ARG:HH12	2.33	0.51
8:A:79:C:N3	8:A:108:G:C6	2.78	0.51
8:A:132:G:C2	8:A:148:U:C2	2.97	0.51
8:A:391:A:H1'	8:A:411:G:O4'	2.11	0.51
8:A:475:C:C6	8:A:509:C:N4	2.77	0.51
8:A:488:G:H1'	8:A:492:A:H61	1.74	0.51
8:A:567:U:H2'	8:A:568:U:O4'	2.10	0.51
8:A:684:G:C6	8:A:774:G:C5	2.99	0.51
8:A:743:A:H2'	8:A:744:U:H6	1.75	0.51
8:A:769:U:O2	8:A:1379:U:H1'	2.09	0.51
8:A:811:U:O3'	8:A:1251:C:H5'	2.11	0.51
8:A:818:G:N2	8:A:1188:U:OP2	2.43	0.51
8:A:1051:G:H2'	8:A:1052:C:C6	2.45	0.51
8:A:1064:C:H41	8:A:1068:G:H4'	1.75	0.51
8:A:1065:U:P	8:A:1075:C:O2	2.69	0.51
8:A:1171:G:N2	8:A:1178:C:C2	2.78	0.51
8:A:1175:A:OP2	8:A:1176:U:C2	2.63	0.51
8:A:1395:A:C5	8:A:1398:C:C5	2.98	0.51
8:A:1437:C:H2'	8:A:1438:U:C6	2.45	0.51
8:A:1455:G:C4	8:A:1456:G:C8	2.98	0.51
8:A:1675:C:C4	8:A:1676:A:C4	2.98	0.51
8:A:1722:A:H62	8:A:1738:G:H1'	1.75	0.51
8:A:1723:G:H2'	8:A:1724:G:O4'	2.09	0.51
8:A:1947:C:N3	8:A:1960:A:C2	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1984:G:C6	8:A:1985:C:C4	2.99	0.51
8:A:2036:C:H2'	8:A:2037:A:C8	2.45	0.51
8:A:2104:C:N4	8:A:2105:U:O2'	2.43	0.51
8:A:2152:G:C6	8:A:2153:C:C2	2.98	0.51
8:A:2215:C:H2'	8:A:2216:G:C8	2.44	0.51
8:A:2311:A:H3'	8:A:2312:U:C5	2.44	0.51
8:A:2409:G:C6	8:A:2410:G:C5	2.98	0.51
8:A:2896:C:H2'	8:A:2897:U:H6	1.75	0.51
9:B:24:G:N2	9:B:28:C:C2	2.78	0.51
9:B:61:G:C6	9:B:62:C:N4	2.78	0.51
13:F:114:ARG:HH22	52:s:27:LYS:HG2	1.75	0.51
17:J:44:TYR:O	24:Q:63:ARG:NH2	2.43	0.51
19:L:101:ILE:HG13	19:L:102:GLY:N	2.24	0.51
20:M:71:LYS:C	20:M:92:TRP:CE3	2.88	0.51
22:O:58:ILE:HG21	22:O:74:VAL:HG23	1.92	0.51
24:Q:16:ILE:HA	24:Q:19:GLN:CD	2.35	0.51
28:U:10:VAL:HA	28:U:71:ILE:HA	1.92	0.51
28:U:82:VAL:HG13	28:U:94:PHE:O	2.10	0.51
29:V:48:MET:SD	29:V:86:LEU:HD11	2.50	0.51
30:W:64:LYS:HE2	30:W:66:GLU:HG3	1.92	0.51
34:a:68:G:C4'	34:a:171:A:H1'	2.40	0.51
34:a:74:A:C2'	34:a:75:G:O4'	2.58	0.51
34:a:101:A:C4	34:a:102:G:C8	2.99	0.51
34:a:119:A:N6	34:a:287:U:H2'	2.24	0.51
34:a:181:A:C4	34:a:195:A:N6	2.78	0.51
34:a:404:G:N7	37:d:1:ALA:HB3	2.25	0.51
34:a:428:G:C5'	34:a:430:A:O4'	2.58	0.51
34:a:578:C:C2	34:a:579:A:C8	2.98	0.51
34:a:780:A:C2	34:a:801:U:C5	2.97	0.51
34:a:979:C:H42	47:n:59:ARG:HA	1.74	0.51
34:a:1016:A:H3'	34:a:1017:U:H6	1.75	0.51
34:a:1074:G:C6	34:a:1075:U:C5	2.98	0.51
34:a:1074:G:H3'	34:a:1075:U:H5''	1.92	0.51
34:a:1152:A:OP1	43:j:70:HIS:CG	2.62	0.51
34:a:1188:A:H2'	34:a:1189:U:O4'	2.10	0.51
34:a:1210:C:H1'	34:a:1214:C:C6	2.46	0.51
34:a:1280:A:P	43:j:9:ARG:HH12	2.32	0.51
34:a:1412:C:N3	34:a:1489:G:N1	2.57	0.51
34:a:1416:G:C6	34:a:1417:G:C4	2.97	0.51
34:a:1527:U:P	54:u:44:ARG:HH21	2.33	0.51
38:e:56:PRO:HA	38:e:59:ILE:CD1	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:e:139:THR:O	38:e:143:LEU:HD12	2.09	0.51
39:f:38:ARG:NH2	39:f:99:ALA:H	2.08	0.51
40:g:46:LEU:HB3	40:g:57:GLU:HG2	1.92	0.51
41:h:91:LEU:HD23	41:h:124:ILE:HD11	1.93	0.51
42:i:70:GLY:O	42:i:74:GLN:OE1	2.28	0.51
44:k:21:HIS:CE1	44:k:34:THR:HG21	2.45	0.51
46:m:87:GLY:C	46:m:91:ARG:NH1	2.68	0.51
49:p:38:PHE:O	49:p:50:THR:HA	2.09	0.51
49:p:75:ILE:O	49:p:79:ASN:HB2	2.09	0.51
51:r:33:THR:CG2	51:r:37:LYS:HB2	2.40	0.51
57:x:105:LEU:HD12	57:x:106:ASP:N	2.25	0.51
57:x:144:ASP:O	57:x:175:GLU:HG2	2.10	0.51
57:x:172:ILE:HG12	57:x:182:VAL:CG2	2.40	0.51
57:x:344:SER:HB3	57:x:374:LYS:HB3	1.91	0.51
57:x:387:LEU:O	57:x:388:LYS:NZ	2.43	0.51
57:x:417:ILE:HA	57:x:485:PRO:HD3	1.92	0.51
59:z:7:G:C5	59:z:8:U:C4	2.98	0.51
3:2:34:ARG:HB3	3:2:42:LEU:HD12	1.91	0.51
5:4:7:VAL:HG13	5:4:37:GLN:O	2.10	0.51
5:4:14:CYS:SG	5:4:33:HIS:ND1	2.77	0.51
8:A:71:A:C6	8:A:73:A:N1	2.78	0.51
8:A:123:G:C6	8:A:124:G:C6	2.98	0.51
8:A:209:C:H2'	8:A:210:C:H6	1.75	0.51
8:A:221:A:C4	8:A:233:A:C4	2.98	0.51
8:A:301:G:C4	8:A:317:G:C2	2.99	0.51
8:A:338:G:C4	8:A:339:U:C6	2.99	0.51
8:A:531:C:H5''	8:A:532:A:C4	2.45	0.51
8:A:613:A:O2'	8:A:614:A:H2'	2.10	0.51
8:A:682:G:C2	8:A:796:C:C2	2.98	0.51
8:A:700:G:H2'	8:A:701:G:O4'	2.10	0.51
8:A:749:A:N3	8:A:1618:6MZ:H2'	2.25	0.51
8:A:781:A:OP1	10:C:216:ARG:NH2	2.40	0.51
8:A:892:A:C5	8:A:893:C:C4	2.98	0.51
8:A:952:G:C6	8:A:953:G:C5	2.98	0.51
8:A:1000:A:C8	8:A:1154:G:N2	2.78	0.51
8:A:1000:A:C5	8:A:1155:A:C5	2.97	0.51
8:A:1093:G:C1'	8:A:1097:U:C5	2.94	0.51
8:A:1105:U:C2	8:A:1106:G:C8	2.98	0.51
8:A:1220:G:N1	8:A:1230:A:C6	2.79	0.51
8:A:1283:G:O2'	8:A:1285:A:N7	2.32	0.51
8:A:1401:G:C5	8:A:1402:U:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1458:U:H4'	8:A:1459:G:O4'	2.10	0.51
8:A:1469:A:C8	8:A:1522:A:N6	2.78	0.51
8:A:1503:A:H2'	8:A:1504:A:H8	1.76	0.51
8:A:1773:A:C5	8:A:1774:C:C5	2.99	0.51
8:A:1857:G:C6	8:A:1884:G:C5	2.98	0.51
8:A:2109:U:OP1	8:A:2142:A:O2'	2.28	0.51
8:A:2109:U:N1	8:A:2180:U:O2	2.43	0.51
8:A:2113:U:H5'	8:A:2114:A:H5'	1.92	0.51
8:A:2204:G:H2'	8:A:2205:A:H8	1.75	0.51
8:A:2239:G:C6	8:A:2240:U:C4	2.99	0.51
8:A:2265:U:H2'	8:A:2266:A:C8	2.45	0.51
8:A:2280:G:C2	8:A:2281:A:C8	2.98	0.51
8:A:2291:U:H5''	8:A:2380:C:O2'	2.10	0.51
8:A:2307:G:H4'	8:A:2308:G:O5'	2.09	0.51
8:A:2414:G:C4	8:A:2415:G:C8	2.97	0.51
8:A:2439:A:N6	8:A:2585:U:O2'	2.43	0.51
8:A:2630:G:O4'	8:A:2894:G:H1'	2.10	0.51
8:A:2801:G:H2'	8:A:2802:G:C8	2.45	0.51
8:A:2848:G:C2	8:A:2867:G:C4	2.98	0.51
9:B:39:A:C2	9:B:44:G:C2	2.99	0.51
9:B:86:G:N1	9:B:88:C:O4'	2.43	0.51
22:O:36:TYR:HA	22:O:52:SER:CB	2.40	0.51
22:O:62:LEU:HG	22:O:70:ALA:HA	1.92	0.51
26:S:86:MET:HE3	26:S:87:PRO:O	2.11	0.51
28:U:21:ARG:HD2	28:U:72:PHE:HB2	1.92	0.51
30:W:45:ALA:O	30:W:47:VAL:HG23	2.09	0.51
31:X:55:MET:HA	31:X:58:ILE:HD12	1.91	0.51
32:Y:13:GLU:HA	32:Y:16:THR:HG22	1.92	0.51
34:a:1:A:H62	34:a:614:C:H1'	1.76	0.51
34:a:61:G:C4	34:a:107:G:N2	2.78	0.51
34:a:179:A:H5'	34:a:180:U:H5	1.76	0.51
34:a:180:U:H2'	34:a:181:A:H8	1.74	0.51
34:a:189:A:H2'	34:a:190:A:C8	2.44	0.51
34:a:257:G:C2	34:a:258:G:C8	2.99	0.51
34:a:373:A:C2	34:a:374:A:C4	2.98	0.51
34:a:413:G:H22	34:a:429:U:P	2.34	0.51
34:a:443:C:N4	34:a:444:G:N7	2.59	0.51
34:a:606:G:N2	34:a:631:C:H3'	2.25	0.51
34:a:613:C:H2'	34:a:614:C:H6	1.75	0.51
34:a:637:C:H5''	50:q:3:LYS:HE2	1.92	0.51
34:a:705:G:C5	34:a:706:A:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:786:G:N1	34:a:797:C:C4	2.78	0.51
34:a:788:U:H2'	34:a:789:U:O4'	2.11	0.51
34:a:921:U:O4'	34:a:1081:A:O3'	2.27	0.51
34:a:979:C:O2	47:n:59:ARG:CZ	2.57	0.51
34:a:1068:G:C6	34:a:1108:G:N3	2.78	0.51
34:a:1120:C:H2'	34:a:1121:U:C6	2.45	0.51
34:a:1191:A:H2'	34:a:1192:C:C6	2.45	0.51
34:a:1212:U:H4'	34:a:1213:A:C8	2.45	0.51
34:a:1261:A:C5	34:a:1262:C:C6	2.98	0.51
34:a:1388:C:H2'	34:a:1389:C:C6	2.45	0.51
34:a:1527:U:OP2	54:u:41:THR:CB	2.58	0.51
36:c:82:ASP:O	36:c:86:LEU:HD13	2.11	0.51
36:c:150:VAL:O	36:c:166:TRP:HB2	2.11	0.51
37:d:75:TYR:CZ	37:d:203:TYR:CB	2.93	0.51
37:d:169:TRP:C	37:d:170:LEU:HD22	2.35	0.51
38:e:99:SER:HB2	38:e:102:THR:HG23	1.91	0.51
40:g:67:ASN:N	40:g:67:ASN:HD22	2.07	0.51
41:h:88:LYS:HA	41:h:91:LEU:CD1	2.40	0.51
50:q:63:CYS:SG	50:q:66:LEU:HD11	2.50	0.51
51:r:11:ARG:HA	51:r:14:ALA:HB3	1.92	0.51
52:s:39:ILE:HA	52:s:43:MET:HE3	1.91	0.51
56:w:63:G:H2'	56:w:64:A:C8	2.42	0.51
57:x:150:PHE:CD1	57:x:265:CYS:HB3	2.46	0.51
57:x:207:PRO:O	57:x:210:MET:N	2.43	0.51
57:x:218:HIS:ND1	57:x:219:GLN:OE1	2.34	0.51
57:x:280:ALA:O	57:x:284:TYR:HD2	1.93	0.51
57:x:441:ASP:OD1	57:x:442:PRO:HD2	2.11	0.51
57:x:647:GLU:H	57:x:651:VAL:HA	1.75	0.51
8:A:27:G:C4	8:A:512:G:N2	2.79	0.51
8:A:86:G:C6	8:A:87:U:C4	2.97	0.51
8:A:124:G:C2	8:A:128:C:N3	2.79	0.51
8:A:271:G:C4	8:A:272:A:N7	2.78	0.51
8:A:297:G:C6	8:A:342:A:C6	2.98	0.51
8:A:373:U:H2'	8:A:374:A:C8	2.46	0.51
8:A:388:G:C6	8:A:390:U:C2	2.98	0.51
8:A:475:C:H42	8:A:479:A:H8	1.53	0.51
8:A:529:A:C4	8:A:2023:C:C5	2.98	0.51
8:A:541:A:H2'	8:A:542:C:H6	1.75	0.51
8:A:574:A:H1'	8:A:2055:C:C6	2.46	0.51
8:A:675:A:P	12:E:58:LYS:HZ3	2.33	0.51
8:A:715:A:C5	8:A:716:A:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:813:U:P	19:L:24:GLY:HA3	2.50	0.51
8:A:832:U:O2	19:L:52:GLY:HA3	2.10	0.51
8:A:1041:G:C2	8:A:1042:G:C8	2.99	0.51
8:A:1069:A:O5'	8:A:1074:G:C5	2.64	0.51
8:A:1103:A:N7	8:A:1104:C:C4	2.79	0.51
8:A:1135:C:N4	8:A:1138:G:C8	2.77	0.51
8:A:1227:G:C2	8:A:1228:G:C4	2.99	0.51
8:A:1239:G:C6	8:A:1240:U:C4	2.98	0.51
8:A:1312:U:H3	8:A:1340:U:H5	1.59	0.51
8:A:1343:G:C2	8:A:1344:U:C4	2.98	0.51
8:A:1544:A:C6	8:A:1545:A:C6	2.98	0.51
8:A:1590:A:H2'	8:A:1591:A:H8	1.75	0.51
8:A:1699:G:C4	8:A:1763:G:C2	2.99	0.51
8:A:1707:G:H2'	8:A:1708:C:H6	1.74	0.51
8:A:1707:G:H2'	8:A:1708:C:C6	2.45	0.51
8:A:1726:C:H6	8:A:1726:C:O5'	1.93	0.51
8:A:1739:A:C6	8:A:1740:G:C4	2.98	0.51
8:A:1838:C:N4	8:A:1899:A:O4'	2.44	0.51
8:A:1862:G:C2	8:A:1881:C:C2	2.98	0.51
8:A:1962:5MC:H4'	8:A:1963:U:H5	1.75	0.51
8:A:2127:G:N2	8:A:2173:A:O4'	2.42	0.51
8:A:2140:G:C8	8:A:2144:G:O6	2.63	0.51
8:A:2194:U:H2'	8:A:2195:U:H6	1.75	0.51
8:A:2200:C:O2	8:A:2226:C:N4	2.43	0.51
8:A:2234:G:H2'	8:A:2235:G:O4'	2.11	0.51
8:A:2242:G:C5	8:A:2243:U:C5	2.99	0.51
8:A:2253:G:C5	8:A:2254:C:C5	2.98	0.51
8:A:2293:G:N1	8:A:2294:G:C5	2.78	0.51
8:A:2311:A:C2	13:F:40:GLY:CA	2.93	0.51
8:A:2375:G:C4	8:A:2377:A:OP2	2.64	0.51
8:A:2438:U:O2'	8:A:2439:A:H5''	2.10	0.51
8:A:2468:A:P	8:A:2476:A:H61	2.33	0.51
8:A:2676:C:O2	8:A:2732:G:N2	2.43	0.51
8:A:2701:U:O2'	21:N:67:PHE:HZ	1.92	0.51
8:A:2703:C:C2	8:A:2704:C:C5	2.98	0.51
8:A:2810:A:H2'	8:A:2811:G:O4'	2.11	0.51
8:A:2852:G:C6	8:A:2853:C:C4	2.98	0.51
8:A:2865:U:H2'	8:A:2866:U:C5	2.45	0.51
9:B:7:G:H5'	22:O:29:HIS:NE2	2.25	0.51
11:D:13:ARG:HG3	23:P:54:LEU:HD21	1.93	0.51
29:V:89:ILE:HG21	29:V:91:PHE:CZ	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:146:G:C6	34:a:147:G:C6	2.99	0.51
34:a:158:G:O6	34:a:163:C:C5	2.64	0.51
34:a:347:G:C6	34:a:348:G:C5	2.98	0.51
34:a:410:G:C2'	34:a:432:A:N6	2.72	0.51
34:a:421:U:OP2	34:a:422:C:C5	2.62	0.51
34:a:454:G:H2'	34:a:455:G:H8	1.75	0.51
34:a:598:U:H4'	41:h:85:TYR:CB	2.41	0.51
34:a:668:G:H21	48:o:45:HIS:HE2	1.58	0.51
34:a:705:G:O2'	44:k:30:ILE:CD1	2.58	0.51
34:a:855:U:H2'	34:a:856:C:C6	2.46	0.51
34:a:857:C:H2'	34:a:858:G:O4'	2.10	0.51
34:a:1027:C:C2	34:a:1035:A:C4	2.98	0.51
34:a:1092:A:C2	34:a:1110:A:C5'	2.93	0.51
34:a:1142:G:C8	34:a:1143:G:C8	2.98	0.51
34:a:1302:C:C4	46:m:16:ILE:HG13	2.44	0.51
34:a:1432:G:N2	34:a:1467:C:H3'	2.25	0.51
35:b:115:ASP:O	35:b:119:GLN:CD	2.53	0.51
36:c:21:TRP:CE2	36:c:58:ARG:HD3	2.45	0.51
41:h:9:MET:HA	41:h:12:ARG:HD2	1.91	0.51
41:h:73:SER:N	41:h:129:ALA:O	2.43	0.51
43:j:14:ASP:HB3	43:j:17:LEU:HB3	1.92	0.51
50:q:14:ASP:CA	50:q:20:ILE:HG22	2.41	0.51
56:w:24:G:C6	56:w:25:C:C4	2.99	0.51
56:w:30:G:H2'	56:w:31:A:H8	1.76	0.51
57:x:251:LEU:O	57:x:255:VAL:HG23	2.09	0.51
57:x:493:ILE:HG23	57:x:604:PHE:CE1	2.46	0.51
57:x:683:PHE:CZ	57:x:686:TYR:CE1	2.99	0.51
3:2:13:ASN:ND2	8:A:125:A:N3	2.50	0.51
4:3:38:LYS:HE3	8:A:2351:G:O6	2.11	0.51
5:4:19:ARG:HA	8:A:2756:U:H5''	1.91	0.51
8:A:67:U:O2	8:A:74:A:H8	1.93	0.51
8:A:131:A:H2'	8:A:132:G:H8	1.74	0.51
8:A:447:A:C2'	8:A:473:G:N7	2.72	0.51
8:A:458:G:H2'	8:A:469:G:C6	2.45	0.51
8:A:458:G:C4	8:A:469:G:C6	2.98	0.51
8:A:676:A:H1'	8:A:2443:C:O4'	2.10	0.51
8:A:709:U:H2'	8:A:710:U:C6	2.45	0.51
8:A:717:C:C5	8:A:718:A:C8	2.98	0.51
8:A:718:A:H2'	8:A:719:C:O4'	2.10	0.51
8:A:747:5MC:C4	8:A:2613:U:C4	2.98	0.51
8:A:809:G:C2	8:A:810:U:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:864:G:C2	8:A:865:C:C4	2.97	0.51
8:A:1013:C:C2	8:A:1014:A:C8	2.98	0.51
8:A:1041:G:C6	8:A:1115:G:C6	2.99	0.51
8:A:1105:U:H2'	8:A:1106:G:H8	1.76	0.51
8:A:1373:A:H4'	8:A:2212:A:C4	2.45	0.51
8:A:1649:G:C6	8:A:2009:A:N6	2.79	0.51
8:A:1655:A:C2	8:A:1656:C:H1'	2.45	0.51
8:A:1800:C:O4'	8:A:1802:A:O4'	2.29	0.51
8:A:1825:U:H2'	8:A:1826:G:H8	1.75	0.51
8:A:1855:U:C4	8:A:1888:G:N2	2.78	0.51
8:A:1900:A:C2	8:A:1970:A:C4	2.98	0.51
8:A:2063:C:C2	8:A:2064:C:C5	2.99	0.51
8:A:2341:G:H2'	8:A:2342:C:H6	1.73	0.51
8:A:2478:A:C8	8:A:2529:G:C5	2.98	0.51
8:A:2520:C:HO2'	8:A:2565:A:HO2'	1.59	0.51
8:A:2543:G:H5'	8:A:2767:C:P	2.51	0.51
8:A:2688:G:H2'	8:A:2719:G:N2	2.25	0.51
8:A:2788:C:O4'	8:A:2810:A:H1'	2.09	0.51
8:A:2802:G:C4	8:A:2803:G:C8	2.98	0.51
8:A:2805:C:H2'	8:A:2806:C:H6	1.75	0.51
8:A:2856:A:N6	8:A:2857:G:C6	2.78	0.51
8:A:2856:A:N6	8:A:2862:G:O6	2.42	0.51
8:A:2869:G:C2	8:A:2870:C:C2	2.98	0.51
9:B:4:C:H2'	9:B:5:U:C6	2.46	0.51
14:G:21:GLN:NE2	14:G:40:VAL:O	2.43	0.51
14:G:97:VAL:HA	14:G:102:ILE:HA	1.92	0.51
15:H:15:LEU:CD2	15:H:55:GLU:OE2	2.57	0.51
15:H:113:SER:O	15:H:116:ARG:NH1	2.41	0.51
15:H:114:GLU:OE1	15:H:114:GLU:N	2.43	0.51
19:L:2:ARG:O	19:L:5:THR:OG1	2.28	0.51
20:M:26:VAL:HG21	20:M:132:THR:O	2.09	0.51
20:M:35:ALA:HB2	20:M:102:LEU:HD21	1.93	0.51
21:N:100:CYS:SG	21:N:111:ALA:C	2.94	0.51
26:S:25:ARG:HE	26:S:74:ILE:CG2	2.23	0.51
28:U:48:VAL:O	28:U:53:GLN:HB3	2.11	0.51
34:a:59:A:O2'	34:a:388:G:H2'	2.10	0.51
34:a:67:C:O2'	34:a:171:A:C2'	2.58	0.51
34:a:222:C:H2'	34:a:223:A:H8	1.75	0.51
34:a:374:A:O4'	34:a:374:A:N3	2.43	0.51
34:a:377:G:H5'	49:p:5:ARG:NH1	2.26	0.51
34:a:378:G:O6	34:a:386:C:N4	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:402:G:C6	34:a:403:C:N4	2.78	0.51
34:a:654:G:C2	34:a:753:A:C4	2.99	0.51
34:a:657:U:O4'	48:o:27:GLN:OE1	2.29	0.51
34:a:817:C:O2	34:a:819:A:H5'	2.11	0.51
34:a:1027:C:H5''	34:a:1028:C:C5	2.45	0.51
34:a:1055:A:C6	34:a:1206:G:C5	2.98	0.51
34:a:1108:G:C5	34:a:1109:C:C6	2.99	0.51
34:a:1131:G:O6	34:a:1139:G:O6	2.27	0.51
34:a:1139:G:H4'	34:a:1140:C:H5'	1.93	0.51
34:a:1264:U:C2	34:a:1272:G:N2	2.79	0.51
34:a:1346:A:C8	34:a:1348:U:C2	2.98	0.51
34:a:1412:C:H2'	34:a:1413:A:H8	1.75	0.51
35:b:67:LEU:HD23	35:b:68:PHE:N	2.24	0.51
35:b:110:ILE:HD13	35:b:147:LEU:HB3	1.92	0.51
36:c:155:ARG:NE	36:c:159:ALA:O	2.41	0.51
37:d:18:LEU:CB	37:d:20:LEU:HD21	2.41	0.51
37:d:44:LYS:O	37:d:44:LYS:HG3	2.03	0.51
37:d:67:LEU:O	37:d:71:PHE:HE1	1.93	0.51
38:e:44:ARG:HA	38:e:71:ILE:O	2.11	0.51
40:g:63:VAL:HA	40:g:66:GLU:OE1	2.10	0.51
40:g:114:SER:C	40:g:118:ARG:HE	2.17	0.51
44:k:19:VAL:CG2	44:k:36:ARG:HA	2.41	0.51
44:k:97:ARG:HD3	54:u:15:LEU:HD11	1.92	0.51
47:n:25:GLU:CD	47:n:26:LEU:HD12	2.36	0.51
47:n:64:CYS:HA	47:n:73:PHE:HE1	1.75	0.51
51:r:64:LEU:HD13	51:r:66:LEU:HD12	1.93	0.51
52:s:47:THR:HA	52:s:60:PHE:HA	1.92	0.51
56:w:52:G:C2	56:w:53:G:C4	2.98	0.51
57:x:78:TYR:OH	57:x:282:ILE:CG2	2.59	0.51
57:x:252:ARG:HH11	57:x:256:LEU:HD11	1.75	0.51
57:x:547:GLU:HG2	57:x:548:TYR:N	2.25	0.51
57:x:633:ASP:O	57:x:637:ARG:HG2	2.11	0.51
1:0:49:ARG:O	1:0:51:ARG:NH1	2.36	0.51
4:3:44:ARG:H	4:3:45:PRO:HD2	1.74	0.51
6:5:80:THR:HA	8:A:1107:G:O3'	2.11	0.51
7:6:1:MET:HA	9:B:40:U:N3	2.26	0.51
8:A:48:G:C2	8:A:178:G:C5	2.98	0.51
8:A:194:G:N1	8:A:202:U:C2	2.79	0.51
8:A:351:C:H2'	8:A:352:A:C8	2.45	0.51
8:A:363:G:H2'	8:A:364:C:H6	1.74	0.51
8:A:616:A:C2	8:A:617:G:H1'	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:663:G:N1	8:A:664:G:C5	2.78	0.51
8:A:706:A:C6	8:A:707:G:C4	2.99	0.51
8:A:844:A:C2	8:A:935:C:C2	2.98	0.51
8:A:854:C:N4	8:A:924:G:O6	2.43	0.51
8:A:856:G:N1	8:A:922:C:C4	2.79	0.51
8:A:874:G:H3'	8:A:875:G:H8	1.74	0.51
8:A:1003:G:H2'	8:A:1004:U:C6	2.46	0.51
8:A:1090:A:H4'	8:A:1091:G:OP1	2.11	0.51
8:A:1131:G:H5'	17:J:84:ILE:CG2	2.40	0.51
8:A:1235:G:C2	8:A:1236:G:C2	2.99	0.51
8:A:1435:G:C6	8:A:1436:G:C6	2.99	0.51
8:A:1448:G:C4	8:A:1449:G:C8	2.98	0.51
8:A:1475:G:H1'	8:A:1732:C:N4	2.24	0.51
8:A:1509:A:H2'	8:A:1510:G:H8	1.75	0.51
8:A:1516:G:C4	8:A:1517:G:C8	2.98	0.51
8:A:1601:G:C5	8:A:1602:U:C4	2.99	0.51
8:A:1643:G:C6	8:A:1644:C:C4	2.99	0.51
8:A:1727:C:N4	8:A:1734:G:O6	2.43	0.51
8:A:1744:A:H3'	8:A:1745:A:H8	1.76	0.51
8:A:1770:G:C6	8:A:1771:C:C4	2.99	0.51
8:A:1824:G:H2'	8:A:1825:U:H6	1.73	0.51
8:A:1901:A:H2'	8:A:1902:C:C6	2.46	0.51
8:A:1932:A:C2	8:A:1933:G:H1'	2.46	0.51
8:A:1999:C:H2'	8:A:2000:C:H6	1.74	0.51
8:A:2000:C:OP1	21:N:5:LYS:NZ	2.44	0.51
8:A:2024:G:C6	8:A:2040:G:C6	2.99	0.51
8:A:2029:G:H2'	8:A:2031:A:OP1	2.10	0.51
8:A:2070:A:H2'	8:A:2071:A:C8	2.45	0.51
8:A:2120:G:H22	8:A:2172:U:H3	1.57	0.51
8:A:2190:G:N1	8:A:2191:A:C5	2.79	0.51
8:A:2291:U:H2'	8:A:2292:U:C5	2.45	0.51
8:A:2400:G:N2	8:A:2417:C:C2	2.79	0.51
8:A:2454:G:N1	8:A:2499:C:N4	2.58	0.51
8:A:2598:A:P	10:C:234:GLY:HA2	2.51	0.51
8:A:2650:U:C2	8:A:2671:G:N2	2.78	0.51
8:A:2689:U:O4'	8:A:2713:U:C2	2.64	0.51
8:A:2699:C:H2'	8:A:2700:A:C8	2.45	0.51
8:A:2746:U:O4'	14:G:138:GLN:HG2	2.10	0.51
10:C:199:HIS:HA	10:C:202:ARG:HH21	1.74	0.51
10:C:204:LEU:O	10:C:206:LYS:N	2.36	0.51
12:E:149:ILE:HA	12:E:170:ARG:O	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:11:VAL:HG13	13:F:171:ALA:HB1	1.93	0.51
13:F:159:ALA:O	13:F:160:LYS:HD2	2.09	0.51
18:K:48:PRO:HB2	18:K:49:ARG:NH1	2.25	0.51
20:M:50:ARG:O	20:M:54:THR:HG23	2.11	0.51
27:T:63:VAL:HG21	27:T:80:TRP:CE3	2.45	0.51
28:U:32:LYS:HE2	28:U:65:GLN:HG2	1.93	0.51
30:W:66:GLU:O	30:W:74:LYS:HA	2.11	0.51
34:a:144:G:O6	34:a:178:C:C5	2.63	0.51
34:a:204:G:N2	34:a:466:A:C2	2.79	0.51
34:a:205:A:H3'	34:a:206:C:C5'	2.40	0.51
34:a:264:C:H4'	50:q:64:ARG:HD2	1.92	0.51
34:a:512:U:H2'	34:a:513:C:C6	2.46	0.51
34:a:538:G:H2'	34:a:539:A:H8	1.75	0.51
34:a:617:G:C2	34:a:618:C:N3	2.79	0.51
34:a:647:C:H2'	34:a:648:A:H8	1.75	0.51
34:a:683:G:N1	34:a:707:U:N3	2.58	0.51
34:a:755:G:C6	34:a:756:C:N4	2.79	0.51
34:a:1142:G:N7	34:a:1143:G:C4	2.78	0.51
34:a:1160:G:N2	34:a:1161:C:C2	2.78	0.51
34:a:1182:G:H4'	34:a:1183:U:O5'	2.10	0.51
34:a:1227:A:N9	52:s:82:HIS:HB2	2.26	0.51
34:a:1277:C:H1'	34:a:1282:C:C2	2.45	0.51
34:a:1287:A:C6	34:a:1288:A:C6	2.99	0.51
34:a:1319:A:P	52:s:2:ARG:NH2	2.83	0.51
34:a:1356:G:H2'	34:a:1357:A:H8	1.76	0.51
39:f:6:ILE:HA	39:f:88:MET:O	2.10	0.51
41:h:9:MET:HB2	41:h:26:MET:SD	2.50	0.51
43:j:9:ARG:HB2	43:j:99:GLN:HB2	1.93	0.51
50:q:16:MET:HE2	50:q:19:SER:HB3	1.93	0.51
50:q:62:GLU:HB2	50:q:72:TRP:CZ2	2.46	0.51
51:r:20:ILE:N	51:r:53:GLN:OE1	2.43	0.51
55:v:36:U:H2'	55:v:37:A:O4'	2.09	0.51
55:v:52:G:N2	55:v:53:G:H1'	2.26	0.51
57:x:457:ILE:O	57:x:457:ILE:HG13	2.11	0.51
2:1:40:PRO:HA	2:1:43:ARG:HA	1.93	0.51
2:1:43:ARG:NH1	8:A:2370:G:C4'	2.66	0.51
8:A:61:C:O4'	32:Y:40:SER:CB	2.59	0.51
8:A:288:U:H2'	8:A:289:G:H8	1.71	0.51
8:A:391:A:C4	8:A:392:U:C6	2.99	0.51
8:A:638:G:C6	8:A:639:U:C4	2.99	0.51
8:A:640:C:C2	8:A:649:G:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:658:U:C2'	12:E:95:LYS:HZ3	2.19	0.51
8:A:687:C:N3	8:A:787:C:H4'	2.26	0.51
8:A:711:G:C4	8:A:712:G:C8	2.98	0.51
8:A:721:A:H2'	8:A:722:A:C8	2.46	0.51
8:A:796:C:H5''	12:E:57:LYS:HZ1	1.74	0.51
8:A:843:G:C6	8:A:936:A:N6	2.79	0.51
8:A:885:C:H4'	8:A:893:C:H5'	1.93	0.51
8:A:1008:A:N6	8:A:1136:G:C2	2.79	0.51
8:A:1161:C:C2	8:A:1162:G:C8	2.98	0.51
8:A:1214:A:C2	8:A:1215:G:H1'	2.46	0.51
8:A:1451:C:C6	8:A:1458:U:O4	2.64	0.51
8:A:1459:G:C5	8:A:1461:C:C4	2.99	0.51
8:A:1468:U:C2	8:A:1525:A:N1	2.79	0.51
8:A:1480:C:H2'	8:A:1481:U:O4'	2.11	0.51
8:A:1649:G:C6	8:A:2009:A:C6	2.98	0.51
8:A:1650:A:H2'	8:A:1651:G:O4'	2.10	0.51
8:A:1797:G:O2'	10:C:256:THR:OG1	2.17	0.51
8:A:1820:U:C2	10:C:157:ALA:O	2.63	0.51
8:A:1847:G:O2'	8:A:1848:A:H8	1.81	0.51
8:A:2028:U:H2'	8:A:2029:G:O4'	2.10	0.51
8:A:2048:G:N1	8:A:2049:G:C5	2.78	0.51
8:A:2113:U:C3'	8:A:2114:A:H5'	2.39	0.51
8:A:2121:G:N7	8:A:2177:C:O2	2.44	0.51
8:A:2137:U:C4	8:A:2138:G:N7	2.79	0.51
8:A:2169:A:OP2	8:A:2170:A:H2	1.94	0.51
8:A:2207:C:C4	8:A:2218:G:N1	2.79	0.51
8:A:2242:G:H2'	8:A:2243:U:O4'	2.11	0.51
8:A:2324:U:H4'	8:A:2325:G:OP2	2.10	0.51
8:A:2325:G:H2'	8:A:2326:C:C6	2.46	0.51
8:A:2435:A:C6	8:A:2436:G:N7	2.79	0.51
8:A:2454:G:C4	8:A:2455:G:C8	2.99	0.51
8:A:2495:G:C4	8:A:2496:C:C5	2.98	0.51
8:A:2517:C:O3'	8:A:2518:A:H3'	2.11	0.51
8:A:2699:C:H2'	8:A:2700:A:H8	1.75	0.51
8:A:2792:A:N1	8:A:2805:C:N3	2.58	0.51
8:A:2848:G:C8	23:P:94:ALA:HB2	2.46	0.51
9:B:13:G:N2	9:B:16:G:C2	2.79	0.51
11:D:57:ALA:HA	11:D:60:VAL:HG12	1.91	0.51
19:L:19:LEU:HD22	19:L:31:GLY:HA3	1.93	0.51
21:N:22:ARG:HD3	21:N:70:THR:O	2.10	0.51
24:Q:15:LYS:O	24:Q:19:GLN:NE2	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:51:PHE:O	27:T:53:VAL:HG13	2.11	0.51
29:V:2:PHE:HE1	29:V:53:LYS:HD2	1.74	0.51
34:a:155:A:N6	34:a:156:C:N4	2.59	0.51
34:a:161:A:H2'	34:a:162:A:C5'	2.39	0.51
34:a:270:A:H2'	34:a:271:C:H6	1.71	0.51
34:a:332:G:C2	34:a:333:U:C6	2.99	0.51
34:a:587:G:N2	34:a:754:C:OP2	2.39	0.51
34:a:644:U:H4'	41:h:83:ARG:CZ	2.40	0.51
34:a:736:C:H2'	34:a:737:C:O4'	2.11	0.51
34:a:947:G:P	46:m:112:ARG:HH12	2.34	0.51
34:a:994:A:N3	34:a:1216:A:H4'	2.26	0.51
34:a:1016:A:H3'	34:a:1017:U:C6	2.45	0.51
34:a:1052:U:H2'	34:a:1055:A:OP2	2.11	0.51
34:a:1054:C:OP2	34:a:1196:A:O3'	2.28	0.51
34:a:1074:G:H2'	34:a:1075:U:O4'	2.11	0.51
34:a:1216:A:C2	34:a:1217:C:C4	2.99	0.51
34:a:1227:A:C2	52:s:82:HIS:CE1	2.98	0.51
34:a:1238:A:C6	34:a:1303:C:O4'	2.63	0.51
34:a:1239:A:C2	34:a:1297:G:C2	2.99	0.51
34:a:1262:C:C5	34:a:1263:C:C5	2.99	0.51
34:a:1300:G:C4	34:a:1334:G:C6	2.99	0.51
34:a:1320:C:O2	52:s:35:ARG:NH2	2.44	0.51
34:a:1378:C:C4	34:a:1379:G:C4	2.99	0.51
34:a:1456:A:C6	34:a:1457:G:C4	2.99	0.51
34:a:1526:G:C6	34:a:1527:U:C4	2.99	0.51
36:c:10:ARG:CZ	36:c:179:ALA:O	2.59	0.51
41:h:100:ILE:CG1	41:h:128:VAL:HB	2.41	0.51
53:t:76:ALA:O	53:t:79:THR:OG1	2.26	0.51
55:v:61:C:C2	55:v:62:C:C5	2.99	0.51
57:x:100:ARG:NH1	57:x:392:THR:CB	2.74	0.51
57:x:256:LEU:HD21	57:x:284:TYR:O	2.11	0.51
57:x:395:THR:HG21	57:x:403:ILE:O	2.10	0.51
3:2:19:ARG:NH1	8:A:124:G:C8	2.79	0.51
4:3:31:ILE:HG13	4:3:35:LYS:NZ	2.25	0.51
7:6:2:LYS:HG3	9:B:43:C:OP2	2.11	0.51
8:A:2:G:C2	8:A:2902:C:N3	2.78	0.51
8:A:2:G:C2	8:A:2902:C:C2	2.99	0.51
8:A:61:C:H5'	32:Y:43:LEU:HD12	1.93	0.51
8:A:184:C:H4'	8:A:216:A:N1	2.26	0.51
8:A:237:C:H2'	8:A:238:C:H6	1.76	0.51
8:A:298:G:N2	8:A:341:C:N4	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:303:G:C2	8:A:304:U:C2	2.99	0.51
8:A:346:A:C6	8:A:347:A:C5	2.99	0.51
8:A:390:U:O5'	8:A:390:U:H6	1.93	0.51
8:A:415:A:C6	8:A:416:U:C4	2.99	0.51
8:A:483:A:C2	8:A:484:C:H1'	2.46	0.51
8:A:484:C:P	28:U:46:LYS:NZ	2.84	0.51
8:A:527:C:N3	8:A:2779:U:H2'	2.26	0.51
8:A:578:G:O2'	8:A:580:U:OP2	2.21	0.51
8:A:710:U:C2	8:A:722:A:C2	2.99	0.51
8:A:778:G:C5	8:A:779:U:C4	2.99	0.51
8:A:1017:G:C6	8:A:1018:U:C4	2.99	0.51
8:A:1022:G:C2	8:A:1141:U:C2	2.98	0.51
8:A:1029:A:O4'	8:A:2486:C:H4'	2.11	0.51
8:A:1141:U:OP2	17:J:68:LYS:NZ	2.35	0.51
8:A:1218:G:H2'	8:A:1219:U:C6	2.44	0.51
8:A:1278:C:H2'	8:A:1279:G:H8	1.75	0.51
8:A:1307:A:C5	8:A:1308:A:C8	2.99	0.51
8:A:1339:G:H2'	8:A:1340:U:O2	2.10	0.51
8:A:1401:G:C2	8:A:1402:U:C2	2.98	0.51
8:A:1605:C:O4'	8:A:1610:A:C6	2.64	0.51
8:A:1889:A:H2'	8:A:1890:A:C8	2.46	0.51
8:A:2111:U:O2'	8:A:2115:G:C2	2.60	0.51
8:A:2199:A:N6	8:A:2224:G:C2'	2.73	0.51
8:A:2308:G:H2'	8:A:2310:C:C4	2.45	0.51
8:A:2337:G:C2	8:A:2338:C:C6	2.98	0.51
8:A:2339:C:H2'	8:A:2340:A:H8	1.76	0.51
8:A:2355:G:O3'	30:W:20:LYS:HE3	2.11	0.51
8:A:2553:G:H2'	8:A:2554:U:O4'	2.11	0.51
8:A:2579:C:H2'	8:A:2580:PSU:C6	2.46	0.51
8:A:2829:A:C6	8:A:2830:C:C4	2.99	0.51
8:A:2846:G:N2	8:A:2871:U:H1'	2.26	0.51
9:B:44:G:H5'	9:B:46:A:H62	1.75	0.51
9:B:68:C:H2'	9:B:69:G:O4'	2.10	0.51
10:C:170:TYR:HB3	10:C:182:LYS:HE2	1.93	0.51
12:E:118:LEU:HD12	12:E:119:ILE:N	2.25	0.51
13:F:128:SER:HA	13:F:153:ILE:O	2.11	0.51
15:H:116:ARG:HB2	15:H:131:SER:HB2	1.92	0.51
21:N:48:VAL:HG12	21:N:51:LEU:HD12	1.93	0.51
23:P:13:LYS:HE3	23:P:76:HIS:HA	1.90	0.51
23:P:13:LYS:HD2	23:P:76:HIS:HA	1.91	0.51
25:R:22:LEU:O	25:R:94:THR:N	2.30	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:41:VAL:HG23	28:U:60:LYS:CG	2.41	0.51
28:U:85:ARG:HD2	28:U:87:GLU:OE2	2.10	0.51
34:a:115:G:O2'	34:a:289:G:H8	1.93	0.51
34:a:321:A:C2	34:a:333:U:C2	2.98	0.51
34:a:322:C:H5	34:a:328:C:O2	1.94	0.51
34:a:345:C:O4'	34:a:346:G:C6	2.64	0.51
34:a:432:A:C2	34:a:433:G:H1'	2.46	0.51
34:a:491:G:N3	34:a:491:G:H2'	2.25	0.51
34:a:509:A:N7	34:a:510:A:N1	2.59	0.51
34:a:633:G:C4	34:a:634:C:C5	2.99	0.51
34:a:676:A:H1'	44:k:116:PRO:HB3	1.93	0.51
34:a:730:G:C5	34:a:731:G:H1'	2.45	0.51
34:a:977:A:C8	34:a:1223:C:C5	2.99	0.51
34:a:980:C:N4	34:a:981:U:O2	2.43	0.51
34:a:1007:U:N3	34:a:1023:U:H1'	2.25	0.51
34:a:1029:U:O2'	34:a:1032:G:C2	2.64	0.51
34:a:1157:A:C5	34:a:1180:A:C6	2.98	0.51
34:a:1313:U:O4	52:s:1:PRO:CD	2.59	0.51
34:a:1327:C:H2'	34:a:1328:C:C6	2.46	0.51
34:a:1519:MA6:OP2	34:a:1520:C:C6	2.62	0.51
34:a:1524:C:H2'	34:a:1525:G:C8	2.46	0.51
35:b:76:SER:HB2	35:b:92:ASN:HB2	1.93	0.51
39:f:46:GLN:OE1	39:f:56:LYS:CE	2.59	0.51
41:h:25:THR:HA	41:h:59:GLU:HA	1.92	0.51
43:j:11:LYS:CG	43:j:97:ASP:HB3	2.41	0.51
43:j:46:LYS:HE3	43:j:68:ARG:HD3	1.93	0.51
44:k:23:HIS:CD2	44:k:30:ILE:HD12	2.46	0.51
46:m:3:ILE:CG1	46:m:56:ARG:HD3	2.41	0.51
47:n:61:ARG:NE	47:n:70:PRO:O	2.43	0.51
51:r:56:ARG:O	51:r:60:ARG:HG3	2.10	0.51
59:z:7:G:H2'	59:z:8:U:C6	2.45	0.51
4:3:44:ARG:N	4:3:45:PRO:CD	2.74	0.51
4:3:49:VAL:HG11	4:3:57:VAL:HG21	1.92	0.51
7:6:1:MET:HE2	9:B:43:C:H5''	1.91	0.51
8:A:98:G:N2	8:A:99:U:C2	2.79	0.51
8:A:121:G:C2	8:A:131:A:C4	2.99	0.51
8:A:187:G:N1	8:A:188:G:C4	2.78	0.51
8:A:233:A:C5	8:A:234:U:C5	2.98	0.51
8:A:297:G:C6	8:A:298:G:C4	2.99	0.51
8:A:304:U:H2'	8:A:305:C:C6	2.46	0.51
8:A:324:A:N6	8:A:338:G:C2'	2.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:332:A:C4	8:A:335:C:C4	2.98	0.51
8:A:456:C:C4	27:T:73:ARG:CZ	2.94	0.51
8:A:538:A:O2'	17:J:8:PRO:HD2	2.11	0.51
8:A:581:C:OP1	24:Q:30:VAL:HG13	2.11	0.51
8:A:671:C:C6	19:L:33:ARG:NH1	2.79	0.51
8:A:772:C:H2'	8:A:773:U:H6	1.76	0.51
8:A:781:A:N1	8:A:1776:G:O2'	2.44	0.51
8:A:871:U:OP1	20:M:5:LYS:HE2	2.11	0.51
8:A:875:G:H2'	8:A:876:C:C6	2.46	0.51
8:A:959:A:C6	8:A:960:A:C2	2.99	0.51
8:A:963:U:C2	8:A:964:C:C5	2.98	0.51
8:A:1193:G:P	19:L:14:LYS:HZ1	2.28	0.51
8:A:1287:A:OP1	21:N:104:ALA:HB3	2.10	0.51
8:A:1315:C:C2	8:A:1338:G:C2	2.99	0.51
8:A:1321:A:C5	8:A:1322:A:C8	2.99	0.51
8:A:1364:G:C4	8:A:1368:G:C2	2.99	0.51
8:A:1385:A:C4	8:A:1386:C:C5	2.98	0.51
8:A:1395:A:OP1	8:A:1604:C:OP2	2.29	0.51
8:A:1442:U:H2'	8:A:1443:U:C6	2.45	0.51
8:A:1467:U:H5	8:A:1546:G:H2'	1.76	0.51
8:A:1470:A:C6	8:A:1471:G:C4	2.99	0.51
8:A:1589:U:H2'	8:A:1590:A:C8	2.46	0.51
8:A:1657:U:H2'	8:A:1658:C:C6	2.46	0.51
8:A:1660:G:C2	8:A:2001:C:C2	2.99	0.51
8:A:1661:G:C6	8:A:2000:C:N3	2.79	0.51
8:A:1666:G:H2'	8:A:1667:G:O4'	2.11	0.51
8:A:1707:G:C4	8:A:1756:G:C2	2.99	0.51
8:A:1734:G:C2	8:A:1735:A:C5	2.98	0.51
8:A:1778:U:H2'	8:A:1779:U:C5	2.45	0.51
8:A:1811:G:H2'	8:A:1812:U:C6	2.46	0.51
8:A:1814:G:H2'	8:A:1815:A:C8	2.45	0.51
8:A:2070:A:C2	8:A:2442:C:C2	2.99	0.51
8:A:2098:U:H2'	8:A:2099:U:O4'	2.11	0.51
8:A:2126:A:H5''	8:A:2127:G:P	2.51	0.51
8:A:2159:G:C2	8:A:2160:C:O2	2.63	0.51
8:A:2197:U:H1'	8:A:2198:A:HO2'	1.76	0.51
8:A:2217:G:H2'	8:A:2218:G:C8	2.46	0.51
8:A:2243:U:O2	8:A:2434:A:C2	2.63	0.51
8:A:2256:G:C5	8:A:2257:U:C5	2.99	0.51
8:A:2399:G:C6	8:A:2400:G:C6	2.98	0.51
8:A:2452:C:H2'	8:A:2453:A:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2513:A:H2'	8:A:2514:U:C6	2.46	0.51
8:A:2562:U:P	18:K:40:LYS:NZ	2.84	0.51
8:A:2707:U:C2'	21:N:71:ARG:NH2	2.74	0.51
8:A:2762:C:H2'	8:A:2763:G:C8	2.46	0.51
8:A:2851:A:H2'	8:A:2852:G:C8	2.45	0.51
9:B:42:C:N3	13:F:89:THR:HB	2.25	0.51
9:B:61:G:C4	9:B:62:C:C5	2.99	0.51
9:B:114:C:C1'	22:O:47:VAL:HG21	2.40	0.51
12:E:52:VAL:HB	12:E:74:LYS:HD2	1.93	0.51
12:E:83:VAL:HB	12:E:86:ALA:HB2	1.92	0.51
13:F:101:ARG:HA	13:F:105:ILE:HD13	1.93	0.51
14:G:41:GLU:HA	14:G:54:ARG:HH21	1.76	0.51
14:G:98:LYS:HZ2	14:G:103:ASN:HB2	1.74	0.51
18:K:99:ILE:HG22	18:K:120:PRO:HD3	1.92	0.51
19:L:82:LEU:HD12	19:L:116:VAL:HB	1.93	0.51
19:L:111:ILE:HG22	19:L:128:THR:HG21	1.93	0.51
21:N:54:LEU:HD11	21:N:62:ASN:HD22	1.75	0.51
26:S:56:ALA:O	26:S:59:GLU:HG2	2.11	0.51
34:a:3:A:C6	34:a:629:A:H4'	2.46	0.51
34:a:53:A:C2	34:a:359:G:C2	2.99	0.51
34:a:216:U:C5'	34:a:464:U:O2'	2.59	0.51
34:a:269:C:H2'	34:a:270:A:H8	1.73	0.51
34:a:360:G:C6	34:a:361:G:C6	2.99	0.51
34:a:404:G:C6	37:d:1:ALA:HB3	2.46	0.51
34:a:415:A:H2'	34:a:416:G:O4'	2.11	0.51
34:a:457:G:C2	34:a:476:U:N3	2.79	0.51
34:a:481:G:H8	34:a:482:A:H62	1.59	0.51
34:a:515:G:O2'	34:a:516:PSU:H6	1.93	0.51
34:a:532:A:H2'	34:a:532:A:N3	2.25	0.51
34:a:692:U:O2	34:a:694:A:C2	2.64	0.51
34:a:828:U:C5	34:a:859:G:C4	2.98	0.51
34:a:841:C:H4'	34:a:843:U:H1'	1.92	0.51
34:a:895:G:O6	34:a:903:G:O6	2.29	0.51
34:a:923:A:H2'	34:a:924:C:H6	1.73	0.51
34:a:996:A:N6	34:a:1044:A:N6	2.58	0.51
34:a:1104:G:H2'	34:a:1105:A:O4'	2.11	0.51
34:a:1160:G:N2	34:a:1176:A:N1	2.59	0.51
34:a:1269:A:O2'	34:a:1325:C:O2	2.28	0.51
34:a:1349:A:N3	34:a:1374:A:C6	2.79	0.51
34:a:1358:U:O5'	34:a:1359:C:H5	1.94	0.51
34:a:1365:G:C6	34:a:1366:C:C4	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:c:18:ASN:OD1	36:c:53:ARG:CZ	2.58	0.51
40:g:39:GLU:HA	40:g:42:VAL:HG12	1.92	0.51
47:n:66:GLN:HG3	47:n:79:LEU:HD22	1.92	0.51
55:v:16:C:H6	55:v:16:C:O5'	1.93	0.51
55:v:18:G:C4	55:v:58:A:C2	2.98	0.51
55:v:28:C:N3	55:v:43:A:C2	2.78	0.51
55:v:59:A:C6	55:v:60:U:C2	2.99	0.51
57:x:120:PRO:O	57:x:124:THR:OG1	2.24	0.51
57:x:143:MET:HG3	57:x:178:PHE:CZ	2.46	0.51
57:x:144:ASP:CG	62:x:801:GDP:HN21	2.18	0.51
57:x:562:ALA:O	57:x:567:GLY:C	2.54	0.51
7:6:41:HIS:HB3	7:6:44:PHE:CD1	2.45	0.51
8:A:84:A:OP2	8:A:100:U:C4	2.64	0.51
8:A:123:G:C6	8:A:124:G:C5	2.99	0.51
8:A:131:A:H2'	8:A:132:G:C8	2.45	0.51
8:A:247:G:O2'	8:A:250:G:N7	2.44	0.51
8:A:515:A:H3'	8:A:516:C:C6	2.46	0.51
8:A:662:G:H4'	19:L:16:GLY:H	1.75	0.51
8:A:713:G:H1'	8:A:718:A:H61	1.75	0.51
8:A:729:G:C8	10:C:208:GLY:HA3	2.45	0.51
8:A:788:A:OP1	8:A:790:U:C5	2.64	0.51
8:A:899:A:O2'	8:A:900:A:C8	2.64	0.51
8:A:950:G:H2'	8:A:951:C:H6	1.76	0.51
8:A:1065:U:OP1	8:A:1075:C:O2	2.29	0.51
8:A:1071:G:OP1	8:A:1097:U:OP1	2.28	0.51
8:A:1116:G:H2'	8:A:1117:C:H6	1.76	0.51
8:A:1200:C:C2	8:A:1246:A:C2	2.99	0.51
8:A:1213:A:N6	8:A:1236:G:C1'	2.74	0.51
8:A:1220:G:O6	8:A:1230:A:N6	2.44	0.51
8:A:1259:G:H2'	8:A:1260:A:H8	1.74	0.51
8:A:1420:A:H1'	8:A:2211:A:N7	2.25	0.51
8:A:1455:G:OP2	8:A:1456:G:OP2	2.29	0.51
8:A:1485:U:H2'	8:A:1486:U:H6	1.75	0.51
8:A:1529:G:C2	8:A:1530:G:C4	2.98	0.51
8:A:1571:A:C6	8:A:1572:A:C5	2.99	0.51
8:A:1620:G:H2'	8:A:1621:U:C6	2.45	0.51
8:A:1633:G:C6	8:A:1635:A:C6	2.99	0.51
8:A:1716:U:C2	8:A:1745:A:N6	2.79	0.51
8:A:1753:G:N2	8:A:1756:G:OP2	2.44	0.51
8:A:1797:G:C6	8:A:1798:U:C4	2.98	0.51
8:A:1799:G:P	10:C:269:ARG:NH2	2.82	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1878:G:C6	8:A:1879:C:C4	2.98	0.51
8:A:2092:U:H5''	15:H:24:GLY:CA	2.41	0.51
8:A:2126:A:H2'	8:A:2163:A:N3	2.25	0.51
8:A:2157:G:O2'	8:A:2158:A:N6	2.43	0.51
8:A:2257:U:C2	8:A:2258:C:C5	2.99	0.51
8:A:2299:U:H2'	8:A:2300:C:O4'	2.11	0.51
8:A:2387:U:P	30:W:51:ARG:HH22	2.34	0.51
8:A:2425:A:N3	8:A:2427:C:N4	2.59	0.51
8:A:2455:G:C6	8:A:2456:C:N4	2.79	0.51
8:A:2545:G:H2'	8:A:2546:U:O4'	2.11	0.51
8:A:2588:G:C5	8:A:2589:A:N7	2.78	0.51
8:A:2696:U:O4	8:A:2714:G:C6	2.64	0.51
8:A:2734:A:C2	8:A:2735:G:H1'	2.46	0.51
8:A:2756:U:H1'	8:A:2757:A:H5''	1.92	0.51
8:A:2886:A:C5	8:A:2887:A:C8	2.99	0.51
10:C:229:HIS:O	10:C:231:HIS:O	2.29	0.51
11:D:2:ILE:HD13	11:D:90:PHE:CZ	2.46	0.51
11:D:104:VAL:HG11	11:D:107:VAL:HG12	1.92	0.51
12:E:75:SER:O	12:E:81:GLY:HA3	2.11	0.51
13:F:141:ASP:OD1	13:F:145:VAL:N	2.44	0.51
13:F:161:SER:OG	13:F:164:GLU:CG	2.59	0.51
15:H:57:LYS:HD2	15:H:57:LYS:C	2.36	0.51
15:H:87:GLU:OE1	39:f:83:ALA:HB2	2.10	0.51
20:M:15:GLY:C	20:M:16:ARG:HH11	2.19	0.51
20:M:31:PHE:O	20:M:104:GLU:HA	2.11	0.51
22:O:85:LYS:HB3	22:O:87:ILE:HG12	1.92	0.51
24:Q:46:TYR:CZ	24:Q:50:ARG:NH2	2.79	0.51
24:Q:78:PHE:CE2	24:Q:82:LEU:HD11	2.46	0.51
25:R:2:TYR:H	25:R:42:ALA:HB3	1.74	0.51
26:S:14:ALA:O	26:S:18:ARG:HB2	2.10	0.51
29:V:6:ALA:HB3	29:V:65:VAL:HG22	1.92	0.51
32:Y:10:SER:H	32:Y:13:GLU:CG	2.24	0.51
34:a:17:U:H1'	34:a:1080:A:N3	2.26	0.51
34:a:30:U:O4	34:a:553:A:N6	2.42	0.51
34:a:73:C:C4	34:a:74:A:C8	2.99	0.51
34:a:158:G:H4'	34:a:160:A:N1	2.26	0.51
34:a:230:G:C2	34:a:231:U:C2	2.99	0.51
34:a:338:A:C6	34:a:339:C:C4	2.99	0.51
34:a:415:A:H2'	34:a:416:G:C8	2.46	0.51
34:a:508:U:O4	34:a:524:G:C6	2.63	0.51
34:a:577:G:H2'	34:a:578:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:669:G:N1	34:a:738:C:C4	2.79	0.51
34:a:773:G:O6	34:a:807:A:N6	2.43	0.51
34:a:831:A:C5'	35:b:20:ARG:CZ	2.89	0.51
34:a:928:G:C2	34:a:1390:U:O2	2.64	0.51
34:a:962:C:C2	34:a:963:G:C8	2.99	0.51
34:a:1000:A:H2'	34:a:1001:C:H6	1.76	0.51
34:a:1235:U:H2'	34:a:1236:A:O4'	2.10	0.51
34:a:1252:A:C2	34:a:1253:G:C4	2.98	0.51
34:a:1359:C:H3'	47:n:75:ARG:HH22	1.74	0.51
34:a:1401:G:C6	34:a:1504:G:N2	2.79	0.51
35:b:48:MET:HA	35:b:51:GLU:CG	2.40	0.51
36:c:76:ILE:CG2	36:c:80:GLY:HA2	2.41	0.51
38:e:104:ILE:HG13	38:e:120:HIS:O	2.11	0.51
38:e:111:ARG:O	38:e:115:GLU:HG3	2.11	0.51
39:f:15:SER:H	39:f:44:ARG:HH21	1.59	0.51
40:g:13:PRO:HB3	40:g:20:GLU:HB3	1.93	0.51
40:g:40:SER:OG	40:g:41:ILE:N	2.42	0.51
40:g:96:ASN:OD1	40:g:97:ALA:N	2.44	0.51
41:h:79:ARG:HG3	41:h:82:LEU:N	2.26	0.51
46:m:69:ARG:O	46:m:72:ILE:CG1	2.59	0.51
46:m:85:TYR:HA	46:m:88:LEU:HD12	1.91	0.51
49:p:71:VAL:O	49:p:75:ILE:HG12	2.10	0.51
57:x:503:LYS:HD2	57:x:516:HIS:CG	2.46	0.51
7:6:12:ILE:C	7:6:23:LYS:HZ2	2.19	0.51
7:6:41:HIS:HA	7:6:50:ASP:OD2	2.10	0.51
8:A:108:G:C6	8:A:109:C:N4	2.79	0.51
8:A:121:G:H2'	8:A:122:G:H8	1.75	0.51
8:A:138:U:C2	8:A:142:A:C6	2.99	0.51
8:A:189:G:P	31:X:25:LYS:NZ	2.84	0.51
8:A:207:A:C8	8:A:208:C:C5	2.99	0.51
8:A:248:G:H5''	8:A:386:G:N2	2.26	0.51
8:A:361:G:OP2	8:A:361:G:C8	2.64	0.51
8:A:576:U:H2'	8:A:577:G:H8	1.75	0.51
8:A:633:A:OP2	8:A:634:C:C4	2.64	0.51
8:A:638:G:C2	8:A:639:U:C2	2.99	0.51
8:A:670:A:H5''	19:L:43:GLY:HA3	1.93	0.51
8:A:691:C:C2	8:A:692:C:C5	2.99	0.51
8:A:706:A:H5'	10:C:6:LYS:HE3	1.93	0.51
8:A:744:U:H2'	8:A:745:1MG:O4'	2.11	0.51
8:A:960:A:N7	8:A:962:G:C8	2.79	0.51
8:A:1058:U:C4	8:A:1060:U:O4	2.62	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1062:G:N2	16:I:134:SER:O	2.34	0.51
8:A:1082:U:H5''	8:A:1083:U:OP1	2.11	0.51
8:A:1415:U:H3	8:A:1587:G:H1	1.56	0.51
8:A:1432:G:O2'	8:A:1433:A:H5'	2.11	0.51
8:A:1454:C:P	21:N:63:ARG:HH22	2.34	0.51
8:A:1476:U:H3'	8:A:1514:G:H22	1.76	0.51
8:A:1510:G:C4	8:A:1511:G:C8	2.99	0.51
8:A:1637:A:H4'	8:A:2711:A:O2'	2.11	0.51
8:A:2065:C:C2	8:A:2066:C:C6	2.99	0.51
8:A:2097:A:C6	8:A:2098:U:C4	2.99	0.51
8:A:2113:U:H5''	8:A:2119:A:C6	2.45	0.51
8:A:2137:U:C4	8:A:2154:A:N6	2.77	0.51
8:A:2141:G:N2	8:A:2152:G:C5	2.79	0.51
8:A:2339:C:H2'	8:A:2340:A:C8	2.46	0.51
8:A:2472:G:C6	8:A:2476:A:H4'	2.46	0.51
8:A:2514:U:H2'	8:A:2515:C:H6	1.70	0.51
8:A:2677:G:C6	8:A:2678:C:C4	2.99	0.51
8:A:2682:A:C4	8:A:2683:C:C6	2.99	0.51
8:A:2683:C:H2'	8:A:2684:U:C6	2.46	0.51
8:A:2737:G:H2'	8:A:2738:A:C8	2.46	0.51
8:A:2851:A:C6	8:A:2852:G:C4	2.99	0.51
9:B:12:C:C2'	30:W:70:PRO:HA	2.41	0.51
9:B:27:C:H2'	9:B:28:C:C6	2.46	0.51
10:C:226:PRO:HD3	10:C:233:GLY:N	2.26	0.51
13:F:36:ASN:OD1	13:F:37:MET:N	2.44	0.51
17:J:23:LYS:O	17:J:62:VAL:HG23	2.11	0.51
19:L:56:PRO:O	19:L:60:ARG:N	2.44	0.51
28:U:45:GLN:HG2	28:U:55:GLY:HA2	1.93	0.51
28:U:52:ASN:C	28:U:54:PRO:HD3	2.36	0.51
29:V:89:ILE:HB	29:V:91:PHE:CE2	2.45	0.51
30:W:46:ASN:CG	30:W:59:ALA:HB3	2.37	0.51
30:W:52:ASP:OD1	30:W:54:THR:OG1	2.28	0.51
34:a:51:A:N1	34:a:116:A:C4	2.79	0.51
34:a:55:A:C2	34:a:56:U:H1'	2.46	0.51
34:a:66:A:H1'	34:a:173:U:O2'	2.11	0.51
34:a:185:U:H2'	34:a:186:C:O4'	2.11	0.51
34:a:251:G:N2	34:a:254:G:O6	2.44	0.51
34:a:343:U:N3	34:a:347:G:C6	2.78	0.51
34:a:460:A:OP2	34:a:460:A:C8	2.64	0.51
34:a:616:G:O3'	49:p:46:LYS:CE	2.59	0.51
34:a:827:U:O2	34:a:874:G:C2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:838:G:C6	34:a:839:C:N4	2.78	0.51
34:a:927:G:N2	34:a:1390:U:O2	2.41	0.51
34:a:958:A:H2'	34:a:959:A:O4'	2.10	0.51
34:a:978:A:C5	34:a:1319:A:C2	2.99	0.51
34:a:987:G:C6	34:a:1219:A:N6	2.79	0.51
34:a:1008:U:C4	34:a:1009:U:C4	2.98	0.51
34:a:1029:U:O2'	34:a:1032:G:N1	2.44	0.51
34:a:1033:G:C6	34:a:1036:A:N6	2.79	0.51
34:a:1057:G:C4	34:a:1204:A:C2	2.98	0.51
34:a:1119:C:O2'	34:a:1120:C:H5'	2.11	0.51
34:a:1126:U:P	43:j:7:ARG:HH22	2.33	0.51
34:a:1306:A:N6	34:a:1331:G:O3'	2.44	0.51
34:a:1307:U:H2'	34:a:1308:U:H6	1.75	0.51
35:b:82:ALA:HB1	35:b:213:LEU:HD22	1.92	0.51
35:b:216:VAL:O	35:b:220:VAL:HG13	2.10	0.51
36:c:78:LYS:HG2	36:c:79:LYS:HG2	1.93	0.51
36:c:183:TYR:CD1	36:c:199:VAL:O	2.64	0.51
36:c:185:THR:HG22	36:c:198:LYS:CB	2.41	0.51
39:f:39:LEU:HD12	39:f:39:LEU:N	2.26	0.51
39:f:67:PRO:HB2	39:f:69:GLU:OE2	2.11	0.51
46:m:94:LEU:O	46:m:108:ARG:CZ	2.59	0.51
52:s:32:THR:HG22	52:s:50:VAL:HA	1.93	0.51
56:w:24:G:H2'	56:w:25:C:C6	2.46	0.51
57:x:359:PHE:CD2	57:x:387:LEU:HD21	2.46	0.51
1:0:3:GLN:HA	8:A:2615:U:O2	2.11	0.50
2:1:43:ARG:NH2	8:A:643:A:N9	2.60	0.50
4:3:29:ARG:NH1	19:L:63:LYS:O	2.43	0.50
8:A:68:G:H2'	8:A:69:C:O4'	2.11	0.50
8:A:78:U:H2'	8:A:79:C:C6	2.45	0.50
8:A:94:A:C5	8:A:95:A:C5	2.98	0.50
8:A:144:A:H4'	27:T:3:ARG:NH1	2.26	0.50
8:A:514:A:C4	8:A:515:A:C8	2.98	0.50
8:A:560:C:O2'	24:Q:47:ARG:NH2	2.44	0.50
8:A:568:U:C2'	8:A:570:G:N7	2.75	0.50
8:A:572:A:H2'	8:A:573:U:O4'	2.11	0.50
8:A:592:A:N6	8:A:666:A:N6	2.59	0.50
8:A:676:A:H1'	8:A:2443:C:C1'	2.40	0.50
8:A:784:G:OP2	8:A:2589:A:OP1	2.29	0.50
8:A:788:A:H2'	8:A:790:U:O4	2.11	0.50
8:A:825:A:H2'	8:A:826:U:H6	1.75	0.50
8:A:844:A:N1	8:A:935:C:N3	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:915:C:N4	8:A:916:G:C2	2.79	0.50
8:A:1004:U:H1'	8:A:1010:A:H2'	1.93	0.50
8:A:1005:C:C1'	8:A:1012:U:N3	2.75	0.50
8:A:1009:A:C6	8:A:1010:A:C6	2.99	0.50
8:A:1011:G:OP2	24:Q:65:ASN:ND2	2.42	0.50
8:A:1081:U:H2'	8:A:1081:U:O2	2.10	0.50
8:A:1083:U:H4'	8:A:1084:A:C8	2.46	0.50
8:A:1189:A:C6	8:A:1190:G:C4	3.00	0.50
8:A:1348:C:C2	8:A:1349:C:C6	2.99	0.50
8:A:1389:G:C2	8:A:1399:C:C2	2.99	0.50
8:A:1668:A:O2'	8:A:1674:G:C8	2.54	0.50
8:A:1686:C:N3	8:A:1703:G:N1	2.59	0.50
8:A:1717:A:N6	8:A:1743:G:C2'	2.73	0.50
8:A:1722:A:C2	8:A:1739:A:H1'	2.46	0.50
8:A:1837:C:C2	8:A:1904:G:C2	2.98	0.50
8:A:1890:A:H4'	8:A:2086:U:H4'	1.92	0.50
8:A:1891:G:H2'	8:A:1892:C:O4'	2.10	0.50
8:A:2067:G:C5	8:A:2069:G7M:CN7	2.94	0.50
8:A:2078:C:C1'	8:A:2434:A:H1'	2.41	0.50
8:A:2116:G:H8	8:A:2166:U:O4	1.94	0.50
8:A:2201:G:C6	8:A:2223:G:C6	2.99	0.50
8:A:2236:U:H2'	8:A:2237:G:O4'	2.11	0.50
8:A:2280:G:N1	8:A:2281:A:C5	2.79	0.50
8:A:2296:U:N3	8:A:2337:G:N1	2.59	0.50
8:A:2297:A:N1	8:A:2321:U:H5	2.08	0.50
8:A:2423:U:C4	8:A:2425:A:C6	2.99	0.50
8:A:2487:G:H2'	8:A:2488:G:H8	1.76	0.50
8:A:2635:A:H4'	11:D:49:GLN:NE2	2.26	0.50
8:A:2733:A:C4	8:A:2734:A:C8	2.99	0.50
8:A:2735:G:N2	8:A:2769:U:O2	2.42	0.50
8:A:2758:A:C5	8:A:2759:G:C8	2.99	0.50
8:A:2854:G:C6	8:A:2864:G:N1	2.78	0.50
8:A:2858:C:N4	8:A:2859:G:C2	2.78	0.50
9:B:32:U:C4	9:B:51:G:N1	2.79	0.50
9:B:51:G:C6	9:B:52:A:C6	2.99	0.50
9:B:75:G:C4'	29:V:29:ILE:HD13	2.41	0.50
10:C:177:SER:O	10:C:270:ARG:HB2	2.11	0.50
11:D:7:LYS:O	11:D:9:VAL:HG23	2.11	0.50
13:F:141:ASP:OD1	13:F:142:TYR:N	2.44	0.50
15:H:5:LEU:HD22	15:H:14:SER:H	1.76	0.50
16:I:24:GLY:HA2	57:x:644:GLN:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:36:THR:HG23	21:N:37:THR:O	2.11	0.50
21:N:73:ASN:HA	21:N:76:VAL:HG12	1.93	0.50
22:O:43:ASN:OD1	22:O:44:GLY:N	2.44	0.50
22:O:71:ALA:O	22:O:106:LEU:HG	2.10	0.50
24:Q:71:ASN:HB3	24:Q:109:VAL:HG11	1.93	0.50
25:R:60:LYS:HZ1	25:R:102:SER:CB	2.25	0.50
29:V:9:ARG:HG3	29:V:40:ILE:C	2.36	0.50
29:V:72:VAL:HG12	29:V:93:ARG:HA	1.92	0.50
34:a:18:C:H2'	34:a:19:A:O4'	2.10	0.50
34:a:68:G:H22	34:a:101:A:H2	1.58	0.50
34:a:94:G:C6	34:a:97:G:O6	2.62	0.50
34:a:179:A:H2'	34:a:179:A:N3	2.25	0.50
34:a:216:U:H1'	34:a:468:A:C2	2.45	0.50
34:a:258:G:H2'	34:a:259:G:O4'	2.11	0.50
34:a:351:G:H8	34:a:351:G:OP2	1.94	0.50
34:a:689:C:HO2'	34:a:690:G:P	2.33	0.50
34:a:728:A:H2'	34:a:729:A:C8	2.46	0.50
34:a:786:G:C6	34:a:787:A:C5	2.99	0.50
34:a:795:C:C6	34:a:796:C:H5	2.29	0.50
34:a:830:G:H2'	34:a:831:A:C8	2.46	0.50
34:a:976:G:OP1	47:n:72:GLY:N	2.35	0.50
34:a:1200:C:OP1	34:a:1201:A:O2'	2.27	0.50
34:a:1240:U:OP1	40:g:118:ARG:CZ	2.59	0.50
34:a:1397:C:O5'	34:a:1397:C:H6	1.94	0.50
35:b:26:MET:HE3	35:b:29:PHE:HB2	1.93	0.50
36:c:6:PRO:HA	36:c:9:ILE:HG22	1.93	0.50
39:f:59:TYR:CZ	51:r:66:LEU:HD21	2.46	0.50
40:g:98:LEU:HD23	40:g:101:ARG:HH12	1.76	0.50
42:i:41:GLU:HA	42:i:44:ARG:NH1	2.25	0.50
46:m:38:ILE:HD13	46:m:55:LEU:HD21	1.92	0.50
51:r:9:PHE:HA	51:r:11:ARG:HH11	1.77	0.50
55:v:28:C:C2	55:v:43:A:C2	3.00	0.50
55:v:49:G:C2	55:v:66:C:N3	2.79	0.50
56:w:31:A:N1	56:w:39:PSU:N1	2.58	0.50
57:x:105:LEU:HD11	57:x:107:GLY:O	2.11	0.50
57:x:254:ARG:O	57:x:257:ASN:N	2.44	0.50
57:x:472:MET:HA	57:x:476:PHE:HD2	1.74	0.50
3:2:24:THR:O	3:2:28:ARG:HG3	2.12	0.50
8:A:271:G:C4	8:A:367:G:C2	2.99	0.50
8:A:324:A:C6	8:A:325:G:C4	3.00	0.50
8:A:379:G:N1	8:A:396:G:O6	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:439:A:H2'	8:A:440:C:H6	1.75	0.50
8:A:459:U:C2	8:A:460:A:C8	2.98	0.50
8:A:518:G:H2'	8:A:519:U:C6	2.46	0.50
8:A:564:C:H2'	8:A:565:C:H6	1.75	0.50
8:A:579:G:C6	8:A:580:U:C4	2.99	0.50
8:A:644:A:N1	8:A:2369:A:H1'	2.26	0.50
8:A:799:G:OP2	8:A:800:A:O2'	2.22	0.50
8:A:962:G:C6	8:A:963:U:C4	2.99	0.50
8:A:974:G:H1'	8:A:989:G:N2	2.25	0.50
8:A:1024:G:C8	8:A:1025:G:H2'	2.46	0.50
8:A:1035:U:O2	8:A:1120:G:C2	2.64	0.50
8:A:1045:C:C2	8:A:1047:G:N2	2.79	0.50
8:A:1056:G:C2	8:A:1103:A:N7	2.79	0.50
8:A:1063:G:H1	16:I:135:MET:H	1.59	0.50
8:A:1166:G:H2'	8:A:1167:C:H6	1.75	0.50
8:A:1171:G:C2	8:A:1178:C:N3	2.79	0.50
8:A:1176:U:H2'	8:A:1177:G:C8	2.46	0.50
8:A:1252:G:C5	8:A:1253:A:C6	3.00	0.50
8:A:1436:G:C6	8:A:1437:C:C4	3.00	0.50
8:A:1538:G:H2'	8:A:1539:U:C6	2.46	0.50
8:A:1705:A:C6	8:A:1706:C:N4	2.79	0.50
8:A:1730:C:H1'	8:A:1731:G:N1	2.26	0.50
8:A:1731:G:C2	8:A:1733:G:N9	2.79	0.50
8:A:1773:A:N7	8:A:1774:C:C5	2.79	0.50
8:A:1802:A:H2'	8:A:1803:A:O4'	2.11	0.50
8:A:1933:G:H2'	8:A:1934:C:O4'	2.11	0.50
8:A:1952:A:C6	8:A:1953:A:N1	2.79	0.50
8:A:2077:A:H1'	8:A:2435:A:C1'	2.41	0.50
8:A:2093:G:OP1	15:H:23:ALA:HB3	2.11	0.50
8:A:2093:G:O2'	15:H:25:TYR:HB2	2.11	0.50
8:A:2114:A:O2'	8:A:2166:U:O4	2.29	0.50
8:A:2255:G:C4	8:A:2256:G:C8	2.99	0.50
8:A:2284:A:N3	8:A:2325:G:C6	2.78	0.50
8:A:2741:A:N6	8:A:2763:G:O2'	2.44	0.50
8:A:2762:C:C4	8:A:2763:G:C5	3.00	0.50
9:B:48:U:H4'	22:O:100:HIS:HD2	1.75	0.50
10:C:225:ASN:O	10:C:228:ASP:N	2.44	0.50
10:C:257:ARG:CB	10:C:269:ARG:NH1	2.73	0.50
13:F:4:HIS:HB2	13:F:96:TRP:CG	2.46	0.50
15:H:26:ALA:HA	15:H:30:LEU:HD12	1.91	0.50
15:H:80:ILE:HD12	15:H:145:ASN:O	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:57:VAL:O	18:K:89:ASN:ND2	2.37	0.50
18:K:61:VAL:O	18:K:84:CYS:HB2	2.12	0.50
18:K:68:GLY:HA3	18:K:78:ARG:HG2	1.92	0.50
19:L:74:THR:HA	19:L:107:PHE:O	2.11	0.50
19:L:95:LEU:HA	19:L:100:ILE:HD12	1.93	0.50
20:M:73:ILE:HG12	20:M:91:TYR:O	2.11	0.50
22:O:99:TYR:OH	22:O:111:ARG:NH2	2.41	0.50
23:P:30:TRP:CZ3	23:P:37:LYS:O	2.64	0.50
24:Q:89:ILE:HA	25:R:11:GLN:HE22	1.76	0.50
25:R:3:ALA:O	25:R:14:VAL:HG22	2.11	0.50
27:T:68:LYS:HE3	27:T:77:ARG:NE	2.26	0.50
28:U:87:GLU:CD	28:U:101:THR:HG1	2.14	0.50
32:Y:10:SER:O	32:Y:14:LEU:HG	2.11	0.50
34:a:244:U:C4	34:a:894:G:N3	2.79	0.50
34:a:405:U:H1'	34:a:498:A:H2'	1.94	0.50
34:a:509:A:C2	34:a:544:G:H4'	2.46	0.50
34:a:522:C:C2	34:a:523:A:C8	2.98	0.50
34:a:574:A:H1'	34:a:883:C:O4'	2.11	0.50
34:a:584:G:H1	34:a:757:U:H3	1.59	0.50
34:a:589:U:H2'	34:a:590:U:C6	2.46	0.50
34:a:597:G:C2	34:a:644:U:C2	3.00	0.50
34:a:691:G:H1'	34:a:696:A:N6	2.25	0.50
34:a:694:A:N6	34:a:787:A:O2'	2.44	0.50
34:a:836:G:C6	34:a:851:G:C5	2.99	0.50
34:a:865:A:O2'	34:a:866:C:H5'	2.11	0.50
34:a:874:G:C4	34:a:875:U:C5	2.99	0.50
34:a:885:G:O2'	34:a:886:G:H5'	2.11	0.50
34:a:928:G:C4'	34:a:1532:U:H4'	2.42	0.50
34:a:969:A:C6	34:a:970:C:C2	2.99	0.50
34:a:1095:U:P	34:a:1108:G:H22	2.30	0.50
34:a:1261:A:OP2	34:a:1274:A:N1	2.44	0.50
34:a:1279:G:H1'	34:a:1282:C:N4	2.25	0.50
38:e:41:GLY:HA2	38:e:116:VAL:O	2.11	0.50
46:m:103:THR:HG23	46:m:104:ASN:N	2.25	0.50
50:q:57:VAL:CB	50:q:78:VAL:HG23	2.38	0.50
52:s:19:GLU:HA	52:s:22:VAL:HG22	1.93	0.50
53:t:80:ALA:O	53:t:84:LYS:HG3	2.10	0.50
55:v:12:G:C2	55:v:24:U:N3	2.80	0.50
57:x:190:ILE:HG23	57:x:192:TRP:CZ2	2.46	0.50
6:5:45:GLY:HA2	6:5:49:GLY:C	2.34	0.50
8:A:80:G:C6	8:A:107:G:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:170:U:H2'	8:A:171:U:O4'	2.11	0.50
8:A:191:A:H2'	8:A:192:C:O4'	2.12	0.50
8:A:270:A:C2	8:A:370:G:C4	2.99	0.50
8:A:407:G:C2	8:A:421:C:C2	2.99	0.50
8:A:487:C:H2'	8:A:488:G:O4'	2.11	0.50
8:A:532:A:H3'	24:Q:27:ARG:CZ	2.41	0.50
8:A:540:C:H2'	8:A:541:A:C8	2.46	0.50
8:A:546:U:H1'	8:A:547:A:C1'	2.41	0.50
8:A:627:A:C4	19:L:111:ILE:HD12	2.46	0.50
8:A:638:G:C5	8:A:651:G:C2	3.00	0.50
8:A:811:U:H1'	8:A:1251:C:O4'	2.11	0.50
8:A:847:U:O4	8:A:932:U:C4	2.64	0.50
8:A:877:A:C6	8:A:899:A:C6	3.00	0.50
8:A:887:A:H5'	8:A:890:C:C2	2.46	0.50
8:A:955:PSU:OP1	20:M:13:HIS:HA	2.12	0.50
8:A:973:A:O4'	8:A:1188:U:C6	2.64	0.50
8:A:1005:C:H2'	8:A:1006:C:H6	1.76	0.50
8:A:1028:A:H62	8:A:1125:G:H2'	1.76	0.50
8:A:1036:G:H1	8:A:1119:U:H2'	1.76	0.50
8:A:1069:A:OP1	8:A:1075:C:C4	2.62	0.50
8:A:1081:U:H5'	8:A:1082:U:C5	2.46	0.50
8:A:1102:C:O5'	8:A:1103:A:P	2.69	0.50
8:A:1173:U:H4'	8:A:1174:U:OP1	2.11	0.50
8:A:1175:A:H5'	8:A:1176:U:N1	2.25	0.50
8:A:1202:G:C6	8:A:1244:A:N6	2.79	0.50
8:A:1208:C:H2'	8:A:1209:U:O4'	2.11	0.50
8:A:1213:A:O4'	8:A:1237:A:C2	2.65	0.50
8:A:1281:G:C2	8:A:1290:C:C2	2.98	0.50
8:A:1289:C:C2	8:A:1290:C:C5	2.99	0.50
8:A:1360:G:N7	8:A:1361:G:C8	2.80	0.50
8:A:1423:G:N1	8:A:1576:U:N3	2.59	0.50
8:A:1479:G:N1	8:A:1513:U:O2	2.45	0.50
8:A:1571:A:C2	8:A:1572:A:C4	2.99	0.50
8:A:1950:G:C5	8:A:1951:U:C4	2.99	0.50
8:A:2137:U:N3	8:A:2138:G:C8	2.79	0.50
8:A:2314:A:P	13:F:87:LYS:NZ	2.85	0.50
8:A:2644:G:H2'	8:A:2645:G:N3	2.26	0.50
8:A:2700:A:C2	8:A:2708:G:C2	3.00	0.50
8:A:2749:A:H5''	8:A:2750:A:H3'	1.93	0.50
8:A:2811:G:C2	8:A:2812:G:C4	2.99	0.50
8:A:2814:A:C5	8:A:2815:C:C5	2.98	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2857:G:C2	8:A:2860:A:OP2	2.65	0.50
8:A:2880:C:H4'	21:N:90:ARG:HH11	1.76	0.50
9:B:29:A:H2'	9:B:30:C:C6	2.47	0.50
9:B:49:C:H2'	9:B:50:A:C8	2.46	0.50
10:C:66:PHE:HD1	10:C:142:ASN:OD1	1.94	0.50
10:C:244:VAL:HB	10:C:248:GLY:C	2.37	0.50
14:G:94:ARG:HB2	14:G:127:GLN:HG2	1.92	0.50
20:M:71:LYS:N	20:M:92:TRP:HE3	2.10	0.50
21:N:32:GLU:O	21:N:118:ARG:HD3	2.12	0.50
22:O:34:HIS:CG	22:O:65:THR:HG1	2.24	0.50
25:R:79:ARG:O	25:R:81:LYS:HG2	2.11	0.50
26:S:24:ILE:HA	26:S:27:LYS:HD2	1.94	0.50
33:Z:10:ARG:HB2	33:Z:53:MET:HB2	1.92	0.50
34:a:41:G:H2'	34:a:42:G:C8	2.44	0.50
34:a:42:G:C6	34:a:401:C:N3	2.80	0.50
34:a:181:A:C4	34:a:195:A:C6	2.99	0.50
34:a:237:G:H2'	34:a:238:A:O4'	2.11	0.50
34:a:265:G:H2'	34:a:267:C:C5	2.46	0.50
34:a:562:U:C6	45:l:14:LYS:CE	2.94	0.50
34:a:821:G:O6	34:a:880:C:N4	2.44	0.50
34:a:849:G:C6	34:a:850:U:C2	3.00	0.50
34:a:1052:U:O2'	34:a:1055:A:OP2	2.25	0.50
34:a:1054:C:P	34:a:1196:A:O2'	2.69	0.50
34:a:1181:G:H1'	34:a:1182:G:C5	2.47	0.50
34:a:1182:G:H5'	34:a:1183:U:OP1	2.11	0.50
34:a:1200:C:H4'	34:a:1201:A:O5'	2.11	0.50
34:a:1238:A:H2	34:a:1241:G:H21	1.57	0.50
34:a:1301:U:C2	34:a:1303:C:C6	2.99	0.50
34:a:1325:C:H2'	34:a:1326:U:H6	1.77	0.50
34:a:1361:G:H2'	34:a:1362:A:O4'	2.11	0.50
34:a:1366:C:H2'	34:a:1367:C:C6	2.46	0.50
34:a:1434:A:H2'	34:a:1435:G:C8	2.46	0.50
34:a:1507:A:C4	34:a:1530:G:C2	2.99	0.50
34:a:1511:G:C6	34:a:1525:G:N1	2.80	0.50
34:a:1524:C:H2'	34:a:1525:G:H8	1.76	0.50
35:b:69:VAL:CG2	35:b:162:VAL:HA	2.40	0.50
35:b:170:ILE:HD12	35:b:170:ILE:H	1.76	0.50
47:n:9:GLU:O	47:n:13:VAL:HG13	2.11	0.50
49:p:46:LYS:N	49:p:48:GLU:OE2	2.30	0.50
50:q:49:ASN:O	50:q:51:GLU:HG2	2.11	0.50
53:t:54:GLN:HA	53:t:57:VAL:HG22	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:v:2:G:C6	55:v:72:A:C6	2.99	0.50
57:x:92:VAL:N	57:x:121:GLN:NE2	2.58	0.50
57:x:144:ASP:HA	57:x:175:GLU:HA	1.92	0.50
57:x:150:PHE:O	57:x:154:VAL:HG23	2.11	0.50
57:x:365:MET:CB	57:x:368:ASN:OD1	2.59	0.50
57:x:666:ALA:HB2	57:x:679:TYR:HE1	1.75	0.50
1:0:47:TYR:HA	1:0:51:ARG:O	2.10	0.50
2:1:8:ILE:HG21	2:1:24:LYS:HB2	1.93	0.50
6:5:30:SER:O	8:A:1054:A:H1'	2.12	0.50
7:6:16:CYS:HB2	7:6:34:LEU:HB2	1.91	0.50
8:A:58:G:N1	8:A:70:G:C6	2.80	0.50
8:A:67:U:N3	8:A:68:G:C5	2.79	0.50
8:A:194:G:C2	8:A:202:U:C2	3.00	0.50
8:A:231:A:C6	8:A:232:G:C2	2.99	0.50
8:A:234:U:C2	8:A:235:U:C6	3.00	0.50
8:A:285:G:C6	8:A:286:U:C4	2.99	0.50
8:A:372:G:H5''	31:X:60:LYS:HD3	1.92	0.50
8:A:397:U:H2'	8:A:398:C:C6	2.45	0.50
8:A:457:A:O4'	8:A:459:U:C1'	2.60	0.50
8:A:549:G:C5	8:A:550:C:C5	2.99	0.50
8:A:581:C:C2	8:A:582:A:C8	3.00	0.50
8:A:608:A:H2'	8:A:609:A:O4'	2.12	0.50
8:A:638:G:C6	8:A:651:G:C6	2.99	0.50
8:A:675:A:H2'	8:A:676:A:C8	2.46	0.50
8:A:745:1MG:P	11:D:138:LEU:HD11	2.52	0.50
8:A:781:A:N9	10:C:217:PRO:HG2	2.27	0.50
8:A:818:G:C2	8:A:1188:U:OP2	2.63	0.50
8:A:874:G:N1	8:A:904:G:C6	2.79	0.50
8:A:948:C:H2'	8:A:949:G:H8	1.76	0.50
8:A:1064:C:O2'	8:A:1076:C:C2	2.61	0.50
8:A:1070:A:N6	8:A:1095:A:O2'	2.44	0.50
8:A:1128:G:C6	8:A:2518:A:C5	3.00	0.50
8:A:1180:U:C4	8:A:1181:U:C4	2.99	0.50
8:A:1198:U:H2'	8:A:1199:U:H6	1.73	0.50
8:A:1216:G:N1	8:A:1233:C:N3	2.58	0.50
8:A:1275:A:C4	21:N:16:HIS:CD2	3.00	0.50
8:A:1303:G:N1	8:A:1304:A:C5	2.80	0.50
8:A:1476:U:C5	8:A:1514:G:C2	3.00	0.50
8:A:1567:G:C8	10:C:82:TYR:CE2	2.99	0.50
8:A:1661:G:H2'	8:A:1662:U:C6	2.46	0.50
8:A:1671:U:C2'	8:A:1673:G:N7	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1724:G:N1	8:A:1736:U:C2	2.79	0.50
8:A:1907:G:C6	8:A:1908:C:C4	3.00	0.50
8:A:2070:A:C2	8:A:2071:A:C4	2.99	0.50
8:A:2100:G:H22	8:A:2189:U:H2'	1.76	0.50
8:A:2126:A:C8	8:A:2163:A:H2'	2.46	0.50
8:A:2143:C:H42	8:A:2148:G:H2'	1.77	0.50
8:A:2192:U:H2'	8:A:2193:G:C8	2.47	0.50
8:A:2230:G:O3'	31:X:29:LEU:HB2	2.12	0.50
8:A:2553:G:C2	8:A:2583:G:H1'	2.47	0.50
8:A:2659:G:C2	8:A:2663:G:C6	3.00	0.50
8:A:2709:G:H2'	8:A:2710:C:H6	1.76	0.50
8:A:2728:U:O2'	8:A:2729:G:P	2.69	0.50
8:A:2786:U:H2'	8:A:2787:C:H6	1.76	0.50
8:A:2898:U:H2'	8:A:2899:A:H8	1.77	0.50
9:B:75:G:C2	9:B:76:G:C4	2.99	0.50
9:B:83:G:N1	9:B:94:A:C6	2.79	0.50
13:F:72:SER:H	13:F:80:GLN:HB2	1.76	0.50
14:G:79:THR:HG23	14:G:80:GLU:H	1.77	0.50
15:H:66:ASN:ND2	15:H:134:VAL:O	2.42	0.50
17:J:69:ARG:O	17:J:90:GLU:HG3	2.12	0.50
19:L:81:ASP:OD1	19:L:84:LYS:NZ	2.31	0.50
21:N:33:ILE:HD12	21:N:114:GLU:HB3	1.93	0.50
22:O:32:PRO:O	22:O:66:GLY:HA3	2.11	0.50
23:P:58:PHE:CZ	23:P:73:PHE:HB2	2.47	0.50
23:P:108:ARG:HH12	34:a:1464:U:P	2.35	0.50
28:U:76:THR:OG1	28:U:78:LYS:HG2	2.12	0.50
30:W:37:ARG:NE	30:W:37:ARG:HA	2.25	0.50
34:a:3:A:N1	34:a:629:A:O4'	2.44	0.50
34:a:208:U:H1'	34:a:212:G:OP2	2.11	0.50
34:a:373:A:H1'	34:a:481:G:C8	2.47	0.50
34:a:420:U:C2	34:a:424:G:N1	2.80	0.50
34:a:424:G:H2'	34:a:425:G:C8	2.47	0.50
34:a:833:G:C2	34:a:854:U:O2	2.64	0.50
34:a:840:C:H2'	34:a:841:C:C5	2.46	0.50
34:a:921:U:OP1	34:a:1081:A:N9	2.45	0.50
34:a:922:G:C6	34:a:923:A:C5	2.99	0.50
34:a:1102:A:H4'	35:b:94:ARG:HH22	1.77	0.50
34:a:1150:A:H2'	34:a:1151:A:C8	2.47	0.50
34:a:1190:G:H2'	36:c:2:GLN:O	2.11	0.50
34:a:1221:G:C6	34:a:1222:G:N2	2.79	0.50
34:a:1255:G:H2'	34:a:1258:G:H21	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1317:C:O2	47:n:53:ARG:CZ	2.60	0.50
35:b:80:LYS:HG3	35:b:90:PHE:CE1	2.47	0.50
35:b:96:LEU:HB2	35:b:99:MET:CG	2.41	0.50
35:b:169:HIS:HA	35:b:172:ILE:HD12	1.93	0.50
37:d:84:ASN:OD1	37:d:86:GLY:N	2.44	0.50
37:d:166:LYS:NZ	37:d:168:THR:HA	2.26	0.50
40:g:125:ASP:HA	40:g:128:GLU:HG2	1.93	0.50
40:g:132:THR:O	40:g:136:LYS:HE2	2.11	0.50
41:h:94:VAL:HB	41:h:99:GLY:C	2.35	0.50
42:i:118:ARG:HD3	42:i:124:PRO:HB3	1.92	0.50
46:m:3:ILE:HG13	46:m:56:ARG:HD3	1.94	0.50
46:m:33:LEU:HD23	46:m:40:GLU:HA	1.94	0.50
53:t:3:ILE:HG22	53:t:4:LYS:CD	2.41	0.50
56:w:28:G:H2'	56:w:29:G:H8	1.76	0.50
56:w:35:A:C1'	57:x:585:VAL:HG21	2.41	0.50
57:x:557:GLN:O	57:x:561:LYS:CD	2.59	0.50
4:3:31:ILE:HG13	4:3:31:ILE:O	2.10	0.50
8:A:1:G:C6	8:A:2:G:C6	2.99	0.50
8:A:25:U:H5'	26:S:102:HIS:CD2	2.46	0.50
8:A:86:G:N1	8:A:97:C:C4	2.79	0.50
8:A:310:A:HO2'	8:A:311:A:P	2.33	0.50
8:A:448:U:C4'	12:E:79:ARG:HE	2.25	0.50
8:A:548:G:N7	8:A:549:G:C8	2.79	0.50
8:A:582:A:C4	8:A:583:G:C8	2.99	0.50
8:A:598:U:H2'	8:A:599:A:C8	2.47	0.50
8:A:636:G:C4	19:L:111:ILE:HG21	2.46	0.50
8:A:671:C:C5	19:L:42:SER:HB2	2.46	0.50
8:A:827:U:H4'	8:A:828:U:C5	2.47	0.50
8:A:875:G:N1	8:A:903:C:N3	2.59	0.50
8:A:1009:A:H2'	8:A:1010:A:O4'	2.12	0.50
8:A:1014:A:O2'	8:A:1015:U:H5'	2.11	0.50
8:A:1069:A:C8	8:A:1073:A:N7	2.79	0.50
8:A:1212:G:H1'	8:A:1236:G:N2	2.26	0.50
8:A:1216:G:O6	8:A:1232:G:O6	2.29	0.50
8:A:1416:G:O2'	8:A:1417:C:O5'	2.27	0.50
8:A:1433:A:H2'	8:A:1434:A:O4'	2.10	0.50
8:A:1748:C:H2'	8:A:1749:A:O4'	2.12	0.50
8:A:1831:G:O6	8:A:1975:G:C6	2.65	0.50
8:A:1848:A:H2'	8:A:1849:G:O4'	2.12	0.50
8:A:2027:G:C6	8:A:2028:U:C4	3.00	0.50
8:A:2088:A:C6	8:A:2089:C:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2143:C:C5	8:A:2149:U:C2	2.99	0.50
8:A:2144:G:H1'	8:A:2148:G:N2	2.26	0.50
8:A:2173:A:OP1	8:A:2174:C:C5	2.65	0.50
8:A:2194:U:H2'	8:A:2195:U:C6	2.47	0.50
8:A:2218:G:C6	8:A:2219:U:C4	2.99	0.50
8:A:2271:G:H4'	30:W:16:ARG:NH2	2.27	0.50
8:A:2366:A:H2'	8:A:2367:G:O4'	2.12	0.50
8:A:2405:G:C2'	8:A:2411:A:H62	2.24	0.50
8:A:2505:G:O2'	8:A:2506:U:O5'	2.22	0.50
8:A:2543:G:H2'	8:A:2544:G:C8	2.47	0.50
8:A:2574:G:C5	8:A:2575:C:C4	2.99	0.50
8:A:2733:A:C6	8:A:2734:A:C5	2.99	0.50
8:A:2758:A:C4	8:A:2759:G:C8	2.99	0.50
8:A:2795:C:H2'	8:A:2796:U:C6	2.46	0.50
12:E:111:GLU:O	12:E:114:ARG:HB2	2.12	0.50
13:F:72:SER:N	13:F:80:GLN:HB2	2.27	0.50
17:J:57:LEU:HB3	17:J:128:ASN:HA	1.94	0.50
18:K:63:VAL:HG22	18:K:83:ALA:C	2.37	0.50
18:K:63:VAL:HG22	18:K:83:ALA:O	2.11	0.50
21:N:57:THR:O	21:N:80:PHE:HE1	1.95	0.50
23:P:32:VAL:HG22	23:P:37:LYS:HG3	1.94	0.50
25:R:69:GLY:O	25:R:90:ARG:HG2	2.11	0.50
31:X:73:ARG:NH1	31:X:75:GLU:OE2	2.45	0.50
34:a:2:A:N3	34:a:613:C:C2'	2.74	0.50
34:a:46:G:H3'	34:a:366:A:H62	1.76	0.50
34:a:117:G:O6	34:a:289:G:C1'	2.59	0.50
34:a:204:G:OP2	34:a:466:A:C2	2.65	0.50
34:a:213:G:O2'	34:a:213:G:N3	2.42	0.50
34:a:267:C:P	50:q:68:LYS:HG3	2.51	0.50
34:a:276:G:H2'	34:a:277:C:C6	2.47	0.50
34:a:369:G:C2	34:a:370:C:C5	2.99	0.50
34:a:456:A:H2'	34:a:457:G:C8	2.46	0.50
34:a:463:U:O2	34:a:464:U:C4	2.64	0.50
34:a:568:G:C6	34:a:569:C:N4	2.79	0.50
34:a:665:A:C8	34:a:725:G:C2	2.99	0.50
34:a:708:C:H2'	34:a:709:U:H6	1.76	0.50
34:a:942:G:C2	34:a:1342:C:C2	2.99	0.50
34:a:1000:A:C6	34:a:1041:G:N1	2.80	0.50
34:a:1008:U:C2	34:a:1022:A:C2	2.99	0.50
34:a:1130:A:O4'	34:a:1146:A:C2	2.64	0.50
34:a:1181:G:C4	34:a:1182:G:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1243:C:N3	34:a:1295:U:O2	2.45	0.50
34:a:1304:G:C5	34:a:1305:G:N1	2.80	0.50
34:a:1432:G:H2'	34:a:1467:C:N3	2.27	0.50
34:a:1451:U:O2'	34:a:1453:G:N7	2.35	0.50
34:a:1463:U:H2'	34:a:1464:U:C6	2.46	0.50
36:c:147:GLY:HA3	36:c:172:VAL:HG22	1.93	0.50
37:d:122:ILE:HD11	37:d:142:VAL:HG12	1.92	0.50
39:f:15:SER:HB2	39:f:44:ARG:HE	1.76	0.50
44:k:109:ILE:CD1	54:u:7:GLU:HB2	2.42	0.50
56:w:40:C:H2'	56:w:41:C:H6	1.76	0.50
57:x:16:ALA:HB2	57:x:111:VAL:HB	1.93	0.50
57:x:110:MET:HE2	57:x:136:ARG:HD2	1.94	0.50
57:x:151:LEU:O	57:x:154:VAL:HB	2.12	0.50
57:x:173:GLY:HA3	57:x:178:PHE:HA	1.93	0.50
57:x:566:ALA:HB3	57:x:568:TYR:HD2	1.77	0.50
57:x:647:GLU:HG2	57:x:651:VAL:HA	1.93	0.50
3:2:1:MET:N	8:A:1620:G:O4'	2.44	0.50
3:2:25:LYS:O	3:2:29:GLN:HG3	2.12	0.50
4:3:4:LYS:HG2	8:A:242:G:N7	2.27	0.50
5:4:9:LYS:HD3	5:4:14:CYS:O	2.11	0.50
8:A:128:C:H2'	8:A:129:C:H6	1.75	0.50
8:A:129:C:H2'	8:A:130:C:O4'	2.11	0.50
8:A:145:C:H2'	8:A:146:A:C8	2.46	0.50
8:A:237:C:N4	8:A:261:G:C6	2.80	0.50
8:A:311:A:O4'	8:A:332:A:N9	2.44	0.50
8:A:328:U:N3	8:A:332:A:C8	2.67	0.50
8:A:409:G:H2'	8:A:410:G:H8	1.75	0.50
8:A:420:C:H2'	8:A:421:C:C6	2.46	0.50
8:A:553:G:H2'	8:A:554:U:O4'	2.10	0.50
8:A:603:A:C5'	8:A:655:A:H61	2.19	0.50
8:A:707:G:C6	8:A:708:G:C5	2.99	0.50
8:A:839:U:C2	8:A:940:G:C2	2.99	0.50
8:A:855:G:C6	8:A:856:G:C5	3.00	0.50
8:A:858:G:N3	8:A:2268:A:H2'	2.25	0.50
8:A:954:G:N2	8:A:963:U:O2	2.38	0.50
8:A:980:A:C6	8:A:1136:G:H4'	2.46	0.50
8:A:1019:U:H3'	8:A:1020:A:C2	2.47	0.50
8:A:1056:G:O6	8:A:1101:U:OP2	2.29	0.50
8:A:1062:G:C6	8:A:1078:U:O4	2.65	0.50
8:A:1067:A:C2	57:x:641:LEU:CD2	2.94	0.50
8:A:1076:C:C2	8:A:1077:A:N3	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1257:C:H4'	12:E:78:TRP:CE2	2.46	0.50
8:A:1308:A:H2'	8:A:1309:G:O4'	2.12	0.50
8:A:1312:U:O4'	8:A:1313:U:C4	2.65	0.50
8:A:1342:A:HO2'	8:A:1344:U:P	2.34	0.50
8:A:1380:G:C2	8:A:1381:G:C8	3.00	0.50
8:A:1406:U:H2'	8:A:1407:G:O4'	2.12	0.50
8:A:1465:G:H2'	8:A:1466:U:C6	2.47	0.50
8:A:1481:U:O2	8:A:1510:G:N2	2.40	0.50
8:A:1487:U:C2	8:A:1503:A:C2	3.00	0.50
8:A:1566:A:N6	10:C:212:TRP:CZ3	2.80	0.50
8:A:1672:A:N1	8:A:1673:G:C2	2.79	0.50
8:A:1722:A:C2	8:A:1723:G:H1'	2.47	0.50
8:A:1821:A:H2'	8:A:1822:C:C6	2.46	0.50
8:A:1906:G:H5'	8:A:1929:G:O2'	2.11	0.50
8:A:1920:C:H5'	34:a:1517:G:C5	2.46	0.50
8:A:2063:C:C2	8:A:2064:C:C6	3.00	0.50
8:A:2087:G:C2	8:A:2233:U:O2	2.65	0.50
8:A:2109:U:C6	8:A:2180:U:O2	2.65	0.50
8:A:2116:G:C8	8:A:2166:U:O4	2.65	0.50
8:A:2285:C:H5'	8:A:2288:A:N6	2.27	0.50
8:A:2635:A:C2	8:A:2784:U:C2	2.99	0.50
8:A:2705:A:N3	21:N:64:ARG:NH1	2.59	0.50
8:A:2715:C:C4	8:A:2716:C:C5	3.00	0.50
8:A:2721:A:C5	8:A:2722:G:C5	3.00	0.50
8:A:2801:G:C6	8:A:2802:G:C5	3.00	0.50
8:A:2820:A:C5	11:D:196:ALA:HB1	2.47	0.50
11:D:12:THR:O	11:D:23:PRO:HA	2.11	0.50
11:D:13:ARG:HE	23:P:55:HIS:HD2	1.59	0.50
11:D:56:LYS:C	11:D:58:ASN:H	2.20	0.50
13:F:37:MET:HE2	13:F:150:GLY:O	2.12	0.50
23:P:26:GLU:HA	23:P:43:GLU:HA	1.94	0.50
23:P:99:LEU:HD23	23:P:102:ARG:HD2	1.94	0.50
24:Q:23:TYR:HB3	24:Q:27:ARG:CB	2.41	0.50
26:S:46:LEU:N	26:S:46:LEU:HD22	2.27	0.50
30:W:46:ASN:HB3	30:W:59:ALA:HB3	1.94	0.50
34:a:2:A:C6	34:a:3:A:C2	3.00	0.50
34:a:15:G:C2	34:a:16:A:C5	2.99	0.50
34:a:19:A:H2'	34:a:20:U:H6	1.77	0.50
34:a:47:C:C6	34:a:365:U:H2'	2.45	0.50
34:a:68:G:O4'	34:a:171:A:H1'	2.12	0.50
34:a:81:A:C6	34:a:88:U:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:130:A:C8	50:q:64:ARG:HG3	2.47	0.50
34:a:137:U:H3	34:a:226:G:H1	1.59	0.50
34:a:394:G:C6	34:a:395:C:N4	2.80	0.50
34:a:425:G:C6	34:a:426:U:C4	3.00	0.50
34:a:477:C:H2'	34:a:478:A:C8	2.46	0.50
34:a:561:U:HO2'	34:a:562:U:P	2.34	0.50
34:a:577:G:H2'	34:a:578:C:C6	2.47	0.50
34:a:588:G:C5	34:a:753:A:C4	3.00	0.50
34:a:611:C:H2'	34:a:612:C:C6	2.47	0.50
34:a:628:G:H2'	34:a:629:A:C8	2.46	0.50
34:a:634:C:O2'	34:a:635:A:H5'	2.11	0.50
34:a:667:G:H4'	48:o:50:HIS:ND1	2.27	0.50
34:a:690:G:C2	34:a:691:G:C4	3.00	0.50
34:a:718:A:N6	51:r:62:ARG:NH1	2.59	0.50
34:a:737:C:C2	34:a:738:C:C5	3.00	0.50
34:a:862:C:C4	34:a:863:U:C4	3.00	0.50
34:a:935:A:H2'	34:a:936:C:O4'	2.12	0.50
34:a:991:U:N3	34:a:1215:G:N1	2.60	0.50
34:a:1029:U:O2'	34:a:1032:G:N2	2.45	0.50
34:a:1089:G:C6	34:a:1097:C:N4	2.79	0.50
34:a:1091:U:C5	40:g:3:ARG:NH2	2.80	0.50
34:a:1100:C:C5	35:b:94:ARG:CZ	2.95	0.50
34:a:1114:C:O3'	43:j:68:ARG:NH2	2.44	0.50
34:a:1159:U:C2	34:a:1182:G:C6	3.00	0.50
34:a:1342:C:H5''	42:i:126:PHE:CD2	2.47	0.50
34:a:1351:U:H3	34:a:1371:G:H1	1.59	0.50
34:a:1465:A:O2'	34:a:1466:C:H5'	2.11	0.50
36:c:183:TYR:CD1	36:c:200:TRP:CE2	3.00	0.50
38:e:81:GLN:HG2	38:e:146:MET:SD	2.51	0.50
38:e:100:GLU:CD	38:e:100:GLU:H	2.19	0.50
39:f:11:HIS:N	39:f:83:ALA:O	2.44	0.50
39:f:38:ARG:C	39:f:39:LEU:HD12	2.36	0.50
42:i:56:MET:SD	42:i:59:LYS:HB2	2.52	0.50
47:n:10:VAL:HG13	47:n:11:LYS:N	2.27	0.50
47:n:81:ARG:HH12	47:n:82:ILE:HD11	1.76	0.50
50:q:45:VAL:HG22	50:q:72:TRP:HB3	1.94	0.50
50:q:58:VAL:HG13	50:q:76:ARG:O	2.11	0.50
53:t:27:MET:O	53:t:31:ILE:HG13	2.12	0.50
55:v:21:A:H2'	55:v:22:G:C8	2.47	0.50
57:x:15:SER:CB	57:x:125:VAL:HG21	2.36	0.50
57:x:140:VAL:HG21	57:x:150:PHE:CD1	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:13:SER:HB3	2:1:49:LYS:HE3	1.93	0.50
4:3:14:LYS:O	4:3:21:PHE:HA	2.11	0.50
7:6:41:HIS:CD2	7:6:42:PRO:HD2	2.47	0.50
7:6:64:PHE:O	7:6:66:ILE:HG23	2.11	0.50
8:A:156:A:C2	8:A:171:U:O2	2.65	0.50
8:A:216:A:C8	8:A:432:A:N6	2.80	0.50
8:A:248:G:O5'	8:A:249:C:H5''	2.12	0.50
8:A:252:G:N2	8:A:253:C:C2	2.79	0.50
8:A:335:C:H2'	8:A:336:C:H6	1.75	0.50
8:A:462:C:H2'	8:A:463:G:O4'	2.11	0.50
8:A:507:A:O4'	8:A:509:C:C2	2.64	0.50
8:A:540:C:H2'	8:A:541:A:H8	1.77	0.50
8:A:588:U:H2'	8:A:589:U:H6	1.75	0.50
8:A:629:G:H1'	8:A:639:U:H1'	1.94	0.50
8:A:643:A:H2'	8:A:644:A:C8	2.46	0.50
8:A:653:U:C4	8:A:654:A:H1'	2.46	0.50
8:A:793:A:N6	8:A:2073:C:P	2.85	0.50
8:A:821:A:N7	8:A:946:C:C4	2.79	0.50
8:A:885:C:C2	8:A:891:G:C6	2.99	0.50
8:A:1007:C:OP1	17:J:37:ARG:CZ	2.60	0.50
8:A:1059:G:C4	8:A:1060:U:C5	3.00	0.50
8:A:1065:U:P	8:A:1075:C:C2	3.05	0.50
8:A:1133:A:C2	8:A:2026:U:H1'	2.47	0.50
8:A:1138:G:H2'	8:A:1139:G:O4'	2.12	0.50
8:A:1230:A:C6	8:A:1231:U:C4	2.99	0.50
8:A:1413:A:N1	8:A:1590:A:C6	2.79	0.50
8:A:1439:A:H3'	8:A:1440:U:H6	1.77	0.50
8:A:1443:U:H2'	8:A:1444:G:C8	2.46	0.50
8:A:1581:G:C6	8:A:1582:C:C4	3.00	0.50
8:A:1586:A:C4	8:A:1587:G:C8	3.00	0.50
8:A:1750:G:C5	8:A:1751:U:C4	3.00	0.50
8:A:1839:G:C2	8:A:1840:G:C8	2.99	0.50
8:A:1973:G:C6	8:A:1974:C:N4	2.80	0.50
8:A:2152:G:N1	8:A:2153:C:C2	2.80	0.50
8:A:2178:C:H5''	8:A:2179:C:O5'	2.11	0.50
8:A:2199:A:C4	8:A:2200:C:C6	2.99	0.50
8:A:2205:A:C6	8:A:2206:C:C4	3.00	0.50
8:A:2262:U:H2'	8:A:2263:C:C6	2.41	0.50
8:A:2267:A:O5'	8:A:2267:A:N3	2.44	0.50
8:A:2316:G:H2'	8:A:2317:A:C8	2.47	0.50
8:A:2380:C:P	22:O:17:LYS:HZ1	2.31	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2660:A:C6	8:A:2661:G:C2	3.00	0.50
8:A:2789:C:H3'	8:A:2893:A:H62	1.77	0.50
8:A:2850:A:H2'	8:A:2851:A:O4'	2.12	0.50
9:B:100:G:C4	9:B:101:A:C8	2.99	0.50
9:B:100:G:H2'	9:B:101:A:O4'	2.11	0.50
10:C:156:SER:O	10:C:194:VAL:HB	2.11	0.50
10:C:245:THR:C	10:C:247:TRP:H	2.20	0.50
11:D:125:TRP:CE3	11:D:160:LYS:HD3	2.46	0.50
17:J:7:LYS:O	17:J:11:VAL:HG23	2.12	0.50
20:M:32:GLY:C	20:M:117:PHE:CE2	2.90	0.50
25:R:2:TYR:HA	25:R:14:VAL:O	2.12	0.50
27:T:18:GLU:N	27:T:18:GLU:OE1	2.45	0.50
27:T:38:ALA:HB1	27:T:43:ILE:HD11	1.94	0.50
28:U:48:VAL:O	28:U:48:VAL:HG13	2.11	0.50
34:a:32:A:H2'	34:a:33:A:C8	2.46	0.50
34:a:64:G:C2	34:a:69:G:C6	3.00	0.50
34:a:81:A:N6	34:a:88:U:C2	2.80	0.50
34:a:203:G:H5'	34:a:204:G:H5''	1.93	0.50
34:a:429:U:C5'	37:d:31:CYS:SG	2.99	0.50
34:a:539:A:H2'	34:a:540:G:C8	2.46	0.50
34:a:603:U:H2'	34:a:604:G:C8	2.47	0.50
34:a:734:G:C4	34:a:735:C:C5	2.99	0.50
34:a:838:G:N2	34:a:849:G:H1'	2.26	0.50
34:a:842:U:O3'	34:a:846:G:C8	2.65	0.50
34:a:932:C:H3'	40:g:2:ARG:HB2	1.93	0.50
34:a:1046:A:C5	34:a:1047:G:C8	3.00	0.50
34:a:1229:A:H2'	34:a:1230:C:H6	1.77	0.50
34:a:1244:G:H2'	34:a:1245:C:C6	2.47	0.50
34:a:1256:A:C4	34:a:1258:G:C6	3.00	0.50
34:a:1281:C:HO2'	34:a:1282:C:H5	1.58	0.50
34:a:1288:A:H2'	34:a:1289:A:O4'	2.11	0.50
34:a:1324:A:H2'	34:a:1325:C:H6	1.73	0.50
34:a:1346:A:C8	34:a:1375:A:N6	2.80	0.50
34:a:1371:G:C4	34:a:1372:U:C5	2.99	0.50
34:a:1476:A:C2	34:a:1477:U:C2	2.99	0.50
34:a:1494:G:N7	61:a:2001:AM2:HA6	2.26	0.50
34:a:1534:A:H3'	34:a:1535:C:H4'	1.94	0.50
37:d:26:ALA:C	37:d:29:THR:HG22	2.37	0.50
37:d:167:PRO:HB2	37:d:170:LEU:CD2	2.41	0.50
39:f:20:GLY:O	39:f:24:ARG:CD	2.60	0.50
42:i:20:ILE:O	42:i:20:ILE:HG13	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:j:17:LEU:HD11	43:j:93:ALA:HB1	1.93	0.50
48:o:79:GLN:HA	48:o:82:GLU:CG	2.42	0.50
50:q:27:PHE:CD1	50:q:38:LYS:HG2	2.46	0.50
50:q:28:VAL:HG13	50:q:37:ILE:HG23	1.93	0.50
57:x:17:HIS:CE1	57:x:18:ILE:HD12	2.47	0.50
57:x:22:LYS:HG3	57:x:111:VAL:HG21	1.94	0.50
57:x:397:CYS:HB3	57:x:401:ALA:HA	1.93	0.50
57:x:583:HIS:O	57:x:587:SER:HB3	2.11	0.50
57:x:632:GLY:O	57:x:636:ARG:HB2	2.12	0.50
57:x:685:LYS:HZ3	57:x:687:ASP:HB2	1.76	0.50
7:6:18:CYS:HB3	7:6:20:ASN:ND2	2.26	0.50
8:A:63:A:C2	27:T:70:HIS:CD2	2.99	0.50
8:A:442:G:C6	8:A:444:C:N4	2.80	0.50
8:A:452:G:H22	8:A:457:A:H1'	1.75	0.50
8:A:463:G:N2	8:A:465:G:H3'	2.27	0.50
8:A:527:C:C2'	8:A:2779:U:O2'	2.58	0.50
8:A:569:U:O4	8:A:570:G:N1	2.45	0.50
8:A:575:A:C4	8:A:576:U:C5	3.00	0.50
8:A:581:C:H2'	8:A:582:A:H8	1.77	0.50
8:A:671:C:H2'	8:A:672:C:H6	1.76	0.50
8:A:695:G:C5	8:A:768:G:C6	3.00	0.50
8:A:716:A:H2'	8:A:717:C:O4'	2.11	0.50
8:A:781:A:C2	8:A:1777:U:O4'	2.64	0.50
8:A:803:U:C2	8:A:804:A:C8	3.00	0.50
8:A:832:U:H5'	19:L:38:GLN:HB3	1.94	0.50
8:A:836:G:C6	8:A:837:C:C4	3.00	0.50
8:A:850:U:O2'	33:Z:22:THR:HG23	2.12	0.50
8:A:864:G:H2'	8:A:865:C:C6	2.47	0.50
8:A:871:U:H2'	8:A:872:U:H6	1.72	0.50
8:A:882:G:N2	8:A:895:U:H1'	2.27	0.50
8:A:953:G:C6	8:A:965:C:N4	2.80	0.50
8:A:1171:G:H2'	8:A:1171:G:N3	2.27	0.50
8:A:1180:U:H2'	8:A:1181:U:C6	2.46	0.50
8:A:1265:A:N1	8:A:2013:A:H5''	2.27	0.50
8:A:1266:G:H22	8:A:2012:G:H3'	1.76	0.50
8:A:1339:G:H5''	27:T:19:LYS:CD	2.41	0.50
8:A:1398:C:H2'	8:A:1399:C:C6	2.46	0.50
8:A:1450:G:C2	8:A:1451:C:C2	3.00	0.50
8:A:1500:G:C4	8:A:1501:G:C8	2.99	0.50
8:A:1582:C:H2'	8:A:1583:A:O4'	2.12	0.50
8:A:1586:A:C2	8:A:1587:G:H1'	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1592:C:H2'	8:A:1593:A:C8	2.47	0.50
8:A:1601:G:H2'	8:A:1602:U:C6	2.47	0.50
8:A:1693:U:H1'	10:C:13:ARG:NH2	2.26	0.50
8:A:1716:U:O2	8:A:1745:A:N6	2.44	0.50
8:A:1927:A:H8	8:A:1927:A:O5'	1.95	0.50
8:A:1952:A:H2'	8:A:1953:A:O4'	2.12	0.50
8:A:2014:A:H8	8:A:2014:A:O5'	1.95	0.50
8:A:2204:G:O6	8:A:2221:G:C6	2.65	0.50
8:A:2230:G:C2	8:A:2231:U:C4	2.99	0.50
8:A:2269:G:C6	8:A:2270:A:C5	3.00	0.50
8:A:2331:G:O2'	8:A:2336:A:C6	2.64	0.50
8:A:2413:G:C4	8:A:2414:G:C8	3.00	0.50
8:A:2452:C:H42	8:A:2504:PSU:HN3	1.60	0.50
8:A:2458:G:O6	8:A:2490:G:O2'	2.24	0.50
8:A:2461:A:H1'	8:A:2492:U:C4	2.47	0.50
8:A:2489:U:H2'	8:A:2490:G:C8	2.47	0.50
8:A:2564:A:C6	8:A:2565:A:N1	2.80	0.50
8:A:2707:U:O2'	21:N:71:ARG:NH2	2.44	0.50
8:A:2801:G:H2'	8:A:2802:G:H8	1.77	0.50
8:A:2887:A:C5	8:A:2888:C:C5	3.00	0.50
9:B:28:C:H2'	9:B:29:A:C8	2.47	0.50
10:C:1:ALA:HB3	10:C:19:VAL:CG2	2.42	0.50
10:C:106:PRO:HG2	10:C:109:LEU:HD13	1.92	0.50
11:D:47:ALA:HA	11:D:84:LEU:HG	1.93	0.50
12:E:24:ASN:OD1	12:E:27:LEU:N	2.30	0.50
17:J:44:TYR:OH	17:J:46:PRO:HA	2.12	0.50
18:K:23:LYS:HB3	18:K:25:LEU:HD21	1.94	0.50
20:M:53:MET:HE1	20:M:103:TYR:CG	2.46	0.50
20:M:55:ARG:O	20:M:58:LYS:NZ	2.40	0.50
23:P:108:ARG:NH1	34:a:1464:U:P	2.85	0.50
25:R:68:ARG:HG2	25:R:92:TRP:CE2	2.46	0.50
28:U:85:ARG:HH12	28:U:99:SER:C	2.19	0.50
34:a:109:A:C4	34:a:326:G:N2	2.80	0.50
34:a:116:A:C5	34:a:117:G:C8	2.99	0.50
34:a:204:G:H5'	34:a:204:G:N3	2.27	0.50
34:a:342:C:N4	34:a:348:G:C6	2.79	0.50
34:a:438:U:C2	34:a:494:G:C2	3.00	0.50
34:a:451:A:C1'	34:a:452:A:C2	2.94	0.50
34:a:459:A:C2	34:a:474:G:C5	3.00	0.50
34:a:474:G:C6	34:a:475:C:C4	2.99	0.50
34:a:499:A:C2	34:a:547:A:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:581:G:H1'	34:a:761:G:N2	2.27	0.50
34:a:614:C:OP2	37:d:80:ARG:NH2	2.43	0.50
34:a:677:U:H3	34:a:713:G:H22	1.58	0.50
34:a:814:A:H3'	34:a:816:A:C8	2.47	0.50
34:a:838:G:C6	34:a:839:C:C4	3.00	0.50
34:a:929:G:O6	34:a:1389:C:N4	2.44	0.50
34:a:1009:U:H3	34:a:1021:A:N6	2.10	0.50
34:a:1054:C:O4'	34:a:1196:A:N3	2.44	0.50
34:a:1227:A:OP1	52:s:79:TYR:CE2	2.65	0.50
34:a:1262:C:C6	34:a:1263:C:C5	3.00	0.50
34:a:1310:G:OP2	46:m:86:ARG:NH2	2.44	0.50
34:a:1320:C:N3	52:s:35:ARG:CZ	2.75	0.50
34:a:1329:A:H5''	46:m:28:ARG:HD2	1.92	0.50
34:a:1459:G:C6	34:a:1460:C:C4	3.00	0.50
35:b:17:HIS:HB3	35:b:188:THR:HG23	1.94	0.50
35:b:128:LEU:HD12	35:b:129:THR:O	2.11	0.50
36:c:150:VAL:HB	36:c:199:VAL:HG12	1.92	0.50
40:g:52:ARG:HH22	40:g:121:ASN:HA	1.77	0.50
42:i:113:LYS:NZ	42:i:114:LYS:O	2.45	0.50
43:j:40:ILE:HG22	43:j:42:LEU:HD22	1.94	0.50
47:n:45:VAL:O	47:n:48:LEU:HB3	2.12	0.50
52:s:2:ARG:HE	52:s:6:LYS:CD	2.24	0.50
55:v:10:G:N2	55:v:26:G:H1'	2.26	0.50
55:v:49:G:N1	55:v:66:C:C4	2.80	0.50
55:v:52:G:C4	55:v:53:G:C8	3.00	0.50
56:w:11:C:H2'	56:w:12:U:H6	1.76	0.50
56:w:29:G:C2	56:w:42:C:C2	3.00	0.50
57:x:118:VAL:HG23	57:x:160:ARG:HD2	1.94	0.50
57:x:155:ASN:O	57:x:159:THR:OG1	2.27	0.50
57:x:242:LEU:O	57:x:247:ILE:HD11	2.12	0.50
57:x:582:TYR:CB	57:x:592:PHE:HZ	2.23	0.50
2:1:33:LEU:HD21	8:A:2286:G:C2'	2.40	0.50
3:2:18:PHE:CD2	8:A:126:A:O4'	2.65	0.50
3:2:37:LYS:HE2	8:A:469:G:C6	2.46	0.50
5:4:34:LYS:NZ	8:A:2526:G:O2'	2.34	0.50
6:5:31:ARG:HA	8:A:1054:A:C4'	2.41	0.50
7:6:26:SER:OG	7:6:27:THR:N	2.44	0.50
8:A:196:A:C2	19:L:50:PHE:HZ	2.30	0.50
8:A:219:A:H2'	8:A:220:G:C8	2.47	0.50
8:A:233:A:C5	8:A:234:U:C6	2.99	0.50
8:A:319:G:H1	8:A:323:C:H5	1.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:340:A:C8	8:A:341:C:C5	3.00	0.50
8:A:406:G:C4	8:A:407:G:C8	3.00	0.50
8:A:442:G:C2	8:A:444:C:C5	3.00	0.50
8:A:443:A:H2'	12:E:40:ARG:NH2	2.27	0.50
8:A:484:C:H2'	8:A:485:C:C6	2.46	0.50
8:A:493:G:C2	8:A:494:G:C4	3.00	0.50
8:A:587:C:O2	19:L:33:ARG:NH1	2.43	0.50
8:A:668:A:N6	8:A:670:A:H1'	2.27	0.50
8:A:738:G:C6	8:A:759:G:C6	2.99	0.50
8:A:1050:A:C4	8:A:1051:G:C8	3.00	0.50
8:A:1059:G:H5'	8:A:1060:U:C6	2.47	0.50
8:A:1362:C:C2	8:A:1363:C:C6	2.99	0.50
8:A:1423:G:C2	8:A:1576:U:C2	3.00	0.50
8:A:1444:G:C6	8:A:1445:G:C5	3.00	0.50
8:A:1507:C:N3	8:A:1508:A:C2	2.80	0.50
8:A:1571:A:H2'	8:A:1572:A:O4'	2.10	0.50
8:A:1818:U:C2'	10:C:152:GLN:O	2.57	0.50
8:A:1944:U:C5	8:A:1955:U:C2	3.00	0.50
8:A:2074:U:C2'	8:A:2597:G:H21	2.25	0.50
8:A:2080:A:H2'	8:A:2081:U:C6	2.47	0.50
8:A:2082:A:H2'	8:A:2083:G:O4'	2.12	0.50
8:A:2100:G:C4	8:A:2190:G:C4	2.99	0.50
8:A:2129:C:N4	8:A:2159:G:N7	2.60	0.50
8:A:2173:A:H2'	8:A:2173:A:N3	2.27	0.50
8:A:2241:A:H2'	8:A:2242:G:C8	2.47	0.50
8:A:2290:G:C6	8:A:2291:U:C4	2.99	0.50
8:A:2412:A:C2	8:A:2413:G:H1'	2.47	0.50
8:A:2452:C:H2'	8:A:2453:A:C8	2.46	0.50
8:A:2526:G:C6	8:A:2527:C:C4	2.99	0.50
8:A:2549:G:H2'	8:A:2550:G:C8	2.47	0.50
8:A:2707:U:H2'	21:N:71:ARG:HH22	1.77	0.50
8:A:2799:A:C5	8:A:2801:G:C8	2.99	0.50
8:A:2839:G:O6	8:A:2878:U:N3	2.38	0.50
8:A:2888:C:H2'	8:A:2889:C:H6	1.77	0.50
9:B:2:G:H2'	9:B:3:C:C6	2.47	0.50
9:B:9:G:N2	9:B:111:U:O2	2.45	0.50
10:C:76:VAL:O	10:C:94:LEU:N	2.28	0.50
13:F:59:ILE:HG12	13:F:98:PHE:CE2	2.45	0.50
14:G:4:ALA:HB2	14:G:65:GLY:CA	2.42	0.50
14:G:47:ASN:O	14:G:47:ASN:ND2	2.44	0.50
14:G:94:ARG:HE	14:G:127:GLN:HE21	1.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:42:LYS:O	15:H:45:GLU:HG2	2.12	0.50
15:H:68:ARG:HD3	15:H:70:GLU:HB2	1.93	0.50
18:K:25:LEU:HG	18:K:39:ILE:HA	1.92	0.50
19:L:79:LEU:O	19:L:82:LEU:HD12	2.12	0.50
20:M:27:SER:O	20:M:133:LYS:NZ	2.27	0.50
21:N:10:LEU:O	21:N:11:ASN:C	2.54	0.50
23:P:30:TRP:CZ2	23:P:39:LEU:HD22	2.47	0.50
23:P:87:ARG:HG2	23:P:111:GLU:HG3	1.93	0.50
26:S:26:GLY:N	26:S:71:VAL:HB	2.27	0.50
26:S:36:LEU:HD13	26:S:48:LYS:HB2	1.94	0.50
31:X:35:HIS:O	31:X:37:PHE:CD2	2.65	0.50
32:Y:15:ASN:O	32:Y:18:LEU:O	2.30	0.50
33:Z:44:ARG:HA	33:Z:47:ILE:HD12	1.94	0.50
34:a:17:U:O4'	34:a:1080:A:H1'	2.12	0.50
34:a:137:U:H2'	34:a:138:G:H8	1.77	0.50
34:a:156:C:H2'	34:a:164:G:N2	2.27	0.50
34:a:339:C:H2'	34:a:340:U:C6	2.46	0.50
34:a:341:C:C2	34:a:349:A:C2	3.00	0.50
34:a:394:G:C4	34:a:395:C:C5	2.99	0.50
34:a:423:G:N2	34:a:424:G:C5	2.80	0.50
34:a:559:A:H4'	34:a:560:A:H3'	1.94	0.50
34:a:618:C:H42	34:a:623:C:H42	1.60	0.50
34:a:781:A:N7	34:a:801:U:C4	2.80	0.50
34:a:829:G:O6	34:a:858:G:C2	2.65	0.50
34:a:920:U:H1'	34:a:1080:A:N1	2.27	0.50
34:a:921:U:OP1	34:a:1081:A:N3	2.45	0.50
34:a:1112:C:O2'	36:c:178:ARG:NH2	2.45	0.50
34:a:1118:U:C1'	34:a:1179:A:C4	2.95	0.50
34:a:1260:G:C5	34:a:1274:A:N6	2.80	0.50
34:a:1260:G:C2'	34:a:1275:A:N6	2.75	0.50
35:b:22:TRP:HB3	35:b:38:HIS:CD2	2.46	0.50
35:b:151:LYS:CG	35:b:152:ASP:H	2.23	0.50
36:c:92:ASP:OD1	36:c:93:ILE:HG23	2.12	0.50
36:c:115:VAL:O	36:c:119:ILE:HG13	2.12	0.50
36:c:122:GLN:CD	36:c:125:ARG:NH2	2.68	0.50
36:c:122:GLN:HB3	36:c:127:VAL:HB	1.93	0.50
36:c:153:SER:HA	36:c:164:THR:HG22	1.94	0.50
36:c:183:TYR:OH	36:c:198:LYS:HB2	2.12	0.50
37:d:181:PHE:CZ	37:d:183:ARG:O	2.64	0.50
45:l:89:LEU:N	45:l:89:LEU:CD2	2.74	0.50
45:l:112:ALA:O	45:l:115:LYS:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:p:9:HIS:CA	49:p:16:PHE:O	2.60	0.50
53:t:42:ASP:OD1	53:t:43:LYS:N	2.44	0.50
55:v:19:G:C2	55:v:57:A:C4	3.00	0.50
56:w:36:A:H2'	56:w:37:MIA:H8	1.94	0.50
57:x:185:VAL:HG23	57:x:186:LYS:N	2.27	0.50
57:x:493:ILE:CG2	57:x:607:ALA:HB3	2.42	0.50
1:0:49:ARG:HG2	8:A:2884:U:C6	2.47	0.49
3:2:34:ARG:CZ	8:A:466:A:OP1	2.60	0.49
8:A:14:A:C4	8:A:526:A:C2	3.00	0.49
8:A:153:U:H2'	8:A:154:U:C6	2.47	0.49
8:A:153:U:H2'	8:A:154:U:H6	1.77	0.49
8:A:182:A:C5	8:A:183:C:C5	3.00	0.49
8:A:387:U:H4'	8:A:388:G:O4'	2.11	0.49
8:A:402:A:C6	8:A:403:U:O2	2.65	0.49
8:A:430:A:H5''	8:A:431:U:OP2	2.11	0.49
8:A:464:U:H2'	8:A:465:G:O4'	2.12	0.49
8:A:485:C:C2	8:A:486:C:C5	3.00	0.49
8:A:586:A:N1	8:A:809:G:O2'	2.32	0.49
8:A:603:A:C8	8:A:655:A:C6	3.00	0.49
8:A:691:C:H2'	8:A:692:C:C6	2.47	0.49
8:A:701:G:N2	8:A:732:C:C2	2.80	0.49
8:A:714:U:OP2	48:o:88:ARG:NE	2.45	0.49
8:A:714:U:H3'	48:o:88:ARG:NH2	2.27	0.49
8:A:788:A:H5''	8:A:790:U:H5	1.76	0.49
8:A:929:U:H5''	33:Z:37:ARG:CZ	2.42	0.49
8:A:952:G:C6	8:A:953:G:N7	2.80	0.49
8:A:1068:G:C6	8:A:1069:A:C2	2.99	0.49
8:A:1178:C:O2	8:A:1179:G:N2	2.45	0.49
8:A:1279:G:C2	8:A:1292:G:C2	3.00	0.49
8:A:1319:C:H2'	8:A:1320:C:C6	2.47	0.49
8:A:1343:G:H2'	8:A:1344:U:C6	2.47	0.49
8:A:1408:G:C2	8:A:1594:U:O2	2.64	0.49
8:A:1479:G:C2	8:A:1513:U:O2	2.65	0.49
8:A:1491:G:O4'	10:C:97:ASP:HB2	2.12	0.49
8:A:1524:G:H2'	8:A:1525:A:O4'	2.12	0.49
8:A:1585:C:H3'	8:A:1586:A:H8	1.77	0.49
8:A:1628:G:C6	8:A:1639:C:C4	3.00	0.49
8:A:1667:G:C2	8:A:1992:G:OP2	2.65	0.49
8:A:1730:C:H1'	8:A:1731:G:C6	2.46	0.49
8:A:1808:A:H3'	8:A:1809:A:C8	2.46	0.49
8:A:1843:C:H2'	8:A:1844:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1947:C:C4	8:A:1960:A:N1	2.80	0.49
8:A:1989:G:H2'	8:A:1990:C:C6	2.47	0.49
8:A:2191:A:C6	8:A:2192:U:C4	2.99	0.49
8:A:2207:C:N3	8:A:2218:G:C2	2.81	0.49
8:A:2231:U:H2'	8:A:2232:C:C6	2.47	0.49
8:A:2266:A:N3	8:A:2272:U:C4	2.80	0.49
8:A:2376:A:C6	8:A:2377:A:C2	3.00	0.49
8:A:2461:A:C5	8:A:2462:C:C4	3.00	0.49
8:A:2487:G:N3	8:A:2488:G:C8	2.80	0.49
8:A:2619:C:H2'	8:A:2620:C:C6	2.47	0.49
8:A:2648:G:N2	8:A:2673:G:H1'	2.27	0.49
8:A:2682:A:N3	11:D:23:PRO:HB3	2.27	0.49
8:A:2846:G:P	23:P:51:ASN:HD22	2.34	0.49
9:B:76:G:O2'	29:V:21:ARG:NH2	2.45	0.49
11:D:7:LYS:HG3	11:D:198:GLY:HA2	1.94	0.49
11:D:8:LYS:NZ	11:D:195:GLY:O	2.39	0.49
11:D:108:ASP:OD1	11:D:173:GLN:HA	2.12	0.49
11:D:110:THR:HB	11:D:202:ILE:HB	1.95	0.49
12:E:29:HIS:O	12:E:32:VAL:HG22	2.12	0.49
12:E:86:ALA:HB3	12:E:88:ARG:NH1	2.27	0.49
13:F:25:MET:HA	13:F:29:ARG:HH22	1.76	0.49
20:M:17:ASN:ND2	20:M:96:ILE:O	2.45	0.49
21:N:77:ALA:O	21:N:81:ASN:CB	2.60	0.49
22:O:46:GLU:OE2	22:O:48:LEU:HD21	2.12	0.49
23:P:51:ASN:C	23:P:52:ARG:HG2	2.36	0.49
23:P:54:LEU:O	23:P:76:HIS:CD2	2.65	0.49
26:S:77:ASP:HB2	26:S:102:HIS:HB2	1.94	0.49
29:V:30:ILE:HD11	29:V:40:ILE:HD13	1.94	0.49
29:V:69:GLU:HB3	29:V:71:LYS:NZ	2.28	0.49
32:Y:14:LEU:C	32:Y:14:LEU:HD12	2.37	0.49
34:a:64:G:O2'	34:a:99:C:N4	2.32	0.49
34:a:82:G:O6	34:a:88:U:O2	2.30	0.49
34:a:205:A:N1	34:a:206:C:H1'	2.27	0.49
34:a:257:G:C2	34:a:270:A:C2	3.00	0.49
34:a:259:G:C4	34:a:260:G:C8	3.00	0.49
34:a:318:G:O6	34:a:336:A:N6	2.45	0.49
34:a:356:A:O2'	34:a:368:U:O2'	2.30	0.49
34:a:449:G:N2	34:a:484:G:O6	2.41	0.49
34:a:540:G:C6	34:a:541:G:C5	3.00	0.49
34:a:552:U:N3	34:a:553:A:C2	2.80	0.49
34:a:768:A:C2'	34:a:1512:U:O2'	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:874:G:C6	34:a:875:U:O4	2.65	0.49
34:a:949:A:C4	34:a:1233:G:C2	3.00	0.49
34:a:951:G:N1	34:a:1231:G:C5	2.80	0.49
34:a:967:5MC:OP2	34:a:968:A:O2'	2.23	0.49
34:a:1014:A:O2'	34:a:1015:G:O4'	2.29	0.49
34:a:1016:A:OP2	34:a:1017:U:C4	2.65	0.49
34:a:1048:G:C6	34:a:1210:C:N4	2.80	0.49
34:a:1055:A:C2	34:a:1206:G:C4	2.99	0.49
34:a:1129:C:C2'	34:a:1139:G:N7	2.75	0.49
34:a:1135:U:H3'	34:a:1137:C:C5	2.47	0.49
34:a:1248:A:H4'	34:a:1249:C:OP1	2.12	0.49
34:a:1291:U:N3	34:a:1292:G:N7	2.60	0.49
34:a:1294:G:H2'	34:a:1295:U:O4'	2.11	0.49
35:b:13:VAL:HG12	35:b:13:VAL:O	2.11	0.49
35:b:69:VAL:O	35:b:69:VAL:HG23	2.12	0.49
36:c:174:LEU:HD23	36:c:181:ILE:CD1	2.42	0.49
37:d:169:TRP:CG	37:d:185:PRO:HB3	2.47	0.49
38:e:79:THR:HG22	38:e:121:ASN:O	2.12	0.49
38:e:156:ARG:NH2	41:h:44:PHE:CE2	2.79	0.49
39:f:71:ILE:HG22	39:f:75:GLU:OE1	2.12	0.49
42:i:6:TYR:HA	42:i:18:VAL:O	2.12	0.49
42:i:8:THR:O	42:i:16:ALA:HB3	2.12	0.49
42:i:101:GLY:O	42:i:103:VAL:HG13	2.12	0.49
43:j:27:GLU:C	43:j:31:ARG:NH1	2.69	0.49
43:j:65:TYR:HA	47:n:98:LYS:HA	1.94	0.49
45:l:80:LEU:CB	45:l:101:LEU:HD22	2.36	0.49
48:o:84:LEU:CB	48:o:86:LEU:HD13	2.41	0.49
54:u:7:GLU:OE1	54:u:12:ASP:N	2.45	0.49
56:w:71:G:C6	56:w:72:C:C4	3.00	0.49
57:x:199:VAL:HA	57:x:201:PHE:CZ	2.47	0.49
57:x:413:PRO:HB2	57:x:458:ALA:HB1	1.93	0.49
4:3:6:VAL:HG12	4:3:9:ALA:H	1.77	0.49
5:4:6:SER:CB	5:4:8:LYS:HZ1	2.25	0.49
6:5:56:ARG:CB	8:A:1106:G:H4'	2.41	0.49
8:A:49:A:N6	8:A:118:A:C4	2.81	0.49
8:A:75:G:C2	8:A:76:C:C6	3.00	0.49
8:A:145:C:H2'	8:A:146:A:H8	1.77	0.49
8:A:190:A:C8	8:A:206:U:N3	2.70	0.49
8:A:391:A:C5	8:A:411:G:C2	3.00	0.49
8:A:457:A:C8	8:A:459:U:C2	3.00	0.49
8:A:498:G:HO2'	8:A:499:U:H5'	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:669:G:OP1	8:A:669:G:C8	2.64	0.49
8:A:685:A:H4'	8:A:686:U:O5'	2.11	0.49
8:A:813:U:C2	8:A:814:C:C5	3.00	0.49
8:A:832:U:H2'	8:A:833:A:C8	2.47	0.49
8:A:863:A:H2'	8:A:864:G:C8	2.47	0.49
8:A:883:G:N3	8:A:884:U:O2	2.45	0.49
8:A:945:A:C5	8:A:2448:A:C2	3.00	0.49
8:A:953:G:C2	8:A:954:G:C8	2.99	0.49
8:A:990:A:H5'	8:A:1157:G:OP1	2.12	0.49
8:A:1077:A:C4	8:A:1078:U:H5	2.30	0.49
8:A:1108:U:H2'	8:A:1109:C:C6	2.47	0.49
8:A:1115:G:H2'	8:A:1116:G:C8	2.48	0.49
8:A:1403:A:H2'	8:A:1404:C:O4'	2.11	0.49
8:A:1770:G:H1	8:A:1982:U:H3	1.60	0.49
8:A:1844:C:C4	8:A:1897:G:N1	2.80	0.49
8:A:1937:A:O2'	8:A:1939:5MU:OP2	2.14	0.49
8:A:1992:G:N3	8:A:1997:C:C4	2.80	0.49
8:A:2141:G:C8	8:A:2142:A:N7	2.80	0.49
8:A:2355:G:H2'	8:A:2356:U:O4'	2.12	0.49
8:A:2383:G:C6	8:A:2384:U:C4	3.00	0.49
8:A:2413:G:N1	8:A:2414:G:C5	2.80	0.49
8:A:2462:C:N3	8:A:2463:C:C5	2.80	0.49
8:A:2525:G:C2	8:A:2539:C:N3	2.80	0.49
8:A:2551:C:C4	8:A:2552:OMU:O4	2.65	0.49
8:A:2615:U:N3	8:A:2616:C:C5	2.80	0.49
8:A:2621:G:C6	8:A:2622:U:C4	3.00	0.49
8:A:2813:A:H2'	8:A:2814:A:O4'	2.12	0.49
8:A:2825:G:O4'	8:A:2825:G:N3	2.43	0.49
8:A:2853:C:H2'	8:A:2854:G:C8	2.47	0.49
9:B:16:G:C2	9:B:17:C:C6	2.99	0.49
9:B:16:G:C6	9:B:69:G:C2	3.00	0.49
9:B:42:C:C6	13:F:65:LEU:HD13	2.48	0.49
9:B:47:C:C4	9:B:48:U:C4	3.00	0.49
9:B:55:U:H2'	9:B:56:G:O4'	2.12	0.49
12:E:142:ALA:C	12:E:143:LEU:HG	2.37	0.49
14:G:8:VAL:HB	14:G:49:LEU:HB2	1.93	0.49
14:G:27:GLY:HA3	14:G:78:VAL:CG2	2.42	0.49
21:N:102:PHE:CE2	21:N:109:PRO:HG3	2.47	0.49
22:O:16:ARG:NE	22:O:16:ARG:HA	2.27	0.49
23:P:51:ASN:HA	23:P:56:SER:OG	2.12	0.49
26:S:2:GLU:CD	26:S:106:VAL:HG11	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S:82:MET:HB3	26:S:84:ARG:NH1	2.27	0.49
28:U:94:PHE:HA	28:U:102:ILE:HG13	1.93	0.49
29:V:20:LEU:HD21	29:V:41:GLU:CA	2.41	0.49
30:W:42:HIS:CE1	30:W:73:ARG:HB2	2.47	0.49
34:a:22:G:H2'	34:a:23:C:H6	1.77	0.49
34:a:49:U:C2	34:a:362:G:H1'	2.46	0.49
34:a:71:A:C6	34:a:72:A:C8	3.00	0.49
34:a:247:G:O2'	34:a:282:A:C2	2.60	0.49
34:a:256:U:H2'	34:a:257:G:C8	2.47	0.49
34:a:292:G:OP2	34:a:305:G:C2	2.64	0.49
34:a:373:A:C4	34:a:482:A:C6	3.01	0.49
34:a:404:G:N3	34:a:498:A:C2	2.81	0.49
34:a:406:G:N7	34:a:495:A:O2'	2.42	0.49
34:a:411:A:OP2	34:a:429:U:H5	1.96	0.49
34:a:454:G:N1	34:a:479:U:N3	2.60	0.49
34:a:455:G:C6	34:a:456:A:C6	3.00	0.49
34:a:502:A:H4'	45:l:115:LYS:NZ	2.27	0.49
34:a:575:G:C6	34:a:881:G:N1	2.81	0.49
34:a:622:A:N7	34:a:623:C:C5	2.80	0.49
34:a:921:U:OP1	34:a:1081:A:H2'	2.11	0.49
34:a:984:C:C4	34:a:1222:G:N2	2.80	0.49
34:a:1004:A:O2'	34:a:1005:A:O5'	2.29	0.49
34:a:1004:A:C5	34:a:1005:A:C2	3.00	0.49
34:a:1023:U:H2'	34:a:1024:G:H8	1.77	0.49
34:a:1086:U:H3	34:a:1099:G:H22	1.60	0.49
34:a:1160:G:C4	34:a:1161:C:C5	3.00	0.49
34:a:1173:U:H2'	34:a:1174:G:O4'	2.12	0.49
34:a:1239:A:C2	34:a:1241:G:C2	3.00	0.49
34:a:1244:G:C5	34:a:1294:G:N1	2.80	0.49
34:a:1269:A:H1'	34:a:1312:G:N2	2.26	0.49
34:a:1304:G:H2'	34:a:1305:G:C8	2.47	0.49
34:a:1349:A:C2	34:a:1350:A:H1'	2.47	0.49
34:a:1450:U:O2	34:a:1454:G:C2	2.65	0.49
35:b:103:TRP:HA	35:b:106:VAL:HB	1.94	0.49
35:b:106:VAL:O	35:b:109:SER:OG	2.26	0.49
35:b:144:GLU:OE2	35:b:145:ASN:N	2.45	0.49
36:c:58:ARG:HA	36:c:62:SER:O	2.11	0.49
40:g:14:ASP:OD2	40:g:16:LYS:HB2	2.12	0.49
42:i:21:LYS:O	42:i:61:ASP:OD1	2.30	0.49
43:j:6:ILE:HB	43:j:76:ILE:O	2.11	0.49
44:k:12:ARG:HA	44:k:76:TYR:CZ	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:r:20:ILE:HD12	51:r:54:LEU:N	2.26	0.49
55:v:9:G:C6	55:v:46:A:C6	3.00	0.49
57:x:4:THR:O	57:x:5:PRO:C	2.54	0.49
57:x:110:MET:HE3	57:x:126:TRP:CE3	2.47	0.49
57:x:146:MET:N	57:x:175:GLU:HG3	2.27	0.49
57:x:496:LYS:HE3	57:x:608:LYS:NZ	2.27	0.49
1:0:39:ARG:NH2	8:A:2885:G:C5	2.80	0.49
3:2:39:ARG:NH2	8:A:468:G:C5	2.81	0.49
3:2:39:ARG:HH12	8:A:461:C:H42	1.59	0.49
6:5:42:ARG:CB	8:A:1081:U:H3	2.25	0.49
8:A:58:G:C2	8:A:70:G:C2	3.01	0.49
8:A:134:G:C6	8:A:135:U:C4	3.00	0.49
8:A:381:G:N2	8:A:394:C:C2	2.80	0.49
8:A:445:C:O2'	8:A:446:G:H5'	2.12	0.49
8:A:479:A:HO2'	8:A:481:G:C1'	2.25	0.49
8:A:481:G:H2'	8:A:507:A:N6	2.27	0.49
8:A:594:U:N3	8:A:664:G:N1	2.60	0.49
8:A:660:C:O4'	12:E:30:GLN:NE2	2.44	0.49
8:A:806:C:C2	8:A:807:U:C5	3.00	0.49
8:A:854:C:N3	8:A:924:G:N1	2.60	0.49
8:A:854:C:O2'	8:A:855:G:H5'	2.12	0.49
8:A:1004:U:H2'	8:A:1011:G:H2'	1.94	0.49
8:A:1005:C:OP2	8:A:1011:G:O2'	2.15	0.49
8:A:1092:C:C4	8:A:1098:A:N6	2.80	0.49
8:A:1161:C:H2'	8:A:1162:G:C8	2.47	0.49
8:A:1196:C:C2	8:A:1197:G:C8	3.00	0.49
8:A:1229:C:H2'	8:A:1230:A:C8	2.47	0.49
8:A:1277:G:C6	8:A:1294:U:C4	3.01	0.49
8:A:1449:G:H2'	8:A:1450:G:C8	2.48	0.49
8:A:1540:G:H2'	8:A:1541:C:C6	2.48	0.49
8:A:1734:G:H2'	8:A:1735:A:C8	2.46	0.49
8:A:1735:A:H2'	8:A:1736:U:C6	2.47	0.49
8:A:1806:C:H2'	8:A:1807:G:O4'	2.13	0.49
8:A:1932:A:H3'	8:A:1933:G:H8	1.76	0.49
8:A:2027:G:N1	8:A:2037:A:C6	2.80	0.49
8:A:2109:U:N1	8:A:2180:U:C2	2.80	0.49
8:A:2109:U:C1'	8:A:2180:U:O2	2.60	0.49
8:A:2128:G:H1'	8:A:2173:A:C1'	2.42	0.49
8:A:2199:A:C6	8:A:2200:C:C2	3.00	0.49
8:A:2215:C:C2	8:A:2216:G:C8	3.01	0.49
8:A:2292:U:C2	8:A:2293:G:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2292:U:C2	8:A:2341:G:C2	3.00	0.49
8:A:2400:G:C6	8:A:2401:U:N3	2.80	0.49
8:A:2461:A:H1'	8:A:2492:U:C2	2.47	0.49
8:A:2509:G:C2	8:A:2580:PSU:N3	2.80	0.49
8:A:2534:A:C5	8:A:2535:G:C8	3.01	0.49
8:A:2644:G:C5	8:A:2645:G:C6	3.00	0.49
8:A:2813:A:C4	8:A:2814:A:C8	3.00	0.49
8:A:2891:U:H2'	8:A:2892:G:O4'	2.12	0.49
10:C:210:ALA:O	10:C:213:ARG:N	2.40	0.49
14:G:10:VAL:N	14:G:47:ASN:O	2.41	0.49
14:G:21:GLN:O	14:G:36:LEU:HG	2.11	0.49
21:N:48:VAL:HA	21:N:51:LEU:HB2	1.93	0.49
25:R:60:LYS:C	25:R:99:THR:OG1	2.55	0.49
34:a:50:A:H1'	34:a:52:C:C1'	2.42	0.49
34:a:84:U:O4	34:a:87:C:OP1	2.29	0.49
34:a:198:G:H1	34:a:219:U:H3	1.60	0.49
34:a:271:C:H2'	34:a:272:C:C6	2.47	0.49
34:a:320:A:C2	34:a:321:A:C4	3.00	0.49
34:a:541:G:C2	34:a:542:G:C4	3.00	0.49
34:a:542:G:O3'	37:d:13:ARG:NH1	2.46	0.49
34:a:756:C:H2'	34:a:757:U:O4'	2.12	0.49
34:a:847:G:H2'	34:a:848:C:H6	1.77	0.49
34:a:1053:G:H4'	34:a:1054:C:H3'	1.94	0.49
34:a:1057:G:O3'	36:c:196:GLY:HA3	2.13	0.49
34:a:1101:A:C2	35:b:97:GLY:O	2.65	0.49
34:a:1179:A:N6	34:a:1180:A:N1	2.60	0.49
34:a:1229:A:H2'	34:a:1230:C:C6	2.47	0.49
34:a:1238:A:C8	34:a:1303:C:H1'	2.47	0.49
34:a:1288:A:N1	34:a:1371:G:H1'	2.27	0.49
34:a:1296:C:H5''	46:m:13:HIS:NE2	2.27	0.49
34:a:1423:G:C2	34:a:1424:U:C2	3.00	0.49
34:a:1462:C:H2'	34:a:1463:U:C6	2.47	0.49
35:b:56:LEU:HD12	35:b:56:LEU:O	2.12	0.49
39:f:40:GLU:HB2	39:f:61:LEU:HB3	1.95	0.49
41:h:49:LYS:O	41:h:58:LEU:HD12	2.12	0.49
42:i:11:ARG:NH1	42:i:12:LYS:HB2	2.26	0.49
43:j:40:ILE:HB	43:j:73:LEU:HB3	1.93	0.49
43:j:85:ASP:OD1	43:j:85:ASP:N	2.45	0.49
46:m:78:ARG:HE	52:s:64:GLU:CD	2.09	0.49
47:n:30:ILE:HG12	47:n:41:ARG:HB2	1.94	0.49
50:q:23:ALA:HB1	50:q:40:THR:CG2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:w:37:MIA:H132	56:w:38:A:C2	2.47	0.49
57:x:18:ILE:HG12	57:x:91:HIS:NE2	2.28	0.49
57:x:248:LYS:O	57:x:252:ARG:HB3	2.12	0.49
57:x:310:ALA:O	57:x:378:ALA:HB1	2.12	0.49
57:x:312:ASP:HB2	57:x:340:GLY:C	2.37	0.49
57:x:314:GLU:HB2	57:x:339:SER:CB	2.42	0.49
57:x:349:LEU:HA	57:x:356:ARG:HA	1.94	0.49
3:2:8:SER:HB3	8:A:686:U:O2	2.12	0.49
3:2:19:ARG:HG3	8:A:126:A:O5'	2.13	0.49
4:3:21:PHE:N	4:3:48:MET:HE1	2.27	0.49
8:A:38:A:C6	8:A:442:G:N1	2.80	0.49
8:A:42:A:C6	8:A:438:G:C6	3.00	0.49
8:A:190:A:N7	8:A:206:U:C2	2.79	0.49
8:A:198:C:O5'	8:A:198:C:C6	2.65	0.49
8:A:298:G:H1'	8:A:340:A:N6	2.26	0.49
8:A:373:U:OP1	31:X:53:LYS:NZ	2.46	0.49
8:A:432:A:H2'	8:A:433:C:H6	1.78	0.49
8:A:532:A:N1	8:A:2020:A:H1'	2.27	0.49
8:A:591:U:C2	8:A:592:A:C8	3.00	0.49
8:A:949:G:N1	8:A:950:G:C5	2.80	0.49
8:A:1024:G:OP2	8:A:1026:G:OP1	2.29	0.49
8:A:1131:G:H1'	8:A:1133:A:H62	1.78	0.49
8:A:1250:G:P	19:L:21:ARG:HE	2.35	0.49
8:A:1280:G:C2	8:A:1291:C:N3	2.80	0.49
8:A:1299:G:C2'	8:A:1640:A:H62	2.25	0.49
8:A:1343:G:N2	8:A:1405:U:C2	2.81	0.49
8:A:1351:C:H4'	8:A:1572:A:H4'	1.94	0.49
8:A:1530:G:H2'	8:A:1531:C:H6	1.76	0.49
8:A:1638:C:N3	8:A:1639:C:C5	2.80	0.49
8:A:1693:U:H1'	10:C:13:ARG:CZ	2.42	0.49
8:A:1861:G:C2	8:A:1862:G:C8	2.99	0.49
8:A:1902:C:C5	8:A:1903:G:C8	3.00	0.49
8:A:1908:C:C2	8:A:1923:U:O2	2.64	0.49
8:A:2011:U:H2'	8:A:2012:G:O4'	2.13	0.49
8:A:2255:G:C6	8:A:2256:G:C5	3.00	0.49
8:A:2269:G:C4	8:A:2270:A:C8	3.01	0.49
8:A:2293:G:C6	8:A:2340:A:N6	2.81	0.49
8:A:2485:G:H5'	20:M:45:GLN:HG2	1.94	0.49
8:A:2511:U:H1'	11:D:144:GLY:HA3	1.94	0.49
8:A:2519:U:C4	8:A:2542:A:C8	3.00	0.49
8:A:2599:G:H5''	10:C:235:GLU:OE2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2667:C:C4	14:G:109:SER:OG	2.52	0.49
8:A:2697:G:C6	8:A:2698:U:C4	3.00	0.49
8:A:2728:U:H2'	8:A:2729:G:C8	2.45	0.49
8:A:2773:C:H2'	8:A:2774:C:H6	1.77	0.49
9:B:31:C:H4'	13:F:25:MET:CE	2.42	0.49
9:B:72:G:C2	9:B:105:G:C6	3.00	0.49
9:B:78:A:C2	9:B:99:A:C4	3.00	0.49
11:D:1:MET:HG2	11:D:205:PRO:HG2	1.94	0.49
11:D:105:LYS:O	11:D:177:VAL:HG23	2.13	0.49
13:F:1:ALA:HB3	13:F:96:TRP:CB	2.42	0.49
13:F:29:ARG:O	13:F:158:THR:HG23	2.12	0.49
13:F:79:ARG:O	13:F:82:TYR:HB2	2.13	0.49
14:G:17:LYS:CE	14:G:24:THR:HB	2.43	0.49
17:J:60:ASP:OD1	17:J:61:LYS:HD3	2.12	0.49
18:K:47:ILE:HG13	18:K:50:GLY:N	2.27	0.49
21:N:42:LYS:O	21:N:45:ARG:NE	2.40	0.49
22:O:2:ASP:OD2	22:O:4:LYS:HB3	2.12	0.49
23:P:20:ARG:HB3	23:P:21:PRO:HD2	1.94	0.49
28:U:34:ILE:HG23	28:U:61:GLU:CG	2.42	0.49
28:U:43:LYS:HD2	28:U:60:LYS:HZ2	1.78	0.49
34:a:15:G:H8	34:a:1396:A:O2'	1.94	0.49
34:a:89:U:H5''	34:a:90:C:C5	2.44	0.49
34:a:123:U:O2'	34:a:290:C:O2	2.26	0.49
34:a:206:C:H42	34:a:465:A:H61	1.60	0.49
34:a:391:G:H2'	34:a:392:C:O4'	2.12	0.49
34:a:402:G:H2'	34:a:403:C:H6	1.78	0.49
34:a:432:A:C6	34:a:433:G:C4	3.00	0.49
34:a:483:C:O5'	34:a:483:C:H6	1.95	0.49
34:a:499:A:O3'	34:a:500:G:H8	1.95	0.49
34:a:517:G:N7	34:a:531:U:N3	2.61	0.49
34:a:560:A:H5'	34:a:566:G:N2	2.28	0.49
34:a:593:U:O2	34:a:646:G:C2	2.65	0.49
34:a:703:G:O2'	34:a:704:A:O4'	2.30	0.49
34:a:811:C:O2'	34:a:901:A:N1	2.27	0.49
34:a:958:A:C6	34:a:959:A:N1	2.80	0.49
34:a:982:U:H6	34:a:982:U:O5'	1.96	0.49
34:a:1179:A:H2'	34:a:1180:A:C8	2.47	0.49
34:a:1242:G:C6	34:a:1243:C:N4	2.81	0.49
34:a:1352:C:H2'	34:a:1353:G:C8	2.47	0.49
34:a:1366:C:H2'	34:a:1367:C:H6	1.77	0.49
34:a:1394:A:C6	34:a:1501:C:C4'	2.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1446:A:H2'	34:a:1447:A:H5''	1.95	0.49
34:a:1462:C:H2'	34:a:1463:U:H6	1.77	0.49
37:d:18:LEU:HB2	37:d:20:LEU:HG	1.93	0.49
38:e:83:PRO:HD2	41:h:96:ALA:HB2	1.93	0.49
40:g:45:ALA:HB1	40:g:119:LEU:HD22	1.94	0.49
45:l:36:VAL:HG11	45:l:74:GLN:HA	1.95	0.49
57:x:71:TRP:CG	57:x:72:SER:N	2.80	0.49
57:x:118:VAL:HG22	57:x:156:GLN:HB3	1.94	0.49
57:x:226:ALA:HB1	57:x:233:MET:HA	1.95	0.49
57:x:327:PRO:HG2	57:x:328:PHE:HD1	1.78	0.49
57:x:518:VAL:HG13	57:x:579:PHE:O	2.11	0.49
57:x:645:GLU:OE1	57:x:646:SER:N	2.42	0.49
1:0:39:ARG:CZ	8:A:2885:G:N7	2.75	0.49
6:5:81:LEU:H	8:A:1107:G:H4'	1.76	0.49
7:6:9:TYR:CD2	7:6:25:ARG:HD3	2.47	0.49
8:A:19:A:C6	8:A:20:C:C4	3.00	0.49
8:A:24:G:H1'	26:S:77:ASP:HB3	1.94	0.49
8:A:39:G:O2'	12:E:43:THR:HG21	2.12	0.49
8:A:58:G:C2	8:A:59:U:C2	3.01	0.49
8:A:226:A:H2'	8:A:227:A:C8	2.47	0.49
8:A:306:U:HO2'	8:A:1211:C:H5	1.59	0.49
8:A:338:G:C5	8:A:339:U:C5	3.01	0.49
8:A:589:U:H2'	8:A:590:A:H8	1.77	0.49
8:A:682:G:N1	8:A:796:C:C4	2.81	0.49
8:A:764:A:N1	8:A:781:A:C2	2.79	0.49
8:A:884:U:O3'	8:A:885:C:H6	1.96	0.49
8:A:888:C:H3'	8:A:889:C:O2	2.13	0.49
8:A:1069:A:H3'	8:A:1074:G:OP2	2.12	0.49
8:A:1222:U:N3	8:A:1228:G:C6	2.80	0.49
8:A:1277:G:C6	8:A:1294:U:N3	2.80	0.49
8:A:1431:A:H2'	8:A:1432:G:C8	2.47	0.49
8:A:1449:G:H2'	8:A:1450:G:H8	1.77	0.49
8:A:1471:G:C4	8:A:1472:C:C5	2.99	0.49
8:A:1522:A:N3	8:A:1524:G:C6	2.80	0.49
8:A:1555:G:C2	8:A:1556:C:C4	3.00	0.49
8:A:1604:C:C2	8:A:1605:C:C5	3.00	0.49
8:A:1692:U:C2	8:A:1694:C:N3	2.80	0.49
8:A:1731:G:C6	8:A:1733:G:C5	3.00	0.49
8:A:1753:G:N1	8:A:1756:G:C6	2.80	0.49
8:A:1754:A:H4'	23:P:102:ARG:NH2	2.27	0.49
8:A:1897:G:H2'	8:A:1898:U:O4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1952:A:C5	8:A:1953:A:C6	3.01	0.49
8:A:2112:G:O5'	8:A:2119:A:N6	2.45	0.49
8:A:2120:G:H4'	8:A:2169:A:C5	2.47	0.49
8:A:2296:U:OP2	22:O:9:ARG:NH2	2.40	0.49
8:A:2333:A:H4'	8:A:2334:U:H5''	1.93	0.49
8:A:2437:G:C6	8:A:2438:U:C4	3.01	0.49
8:A:2555:U:N3	8:A:2556:C:H1'	2.26	0.49
8:A:2578:G:C5	11:D:145:SER:HB2	2.47	0.49
8:A:2645:G:H4'	8:A:2732:G:O3'	2.13	0.49
8:A:2692:G:C6	8:A:2718:G:C6	3.01	0.49
8:A:2734:A:C6	8:A:2735:G:C4	3.00	0.49
8:A:2747:G:O6	8:A:2755:C:H5'	2.12	0.49
8:A:2821:A:H2'	8:A:2822:G:O4'	2.12	0.49
8:A:2848:G:HO2'	8:A:2849:U:P	2.35	0.49
9:B:7:G:H2'	9:B:8:C:C6	2.47	0.49
9:B:26:C:C2	9:B:27:C:C6	3.00	0.49
9:B:31:C:H4'	13:F:25:MET:HE1	1.94	0.49
9:B:35:C:C4	9:B:36:C:H1'	2.47	0.49
9:B:52:A:O2'	9:B:53:A:P	2.71	0.49
10:C:264:LYS:HG3	10:C:265:PHE:CE1	2.48	0.49
11:D:104:VAL:HG11	11:D:107:VAL:CG1	2.42	0.49
19:L:92:LEU:C	19:L:94:THR:H	2.18	0.49
23:P:77:SER:HB2	23:P:80:VAL:HG23	1.94	0.49
25:R:1:MET:HE3	25:R:101:ILE:HG21	1.94	0.49
26:S:29:VAL:CG1	26:S:69:LEU:HB3	2.43	0.49
29:V:58:SER:C	29:V:73:LYS:HZ3	2.20	0.49
29:V:72:VAL:HG12	29:V:93:ARG:HG2	1.94	0.49
32:Y:39:GLN:HB2	32:Y:42:LEU:HD12	1.93	0.49
34:a:5:U:O4'	34:a:6:G:C5	2.65	0.49
34:a:46:G:H2'	34:a:366:A:N7	2.27	0.49
34:a:72:A:C4	34:a:73:C:C5	3.00	0.49
34:a:81:A:C6	34:a:90:C:N3	2.81	0.49
34:a:123:U:H5''	34:a:311:C:C2'	2.41	0.49
34:a:187:G:C2	34:a:191:G:C6	3.00	0.49
34:a:212:G:H8	34:a:213:G:C4	2.31	0.49
34:a:337:G:H2'	34:a:338:A:H8	1.77	0.49
34:a:449:G:H2'	34:a:450:G:C8	2.48	0.49
34:a:645:G:H2'	34:a:646:G:H8	1.77	0.49
34:a:719:C:O2	51:r:38:ILE:HG13	2.12	0.49
34:a:778:G:H2'	34:a:779:C:H6	1.78	0.49
34:a:781:A:OP1	44:k:124:LYS:NZ	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:789:U:C2'	34:a:791:G:N7	2.74	0.49
34:a:832:G:C2	34:a:833:G:C4	3.01	0.49
34:a:992:U:H3	34:a:1045:C:H1'	1.77	0.49
34:a:1014:A:C2'	34:a:1015:G:O4'	2.60	0.49
34:a:1033:G:C2	34:a:1035:A:N6	2.80	0.49
34:a:1247:U:O2	34:a:1290:G:O6	2.30	0.49
34:a:1255:G:C2'	34:a:1258:G:H21	2.25	0.49
34:a:1323:G:H2'	34:a:1324:A:C8	2.48	0.49
34:a:1376:U:OP1	40:g:24:LYS:HE2	2.13	0.49
36:c:5:HIS:O	36:c:9:ILE:HG22	2.13	0.49
36:c:90:VAL:HA	36:c:93:ILE:HG12	1.94	0.49
36:c:141:MET:HE2	36:c:169:GLU:HB3	1.95	0.49
37:d:58:GLN:HB3	37:d:62:ARG:NE	2.28	0.49
37:d:104:MET:HB2	37:d:106:PHE:HE2	1.77	0.49
38:e:81:GLN:HA	38:e:81:GLN:HE21	1.76	0.49
38:e:85:LYS:HE2	38:e:94:PHE:HD1	1.77	0.49
38:e:122:VAL:O	38:e:122:VAL:HG13	2.12	0.49
39:f:90:MET:HE1	51:r:22:TYR:CE1	2.48	0.49
40:g:93:VAL:O	40:g:96:ASN:OD1	2.30	0.49
40:g:107:ALA:CA	40:g:122:GLU:HG3	2.42	0.49
42:i:26:LYS:NZ	42:i:27:ILE:O	2.45	0.49
43:j:25:ILE:HD11	43:j:87:LEU:HD22	1.93	0.49
44:k:80:ASN:HB3	44:k:105:ARG:HD3	1.93	0.49
46:m:15:VAL:O	46:m:19:THR:HG23	2.13	0.49
49:p:53:ASP:HB3	49:p:56:ARG:HB2	1.95	0.49
50:q:37:ILE:HD12	50:q:38:LYS:H	1.77	0.49
53:t:25:SER:O	53:t:29:THR:OG1	2.30	0.49
54:u:28:LEU:O	54:u:32:ARG:HB2	2.12	0.49
55:v:49:G:N2	55:v:66:C:C2	2.80	0.49
56:w:40:C:O2'	56:w:41:C:H5'	2.12	0.49
57:x:11:ASN:C	57:x:12:ILE:CG2	2.86	0.49
57:x:254:ARG:C	57:x:259:GLU:HG2	2.37	0.49
57:x:416:SER:HA	57:x:458:ALA:HA	1.93	0.49
1:0:41:HIS:CE1	21:N:99:LYS:HD2	2.48	0.49
8:A:6:A:O2'	8:A:7:G:H5'	2.13	0.49
8:A:58:G:N3	8:A:73:A:H2	2.11	0.49
8:A:207:A:H2'	8:A:208:C:O4'	2.12	0.49
8:A:221:A:C8	8:A:266:G:O6	2.66	0.49
8:A:244:A:N6	8:A:254:G:O2'	2.44	0.49
8:A:268:C:N3	8:A:425:G:C2	2.81	0.49
8:A:301:G:C2	8:A:317:G:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:361:G:OP2	8:A:361:G:H8	1.94	0.49
8:A:374:A:H61	8:A:400:G:C2'	2.26	0.49
8:A:395:U:H2'	8:A:396:G:N7	2.27	0.49
8:A:482:A:C4	8:A:506:G:C6	3.00	0.49
8:A:587:C:H5'	12:E:85:PHE:HE2	1.76	0.49
8:A:588:U:O4	8:A:670:A:H1'	2.12	0.49
8:A:608:A:C8	8:A:619:G:N2	2.81	0.49
8:A:630:G:C2	8:A:633:A:OP2	2.64	0.49
8:A:669:G:H3'	8:A:670:A:C8	2.47	0.49
8:A:670:A:H3'	19:L:43:GLY:HA2	1.95	0.49
8:A:764:A:O2'	8:A:765:C:H5'	2.12	0.49
8:A:782:A:O4'	8:A:783:A:C6	2.66	0.49
8:A:932:U:H4'	8:A:933:A:O4'	2.13	0.49
8:A:995:C:OP2	24:Q:53:LYS:HE3	2.13	0.49
8:A:1053:C:H6	8:A:1053:C:O5'	1.95	0.49
8:A:1205:A:C6	12:E:165:HIS:ND1	2.81	0.49
8:A:1238:G:N1	8:A:1239:G:C5	2.80	0.49
8:A:1318:U:H2'	8:A:1319:C:C6	2.47	0.49
8:A:1334:G:H2'	8:A:1335:C:C6	2.47	0.49
8:A:1341:G:H3'	8:A:1397:U:O2	2.12	0.49
8:A:1399:C:C2	8:A:1400:U:C5	3.00	0.49
8:A:1415:U:N3	8:A:1588:G:N1	2.60	0.49
8:A:1428:C:C2'	8:A:1569:A:OP2	2.59	0.49
8:A:1437:C:H2'	8:A:1438:U:O4'	2.12	0.49
8:A:1489:C:N3	8:A:1501:G:C2	2.80	0.49
8:A:1517:G:H2'	8:A:1518:C:H6	1.76	0.49
8:A:1528:A:N6	8:A:1529:G:C2	2.81	0.49
8:A:1628:G:C6	8:A:1639:C:N4	2.80	0.49
8:A:1657:U:C2	8:A:1658:C:C5	3.00	0.49
8:A:1742:U:H2'	8:A:1743:G:C8	2.48	0.49
8:A:2018:G:N1	8:A:2019:A:C5	2.80	0.49
8:A:2046:G:H2'	8:A:2047:C:C6	2.47	0.49
8:A:2078:C:H2'	8:A:2079:U:H6	1.76	0.49
8:A:2083:G:H2'	8:A:2084:C:C6	2.48	0.49
8:A:2172:U:H3'	8:A:2173:A:H5'	1.94	0.49
8:A:2199:A:C8	8:A:2225:A:C6	3.01	0.49
8:A:2305:U:H1'	13:F:132:ARG:HG2	1.94	0.49
8:A:2317:A:C6	8:A:2318:G:C2	3.00	0.49
8:A:2366:A:C6	8:A:2367:G:C4	3.00	0.49
8:A:2406:A:H4'	8:A:2407:A:O5'	2.12	0.49
8:A:2566:A:N1	18:K:28:SER:HB2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2591:C:OP1	10:C:237:ARG:HD2	2.13	0.49
8:A:2711:A:OP2	8:A:2714:G:OP2	2.30	0.49
8:A:2723:C:C4	8:A:2724:U:C4	3.00	0.49
8:A:2857:G:N1	8:A:2860:A:OP2	2.46	0.49
8:A:2859:G:C2	8:A:2860:A:C2	3.01	0.49
9:B:71:C:C2	9:B:106:G:N2	2.81	0.49
9:B:78:A:H2'	9:B:79:G:O4'	2.13	0.49
11:D:125:TRP:CZ3	11:D:160:LYS:HE2	2.47	0.49
17:J:34:ARG:HH12	17:J:40:HIS:HB3	1.77	0.49
18:K:70:ARG:HG3	18:K:76:VAL:HG23	1.94	0.49
21:N:10:LEU:HD22	21:N:40:LYS:HE3	1.94	0.49
21:N:82:GLU:C	21:N:85:PRO:HD2	2.36	0.49
33:Z:43:ILE:HD13	33:Z:46:MET:CE	2.43	0.49
34:a:107:G:H5''	34:a:325:A:N6	2.28	0.49
34:a:142:G:C2	34:a:222:C:C4	3.01	0.49
34:a:150:U:O2	34:a:151:A:C8	2.65	0.49
34:a:185:U:H2'	34:a:186:C:C6	2.48	0.49
34:a:316:C:H6	34:a:351:G:O2'	1.96	0.49
34:a:424:G:C6	34:a:425:G:C6	3.01	0.49
34:a:492:C:O3'	34:a:493:A:C8	2.66	0.49
34:a:748:G:C2	34:a:749:A:C5	3.00	0.49
34:a:810:C:H2'	34:a:811:C:H6	1.77	0.49
34:a:810:C:O2'	34:a:899:C:H5	1.94	0.49
34:a:1028:C:N3	34:a:1034:G:N7	2.60	0.49
34:a:1049:U:H2'	47:n:2:LYS:HE3	1.95	0.49
34:a:1081:A:O5'	38:e:22:LYS:HA	2.12	0.49
34:a:1391:U:O2'	34:a:1532:U:OP1	2.26	0.49
34:a:1518:MA6:N7	34:a:1519:MA6:H93	2.27	0.49
37:d:25:ARG:CZ	37:d:30:LYS:HE2	2.42	0.49
37:d:166:LYS:NZ	37:d:167:PRO:O	2.40	0.49
45:l:31:GLY:CA	45:l:56:LEU:HD23	2.42	0.49
45:l:80:LEU:HB2	45:l:101:LEU:CD2	2.38	0.49
50:q:56:ASP:CG	50:q:80:LYS:HA	2.37	0.49
50:q:62:GLU:OE1	50:q:72:TRP:NE1	2.45	0.49
52:s:10:ILE:HG13	52:s:14:LEU:HD23	1.94	0.49
55:v:25:C:C2	55:v:26:G:C8	3.01	0.49
55:v:52:G:C6	55:v:63:G:C6	3.00	0.49
56:w:51:C:C2	56:w:64:A:C2	3.00	0.49
57:x:1:ALA:HA	57:x:377:ARG:NH1	2.28	0.49
57:x:547:GLU:O	57:x:550:PRO:HD2	2.13	0.49
57:x:685:LYS:NZ	57:x:687:ASP:HB2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5:3:LEU:O	6:5:7:ASP:CB	2.60	0.49
7:6:5:ILE:O	13:F:63:LYS:HB2	2.13	0.49
7:6:49:ARG:NE	7:6:52:ALA:HA	2.26	0.49
8:A:95:A:H2'	8:A:96:C:O4'	2.13	0.49
8:A:191:A:N7	8:A:204:A:C6	2.78	0.49
8:A:192:C:H2'	8:A:193:U:O4'	2.13	0.49
8:A:223:A:C6	8:A:422:A:C5	3.01	0.49
8:A:298:G:C2'	8:A:340:A:H61	2.25	0.49
8:A:329:G:OP1	28:U:68:ASN:ND2	2.38	0.49
8:A:432:A:C6	8:A:433:C:C4	3.00	0.49
8:A:449:A:OP1	12:E:80:SER:N	2.40	0.49
8:A:594:U:C2	8:A:595:C:C5	3.00	0.49
8:A:628:G:C6	8:A:629:G:C5	3.00	0.49
8:A:636:G:H3'	19:L:128:THR:CG2	2.42	0.49
8:A:674:G:H5''	12:E:71:GLY:HA3	1.93	0.49
8:A:1171:G:N1	8:A:1178:C:C4	2.80	0.49
8:A:1176:U:C2'	8:A:1177:G:O4'	2.58	0.49
8:A:1225:G:C6	8:A:1226:A:N6	2.81	0.49
8:A:1230:A:C5	8:A:1231:U:C4	3.01	0.49
8:A:1356:G:N1	8:A:1376:C:N3	2.61	0.49
8:A:1426:G:C2'	8:A:1572:A:N6	2.76	0.49
8:A:1430:G:C2	8:A:1564:C:C2	3.00	0.49
8:A:1436:G:H2'	8:A:1437:C:O4'	2.13	0.49
8:A:1568:G:C5	10:C:27:LYS:NZ	2.80	0.49
8:A:1585:C:H2'	8:A:1586:A:O4'	2.12	0.49
8:A:1665:A:O3'	18:K:66:LYS:HD3	2.13	0.49
8:A:1669:A:C8	18:K:5:GLN:HG3	2.48	0.49
8:A:1840:G:C2	8:A:1841:U:C2	3.00	0.49
8:A:1845:G:C2	8:A:1896:G:C2	3.01	0.49
8:A:1906:G:C5	8:A:1929:G:C2	3.01	0.49
8:A:2061:G:N3	8:A:2063:C:C5	2.81	0.49
8:A:2094:A:C1'	8:A:2198:A:N6	2.76	0.49
8:A:2101:A:H2'	8:A:2102:G:O4'	2.13	0.49
8:A:2107:G:H3'	8:A:2108:A:H8	1.77	0.49
8:A:2140:G:N3	8:A:2141:G:O6	2.45	0.49
8:A:2266:A:C2	8:A:2272:U:C6	3.00	0.49
8:A:2282:G:C4	8:A:2425:A:N6	2.80	0.49
8:A:2580:PSU:N3	8:A:2581:G:N7	2.60	0.49
8:A:2729:G:C4	8:A:2730:C:C5	3.00	0.49
8:A:2792:A:H2'	8:A:2793:C:O4'	2.12	0.49
8:A:2794:C:C2	8:A:2803:G:N2	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2856:A:N1	8:A:2862:G:C6	2.81	0.49
8:A:2896:C:H2'	8:A:2897:U:C6	2.48	0.49
9:B:10:G:C6	9:B:111:U:N3	2.81	0.49
9:B:112:G:H2'	9:B:113:C:H6	1.78	0.49
12:E:28:VAL:O	12:E:32:VAL:HG22	2.12	0.49
12:E:141:MET:HB3	12:E:143:LEU:HD11	1.95	0.49
13:F:49:LEU:CD2	13:F:83:PRO:HB2	2.42	0.49
13:F:121:PHE:CE1	13:F:127:TYR:HB2	2.48	0.49
13:F:145:VAL:HG22	13:F:146:ASP:N	2.28	0.49
14:G:39:ALA:HA	14:G:57:TYR:CD2	2.48	0.49
14:G:126:THR:HG22	14:G:127:GLN:N	2.27	0.49
15:H:62:LEU:O	15:H:66:ASN:CB	2.59	0.49
15:H:72:ILE:HD12	15:H:140:ALA:HA	1.95	0.49
20:M:65:ILE:HG12	20:M:103:TYR:CD2	2.47	0.49
23:P:91:VAL:HG22	23:P:92:ARG:N	2.28	0.49
27:T:59:ASN:O	27:T:84:TYR:HD1	1.96	0.49
29:V:25:LYS:CB	29:V:42:LEU:O	2.60	0.49
30:W:26:SER:HA	30:W:62:LYS:HA	1.95	0.49
34:a:27:G:C6	34:a:557:G:N1	2.81	0.49
34:a:62:U:H3	34:a:105:G:H1	1.61	0.49
34:a:74:A:H3'	34:a:75:G:H8	1.78	0.49
34:a:244:U:C2	34:a:894:G:H1'	2.47	0.49
34:a:254:G:H4'	50:q:16:MET:HE2	1.95	0.49
34:a:432:A:C4	34:a:433:G:C8	3.00	0.49
34:a:470:C:C2	34:a:471:U:O2	2.65	0.49
34:a:487:A:C8	34:a:488:C:C5	3.01	0.49
34:a:675:A:H1'	44:k:117:HIS:CG	2.48	0.49
34:a:687:A:HO2'	34:a:701:U:H5	1.59	0.49
34:a:827:U:C2	34:a:874:G:C2	3.00	0.49
34:a:859:G:H2'	34:a:859:G:N3	2.28	0.49
34:a:864:A:C6	34:a:865:A:C6	3.01	0.49
34:a:874:G:C6	34:a:875:U:C4	3.01	0.49
34:a:1047:G:O3'	47:n:3:GLN:OE1	2.31	0.49
34:a:1061:G:H3'	34:a:1062:U:C6	2.48	0.49
34:a:1065:U:C5	34:a:1190:G:N9	2.81	0.49
34:a:1095:U:C4	34:a:1096:C:C4	3.01	0.49
34:a:1126:U:O2	34:a:1280:A:H2'	2.13	0.49
34:a:1206:G:H2'	34:a:1207:2MG:C8	2.47	0.49
34:a:1254:A:N6	34:a:1284:C:H42	2.10	0.49
34:a:1255:G:C6	34:a:1279:G:C4	3.00	0.49
34:a:1280:A:OP1	43:j:9:ARG:NH1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:b:150:ILE:HG23	35:b:153:MET:SD	2.53	0.49
36:c:110:LEU:HG	36:c:143:LEU:CD2	2.42	0.49
36:c:120:THR:O	36:c:124:GLU:HG2	2.13	0.49
37:d:123:MET:CB	37:d:145:ARG:HB2	2.42	0.49
40:g:70:PRO:HB3	40:g:102:TRP:CH2	2.48	0.49
43:j:6:ILE:HD12	43:j:102:LEU:CG	2.34	0.49
43:j:8:ILE:CD1	43:j:100:ILE:HA	2.42	0.49
46:m:85:TYR:HA	46:m:88:LEU:CD1	2.43	0.49
47:n:62:ASN:O	47:n:73:PHE:CG	2.65	0.49
49:p:79:ASN:O	49:p:81:ALA:N	2.46	0.49
53:t:53:MET:HA	53:t:56:ILE:HB	1.95	0.49
55:v:64:G:C6	55:v:65:C:C4	3.01	0.49
57:x:87:ASP:OD1	57:x:88:THR:N	2.45	0.49
57:x:172:ILE:O	57:x:178:PHE:HA	2.11	0.49
57:x:308:ARG:CZ	57:x:402:PRO:HG3	2.43	0.49
57:x:318:ALA:HA	57:x:338:TYR:H	1.77	0.49
8:A:19:A:N6	8:A:522:A:N6	2.60	0.49
8:A:55:G:O2'	8:A:127:A:N1	2.33	0.49
8:A:230:G:H2'	8:A:231:A:H8	1.77	0.49
8:A:236:C:H2'	8:A:237:C:H6	1.78	0.49
8:A:374:A:N6	8:A:400:G:C2'	2.75	0.49
8:A:556:A:C8	8:A:557:C:C5	3.01	0.49
8:A:592:A:C6	8:A:666:A:C6	3.00	0.49
8:A:628:G:C6	8:A:636:G:N1	2.81	0.49
8:A:675:A:C6	8:A:676:A:C6	3.01	0.49
8:A:690:G:C6	8:A:691:C:C4	3.00	0.49
8:A:693:A:O2'	8:A:1353:A:N3	2.37	0.49
8:A:887:A:C5'	8:A:890:C:N3	2.76	0.49
8:A:892:A:H1'	8:A:893:C:O4'	2.12	0.49
8:A:936:A:H2'	8:A:937:C:H6	1.75	0.49
8:A:954:G:P	20:M:16:ARG:HH12	2.36	0.49
8:A:1309:G:C4	8:A:1310:G:C8	3.00	0.49
8:A:1446:C:H2'	8:A:1447:C:C6	2.48	0.49
8:A:1505:A:H2'	8:A:1506:U:C6	2.47	0.49
8:A:1739:A:C2	8:A:1740:G:H1'	2.47	0.49
8:A:1760:C:OP2	8:A:1761:C:N4	2.43	0.49
8:A:1811:G:H2'	8:A:1812:U:H6	1.78	0.49
8:A:1823:G:C4	8:A:1824:G:C8	3.01	0.49
8:A:1854:A:OP2	8:A:1888:G:N2	2.39	0.49
8:A:1890:A:C5	8:A:1891:G:C8	3.00	0.49
8:A:1943:U:O4'	8:A:1945:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2056:G:C2	8:A:2577:A:N3	2.81	0.49
8:A:2057:G:H2'	8:A:2058:A:O4'	2.12	0.49
8:A:2400:G:N1	8:A:2417:C:C4	2.81	0.49
8:A:2410:G:H3'	8:A:2411:A:H8	1.78	0.49
8:A:2472:G:O6	8:A:2476:A:H4'	2.13	0.49
8:A:2474:U:H2'	8:A:2474:U:O2	2.12	0.49
8:A:2513:A:N6	8:A:2574:G:C6	2.81	0.49
8:A:2516:A:C6	8:A:2569:G:N1	2.81	0.49
8:A:2531:A:C2	8:A:2532:G:C1'	2.96	0.49
8:A:2682:A:N6	8:A:2728:U:H1'	2.28	0.49
8:A:2799:A:N6	8:A:2801:G:C6	2.80	0.49
8:A:2822:G:OP2	11:D:115:GLY:O	2.31	0.49
8:A:2835:A:N6	8:A:2879:A:O4'	2.45	0.49
8:A:2901:C:C4	8:A:2902:C:N4	2.80	0.49
9:B:29:A:P	22:O:31:THR:HG23	2.53	0.49
9:B:66:A:C8	9:B:108:A:N6	2.81	0.49
10:C:142:ASN:HB3	10:C:190:THR:OG1	2.13	0.49
10:C:170:TYR:CE1	10:C:184:GLU:OE1	2.65	0.49
12:E:47:LYS:HA	12:E:51:GLU:OE1	2.12	0.49
13:F:127:TYR:CE2	13:F:129:MET:HB3	2.47	0.49
13:F:161:SER:OG	13:F:164:GLU:HG3	2.13	0.49
15:H:33:GLN:HG2	15:H:35:LYS:HE2	1.95	0.49
17:J:24:THR:HA	17:J:63:ALA:O	2.13	0.49
18:K:35:VAL:HG13	18:K:63:VAL:CA	2.42	0.49
20:M:63:ILE:HA	20:M:104:GLU:O	2.13	0.49
24:Q:79:ILE:O	24:Q:83:LYS:HG2	2.13	0.49
26:S:81:SER:CB	26:S:99:ARG:HA	2.43	0.49
28:U:64:ILE:HG12	28:U:65:GLN:N	2.28	0.49
28:U:80:ASP:OD2	28:U:97:SER:OG	2.30	0.49
31:X:12:VAL:O	31:X:27:ARG:HA	2.12	0.49
31:X:73:ARG:CZ	31:X:75:GLU:OE2	2.61	0.49
34:a:206:C:N3	34:a:465:A:N1	2.61	0.49
34:a:230:G:C6	34:a:231:U:C4	3.01	0.49
34:a:246:A:C5	34:a:279:A:C5	3.01	0.49
34:a:309:A:H2'	34:a:310:G:C8	2.47	0.49
34:a:359:G:C6	34:a:360:G:C5	3.01	0.49
34:a:406:G:C5	34:a:495:A:C8	3.00	0.49
34:a:409:U:C4	34:a:410:G:C5	3.00	0.49
34:a:455:G:C6	34:a:478:A:N6	2.81	0.49
34:a:587:G:C6	34:a:755:G:O6	2.65	0.49
34:a:603:U:C5	34:a:636:U:N3	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:624:C:H2'	34:a:625:U:H6	1.78	0.49
34:a:690:G:H2'	34:a:691:G:O4'	2.13	0.49
34:a:692:U:HO2'	34:a:694:A:H2	1.58	0.49
34:a:693:G:C6	34:a:694:A:C6	3.01	0.49
34:a:727:G:N1	34:a:731:G:C6	2.80	0.49
34:a:766:A:C5	34:a:814:A:C5	3.00	0.49
34:a:842:U:C2'	34:a:846:G:OP1	2.61	0.49
34:a:925:G:C2	34:a:1391:U:O2	2.65	0.49
34:a:938:A:H2'	34:a:939:G:O4'	2.13	0.49
34:a:974:A:P	47:n:69:ARG:HH22	2.35	0.49
34:a:1035:A:H2'	34:a:1036:A:O4'	2.13	0.49
34:a:1072:G:C4	34:a:1104:G:N2	2.80	0.49
34:a:1101:A:C4	35:b:97:GLY:HA3	2.48	0.49
34:a:1220:G:O2'	52:s:53:GLY:HA2	2.13	0.49
34:a:1304:G:N1	34:a:1334:G:O6	2.45	0.49
34:a:1365:G:C5	34:a:1366:C:C5	3.01	0.49
34:a:1387:G:C6	34:a:1388:C:N4	2.80	0.49
34:a:1502:A:C8	34:a:1504:G:C4	3.01	0.49
36:c:121:SER:C	36:c:125:ARG:HH21	2.19	0.49
37:d:141:VAL:HA	37:d:179:GLY:O	2.13	0.49
37:d:141:VAL:HG13	37:d:178:GLU:HB3	1.94	0.49
38:e:80:LEU:HA	38:e:146:MET:HE1	1.94	0.49
42:i:55:ASP:O	42:i:59:LYS:HE2	2.12	0.49
45:l:80:LEU:HB2	45:l:101:LEU:HB2	1.95	0.49
52:s:2:ARG:NE	52:s:6:LYS:HD2	2.28	0.49
55:v:26:G:H22	55:v:44:A:H2	1.59	0.49
56:w:38:A:C4	56:w:39:PSU:C4	3.00	0.49
57:x:193:ASN:HB3	57:x:197:GLN:O	2.13	0.49
57:x:302:LYS:N	57:x:302:LYS:HD2	2.28	0.49
57:x:316:PHE:CA	57:x:340:GLY:HA3	2.42	0.49
57:x:365:MET:SD	57:x:368:ASN:OD1	2.70	0.49
57:x:466:ASP:HA	57:x:469:VAL:HG12	1.95	0.49
1:0:40:HIS:N	8:A:2884:U:O4	2.24	0.49
2:1:5:ARG:HB3	2:1:23:THR:HB	1.95	0.49
2:1:34:GLU:OE2	2:1:47:ILE:HG21	2.13	0.49
3:2:18:PHE:N	3:2:45:SER:OG	2.45	0.49
5:4:20:ASP:HA	8:A:2757:A:OP2	2.13	0.49
7:6:13:THR:HG22	7:6:23:LYS:CD	2.43	0.49
7:6:16:CYS:SG	7:6:35:ASP:C	2.96	0.49
8:A:4:U:H2'	8:A:5:A:C8	2.48	0.49
8:A:27:G:N2	8:A:512:G:O2'	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:53:A:H2'	8:A:54:G:O4'	2.12	0.49
8:A:247:G:C2	8:A:252:G:C6	3.00	0.49
8:A:270:A:C2	8:A:370:G:N3	2.80	0.49
8:A:546:U:H1'	8:A:547:A:H1'	1.94	0.49
8:A:579:G:H5'	8:A:2017:U:H3'	1.95	0.49
8:A:585:G:C2'	8:A:1254:A:H61	2.25	0.49
8:A:607:U:O2	8:A:607:U:H2'	2.12	0.49
8:A:642:U:C6	8:A:644:A:OP2	2.66	0.49
8:A:733:G:C5	8:A:761:A:C5	3.01	0.49
8:A:764:A:OP1	10:C:206:LYS:NZ	2.29	0.49
8:A:935:C:O2'	8:A:936:A:H5'	2.13	0.49
8:A:1024:G:H2'	8:A:1025:G:N7	2.28	0.49
8:A:1057:A:O5'	8:A:1086:A:H8	1.96	0.49
8:A:1059:G:N2	8:A:1080:A:C4	2.80	0.49
8:A:1175:A:N3	8:A:1175:A:H2'	2.28	0.49
8:A:1201:U:C4	8:A:1245:G:N1	2.80	0.49
8:A:1204:A:C4	8:A:1206:G:C6	3.00	0.49
8:A:1205:A:C2	12:E:165:HIS:CE1	3.01	0.49
8:A:1213:A:C2	8:A:1237:A:O4'	2.65	0.49
8:A:1220:G:C6	8:A:1221:C:C4	3.01	0.49
8:A:1366:A:C2	8:A:1367:A:H1'	2.48	0.49
8:A:1378:A:O2'	8:A:1379:U:P	2.68	0.49
8:A:1428:C:C5	8:A:1570:A:OP2	2.66	0.49
8:A:1469:A:H2'	8:A:1470:A:H8	1.77	0.49
8:A:1524:G:H2'	8:A:1525:A:C8	2.47	0.49
8:A:1628:G:C6	8:A:1639:C:N3	2.81	0.49
8:A:1689:A:C8	8:A:1698:A:N6	2.81	0.49
8:A:1736:U:C4	8:A:1737:G:N2	2.81	0.49
8:A:1785:A:N6	8:A:1787:A:C2	2.81	0.49
8:A:1819:A:O4'	8:A:1821:A:C5	2.66	0.49
8:A:1848:A:H2'	8:A:1849:G:C8	2.47	0.49
8:A:1858:A:N6	8:A:1884:G:C2'	2.73	0.49
8:A:1911:PSU:O5'	8:A:1911:PSU:H6	1.95	0.49
8:A:1918:A:N3	8:A:1919:A:N6	2.60	0.49
8:A:2012:G:H8	8:A:2012:G:O5'	1.96	0.49
8:A:2083:G:H2'	8:A:2084:C:H6	1.78	0.49
8:A:2113:U:C5'	8:A:2114:A:H5'	2.43	0.49
8:A:2133:G:N2	8:A:2157:G:C2	2.81	0.49
8:A:2204:G:H4'	10:C:149:LYS:HD3	1.95	0.49
8:A:2340:A:H2'	8:A:2341:G:C8	2.47	0.49
8:A:2466:C:C2	8:A:2467:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2484:G:O2'	20:M:123:LYS:O	2.19	0.49
8:A:2544:G:C2	8:A:2545:G:C4	3.00	0.49
8:A:2580:PSU:C4	8:A:2581:G:N7	2.81	0.49
8:A:2639:A:H1'	8:A:2778:A:C2	2.48	0.49
8:A:2643:G:H2'	8:A:2644:G:C8	2.48	0.49
8:A:2735:G:C2	8:A:2736:A:C8	3.01	0.49
9:B:15:A:C1'	9:B:109:A:C8	2.95	0.49
9:B:81:G:H2'	9:B:82:U:C6	2.48	0.49
10:C:239:PHE:O	10:C:241:LYS:CG	2.60	0.49
13:F:33:ILE:HG12	13:F:155:ILE:HG12	1.95	0.49
14:G:4:ALA:HB2	14:G:65:GLY:N	2.28	0.49
14:G:97:VAL:HG12	14:G:124:CYS:SG	2.52	0.49
14:G:136:ASP:O	14:G:140:ILE:HG22	2.13	0.49
17:J:34:ARG:CG	17:J:39:LYS:HB2	2.42	0.49
18:K:20:MET:O	18:K:41:ILE:HA	2.13	0.49
18:K:22:ILE:HD11	18:K:40:LYS:HG2	1.94	0.49
20:M:42:THR:C	20:M:46:ILE:HD12	2.37	0.49
20:M:73:ILE:N	20:M:91:TYR:O	2.45	0.49
21:N:2:ARG:HA	21:N:5:LYS:CD	2.42	0.49
21:N:37:THR:HG1	21:N:40:LYS:HG3	1.78	0.49
25:R:4:VAL:HB	25:R:39:LEU:HB2	1.95	0.49
29:V:1:MET:HE1	29:V:62:THR:HG21	1.95	0.49
29:V:69:GLU:HB3	29:V:71:LYS:HZ1	1.78	0.49
30:W:20:LYS:O	30:W:21:ARG:HD3	2.13	0.49
31:X:11:PRO:HB2	31:X:27:ARG:NH1	2.27	0.49
34:a:50:A:N3	34:a:52:C:C2	2.80	0.49
34:a:162:A:C8	34:a:346:G:O6	2.65	0.49
34:a:404:G:C6	34:a:405:U:C4	3.00	0.49
34:a:404:G:C5	34:a:405:U:C5	3.01	0.49
34:a:474:G:H2'	34:a:475:C:H6	1.76	0.49
34:a:546:A:O5'	37:d:67:LEU:HD13	2.12	0.49
34:a:568:G:C6	34:a:883:C:N4	2.81	0.49
34:a:683:G:H2'	34:a:684:U:H6	1.78	0.49
34:a:707:U:H2'	34:a:708:C:C5	2.48	0.49
34:a:837:U:C2	34:a:850:U:O2	2.66	0.49
34:a:920:U:H3'	34:a:1082:A:O5'	2.12	0.49
34:a:940:C:C2	34:a:941:G:C8	3.00	0.49
34:a:948:C:OP1	46:m:106:ARG:N	2.46	0.49
34:a:1004:A:C6	34:a:1005:A:C2	3.00	0.49
34:a:1036:A:C6	34:a:1037:C:C2	3.01	0.49
34:a:1044:A:C5	34:a:1045:C:H1'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1049:U:C6	34:a:1201:A:O4'	2.65	0.49
34:a:1056:U:C2	34:a:1205:U:O2	2.66	0.49
34:a:1084:G:C4	34:a:1085:U:C5	3.01	0.49
34:a:1090:U:O2	34:a:1096:C:N3	2.46	0.49
34:a:1135:U:H2'	34:a:1136:C:H3'	1.94	0.49
34:a:1195:C:C2	34:a:1197:A:C8	3.01	0.49
34:a:1237:C:H3'	34:a:1336:C:H41	1.77	0.49
34:a:1242:G:C6	34:a:1243:C:C4	3.00	0.49
34:a:1242:G:C6	34:a:1296:C:N3	2.81	0.49
34:a:1247:U:C2	34:a:1290:G:O6	2.65	0.49
34:a:1261:A:C6	34:a:1275:A:C8	3.00	0.49
34:a:1300:G:N3	34:a:1334:G:C6	2.80	0.49
34:a:1317:C:C2	47:n:53:ARG:CZ	2.96	0.49
35:b:14:HIS:HA	35:b:202:ASN:HB2	1.93	0.49
36:c:11:LEU:HD13	36:c:17:TRP:CE2	2.48	0.49
37:d:56:GLU:O	37:d:60:VAL:HG23	2.13	0.49
37:d:78:ALA:H	37:d:81:LEU:HG	1.77	0.49
38:e:81:GLN:CG	38:e:146:MET:SD	3.01	0.49
39:f:16:GLU:O	39:f:19:PRO:HD2	2.13	0.49
41:h:50:VAL:O	41:h:50:VAL:HG12	2.12	0.49
42:i:93:LEU:O	42:i:97:LEU:HG	2.13	0.49
48:o:1:SER:O	48:o:1:SER:OG	2.27	0.49
50:q:74:LEU:HD23	50:q:75:VAL:C	2.38	0.49
51:r:57:ALA:HA	51:r:60:ARG:HE	1.77	0.49
55:v:26:G:H2'	55:v:27:U:H6	1.77	0.49
1:0:32:THR:HG22	1:0:33:SER:N	2.28	0.49
4:3:32:LEU:HA	4:3:35:LYS:HD2	1.95	0.49
7:6:16:CYS:SG	7:6:18:CYS:N	2.63	0.49
8:A:15:G:C2	8:A:16:C:C2	3.01	0.49
8:A:36:G:O2'	8:A:450:G:H2'	2.12	0.49
8:A:45:G:H5'	8:A:46:G:OP1	2.12	0.49
8:A:79:C:C2	8:A:80:G:C8	3.01	0.49
8:A:102:U:C5	32:Y:4:LYS:HD2	2.48	0.49
8:A:195:A:H5''	8:A:196:A:H4'	1.95	0.49
8:A:402:A:H2'	8:A:403:U:O4'	2.13	0.49
8:A:476:G:C5	8:A:478:A:OP2	2.66	0.49
8:A:488:G:H2'	8:A:491:G:N7	2.27	0.49
8:A:620:G:H21	8:A:620:G:P	2.36	0.49
8:A:629:G:H2'	8:A:630:G:O4'	2.12	0.49
8:A:656:G:C2	8:A:657:U:C2	3.00	0.49
8:A:805:G:H5'	8:A:806:C:H5	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:870:U:H5'	20:M:6:ARG:HD3	1.95	0.49
8:A:887:A:OP2	8:A:891:G:C2	2.65	0.49
8:A:919:U:C2	8:A:920:A:C8	3.01	0.49
8:A:955:PSU:O4	8:A:962:G:N2	2.36	0.49
8:A:987:C:C4	8:A:988:A:C5	3.01	0.49
8:A:1062:G:C1'	8:A:1088:A:N7	2.76	0.49
8:A:1077:A:N6	8:A:1089:A:OP1	2.46	0.49
8:A:1176:U:C4	8:A:1177:G:N7	2.81	0.49
8:A:1178:C:H1'	8:A:1179:G:C5	2.47	0.49
8:A:1424:G:H2'	8:A:1425:G:O4'	2.13	0.49
8:A:1446:C:N3	8:A:1466:U:O2	2.46	0.49
8:A:1488:C:C2	8:A:1502:A:C2	3.01	0.49
8:A:1604:C:H2'	8:A:1605:C:H6	1.78	0.49
8:A:1613:G:C6	8:A:1617:C:C5	3.01	0.49
8:A:1689:A:H2'	8:A:1690:A:C8	2.48	0.49
8:A:1722:A:N6	8:A:1738:G:H1'	2.28	0.49
8:A:1784:A:OP2	8:A:1784:A:C8	2.66	0.49
8:A:1807:G:C5	8:A:1809:A:OP2	2.66	0.49
8:A:1844:C:C2	8:A:1897:G:N2	2.80	0.49
8:A:1857:G:N2	8:A:1885:A:C8	2.79	0.49
8:A:1857:G:H22	8:A:1884:G:H2'	1.74	0.49
8:A:1865:U:O2	8:A:1877:A:N6	2.46	0.49
8:A:2069:G7M:C2	8:A:2070:A:C4	2.96	0.49
8:A:2077:A:C5	8:A:2435:A:C5	3.01	0.49
8:A:2077:A:C6	8:A:2078:C:N4	2.81	0.49
8:A:2116:G:C2	8:A:2117:A:N7	2.81	0.49
8:A:2204:G:C5	8:A:2221:G:C2	3.01	0.49
8:A:2405:G:C2'	8:A:2411:A:N6	2.76	0.49
8:A:2545:G:N2	8:A:2546:U:O2	2.46	0.49
8:A:2564:A:H2'	8:A:2565:A:O4'	2.13	0.49
8:A:2681:C:N4	8:A:2727:A:C6	2.81	0.49
8:A:2711:A:N6	8:A:2714:G:C5	2.81	0.49
8:A:2791:G:C2	8:A:2792:A:C4	3.01	0.49
8:A:2816:G:C2	8:A:2831:G:C2	3.01	0.49
9:B:47:C:P	22:O:3:LYS:CE	3.01	0.49
9:B:90:C:C2	9:B:91:C:C6	3.01	0.49
10:C:80:LEU:HD13	10:C:90:ILE:O	2.13	0.49
11:D:107:VAL:HB	11:D:204:LYS:O	2.13	0.49
13:F:35:LEU:O	13:F:87:LYS:HB2	2.13	0.49
15:H:83:LYS:HB3	15:H:91:PHE:HB2	1.95	0.49
26:S:65:ASP:HB3	26:S:109:ASP:OD2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:46:G:C6	34:a:366:A:C2	3.00	0.49
34:a:109:A:N1	34:a:326:G:N1	2.61	0.49
34:a:236:A:H2'	34:a:237:G:H8	1.78	0.49
34:a:273:U:C4	34:a:274:A:N6	2.81	0.49
34:a:369:G:C6	34:a:393:A:C6	3.01	0.49
34:a:373:A:C2	34:a:374:A:N3	2.81	0.49
34:a:428:G:O4'	34:a:430:A:C8	2.65	0.49
34:a:855:U:H2'	34:a:856:C:H6	1.78	0.49
34:a:877:G:H2'	34:a:878:A:H8	1.78	0.49
34:a:921:U:C1'	34:a:1082:A:OP2	2.61	0.49
34:a:923:A:OP1	38:e:25:LYS:HB3	2.13	0.49
34:a:925:G:C6	34:a:1392:G:N1	2.81	0.49
34:a:1059:C:P	36:c:198:LYS:NZ	2.86	0.49
34:a:1079:G:C6	34:a:1080:A:N6	2.81	0.49
34:a:1128:C:N3	34:a:1145:A:C2	2.81	0.49
34:a:1212:U:O5'	34:a:1212:U:H6	1.96	0.49
34:a:1221:G:H5''	34:a:1321:U:O2	2.12	0.49
34:a:1287:A:N6	34:a:1371:G:C4'	2.76	0.49
34:a:1401:G:P	34:a:1402:4OC:H5	2.53	0.49
34:a:1404:C:C2'	34:a:1519:MA6:O2'	2.60	0.49
34:a:1417:G:N2	34:a:1484:C:N4	2.61	0.49
34:a:1422:G:C2	34:a:1478:U:O2	2.66	0.49
34:a:1458:G:H2'	34:a:1459:G:O4'	2.13	0.49
35:b:39:ILE:HG23	35:b:39:ILE:O	2.13	0.49
37:d:9:LYS:O	37:d:12:ARG:HG2	2.13	0.49
38:e:39:GLY:HA2	38:e:44:ARG:O	2.13	0.49
39:f:18:VAL:O	39:f:22:ILE:HG13	2.13	0.49
46:m:90:HIS:CD2	46:m:96:VAL:HG11	2.48	0.49
49:p:39:PHE:HB2	49:p:50:THR:HG23	1.94	0.49
56:w:39:PSU:H2'	56:w:40:C:C6	2.48	0.49
56:w:66:U:H2'	56:w:67:C:C6	2.48	0.49
57:x:173:GLY:HA3	57:x:177:HIS:O	2.13	0.49
57:x:256:LEU:CD2	57:x:284:TYR:O	2.60	0.49
57:x:395:THR:CG2	57:x:405:LEU:H	2.25	0.49
57:x:459:GLY:H	57:x:465:LEU:HD23	1.78	0.49
57:x:561:LYS:N	57:x:561:LYS:HD2	2.28	0.49
8:A:66:C:C4	8:A:67:U:C5	3.00	0.48
8:A:108:G:H2'	8:A:109:C:H6	1.77	0.48
8:A:120:U:C2	8:A:149:A:C5	3.01	0.48
8:A:185:G:N1	8:A:212:G:C6	2.81	0.48
8:A:289:G:N1	8:A:352:A:C6	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:298:G:C2	8:A:339:U:C5	3.01	0.48
8:A:383:C:N4	8:A:385:C:H2'	2.28	0.48
8:A:396:G:C6	8:A:397:U:C4	3.01	0.48
8:A:415:A:H2'	8:A:416:U:C6	2.48	0.48
8:A:635:C:C2	8:A:636:G:C8	3.00	0.48
8:A:659:G:C4	8:A:660:C:C5	3.01	0.48
8:A:733:G:C8	8:A:761:A:N6	2.80	0.48
8:A:823:C:H2'	8:A:824:U:H6	1.76	0.48
8:A:824:U:H2'	8:A:825:A:C8	2.48	0.48
8:A:857:G:H5''	30:W:65:PHE:CD2	2.49	0.48
8:A:924:G:H2'	8:A:925:A:C8	2.47	0.48
8:A:950:G:C6	8:A:951:C:C4	3.01	0.48
8:A:991:C:C5	8:A:1185:G:C6	3.01	0.48
8:A:1061:U:H4'	8:A:1070:A:H1'	1.95	0.48
8:A:1065:U:O4	8:A:1074:G:H2'	2.12	0.48
8:A:1227:G:C6	8:A:1228:G:C5	3.01	0.48
8:A:1317:G:N1	8:A:1336:A:C5	2.81	0.48
8:A:1340:U:C6	8:A:1603:A:C8	3.01	0.48
8:A:1422:G:C6	8:A:1577:C:N3	2.80	0.48
8:A:1470:A:C4	8:A:1471:G:C8	3.01	0.48
8:A:1477:A:H61	8:A:1514:G:C2'	2.25	0.48
8:A:1488:C:H2'	8:A:1489:C:C6	2.48	0.48
8:A:1498:C:N3	8:A:1499:C:C5	2.81	0.48
8:A:1503:A:H2'	8:A:1504:A:C8	2.48	0.48
8:A:1521:G:C8	8:A:1522:A:O2'	2.66	0.48
8:A:1600:C:N3	8:A:1601:G:N7	2.61	0.48
8:A:1668:A:C2'	8:A:1674:G:N7	2.75	0.48
8:A:1707:G:C8	8:A:1756:G:C4	3.01	0.48
8:A:1803:A:H61	8:A:1814:G:H1'	1.78	0.48
8:A:1853:A:N1	8:A:2087:G:H1'	2.27	0.48
8:A:1941:C:H2'	8:A:1942:C:C6	2.48	0.48
8:A:2062:A:N6	8:A:2503:2MA:N7	2.60	0.48
8:A:2073:C:C4	8:A:2437:G:N1	2.81	0.48
8:A:2093:G:H1'	8:A:2198:A:H2	1.78	0.48
8:A:2100:G:H3'	8:A:2101:A:C8	2.47	0.48
8:A:2104:C:H5	8:A:2105:U:H1'	1.77	0.48
8:A:2114:A:HO2'	8:A:2166:U:H3	1.56	0.48
8:A:2139:U:C4	8:A:2152:G:O6	2.66	0.48
8:A:2173:A:OP1	8:A:2174:C:H5	1.96	0.48
8:A:2487:G:C2	8:A:2488:G:C8	3.00	0.48
9:B:2:G:H2'	9:B:3:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:C:167:ASP:HB2	10:C:182:LYS:NZ	2.28	0.48
11:D:168:GLU:CG	11:D:169:ARG:N	2.75	0.48
14:G:87:GLN:HG3	14:G:164:ALA:HA	1.95	0.48
15:H:7:ASP:HA	15:H:15:LEU:HD12	1.94	0.48
23:P:1:SER:OG	23:P:2:ASN:N	2.46	0.48
28:U:95:PHE:O	28:U:98:ASN:O	2.31	0.48
29:V:21:ARG:HD3	29:V:87:GLN:HA	1.95	0.48
30:W:19:VAL:HB	30:W:22:PHE:CZ	2.48	0.48
34:a:30:U:H3	34:a:553:A:H62	1.61	0.48
34:a:73:C:C4	34:a:74:A:N7	2.81	0.48
34:a:129:A:H2	34:a:232:G:N2	2.11	0.48
34:a:151:A:N6	34:a:170:U:O2	2.42	0.48
34:a:246:A:C8	34:a:279:A:C6	3.01	0.48
34:a:299:G:N1	34:a:300:A:C2	2.81	0.48
34:a:383:A:OP2	34:a:384:G:N7	2.46	0.48
34:a:442:G:H2'	34:a:443:C:C4'	2.43	0.48
34:a:520:A:C2	34:a:533:A:N6	2.81	0.48
34:a:592:G:C5	34:a:593:U:C5	3.01	0.48
34:a:661:G:HO2'	34:a:662:U:P	2.35	0.48
34:a:807:A:C6	34:a:808:C:C4	3.01	0.48
34:a:853:C:H2'	34:a:854:U:H6	1.77	0.48
34:a:857:C:H3'	34:a:858:G:H8	1.78	0.48
34:a:870:U:C5	34:a:872:A:N6	2.81	0.48
34:a:942:G:H2'	34:a:942:G:N3	2.28	0.48
34:a:945:G:H1'	34:a:1337:G:H1'	1.95	0.48
34:a:1103:C:H2'	34:a:1104:G:O4'	2.13	0.48
34:a:1111:A:H61	36:c:175:HIS:C	2.21	0.48
34:a:1172:C:H2'	34:a:1173:U:C6	2.48	0.48
34:a:1332:A:H2'	34:a:1333:A:O4'	2.13	0.48
34:a:1508:A:H2'	34:a:1509:C:H6	1.78	0.48
34:a:1518:MA6:H2'	34:a:1519:MA6:N9	2.28	0.48
35:b:168:GLU:N	35:b:168:GLU:OE1	2.46	0.48
36:c:38:VAL:HG23	36:c:93:ILE:HD11	1.95	0.48
37:d:18:LEU:HB2	37:d:20:LEU:CD2	2.42	0.48
38:e:33:THR:HA	38:e:51:LYS:HA	1.94	0.48
38:e:55:VAL:HB	38:e:56:PRO:HD3	1.95	0.48
38:e:103:GLY:C	38:e:121:ASN:HA	2.38	0.48
38:e:158:LYS:HG3	38:e:159:SER:N	2.28	0.48
38:e:165:GLY:HA2	41:h:113:ARG:NH2	2.28	0.48
39:f:9:MET:O	39:f:85:ILE:N	2.45	0.48
39:f:11:HIS:CG	39:f:12:PRO:HD2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:f:67:PRO:HB2	39:f:69:GLU:CD	2.39	0.48
42:i:44:ARG:HG3	42:i:48:ARG:HH22	1.78	0.48
42:i:70:GLY:O	42:i:74:GLN:HB2	2.12	0.48
42:i:112:ARG:NH1	42:i:114:LYS:HG3	2.27	0.48
45:l:82:ARG:HD3	45:l:97:VAL:HG12	1.94	0.48
46:m:111:PRO:O	46:m:113:LYS:NZ	2.41	0.48
47:n:19:TYR:CD2	47:n:51:LEU:HD11	2.48	0.48
50:q:24:ILE:HD11	50:q:41:THR:HB	1.95	0.48
51:r:38:ILE:CG1	51:r:58:ILE:HG21	2.43	0.48
52:s:12:LEU:O	52:s:16:LYS:HG2	2.13	0.48
57:x:1:ALA:C	57:x:377:ARG:NH1	2.71	0.48
57:x:100:ARG:HB3	57:x:407:ARG:NH2	2.26	0.48
57:x:171:ALA:HA	57:x:265:CYS:SG	2.53	0.48
57:x:225:ALA:CA	57:x:251:LEU:HD21	2.43	0.48
57:x:317:SER:N	57:x:339:SER:O	2.35	0.48
57:x:421:PRO:HD2	57:x:427:GLN:OE1	2.13	0.48
57:x:434:LEU:HD21	57:x:457:ILE:HG22	1.95	0.48
57:x:473:LYS:HA	57:x:478:VAL:O	2.13	0.48
57:x:525:GLU:O	57:x:527:GLY:N	2.46	0.48
1:0:5:ASN:CB	8:A:2022:U:O4	2.61	0.48
3:2:4:THR:CG2	8:A:789:A:H5'	2.44	0.48
3:2:18:PHE:HB3	8:A:126:A:P	2.53	0.48
4:3:26:ALA:HB2	19:L:61:LEU:HA	1.94	0.48
8:A:1:G:C4	8:A:2903:U:O2	2.66	0.48
8:A:9:G:H2'	8:A:2629:U:O4	2.12	0.48
8:A:24:G:C6	8:A:25:U:C4	3.01	0.48
8:A:46:G:OP2	8:A:215:G:OP2	2.30	0.48
8:A:135:U:H2'	8:A:136:G:O4'	2.13	0.48
8:A:160:A:C5	8:A:167:A:C2	3.01	0.48
8:A:402:A:C2	8:A:407:G:H4'	2.48	0.48
8:A:424:G:C6	8:A:425:G:C5	3.01	0.48
8:A:425:G:C2	8:A:426:C:C6	3.01	0.48
8:A:475:C:C4	8:A:476:G:C5	3.02	0.48
8:A:531:C:H5''	8:A:532:A:C5	2.48	0.48
8:A:598:U:H2'	8:A:599:A:H8	1.78	0.48
8:A:729:G:N7	10:C:206:LYS:HD2	2.27	0.48
8:A:811:U:O2	8:A:1250:G:H3'	2.13	0.48
8:A:812:C:C4	8:A:1250:G:C6	3.01	0.48
8:A:839:U:C2	8:A:840:C:C5	3.01	0.48
8:A:879:G:C4	8:A:880:G:C8	3.01	0.48
8:A:999:U:C2	8:A:1000:A:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1144:A:C6	8:A:1145:C:C4	3.01	0.48
8:A:1163:G:C5'	25:R:24:LYS:HE2	2.42	0.48
8:A:1216:G:H2'	8:A:1217:U:O4'	2.12	0.48
8:A:1218:G:C2	8:A:1232:G:C8	3.01	0.48
8:A:1266:G:O2'	8:A:2012:G:C6	2.53	0.48
8:A:1342:A:N6	8:A:1601:G:N2	2.61	0.48
8:A:1436:G:O2'	8:A:1515:A:N1	2.44	0.48
8:A:1439:A:H3'	8:A:1440:U:C6	2.48	0.48
8:A:1454:C:O4'	21:N:60:VAL:HG13	2.12	0.48
8:A:1708:C:H2'	8:A:1709:U:H6	1.78	0.48
8:A:1733:G:H2'	8:A:1734:G:H8	1.78	0.48
8:A:1825:U:H2'	8:A:1826:G:C8	2.48	0.48
8:A:1999:C:C2	8:A:2000:C:C6	3.01	0.48
8:A:2026:U:O5'	8:A:2026:U:H6	1.95	0.48
8:A:2027:G:C5	8:A:2028:U:C4	3.01	0.48
8:A:2033:A:C5	8:A:2036:C:C4	3.01	0.48
8:A:2039:U:H2'	8:A:2040:G:C8	2.47	0.48
8:A:2048:G:C6	8:A:2049:G:N7	2.81	0.48
8:A:2052:A:H8	11:D:146:ILE:HD11	1.79	0.48
8:A:2080:A:C6	8:A:2081:U:C4	3.01	0.48
8:A:2120:G:H4'	8:A:2169:A:N7	2.28	0.48
8:A:2122:U:C2	8:A:2176:A:N6	2.79	0.48
8:A:2183:A:O2'	8:A:2184:A:H5'	2.14	0.48
8:A:2247:A:C4	8:A:2248:C:C5	3.00	0.48
8:A:2308:G:O6	8:A:2311:A:C5	2.66	0.48
8:A:2367:G:C2	8:A:2368:C:C5	3.01	0.48
8:A:2435:A:C5	8:A:2436:G:C8	3.01	0.48
8:A:2512:C:H4'	11:D:127:PHE:CE2	2.48	0.48
8:A:2572:A:C2'	11:D:149:ASN:ND2	2.76	0.48
8:A:2641:G:H2'	8:A:2642:G:O4'	2.13	0.48
8:A:2670:A:H2'	8:A:2671:G:C8	2.48	0.48
8:A:2673:G:N3	8:A:2674:G:C8	2.81	0.48
8:A:2698:U:H2'	8:A:2699:C:C5	2.49	0.48
8:A:2701:U:O2'	21:N:67:PHE:CZ	2.65	0.48
8:A:2714:G:C4	8:A:2715:C:C5	3.00	0.48
8:A:2759:G:C6	8:A:2760:C:C4	3.01	0.48
9:B:4:C:H2'	9:B:5:U:H6	1.79	0.48
9:B:44:G:H5''	9:B:45:A:C8	2.48	0.48
9:B:97:C:H2'	9:B:98:G:O4'	2.13	0.48
11:D:11:MET:CE	11:D:23:PRO:HB2	2.43	0.48
12:E:118:LEU:HD12	12:E:119:ILE:H	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:6:LEU:C	15:H:15:LEU:HG	2.37	0.48
18:K:24:VAL:HG21	18:K:31:ARG:O	2.13	0.48
18:K:35:VAL:C	18:K:37:ASP:H	2.20	0.48
20:M:47:GLU:CD	20:M:50:ARG:HE	2.20	0.48
29:V:25:LYS:HB3	29:V:42:LEU:O	2.12	0.48
30:W:64:LYS:O	30:W:76:ILE:HA	2.12	0.48
34:a:8:A:C4	37:d:205:LYS:HD3	2.47	0.48
34:a:75:G:C6	34:a:76:G:C5	3.01	0.48
34:a:103:U:P	53:t:8:LYS:HZ2	2.35	0.48
34:a:166:U:C4	34:a:167:A:N7	2.81	0.48
34:a:419:C:H2'	34:a:420:U:O4'	2.13	0.48
34:a:425:G:C5	34:a:426:U:C4	3.00	0.48
34:a:426:U:H2'	34:a:427:U:C6	2.48	0.48
34:a:516:PSU:C2	34:a:517:G:N1	2.81	0.48
34:a:585:G:H2'	34:a:586:C:C6	2.48	0.48
34:a:923:A:C6	34:a:924:C:C4	3.01	0.48
34:a:983:A:H5'	34:a:984:C:OP2	2.13	0.48
34:a:1016:A:O4'	34:a:1218:C:H4'	2.13	0.48
34:a:1024:G:H2'	34:a:1024:G:N3	2.28	0.48
34:a:1065:U:C5	34:a:1190:G:C4	3.01	0.48
34:a:1114:C:H1'	47:n:100:SER:HG	1.79	0.48
34:a:1219:A:H2'	34:a:1220:G:H8	1.78	0.48
34:a:1256:A:H62	34:a:1277:C:H2'	1.79	0.48
34:a:1259:C:H3'	34:a:1260:G:H5''	1.94	0.48
34:a:1300:G:H1'	34:a:1334:G:O6	2.12	0.48
34:a:1347:G:H1'	34:a:1348:U:C5	2.49	0.48
34:a:1526:G:OP2	54:u:39:LYS:CE	2.61	0.48
36:c:11:LEU:HB3	36:c:17:TRP:CH2	2.48	0.48
37:d:9:LYS:HG2	37:d:37:PRO:HG3	1.95	0.48
37:d:58:GLN:HB3	37:d:62:ARG:NH2	2.27	0.48
37:d:185:PRO:HB2	37:d:190:LEU:HD21	1.94	0.48
38:e:56:PRO:HA	38:e:59:ILE:CG1	2.43	0.48
39:f:11:HIS:C	39:f:13:ASP:H	2.21	0.48
40:g:14:ASP:N	40:g:23:ALA:HB2	2.28	0.48
40:g:60:ALA:HA	40:g:63:VAL:HG22	1.93	0.48
42:i:111:GLU:HB3	42:i:114:LYS:NZ	2.28	0.48
45:l:82:ARG:NH1	45:l:83:GLY:O	2.47	0.48
45:l:87:LYS:O	45:l:87:LYS:HG3	2.12	0.48
46:m:14:ALA:O	46:m:18:LEU:HB2	2.13	0.48
46:m:15:VAL:O	46:m:29:SER:OG	2.15	0.48
49:p:7:ALA:O	49:p:29:ASN:OD1	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:98:VAL:HG11	57:x:128:GLN:HG3	1.95	0.48
57:x:190:ILE:HD11	57:x:201:PHE:CA	2.40	0.48
57:x:345:GLY:CA	57:x:359:PHE:O	2.60	0.48
57:x:465:LEU:C	57:x:465:LEU:HD12	2.38	0.48
57:x:522:TYR:CZ	57:x:574:GLY:HA3	2.47	0.48
1:0:49:ARG:CZ	8:A:2884:U:O4'	2.59	0.48
3:2:28:ARG:CA	3:2:31:LEU:HD12	2.43	0.48
6:5:30:SER:O	8:A:1054:A:C1'	2.61	0.48
7:6:41:HIS:HB3	7:6:44:PHE:HD1	1.78	0.48
8:A:30:G:C6	8:A:31:C:N4	2.81	0.48
8:A:122:G:H2'	8:A:123:G:C8	2.48	0.48
8:A:174:U:H2'	8:A:175:G:C8	2.47	0.48
8:A:205:G:O6	31:X:25:LYS:NZ	2.47	0.48
8:A:242:G:HO2'	8:A:243:U:P	2.33	0.48
8:A:269:C:N4	8:A:424:G:C6	2.82	0.48
8:A:271:G:C2	8:A:272:A:C5	3.01	0.48
8:A:307:G:H1	28:U:18:LYS:HZ3	1.61	0.48
8:A:310:A:C6	8:A:312:G:C2	3.00	0.48
8:A:499:U:H5''	28:U:42:LYS:HE2	1.95	0.48
8:A:503:A:H4'	8:A:505:A:H5''	1.96	0.48
8:A:524:G:C6	8:A:525:U:C4	3.01	0.48
8:A:561:G:N3	24:Q:44:TYR:OH	2.37	0.48
8:A:704:G:H22	8:A:726:G:C1'	2.25	0.48
8:A:709:U:H2'	8:A:710:U:H6	1.79	0.48
8:A:729:G:C4	8:A:1775:U:O2	2.66	0.48
8:A:818:G:C5	8:A:1187:G:C2	3.02	0.48
8:A:832:U:H2'	8:A:833:A:H8	1.79	0.48
8:A:957:C:C4	8:A:959:A:C5	3.01	0.48
8:A:995:C:H5''	24:Q:53:LYS:HG2	1.95	0.48
8:A:1024:G:OP2	8:A:1025:G:O2'	2.23	0.48
8:A:1026:G:OP2	8:A:1134:A:O2'	2.18	0.48
8:A:1125:G:N1	8:A:1126:A:N6	2.61	0.48
8:A:1204:A:N6	8:A:1241:A:C8	2.77	0.48
8:A:1241:A:C4	8:A:1242:U:C6	3.02	0.48
8:A:1361:G:H2'	8:A:1362:C:H6	1.74	0.48
8:A:1404:C:O2'	8:A:1405:U:H5'	2.13	0.48
8:A:1412:U:C2	8:A:1591:A:C2	3.02	0.48
8:A:1429:G:C4	8:A:1430:G:C8	3.01	0.48
8:A:1650:A:C4	8:A:1651:G:C8	3.01	0.48
8:A:1760:C:OP1	8:A:2712:C:N4	2.43	0.48
8:A:1892:C:C4	8:A:1893:C:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2020:A:C5	8:A:2022:U:C4	3.01	0.48
8:A:2054:A:C2	8:A:2616:C:N3	2.81	0.48
8:A:2116:G:C2	8:A:2165:C:O2	2.67	0.48
8:A:2151:U:O4	8:A:2153:C:N4	2.39	0.48
8:A:2170:A:C8	8:A:2171:A:N6	2.81	0.48
8:A:2231:U:OP1	31:X:29:LEU:HD12	2.12	0.48
8:A:2244:U:H2'	8:A:2245:U:O4'	2.14	0.48
8:A:2293:G:O6	8:A:2340:A:N6	2.46	0.48
8:A:2357:G:C2	8:A:2361:G:C4	3.02	0.48
8:A:2520:C:C6	8:A:2567:G:H1'	2.48	0.48
8:A:2566:A:N1	18:K:28:SER:CB	2.77	0.48
8:A:2599:G:C2	8:A:2600:A:C8	3.01	0.48
8:A:2599:G:N1	8:A:2600:A:C5	2.81	0.48
8:A:2603:G:C4	8:A:2604:PSU:C6	3.00	0.48
8:A:2842:G:C6	8:A:2876:G:C6	3.01	0.48
8:A:2852:G:C6	8:A:2866:U:O4	2.66	0.48
9:B:40:U:O2'	9:B:43:C:OP2	2.30	0.48
9:B:59:A:H2'	9:B:60:C:O4'	2.13	0.48
10:C:209:ALA:HA	10:C:212:TRP:CZ2	2.47	0.48
10:C:227:VAL:HG13	10:C:228:ASP:OD1	2.14	0.48
12:E:106:LYS:HG2	12:E:200:LEU:HD23	1.95	0.48
15:H:15:LEU:HD21	15:H:55:GLU:OE2	2.13	0.48
15:H:79:THR:HA	15:H:145:ASN:OD1	2.12	0.48
18:K:69:VAL:O	18:K:76:VAL:CG2	2.62	0.48
20:M:72:PRO:HB3	20:M:92:TRP:CH2	2.48	0.48
21:N:61:ALA:O	21:N:65:LEU:CD1	2.61	0.48
23:P:3:ILE:O	23:P:7:LEU:HD13	2.13	0.48
25:R:6:GLN:HB3	25:R:11:GLN:HG2	1.94	0.48
27:T:7:LEU:HD22	27:T:46:ALA:HB2	1.95	0.48
28:U:5:ARG:CG	28:U:93:ARG:NH1	2.77	0.48
33:Z:22:THR:O	33:Z:26:LEU:HG	2.13	0.48
34:a:69:G:H2'	34:a:70:U:C6	2.48	0.48
34:a:147:G:N2	34:a:176:C:C2	2.81	0.48
34:a:168:G:H2'	34:a:169:C:C6	2.48	0.48
34:a:169:C:C4	34:a:170:U:C6	3.01	0.48
34:a:211:G:C2	34:a:213:G:OP2	2.65	0.48
34:a:314:C:H2'	34:a:315:A:C8	2.49	0.48
34:a:415:A:C5	34:a:416:G:C5	3.01	0.48
34:a:428:G:C4'	34:a:430:A:O4'	2.61	0.48
34:a:437:U:O2	34:a:495:A:N7	2.45	0.48
34:a:455:G:H2'	34:a:456:A:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:522:C:C2	34:a:527:G7M:N2	2.81	0.48
34:a:600:A:H2'	34:a:601:G:H8	1.78	0.48
34:a:737:C:H2'	34:a:738:C:H6	1.77	0.48
34:a:781:A:OP2	34:a:800:G:C2	2.66	0.48
34:a:821:G:C4	34:a:822:U:C5	3.01	0.48
34:a:831:A:C2	34:a:856:C:C2	3.01	0.48
34:a:923:A:H8	34:a:923:A:O5'	1.96	0.48
34:a:949:A:C4	34:a:1233:G:N2	2.81	0.48
34:a:1045:C:C4	34:a:1046:A:C8	3.01	0.48
34:a:1051:C:C2	34:a:1207:2MG:N2	2.81	0.48
34:a:1130:A:C6	34:a:1131:G:C6	3.01	0.48
34:a:1326:U:C2	34:a:1327:C:C5	3.01	0.48
34:a:1467:C:H2'	34:a:1468:A:C8	2.48	0.48
34:a:1510:C:C2	34:a:1526:G:C2	3.01	0.48
34:a:1515:G:C2	34:a:1521:C:N3	2.81	0.48
34:a:1537:U:C4	34:a:1538:C:H1'	2.48	0.48
35:b:122:ASP:OD1	35:b:122:ASP:N	2.47	0.48
36:c:11:LEU:O	36:c:17:TRP:CZ3	2.65	0.48
36:c:11:LEU:HD22	36:c:17:TRP:CD2	2.48	0.48
36:c:49:ALA:HA	36:c:74:ILE:HD11	1.94	0.48
37:d:118:SER:HA	37:d:130:ASN:HB2	1.94	0.48
39:f:14:GLN:CA	39:f:16:GLU:OE1	2.60	0.48
41:h:73:SER:HB3	41:h:129:ALA:O	2.12	0.48
43:j:5:ARG:NH1	43:j:79:PRO:HD2	2.28	0.48
43:j:53:ILE:HG23	47:n:85:ARG:CZ	2.43	0.48
47:n:29:ILE:O	47:n:32:ASP:OD1	2.32	0.48
47:n:87:ALA:HA	47:n:90:ARG:NH2	2.29	0.48
50:q:20:ILE:HG12	50:q:47:ASP:HB2	1.95	0.48
50:q:59:GLU:N	50:q:76:ARG:O	2.39	0.48
53:t:80:ALA:C	53:t:84:LYS:HZ3	2.21	0.48
55:v:48:C:H6	55:v:48:C:O5'	1.96	0.48
57:x:269:PHE:CD2	57:x:270:LYS:HE3	2.48	0.48
57:x:278:LEU:O	57:x:281:VAL:HB	2.13	0.48
1:0:45:ASP:O	1:0:52:LYS:CE	2.61	0.48
3:2:12:ARG:HE	3:2:44:VAL:HG11	1.78	0.48
5:4:1:MET:SD	5:4:36:ARG:HB2	2.52	0.48
7:6:6:HIS:CE1	13:F:62:GLN:HG3	2.48	0.48
7:6:14:ALA:O	7:6:21:VAL:HA	2.13	0.48
8:A:121:G:H4'	8:A:149:A:H5'	1.96	0.48
8:A:146:A:H2'	8:A:147:C:H6	1.75	0.48
8:A:190:A:C6	8:A:191:A:C6	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:224:U:C4	8:A:225:C:C5	3.01	0.48
8:A:247:G:C6	8:A:252:G:O6	2.66	0.48
8:A:350:G:C6	8:A:351:C:C4	3.01	0.48
8:A:370:G:C8	8:A:423:A:OP2	2.66	0.48
8:A:387:U:C6	8:A:388:G:C6	3.01	0.48
8:A:452:G:C6	8:A:458:G:C8	3.02	0.48
8:A:483:A:N7	8:A:497:A:H2	2.10	0.48
8:A:510:C:OP1	8:A:512:G:O6	2.31	0.48
8:A:586:A:C2	8:A:810:U:O4'	2.67	0.48
8:A:659:G:C6	8:A:660:C:C4	3.02	0.48
8:A:707:G:C4	8:A:708:G:C8	3.01	0.48
8:A:739:A:H1'	8:A:740:C:H5	1.78	0.48
8:A:782:A:C2	10:C:224:MET:SD	3.06	0.48
8:A:891:G:O2'	8:A:892:A:OP1	2.30	0.48
8:A:963:U:H2'	8:A:964:C:H6	1.78	0.48
8:A:969:G:H2'	8:A:970:U:H6	1.75	0.48
8:A:982:C:O5'	8:A:982:C:H6	1.96	0.48
8:A:983:A:N7	8:A:984:A:C6	2.81	0.48
8:A:1057:A:H2'	8:A:1058:U:C6	2.48	0.48
8:A:1253:A:P	24:Q:32:ARG:HH12	2.37	0.48
8:A:1269:A:N6	8:A:2012:G:C2	2.81	0.48
8:A:1277:G:H2'	8:A:1278:C:H6	1.78	0.48
8:A:1527:G:N2	8:A:1546:G:C6	2.82	0.48
8:A:1569:A:H5''	10:C:58:LYS:NZ	2.26	0.48
8:A:1651:G:H2'	8:A:1652:A:C8	2.48	0.48
8:A:1688:U:C2	8:A:1698:A:C2	3.01	0.48
8:A:1760:C:H2'	8:A:1761:C:O4'	2.13	0.48
8:A:1805:A:C6	8:A:1813:G:N1	2.82	0.48
8:A:1835:2MG:C2	8:A:1836:C:C4	3.02	0.48
8:A:1863:G:H2'	8:A:1864:U:O4'	2.14	0.48
8:A:1918:A:O2'	8:A:1919:A:N6	2.46	0.48
8:A:1949:G:H2'	8:A:1950:G:C8	2.48	0.48
8:A:2083:G:O6	8:A:2237:G:C2	2.66	0.48
8:A:2102:G:O6	8:A:2187:U:O4	2.31	0.48
8:A:2143:C:N4	8:A:2149:U:C4	2.81	0.48
8:A:2245:U:H5''	8:A:2246:G:H5'	1.96	0.48
8:A:2259:U:C4	8:A:2282:G:O6	2.66	0.48
8:A:2270:A:C5	8:A:2271:G:C5	3.01	0.48
8:A:2304:G:H1'	13:F:128:SER:OG	2.13	0.48
8:A:2380:C:P	22:O:17:LYS:NZ	2.85	0.48
8:A:2386:A:C5	8:A:2387:U:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2387:U:C1'	30:W:37:ARG:HH11	2.27	0.48
8:A:2461:A:H2'	8:A:2462:C:O4'	2.13	0.48
8:A:2605:PSU:H2'	8:A:2606:C:C6	2.49	0.48
8:A:2626:C:H2'	8:A:2627:G:H8	1.77	0.48
12:E:2:GLU:HB3	12:E:11:ALA:HB1	1.95	0.48
12:E:58:LYS:HG3	12:E:71:GLY:HA2	1.95	0.48
13:F:102:LEU:HD23	13:F:103:ILE:N	2.29	0.48
14:G:93:TYR:CE1	14:G:106:LEU:O	2.66	0.48
18:K:102:PRO:HD2	23:P:67:GLU:HG3	1.95	0.48
22:O:66:GLY:HA2	22:O:102:ARG:NH2	2.28	0.48
24:Q:105:PHE:O	24:Q:108:LEU:HB2	2.14	0.48
27:T:40:LYS:HE3	27:T:60:THR:OG1	2.13	0.48
28:U:9:GLU:OE2	28:U:21:ARG:HG2	2.13	0.48
29:V:3:THR:CB	29:V:62:THR:HG23	2.43	0.48
34:a:187:G:C6	34:a:189:A:OP2	2.66	0.48
34:a:230:G:H2'	34:a:231:U:O4'	2.12	0.48
34:a:420:U:O2	34:a:424:G:C2	2.67	0.48
34:a:439:U:C5	34:a:440:C:C4	3.01	0.48
34:a:451:A:N1	34:a:481:G:OP2	2.46	0.48
34:a:511:C:C2	34:a:512:U:C6	3.01	0.48
34:a:517:G:H2'	34:a:531:U:C5	2.48	0.48
34:a:595:A:H2'	34:a:641:U:O4	2.13	0.48
34:a:751:U:C5'	48:o:16:ARG:NH2	2.76	0.48
34:a:843:U:OP2	34:a:844:G:C5	2.67	0.48
34:a:980:C:C4	34:a:981:U:C2	3.02	0.48
34:a:997:U:C2	34:a:998:C:C6	3.02	0.48
34:a:1057:G:C5	34:a:1058:G:C5	3.01	0.48
34:a:1087:G:N2	34:a:1099:G:H1'	2.27	0.48
34:a:1127:G:C2	34:a:1128:C:C5	3.01	0.48
34:a:1144:G:N2	34:a:1146:A:N6	2.62	0.48
34:a:1186:G:H2'	34:a:1187:G:O4'	2.13	0.48
34:a:1200:C:H1'	34:a:1205:U:O4	2.13	0.48
34:a:1244:G:C6	34:a:1294:G:N1	2.81	0.48
34:a:1261:A:OP2	34:a:1274:A:C2	2.66	0.48
34:a:1336:C:O4'	34:a:1337:G:C2	2.67	0.48
34:a:1346:A:C5	40:g:9:ARG:CZ	2.96	0.48
34:a:1455:G:C6	34:a:1456:A:C5	3.00	0.48
35:b:75:ALA:O	35:b:79:VAL:HG23	2.12	0.48
35:b:159:ALA:HA	35:b:181:PRO:HG2	1.96	0.48
36:c:11:LEU:HD21	36:c:16:PRO:O	2.13	0.48
36:c:109:GLU:HB2	36:c:143:LEU:HD22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:114:ARG:HG3	37:d:132:ALA:CB	2.43	0.48
39:f:9:MET:HB2	39:f:85:ILE:O	2.13	0.48
42:i:79:ARG:NH1	42:i:102:PHE:HA	2.28	0.48
44:k:90:PRO:O	44:k:93:GLU:OE2	2.31	0.48
46:m:10:ASP:HA	46:m:44:ILE:CB	2.42	0.48
47:n:41:ARG:O	47:n:44:ALA:HB3	2.13	0.48
47:n:63:ARG:HB3	47:n:68:GLY:HA2	1.95	0.48
47:n:69:ARG:HD3	47:n:71:HIS:O	2.12	0.48
51:r:68:PRO:HB2	51:r:70:THR:O	2.13	0.48
52:s:72:GLU:HB3	52:s:73:PHE:CE2	2.49	0.48
55:v:1:C:N4	55:v:73:A:C6	2.81	0.48
56:w:52:G:N1	56:w:53:G:C5	2.81	0.48
57:x:303:ASP:N	57:x:303:ASP:OD1	2.47	0.48
57:x:438:ALA:HB3	57:x:439:LYS:NZ	2.27	0.48
57:x:472:MET:HB3	57:x:478:VAL:CG1	2.43	0.48
2:1:3:GLY:N	8:A:2283:C:H5'	2.29	0.48
2:1:5:ARG:NE	8:A:2285:C:C5	2.81	0.48
2:1:6:GLU:HB3	2:1:26:LYS:CE	2.43	0.48
8:A:27:G:N2	8:A:512:G:HO2'	2.12	0.48
8:A:144:A:C6	8:A:145:C:C4	3.02	0.48
8:A:199:A:H1'	8:A:2433:A:N1	2.28	0.48
8:A:221:A:C4	8:A:233:A:H1'	2.49	0.48
8:A:279:A:C6	8:A:280:U:C6	3.01	0.48
8:A:373:U:O2	8:A:374:A:C8	2.66	0.48
8:A:461:C:N4	8:A:469:G:N2	2.60	0.48
8:A:532:A:N3	8:A:532:A:H2'	2.29	0.48
8:A:585:G:O5'	8:A:585:G:H8	1.96	0.48
8:A:621:A:OP2	19:L:99:ASN:CG	2.56	0.48
8:A:629:G:C6	8:A:630:G:C5	3.00	0.48
8:A:635:C:P	19:L:109:LYS:HE3	2.54	0.48
8:A:811:U:C4	19:L:21:ARG:CZ	2.96	0.48
8:A:974:G:H8	8:A:990:A:H62	1.60	0.48
8:A:1026:G:C5	8:A:1134:A:C5	3.01	0.48
8:A:1086:A:OP1	8:A:1103:A:C2	2.65	0.48
8:A:1144:A:C5	8:A:1145:C:C5	3.01	0.48
8:A:1299:G:C6	8:A:1640:A:OP2	2.66	0.48
8:A:1343:G:C4	8:A:1344:U:C5	3.02	0.48
8:A:1582:C:N4	8:A:1583:A:C5	2.81	0.48
8:A:1587:G:C4	8:A:1588:G:C8	3.01	0.48
8:A:1592:C:H2'	8:A:1593:A:H8	1.78	0.48
8:A:1631:G:C4	8:A:1633:G:OP2	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1679:A:C5	8:A:1680:U:C5	3.01	0.48
8:A:1699:G:N1	8:A:1763:G:C4	2.81	0.48
8:A:1733:G:H2'	8:A:1734:G:C8	2.49	0.48
8:A:1737:G:O3'	8:A:1738:G:O4'	2.32	0.48
8:A:1740:G:C6	8:A:1741:C:C4	3.00	0.48
8:A:1778:U:H2'	8:A:1784:A:N6	2.29	0.48
8:A:1795:C:O2	10:C:252:LYS:CD	2.62	0.48
8:A:1837:C:N4	8:A:1899:A:C4	2.82	0.48
8:A:1845:G:C6	8:A:1896:G:C6	3.02	0.48
8:A:1918:A:C2'	8:A:1920:C:N4	2.76	0.48
8:A:1994:C:P	11:D:132:ALA:HB3	2.54	0.48
8:A:2072:C:C2	8:A:2073:C:C5	3.01	0.48
8:A:2114:A:C6	8:A:2119:A:O2'	2.63	0.48
8:A:2188:U:H2'	8:A:2189:U:C6	2.48	0.48
8:A:2281:A:N1	8:A:2282:G:C6	2.81	0.48
8:A:2292:U:H2'	8:A:2293:G:O4'	2.13	0.48
8:A:2297:A:C2	8:A:2298:A:C8	3.01	0.48
8:A:2316:G:H2'	8:A:2317:A:H8	1.78	0.48
8:A:2337:G:H2'	8:A:2337:G:N3	2.28	0.48
8:A:2341:G:N2	8:A:2374:C:O2'	2.47	0.48
8:A:2391:G:C2'	8:A:2424:C:H41	2.23	0.48
8:A:2574:G:H1'	11:D:148:GLN:HB3	1.95	0.48
8:A:2707:U:H2'	21:N:71:ARG:NH2	2.28	0.48
8:A:2734:A:N6	8:A:2770:G:C2'	2.76	0.48
8:A:2847:U:OP1	23:P:95:LYS:CD	2.60	0.48
10:C:74:PRO:CD	10:C:96:LYS:HZ2	2.25	0.48
11:D:104:VAL:HG21	11:D:205:PRO:HG3	1.94	0.48
12:E:59:PRO:HB2	12:E:60:TRP:CE3	2.48	0.48
15:H:19:VAL:HG22	15:H:20:ASN:N	2.27	0.48
25:R:29:THR:HA	25:R:63:VAL:CG1	2.43	0.48
28:U:49:PRO:HA	28:U:53:GLN:OE1	2.13	0.48
30:W:17:LEU:CD2	30:W:35:ARG:HH21	2.27	0.48
33:Z:8:GLN:CG	33:Z:31:ILE:HA	2.43	0.48
33:Z:55:LYS:NZ	33:Z:56:VAL:O	2.47	0.48
34:a:39:G:C2	34:a:404:G:C5	3.02	0.48
34:a:159:G:OP2	34:a:162:A:OP2	2.31	0.48
34:a:166:U:H2'	34:a:167:A:H5'	1.94	0.48
34:a:198:G:H2'	34:a:199:A:H8	1.78	0.48
34:a:212:G:C8	34:a:213:G:C2	3.01	0.48
34:a:262:A:H5'	53:t:67:HIS:HB3	1.95	0.48
34:a:333:U:H2'	34:a:334:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:411:A:C4	34:a:413:G:H1'	2.48	0.48
34:a:459:A:C2	34:a:474:G:C6	3.02	0.48
34:a:607:A:H2'	34:a:608:A:O4'	2.13	0.48
34:a:683:G:N1	34:a:708:C:C4	2.82	0.48
34:a:706:A:O2'	44:k:32:THR:HG21	2.14	0.48
34:a:742:G:H2'	34:a:743:A:C8	2.48	0.48
34:a:749:A:H2'	34:a:750:C:H6	1.78	0.48
34:a:751:U:P	48:o:16:ARG:HH22	2.36	0.48
34:a:752:G:H1'	34:a:754:C:H41	1.79	0.48
34:a:843:U:OP2	34:a:844:G:C6	2.66	0.48
34:a:860:A:C5	34:a:861:G:C5	3.02	0.48
34:a:911:U:H2'	34:a:912:C:H6	1.78	0.48
34:a:920:U:O3'	34:a:1082:A:O5'	2.31	0.48
34:a:930:C:H2'	34:a:931:C:C6	2.49	0.48
34:a:1056:U:OP1	36:c:161:ILE:HG13	2.13	0.48
34:a:1227:A:H5'	34:a:1228:C:OP2	2.12	0.48
34:a:1261:A:C4	34:a:1275:A:C5	3.01	0.48
34:a:1360:A:C6	34:a:1361:G:C4	3.02	0.48
34:a:1367:C:P	42:i:113:LYS:HZ1	2.35	0.48
36:c:45:GLU:C	36:c:46:LEU:HD22	2.38	0.48
36:c:174:LEU:HD23	36:c:181:ILE:HD13	1.94	0.48
50:q:23:ALA:HB1	50:q:40:THR:HG21	1.96	0.48
52:s:33:TRP:HA	52:s:51:HIS:HB2	1.95	0.48
53:t:69:ASN:O	53:t:73:ARG:HG2	2.14	0.48
57:x:74:MET:O	57:x:75:ALA:HB3	2.12	0.48
57:x:490:ARG:CZ	57:x:612:LEU:HD13	2.43	0.48
1:0:6:LYS:NZ	8:A:1262:A:H2'	2.29	0.48
8:A:90:U:H3'	8:A:91:A:H2'	1.96	0.48
8:A:177:G:H3'	8:A:178:G:C8	2.48	0.48
8:A:272:A:H2'	8:A:273:G:H8	1.78	0.48
8:A:308:G:H2'	8:A:309:A:C8	2.48	0.48
8:A:382:A:C6	8:A:383:C:C2	3.02	0.48
8:A:410:G:C2	8:A:2407:A:N7	2.82	0.48
8:A:449:A:C4'	24:Q:2:ARG:NH1	2.77	0.48
8:A:458:G:C2'	8:A:469:G:C6	2.96	0.48
8:A:479:A:C1'	8:A:480:A:H5''	2.43	0.48
8:A:582:A:OP1	24:Q:13:HIS:HD2	1.95	0.48
8:A:595:C:H2'	8:A:596:U:H6	1.78	0.48
8:A:651:G:C6	8:A:652:U:C4	3.01	0.48
8:A:705:A:N6	8:A:726:G:O4'	2.46	0.48
8:A:749:A:C5	8:A:750:A:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:776:G:C2	8:A:793:A:C5	3.02	0.48
8:A:838:C:C4	8:A:941:A:N6	2.81	0.48
8:A:895:U:H4'	8:A:896:A:C6	2.48	0.48
8:A:929:U:N3	8:A:930:G:C5	2.82	0.48
8:A:930:G:H1'	33:Z:24:LEU:CD2	2.43	0.48
8:A:1029:A:OP2	8:A:1030:C:N4	2.46	0.48
8:A:1095:A:C2	57:x:627:THR:HG22	2.49	0.48
8:A:1249:U:OP1	8:A:1250:G:OP1	2.30	0.48
8:A:1343:G:C8	8:A:1597:A:C5	3.02	0.48
8:A:1358:G:H8	8:A:1358:G:O5'	1.97	0.48
8:A:1385:A:C4	8:A:1386:C:C4	3.02	0.48
8:A:1387:A:C4	8:A:1401:G:N2	2.81	0.48
8:A:1469:A:N6	8:A:1521:G:H2'	2.28	0.48
8:A:1488:C:H2'	8:A:1489:C:H6	1.78	0.48
8:A:1557:C:C4	8:A:1558:C:C4	3.02	0.48
8:A:1569:A:C2	8:A:1570:A:C4	3.02	0.48
8:A:1840:G:C4	8:A:1841:U:C5	3.02	0.48
8:A:1890:A:C2	8:A:1891:G:H1'	2.48	0.48
8:A:2007:U:C2	8:A:2008:C:C5	3.01	0.48
8:A:2083:G:N1	8:A:2236:U:C2	2.76	0.48
8:A:2190:G:C6	8:A:2191:A:C6	3.01	0.48
8:A:2227:A:H3'	8:A:2228:G:H8	1.78	0.48
8:A:2278:A:P	20:M:11:LYS:HZ2	2.37	0.48
8:A:2404:U:H2'	8:A:2405:G:C8	2.48	0.48
8:A:2465:C:H2'	8:A:2466:C:H6	1.77	0.48
8:A:2511:U:H2'	8:A:2512:C:O4'	2.13	0.48
8:A:2680:U:H5''	11:D:193:VAL:O	2.13	0.48
8:A:2682:A:C6	8:A:2683:C:C5	3.01	0.48
8:A:2691:C:H2'	8:A:2692:G:C8	2.49	0.48
8:A:2882:A:P	21:N:96:ARG:HH11	2.37	0.48
9:B:83:G:O6	9:B:94:A:N6	2.47	0.48
10:C:56:GLY:HA2	10:C:212:TRP:C	2.38	0.48
12:E:105:LEU:HB3	12:E:200:LEU:HD21	1.96	0.48
12:E:117:ARG:HA	12:E:185:LYS:HD3	1.94	0.48
13:F:68:LYS:HG3	13:F:83:PRO:N	2.29	0.48
14:G:102:ILE:O	14:G:113:ASP:HA	2.13	0.48
16:I:76:ALA:HA	16:I:79:LEU:CB	2.44	0.48
20:M:42:THR:HG22	20:M:91:TYR:CE2	2.49	0.48
20:M:78:LEU:HD23	20:M:79:ALA:HB2	1.94	0.48
20:M:121:ALA:C	20:M:123:LYS:N	2.70	0.48
24:Q:61:ILE:HG23	24:Q:75:TYR:CE2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:98:ALA:O	24:Q:102:LYS:NZ	2.41	0.48
24:Q:108:LEU:HD21	25:R:49:ILE:HG12	1.96	0.48
25:R:60:LYS:HZ1	25:R:102:SER:HB3	1.79	0.48
30:W:62:LYS:HG3	30:W:81:GLU:HB2	1.95	0.48
30:W:67:VAL:HG13	30:W:74:LYS:HG2	1.95	0.48
34:a:27:G:C6	34:a:557:G:C6	3.02	0.48
34:a:34:C:H1'	45:l:28:GLN:NE2	2.28	0.48
34:a:39:G:N1	34:a:404:G:C5	2.81	0.48
34:a:56:U:O2	34:a:368:U:N3	2.46	0.48
34:a:76:G:C2	34:a:93:U:O2	2.67	0.48
34:a:149:A:H2'	34:a:150:U:C6	2.48	0.48
34:a:241:G:C2	34:a:286:C:N3	2.82	0.48
34:a:253:A:C6	34:a:254:G:C6	3.02	0.48
34:a:295:C:C4	34:a:303:A:N1	2.82	0.48
34:a:462:G:C6	34:a:470:C:N4	2.81	0.48
34:a:478:A:H2'	34:a:479:U:O4'	2.13	0.48
34:a:540:G:H2'	34:a:541:G:O4'	2.13	0.48
34:a:542:G:C6	34:a:543:U:C4	3.02	0.48
34:a:562:U:O3'	45:l:11:ARG:HD2	2.12	0.48
34:a:655:A:C6	34:a:656:G:C5	3.01	0.48
34:a:765:G:C6	34:a:812:G:C4	3.02	0.48
34:a:878:A:C6	34:a:879:C:N4	2.82	0.48
34:a:908:A:C4	34:a:909:A:C8	3.01	0.48
34:a:1004:A:N1	34:a:1026:G:H1'	2.28	0.48
34:a:1004:A:H2'	34:a:1005:A:O4'	2.13	0.48
34:a:1074:G:C2	34:a:1102:A:C5	3.02	0.48
34:a:1089:G:N1	34:a:1097:C:C4	2.81	0.48
34:a:1160:G:H2'	34:a:1161:C:C6	2.48	0.48
34:a:1175:G:C2	34:a:1176:A:C8	3.01	0.48
34:a:1477:U:H2'	34:a:1478:U:H6	1.75	0.48
34:a:1523:G:C6	34:a:1524:C:N4	2.81	0.48
35:b:19:THR:HA	35:b:37:VAL:HA	1.94	0.48
35:b:20:ARG:O	35:b:22:TRP:HD1	1.97	0.48
35:b:34:ARG:HG3	35:b:35:ASN:N	2.29	0.48
37:d:9:LYS:HA	37:d:37:PRO:HG3	1.95	0.48
38:e:105:ILE:CD1	38:e:123:LEU:HD23	2.43	0.48
40:g:73:GLU:O	40:g:88:VAL:HG22	2.14	0.48
42:i:61:ASP:O	42:i:62:LEU:HD23	2.13	0.48
42:i:78:ILE:O	42:i:82:ILE:HG13	2.14	0.48
49:p:79:ASN:C	49:p:81:ALA:N	2.71	0.48
50:q:19:SER:HB2	50:q:70:LYS:HZ2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:v:38:A:C4	55:v:39:C:C6	3.01	0.48
57:x:4:THR:O	57:x:6:ILE:HD13	2.12	0.48
57:x:71:TRP:O	57:x:81:HIS:N	2.35	0.48
57:x:320:ALA:HB2	57:x:396:LEU:HD21	1.95	0.48
57:x:647:GLU:HG3	57:x:648:VAL:N	2.24	0.48
2:1:5:ARG:CG	8:A:2285:C:OP2	2.62	0.48
4:3:12:ARG:HB2	4:3:13:PHE:CE2	2.48	0.48
5:4:17:VAL:HG22	5:4:18:LYS:N	2.29	0.48
8:A:26:G:H1'	8:A:514:A:H61	1.79	0.48
8:A:54:G:C6	8:A:117:G:N2	2.82	0.48
8:A:67:U:O2	8:A:74:A:C8	2.67	0.48
8:A:358:U:H2'	8:A:359:G:O4'	2.13	0.48
8:A:377:G:N1	8:A:398:C:C2	2.81	0.48
8:A:380:G:C6	8:A:395:U:N3	2.81	0.48
8:A:383:C:H41	8:A:385:C:H3'	1.79	0.48
8:A:412:A:N7	8:A:2412:A:H1'	2.28	0.48
8:A:417:C:C2	8:A:2407:A:C2	3.02	0.48
8:A:687:C:C5	8:A:688:U:C4	3.01	0.48
8:A:857:G:H8	8:A:857:G:O5'	1.97	0.48
8:A:869:G:C6	8:A:870:U:C4	3.01	0.48
8:A:881:G:H1	8:A:895:U:H1'	1.78	0.48
8:A:947:A:C6	8:A:948:C:N4	2.82	0.48
8:A:1011:G:H1'	8:A:1013:C:C6	2.48	0.48
8:A:1021:A:H3'	8:A:1021:A:N3	2.28	0.48
8:A:1029:A:C8	8:A:1030:C:C5	3.01	0.48
8:A:1040:A:N1	8:A:1116:G:C6	2.81	0.48
8:A:1144:A:C6	8:A:1145:C:N4	2.82	0.48
8:A:1171:G:O6	8:A:1172:C:N4	2.46	0.48
8:A:1177:G:O6	8:A:1178:C:C5	2.66	0.48
8:A:1232:G:C5	8:A:1233:C:C5	3.01	0.48
8:A:1298:C:H2'	8:A:1299:G:C8	2.49	0.48
8:A:1341:G:OP1	8:A:1397:U:N3	2.46	0.48
8:A:1358:G:C2	8:A:1372:U:OP2	2.66	0.48
8:A:1429:G:O4'	8:A:1568:G:C1'	2.61	0.48
8:A:1769:U:C2	8:A:1984:G:C6	3.02	0.48
8:A:1788:C:H6	8:A:1788:C:O5'	1.96	0.48
8:A:1936:A:H2	8:A:1943:U:N3	2.11	0.48
8:A:2073:C:C2	8:A:2437:G:C2	3.01	0.48
8:A:2108:A:H2'	8:A:2109:U:H5''	1.95	0.48
8:A:2179:C:H5''	8:A:2180:U:O4	2.14	0.48
8:A:2217:G:C4	8:A:2218:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2228:G:C6	8:A:2229:U:C4	3.02	0.48
8:A:2294:G:H2'	8:A:2295:C:H6	1.78	0.48
8:A:2303:G:C6	8:A:2304:G:C5	3.01	0.48
8:A:2309:A:H61	13:F:75:GLY:CA	2.27	0.48
8:A:2316:G:H4'	13:F:124:ARG:NE	2.28	0.48
8:A:2466:C:C2	8:A:2485:G:C2	3.02	0.48
8:A:2656:U:H3	8:A:2665:A:H8	1.54	0.48
8:A:2725:A:C8	8:A:2727:A:N7	2.82	0.48
8:A:2773:C:OP1	11:D:169:ARG:CZ	2.61	0.48
8:A:2832:U:C2	8:A:2834:G:N2	2.82	0.48
8:A:2838:G:H4'	21:N:45:ARG:CZ	2.44	0.48
8:A:2898:U:O2	17:J:134:ALA:HB1	2.13	0.48
9:B:59:A:C5	9:B:60:C:C4	3.02	0.48
10:C:77:VAL:CG1	10:C:91:ALA:HB1	2.44	0.48
10:C:197:ALA:O	10:C:200:MET:HG2	2.14	0.48
12:E:194:LYS:HE2	12:E:194:LYS:HA	1.96	0.48
13:F:124:ARG:O	13:F:159:ALA:O	2.30	0.48
15:H:46:PHE:O	15:H:50:ARG:HB2	2.14	0.48
15:H:96:THR:HA	15:H:99:ILE:HG22	1.96	0.48
15:H:134:VAL:H	15:H:138:VAL:HG21	1.77	0.48
16:I:80:LYS:HA	16:I:85:ILE:O	2.14	0.48
20:M:4:PRO:HG2	20:M:92:TRP:CE3	2.49	0.48
20:M:29:GLY:HA3	20:M:104:GLU:HB3	1.96	0.48
20:M:53:MET:HE2	20:M:117:PHE:HD1	1.79	0.48
24:Q:82:LEU:HD21	24:Q:112:ALA:HB2	1.94	0.48
25:R:78:ARG:HB3	25:R:81:LYS:HB2	1.96	0.48
28:U:25:LYS:HD3	28:U:34:ILE:HG22	1.95	0.48
30:W:79:GLU:C	30:W:81:GLU:HG2	2.38	0.48
33:Z:8:GLN:HG2	33:Z:31:ILE:HA	1.96	0.48
34:a:173:U:O4'	34:a:197:A:C5	2.66	0.48
34:a:258:G:C2	34:a:269:C:C2	3.02	0.48
34:a:298:A:C2	34:a:299:G:H1'	2.48	0.48
34:a:374:A:C4	34:a:375:U:C5	3.02	0.48
34:a:452:A:N7	34:a:453:G:H1'	2.29	0.48
34:a:465:A:C3'	34:a:466:A:C8	2.96	0.48
34:a:481:G:N3	34:a:481:G:C2'	2.76	0.48
34:a:499:A:N6	34:a:547:A:H5''	2.29	0.48
34:a:502:A:C6	34:a:503:C:C4	3.02	0.48
34:a:521:G:H4'	45:l:69:GLU:HG2	1.95	0.48
34:a:575:G:C2	34:a:881:G:C4	3.01	0.48
34:a:652:U:O2	34:a:653:U:C5	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:664:G:N2	34:a:741:G:H1	2.11	0.48
34:a:684:U:O2'	44:k:40:ALA:N	2.47	0.48
34:a:694:A:O4'	34:a:694:A:N3	2.45	0.48
34:a:947:G:C6	34:a:948:C:C4	3.02	0.48
34:a:978:A:H1'	34:a:1322:C:O2	2.12	0.48
34:a:999:C:O2'	34:a:1000:A:H5'	2.12	0.48
34:a:1009:U:O2	34:a:1020:G:N1	2.43	0.48
34:a:1049:U:C2	34:a:1201:A:C4	3.02	0.48
34:a:1224:U:O2'	52:s:77:ARG:NH2	2.47	0.48
36:c:39:ARG:CZ	36:c:56:ILE:HG12	2.43	0.48
37:d:73:ASN:O	37:d:76:LYS:HB2	2.13	0.48
42:i:46:VAL:HA	42:i:49:GLN:HB2	1.95	0.48
44:k:27:ASN:HA	44:k:57:SER:OG	2.13	0.48
46:m:40:GLU:HG2	46:m:41:ASP:N	2.28	0.48
50:q:6:THR:C	50:q:7:LEU:HD12	2.38	0.48
50:q:74:LEU:HD21	50:q:76:ARG:HA	1.95	0.48
57:x:114:ALA:CB	57:x:143:MET:SD	3.02	0.48
3:2:18:PHE:HB2	3:2:45:SER:OG	2.13	0.48
8:A:143:C:O2'	8:A:144:A:H5'	2.14	0.48
8:A:144:A:C5	8:A:145:C:C4	3.02	0.48
8:A:203:A:C5	8:A:204:A:C5	3.02	0.48
8:A:301:G:C6	8:A:317:G:C5	3.02	0.48
8:A:374:A:C2	8:A:375:G:H1'	2.48	0.48
8:A:500:G:O2'	8:A:502:A:N7	2.45	0.48
8:A:544:C:H2'	8:A:545:U:C6	2.48	0.48
8:A:583:G:C4	8:A:584:C:C5	3.01	0.48
8:A:623:C:C2	8:A:624:C:C5	3.01	0.48
8:A:627:A:N6	19:L:112:LEU:O	2.34	0.48
8:A:635:C:OP2	19:L:126:ARG:CZ	2.60	0.48
8:A:663:G:C6	8:A:664:G:C5	3.02	0.48
8:A:779:U:O2	8:A:785:G:C2	2.67	0.48
8:A:794:A:C4	8:A:795:C:C5	3.01	0.48
8:A:845:A:C2	8:A:847:U:C6	3.01	0.48
8:A:851:C:H2'	8:A:852:U:H6	1.79	0.48
8:A:973:A:H1'	8:A:1188:U:C5	2.49	0.48
8:A:974:G:C4	8:A:1186:G:C2	3.02	0.48
8:A:976:G:N1	8:A:977:G:C5	2.82	0.48
8:A:1024:G:H2'	8:A:1025:G:C8	2.48	0.48
8:A:1062:G:O4'	8:A:1088:A:N7	2.47	0.48
8:A:1098:A:N7	8:A:1099:G:O6	2.47	0.48
8:A:1194:A:C2	8:A:1195:G:H1'	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1218:G:H2'	8:A:1219:U:H6	1.78	0.48
8:A:1238:G:C2	8:A:1239:G:C4	3.01	0.48
8:A:1300:G:O4'	8:A:1626:A:C2	2.66	0.48
8:A:1306:C:C2	8:A:1623:G:C2	3.01	0.48
8:A:1322:A:C4	8:A:1323:C:C6	3.01	0.48
8:A:1336:A:H2'	8:A:1337:G:O4'	2.13	0.48
8:A:1416:G:N2	8:A:1417:C:C2	2.81	0.48
8:A:1426:G:H3'	8:A:1427:A:H2'	1.94	0.48
8:A:1619:G:C6	8:A:1620:G:C5	3.02	0.48
8:A:1736:U:O2'	8:A:1737:G:H5'	2.13	0.48
8:A:1739:A:C5	8:A:1740:G:C5	3.01	0.48
8:A:1748:C:H2'	8:A:1749:A:H8	1.77	0.48
8:A:1794:A:H2	10:C:252:LYS:NZ	2.12	0.48
8:A:1833:C:C2	8:A:1973:G:N1	2.82	0.48
8:A:1837:C:C4	8:A:1899:A:C5	3.02	0.48
8:A:1866:A:N6	8:A:1867:G:C2	2.82	0.48
8:A:1867:G:C6	8:A:1868:C:C4	3.01	0.48
8:A:1906:G:N1	8:A:1907:G:C5	2.82	0.48
8:A:1945:G:H2'	8:A:1946:U:C6	2.49	0.48
8:A:2073:C:O2'	8:A:2074:U:H5'	2.13	0.48
8:A:2074:U:C4	8:A:2436:G:N1	2.82	0.48
8:A:2077:A:C2	8:A:2078:C:C4	3.02	0.48
8:A:2166:U:H3'	8:A:2167:U:O4'	2.14	0.48
8:A:2278:A:P	20:M:10:ARG:NH2	2.86	0.48
8:A:2315:G:C4	8:A:2316:G:C8	3.01	0.48
8:A:2351:G:H1'	8:A:2367:G:N2	2.29	0.48
8:A:2468:A:C2	8:A:2481:G:H2'	2.49	0.48
8:A:2474:U:H5''	8:A:2475:C:H5	1.79	0.48
8:A:2736:A:H2'	8:A:2737:G:H8	1.79	0.48
8:A:2757:A:C2	8:A:2758:A:C8	3.01	0.48
8:A:2766:A:H2'	8:A:2766:A:N3	2.29	0.48
8:A:2818:U:OP2	21:N:42:LYS:HE3	2.14	0.48
8:A:2824:C:O5'	8:A:2824:C:H6	1.96	0.48
8:A:2839:G:C6	8:A:2840:C:C4	3.02	0.48
10:C:128:THR:HG1	10:C:190:THR:HG1	1.55	0.48
10:C:169:ALA:O	10:C:184:GLU:CD	2.57	0.48
12:E:146:VAL:HG23	12:E:185:LYS:O	2.14	0.48
13:F:68:LYS:HG3	13:F:83:PRO:CA	2.43	0.48
13:F:68:LYS:HG3	13:F:83:PRO:HA	1.95	0.48
14:G:26:LYS:HD3	14:G:27:GLY:H	1.78	0.48
14:G:148:ARG:HG3	14:G:161:VAL:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:135:HIS:ND1	15:H:137:GLU:OE1	2.46	0.48
19:L:29:LYS:HD3	25:R:82:HIS:CD2	2.49	0.48
20:M:70:ASP:OD1	20:M:70:ASP:C	2.55	0.48
23:P:31:VAL:HG21	23:P:40:GLN:NE2	2.27	0.48
26:S:79:GLY:C	26:S:100:THR:OG1	2.56	0.48
28:U:72:PHE:CE2	28:U:77:GLY:HA2	2.49	0.48
34:a:15:G:H4'	38:e:28:ARG:NH2	2.28	0.48
34:a:141:G:N2	34:a:142:G:H1'	2.29	0.48
34:a:158:G:O3'	34:a:160:A:C2	2.66	0.48
34:a:210:C:H4'	34:a:211:G:O3'	2.14	0.48
34:a:313:A:C6	34:a:314:C:C4	3.01	0.48
34:a:361:G:H2'	34:a:362:G:O4'	2.14	0.48
34:a:378:G:N1	34:a:386:C:N3	2.62	0.48
34:a:447:G:C2	34:a:488:C:N4	2.82	0.48
34:a:460:A:C4	34:a:461:A:C2	3.01	0.48
34:a:501:C:OP1	45:l:113:ARG:NH2	2.47	0.48
34:a:601:G:N1	34:a:638:U:N3	2.61	0.48
34:a:646:G:C5	34:a:647:C:C5	3.00	0.48
34:a:649:A:H2'	34:a:650:G:O4'	2.14	0.48
34:a:671:G:N2	34:a:736:C:C2	2.82	0.48
34:a:677:U:C2	34:a:714:G:N2	2.82	0.48
34:a:769:G:C5'	34:a:1513:A:H4'	2.44	0.48
34:a:781:A:N7	34:a:801:U:O4	2.47	0.48
34:a:810:C:H1'	34:a:899:C:H41	1.79	0.48
34:a:953:G:C4	34:a:954:G:C8	3.02	0.48
34:a:978:A:N7	34:a:1318:A:N6	2.61	0.48
34:a:1014:A:C2	34:a:1015:G:C2	3.01	0.48
34:a:1027:C:N4	34:a:1035:A:O4'	2.47	0.48
34:a:1072:G:C6	34:a:1073:U:C4	3.02	0.48
34:a:1130:A:C5	34:a:1144:G:H1'	2.48	0.48
34:a:1148:U:O4'	42:i:17:ARG:HD3	2.14	0.48
34:a:1178:G:C4	34:a:1180:A:OP2	2.67	0.48
34:a:1237:C:H4'	34:a:1300:G:H22	1.78	0.48
34:a:1251:A:C2'	34:a:1369:C:O2'	2.61	0.48
34:a:1265:C:C2	34:a:1271:A:C2	3.01	0.48
34:a:1338:G:C2	34:a:1339:A:C2	3.02	0.48
34:a:1464:U:O5'	34:a:1464:U:H6	1.97	0.48
34:a:1516:2MG:N1	34:a:1520:C:C4	2.82	0.48
36:c:72:PRO:CD	36:c:104:GLU:HG2	2.43	0.48
41:h:27:PRO:HA	41:h:57:GLU:HA	1.96	0.48
42:i:18:VAL:HG12	42:i:64:ILE:HG23	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:j:65:TYR:CB	47:n:96:LEU:HD21	2.44	0.48
47:n:81:ARG:C	47:n:84:VAL:HG12	2.38	0.48
49:p:35:ARG:NH2	49:p:37:GLY:C	2.72	0.48
50:q:14:ASP:HA	50:q:20:ILE:HG22	1.95	0.48
55:v:20:H2U:OP2	55:v:20:H2U:H3'	2.13	0.48
56:w:6:G:C6	56:w:68:C:N3	2.81	0.48
57:x:172:ILE:HG23	57:x:210:MET:HE3	1.95	0.48
57:x:207:PRO:HB2	57:x:209:ASP:OD1	2.13	0.48
57:x:298:LEU:C	57:x:404:ILE:HD13	2.38	0.48
57:x:304:THR:O	57:x:304:THR:HG23	2.13	0.48
57:x:349:LEU:HD21	57:x:351:SER:HB3	1.95	0.48
57:x:357:GLU:HG2	57:x:388:LYS:NZ	2.28	0.48
57:x:563:GLY:HA2	57:x:570:VAL:CG2	2.43	0.48
57:x:614:PRO:HB2	57:x:659:LEU:HB2	1.94	0.48
1:0:49:ARG:CZ	8:A:2884:U:H1'	2.44	0.48
7:6:16:CYS:HA	7:6:34:LEU:HB2	1.96	0.48
8:A:36:G:C5	8:A:37:C:C5	3.02	0.48
8:A:49:A:N6	8:A:177:G:O2'	2.46	0.48
8:A:72:U:C4	8:A:112:U:O4'	2.66	0.48
8:A:75:G:O6	8:A:111:A:N1	2.46	0.48
8:A:120:U:C2	8:A:149:A:C6	3.02	0.48
8:A:337:C:P	28:U:3:LYS:NZ	2.87	0.48
8:A:364:C:H2'	8:A:365:U:C6	2.48	0.48
8:A:366:C:O5'	8:A:366:C:H6	1.96	0.48
8:A:408:G:H1	8:A:419:U:H3	1.62	0.48
8:A:429:A:C6	8:A:430:A:N6	2.82	0.48
8:A:449:A:C6	8:A:450:G:C4	3.02	0.48
8:A:460:A:N6	8:A:469:G:C2'	2.76	0.48
8:A:488:G:H22	8:A:491:G:H5''	1.79	0.48
8:A:491:G:O6	26:S:49:LYS:HD3	2.14	0.48
8:A:514:A:H2'	8:A:515:A:H8	1.78	0.48
8:A:546:U:H4'	8:A:548:G:N2	2.29	0.48
8:A:547:A:O2'	8:A:548:G:C8	2.56	0.48
8:A:573:U:N3	8:A:2031:A:OP1	2.47	0.48
8:A:595:C:N3	8:A:663:G:N1	2.61	0.48
8:A:633:A:OP2	8:A:634:C:N4	2.47	0.48
8:A:633:A:H5''	19:L:70:LYS:HE2	1.95	0.48
8:A:660:C:H2'	8:A:661:A:C8	2.48	0.48
8:A:671:C:C6	19:L:42:SER:HB2	2.49	0.48
8:A:710:U:H2'	8:A:711:G:H8	1.79	0.48
8:A:834:G:C2	8:A:835:C:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:836:G:O6	8:A:943:A:C2	2.66	0.48
8:A:858:G:C6	8:A:920:A:N6	2.81	0.48
8:A:909:A:H3'	8:A:912:C:H41	1.79	0.48
8:A:910:A:C6	8:A:911:A:C6	3.01	0.48
8:A:1048:A:H1'	8:A:1112:G:H21	1.79	0.48
8:A:1064:C:H5''	8:A:1065:U:H5'	1.96	0.48
8:A:1164:C:C2	8:A:1165:A:C8	3.02	0.48
8:A:1203:U:P	8:A:1204:A:H3'	2.54	0.48
8:A:1234:U:C4	8:A:1235:G:C5	3.01	0.48
8:A:1364:G:H1'	8:A:1368:G:N2	2.28	0.48
8:A:1384:A:H1'	8:A:1405:U:C1'	2.44	0.48
8:A:1407:G:H2'	8:A:1408:G:H8	1.78	0.48
8:A:1521:G:OP2	8:A:1522:A:O2'	2.22	0.48
8:A:1580:A:C8	8:A:1581:G:C8	3.02	0.48
8:A:1599:U:H2'	8:A:1600:C:O4'	2.14	0.48
8:A:1661:G:H2'	8:A:1662:U:H6	1.79	0.48
8:A:1701:A:N7	8:A:1702:G:N7	2.61	0.48
8:A:1727:C:C2	8:A:1734:G:C2	3.02	0.48
8:A:1748:C:C2	8:A:1749:A:C8	3.02	0.48
8:A:1779:U:O4	8:A:1785:A:C6	2.67	0.48
8:A:1821:A:H2'	8:A:1822:C:H6	1.78	0.48
8:A:1955:U:O4	8:A:2552:OMU:H6	2.14	0.48
8:A:2128:G:H1'	8:A:2173:A:H1'	1.95	0.48
8:A:2142:A:C6	8:A:2149:U:C4	3.00	0.48
8:A:2156:G:N3	8:A:2156:G:O4'	2.45	0.48
8:A:2266:A:N1	8:A:2272:U:H3'	2.29	0.48
8:A:2342:C:H2'	8:A:2343:U:O4'	2.13	0.48
8:A:2464:G:C2	8:A:2487:G:C2	3.02	0.48
8:A:2573:C:OP1	8:A:2574:G:OP1	2.31	0.48
8:A:2642:G:C2	8:A:2773:C:C2	3.01	0.48
8:A:2736:A:H2'	8:A:2737:G:C8	2.49	0.48
8:A:2786:U:O2'	11:D:63:PRO:HA	2.14	0.48
8:A:2839:G:C2	8:A:2878:U:O2	2.66	0.48
9:B:109:A:H2'	9:B:110:C:O4'	2.14	0.48
10:C:77:VAL:HB	10:C:111:ALA:HA	1.94	0.48
11:D:7:LYS:CD	11:D:198:GLY:HA2	2.44	0.48
13:F:68:LYS:HG3	13:F:82:TYR:C	2.39	0.48
13:F:68:LYS:HA	13:F:83:PRO:HA	1.96	0.48
15:H:1:MET:O	15:H:20:ASN:HA	2.13	0.48
15:H:126:GLY:O	15:H:128:HIS:ND1	2.45	0.48
17:J:77:HIS:CE1	17:J:80:HIS:O	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:71:ALA:HA	19:L:74:THR:HB	1.95	0.48
21:N:33:ILE:HG13	21:N:113:ILE:C	2.39	0.48
22:O:27:VAL:CG2	22:O:40:ILE:HD12	2.41	0.48
25:R:30:GLY:O	25:R:62:GLU:OE2	2.32	0.48
25:R:34:GLU:N	25:R:34:GLU:OE1	2.47	0.48
25:R:46:GLU:HG3	25:R:48:LYS:HE3	1.96	0.48
26:S:76:VAL:HA	26:S:102:HIS:O	2.14	0.48
28:U:45:GLN:O	28:U:55:GLY:CA	2.62	0.48
29:V:21:ARG:HE	29:V:27:PRO:HD2	1.78	0.48
29:V:81:PRO:HB2	29:V:82:TYR:HD1	1.78	0.48
31:X:4:CYS:HB3	31:X:9:LYS:N	2.28	0.48
34:a:38:G:OP1	45:l:122:LYS:NZ	2.47	0.48
34:a:65:A:C5	34:a:381:C:C5	3.02	0.48
34:a:75:G:C2	34:a:96:U:N3	2.81	0.48
34:a:108:G:C2	53:t:9:ARG:HG3	2.49	0.48
34:a:233:C:H2'	34:a:234:C:H6	1.79	0.48
34:a:253:A:C6	34:a:254:G:C5	3.02	0.48
34:a:313:A:H2'	34:a:314:C:C6	2.49	0.48
34:a:321:A:H2'	34:a:322:C:C6	2.48	0.48
34:a:375:U:C2	34:a:376:G:C8	3.02	0.48
34:a:440:C:N3	34:a:441:A:C5	2.82	0.48
34:a:451:A:OP1	34:a:481:G:O6	2.32	0.48
34:a:500:G:C6	34:a:546:A:C2	3.02	0.48
34:a:547:A:OP2	37:d:1:ALA:CA	2.61	0.48
34:a:561:U:O2'	34:a:562:U:P	2.71	0.48
34:a:570:G:H2'	34:a:571:U:C6	2.49	0.48
34:a:633:G:C6	34:a:634:C:N4	2.81	0.48
34:a:670:G:C2	34:a:737:C:C2	3.01	0.48
34:a:679:C:H2'	34:a:680:C:C6	2.48	0.48
34:a:863:U:H2'	34:a:865:A:OP2	2.13	0.48
34:a:927:G:C2	34:a:1391:U:H1'	2.49	0.48
34:a:940:C:H2'	34:a:941:G:C8	2.48	0.48
34:a:949:A:C4	34:a:950:U:C5	3.02	0.48
34:a:953:G:N1	34:a:1229:A:C6	2.81	0.48
34:a:975:A:O2'	47:n:72:GLY:HA2	2.14	0.48
34:a:980:C:H2'	34:a:981:U:H5'	1.96	0.48
34:a:1015:G:H2'	34:a:1016:A:O4'	2.14	0.48
34:a:1054:C:O5'	34:a:1196:A:O2'	2.32	0.48
34:a:1080:A:H3'	34:a:1081:A:C1'	2.43	0.48
34:a:1088:G:H21	34:a:1167:A:N6	2.12	0.48
34:a:1186:G:C4	34:a:1187:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1237:C:H4'	34:a:1300:G:N2	2.29	0.48
34:a:1248:A:H2'	34:a:1249:C:H6	1.78	0.48
34:a:1249:C:C2	34:a:1289:A:N6	2.81	0.48
34:a:1250:A:C8	34:a:1287:A:N7	2.81	0.48
34:a:1275:A:H3'	34:a:1276:G:C8	2.49	0.48
34:a:1303:C:OP1	34:a:1304:G:OP2	2.30	0.48
34:a:1387:G:C4	34:a:1388:C:C5	3.01	0.48
34:a:1388:C:H2'	34:a:1389:C:H6	1.79	0.48
34:a:1453:G:C6	34:a:1454:G:H1'	2.49	0.48
34:a:1510:C:N4	34:a:1526:G:O6	2.46	0.48
35:b:129:THR:HB	35:b:132:GLU:HG2	1.95	0.48
37:d:77:GLU:O	37:d:78:ALA:HB3	2.14	0.48
37:d:167:PRO:HA	37:d:169:TRP:CZ3	2.48	0.48
38:e:63:MET:O	38:e:67:ARG:HD3	2.14	0.48
43:j:56:HIS:CG	43:j:57:VAL:H	2.32	0.48
45:l:86:VAL:C	45:l:88:ASP:H	2.21	0.48
46:m:33:LEU:CD2	46:m:40:GLU:HA	2.44	0.48
50:q:49:ASN:O	50:q:50:ASN:C	2.57	0.48
55:v:9:G:O4'	55:v:46:A:O4'	2.32	0.48
55:v:27:U:H2'	55:v:28:C:C6	2.48	0.48
56:w:38:A:C5	56:w:39:PSU:C4	3.02	0.48
57:x:493:ILE:HG23	57:x:604:PHE:CD1	2.48	0.48
57:x:617:LYS:HG3	57:x:619:GLU:OE2	2.14	0.48
5:4:7:VAL:HB	5:4:25:VAL:CG2	2.43	0.48
8:A:35:G:C5	8:A:36:G:C8	3.02	0.48
8:A:58:G:H1'	8:A:70:G:N2	2.29	0.48
8:A:178:G:C6	8:A:179:C:C4	3.01	0.48
8:A:199:A:C6	8:A:2433:A:H2'	2.48	0.48
8:A:332:A:C8	8:A:335:C:N4	2.82	0.48
8:A:408:G:N2	8:A:419:U:O2	2.40	0.48
8:A:438:G:H2'	8:A:439:A:C8	2.49	0.48
8:A:447:A:C6	8:A:454:A:C5	3.02	0.48
8:A:534:U:N3	8:A:559:G:C6	2.77	0.48
8:A:630:G:C5	8:A:632:A:OP2	2.66	0.48
8:A:642:U:O2	8:A:644:A:H3'	2.14	0.48
8:A:650:C:C4	8:A:651:G:N7	2.82	0.48
8:A:668:A:H2'	8:A:670:A:N6	2.29	0.48
8:A:671:C:O2'	8:A:672:C:H5'	2.14	0.48
8:A:792:A:C5	8:A:2440:C:C2	3.02	0.48
8:A:836:G:C5	8:A:837:C:C5	3.01	0.48
8:A:838:C:H2'	8:A:839:U:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:933:A:H5''	8:A:934:U:H5	1.78	0.48
8:A:1045:C:C4	8:A:1111:A:C5	3.01	0.48
8:A:1064:C:H4'	16:I:89:SER:CB	2.44	0.48
8:A:1147:A:H2'	8:A:1148:U:O4'	2.14	0.48
8:A:1151:A:H4'	24:Q:80:ASN:ND2	2.28	0.48
8:A:1168:G:C4	8:A:1182:G:N2	2.82	0.48
8:A:1191:G:H2'	8:A:1192:G:O4'	2.14	0.48
8:A:1268:A:H61	8:A:2012:G:C2'	2.27	0.48
8:A:1280:G:C6	8:A:1281:G:C5	3.02	0.48
8:A:1300:G:N2	8:A:1634:A:C2	2.82	0.48
8:A:1323:C:N4	8:A:1324:G:O6	2.47	0.48
8:A:1362:C:N3	8:A:1363:C:C5	2.82	0.48
8:A:1441:G:C6	8:A:1551:A:N1	2.82	0.48
8:A:1492:G:N1	8:A:1499:C:N3	2.62	0.48
8:A:1625:C:H2'	8:A:1626:A:O4'	2.13	0.48
8:A:1640:A:H2'	8:A:1641:A:C8	2.48	0.48
8:A:1661:G:C6	8:A:1662:U:C4	3.02	0.48
8:A:1670:C:OP2	8:A:2550:G:OP1	2.32	0.48
8:A:1673:G:O6	11:D:134:HIS:ND1	2.47	0.48
8:A:1824:G:OP1	10:C:51:ARG:NH2	2.45	0.48
8:A:1862:G:N1	8:A:1881:C:C4	2.82	0.48
8:A:1863:G:H2'	8:A:1864:U:H6	1.79	0.48
8:A:1924:C:H2'	8:A:1925:C:C6	2.49	0.48
8:A:1927:A:C6	8:A:1928:A:N6	2.82	0.48
8:A:1998:A:C6	8:A:1999:C:N4	2.82	0.48
8:A:2046:G:C4	8:A:2047:C:C5	3.02	0.48
8:A:2114:A:C2	8:A:2116:G:O6	2.67	0.48
8:A:2185:U:C2	8:A:2186:G:N7	2.82	0.48
8:A:2223:G:H2'	8:A:2224:G:O4'	2.14	0.48
8:A:2259:U:C6	8:A:2427:C:C4	3.02	0.48
8:A:2291:U:H2'	8:A:2292:U:H6	1.77	0.48
8:A:2299:U:C4	8:A:2318:G:N2	2.82	0.48
8:A:2361:G:C6	8:A:2362:C:C4	3.02	0.48
8:A:2469:A:N6	8:A:2481:G:C2'	2.77	0.48
8:A:2547:A:H2'	8:A:2548:U:C6	2.49	0.48
8:A:2675:A:H2'	8:A:2676:C:H6	1.79	0.48
8:A:2679:A:C5	8:A:2680:U:C5	3.02	0.48
8:A:2739:U:C2	8:A:2740:A:C8	3.01	0.48
8:A:2749:A:H5''	8:A:2750:A:H5''	1.96	0.48
8:A:2783:U:H2'	8:A:2784:U:C6	2.48	0.48
8:A:2788:C:C5'	11:D:62:LYS:NZ	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:44:G:H5''	9:B:45:A:N7	2.28	0.48
9:B:46:A:O3'	22:O:3:LYS:HE3	2.13	0.48
12:E:111:GLU:HB2	12:E:114:ARG:NH2	2.29	0.48
13:F:107:VAL:HA	13:F:110:ILE:CD1	2.44	0.48
13:F:124:ARG:HA	13:F:160:LYS:O	2.14	0.48
14:G:156:TYR:HA	14:G:171:LYS:O	2.14	0.48
20:M:77:PRO:O	20:M:80:VAL:HG22	2.14	0.48
22:O:36:TYR:CD2	22:O:52:SER:HB2	2.49	0.48
23:P:17:PRO:HG3	23:P:83:ILE:HB	1.95	0.48
23:P:46:VAL:HA	23:P:59:THR:O	2.14	0.48
27:T:67:VAL:HG23	27:T:76:ARG:NH1	2.29	0.48
28:U:83:GLY:CA	28:U:96:LYS:HE3	2.44	0.48
29:V:4:ILE:HG22	29:V:5:ASN:O	2.14	0.48
31:X:2:ARG:O	31:X:11:PRO:HD3	2.14	0.48
34:a:28:A:O2'	34:a:296:U:OP1	2.32	0.48
34:a:28:A:C6	34:a:29:U:C4	3.02	0.48
34:a:35:G:H2'	34:a:36:C:H6	1.77	0.48
34:a:53:A:C6	34:a:359:G:C6	3.01	0.48
34:a:74:A:C4	34:a:75:G:C8	3.02	0.48
34:a:113:G:C6	34:a:315:A:N6	2.81	0.48
34:a:175:C:HO2'	34:a:1447:A:N6	2.12	0.48
34:a:389:A:H3'	34:a:390:U:C6	2.48	0.48
34:a:475:C:H2'	34:a:476:U:O4'	2.14	0.48
34:a:495:A:C4	34:a:496:A:C6	3.02	0.48
34:a:500:G:C6	34:a:501:C:N4	2.82	0.48
34:a:542:G:H2'	34:a:543:U:H6	1.78	0.48
34:a:560:A:HO2'	38:e:127:TYR:HD1	1.60	0.48
34:a:562:U:C6	45:l:14:LYS:HE2	2.48	0.48
34:a:680:C:N3	34:a:711:G:N1	2.62	0.48
34:a:692:U:N3	34:a:695:A:OP2	2.37	0.48
34:a:697:U:H2'	34:a:698:G:O4'	2.14	0.48
34:a:834:U:H2'	34:a:835:U:H6	1.77	0.48
34:a:1032:G:C4	34:a:1034:G:N2	2.81	0.48
34:a:1134:G:H2'	34:a:1135:U:C6	2.49	0.48
34:a:1151:A:C2	34:a:1152:A:C5	3.02	0.48
34:a:1260:G:N2	34:a:1275:A:C8	2.73	0.48
34:a:1268:G:H1'	34:a:1326:U:O2'	2.14	0.48
34:a:1320:C:P	52:s:69:LYS:HE3	2.54	0.48
34:a:1528:U:O2'	34:a:1530:G:H5''	2.14	0.48
36:c:71:ARG:HB3	36:c:74:ILE:HD11	1.96	0.48
36:c:155:ARG:CZ	36:c:192:TYR:HB3	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:8:LEU:HD22	37:d:27:ILE:HG21	1.96	0.48
39:f:5:GLU:CB	39:f:92:THR:HG21	2.43	0.48
49:p:2:VAL:HA	49:p:23:ASP:HA	1.95	0.48
50:q:22:VAL:O	50:q:42:LYS:HA	2.14	0.48
53:t:14:GLU:HG2	53:t:18:LYS:HE2	1.96	0.48
55:v:21:A:C4	55:v:48:C:N3	2.82	0.48
55:v:23:C:H2'	55:v:24:U:H6	1.79	0.48
55:v:70:G:C6	55:v:71:C:N4	2.82	0.48
56:w:39:PSU:C6	56:w:40:C:C5	3.02	0.48
56:w:51:C:H2'	56:w:52:G:H8	1.79	0.48
57:x:19:ASP:HA	62:x:801:GDP:O2B	2.14	0.48
57:x:323:ILE:HD11	57:x:391:THR:HA	1.96	0.48
57:x:613:GLU:HG2	57:x:687:ASP:O	2.13	0.48
57:x:637:ARG:O	57:x:638:ARG:HG3	2.14	0.48
2:1:8:ILE:HD11	2:1:22:THR:HG23	1.96	0.47
2:1:31:GLU:N	2:1:31:GLU:OE1	2.44	0.47
8:A:1:G:C2	8:A:2:G:C5	3.02	0.47
8:A:32:C:N4	8:A:474:G:O6	2.47	0.47
8:A:104:A:C5	8:A:105:C:C5	3.02	0.47
8:A:208:C:H2'	8:A:209:C:H6	1.76	0.47
8:A:230:G:C2	8:A:231:A:C8	3.02	0.47
8:A:268:C:N4	8:A:425:G:C6	2.82	0.47
8:A:311:A:C8	8:A:332:A:N7	2.82	0.47
8:A:323:C:O2	8:A:1205:A:C2	2.67	0.47
8:A:348:A:H2'	8:A:349:U:O4'	2.13	0.47
8:A:484:C:C2	8:A:485:C:C5	3.02	0.47
8:A:495:G:C2'	26:S:61:ASN:HD22	2.27	0.47
8:A:527:C:C6	8:A:2043:C:O4'	2.66	0.47
8:A:580:U:H2'	8:A:581:C:H6	1.77	0.47
8:A:609:A:H3'	8:A:610:C:C6	2.49	0.47
8:A:637:A:OP2	19:L:128:THR:HG21	2.14	0.47
8:A:704:G:O2'	8:A:727:A:N6	2.47	0.47
8:A:712:G:C2	8:A:720:U:O2	2.67	0.47
8:A:795:C:H2'	8:A:796:C:C6	2.49	0.47
8:A:805:G:H5'	8:A:806:C:C5	2.48	0.47
8:A:806:C:H3'	19:L:41:ARG:NH1	2.28	0.47
8:A:816:C:C4	8:A:1192:G:N1	2.82	0.47
8:A:834:G:H2'	8:A:835:C:C6	2.48	0.47
8:A:879:G:H2'	8:A:880:G:C8	2.49	0.47
8:A:912:C:O2'	8:A:913:U:H5'	2.14	0.47
8:A:992:C:H2'	8:A:993:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1220:G:C6	8:A:1230:A:N1	2.82	0.47
8:A:1264:A:C6	8:A:1265:A:N6	2.82	0.47
8:A:1361:G:C6	8:A:1362:C:C4	3.02	0.47
8:A:1432:G:C2	8:A:1433:A:C5	3.02	0.47
8:A:1448:G:C6	8:A:1464:G:C6	3.01	0.47
8:A:1497:U:O4	8:A:1578:U:H5'	2.13	0.47
8:A:1615:C:N4	8:A:1617:C:O2	2.47	0.47
8:A:1656:C:OP1	11:D:141:ARG:NH2	2.47	0.47
8:A:1719:G:H2'	8:A:1720:U:C6	2.49	0.47
8:A:1726:C:N3	8:A:1735:A:N1	2.61	0.47
8:A:1801:A:O4'	8:A:2203:U:C2	2.67	0.47
8:A:1949:G:H2'	8:A:1950:G:O4'	2.14	0.47
8:A:2271:G:C5'	30:W:16:ARG:NE	2.77	0.47
8:A:2313:C:O3'	13:F:87:LYS:NZ	2.43	0.47
8:A:2328:A:H2'	8:A:2329:U:H6	1.77	0.47
8:A:2350:C:N3	8:A:2368:C:N4	2.62	0.47
8:A:2421:G:H2'	55:v:76:A:C5	2.49	0.47
8:A:2447:G:C8	8:A:2500:U:H3'	2.49	0.47
8:A:2531:A:H5'	14:G:173:ALA:O	2.14	0.47
8:A:2536:G:C6	8:A:2537:U:C4	3.01	0.47
8:A:2657:A:N6	8:A:2664:G:H1'	2.28	0.47
8:A:2739:U:H5'	8:A:2763:G:O6	2.14	0.47
9:B:16:G:N1	9:B:17:C:C4	2.82	0.47
9:B:46:A:C4	9:B:47:C:C6	3.02	0.47
9:B:66:A:N6	9:B:107:G:H3'	2.27	0.47
10:C:2:VAL:HG22	10:C:18:VAL:HG22	1.96	0.47
10:C:224:MET:HB3	10:C:228:ASP:HB2	1.95	0.47
11:D:13:ARG:HD2	11:D:15:PHE:CE2	2.49	0.47
12:E:14:VAL:HB	12:E:19:PHE:CD2	2.49	0.47
17:J:72:LYS:O	17:J:88:THR:HA	2.15	0.47
18:K:98:ARG:HH12	34:a:339:C:P	2.36	0.47
21:N:103:ARG:HG3	21:N:104:ALA:N	2.29	0.47
22:O:31:THR:O	22:O:32:PRO:C	2.56	0.47
22:O:58:ILE:HD13	22:O:74:VAL:HG22	1.95	0.47
23:P:52:ARG:HB2	23:P:55:HIS:C	2.39	0.47
25:R:1:MET:HA	25:R:43:ASN:N	2.29	0.47
34:a:38:G:P	45:l:122:LYS:NZ	2.87	0.47
34:a:71:A:H61	34:a:99:C:H1'	1.79	0.47
34:a:112:G:H21	34:a:354:G:C4'	2.27	0.47
34:a:243:A:C2	34:a:246:A:H5'	2.41	0.47
34:a:261:U:C4	53:t:73:ARG:CZ	2.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:300:A:H2'	34:a:564:C:N4	2.29	0.47
34:a:340:U:C2	34:a:350:G:C2	3.02	0.47
34:a:525:C:C2	34:a:526:C:C5	3.02	0.47
34:a:683:G:C2	34:a:707:U:O2	2.66	0.47
34:a:836:G:C6	34:a:851:G:C8	3.01	0.47
34:a:922:G:C6	34:a:923:A:C6	3.02	0.47
34:a:1004:A:H4'	34:a:1033:G:H1	1.79	0.47
34:a:1015:G:H1'	34:a:1218:C:O2'	2.14	0.47
34:a:1017:U:H2'	34:a:1018:G:C8	2.48	0.47
34:a:1042:A:C2'	34:a:1043:G:O4'	2.62	0.47
34:a:1080:A:OP1	38:e:51:LYS:HD2	2.14	0.47
34:a:1238:A:H5'	34:a:1336:C:N4	2.27	0.47
34:a:1244:G:C6	34:a:1245:C:C4	3.02	0.47
34:a:1301:U:N3	34:a:1303:C:C6	2.82	0.47
34:a:1305:G:C4	34:a:1331:G:C8	3.02	0.47
34:a:1323:G:N1	34:a:1324:A:C5	2.82	0.47
34:a:1489:G:H2'	34:a:1490:U:C6	2.49	0.47
34:a:1510:C:H2'	34:a:1511:G:C8	2.49	0.47
35:b:111:LYS:HD3	35:b:112:ARG:NH1	2.29	0.47
37:d:8:LEU:CD2	37:d:27:ILE:HG12	2.43	0.47
37:d:53:GLN:HG3	37:d:198:LEU:HD11	1.94	0.47
37:d:106:PHE:HD1	37:d:158:LEU:HD11	1.77	0.47
37:d:182:LYS:HZ2	37:d:183:ARG:HG2	1.79	0.47
38:e:20:VAL:N	38:e:31:SER:O	2.39	0.47
38:e:44:ARG:HE	38:e:72:ASN:HB3	1.79	0.47
38:e:92:ARG:N	38:e:127:TYR:O	2.47	0.47
38:e:135:VAL:HG13	38:e:136:VAL:N	2.29	0.47
38:e:136:VAL:HG12	38:e:140:ILE:HD12	1.95	0.47
40:g:115:MET:O	40:g:118:ARG:HG2	2.14	0.47
41:h:6:ILE:HG21	41:h:76:ARG:NH1	2.29	0.47
41:h:40:LYS:HE3	41:h:48:PHE:HD1	1.78	0.47
41:h:86:LYS:O	41:h:122:GLY:N	2.29	0.47
41:h:95:MET:SD	41:h:129:ALA:HB1	2.54	0.47
41:h:105:THR:HB	41:h:120:LEU:CD1	2.44	0.47
42:i:32:ARG:HB3	42:i:36:GLN:CD	2.39	0.47
48:o:42:PHE:CZ	48:o:52:ARG:HA	2.49	0.47
49:p:67:ILE:HG23	49:p:71:VAL:CG1	2.44	0.47
51:r:54:LEU:O	51:r:58:ILE:HG12	2.14	0.47
55:v:50:U:H3	55:v:64:G:H1	1.62	0.47
57:x:117:GLY:HA2	57:x:153:VAL:HG22	1.96	0.47
57:x:227:GLU:HG3	57:x:254:ARG:HH12	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:411:PRO:HB2	57:x:460:MET:SD	2.53	0.47
57:x:518:VAL:HG22	57:x:579:PHE:N	2.27	0.47
57:x:665:TYR:HB3	57:x:679:TYR:CZ	2.49	0.47
57:x:670:ARG:HG3	57:x:675:GLY:HA2	1.95	0.47
5:4:15:LYS:HB2	5:4:26:ILE:CD1	2.44	0.47
8:A:39:G:C2	8:A:441:U:C2	3.02	0.47
8:A:52:A:OP2	8:A:117:G:C2	2.67	0.47
8:A:77:G:O4'	32:Y:55:THR:HG21	2.14	0.47
8:A:102:U:O4	32:Y:2:LYS:CB	2.62	0.47
8:A:103:A:O5'	8:A:103:A:H8	1.97	0.47
8:A:241:A:C4'	8:A:243:U:O4'	2.62	0.47
8:A:307:G:O6	28:U:18:LYS:NZ	2.44	0.47
8:A:330:A:H1'	8:A:1210:G:C6	2.49	0.47
8:A:376:G:C2	8:A:377:G:C5	3.02	0.47
8:A:401:A:C2	8:A:402:A:C2	3.02	0.47
8:A:539:G:H1	8:A:554:U:H3	1.61	0.47
8:A:544:C:C4	8:A:545:U:O4	2.68	0.47
8:A:596:U:C2	8:A:662:G:C2	3.02	0.47
8:A:612:G:H3'	8:A:614:A:N7	2.29	0.47
8:A:634:C:H2'	8:A:635:C:H6	1.78	0.47
8:A:662:G:H2'	8:A:663:G:H8	1.79	0.47
8:A:740:C:N3	8:A:758:C:H1'	2.29	0.47
8:A:762:U:C6	8:A:763:G:N1	2.82	0.47
8:A:813:U:C4	8:A:1195:G:N1	2.83	0.47
8:A:813:U:C5	19:L:25:SER:HA	2.48	0.47
8:A:879:G:C2	8:A:880:G:C4	3.02	0.47
8:A:956:G:OP1	20:M:86:LYS:HG3	2.14	0.47
8:A:999:U:N3	8:A:1000:A:N7	2.62	0.47
8:A:1010:A:C5'	24:Q:65:ASN:ND2	2.76	0.47
8:A:1168:G:C6	8:A:1169:A:N6	2.81	0.47
8:A:1171:G:C6	8:A:1178:C:N4	2.82	0.47
8:A:1200:C:N3	8:A:1246:A:N1	2.61	0.47
8:A:1290:C:H2'	8:A:1291:C:H6	1.79	0.47
8:A:1419:A:C8	8:A:1579:A:C6	3.02	0.47
8:A:1430:G:H2'	8:A:1431:A:C8	2.49	0.47
8:A:1448:G:C6	8:A:1464:G:N1	2.82	0.47
8:A:1501:G:OP1	10:C:100:ARG:NH2	2.47	0.47
8:A:1593:A:C6	8:A:1594:U:N3	2.82	0.47
8:A:1641:A:N6	8:A:1642:G:C2	2.82	0.47
8:A:1663:G:N1	8:A:1998:A:C6	2.82	0.47
8:A:1715:G:O2'	8:A:1716:U:C6	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1796:U:H3	8:A:1823:G:H1	1.61	0.47
8:A:1800:C:C6	8:A:1802:A:H1'	2.49	0.47
8:A:1818:U:OP2	10:C:155:ARG:CZ	2.62	0.47
8:A:1918:A:O2'	8:A:1919:A:C5	2.63	0.47
8:A:2028:U:C4	8:A:2029:G:C6	3.02	0.47
8:A:2061:G:P	12:E:63:LYS:NZ	2.87	0.47
8:A:2140:G:O2'	8:A:2141:G:C2	2.63	0.47
8:A:2314:A:H2'	8:A:2315:G:O4'	2.13	0.47
8:A:2468:A:N1	8:A:2481:G:H2'	2.29	0.47
8:A:2648:G:C2	8:A:2673:G:C4	3.02	0.47
8:A:2685:G:N3	8:A:2686:G:C8	2.82	0.47
8:A:2696:U:C4	8:A:2714:G:C2	3.03	0.47
8:A:2720:U:H2'	8:A:2721:A:O4'	2.14	0.47
8:A:2852:G:O6	8:A:2866:U:O4	2.31	0.47
9:B:23:G:C6	9:B:61:G:N1	2.82	0.47
9:B:41:G:OP1	9:B:42:C:C5	2.66	0.47
9:B:59:A:C6	9:B:60:C:C2	3.02	0.47
9:B:109:A:C5	9:B:110:C:C5	3.02	0.47
10:C:210:ALA:HB1	10:C:215:VAL:HG11	1.96	0.47
12:E:106:LYS:HE2	12:E:200:LEU:HG	1.96	0.47
13:F:74:ALA:HA	13:F:77:LYS:HD3	1.95	0.47
14:G:148:ARG:HE	14:G:166:GLU:CD	2.22	0.47
31:X:70:LEU:N	31:X:70:LEU:HD12	2.29	0.47
33:Z:43:ILE:HD13	33:Z:46:MET:HE3	1.96	0.47
34:a:34:C:C1'	45:l:28:GLN:NE2	2.77	0.47
34:a:200:G:N1	34:a:218:U:N3	2.62	0.47
34:a:251:G:C2	34:a:254:G:O6	2.67	0.47
34:a:289:G:C2	34:a:312:C:C2	3.02	0.47
34:a:289:G:O6	34:a:312:C:N4	2.46	0.47
34:a:322:C:C2	34:a:332:G:N2	2.82	0.47
34:a:433:G:C6	34:a:434:U:C4	3.03	0.47
34:a:464:U:C2	34:a:466:A:C8	2.99	0.47
34:a:585:G:C6	34:a:586:C:C4	3.02	0.47
34:a:592:G:C2	34:a:648:A:C4	3.02	0.47
34:a:600:A:C5	34:a:639:G:C2	3.02	0.47
34:a:626:G:H2'	34:a:627:G:C8	2.49	0.47
34:a:671:G:C2	34:a:736:C:N3	2.83	0.47
34:a:842:U:O3'	34:a:846:G:N7	2.46	0.47
34:a:944:G:C2	34:a:1340:A:C6	3.02	0.47
34:a:945:G:C2'	34:a:946:A:H5'	2.44	0.47
34:a:1000:A:C6	34:a:1041:G:C6	3.01	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1028:C:C2	34:a:1034:G:C8	3.02	0.47
34:a:1040:U:H2'	34:a:1041:G:C8	2.49	0.47
34:a:1152:A:P	43:j:72:ARG:HH22	2.36	0.47
34:a:1242:G:C4	34:a:1243:C:C5	3.01	0.47
34:a:1250:A:N9	34:a:1287:A:N7	2.62	0.47
34:a:1261:A:O2'	34:a:1283:U:H5''	2.14	0.47
34:a:1353:G:C2	34:a:1354:U:C6	3.02	0.47
34:a:1430:A:C6	34:a:1431:A:C4	3.02	0.47
36:c:141:MET:HG3	36:c:169:GLU:HB3	1.96	0.47
36:c:150:VAL:O	36:c:166:TRP:CB	2.62	0.47
37:d:58:GLN:HB3	37:d:62:ARG:CZ	2.44	0.47
40:g:24:LYS:O	40:g:28:ILE:HG13	2.14	0.47
45:l:8:ARG:HG2	45:l:9:LYS:HE2	1.96	0.47
49:p:20:VAL:HG21	49:p:32:PHE:CG	2.49	0.47
56:w:35:A:H2'	56:w:36:A:C8	2.50	0.47
56:w:35:A:C4'	57:x:585:VAL:HG21	2.43	0.47
57:x:14:ILE:O	57:x:14:ILE:CG1	2.61	0.47
57:x:110:MET:HG3	57:x:126:TRP:CZ3	2.49	0.47
57:x:174:ALA:H	57:x:177:HIS:CE1	2.31	0.47
57:x:224:SER:C	57:x:251:LEU:HD21	2.40	0.47
57:x:352:VAL:HG11	57:x:408:MET:HE1	1.95	0.47
57:x:395:THR:HG21	57:x:404:ILE:HA	1.95	0.47
57:x:618:VAL:HG21	57:x:662:MET:SD	2.54	0.47
2:1:43:ARG:CZ	8:A:643:A:C5	2.97	0.47
3:2:2:LYS:CE	8:A:687:C:H5''	2.43	0.47
5:4:7:VAL:HA	5:4:35:GLN:NE2	2.30	0.47
8:A:111:A:C6	8:A:112:U:C4	3.02	0.47
8:A:132:G:N1	8:A:148:U:N3	2.62	0.47
8:A:182:A:C6	8:A:183:C:C4	3.02	0.47
8:A:206:U:H2'	8:A:207:A:H8	1.79	0.47
8:A:216:A:N9	8:A:432:A:N6	2.62	0.47
8:A:219:A:H61	8:A:428:A:P	2.37	0.47
8:A:260:G:O4'	8:A:621:A:O2'	2.19	0.47
8:A:310:A:C8	8:A:312:G:C6	3.02	0.47
8:A:391:A:H2'	8:A:391:A:N3	2.28	0.47
8:A:428:A:C6	8:A:429:A:C6	3.02	0.47
8:A:475:C:O3'	8:A:510:C:H5'	2.14	0.47
8:A:519:U:H5''	26:S:25:ARG:HH12	1.78	0.47
8:A:751:A:H5'	26:S:90:LYS:CA	2.44	0.47
8:A:763:G:C4	8:A:765:C:C6	3.03	0.47
8:A:862:G:C6	8:A:863:A:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:869:G:C5	8:A:870:U:C5	3.03	0.47
8:A:897:C:H3'	8:A:898:C:H6	1.79	0.47
8:A:974:G:O2'	8:A:989:G:C2	2.67	0.47
8:A:1005:C:H2'	8:A:1006:C:C6	2.49	0.47
8:A:1022:G:C4	8:A:1141:U:C4	3.02	0.47
8:A:1137:G:C2	8:A:1138:G:C4	3.02	0.47
8:A:1169:A:C2	8:A:1181:U:C2	3.03	0.47
8:A:1177:G:C6	8:A:1178:C:C5	3.02	0.47
8:A:1228:G:H2'	8:A:1229:C:C6	2.49	0.47
8:A:1275:A:C5	21:N:16:HIS:CD2	3.02	0.47
8:A:1294:U:H2'	21:N:23:ASN:HD21	1.80	0.47
8:A:1342:A:O4'	8:A:1397:U:O4'	2.32	0.47
8:A:1360:G:N1	8:A:1372:U:C2	2.82	0.47
8:A:1387:A:C2	8:A:1401:G:C2	3.03	0.47
8:A:1416:G:C2	8:A:1417:C:C2	3.02	0.47
8:A:1431:A:H2'	8:A:1432:G:H8	1.79	0.47
8:A:1537:G:C6	8:A:1538:G:H1'	2.50	0.47
8:A:1581:G:H2'	8:A:1582:C:H6	1.79	0.47
8:A:1699:G:C4	8:A:1763:G:N2	2.82	0.47
8:A:1739:A:C4	8:A:1740:G:C8	3.02	0.47
8:A:1767:G:C2	8:A:1986:C:C2	3.02	0.47
8:A:1839:G:C4	8:A:1840:G:C8	3.02	0.47
8:A:1891:G:C6	8:A:1892:C:C4	3.03	0.47
8:A:1903:G:OP1	10:C:239:PHE:HB3	2.14	0.47
8:A:1907:G:C6	8:A:1924:C:N4	2.81	0.47
8:A:1946:U:C2	8:A:1947:C:C5	3.02	0.47
8:A:2004:G:H2'	8:A:2005:A:O4'	2.14	0.47
8:A:2053:G:H2'	8:A:2054:A:O4'	2.13	0.47
8:A:2184:A:C6	8:A:2185:U:C2	3.01	0.47
8:A:2271:G:C5	8:A:2272:U:C4	3.02	0.47
8:A:2272:U:H5''	8:A:2273:A:OP1	2.13	0.47
8:A:2284:A:C6	8:A:2285:C:C4	3.02	0.47
8:A:2285:C:O4'	8:A:2288:A:C6	2.67	0.47
8:A:2307:G:H4'	8:A:2308:G:C5'	2.43	0.47
8:A:2397:G:H2'	8:A:2398:U:C6	2.50	0.47
8:A:2401:U:O2	8:A:2416:C:N3	2.47	0.47
8:A:2404:U:H3	8:A:2413:G:H1	1.62	0.47
8:A:2454:G:N2	8:A:2455:G:H1'	2.29	0.47
8:A:2514:U:H3	8:A:2570:G:H1	1.61	0.47
8:A:2683:C:H42	8:A:2727:A:H1'	1.79	0.47
9:B:89:U:H5'	9:B:90:C:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:114:C:H2'	9:B:115:A:H8	1.79	0.47
10:C:3:VAL:CG2	10:C:17:LYS:HB2	2.42	0.47
10:C:226:PRO:HG3	10:C:233:GLY:HA3	1.97	0.47
10:C:259:ASN:C	10:C:259:ASN:HD22	2.23	0.47
12:E:78:TRP:CD1	12:E:78:TRP:N	2.81	0.47
12:E:118:LEU:HD12	12:E:186:VAL:O	2.13	0.47
13:F:72:SER:CB	13:F:79:ARG:HA	2.44	0.47
13:F:134:GLN:NE2	13:F:147:ARG:O	2.47	0.47
14:G:84:LYS:HB2	14:G:132:LEU:HD12	1.95	0.47
17:J:16:TYR:CD1	17:J:140:LEU:HB2	2.48	0.47
18:K:64:ARG:NH2	18:K:101:GLY:HA3	2.29	0.47
19:L:119:PRO:CB	19:L:139:GLY:O	2.63	0.47
19:L:123:ARG:HA	19:L:143:GLU:O	2.14	0.47
23:P:60:VAL:HB	23:P:73:PHE:HE2	1.80	0.47
28:U:41:VAL:HG23	28:U:60:LYS:HG3	1.95	0.47
34:a:119:A:H62	34:a:287:U:C2'	2.27	0.47
34:a:124:C:O2'	34:a:125:U:H5'	2.14	0.47
34:a:283:U:C6	34:a:284:C:C5	3.02	0.47
34:a:284:C:C2	34:a:285:C:C5	3.03	0.47
34:a:316:C:C5	34:a:351:G:C5	3.03	0.47
34:a:367:U:P	57:x:358:ARG:HH12	2.37	0.47
34:a:404:G:N7	37:d:1:ALA:CB	2.78	0.47
34:a:417:G:N2	34:a:426:U:O2	2.47	0.47
34:a:524:G:C6	34:a:525:C:N4	2.82	0.47
34:a:567:G:C6	34:a:568:G:C5	3.03	0.47
34:a:603:U:H5	34:a:635:A:C2	2.31	0.47
34:a:748:G:N1	34:a:749:A:C6	2.82	0.47
34:a:965:U:O4'	34:a:969:A:H1'	2.14	0.47
34:a:1002:G:H2'	34:a:1003:G:C8	2.49	0.47
34:a:1004:A:OP1	34:a:1025:U:C2	2.68	0.47
34:a:1022:A:C6	34:a:1023:U:C2	3.02	0.47
34:a:1123:U:H1'	43:j:39:PRO:O	2.14	0.47
34:a:1130:A:C5	34:a:1131:G:C6	3.03	0.47
34:a:1170:A:C6	34:a:1171:A:C4	3.03	0.47
34:a:1227:A:C2	52:s:82:HIS:ND1	2.82	0.47
34:a:1296:C:C5'	34:a:1302:C:N4	2.77	0.47
34:a:1359:C:H4'	34:a:1362:A:H62	1.78	0.47
34:a:1405:G:O4'	34:a:1519:MA6:H4'	2.14	0.47
40:g:75:LYS:HE3	40:g:77:ARG:HB3	1.95	0.47
40:g:142:ARG:O	40:g:146:ALA:HB2	2.14	0.47
43:j:35:GLN:O	43:j:77:VAL:HB	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:j:52:LEU:HD21	43:j:59:LYS:HA	1.95	0.47
45:l:71:HIS:HB2	45:l:73:LEU:HD13	1.95	0.47
46:m:82:LEU:HD21	52:s:64:GLU:O	2.14	0.47
49:p:46:LYS:O	49:p:48:GLU:N	2.46	0.47
50:q:28:VAL:CG1	50:q:39:ARG:HG2	2.44	0.47
51:r:40:PRO:HG2	51:r:43:ILE:HG13	1.95	0.47
54:u:9:GLU:O	54:u:10:PRO:C	2.56	0.47
54:u:29:ALA:HA	54:u:32:ARG:NH1	2.29	0.47
55:v:66:C:N3	55:v:67:C:C5	2.83	0.47
56:w:3:C:H2'	56:w:4:C:C6	2.49	0.47
57:x:225:ALA:HA	57:x:251:LEU:HD21	1.96	0.47
57:x:251:LEU:HD23	57:x:251:LEU:HA	1.72	0.47
57:x:411:PRO:HG2	57:x:443:SER:CB	2.40	0.47
57:x:507:GLN:O	57:x:509:GLY:N	2.47	0.47
5:4:7:VAL:C	5:4:8:LYS:HG3	2.38	0.47
8:A:243:U:C2	8:A:244:A:C8	3.02	0.47
8:A:396:G:C4	8:A:397:U:C5	3.02	0.47
8:A:470:A:C6	8:A:471:A:C6	3.02	0.47
8:A:489:G:N2	8:A:1321:A:OP1	2.40	0.47
8:A:537:G:C2'	8:A:556:A:N6	2.77	0.47
8:A:556:A:OP2	8:A:557:C:N4	2.39	0.47
8:A:572:A:N1	8:A:2033:A:C2	2.83	0.47
8:A:572:A:C2	8:A:2033:A:C2	3.01	0.47
8:A:639:U:C2	8:A:640:C:C5	3.03	0.47
8:A:640:C:C4	8:A:649:G:N1	2.82	0.47
8:A:662:G:O3'	19:L:16:GLY:HA2	2.15	0.47
8:A:696:G:C2	8:A:766:U:O2	2.68	0.47
8:A:717:C:C6	8:A:718:A:C8	3.02	0.47
8:A:860:U:C5	8:A:916:G:N2	2.82	0.47
8:A:918:A:C2	8:A:919:U:H1'	2.49	0.47
8:A:1027:A:C6	8:A:1126:A:C4	3.02	0.47
8:A:1039:A:N1	8:A:1117:C:N3	2.63	0.47
8:A:1057:A:N1	8:A:1079:C:O2	2.47	0.47
8:A:1084:A:C1'	8:A:1105:U:H1'	2.43	0.47
8:A:1125:G:P	8:A:1126:A:O2'	2.73	0.47
8:A:1135:C:N4	8:A:1139:G:C5	2.82	0.47
8:A:1168:G:C6	8:A:1169:A:C6	3.03	0.47
8:A:1213:A:C8	8:A:1235:G:N2	2.82	0.47
8:A:1213:A:H8	8:A:1213:A:O5'	1.96	0.47
8:A:1358:G:N2	8:A:1372:U:C6	2.82	0.47
8:A:1436:G:C5	8:A:1437:C:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1441:G:H2'	8:A:1442:U:H6	1.73	0.47
8:A:1447:C:C2	8:A:1465:G:N2	2.82	0.47
8:A:1455:G:N1	8:A:1456:G:C5	2.82	0.47
8:A:1458:U:O4'	8:A:1459:G:N3	2.47	0.47
8:A:1479:G:H2'	8:A:1480:C:H6	1.78	0.47
8:A:1580:A:H2'	8:A:1581:G:O4'	2.13	0.47
8:A:1586:A:C6	8:A:1587:G:C5	3.02	0.47
8:A:1636:U:O2'	8:A:1760:C:C2'	2.62	0.47
8:A:1709:U:C2	8:A:1750:G:N2	2.82	0.47
8:A:1797:G:N1	8:A:1823:G:C5	2.82	0.47
8:A:1799:G:OP1	10:C:257:ARG:HD2	2.14	0.47
8:A:1811:G:C6	8:A:1812:U:C4	3.02	0.47
8:A:1816:C:H3'	10:C:61:TYR:CE1	2.49	0.47
8:A:1970:A:H1'	8:A:1972:G:C8	2.49	0.47
8:A:1980:G:C4	8:A:1982:U:C5	3.02	0.47
8:A:2024:G:C6	8:A:2040:G:N1	2.83	0.47
8:A:2043:C:N3	8:A:2777:G:C2	2.83	0.47
8:A:2048:G:C6	8:A:2049:G:C5	3.02	0.47
8:A:2067:G:C4	8:A:2069:G7M:HN73	2.48	0.47
8:A:2168:G:N7	8:A:2169:A:C8	2.82	0.47
8:A:2320:U:H4'	8:A:2321:U:C6	2.50	0.47
8:A:2331:G:C5	8:A:2332:C:C4	3.02	0.47
8:A:2415:G:H2'	8:A:2415:G:N3	2.29	0.47
8:A:2496:C:H3'	8:A:2497:A:C8	2.49	0.47
8:A:2581:G:H1'	8:A:2582:G:N7	2.29	0.47
8:A:2648:G:H2'	8:A:2649:C:C6	2.49	0.47
8:A:2739:U:C4	8:A:2763:G:H2'	2.49	0.47
8:A:2746:U:O4	8:A:2755:C:H4'	2.13	0.47
8:A:2820:A:O2'	8:A:2821:A:P	2.71	0.47
8:A:2820:A:O4'	21:N:4:ARG:HG2	2.14	0.47
9:B:15:A:OP2	9:B:69:G:N2	2.45	0.47
9:B:28:C:C2	9:B:29:A:C8	3.03	0.47
9:B:60:C:C2	9:B:61:G:C8	3.02	0.47
9:B:74:U:O4	9:B:102:G:C2	2.67	0.47
9:B:119:A:N1	9:B:120:U:C2	2.82	0.47
13:F:135:ILE:O	13:F:135:ILE:HG22	2.14	0.47
14:G:88:LEU:HD23	14:G:93:TYR:C	2.39	0.47
18:K:69:VAL:CG2	18:K:77:ILE:HB	2.43	0.47
18:K:71:ARG:NH1	18:K:106:GLU:CG	2.78	0.47
20:M:57:VAL:HG12	20:M:112:LEU:CG	2.43	0.47
22:O:71:ALA:HB1	22:O:102:ARG:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:81:GLY:N	24:Q:116:LEU:HD21	2.29	0.47
28:U:6:ARG:HA	28:U:27:VAL:HG23	1.95	0.47
30:W:48:GLY:HA3	30:W:56:PHE:CZ	2.50	0.47
33:Z:2:LYS:HD2	33:Z:39:ASP:HB3	1.96	0.47
34:a:17:U:N3	34:a:919:A:C2	2.82	0.47
34:a:37:U:H5'	45:l:122:LYS:NZ	2.29	0.47
34:a:113:G:H2'	34:a:114:U:H6	1.79	0.47
34:a:113:G:H2'	34:a:114:U:C6	2.50	0.47
34:a:204:G:C8	34:a:205:A:O4'	2.66	0.47
34:a:216:U:H4'	34:a:464:U:O2'	2.14	0.47
34:a:239:U:H5'	34:a:240:G:OP2	2.14	0.47
34:a:406:G:C4	34:a:495:A:C5	3.02	0.47
34:a:428:G:H5''	37:d:9:LYS:HD2	1.96	0.47
34:a:430:A:H4'	37:d:6:PRO:HB3	1.96	0.47
34:a:575:G:C6	34:a:821:G:N7	2.83	0.47
34:a:774:G:C2	34:a:806:C:N3	2.82	0.47
34:a:787:A:C5	34:a:788:U:C5	3.03	0.47
34:a:889:A:O4'	34:a:891:U:H1'	2.14	0.47
34:a:931:C:C2	34:a:1387:G:C2	3.02	0.47
34:a:937:A:C6	34:a:938:A:C5	3.01	0.47
34:a:950:U:OP2	46:m:100:ARG:NH1	2.48	0.47
34:a:958:A:N6	34:a:959:A:N1	2.62	0.47
34:a:1057:G:H4'	36:c:196:GLY:N	2.30	0.47
34:a:1060:U:H5''	43:j:53:ILE:CG2	2.44	0.47
34:a:1210:C:H3'	34:a:1211:U:H6	1.78	0.47
34:a:1227:A:H5''	52:s:82:HIS:HD1	1.79	0.47
34:a:1251:A:C2	34:a:1252:A:C4	3.02	0.47
34:a:1308:U:H4'	46:m:108:ARG:NH1	2.29	0.47
34:a:1329:A:N7	34:a:1331:G:N2	2.62	0.47
34:a:1349:A:C4	34:a:1350:A:C8	3.03	0.47
34:a:1458:G:C4	34:a:1459:G:C8	3.02	0.47
35:b:162:VAL:HG12	35:b:164:ASP:N	2.27	0.47
36:c:102:ILE:HG22	36:c:103:ALA:N	2.30	0.47
36:c:147:GLY:HA3	36:c:171:ARG:O	2.14	0.47
37:d:88:ASN:O	37:d:92:LEU:HD23	2.14	0.47
37:d:149:LYS:HB3	37:d:150:LYS:NZ	2.29	0.47
37:d:167:PRO:HB3	37:d:169:TRP:CH2	2.49	0.47
37:d:169:TRP:HA	37:d:183:ARG:HG3	1.96	0.47
39:f:3:HIS:HA	39:f:64:VAL:O	2.13	0.47
40:g:42:VAL:HG13	40:g:43:TYR:N	2.30	0.47
40:g:68:VAL:HG12	40:g:134:VAL:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:k:21:HIS:O	44:k:31:VAL:HA	2.15	0.47
44:k:59:PRO:HA	44:k:91:GLY:CA	2.44	0.47
44:k:76:TYR:N	44:k:76:TYR:CD1	2.82	0.47
46:m:39:ALA:HB3	46:m:42:VAL:CG1	2.44	0.47
50:q:56:ASP:CG	50:q:81:ALA:H	2.22	0.47
51:r:17:VAL:O	51:r:18:GLN:HB2	2.15	0.47
52:s:60:PHE:O	52:s:65:MET:CE	2.63	0.47
53:t:31:ILE:HG22	53:t:35:TYR:CE2	2.50	0.47
54:u:8:ASN:C	54:u:10:PRO:HD2	2.40	0.47
55:v:52:G:H2'	55:v:53:G:O4'	2.14	0.47
56:w:30:G:C4	56:w:31:A:C8	3.02	0.47
56:w:37:MIA:C5	56:w:38:A:C8	2.97	0.47
56:w:39:PSU:H2'	56:w:40:C:H6	1.80	0.47
57:x:20:ALA:HA	57:x:142:LYS:NZ	2.29	0.47
57:x:619:GLU:HB2	57:x:680:THR:HG1	1.79	0.47
3:2:11:LYS:HD3	8:A:686:U:O2	2.14	0.47
7:6:50:ASP:OD1	7:6:50:ASP:N	2.26	0.47
8:A:38:A:C4	8:A:442:G:N2	2.83	0.47
8:A:38:A:C5'	12:E:45:ALA:HB3	2.44	0.47
8:A:64:A:H1'	27:T:70:HIS:HB3	1.97	0.47
8:A:114:U:H2'	8:A:115:C:C6	2.49	0.47
8:A:142:A:H2'	8:A:143:C:H6	1.80	0.47
8:A:182:A:C4	8:A:183:C:C6	3.02	0.47
8:A:184:C:C4	8:A:185:G:N7	2.82	0.47
8:A:230:G:C2	8:A:231:A:C5	3.02	0.47
8:A:233:A:H61	8:A:429:A:H61	1.63	0.47
8:A:245:G:O2'	8:A:384:A:C2	2.66	0.47
8:A:375:G:H2'	8:A:376:G:O4'	2.14	0.47
8:A:386:G:H4'	8:A:387:U:OP2	2.14	0.47
8:A:476:G:C4	8:A:478:A:OP2	2.67	0.47
8:A:502:A:N6	8:A:505:A:C2	2.83	0.47
8:A:502:A:C6	8:A:505:A:C4	3.03	0.47
8:A:568:U:O2	8:A:2030:6MZ:H9C1	2.14	0.47
8:A:648:G:N1	8:A:649:G:C5	2.82	0.47
8:A:714:U:H3'	48:o:88:ARG:HH21	1.79	0.47
8:A:812:C:C5'	8:A:1250:G:O2'	2.62	0.47
8:A:819:A:C8	8:A:1188:U:N3	2.79	0.47
8:A:935:C:H2'	8:A:936:A:C8	2.47	0.47
8:A:936:A:C6	8:A:937:C:C4	3.02	0.47
8:A:954:G:C5	8:A:955:PSU:N1	2.82	0.47
8:A:993:G:H1'	25:R:91:GLN:NE2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1011:G:N2	8:A:1013:C:C2	2.82	0.47
8:A:1045:C:N4	8:A:1111:A:H2'	2.30	0.47
8:A:1057:A:C2	8:A:1079:C:O2	2.66	0.47
8:A:1064:C:H4'	16:I:89:SER:CA	2.45	0.47
8:A:1064:C:C2'	8:A:1075:C:N3	2.76	0.47
8:A:1065:U:C5	8:A:1074:G:H2'	2.50	0.47
8:A:1093:G:H1'	8:A:1097:U:C5	2.50	0.47
8:A:1172:C:O4'	8:A:1179:G:O6	2.33	0.47
8:A:1178:C:H1'	8:A:1179:G:N1	2.29	0.47
8:A:1203:U:H2'	8:A:1241:A:H61	1.77	0.47
8:A:1243:C:H2'	8:A:1244:A:O4'	2.15	0.47
8:A:1290:C:H2'	8:A:1291:C:C6	2.48	0.47
8:A:1300:G:N2	8:A:1634:A:C4	2.83	0.47
8:A:1342:A:C4	8:A:1345:C:C4	3.01	0.47
8:A:1424:G:N1	8:A:1575:C:C4	2.82	0.47
8:A:1483:G:C5	8:A:1484:U:C5	3.03	0.47
8:A:1605:C:C4	8:A:1606:C:C4	3.02	0.47
8:A:1692:U:N3	8:A:1694:C:N3	2.63	0.47
8:A:1747:U:H2'	8:A:1748:C:O4'	2.15	0.47
8:A:1779:U:O2	8:A:1783:A:N6	2.47	0.47
8:A:1806:C:N4	8:A:1807:G:C5	2.83	0.47
8:A:1810:A:C8	8:A:1811:G:C8	3.03	0.47
8:A:1853:A:H2'	8:A:1854:A:O4'	2.14	0.47
8:A:1858:A:C2	8:A:1885:A:C1'	2.97	0.47
8:A:1862:G:C2	8:A:1863:G:C8	3.01	0.47
8:A:1945:G:N2	8:A:1946:U:C2	2.83	0.47
8:A:2083:G:C6	8:A:2084:C:C4	3.02	0.47
8:A:2193:G:C6	8:A:2194:U:C4	3.03	0.47
8:A:2251:OMG:OP1	20:M:81:ARG:HD2	2.15	0.47
8:A:2306:C:H2'	8:A:2307:G:C8	2.49	0.47
8:A:2341:G:C6	8:A:2342:C:C4	3.02	0.47
8:A:2519:U:H5'	8:A:2567:G:N2	2.29	0.47
8:A:2523:G:C5	8:A:2765:A:N6	2.83	0.47
8:A:2654:A:N1	8:A:2666:C:OP2	2.47	0.47
8:A:2850:A:C8	8:A:2869:G:O4'	2.67	0.47
8:A:2852:G:C6	8:A:2853:C:N4	2.82	0.47
9:B:9:G:H1'	9:B:112:G:N2	2.30	0.47
10:C:137:GLY:CA	10:C:163:ILE:O	2.62	0.47
13:F:25:MET:C	13:F:29:ARG:HH12	2.21	0.47
14:G:46:ASP:O	14:G:48:THR:HG23	2.15	0.47
15:H:81:ALA:HA	15:H:147:VAL:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:H:125:THR:HA	15:H:146:VAL:HB	1.97	0.47
16:I:80:LYS:HA	16:I:86:LYS:HA	1.96	0.47
18:K:23:LYS:HG3	18:K:25:LEU:HD23	1.97	0.47
20:M:67:VAL:CG2	20:M:68:PHE:N	2.77	0.47
21:N:55:ALA:HB2	21:N:79:LEU:HD22	1.97	0.47
26:S:4:ILE:CG1	26:S:106:VAL:HG22	2.44	0.47
26:S:83:LYS:HE2	26:S:83:LYS:H	1.79	0.47
27:T:8:LEU:HD13	32:Y:22:LEU:HB3	1.96	0.47
28:U:12:VAL:HB	28:U:17:ASP:O	2.15	0.47
29:V:9:ARG:HG3	29:V:40:ILE:CA	2.44	0.47
29:V:9:ARG:NH2	29:V:12:GLN:HA	2.30	0.47
34:a:33:A:H2'	34:a:34:C:C6	2.49	0.47
34:a:39:G:N7	34:a:547:A:H2'	2.30	0.47
34:a:155:A:N6	34:a:167:A:H61	2.11	0.47
34:a:159:G:O6	34:a:164:G:C8	2.68	0.47
34:a:200:G:C2	34:a:201:G:C4	3.03	0.47
34:a:206:C:C4	34:a:465:A:N1	2.82	0.47
34:a:255:G:H1'	50:q:17:GLU:OE1	2.13	0.47
34:a:373:A:C6	34:a:482:A:C2	3.01	0.47
34:a:638:U:H2'	34:a:639:G:O4'	2.14	0.47
34:a:671:G:N1	34:a:736:C:N3	2.63	0.47
34:a:687:A:N6	34:a:704:A:C8	2.83	0.47
34:a:1049:U:O4'	34:a:1201:A:C8	2.67	0.47
34:a:1096:C:O2	34:a:1170:A:O2'	2.33	0.47
34:a:1203:C:H2'	34:a:1204:A:C8	2.49	0.47
34:a:1209:C:N4	34:a:1210:C:H41	2.12	0.47
34:a:1244:G:C4	34:a:1294:G:N2	2.83	0.47
34:a:1256:A:O4'	34:a:1258:G:C4	2.68	0.47
34:a:1265:C:C2	34:a:1266:G:C8	3.02	0.47
34:a:1321:U:C4	34:a:1322:C:N3	2.83	0.47
34:a:1339:A:C2	55:v:31:G:C4'	2.97	0.47
34:a:1379:G:O2'	34:a:1380:U:H5'	2.15	0.47
34:a:1423:G:C6	34:a:1478:U:N3	2.82	0.47
37:d:35:GLN:O	37:d:36:ALA:C	2.55	0.47
37:d:35:GLN:O	37:d:41:GLY:HA3	2.14	0.47
38:e:13:LYS:HD2	38:e:116:VAL:HG11	1.96	0.47
43:j:82:LYS:HE2	43:j:83:THR:CG2	2.44	0.47
45:l:81:ILE:HD11	45:l:94:TYR:HB3	1.97	0.47
48:o:35:ILE:HG12	48:o:55:LEU:HD11	1.97	0.47
49:p:54:LEU:HA	49:p:57:ILE:CG1	2.45	0.47
55:v:8:4SU:H6	55:v:8:4SU:H3'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:182:VAL:HG21	57:x:210:MET:HB3	1.97	0.47
57:x:336:ARG:HG3	57:x:381:ILE:HG12	1.94	0.47
57:x:349:LEU:HG	57:x:351:SER:N	2.30	0.47
57:x:564:PRO:HD2	57:x:604:PHE:CD2	2.49	0.47
57:x:638:ARG:HD2	57:x:661:GLU:CG	2.45	0.47
4:3:29:ARG:CZ	8:A:2394:C:OP1	2.61	0.47
4:3:38:LYS:HA	4:3:41:ARG:NH2	2.30	0.47
7:6:1:MET:HB3	9:B:43:C:H5"	1.97	0.47
7:6:13:THR:HG23	7:6:31:ASP:OD1	2.15	0.47
8:A:6:A:N3	17:J:135:GLN:NE2	2.63	0.47
8:A:31:C:N3	8:A:32:C:C5	2.82	0.47
8:A:97:C:H2'	8:A:98:G:C8	2.50	0.47
8:A:152:A:C6	8:A:175:G:C6	3.03	0.47
8:A:241:A:O4'	8:A:243:U:O4'	2.32	0.47
8:A:266:G:N2	8:A:427:U:H1'	2.30	0.47
8:A:303:G:H2'	8:A:304:U:H6	1.80	0.47
8:A:324:A:C5	8:A:339:U:H4'	2.50	0.47
8:A:406:G:C2	8:A:407:G:C4	3.03	0.47
8:A:717:C:H3'	8:A:718:A:H8	1.77	0.47
8:A:723:C:H2'	8:A:724:U:H6	1.79	0.47
8:A:882:G:O2'	8:A:896:A:C8	2.66	0.47
8:A:889:C:O2	8:A:889:C:O4'	2.31	0.47
8:A:1026:G:H1'	8:A:1134:A:C2	2.48	0.47
8:A:1125:G:C6	8:A:1126:A:N6	2.82	0.47
8:A:1144:A:H2'	8:A:1145:C:C6	2.47	0.47
8:A:1171:G:C2	8:A:1172:C:C6	3.03	0.47
8:A:1309:G:C6	8:A:1310:G:N7	2.82	0.47
8:A:1317:G:C6	8:A:1336:A:N6	2.83	0.47
8:A:1327:A:H2'	8:A:1328:A:O4'	2.15	0.47
8:A:1395:A:O2'	8:A:1397:U:C6	2.67	0.47
8:A:1452:G:H2'	8:A:2702:G:O6	2.14	0.47
8:A:1452:G:C2'	8:A:2702:G:O6	2.62	0.47
8:A:1483:G:N2	8:A:1506:U:O2	2.43	0.47
8:A:1593:A:H2'	8:A:1594:U:O4'	2.14	0.47
8:A:1698:A:O4'	8:A:1700:A:H4'	2.15	0.47
8:A:1707:G:C6	8:A:1708:C:C4	3.02	0.47
8:A:1849:G:H2'	8:A:1850:G:H8	1.79	0.47
8:A:1917:PSU:C2	8:A:1918:A:C5	3.02	0.47
8:A:1959:G:C6	8:A:1960:A:C5	3.02	0.47
8:A:2034:U:H2'	8:A:2035:G:O4'	2.15	0.47
8:A:2082:A:C8	8:A:2237:G:N2	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2145:C:C5	8:A:2147:A:N1	2.82	0.47
8:A:2163:A:OP1	8:A:2165:C:C4	2.68	0.47
8:A:2261:C:N3	8:A:2280:G:C2	2.83	0.47
8:A:2287:A:C6	8:A:2289:G:C4	3.03	0.47
8:A:2379:G:H2'	8:A:2380:C:H6	1.78	0.47
8:A:2397:G:N2	8:A:2419:U:O2	2.46	0.47
8:A:2520:C:N4	8:A:2542:A:C2	2.82	0.47
8:A:2543:G:H2'	8:A:2544:G:H8	1.79	0.47
8:A:2549:G:C6	8:A:2560:A:C6	3.02	0.47
8:A:2572:A:P	11:D:149:ASN:HB3	2.54	0.47
8:A:2637:U:C2	8:A:2782:G:N2	2.83	0.47
8:A:2656:U:C2	8:A:2657:A:C8	3.03	0.47
8:A:2660:A:H5'	57:x:674:LYS:HG3	1.96	0.47
8:A:2668:G:C1'	14:G:110:HIS:HD2	2.27	0.47
8:A:2718:G:H5'	23:P:97:TYR:HD2	1.80	0.47
8:A:2876:G:H4'	23:P:2:ASN:HD21	1.80	0.47
9:B:45:A:C5	9:B:46:A:C8	3.03	0.47
10:C:157:ALA:HB1	10:C:196:ASN:O	2.15	0.47
12:E:152:GLU:HA	12:E:171:ASP:OD1	2.14	0.47
13:F:118:ALA:HB1	13:F:166:ARG:HE	1.80	0.47
14:G:44:HIS:CE1	14:G:47:ASN:H	2.33	0.47
15:H:129:GLU:CA	15:H:143:ILE:HG22	2.41	0.47
15:H:135:HIS:HB3	15:H:138:VAL:HG13	1.97	0.47
16:I:97:VAL:H	16:I:137:LEU:CB	2.28	0.47
17:J:42:ALA:O	24:Q:63:ARG:HD3	2.14	0.47
21:N:103:ARG:O	21:N:107:ASN:HA	2.15	0.47
24:Q:75:TYR:O	24:Q:79:ILE:HG12	2.15	0.47
32:Y:7:ARG:HA	32:Y:60:LYS:CE	2.44	0.47
33:Z:2:LYS:HG3	33:Z:2:LYS:O	2.14	0.47
34:a:13:U:C2	34:a:915:A:N7	2.83	0.47
34:a:33:A:C4	34:a:34:C:C5	3.03	0.47
34:a:53:A:C2	34:a:54:C:H1'	2.49	0.47
34:a:122:G:O3'	34:a:312:C:H4'	2.13	0.47
34:a:142:G:C2	34:a:222:C:C2	3.02	0.47
34:a:150:U:O2'	34:a:151:A:H5'	2.14	0.47
34:a:188:C:O2'	34:a:189:A:C5'	2.62	0.47
34:a:212:G:C8	34:a:213:G:N3	2.83	0.47
34:a:404:G:C4	34:a:405:U:C5	3.02	0.47
34:a:408:A:C5	34:a:409:U:C5	3.02	0.47
34:a:552:U:C2	34:a:553:A:C2	3.02	0.47
34:a:643:C:H2'	34:a:644:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:652:U:HO2'	34:a:653:U:P	2.36	0.47
34:a:723:U:C4'	54:u:48:LYS:HZ2	2.26	0.47
34:a:763:G:H2'	34:a:764:C:C6	2.49	0.47
34:a:777:A:C4	34:a:778:G:C8	3.02	0.47
34:a:994:A:H8	34:a:994:A:O5'	1.97	0.47
34:a:1003:G:O3'	34:a:1024:G:N2	2.48	0.47
34:a:1052:U:N3	34:a:1207:2MG:C2	2.82	0.47
34:a:1071:C:N3	34:a:1105:A:C2	2.82	0.47
34:a:1111:A:C2	36:c:176:THR:HG23	2.50	0.47
34:a:1133:G:C4	34:a:1142:G:C2	3.02	0.47
34:a:1313:U:C5	52:s:1:PRO:HD2	2.50	0.47
34:a:1324:A:C6	34:a:1325:C:C4	3.03	0.47
34:a:1371:G:H2'	34:a:1372:U:H6	1.79	0.47
34:a:1413:A:N6	34:a:1487:G:H1	2.11	0.47
35:b:25:LYS:HE3	35:b:192:PRO:HD2	1.97	0.47
35:b:68:PHE:O	35:b:90:PHE:HA	2.15	0.47
35:b:217:ALA:CB	35:b:221:ARG:HH21	2.26	0.47
37:d:89:LEU:O	37:d:93:LEU:HD23	2.15	0.47
39:f:49:TYR:HD2	51:r:68:PRO:HA	1.80	0.47
39:f:79:ARG:HD2	39:f:80:PHE:CE2	2.50	0.47
42:i:62:LEU:HB3	42:i:64:ILE:HD11	1.96	0.47
45:l:73:LEU:HD12	45:l:73:LEU:N	2.29	0.47
45:l:99:GLY:CA	45:l:103:CYS:O	2.62	0.47
46:m:24:VAL:HG23	46:m:29:SER:N	2.30	0.47
46:m:44:ILE:HA	46:m:47:LEU:HD12	1.96	0.47
46:m:89:ARG:HB2	46:m:96:VAL:HG13	1.97	0.47
47:n:10:VAL:HA	47:n:13:VAL:HG22	1.95	0.47
49:p:3:THR:O	49:p:22:ALA:O	2.32	0.47
51:r:25:ILE:HA	51:r:28:LEU:CD1	2.44	0.47
53:t:47:GLN:NE2	53:t:50:PHE:HB3	2.30	0.47
55:v:7:G:N1	55:v:67:C:N3	2.62	0.47
55:v:51:C:H2'	55:v:52:G:O4'	2.15	0.47
56:w:30:G:N1	56:w:41:C:N3	2.62	0.47
57:x:29:ILE:HD12	57:x:278:LEU:HG	1.97	0.47
57:x:142:LYS:HA	62:x:801:GDP:C6	2.49	0.47
57:x:146:MET:HA	57:x:175:GLU:HG3	1.95	0.47
57:x:471:ARG:HG2	57:x:474:ARG:NH1	2.29	0.47
1:0:25:THR:OG1	1:0:26:SER:N	2.46	0.47
4:3:4:LYS:HA	8:A:242:G:C8	2.50	0.47
4:3:24:LYS:HB2	19:L:64:PHE:CD2	2.50	0.47
4:3:32:LEU:H	8:A:2420:C:P	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:36:ARG:HE	8:A:2742:G:P	2.38	0.47
6:5:54:VAL:H	8:A:1083:U:P	2.37	0.47
8:A:35:G:H1'	8:A:450:G:N2	2.29	0.47
8:A:74:A:N3	8:A:74:A:H5''	2.29	0.47
8:A:84:A:OP2	8:A:100:U:O4	2.33	0.47
8:A:122:G:C4	8:A:123:G:C8	3.03	0.47
8:A:142:A:H1'	27:T:1:MET:N	2.30	0.47
8:A:147:C:O2'	8:A:148:U:H5'	2.15	0.47
8:A:191:A:C8	8:A:204:A:N6	2.83	0.47
8:A:203:A:C6	8:A:204:A:C6	3.02	0.47
8:A:241:A:N6	8:A:256:A:C8	2.81	0.47
8:A:269:C:C2	8:A:270:A:C8	3.03	0.47
8:A:300:A:H3'	28:U:81:ARG:HH12	1.80	0.47
8:A:301:G:C6	8:A:302:C:N4	2.82	0.47
8:A:307:G:N2	8:A:309:A:H3'	2.29	0.47
8:A:309:A:N3	8:A:329:G:O2'	2.39	0.47
8:A:347:A:C2	8:A:348:A:C5	3.02	0.47
8:A:384:A:C6	8:A:385:C:C2	3.02	0.47
8:A:412:A:C5	8:A:2412:A:H1'	2.50	0.47
8:A:418:C:H2'	8:A:419:U:H6	1.79	0.47
8:A:432:A:H2'	8:A:433:C:C6	2.49	0.47
8:A:488:G:O2'	8:A:491:G:N7	2.35	0.47
8:A:519:U:O3'	26:S:25:ARG:NH1	2.48	0.47
8:A:527:C:H2'	8:A:2779:U:O2'	2.14	0.47
8:A:545:U:H3'	8:A:546:U:C6	2.50	0.47
8:A:599:A:H2'	8:A:600:G:H8	1.78	0.47
8:A:607:U:O2	8:A:608:A:C8	2.67	0.47
8:A:640:C:N3	8:A:649:G:N1	2.62	0.47
8:A:703:U:C3'	8:A:704:G:O4'	2.63	0.47
8:A:703:U:O2	8:A:727:A:N6	2.48	0.47
8:A:711:G:O6	8:A:721:A:N6	2.48	0.47
8:A:728:G:O2'	8:A:730:A:H5''	2.15	0.47
8:A:729:G:C2	8:A:1775:U:H1'	2.49	0.47
8:A:748:G:N7	8:A:750:A:H3'	2.29	0.47
8:A:775:G:C4	8:A:794:A:C8	3.03	0.47
8:A:780:G:C4	8:A:782:A:C6	3.03	0.47
8:A:786:C:O2'	8:A:787:C:H5'	2.15	0.47
8:A:841:G:C6	8:A:938:G:N1	2.83	0.47
8:A:865:C:N4	8:A:909:A:C5	2.83	0.47
8:A:953:G:N1	8:A:965:C:C4	2.83	0.47
8:A:953:G:H3'	20:M:16:ARG:HH22	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:971:G:O6	8:A:972:A:C2	2.68	0.47
8:A:1006:C:H2'	8:A:1007:C:O4'	2.15	0.47
8:A:1016:G:C6	8:A:1017:G:C5	3.03	0.47
8:A:1017:G:N1	8:A:1146:C:C4	2.82	0.47
8:A:1155:A:N7	8:A:1157:G:C5	2.83	0.47
8:A:1160:G:C6	8:A:1161:C:N4	2.82	0.47
8:A:1169:A:C2	8:A:1181:U:O2	2.67	0.47
8:A:1179:G:H21	8:A:1180:U:C4'	2.26	0.47
8:A:1195:G:C2	8:A:1196:C:C6	3.03	0.47
8:A:1203:U:H1'	19:L:4:ASN:HB3	1.96	0.47
8:A:1230:A:C6	8:A:1231:U:N3	2.83	0.47
8:A:1235:G:C5	8:A:1236:G:C6	3.02	0.47
8:A:1253:A:O4'	24:Q:32:ARG:NH2	2.36	0.47
8:A:1268:A:H1'	8:A:2013:A:N6	2.29	0.47
8:A:1279:G:N1	8:A:1292:G:C6	2.83	0.47
8:A:1300:G:N7	8:A:1626:A:H2'	2.30	0.47
8:A:1308:A:C6	8:A:1309:G:C4	3.02	0.47
8:A:1346:G:N2	8:A:1347:A:H1'	2.30	0.47
8:A:1356:G:C6	8:A:1376:C:N3	2.83	0.47
8:A:1388:G:C6	8:A:1389:G:C5	3.03	0.47
8:A:1403:A:C5	8:A:1404:C:C4	3.03	0.47
8:A:1413:A:C6	8:A:1590:A:N1	2.83	0.47
8:A:1418:G:H1'	8:A:1580:A:N6	2.24	0.47
8:A:1501:G:P	10:C:100:ARG:HH22	2.37	0.47
8:A:1502:A:C4	8:A:1503:A:C8	3.03	0.47
8:A:1534:U:O2'	8:A:1535:A:C6	2.63	0.47
8:A:1558:C:C1'	8:A:1560:G:C8	2.97	0.47
8:A:1569:A:H2'	8:A:1570:A:O4'	2.15	0.47
8:A:1570:A:C6	8:A:1571:A:C5	3.03	0.47
8:A:1654:A:C4	8:A:1655:A:C8	3.03	0.47
8:A:1670:C:OP2	8:A:1671:U:O4	2.33	0.47
8:A:1672:A:H2'	8:A:1673:G:O4'	2.15	0.47
8:A:1710:G:C2	8:A:1749:A:C2	3.03	0.47
8:A:1722:A:H1'	8:A:1739:A:C2	2.50	0.47
8:A:1727:C:N3	8:A:1734:G:C6	2.83	0.47
8:A:1733:G:N1	8:A:1734:G:C5	2.82	0.47
8:A:1737:G:O5'	8:A:1737:G:H8	1.97	0.47
8:A:1799:G:N2	10:C:153:LEU:HD23	2.30	0.47
8:A:1851:U:H2'	8:A:1852:U:C6	2.50	0.47
8:A:1856:U:H6	8:A:1856:U:O5'	1.98	0.47
8:A:1877:A:C6	8:A:1878:G:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1900:A:H1'	8:A:1970:A:H2'	1.97	0.47
8:A:1920:C:C5'	34:a:1517:G:C5	2.98	0.47
8:A:1927:A:C6	8:A:1928:A:C6	3.02	0.47
8:A:1965:C:C4	8:A:1966:A:C5	3.03	0.47
8:A:2051:A:C8	8:A:2614:A:C6	3.03	0.47
8:A:2054:A:C2	8:A:2616:C:C2	3.02	0.47
8:A:2069:G7M:N2	8:A:2070:A:C4	2.83	0.47
8:A:2127:G:H2'	8:A:2128:G:O4'	2.14	0.47
8:A:2127:G:N1	8:A:2162:G:N2	2.63	0.47
8:A:2128:G:H1'	8:A:2173:A:O2'	2.15	0.47
8:A:2139:U:C2	8:A:2152:G:N2	2.80	0.47
8:A:2197:U:C2	8:A:2224:G:C2	3.02	0.47
8:A:2230:G:H1'	31:X:31:ASN:OD1	2.13	0.47
8:A:2263:C:H2'	8:A:2264:C:C6	2.50	0.47
8:A:2322:A:C5	8:A:2323:G:C5	3.03	0.47
8:A:2379:G:C6	8:A:2380:C:C4	3.02	0.47
8:A:2443:C:H2'	8:A:2444:G:C8	2.50	0.47
8:A:2542:A:H61	8:A:2567:G:N2	2.12	0.47
8:A:2557:G:H2'	8:A:2558:C:H6	1.77	0.47
8:A:2579:C:C2	8:A:2580:PSU:N1	2.82	0.47
8:A:2642:G:N1	8:A:2773:C:C4	2.83	0.47
8:A:2663:G:C6	8:A:2664:G:C4	3.03	0.47
8:A:2682:A:H61	8:A:2728:U:C1'	2.28	0.47
8:A:2709:G:C5	8:A:2710:C:C4	3.02	0.47
8:A:2776:A:C6	8:A:2778:A:C6	3.03	0.47
8:A:2802:G:C6	8:A:2803:G:C5	3.03	0.47
8:A:2847:U:OP1	23:P:95:LYS:HD3	2.15	0.47
8:A:2859:G:N2	8:A:2860:A:C2	2.83	0.47
9:B:21:G:H2'	9:B:22:U:C6	2.49	0.47
9:B:29:A:H2'	9:B:30:C:H6	1.79	0.47
9:B:61:G:C6	9:B:62:C:C4	3.02	0.47
9:B:76:G:O2'	29:V:88:HIS:HB2	2.14	0.47
9:B:110:C:C4	9:B:111:U:C4	3.03	0.47
10:C:229:HIS:CD2	10:C:246:PRO:HA	2.49	0.47
11:D:45:TYR:CD2	11:D:83:ARG:NE	2.83	0.47
11:D:106:LYS:HB3	11:D:206:ALA:HB2	1.96	0.47
11:D:125:TRP:CG	11:D:160:LYS:HD3	2.50	0.47
11:D:184:ARG:HB3	11:D:186:LEU:CD1	2.44	0.47
12:E:61:ARG:HH11	12:E:64:GLY:C	2.23	0.47
12:E:159:LEU:HA	12:E:162:ARG:HB2	1.97	0.47
13:F:102:LEU:HD23	13:F:103:ILE:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:116:LEU:HA	13:F:177:ARG:HH21	1.78	0.47
14:G:108:PHE:CD1	14:G:151:ARG:CZ	2.97	0.47
15:H:84:ALA:HB2	15:H:90:LEU:HD12	1.97	0.47
17:J:56:VAL:HB	17:J:124:VAL:HA	1.96	0.47
17:J:122:LEU:CG	17:J:124:VAL:HG23	2.44	0.47
20:M:50:ARG:NH1	20:M:51:ARG:HG3	2.30	0.47
25:R:19:THR:HA	25:R:96:VAL:O	2.15	0.47
26:S:72:THR:CG2	26:S:108:SER:HB3	2.41	0.47
28:U:82:VAL:HG12	28:U:83:GLY:N	2.30	0.47
29:V:82:TYR:CE2	29:V:83:LYS:HG3	2.50	0.47
31:X:66:VAL:HA	31:X:69:GLU:HG2	1.97	0.47
33:Z:57:GLU:O	33:Z:57:GLU:HG3	2.14	0.47
34:a:31:G:H2'	34:a:48:C:N4	2.29	0.47
34:a:45:G:H2'	34:a:46:G:O4'	2.15	0.47
34:a:49:U:N3	34:a:362:G:H1'	2.29	0.47
34:a:64:G:C6	34:a:68:G:O6	2.67	0.47
34:a:110:C:H3'	34:a:111:G:C8	2.50	0.47
34:a:136:C:H2'	34:a:137:U:O4'	2.15	0.47
34:a:159:G:O6	34:a:164:G:C4	2.68	0.47
34:a:222:C:H2'	34:a:223:A:C8	2.50	0.47
34:a:257:G:N1	34:a:258:G:C5	2.83	0.47
34:a:266:G:OP2	34:a:267:C:N4	2.30	0.47
34:a:334:C:H2'	34:a:335:C:H6	1.80	0.47
34:a:344:A:P	34:a:344:A:H3'	2.55	0.47
34:a:356:A:H1'	34:a:369:G:OP2	2.15	0.47
34:a:389:A:H3'	34:a:390:U:H6	1.79	0.47
34:a:430:A:OP1	37:d:8:LEU:HD12	2.14	0.47
34:a:447:G:N2	34:a:488:C:C4	2.83	0.47
34:a:456:A:C2	34:a:477:C:C4	3.02	0.47
34:a:464:U:O2	34:a:466:A:C6	2.68	0.47
34:a:509:A:C8	34:a:510:A:C6	3.03	0.47
34:a:579:A:C6	34:a:763:G:C6	3.03	0.47
34:a:613:C:C2	34:a:614:C:C5	3.02	0.47
34:a:646:G:C4	34:a:647:C:C5	3.03	0.47
34:a:652:U:O2'	34:a:653:U:O5'	2.28	0.47
34:a:661:G:O2'	34:a:662:U:P	2.72	0.47
34:a:705:G:C6	34:a:706:A:C5	3.03	0.47
34:a:760:G:H2'	34:a:761:G:O4'	2.15	0.47
34:a:769:G:H4'	34:a:1513:A:C4'	2.44	0.47
34:a:780:A:C2	34:a:803:G:C6	3.03	0.47
34:a:836:G:C8	34:a:851:G:N1	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:851:G:C5	34:a:852:G:N7	2.83	0.47
34:a:894:G:H2'	34:a:895:G:O4'	2.15	0.47
34:a:933:G:OP2	40:g:2:ARG:CB	2.62	0.47
34:a:953:G:H2'	34:a:954:G:O4'	2.15	0.47
34:a:963:G:N3	34:a:964:A:C8	2.83	0.47
34:a:1006:G:C6	34:a:1007:U:C4	3.02	0.47
34:a:1014:A:O2'	34:a:1219:A:C4'	2.63	0.47
34:a:1038:C:H2'	34:a:1039:G:O4'	2.15	0.47
34:a:1045:C:H2'	34:a:1046:A:O4'	2.15	0.47
34:a:1063:C:H2'	34:a:1064:G:C8	2.48	0.47
34:a:1071:C:C2	34:a:1105:A:C2	3.02	0.47
34:a:1078:U:H2'	34:a:1079:G:C8	2.50	0.47
34:a:1107:C:OP1	36:c:173:PRO:HB3	2.15	0.47
34:a:1135:U:O2'	34:a:1136:C:C6	2.68	0.47
34:a:1151:A:C4	34:a:1152:A:N7	2.82	0.47
34:a:1158:C:C5	34:a:1160:G:O4'	2.67	0.47
34:a:1160:G:H2'	34:a:1161:C:H6	1.80	0.47
34:a:1206:G:H2'	34:a:1207:2MG:O4'	2.15	0.47
34:a:1210:C:H5'	57:x:540:LYS:HZ2	1.80	0.47
34:a:1226:C:N3	46:m:102:LYS:HE3	2.30	0.47
34:a:1243:C:C2	34:a:1295:U:O2	2.67	0.47
34:a:1269:A:C1'	34:a:1313:U:H1'	2.44	0.47
34:a:1272:G:H2'	34:a:1273:C:O4'	2.14	0.47
34:a:1287:A:N3	34:a:1353:G:O2'	2.47	0.47
34:a:1324:A:H2'	34:a:1325:C:O4'	2.14	0.47
34:a:1349:A:C5	34:a:1350:A:C8	3.02	0.47
34:a:1355:G:C6	34:a:1368:A:C6	3.03	0.47
34:a:1369:C:H2'	34:a:1370:G:O4'	2.14	0.47
34:a:1416:G:C4	34:a:1417:G:C8	3.02	0.47
34:a:1418:A:H3'	34:a:1419:G:O4'	2.15	0.47
34:a:1426:G:N2	34:a:1475:G:H1'	2.29	0.47
34:a:1530:G:H2'	34:a:1531:A:C8	2.50	0.47
35:b:15:PHE:CD1	35:b:34:ARG:NH2	2.83	0.47
35:b:29:PHE:N	35:b:29:PHE:CD1	2.82	0.47
36:c:10:ARG:HB3	36:c:14:VAL:CG2	2.44	0.47
36:c:70:ALA:O	36:c:104:GLU:OE2	2.33	0.47
36:c:81:GLU:HA	36:c:84:GLU:HG3	1.97	0.47
36:c:152:VAL:HG22	36:c:197:VAL:CG2	2.44	0.47
36:c:152:VAL:HA	36:c:197:VAL:HA	1.95	0.47
37:d:36:ALA:HB3	37:d:41:GLY:CA	2.44	0.47
37:d:80:ARG:HD3	37:d:81:LEU:HD23	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:147:LYS:HD3	37:d:147:LYS:C	2.40	0.47
38:e:99:SER:O	38:e:121:ASN:CB	2.62	0.47
39:f:81:ASN:OD1	39:f:82:ASP:N	2.47	0.47
41:h:21:LYS:O	41:h:64:TYR:CZ	2.68	0.47
45:l:33:CYS:HB3	45:l:77:SER:O	2.14	0.47
45:l:54:VAL:O	45:l:61:GLU:HA	2.15	0.47
45:l:88:ASP:CG	45:l:89:LEU:HD22	2.40	0.47
46:m:65:GLU:O	46:m:69:ARG:HG3	2.15	0.47
46:m:72:ILE:HG13	46:m:73:SER:N	2.28	0.47
48:o:79:GLN:HA	48:o:82:GLU:HG2	1.97	0.47
51:r:41:SER:N	51:r:51:GLN:OE1	2.48	0.47
53:t:59:ARG:HA	53:t:62:ALA:HB3	1.97	0.47
56:w:28:G:H2'	56:w:29:G:C8	2.49	0.47
56:w:50:U:H2'	56:w:51:C:C6	2.50	0.47
57:x:17:HIS:ND1	57:x:121:GLN:HB2	2.30	0.47
57:x:168:LEU:HD23	57:x:263:VAL:O	2.15	0.47
57:x:314:GLU:HB2	57:x:339:SER:HG	1.79	0.47
57:x:364:GLN:HG3	57:x:382:ALA:HB2	1.96	0.47
5:4:36:ARG:NH2	8:A:2741:A:O3'	2.48	0.47
6:5:38:MET:CB	8:A:1082:U:O2'	2.63	0.47
7:6:48:GLN:O	7:6:49:ARG:HB3	2.15	0.47
8:A:1:G:H2'	8:A:2:G:H8	1.79	0.47
8:A:79:C:C2	8:A:108:G:N1	2.82	0.47
8:A:226:A:N1	8:A:418:C:O2'	2.48	0.47
8:A:235:U:H2'	8:A:236:C:C6	2.50	0.47
8:A:273:G:C2	8:A:365:U:N3	2.83	0.47
8:A:295:G:C2	8:A:344:A:C4	3.03	0.47
8:A:417:C:O2	8:A:2407:A:C2	2.68	0.47
8:A:442:G:O4'	12:E:41:GLN:CD	2.58	0.47
8:A:478:A:N6	8:A:502:A:H62	2.13	0.47
8:A:498:G:HO2'	28:U:44:HIS:CE1	2.33	0.47
8:A:522:A:C6	8:A:523:C:N4	2.83	0.47
8:A:656:G:C6	8:A:657:U:C4	3.03	0.47
8:A:685:A:N1	8:A:787:C:H1'	2.29	0.47
8:A:728:G:C5	8:A:730:A:N7	2.83	0.47
8:A:780:G:N2	8:A:785:G:C5	2.83	0.47
8:A:811:U:H1'	8:A:1251:C:H5'	1.97	0.47
8:A:835:C:C4	8:A:836:G:N7	2.83	0.47
8:A:835:C:H2'	8:A:836:G:H8	1.79	0.47
8:A:882:G:H1	8:A:894:U:C4'	2.27	0.47
8:A:923:G:H2'	8:A:924:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1040:A:C6	8:A:1116:G:N1	2.83	0.47
8:A:1131:G:O2'	8:A:2026:U:H5'	2.15	0.47
8:A:1163:G:H5'	25:R:24:LYS:HE3	1.97	0.47
8:A:1166:G:C6	8:A:1167:C:C4	3.03	0.47
8:A:1227:G:C4	8:A:1228:G:C8	3.02	0.47
8:A:1256:G:N3	8:A:1257:C:C5	2.83	0.47
8:A:1276:A:C6	8:A:1295:C:N3	2.83	0.47
8:A:1276:A:N7	8:A:1645:G:C2	2.83	0.47
8:A:1333:G:C2	8:A:1334:G:C8	3.02	0.47
8:A:1358:G:C2	8:A:1372:U:C5	3.02	0.47
8:A:1445:G:N2	8:A:1547:C:C2	2.82	0.47
8:A:1468:U:C2	8:A:1525:A:C2	3.02	0.47
8:A:1492:G:C5	8:A:1496:A:N6	2.83	0.47
8:A:1575:C:H2'	8:A:1576:U:C6	2.50	0.47
8:A:1605:C:O4'	8:A:1610:A:N6	2.47	0.47
8:A:1675:C:N4	8:A:1676:A:C2	2.83	0.47
8:A:1721:G:H1'	8:A:1739:A:N6	2.30	0.47
8:A:1753:G:H5''	23:P:92:ARG:HD3	1.96	0.47
8:A:1766:G:C6	8:A:1987:A:N6	2.83	0.47
8:A:1770:G:H2'	8:A:1771:C:H6	1.80	0.47
8:A:1799:G:C5	8:A:1819:A:C5	3.03	0.47
8:A:1836:C:C2	8:A:1905:C:O2	2.67	0.47
8:A:1846:G:O6	8:A:1895:C:N4	2.48	0.47
8:A:1861:G:C2	8:A:1882:U:O2	2.68	0.47
8:A:1906:G:C4	8:A:1907:G:C8	3.02	0.47
8:A:2143:C:H42	8:A:2148:G:C2'	2.27	0.47
8:A:2230:G:C4	8:A:2231:U:C5	3.03	0.47
8:A:2279:G:C6	8:A:2280:G:C5	3.03	0.47
8:A:2470:G:O6	8:A:2481:G:C2	2.68	0.47
8:A:2478:A:C5	8:A:2479:U:C4	3.03	0.47
8:A:2532:G:C8	8:A:2533:U:C5	3.03	0.47
8:A:2680:U:H4'	11:D:192:ALA:HB1	1.97	0.47
8:A:2694:G:C2	8:A:2695:U:C2	3.03	0.47
8:A:2738:A:N1	8:A:2767:C:N3	2.63	0.47
8:A:2739:U:H3'	8:A:2763:G:N1	2.30	0.47
8:A:2783:U:H2'	8:A:2784:U:H6	1.80	0.47
8:A:2785:C:O3'	11:D:70:LYS:HE3	2.15	0.47
8:A:2786:U:O2'	11:D:63:PRO:O	2.27	0.47
8:A:2854:G:C2	8:A:2864:G:C2	3.03	0.47
9:B:10:G:H2'	9:B:11:C:C6	2.50	0.47
9:B:16:G:C2	9:B:69:G:H1'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:52:A:O2'	9:B:53:A:O5'	2.24	0.47
13:F:9:ASP:HB3	13:F:10:GLU:OE1	2.15	0.47
15:H:90:LEU:HD13	15:H:146:VAL:HG11	1.97	0.47
17:J:69:ARG:HG3	17:J:90:GLU:HG3	1.96	0.47
20:M:27:SER:OG	20:M:28:PHE:N	2.46	0.47
21:N:28:LEU:HD11	21:N:32:GLU:C	2.40	0.47
22:O:53:THR:HG21	22:O:65:THR:HB	1.97	0.47
34:a:2:A:H2	34:a:614:C:C1'	2.27	0.47
34:a:2:A:H2	34:a:614:C:O4'	1.98	0.47
34:a:9:G:C6	34:a:26:A:C6	3.02	0.47
34:a:94:G:H4'	34:a:95:C:O5'	2.15	0.47
34:a:119:A:N7	34:a:288:A:C4	2.83	0.47
34:a:120:A:N7	34:a:122:G:C6	2.83	0.47
34:a:131:A:C6	34:a:232:G:C6	3.03	0.47
34:a:261:U:C4	53:t:73:ARG:NH2	2.83	0.47
34:a:399:G:C6	34:a:400:C:N4	2.83	0.47
34:a:483:C:H5''	34:a:484:G:OP2	2.14	0.47
34:a:492:C:O2'	34:a:493:A:OP2	2.31	0.47
34:a:594:U:C2'	34:a:595:A:O4'	2.60	0.47
34:a:765:G:H2'	34:a:812:G:H21	1.79	0.47
34:a:916:U:H2'	34:a:917:G:C8	2.50	0.47
34:a:949:A:C5	34:a:1233:G:C2	3.03	0.47
34:a:960:U:O2	34:a:960:U:H2'	2.15	0.47
34:a:978:A:C6	34:a:1319:A:C4	3.03	0.47
34:a:983:A:H2	34:a:984:C:C6	2.33	0.47
34:a:1009:U:N3	34:a:1020:G:N1	2.62	0.47
34:a:1133:G:H2'	34:a:1134:G:C4	2.50	0.47
34:a:1246:A:N1	34:a:1292:G:C6	2.83	0.47
34:a:1338:G:C6	34:a:1339:A:C6	3.03	0.47
34:a:1532:U:C4	34:a:1533:C:N4	2.83	0.47
36:c:46:LEU:O	36:c:51:VAL:HG12	2.14	0.47
36:c:53:ARG:HH21	36:c:55:VAL:HG21	1.79	0.47
37:d:181:PHE:HZ	37:d:184:LYS:HA	1.80	0.47
39:f:18:VAL:HB	39:f:19:PRO:HD3	1.96	0.47
39:f:29:ILE:O	39:f:34:GLY:N	2.48	0.47
42:i:24:ASN:HA	42:i:58:GLU:O	2.15	0.47
45:l:51:VAL:HA	45:l:66:ILE:HG13	1.97	0.47
45:l:68:GLY:HA3	45:l:106:VAL:HG21	1.97	0.47
46:m:15:VAL:HG23	46:m:40:GLU:HA	1.97	0.47
48:o:73:ASP:CB	48:o:76:ARG:HE	2.28	0.47
49:p:68:SER:OG	49:p:71:VAL:CG2	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:t:20:ASN:HB3	53:t:65:LEU:CD1	2.45	0.47
55:v:24:U:H2'	55:v:25:C:H6	1.80	0.47
56:w:27:G:C2	56:w:28:G:C5	3.03	0.47
56:w:39:PSU:C2	56:w:40:C:N4	2.83	0.47
57:x:28:ARG:NH1	57:x:269:PHE:O	2.48	0.47
57:x:149:ASN:ND2	57:x:152:LYS:HB2	2.29	0.47
57:x:197:GLN:C	57:x:199:VAL:N	2.69	0.47
57:x:297:ILE:HB	57:x:404:ILE:HB	1.95	0.47
57:x:521:MET:HG2	57:x:575:ILE:CD1	2.44	0.47
2:1:21:THR:CG2	4:3:33:THR:HG23	2.45	0.47
4:3:9:ALA:O	4:3:13:PHE:HD2	1.98	0.47
8:A:70:G:H3'	8:A:113:U:H4'	1.96	0.47
8:A:71:A:H5''	8:A:73:A:C8	2.49	0.47
8:A:94:A:H2'	8:A:95:A:O4'	2.15	0.47
8:A:190:A:C2	8:A:191:A:C4	3.02	0.47
8:A:195:A:C5'	8:A:196:A:H4'	2.45	0.47
8:A:195:A:H2'	8:A:198:C:N4	2.30	0.47
8:A:203:A:H2'	8:A:204:A:C8	2.50	0.47
8:A:226:A:C6	8:A:227:A:C6	3.03	0.47
8:A:261:G:N1	8:A:262:A:C5	2.83	0.47
8:A:279:A:N6	8:A:280:U:C4	2.82	0.47
8:A:568:U:H2'	8:A:570:G:N7	2.30	0.47
8:A:607:U:C2	8:A:608:A:C8	3.02	0.47
8:A:628:G:C5	8:A:636:G:N2	2.82	0.47
8:A:700:G:O2'	8:A:1632:A:N3	2.47	0.47
8:A:744:U:H2'	8:A:745:1MG:C8	2.50	0.47
8:A:784:G:C6	8:A:792:A:C5	3.02	0.47
8:A:883:G:H1'	8:A:884:U:C2	2.50	0.47
8:A:920:A:C4	8:A:921:C:C5	3.03	0.47
8:A:953:G:O2'	8:A:954:G:H5'	2.15	0.47
8:A:975:A:N3	8:A:1156:A:C2	2.83	0.47
8:A:1042:G:C2	8:A:1113:U:O2	2.68	0.47
8:A:1056:G:H22	8:A:1102:C:H5'	1.80	0.47
8:A:1079:C:H4'	8:A:1080:A:N7	2.30	0.47
8:A:1093:G:O3'	8:A:1095:A:N6	2.43	0.47
8:A:1113:U:H2'	8:A:1114:C:H6	1.80	0.47
8:A:1113:U:H2'	8:A:1114:C:C6	2.50	0.47
8:A:1139:G:H5''	17:J:25:LEU:CD2	2.44	0.47
8:A:1178:C:H1'	8:A:1179:G:C4	2.50	0.47
8:A:1283:G:C2'	8:A:1285:A:N7	2.77	0.47
8:A:1417:C:C4	8:A:1418:G:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1432:G:H2'	8:A:1433:A:H8	1.73	0.47
8:A:1439:A:C2	8:A:1553:A:C4	3.03	0.47
8:A:1490:A:N6	10:C:96:LYS:HB3	2.30	0.47
8:A:1498:C:C2	8:A:1499:C:C5	3.03	0.47
8:A:1653:G:C2	21:N:9:GLN:NE2	2.83	0.47
8:A:1753:G:C4	8:A:1755:A:OP2	2.68	0.47
8:A:1805:A:C2	8:A:1813:G:C2	3.02	0.47
8:A:1846:G:C5	8:A:1847:G:C6	3.03	0.47
8:A:1869:G:H2'	8:A:1869:G:N3	2.29	0.47
8:A:1876:A:H2'	8:A:1877:A:O4'	2.15	0.47
8:A:2012:G:N7	26:S:16:LYS:NZ	2.61	0.47
8:A:2073:C:H2'	8:A:2074:U:H6	1.80	0.47
8:A:2114:A:N6	8:A:2117:A:C5	2.83	0.47
8:A:2198:A:C4	8:A:2225:A:N6	2.82	0.47
8:A:2216:G:C2	8:A:2217:G:C4	3.03	0.47
8:A:2228:G:N2	31:X:33:HIS:CE1	2.83	0.47
8:A:2271:G:H5'	30:W:16:ARG:HG3	1.95	0.47
8:A:2368:C:H2'	8:A:2369:A:H8	1.79	0.47
8:A:2379:G:C2	8:A:2380:C:C2	3.03	0.47
8:A:2422:C:P	55:v:76:A:H62	2.37	0.47
8:A:2455:G:C4	8:A:2456:C:C5	3.02	0.47
8:A:2550:G:H2'	8:A:2551:C:C6	2.50	0.47
8:A:2677:G:C6	8:A:2678:C:N4	2.83	0.47
8:A:2779:U:O5'	8:A:2780:G:H2'	2.14	0.47
8:A:2850:A:N6	8:A:2851:A:C6	2.83	0.47
9:B:76:G:H2'	9:B:77:U:O4'	2.15	0.47
10:C:41:GLY:O	10:C:49:THR:OG1	2.31	0.47
10:C:57:HIS:ND1	10:C:58:LYS:O	2.35	0.47
10:C:132:ARG:HB2	10:C:185:ALA:O	2.14	0.47
12:E:149:ILE:HD12	12:E:188:MET:HG2	1.95	0.47
13:F:23:SER:O	13:F:26:GLN:HB3	2.14	0.47
14:G:14:VAL:HA	14:G:26:LYS:O	2.14	0.47
14:G:175:LYS:O	57:x:672:LEU:HA	2.14	0.47
15:H:16:GLY:HA2	15:H:47:PHE:CE2	2.50	0.47
15:H:46:PHE:O	15:H:51:ARG:HG2	2.15	0.47
18:K:24:VAL:HG12	18:K:30:ARG:HD3	1.97	0.47
18:K:99:ILE:HD12	18:K:118:LEU:CB	2.45	0.47
18:K:115:ILE:O	18:K:119:ALA:HB2	2.15	0.47
22:O:6:ALA:HA	22:O:9:ARG:HG2	1.96	0.47
25:R:78:ARG:O	25:R:81:LYS:HB2	2.15	0.47
26:S:68:ASP:O	26:S:109:ASP:OD1	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:31:VAL:C	27:T:32:LEU:HG	2.39	0.47
28:U:12:VAL:HG12	28:U:18:LYS:HA	1.97	0.47
28:U:26:ASN:ND2	28:U:28:LEU:CD2	2.78	0.47
29:V:60:VAL:HG22	29:V:61:LEU:N	2.30	0.47
34:a:3:A:O3'	34:a:4:U:H6	1.98	0.47
34:a:9:G:P	38:e:125:LYS:HZ3	2.28	0.47
34:a:15:G:H5'	38:e:28:ARG:NH2	2.30	0.47
34:a:78:A:H2	34:a:91:U:O2	1.97	0.47
34:a:156:C:C2	34:a:164:G:N2	2.83	0.47
34:a:161:A:N3	34:a:162:A:C6	2.83	0.47
34:a:167:A:C5	34:a:168:G:C6	3.03	0.47
34:a:251:G:O4'	34:a:252:U:C6	2.68	0.47
34:a:298:A:C6	34:a:299:G:C4	3.02	0.47
34:a:431:A:C5	34:a:432:A:C8	3.03	0.47
34:a:504:C:N3	34:a:542:G:N1	2.63	0.47
34:a:509:A:N3	37:d:54:LEU:HD22	2.30	0.47
34:a:594:U:H2'	34:a:595:A:C8	2.50	0.47
34:a:720:C:H5	34:a:721:G:O2'	1.98	0.47
34:a:773:G:C6	34:a:807:A:C6	3.02	0.47
34:a:831:A:C2	34:a:856:C:N3	2.83	0.47
34:a:844:G:N7	34:a:846:G:O4'	2.48	0.47
34:a:882:C:H2'	34:a:883:C:H6	1.80	0.47
34:a:889:A:N1	34:a:907:A:H5''	2.30	0.47
34:a:939:G:O6	34:a:1343:G:O6	2.32	0.47
34:a:947:G:H2'	34:a:948:C:H6	1.79	0.47
34:a:949:A:N6	34:a:1233:G:C6	2.83	0.47
34:a:954:G:C5	34:a:955:U:C4	3.03	0.47
34:a:1000:A:C6	34:a:1001:C:C4	3.03	0.47
34:a:1002:G:C8	34:a:1002:G:OP2	2.68	0.47
34:a:1089:G:C5	34:a:1090:U:C5	3.03	0.47
34:a:1241:G:H2'	34:a:1241:G:N3	2.30	0.47
34:a:1402:4OC:HM41	59:z:5:U:OP1	2.15	0.47
34:a:1434:A:C5	34:a:1435:G:C5	3.02	0.47
34:a:1501:C:N4	34:a:1504:G:C2	2.83	0.47
35:b:27:LYS:N	35:b:28:PRO:CD	2.78	0.47
35:b:60:ALA:HB1	35:b:224:ARG:HB2	1.96	0.47
37:d:36:ALA:O	37:d:41:GLY:HA3	2.15	0.47
41:h:104:SER:HB2	41:h:125:ILE:HD11	1.97	0.47
43:j:19:ASP:O	43:j:22:THR:HG22	2.15	0.47
43:j:80:THR:C	43:j:82:LYS:H	2.22	0.47
46:m:6:ILE:HG21	46:m:65:GLU:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:m:113:LYS:HB2	46:m:114:PRO:HD3	1.97	0.47
49:p:12:LYS:C	49:p:14:ARG:N	2.69	0.47
52:s:51:HIS:HB2	52:s:56:HIS:CE1	2.50	0.47
55:v:2:G:C6	55:v:72:A:C2	3.03	0.47
55:v:30:G:N2	55:v:41:C:C2	2.83	0.47
56:w:51:C:H2'	56:w:52:G:C8	2.50	0.47
56:w:53:G:N1	56:w:62:C:C4	2.83	0.47
57:x:95:THR:O	57:x:99:GLU:HG3	2.14	0.47
57:x:665:TYR:HD2	57:x:679:TYR:CD2	2.33	0.47
2:1:6:GLU:HB3	2:1:26:LYS:CD	2.45	0.47
8:A:4:U:C2	8:A:2900:A:C2	3.02	0.47
8:A:38:A:C2	8:A:39:G:C4	3.03	0.47
8:A:85:G:N1	8:A:86:G:C5	2.83	0.47
8:A:87:U:O2'	32:Y:44:LYS:NZ	2.48	0.47
8:A:88:G:N1	8:A:89:A:C5	2.83	0.47
8:A:93:G:C6	8:A:94:A:C5	3.03	0.47
8:A:95:A:C6	8:A:96:C:C4	3.03	0.47
8:A:187:G:C2	8:A:210:C:C2	3.03	0.47
8:A:187:G:N2	8:A:188:G:H1'	2.30	0.47
8:A:199:A:N3	8:A:2433:A:C2	2.83	0.47
8:A:221:A:N7	8:A:427:U:C2	2.83	0.47
8:A:222:A:C5	8:A:224:U:C2	3.03	0.47
8:A:310:A:P	28:U:18:LYS:HZ3	2.35	0.47
8:A:415:A:N6	8:A:2409:G:O6	2.48	0.47
8:A:693:A:C6	8:A:770:G:C6	3.03	0.47
8:A:710:U:C4	8:A:722:A:N1	2.83	0.47
8:A:735:A:C8	8:A:736:C:C5	3.03	0.47
8:A:788:A:O5'	8:A:790:U:O4	2.33	0.47
8:A:902:C:H2'	8:A:903:C:H6	1.79	0.47
8:A:1040:A:C2	8:A:1116:G:C2	3.03	0.47
8:A:1087:G:C8	8:A:1088:A:O2'	2.62	0.47
8:A:1111:A:O3'	8:A:1112:G:H4'	2.15	0.47
8:A:1215:G:C6	8:A:1216:G:C5	3.03	0.47
8:A:1245:G:H4'	12:E:33:VAL:HG13	1.97	0.47
8:A:1256:G:H21	12:E:77:ILE:HG23	1.79	0.47
8:A:1269:A:H2'	8:A:1270:C:H6	1.71	0.47
8:A:1288:G:C8	8:A:1326:U:O4	2.68	0.47
8:A:1307:A:H1'	8:A:1622:G:N2	2.30	0.47
8:A:1340:U:C5	8:A:1603:A:C8	3.03	0.47
8:A:1369:G:H2'	8:A:1370:C:C6	2.49	0.47
8:A:1435:G:H2'	8:A:1436:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1436:G:C2	8:A:1557:C:O2	2.68	0.47
8:A:1504:A:H2'	8:A:1505:A:C8	2.50	0.47
8:A:1561:C:H2'	8:A:1562:U:H6	1.76	0.47
8:A:1659:G:C6	8:A:1660:G:N7	2.83	0.47
8:A:1721:G:C2	8:A:1738:G:C5	3.03	0.47
8:A:1739:A:H2'	8:A:1740:G:O4'	2.15	0.47
8:A:1767:G:C6	8:A:1768:C:C4	3.03	0.47
8:A:1891:G:H2'	8:A:1892:C:H6	1.77	0.47
8:A:2093:G:H4'	15:H:25:TYR:N	2.30	0.47
8:A:2104:C:C5	8:A:2105:U:H1'	2.50	0.47
8:A:2109:U:OP1	8:A:2143:C:C5'	2.61	0.47
8:A:2329:U:H2'	8:A:2330:G:H8	1.79	0.47
8:A:2437:G:H2'	8:A:2438:U:C6	2.49	0.47
8:A:2459:A:N1	8:A:2494:G:C4	2.83	0.47
8:A:2473:U:O4'	8:A:2473:U:O2	2.31	0.47
8:A:2657:A:C2	8:A:2665:A:H1'	2.49	0.47
8:A:2707:U:C2'	21:N:71:ARG:HH22	2.28	0.47
8:A:2831:G:OP2	11:D:59:ARG:CZ	2.63	0.47
8:A:2898:U:C2	8:A:2899:A:C8	3.03	0.47
9:B:2:G:C5	9:B:119:A:N1	2.83	0.47
9:B:20:G:C4	9:B:64:G:C2	3.03	0.47
11:D:79:LEU:C	11:D:80:TRP:CD2	2.93	0.47
11:D:110:THR:HG23	11:D:170:VAL:O	2.15	0.47
13:F:113:PHE:CZ	13:F:115:GLY:HA2	2.50	0.47
15:H:68:ARG:C	15:H:68:ARG:HD2	2.39	0.47
17:J:74:TYR:HB2	17:J:92:MET:HE2	1.97	0.47
17:J:75:TYR:HA	17:J:86:GLN:HB3	1.95	0.47
23:P:97:TYR:CD1	23:P:100:ARG:NH2	2.83	0.47
27:T:62:VAL:HA	27:T:81:LYS:HA	1.97	0.47
29:V:88:HIS:O	29:V:89:ILE:HG12	2.15	0.47
34:a:181:A:N6	34:a:194:C:H2'	2.29	0.47
34:a:191:G:C2	34:a:192:A:C5	3.03	0.47
34:a:197:A:N3	34:a:198:G:H1'	2.30	0.47
34:a:565:U:H3'	34:a:566:G:H2'	1.96	0.47
34:a:796:C:O3'	44:k:126:ARG:NE	2.47	0.47
34:a:1057:G:C6	34:a:1204:A:N1	2.82	0.47
34:a:1072:G:C4	34:a:1073:U:C5	3.03	0.47
34:a:1084:G:C6	34:a:1085:U:C4	3.03	0.47
34:a:1090:U:H2'	34:a:1091:U:H6	1.79	0.47
34:a:1165:U:H2'	34:a:1166:G:O4'	2.15	0.47
34:a:1240:U:C5	40:g:115:MET:SD	3.09	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1254:A:C2	34:a:1284:C:N3	2.83	0.47
34:a:1269:A:N9	34:a:1313:U:H1'	2.30	0.47
34:a:1415:G:C6	34:a:1486:G:C6	3.03	0.47
34:a:1421:G:C6	34:a:1480:A:N1	2.82	0.47
34:a:1509:C:H2'	34:a:1510:C:C6	2.50	0.47
35:b:46:VAL:CG2	35:b:47:PRO:HD3	2.45	0.47
35:b:80:LYS:HB2	35:b:90:PHE:CE2	2.50	0.47
37:d:134:TYR:CE2	37:d:136:VAL:HA	2.50	0.47
38:e:133:ILE:O	38:e:137:ARG:HG3	2.15	0.47
39:f:7:VAL:HA	39:f:60:VAL:O	2.14	0.47
40:g:17:PHE:HE2	40:g:46:LEU:HD22	1.79	0.47
41:h:78:SER:OG	41:h:83:ARG:HA	2.14	0.47
41:h:105:THR:HB	41:h:120:LEU:HD13	1.97	0.47
44:k:19:VAL:HB	44:k:34:THR:HG23	1.96	0.47
44:k:123:PRO:O	54:u:36:PHE:HD1	1.98	0.47
45:l:2:THR:HB	45:l:5:GLN:HB2	1.96	0.47
47:n:15:LEU:HD12	47:n:18:LYS:HB3	1.97	0.47
51:r:12:PHE:CD2	51:r:46:THR:HG23	2.50	0.47
51:r:20:ILE:CD1	51:r:53:GLN:HB2	2.37	0.47
55:v:6:G:H2'	55:v:7:G:C8	2.50	0.47
56:w:52:G:C4	56:w:53:G:C8	3.03	0.47
57:x:348:VAL:HB	57:x:397:CYS:O	2.15	0.47
57:x:625:GLU:HG2	57:x:626:ASN:N	2.30	0.47
1:0:39:ARG:HH12	8:A:2884:U:H2'	1.80	0.46
8:A:5:A:H2'	8:A:6:A:H8	1.78	0.46
8:A:33:C:N4	8:A:446:G:O2'	2.36	0.46
8:A:77:G:H2'	8:A:78:U:C6	2.50	0.46
8:A:182:A:C2	8:A:183:C:N1	2.83	0.46
8:A:310:A:OP1	28:U:14:THR:HG23	2.16	0.46
8:A:458:G:O6	12:E:53:THR:HG21	2.16	0.46
8:A:534:U:C2	8:A:559:G:N1	2.80	0.46
8:A:547:A:H4'	8:A:548:G:C4	2.50	0.46
8:A:621:A:C5	8:A:622:G:H1'	2.50	0.46
8:A:653:U:C2	8:A:654:A:H1'	2.50	0.46
8:A:704:G:H1'	8:A:727:A:N6	2.29	0.46
8:A:711:G:C2	8:A:720:U:O2	2.67	0.46
8:A:729:G:C1'	10:C:206:LYS:NZ	2.73	0.46
8:A:744:U:H5''	11:D:138:LEU:HD21	1.96	0.46
8:A:859:G:C4	8:A:916:G:C6	3.03	0.46
8:A:993:G:H1'	25:R:91:GLN:CD	2.40	0.46
8:A:1059:G:C6	16:I:131:THR:HA	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1139:G:H5''	17:J:25:LEU:HD21	1.97	0.46
8:A:1139:G:OP2	17:J:72:LYS:NZ	2.34	0.46
8:A:1145:C:H2'	8:A:1146:C:C6	2.50	0.46
8:A:1170:C:C4	8:A:1178:C:N4	2.82	0.46
8:A:1180:U:H2'	8:A:1181:U:H6	1.79	0.46
8:A:1196:C:C4	8:A:1197:G:N7	2.83	0.46
8:A:1216:G:H2'	8:A:1217:U:C6	2.49	0.46
8:A:1310:G:C6	8:A:1605:C:N4	2.84	0.46
8:A:1421:G:O2'	8:A:1422:G:H5'	2.15	0.46
8:A:1516:G:C6	8:A:1517:G:C5	3.03	0.46
8:A:1574:C:C2	8:A:1575:C:C5	3.02	0.46
8:A:1588:G:H2'	8:A:1589:U:C6	2.50	0.46
8:A:1722:A:N1	8:A:1739:A:H1'	2.30	0.46
8:A:1799:G:H4'	8:A:1800:C:H6	1.81	0.46
8:A:1845:G:H2'	8:A:1846:G:H8	1.79	0.46
8:A:1995:U:H3'	8:A:1996:C:H2'	1.96	0.46
8:A:2071:A:C2	8:A:2441:U:N3	2.83	0.46
8:A:2076:U:O4	8:A:2596:U:C6	2.68	0.46
8:A:2264:C:C2	8:A:2277:G:N2	2.83	0.46
8:A:2310:C:H2'	13:F:76:PHE:CE2	2.50	0.46
8:A:2313:C:C1'	13:F:36:ASN:HD22	2.28	0.46
8:A:2397:G:C6	8:A:2420:C:N3	2.83	0.46
8:A:2450:A:N6	8:A:2501:C:O2	2.47	0.46
8:A:2459:A:C2	8:A:2460:U:H1'	2.50	0.46
8:A:2520:C:C1'	8:A:2567:G:O4'	2.63	0.46
8:A:2534:A:C6	8:A:2535:G:C8	3.02	0.46
8:A:2552:OMU:H5	8:A:2557:G:N1	2.30	0.46
8:A:2557:G:C6	8:A:2558:C:N4	2.83	0.46
8:A:2603:G:H2'	8:A:2604:PSU:O4'	2.15	0.46
8:A:2718:G:H5'	23:P:97:TYR:CD2	2.49	0.46
8:A:2792:A:C6	8:A:2793:C:C4	3.03	0.46
8:A:2801:G:C4	8:A:2802:G:C8	3.04	0.46
8:A:2895:G:C2	8:A:2896:C:C2	3.03	0.46
9:B:21:G:H2'	9:B:22:U:H6	1.80	0.46
9:B:25:U:C5	9:B:26:C:C1'	2.98	0.46
9:B:77:U:C2	9:B:78:A:C8	3.03	0.46
13:F:59:ILE:HG23	13:F:60:SER:N	2.30	0.46
17:J:13:ARG:NH2	17:J:49:ASP:OD2	2.48	0.46
20:M:26:VAL:HG12	20:M:133:LYS:HE3	1.97	0.46
22:O:34:HIS:HA	22:O:65:THR:HB	1.97	0.46
23:P:1:SER:O	23:P:5:LYS:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Q:8:ILE:HG13	24:Q:9:ALA:H	1.79	0.46
25:R:58:VAL:HB	25:R:102:SER:OG	2.14	0.46
28:U:5:ARG:HG3	28:U:93:ARG:NH1	2.30	0.46
34:a:37:U:H2'	34:a:38:G:O4'	2.15	0.46
34:a:75:G:C6	34:a:76:G:C6	3.04	0.46
34:a:103:U:P	53:t:8:LYS:NZ	2.88	0.46
34:a:120:A:C5	34:a:122:G:C5	3.03	0.46
34:a:159:G:C6	34:a:164:G:O5'	2.68	0.46
34:a:186:C:C4	34:a:187:G:C5	3.02	0.46
34:a:247:G:C4	34:a:278:G:C2	3.03	0.46
34:a:343:U:H3'	34:a:345:C:C5	2.51	0.46
34:a:363:A:OP2	45:l:30:ARG:CZ	2.63	0.46
34:a:371:A:C6	34:a:391:G:C6	3.04	0.46
34:a:455:G:N1	34:a:478:A:C6	2.83	0.46
34:a:546:A:H3'	37:d:67:LEU:CD1	2.46	0.46
34:a:600:A:H2'	34:a:601:G:C8	2.50	0.46
34:a:706:A:C6	34:a:707:U:C4	3.03	0.46
34:a:770:C:H2'	34:a:771:G:H8	1.79	0.46
34:a:781:A:C5	34:a:802:A:C2	3.03	0.46
34:a:781:A:C8	34:a:782:A:C8	3.03	0.46
34:a:810:C:C2	34:a:811:C:C6	3.03	0.46
34:a:866:C:O5'	34:a:866:C:H6	1.99	0.46
34:a:981:U:O5'	34:a:981:U:H6	1.99	0.46
34:a:990:C:C2	34:a:1216:A:C2	3.03	0.46
34:a:1063:C:C4	34:a:1064:G:C5	3.02	0.46
34:a:1068:G:C6	34:a:1069:C:C4	3.03	0.46
34:a:1314:C:H2'	34:a:1315:U:H6	1.80	0.46
34:a:1327:C:O2'	34:a:1328:C:H5'	2.15	0.46
34:a:1330:U:H4'	46:m:22:TYR:CE2	2.50	0.46
34:a:1332:A:C2	34:a:1333:A:C4	3.02	0.46
34:a:1423:G:H2'	34:a:1424:U:O4'	2.16	0.46
35:b:151:LYS:CG	35:b:152:ASP:N	2.79	0.46
36:c:11:LEU:HA	36:c:15:LYS:HB2	1.96	0.46
38:e:63:MET:HB3	38:e:67:ARG:CZ	2.44	0.46
40:g:139:ASP:HA	40:g:142:ARG:NH2	2.30	0.46
41:h:22:ALA:O	41:h:62:LEU:HG	2.15	0.46
41:h:86:LYS:HG3	41:h:124:ILE:CD1	2.45	0.46
43:j:15:HIS:HB3	43:j:70:HIS:CE1	2.50	0.46
44:k:59:PRO:HB3	44:k:90:PRO:O	2.15	0.46
46:m:12:LYS:CB	46:m:17:ALA:HB2	2.43	0.46
48:o:63:ARG:HA	48:o:66:LEU:HD12	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:q:7:LEU:HD12	50:q:7:LEU:N	2.30	0.46
51:r:21:ASP:HB2	51:r:24:ASP:OD2	2.15	0.46
52:s:9:PHE:HE2	52:s:36:ARG:NE	2.13	0.46
55:v:52:G:C2	55:v:53:G:C8	3.03	0.46
57:x:114:ALA:HB1	57:x:143:MET:SD	2.55	0.46
57:x:117:GLY:HA2	57:x:153:VAL:HG13	1.97	0.46
57:x:119:GLN:O	57:x:122:SER:N	2.48	0.46
57:x:207:PRO:O	57:x:211:VAL:HG23	2.15	0.46
57:x:252:ARG:NH1	57:x:256:LEU:HD21	2.30	0.46
57:x:617:LYS:HB3	57:x:682:GLU:CG	2.45	0.46
2:1:9:LYS:CB	2:1:52:LYS:C	2.88	0.46
2:1:25:ASN:ND2	8:A:2285:C:P	2.87	0.46
6:5:31:ARG:HA	8:A:1054:A:O4'	2.16	0.46
8:A:160:A:C6	8:A:161:A:C6	3.03	0.46
8:A:185:G:C6	8:A:212:G:C6	3.02	0.46
8:A:202:U:H2'	8:A:203:A:C8	2.50	0.46
8:A:235:U:N3	8:A:236:C:C5	2.83	0.46
8:A:272:A:H2'	8:A:273:G:C8	2.50	0.46
8:A:291:G:C6	8:A:292:U:C4	3.04	0.46
8:A:467:G:C2	8:A:468:G:C4	3.02	0.46
8:A:534:U:C2	8:A:535:G:N7	2.84	0.46
8:A:582:A:H2'	8:A:583:G:C8	2.51	0.46
8:A:584:C:N4	8:A:585:G:C6	2.83	0.46
8:A:598:U:O2	8:A:659:G:N2	2.47	0.46
8:A:643:A:N6	8:A:644:A:C6	2.83	0.46
8:A:653:U:N3	8:A:654:A:H1'	2.30	0.46
8:A:776:G:H1'	8:A:793:A:C2	2.51	0.46
8:A:892:A:N3	8:A:894:U:O2	2.49	0.46
8:A:895:U:H4'	8:A:896:A:C5	2.51	0.46
8:A:908:C:H2'	8:A:909:A:C8	2.50	0.46
8:A:915:C:C4	8:A:916:G:C5	3.03	0.46
8:A:996:A:O3'	24:Q:90:ASP:HB2	2.15	0.46
8:A:1029:A:H8	8:A:1029:A:O5'	1.97	0.46
8:A:1051:G:C6	8:A:1052:C:C4	3.04	0.46
8:A:1072:C:O2	8:A:1101:U:C4	2.68	0.46
8:A:1074:G:H5''	8:A:1075:C:C5'	2.45	0.46
8:A:1129:A:N1	8:A:2569:G:O2'	2.41	0.46
8:A:1161:C:H2'	8:A:1162:G:O4'	2.15	0.46
8:A:1163:G:H2'	8:A:1164:C:H6	1.80	0.46
8:A:1197:G:N1	8:A:1250:G:C6	2.83	0.46
8:A:1252:G:C2	8:A:1253:A:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1405:U:H2'	8:A:1406:U:H6	1.76	0.46
8:A:1414:C:H2'	8:A:1415:U:C1'	2.46	0.46
8:A:1487:U:C4	8:A:1503:A:N1	2.83	0.46
8:A:1510:G:C2	8:A:1511:G:C4	3.03	0.46
8:A:1530:G:N1	8:A:1542:U:C2	2.82	0.46
8:A:1537:G:N1	8:A:1538:G:N3	2.64	0.46
8:A:1607:C:H5''	8:A:1608:A:H5'	1.97	0.46
8:A:1613:G:N1	8:A:1617:C:C6	2.84	0.46
8:A:1631:G:C5	8:A:1633:G:OP2	2.68	0.46
8:A:1661:G:O2'	8:A:1662:U:H5'	2.16	0.46
8:A:1778:U:C6	8:A:1784:A:C2	3.03	0.46
8:A:1794:A:H4'	8:A:1900:A:C6	2.50	0.46
8:A:1818:U:O2'	10:C:153:LEU:HA	2.15	0.46
8:A:2028:U:H2'	8:A:2029:G:C8	2.50	0.46
8:A:2057:G:C4	8:A:2058:A:C8	3.03	0.46
8:A:2146:C:O2'	8:A:2147:A:C8	2.59	0.46
8:A:2171:A:O2'	8:A:2172:U:C5	2.68	0.46
8:A:2307:G:N1	13:F:38:GLY:O	2.47	0.46
8:A:2315:G:H2'	8:A:2316:G:C8	2.50	0.46
8:A:2331:G:C2	8:A:2385:C:C4	3.04	0.46
8:A:2444:G:C6	8:A:2445:2MG:C5	3.03	0.46
8:A:2454:G:C2	8:A:2499:C:N4	2.83	0.46
8:A:2666:C:H2'	8:A:2667:C:O4'	2.16	0.46
8:A:2792:A:N6	8:A:2793:C:C4	2.83	0.46
8:A:2818:U:C2	8:A:2829:A:N1	2.84	0.46
10:C:130:PRO:HD3	10:C:188:ARG:NH2	2.31	0.46
11:D:7:LYS:CG	11:D:198:GLY:HA2	2.46	0.46
11:D:172:VAL:CG1	11:D:175:LEU:HD21	2.44	0.46
13:F:70:ARG:O	13:F:80:GLN:CG	2.61	0.46
15:H:115:VAL:CG1	15:H:130:VAL:CG1	2.93	0.46
17:J:16:TYR:CE1	17:J:138:GLN:HB2	2.50	0.46
18:K:42:THR:O	18:K:42:THR:HG23	2.15	0.46
21:N:2:ARG:HD3	21:N:2:ARG:C	2.39	0.46
25:R:24:LYS:HD3	25:R:92:TRP:CG	2.50	0.46
26:S:20:VAL:HG21	26:S:43:ALA:HB3	1.96	0.46
26:S:88:ARG:NH2	26:S:94:ASP:OD2	2.48	0.46
27:T:6:ARG:NH2	27:T:37:ASP:HB3	2.30	0.46
27:T:29:THR:HG23	27:T:85:VAL:C	2.40	0.46
33:Z:6:ILE:HG12	33:Z:56:VAL:HG12	1.98	0.46
33:Z:38:GLU:CD	33:Z:38:GLU:N	2.73	0.46
34:a:7:A:C6	34:a:298:A:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:8:A:C2	38:e:111:ARG:NH2	2.83	0.46
34:a:54:C:H2'	34:a:352:C:H41	1.80	0.46
34:a:61:G:H2'	34:a:62:U:O4'	2.15	0.46
34:a:159:G:C5	34:a:164:G:O5'	2.69	0.46
34:a:203:G:C6	34:a:212:G:O6	2.68	0.46
34:a:216:U:N3	34:a:217:C:N4	2.62	0.46
34:a:216:U:C4	34:a:217:C:N4	2.84	0.46
34:a:376:G:OP2	49:p:69:ASP:OD1	2.32	0.46
34:a:377:G:H5'	49:p:5:ARG:HH11	1.80	0.46
34:a:381:C:N4	34:a:382:A:C2	2.84	0.46
34:a:419:C:OP1	34:a:513:C:O2'	2.31	0.46
34:a:454:G:H8	34:a:454:G:O5'	1.98	0.46
34:a:539:A:C2	34:a:540:G:C4	3.03	0.46
34:a:542:G:H2'	34:a:543:U:C6	2.50	0.46
34:a:544:G:C6	34:a:545:C:C4	3.02	0.46
34:a:575:G:C6	34:a:821:G:C5	3.03	0.46
34:a:676:A:O3'	44:k:114:PRO:HB3	2.15	0.46
34:a:753:A:H4'	34:a:754:C:O4'	2.16	0.46
34:a:765:G:N1	34:a:812:G:O2'	2.19	0.46
34:a:832:G:H1	34:a:854:U:H3	1.63	0.46
34:a:907:A:C6	34:a:908:A:C5	3.04	0.46
34:a:921:U:OP2	34:a:1082:A:C1'	2.63	0.46
34:a:973:G:OP1	43:j:59:LYS:HE3	2.16	0.46
34:a:1125:U:H4'	43:j:7:ARG:NH1	2.31	0.46
34:a:1129:C:H4'	42:i:17:ARG:NH2	2.29	0.46
34:a:1163:A:C6	34:a:1174:G:C6	3.03	0.46
34:a:1225:A:H5''	34:a:1226:C:OP2	2.15	0.46
34:a:1270:G:O3'	34:a:1314:C:C5'	2.63	0.46
34:a:1303:C:H2'	34:a:1304:G:H5'	1.96	0.46
34:a:1332:A:H8	34:a:1332:A:O5'	1.99	0.46
34:a:1338:G:H2'	34:a:1339:A:C8	2.50	0.46
34:a:1415:G:C4	34:a:1416:G:C8	3.03	0.46
34:a:1416:G:C2	34:a:1417:G:H1'	2.49	0.46
34:a:1502:A:C8	34:a:1504:G:C5	3.03	0.46
34:a:1516:2MG:HM23	34:a:1518:MA6:H8	1.97	0.46
34:a:1519:MA6:H8	34:a:1520:C:O4'	2.15	0.46
35:b:86:CYS:SG	35:b:87:ASP:N	2.88	0.46
36:c:101:ASN:C	36:c:102:ILE:HD13	2.41	0.46
39:f:20:GLY:O	39:f:24:ARG:HD2	2.15	0.46
45:l:82:ARG:HB3	45:l:97:VAL:CG1	2.45	0.46
46:m:65:GLU:O	46:m:69:ARG:CG	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:t:26:MET:O	53:t:29:THR:HB	2.15	0.46
53:t:78:LEU:HD23	53:t:78:LEU:HA	1.78	0.46
54:u:28:LEU:HA	54:u:31:VAL:HG12	1.98	0.46
55:v:14:A:C2	55:v:15:G:H1'	2.50	0.46
55:v:66:C:C2	55:v:67:C:C5	3.03	0.46
57:x:297:ILE:HA	57:x:305:PRO:HG2	1.98	0.46
57:x:503:LYS:HD2	57:x:516:HIS:CD2	2.50	0.46
57:x:624:GLU:CD	57:x:625:GLU:N	2.73	0.46
5:4:32:LYS:NZ	8:A:2529:G:N7	2.54	0.46
7:6:12:ILE:HD13	7:6:28:VAL:CG1	2.46	0.46
8:A:10:A:C5	8:A:2800:A:C2	3.04	0.46
8:A:68:G:H2'	8:A:69:C:H6	1.78	0.46
8:A:75:G:H4'	32:Y:48:ARG:CZ	2.45	0.46
8:A:116:C:H1'	8:A:127:A:H1'	1.96	0.46
8:A:138:U:C2	8:A:140:C:N3	2.83	0.46
8:A:179:C:H2'	8:A:180:G:O4'	2.15	0.46
8:A:217:A:H2'	8:A:218:A:C8	2.50	0.46
8:A:251:A:H2'	8:A:252:G:O4'	2.15	0.46
8:A:291:G:C2	8:A:349:U:O2	2.68	0.46
8:A:294:A:C8	8:A:345:A:C6	3.02	0.46
8:A:360:U:H2'	8:A:361:G:O4'	2.15	0.46
8:A:368:A:H2'	8:A:369:U:C4'	2.46	0.46
8:A:423:A:H8	8:A:423:A:O5'	1.97	0.46
8:A:459:U:C5	8:A:469:G:C2	3.03	0.46
8:A:469:G:C8	8:A:469:G:H3'	2.51	0.46
8:A:693:A:H2'	8:A:694:U:C6	2.50	0.46
8:A:776:G:C2	8:A:793:A:C6	3.03	0.46
8:A:826:U:H5''	8:A:2429:G:P	2.55	0.46
8:A:838:C:H2'	8:A:839:U:C6	2.50	0.46
8:A:854:C:N3	8:A:924:G:C6	2.84	0.46
8:A:880:G:H3'	8:A:881:G:C8	2.51	0.46
8:A:946:C:H2'	8:A:947:A:H8	1.80	0.46
8:A:1002:G:C6	8:A:1003:G:C5	3.02	0.46
8:A:1063:G:C5	16:I:89:SER:CB	2.98	0.46
8:A:1086:A:OP1	8:A:1103:A:H2	1.97	0.46
8:A:1207:C:O2	8:A:1240:U:O2	2.33	0.46
8:A:1208:C:C4	8:A:1209:U:C4	3.02	0.46
8:A:1232:G:C2	8:A:1233:C:C2	3.03	0.46
8:A:1243:C:C2	8:A:1244:A:C8	3.03	0.46
8:A:1264:A:H3'	8:A:1265:A:C8	2.50	0.46
8:A:1280:G:N2	8:A:1291:C:C2	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1289:C:H2'	8:A:1290:C:C6	2.49	0.46
8:A:1317:G:C5	8:A:1318:U:C4	3.04	0.46
8:A:1340:U:OP1	27:T:61:LEU:HD21	2.16	0.46
8:A:1361:G:C4	8:A:1362:C:C5	3.03	0.46
8:A:1501:G:C2	8:A:1502:A:C4	3.04	0.46
8:A:1588:G:H2'	8:A:1589:U:H6	1.81	0.46
8:A:1686:C:C4	8:A:1687:G:C5	3.02	0.46
8:A:1835:2MG:N7	8:A:1969:A:C8	2.83	0.46
8:A:1865:U:O2'	8:A:1866:A:H8	1.98	0.46
8:A:1951:U:O2'	8:A:1953:A:N7	2.33	0.46
8:A:1967:C:C4	8:A:1968:G:C5	3.03	0.46
8:A:2051:A:C6	8:A:2614:A:C4	3.04	0.46
8:A:2200:C:H1'	8:A:2226:C:H41	1.80	0.46
8:A:2207:C:N3	8:A:2218:G:N1	2.63	0.46
8:A:2307:G:H1	13:F:40:GLY:HA3	1.80	0.46
8:A:2330:G:N1	8:A:2386:A:C6	2.84	0.46
8:A:2477:U:C5'	8:A:2479:U:O4	2.63	0.46
8:A:2545:G:C2	8:A:2546:U:O2	2.68	0.46
8:A:2580:PSU:O2'	8:A:2581:G:H5'	2.15	0.46
8:A:2700:A:C6	8:A:2708:G:C6	3.04	0.46
8:A:2812:G:H2'	8:A:2813:A:H8	1.81	0.46
8:A:2847:U:H3	8:A:2869:G:H1	1.62	0.46
8:A:2870:C:C4	8:A:2871:U:C5	3.04	0.46
9:B:57:A:H1'	13:F:26:GLN:CA	2.46	0.46
9:B:83:G:C6	9:B:94:A:C6	3.03	0.46
10:C:144:GLU:HG2	10:C:150:GLY:C	2.40	0.46
14:G:148:ARG:HD2	14:G:166:GLU:OE1	2.15	0.46
14:G:153:PRO:CD	14:G:161:VAL:O	2.63	0.46
15:H:127:GLU:OE1	15:H:143:ILE:HB	2.15	0.46
18:K:71:ARG:HB2	18:K:73:ASP:OD1	2.14	0.46
20:M:20:LEU:CD2	20:M:98:PRO:HB2	2.45	0.46
24:Q:69:ARG:CZ	24:Q:74:SER:HA	2.45	0.46
24:Q:109:VAL:O	24:Q:113:LYS:HG3	2.15	0.46
25:R:38:VAL:HB	25:R:54:VAL:HG12	1.98	0.46
27:T:57:VAL:HG12	27:T:86:THR:HB	1.98	0.46
34:a:46:G:C2	34:a:366:A:C4	3.04	0.46
34:a:62:U:O2'	34:a:379:C:O2	2.29	0.46
34:a:73:C:N3	34:a:74:A:C8	2.83	0.46
34:a:123:U:O3'	34:a:311:C:H1'	2.15	0.46
34:a:169:C:N4	34:a:170:U:C5	2.84	0.46
34:a:202:G:C2	34:a:216:U:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:412:A:N6	34:a:414:A:O4'	2.48	0.46
34:a:561:U:C2'	34:a:562:U:OP2	2.64	0.46
34:a:605:U:H2'	34:a:606:G:O4'	2.16	0.46
34:a:633:G:C2	34:a:634:C:C2	3.04	0.46
34:a:671:G:N1	34:a:736:C:C4	2.84	0.46
34:a:708:C:O4'	44:k:38:GLY:HA3	2.14	0.46
34:a:771:G:H2'	34:a:772:U:C6	2.50	0.46
34:a:880:C:H3'	45:l:5:GLN:HE21	1.79	0.46
34:a:927:G:C4	34:a:928:G:C8	3.04	0.46
34:a:931:C:N3	34:a:1387:G:C6	2.83	0.46
34:a:973:G:C6	34:a:974:A:C6	3.03	0.46
34:a:1091:U:H2'	34:a:1092:A:H3'	1.97	0.46
34:a:1169:A:H8	34:a:1169:A:OP2	1.98	0.46
34:a:1401:G:H2'	34:a:1402:4OC:H6	1.98	0.46
34:a:1401:G:C3'	34:a:1402:4OC:H6	2.44	0.46
36:c:62:SER:O	36:c:63:ILE:HG13	2.16	0.46
36:c:87:ARG:CZ	36:c:87:ARG:HB3	2.45	0.46
38:e:41:GLY:CA	38:e:116:VAL:O	2.63	0.46
40:g:77:ARG:NE	40:g:86:VAL:HG11	2.30	0.46
40:g:112:ASP:OD1	40:g:117:LEU:HD22	2.15	0.46
41:h:85:TYR:CD1	41:h:123:GLU:HB2	2.50	0.46
44:k:53:GLY:O	44:k:56:LYS:HG2	2.15	0.46
45:l:32:VAL:HG22	45:l:32:VAL:O	2.15	0.46
48:o:3:SER:O	48:o:7:THR:HG22	2.16	0.46
48:o:5:GLU:OE2	48:o:5:GLU:N	2.47	0.46
55:v:5:G:N1	55:v:6:G:C5	2.83	0.46
55:v:16:C:P	55:v:17:C:H41	2.37	0.46
55:v:21:A:H2'	55:v:46:A:N6	2.30	0.46
56:w:67:C:N3	56:w:68:C:C5	2.83	0.46
57:x:233:MET:O	57:x:237:LEU:HG	2.15	0.46
57:x:639:GLY:HA3	57:x:657:VAL:HG22	1.97	0.46
57:x:647:GLU:OE1	57:x:652:LYS:HE2	2.15	0.46
5:4:2:LYS:O	5:4:35:GLN:HA	2.15	0.46
7:6:12:ILE:HD13	7:6:28:VAL:HB	1.97	0.46
7:6:16:CYS:HB3	7:6:20:ASN:ND2	2.30	0.46
7:6:59:ARG:HB3	7:6:63:ARG:HH22	1.79	0.46
8:A:48:G:N1	8:A:177:G:OP2	2.49	0.46
8:A:48:G:C6	8:A:178:G:O6	2.69	0.46
8:A:71:A:C5	8:A:73:A:C6	3.03	0.46
8:A:99:U:H5''	8:A:100:U:H5'	1.98	0.46
8:A:186:G:N1	8:A:211:C:C4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:236:C:H2'	8:A:237:C:C6	2.51	0.46
8:A:289:G:C2	8:A:290:U:C2	3.04	0.46
8:A:558:U:H2'	8:A:559:G:C8	2.50	0.46
8:A:575:A:H2'	8:A:576:U:H6	1.80	0.46
8:A:637:A:OP2	19:L:111:ILE:HB	2.14	0.46
8:A:735:A:H3'	8:A:736:C:C6	2.51	0.46
8:A:756:A:C6	8:A:757:G:C5	3.03	0.46
8:A:781:A:N6	10:C:211:ARG:HH22	2.13	0.46
8:A:816:C:N3	8:A:1192:G:C2	2.84	0.46
8:A:1001:A:C6	8:A:1002:G:C4	3.03	0.46
8:A:1001:A:N6	8:A:1002:G:C2	2.83	0.46
8:A:1004:U:H5'	8:A:1010:A:C6	2.50	0.46
8:A:1004:U:O4'	8:A:1010:A:C5	2.68	0.46
8:A:1013:C:O2'	8:A:1014:A:H5'	2.16	0.46
8:A:1024:G:H3'	8:A:1025:G:C8	2.50	0.46
8:A:1024:G:H3'	8:A:1025:G:H8	1.79	0.46
8:A:1060:U:C4'	8:A:1062:G:H5'	2.45	0.46
8:A:1079:C:C2	8:A:1086:A:H2	2.33	0.46
8:A:1102:C:P	8:A:1103:A:OP2	2.72	0.46
8:A:1136:G:N1	8:A:1137:G:C5	2.84	0.46
8:A:1210:G:O6	8:A:1237:A:H2'	2.15	0.46
8:A:1260:A:H2'	8:A:1261:C:H6	1.80	0.46
8:A:1279:G:C6	8:A:1280:G:C5	3.03	0.46
8:A:1359:A:OP2	8:A:1371:G:C2	2.69	0.46
8:A:1384:A:H1'	8:A:1405:U:O4'	2.15	0.46
8:A:1385:A:C4	8:A:1403:A:C4	3.03	0.46
8:A:1430:G:N1	8:A:1564:C:N3	2.63	0.46
8:A:1527:G:H1'	8:A:1546:G:N2	2.31	0.46
8:A:1557:C:C6	8:A:1558:C:H2'	2.50	0.46
8:A:1654:A:C2'	11:D:118:PHE:HB3	2.46	0.46
8:A:1683:U:H2'	8:A:1684:G:C8	2.51	0.46
8:A:1693:U:O4	8:A:1977:A:C8	2.68	0.46
8:A:1699:G:C6	8:A:1763:G:N3	2.83	0.46
8:A:1710:G:C6	8:A:1749:A:N1	2.83	0.46
8:A:1844:C:H2'	8:A:1845:G:H8	1.80	0.46
8:A:1866:A:C6	8:A:1876:A:C8	3.04	0.46
8:A:1999:C:H2'	8:A:2000:C:O4'	2.16	0.46
8:A:2076:U:O2	8:A:2076:U:O5'	2.34	0.46
8:A:2100:G:C5	8:A:2190:G:C6	3.03	0.46
8:A:2228:G:H21	31:X:33:HIS:CE1	2.34	0.46
8:A:2380:C:H5'	22:O:17:LYS:NZ	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2494:G:C4	8:A:2495:G:C8	3.03	0.46
8:A:2519:U:O4	8:A:2541:A:H2'	2.16	0.46
8:A:2627:G:C5	8:A:2628:C:C4	3.04	0.46
8:A:2705:A:C5	8:A:2706:A:C5	3.03	0.46
8:A:2785:C:C2	8:A:2786:U:C5	3.04	0.46
8:A:2786:U:H2'	8:A:2787:C:C6	2.50	0.46
8:A:2868:A:C5	8:A:2869:G:C5	3.03	0.46
8:A:2884:U:O2'	8:A:2885:G:O4'	2.32	0.46
8:A:2893:A:O4'	8:A:2894:G:C2	2.69	0.46
9:B:45:A:C6	9:B:46:A:C4	3.04	0.46
9:B:67:G:C6	9:B:68:C:C4	3.02	0.46
10:C:106:PRO:HD2	10:C:109:LEU:CD2	2.31	0.46
11:D:47:ALA:HB2	11:D:83:ARG:HA	1.96	0.46
12:E:169:VAL:O	12:E:169:VAL:HG23	2.15	0.46
12:E:181:ILE:CG2	19:L:2:ARG:HA	2.45	0.46
13:F:37:MET:SD	13:F:52:ALA:HB1	2.55	0.46
13:F:47:LYS:HD2	13:F:50:ASP:HB2	1.98	0.46
14:G:8:VAL:O	14:G:49:LEU:HB2	2.15	0.46
14:G:86:LEU:HG	14:G:163:TYR:HA	1.98	0.46
15:H:9:VAL:HG22	15:H:13:GLY:N	2.30	0.46
17:J:34:ARG:NH1	17:J:40:HIS:HB3	2.30	0.46
20:M:42:THR:O	20:M:46:ILE:CG1	2.63	0.46
21:N:10:LEU:HB3	21:N:12:ARG:HH21	1.80	0.46
21:N:44:LEU:O	21:N:44:LEU:HG	2.13	0.46
25:R:62:GLU:HB2	25:R:99:THR:CG2	2.46	0.46
29:V:3:THR:HB	29:V:62:THR:HG23	1.97	0.46
29:V:4:ILE:CG1	29:V:50:MET:HE1	2.46	0.46
34:a:17:U:C2'	34:a:1079:G:H21	2.28	0.46
34:a:107:G:C5	53:t:9:ARG:NH1	2.82	0.46
34:a:206:C:H5''	34:a:207:C:O5'	2.16	0.46
34:a:260:G:C2	34:a:261:U:C4	3.03	0.46
34:a:270:A:C5	34:a:271:C:C4	3.04	0.46
34:a:272:C:H2'	34:a:273:U:C6	2.50	0.46
34:a:304:U:O2'	34:a:305:G:H5'	2.14	0.46
34:a:456:A:H2	34:a:476:U:C4	2.34	0.46
34:a:577:G:O2'	34:a:816:A:H2'	2.16	0.46
34:a:594:U:H3'	34:a:595:A:C8	2.50	0.46
34:a:595:A:C2'	34:a:641:U:O4	2.63	0.46
34:a:704:A:C6	34:a:705:G:C4	3.03	0.46
34:a:720:C:O2	51:r:55:ALA:HB1	2.15	0.46
34:a:720:C:H2'	34:a:721:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:771:G:O6	34:a:809:G:C6	2.69	0.46
34:a:832:G:C4	34:a:833:G:C8	3.03	0.46
34:a:895:G:C6	34:a:896:C:N4	2.84	0.46
34:a:902:G:H2'	34:a:903:G:H8	1.79	0.46
34:a:1013:G:H2'	34:a:1014:A:H3'	1.97	0.46
34:a:1052:U:C2'	34:a:1055:A:OP2	2.63	0.46
34:a:1215:G:C6	34:a:1216:A:N7	2.84	0.46
34:a:1244:G:O2'	34:a:1245:C:H5'	2.15	0.46
34:a:1253:G:C2	34:a:1254:A:C4	3.03	0.46
34:a:1253:G:C2	34:a:1285:A:N6	2.80	0.46
34:a:1275:A:H3'	34:a:1276:G:H8	1.79	0.46
34:a:1300:G:C5	34:a:1335:U:C4	3.03	0.46
34:a:1452:C:OP1	34:a:1453:G:O4'	2.34	0.46
34:a:1507:A:C8	34:a:1530:G:N2	2.83	0.46
34:a:1514:G:C2	34:a:1522:U:C2	3.03	0.46
36:c:52:SER:CB	36:c:111:ASP:OD2	2.63	0.46
36:c:87:ARG:HA	36:c:90:VAL:HG22	1.98	0.46
37:d:18:LEU:HB2	37:d:20:LEU:HD21	1.97	0.46
37:d:70:GLN:HA	37:d:73:ASN:HB2	1.97	0.46
38:e:76:ASN:HB3	38:e:80:LEU:O	2.15	0.46
41:h:28:SER:CB	41:h:50:VAL:HG13	2.45	0.46
41:h:40:LYS:HA	41:h:45:ILE:HB	1.96	0.46
43:j:22:THR:O	43:j:26:VAL:HG13	2.15	0.46
43:j:42:LEU:O	43:j:71:LEU:HB2	2.16	0.46
45:l:33:CYS:HA	45:l:54:VAL:HG12	1.96	0.46
46:m:24:VAL:HG22	46:m:25:GLY:O	2.16	0.46
46:m:87:GLY:C	46:m:91:ARG:HH11	2.24	0.46
49:p:39:PHE:CZ	49:p:41:PRO:HA	2.51	0.46
53:t:14:GLU:HG3	53:t:17:ARG:HH21	1.79	0.46
53:t:20:ASN:HB3	53:t:24:ARG:CZ	2.45	0.46
55:v:9:G:H4'	55:v:46:A:C4'	2.45	0.46
55:v:49:G:C2	55:v:50:U:C2	3.03	0.46
55:v:51:C:N3	55:v:64:G:C6	2.83	0.46
57:x:297:ILE:CG2	57:x:404:ILE:HB	2.45	0.46
57:x:638:ARG:HD2	57:x:658:PRO:HG2	1.97	0.46
57:x:664:GLY:O	57:x:667:THR:OG1	2.26	0.46
2:1:3:GLY:HA3	8:A:2284:A:P	2.56	0.46
2:1:39:ASP:HA	2:1:48:TYR:HH	1.81	0.46
4:3:63:TYR:CZ	8:A:242:G:H5''	2.51	0.46
8:A:1:G:N1	8:A:2:G:C5	2.84	0.46
8:A:27:G:O2'	8:A:512:G:N2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:66:C:C4	8:A:67:U:C4	3.03	0.46
8:A:71:A:O5'	8:A:72:U:H2'	2.15	0.46
8:A:84:A:N7	8:A:101:A:C2	2.84	0.46
8:A:123:G:C2	8:A:124:G:C4	3.04	0.46
8:A:241:A:N1	8:A:255:A:H5'	2.30	0.46
8:A:244:A:H61	8:A:254:G:C2'	2.29	0.46
8:A:333:G:C2	8:A:334:C:C2	3.03	0.46
8:A:346:A:C4	8:A:347:A:C8	3.03	0.46
8:A:409:G:C2	8:A:419:U:O2	2.68	0.46
8:A:483:A:O3'	28:U:47:PRO:HD3	2.15	0.46
8:A:517:C:O2'	26:S:18:ARG:NH2	2.46	0.46
8:A:571:U:O2'	8:A:573:U:O5'	2.22	0.46
8:A:604:G:C6	8:A:605:G:C5	3.04	0.46
8:A:607:U:H3'	8:A:619:G:O6	2.16	0.46
8:A:697:G:N1	8:A:766:U:C2	2.83	0.46
8:A:729:G:C6	8:A:1775:U:C2	3.03	0.46
8:A:840:C:N3	8:A:939:G:C6	2.84	0.46
8:A:860:U:N3	8:A:917:A:C8	2.82	0.46
8:A:885:C:O2'	8:A:893:C:O5'	2.33	0.46
8:A:953:G:C2	8:A:965:C:N3	2.84	0.46
8:A:1024:G:C6	8:A:1025:G:C6	3.03	0.46
8:A:1092:C:N4	8:A:1093:G:O6	2.42	0.46
8:A:1103:A:C5	8:A:1104:C:N3	2.84	0.46
8:A:1183:U:H4'	33:Z:29:ARG:CZ	2.45	0.46
8:A:1190:G:H2'	8:A:1191:G:H8	1.81	0.46
8:A:1197:G:O2'	8:A:1198:U:H5'	2.15	0.46
8:A:1223:G:C2	8:A:1226:A:OP2	2.69	0.46
8:A:1317:G:H2'	8:A:1318:U:O4'	2.15	0.46
8:A:1379:U:OP2	8:A:1380:G:OP2	2.33	0.46
8:A:1424:G:C2	8:A:1575:C:N3	2.84	0.46
8:A:1439:A:N7	8:A:1552:A:C2	2.84	0.46
8:A:1479:G:C4	8:A:1480:C:C5	3.04	0.46
8:A:1483:G:H2'	8:A:1484:U:O4'	2.14	0.46
8:A:1622:G:H2'	8:A:1623:G:O4'	2.15	0.46
8:A:1628:G:H2'	8:A:1629:U:H6	1.80	0.46
8:A:1638:C:H5''	8:A:2710:C:O2'	2.14	0.46
8:A:1731:G:N1	8:A:1733:G:C4	2.84	0.46
8:A:1767:G:N1	8:A:1986:C:C4	2.83	0.46
8:A:1770:G:C5	8:A:1983:G:N1	2.84	0.46
8:A:1780:A:OP2	8:A:1781:U:C3'	2.63	0.46
8:A:1847:G:O2'	8:A:1848:A:P	2.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1878:G:C6	8:A:1879:C:N4	2.83	0.46
8:A:2061:G:H1'	8:A:2062:A:C2	2.50	0.46
8:A:2064:C:O4'	8:A:2450:A:C2	2.68	0.46
8:A:2124:G:N7	8:A:2176:A:N6	2.63	0.46
8:A:2140:G:H2'	8:A:2141:G:C5	2.50	0.46
8:A:2313:C:O4'	13:F:36:ASN:CG	2.59	0.46
8:A:2343:U:HO2'	8:A:2373:G:HO2'	1.56	0.46
8:A:2367:G:O2'	8:A:2368:C:H5'	2.15	0.46
8:A:2376:A:C4	22:O:99:TYR:CZ	3.03	0.46
8:A:2419:U:H2'	8:A:2420:C:C6	2.50	0.46
8:A:2431:U:H2'	8:A:2432:A:H3'	1.97	0.46
8:A:2447:G:H1	8:A:2451:A:H62	1.62	0.46
8:A:2549:G:C4	8:A:2550:G:N7	2.83	0.46
8:A:2643:G:C2	8:A:2772:C:C2	3.03	0.46
8:A:2649:C:H2'	8:A:2650:U:H6	1.80	0.46
8:A:2651:C:H2'	8:A:2652:C:C6	2.51	0.46
8:A:2654:A:N6	8:A:2666:C:OP2	2.49	0.46
8:A:2711:A:C8	8:A:2714:G:O4'	2.68	0.46
8:A:2788:C:H1'	8:A:2810:A:H1'	1.98	0.46
10:C:70:LYS:HD3	10:C:95:TYR:CE2	2.51	0.46
10:C:123:ILE:HG22	10:C:123:ILE:O	2.16	0.46
10:C:221:GLY:O	10:C:231:HIS:HB2	2.16	0.46
13:F:73:VAL:HG12	13:F:75:GLY:N	2.30	0.46
13:F:101:ARG:O	13:F:105:ILE:CD1	2.63	0.46
17:J:4:PHE:CZ	17:J:6:ALA:HA	2.50	0.46
17:J:106:LYS:O	17:J:111:LYS:HE3	2.15	0.46
17:J:130:HIS:HE1	17:J:133:ALA:HA	1.79	0.46
18:K:41:ILE:HD11	18:K:58:LEU:HD21	1.97	0.46
19:L:101:ILE:HG13	19:L:102:GLY:H	1.80	0.46
24:Q:44:TYR:CD1	24:Q:47:ARG:CZ	2.98	0.46
25:R:17:GLY:O	25:R:97:LYS:CE	2.63	0.46
25:R:21:ARG:HD3	25:R:93:PHE:CB	2.45	0.46
28:U:24:VAL:HA	28:U:35:VAL:HG22	1.97	0.46
28:U:72:PHE:CZ	28:U:77:GLY:C	2.94	0.46
28:U:73:ASN:O	28:U:74:ALA:HB3	2.16	0.46
29:V:17:SER:HB3	29:V:27:PRO:HG3	1.98	0.46
32:Y:16:THR:HG23	32:Y:17:GLU:H	1.79	0.46
33:Z:9:THR:OG1	33:Z:53:MET:C	2.58	0.46
34:a:14:U:N3	34:a:16:A:H5''	2.31	0.46
34:a:130:A:N1	34:a:233:C:O2'	2.38	0.46
34:a:180:U:O2	34:a:195:A:N7	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:211:G:C2'	34:a:212:G:O5'	2.63	0.46
34:a:213:G:N3	34:a:214:C:O2'	2.39	0.46
34:a:355:C:H2'	34:a:356:A:O4'	2.16	0.46
34:a:362:G:C2	34:a:365:U:OP2	2.68	0.46
34:a:375:U:H2'	34:a:376:G:O4'	2.15	0.46
34:a:504:C:C2	34:a:542:G:N2	2.83	0.46
34:a:514:C:C2	34:a:538:G:N2	2.83	0.46
34:a:540:G:C4	34:a:541:G:C8	3.03	0.46
34:a:600:A:OP1	41:h:87:ARG:HB3	2.15	0.46
34:a:608:A:C2	34:a:609:A:H1'	2.51	0.46
34:a:624:C:H2'	34:a:625:U:C6	2.50	0.46
34:a:632:U:H6	34:a:632:U:O5'	1.98	0.46
34:a:942:G:C2	34:a:943:U:C6	3.04	0.46
34:a:953:G:C6	34:a:954:G:C4	3.03	0.46
34:a:1060:U:H2'	34:a:1061:G:H8	1.81	0.46
34:a:1136:C:O5'	34:a:1137:C:OP1	2.34	0.46
34:a:1148:U:H2'	34:a:1149:C:C6	2.51	0.46
34:a:1169:A:H2'	34:a:1170:A:C8	2.51	0.46
34:a:1220:G:H2'	34:a:1221:G:C8	2.51	0.46
34:a:1226:C:H4'	52:s:79:TYR:CE2	2.51	0.46
34:a:1239:A:N1	34:a:1296:C:O2	2.49	0.46
34:a:1271:A:H2'	34:a:1272:G:C8	2.51	0.46
34:a:1317:C:O5'	47:n:23:ARG:NH2	2.49	0.46
34:a:1352:C:H2'	34:a:1353:G:C1'	2.45	0.46
34:a:1371:G:N1	34:a:1372:U:C4	2.84	0.46
34:a:1386:G:H2'	34:a:1387:G:C8	2.51	0.46
35:b:12:GLY:HA2	35:b:207:ARG:HH21	1.81	0.46
35:b:25:LYS:NZ	35:b:193:ASP:HB2	2.31	0.46
36:c:21:TRP:CD1	36:c:58:ARG:HG3	2.49	0.46
36:c:33:ASP:O	36:c:37:LYS:CG	2.64	0.46
37:d:167:PRO:HB2	37:d:170:LEU:HD21	1.98	0.46
38:e:45:VAL:O	38:e:71:ILE:HG22	2.16	0.46
40:g:138:GLU:CD	40:g:142:ARG:HE	2.24	0.46
42:i:101:GLY:O	42:i:102:PHE:HB2	2.16	0.46
45:l:115:LYS:C	45:l:117:GLY:H	2.23	0.46
46:m:40:GLU:H	46:m:40:GLU:CD	2.23	0.46
48:o:77:TYR:O	48:o:81:ILE:HG23	2.15	0.46
49:p:8:ARG:HA	49:p:17:TYR:CE2	2.51	0.46
53:t:43:LYS:HB2	53:t:86:ALA:C	2.41	0.46
53:t:77:ASN:O	53:t:81:GLN:HG2	2.15	0.46
55:v:1:C:N3	55:v:72:A:C2	2.82	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:v:12:G:C2	55:v:24:U:C2	3.03	0.46
56:w:52:G:H2'	56:w:53:G:H8	1.80	0.46
56:w:52:G:C2	56:w:63:G:C2	3.04	0.46
57:x:110:MET:HG3	57:x:126:TRP:HZ3	1.80	0.46
57:x:179:THR:O	57:x:272:LYS:HD2	2.15	0.46
57:x:296:GLY:HA2	57:x:405:LEU:HD13	1.96	0.46
57:x:297:ILE:HG22	57:x:298:LEU:N	2.31	0.46
57:x:395:THR:CG2	57:x:405:LEU:N	2.79	0.46
57:x:518:VAL:O	57:x:577:LEU:CD1	2.62	0.46
57:x:548:TYR:CE1	57:x:588:SER:C	2.93	0.46
57:x:611:LEU:C	57:x:611:LEU:HD23	2.41	0.46
57:x:620:VAL:O	57:x:652:LYS:HA	2.15	0.46
6:5:56:ARG:HA	6:5:82:ILE:O	2.15	0.46
7:6:6:HIS:HE2	9:B:43:C:P	2.39	0.46
7:6:40:CYS:O	7:6:50:ASP:OD2	2.33	0.46
8:A:7:G:C1'	17:J:135:GLN:HE21	2.28	0.46
8:A:12:U:O2	8:A:12:U:H2'	2.16	0.46
8:A:38:A:H4'	12:E:45:ALA:CB	2.46	0.46
8:A:75:G:C2	8:A:76:C:C5	3.04	0.46
8:A:136:G:N2	8:A:144:A:C4	2.84	0.46
8:A:189:G:O2'	8:A:207:A:N6	2.46	0.46
8:A:205:G:H1'	8:A:206:U:H5	1.79	0.46
8:A:363:G:H2'	8:A:364:C:C6	2.50	0.46
8:A:404:A:N3	8:A:406:G:N2	2.64	0.46
8:A:438:G:C2	8:A:439:A:C5	3.04	0.46
8:A:483:A:H3'	8:A:484:C:C6	2.51	0.46
8:A:502:A:H2'	8:A:503:A:H5'	1.98	0.46
8:A:538:A:H5''	17:J:7:LYS:NZ	2.31	0.46
8:A:544:C:H3'	8:A:545:U:C5	2.50	0.46
8:A:594:U:C2	8:A:664:G:C2	3.03	0.46
8:A:596:U:C2	8:A:662:G:N2	2.83	0.46
8:A:637:A:C5'	19:L:112:LEU:HD23	2.45	0.46
8:A:639:U:H2'	8:A:640:C:H6	1.79	0.46
8:A:699:A:C8	8:A:734:A:C5	3.03	0.46
8:A:738:G:C6	8:A:739:A:C6	3.04	0.46
8:A:742:A:C6	8:A:756:A:N1	2.84	0.46
8:A:783:A:C6	8:A:785:G:H1'	2.50	0.46
8:A:784:G:O4'	10:C:225:ASN:ND2	2.49	0.46
8:A:878:A:N7	8:A:879:G:C4	2.83	0.46
8:A:1022:G:C2	8:A:1024:G:N2	2.83	0.46
8:A:1084:A:O4'	8:A:1105:U:H1'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1084:A:C8	8:A:1085:A:C5	3.04	0.46
8:A:1128:G:O4'	8:A:2516:A:O2'	2.34	0.46
8:A:1231:U:H2'	8:A:1232:G:C8	2.50	0.46
8:A:1341:G:C5	8:A:1395:A:H2	2.34	0.46
8:A:1343:G:C2	8:A:1405:U:C2	3.04	0.46
8:A:1343:G:C2	8:A:1405:U:N3	2.83	0.46
8:A:1373:A:C8	8:A:1374:G:C8	3.03	0.46
8:A:1378:A:O2'	8:A:1380:G:N7	2.48	0.46
8:A:1381:G:HO2'	8:A:1571:A:H61	1.63	0.46
8:A:1425:G:N1	8:A:1426:G:C2	2.83	0.46
8:A:1505:A:H2'	8:A:1506:U:H6	1.81	0.46
8:A:1509:A:C6	8:A:1510:G:C5	3.04	0.46
8:A:1664:A:C4	8:A:2726:A:C5	3.03	0.46
8:A:1689:A:C5	8:A:1700:A:C5	3.04	0.46
8:A:1773:A:H1'	8:A:1829:A:C5	2.51	0.46
8:A:1799:G:H22	8:A:1819:A:P	2.32	0.46
8:A:1835:2MG:O6	8:A:1969:A:H5''	2.16	0.46
8:A:1947:C:C2	8:A:1960:A:C2	3.03	0.46
8:A:2033:A:N6	8:A:2036:C:C2	2.84	0.46
8:A:2188:U:C6	8:A:2188:U:OP2	2.69	0.46
8:A:2266:A:H4'	8:A:2267:A:N3	2.30	0.46
8:A:2525:G:H2'	8:A:2526:G:H8	1.80	0.46
8:A:2662:A:H2'	8:A:2663:G:O4'	2.14	0.46
8:A:2738:A:C2	8:A:2767:C:C2	3.04	0.46
8:A:2887:A:C6	8:A:2888:C:C4	3.03	0.46
9:B:7:G:C6	9:B:8:C:C4	3.04	0.46
11:D:39:ASP:O	11:D:43:ASP:N	2.45	0.46
11:D:106:LYS:C	11:D:206:ALA:HB2	2.40	0.46
13:F:47:LYS:NZ	13:F:51:ASN:N	2.63	0.46
14:G:54:ARG:HB3	14:G:57:TYR:HD2	1.79	0.46
15:H:79:THR:HG23	15:H:145:ASN:OD1	2.14	0.46
17:J:123:LYS:HD2	17:J:132:HIS:CE1	2.50	0.46
18:K:2:ILE:HG12	18:K:33:ALA:O	2.14	0.46
18:K:116:ILE:HD11	18:K:122:VAL:HG12	1.96	0.46
23:P:23:ASP:CG	23:P:88:ARG:HA	2.41	0.46
34:a:21:G:H2'	34:a:22:G:H8	1.78	0.46
34:a:32:A:H2	45:l:27:PRO:HG3	1.80	0.46
34:a:53:A:H2'	34:a:54:C:O4'	2.15	0.46
34:a:77:A:H2'	34:a:78:A:C8	2.51	0.46
34:a:102:G:H2'	34:a:103:U:H6	1.81	0.46
34:a:123:U:H1'	34:a:290:C:O2'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:177:G:N1	34:a:178:C:C5	2.84	0.46
34:a:217:C:H2'	34:a:218:U:C6	2.51	0.46
34:a:341:C:C4	34:a:349:A:N1	2.83	0.46
34:a:407:U:C2	34:a:408:A:C8	3.03	0.46
34:a:417:G:H2'	34:a:418:C:H6	1.78	0.46
34:a:421:U:OP2	34:a:422:C:H5	1.99	0.46
34:a:450:G:N1	34:a:484:G:C6	2.84	0.46
34:a:518:C:H5	34:a:529:G:H3'	1.80	0.46
34:a:529:G:O4'	34:a:533:A:C2	2.68	0.46
34:a:568:G:N1	34:a:569:C:C4	2.83	0.46
34:a:585:G:C5	34:a:586:C:C5	3.04	0.46
34:a:590:U:C2	34:a:650:G:C2	3.03	0.46
34:a:678:U:C2	34:a:679:C:C6	3.04	0.46
34:a:950:U:H3	34:a:1231:G:H1	1.64	0.46
34:a:1074:G:C2	34:a:1102:A:C6	3.02	0.46
34:a:1097:C:H1'	34:a:1170:A:H1'	1.96	0.46
34:a:1185:G:O2'	34:a:1186:G:H5'	2.16	0.46
34:a:1343:G:C4'	42:i:123:ARG:HB2	2.46	0.46
34:a:1353:G:H2'	34:a:1354:U:C6	2.51	0.46
34:a:1396:A:O3'	38:e:28:ARG:NH2	2.48	0.46
34:a:1413:A:C6	34:a:1488:G:N1	2.84	0.46
34:a:1507:A:H2'	34:a:1508:A:H8	1.78	0.46
34:a:1526:G:N1	34:a:1527:U:C4	2.83	0.46
36:c:6:PRO:HA	36:c:9:ILE:CG2	2.45	0.46
36:c:120:THR:O	36:c:124:GLU:OE2	2.34	0.46
36:c:121:SER:HA	36:c:124:GLU:HG2	1.97	0.46
37:d:24:VAL:HG23	37:d:25:ARG:N	2.30	0.46
37:d:112:GLU:O	37:d:116:LEU:HD13	2.15	0.46
40:g:49:LEU:HD11	40:g:60:ALA:HB1	1.98	0.46
42:i:100:ALA:HB3	42:i:102:PHE:CE2	2.51	0.46
45:l:2:THR:O	45:l:4:ASN:N	2.48	0.46
45:l:101:LEU:O	45:l:102:ASP:HB2	2.15	0.46
46:m:18:LEU:HD23	46:m:29:SER:CA	2.46	0.46
47:n:52:PRO:C	47:n:54:ASP:N	2.72	0.46
49:p:58:ALA:HA	49:p:61:VAL:HG22	1.97	0.46
55:v:7:G:O2'	55:v:49:G:O4'	2.33	0.46
55:v:23:C:H2'	55:v:24:U:C6	2.51	0.46
56:w:35:A:H2'	56:w:36:A:H8	1.79	0.46
57:x:190:ILE:HD12	57:x:203:TYR:CE1	2.51	0.46
57:x:443:SER:HB2	57:x:460:MET:HE3	1.96	0.46
3:2:41:ARG:NH1	8:A:460:A:OP1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:23:G:C5	8:A:518:G:C6	3.03	0.46
8:A:86:G:C2	8:A:97:C:C2	3.03	0.46
8:A:156:A:N1	8:A:171:U:C2	2.84	0.46
8:A:223:A:N6	8:A:422:A:C2	2.84	0.46
8:A:242:G:C2'	8:A:254:G:H1	2.29	0.46
8:A:249:C:C2'	19:L:63:LYS:HZ2	2.22	0.46
8:A:299:A:C8	8:A:322:A:N1	2.84	0.46
8:A:413:C:N4	8:A:2411:A:C2	2.84	0.46
8:A:471:A:H2'	8:A:472:A:C8	2.51	0.46
8:A:479:A:O2'	8:A:481:G:C5'	2.64	0.46
8:A:606:U:H6	8:A:606:U:O5'	1.99	0.46
8:A:635:C:H1'	8:A:639:U:H5''	1.98	0.46
8:A:684:G:C6	8:A:794:A:N6	2.84	0.46
8:A:770:G:H1'	8:A:1379:U:N3	2.31	0.46
8:A:812:C:H5''	8:A:1250:G:HO2'	1.81	0.46
8:A:891:G:O2'	8:A:892:A:P	2.73	0.46
8:A:927:A:H2'	8:A:928:A:C8	2.50	0.46
8:A:960:A:H8	8:A:960:A:O5'	1.98	0.46
8:A:962:G:C4	8:A:963:U:C5	3.03	0.46
8:A:974:G:H8	8:A:990:A:N6	2.14	0.46
8:A:1044:C:C4	8:A:1112:G:C6	3.04	0.46
8:A:1086:A:H3'	8:A:1086:A:N3	2.31	0.46
8:A:1090:A:C2	8:A:1101:U:N3	2.84	0.46
8:A:1218:G:N2	8:A:1232:G:C8	2.84	0.46
8:A:1230:A:C2	8:A:1231:U:C2	3.03	0.46
8:A:1283:G:H1'	8:A:1329:U:O2	2.16	0.46
8:A:1286:A:C4	8:A:1289:C:C4	3.04	0.46
8:A:1306:C:H1'	8:A:1623:G:N2	2.31	0.46
8:A:1334:G:C2	8:A:1335:C:C2	3.03	0.46
8:A:1413:A:H2'	8:A:1414:C:C6	2.50	0.46
8:A:1425:G:N2	8:A:1574:C:C4	2.83	0.46
8:A:1430:G:H2'	8:A:1431:A:H8	1.80	0.46
8:A:1501:G:H4'	10:C:94:LEU:HD21	1.98	0.46
8:A:1555:G:C6	8:A:1556:C:N4	2.84	0.46
8:A:1686:C:H2'	8:A:1687:G:O4'	2.14	0.46
8:A:1721:G:N1	8:A:1738:G:C5	2.84	0.46
8:A:1722:A:H2'	8:A:1723:G:C8	2.51	0.46
8:A:1846:G:C6	8:A:1895:C:N3	2.83	0.46
8:A:1907:G:N1	8:A:1924:C:C4	2.84	0.46
8:A:1984:G:C5	8:A:1985:C:C5	3.04	0.46
8:A:1998:A:C4	8:A:1999:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2024:G:C5	8:A:2040:G:C2	3.04	0.46
8:A:2036:C:C2	8:A:2037:A:N7	2.84	0.46
8:A:2077:A:C4	8:A:2078:C:C5	3.04	0.46
8:A:2092:U:H5'	15:H:24:GLY:HA3	1.98	0.46
8:A:2122:U:H2'	8:A:2176:A:N6	2.31	0.46
8:A:2126:A:C5'	8:A:2127:G:O5'	2.64	0.46
8:A:2292:U:N3	8:A:2341:G:C6	2.84	0.46
8:A:2297:A:N6	8:A:2319:G:O2'	2.49	0.46
8:A:2355:G:C6	8:A:2363:G:C6	3.04	0.46
8:A:2365:G:H4'	30:W:56:PHE:CE1	2.51	0.46
8:A:2405:G:H2'	8:A:2411:A:H62	1.81	0.46
8:A:2483:C:C2	20:M:123:LYS:NZ	2.82	0.46
8:A:2558:C:H2'	8:A:2559:C:C6	2.50	0.46
8:A:2574:G:C2	8:A:2575:C:C2	3.03	0.46
8:A:2649:C:H2'	8:A:2650:U:C6	2.50	0.46
8:A:2667:C:H2'	8:A:2668:G:O4'	2.16	0.46
8:A:2668:G:O4'	14:G:110:HIS:HD2	1.99	0.46
8:A:2727:A:H2'	8:A:2728:U:C6	2.50	0.46
8:A:2745:C:H1'	14:G:142:GLN:OE1	2.16	0.46
8:A:2746:U:H1'	14:G:138:GLN:CG	2.46	0.46
8:A:2799:A:N6	8:A:2801:G:C5	2.84	0.46
8:A:2811:G:C6	8:A:2812:G:C5	3.04	0.46
8:A:2818:U:C2	8:A:2829:A:C6	3.04	0.46
8:A:2830:C:H2'	8:A:2883:A:C2	2.51	0.46
8:A:2862:G:C4	8:A:2863:C:C5	3.04	0.46
9:B:16:G:N1	9:B:69:G:C4	2.84	0.46
9:B:44:G:N2	9:B:48:U:C2	2.83	0.46
9:B:81:G:H2'	9:B:82:U:H6	1.81	0.46
9:B:92:C:H2'	9:B:93:C:C6	2.49	0.46
9:B:109:A:C6	9:B:110:C:C4	3.04	0.46
12:E:49:ARG:CA	12:E:82:GLY:HA3	2.46	0.46
12:E:61:ARG:CD	12:E:63:LYS:O	2.64	0.46
16:I:92:PRO:CB	16:I:135:MET:O	2.64	0.46
17:J:16:TYR:HE2	17:J:52:ASP:CB	2.29	0.46
17:J:98:GLU:O	17:J:102:GLU:HG3	2.16	0.46
19:L:121:THR:CG2	19:L:141:LYS:HE3	2.46	0.46
22:O:11:ALA:HB2	22:O:95:SER:C	2.40	0.46
22:O:81:ARG:O	22:O:84:GLU:HB3	2.16	0.46
23:P:91:VAL:HG11	23:P:96:LEU:HD11	1.97	0.46
24:Q:109:VAL:CG1	24:Q:113:LYS:HE3	2.45	0.46
29:V:51:GLN:HA	29:V:56:PHE:CD1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:X:3:VAL:CG1	31:X:8:GLY:HA2	2.46	0.46
34:a:22:G:C4	34:a:23:C:C5	3.04	0.46
34:a:50:A:H1'	34:a:52:C:C6	2.51	0.46
34:a:75:G:H2'	34:a:75:G:N3	2.31	0.46
34:a:151:A:H2'	34:a:152:A:O4'	2.16	0.46
34:a:251:G:C6	34:a:266:G:O6	2.69	0.46
34:a:265:G:O2'	50:q:68:LYS:HA	2.15	0.46
34:a:308:C:C2	34:a:309:A:C8	3.03	0.46
34:a:342:C:C4	34:a:348:G:N1	2.83	0.46
34:a:345:C:OP2	34:a:346:G:O6	2.34	0.46
34:a:378:G:H2'	34:a:379:C:C6	2.50	0.46
34:a:402:G:O2'	37:d:131:ILE:HD12	2.16	0.46
34:a:457:G:N2	34:a:476:U:C2	2.83	0.46
34:a:518:C:C5	34:a:530:G:H5'	2.50	0.46
34:a:629:A:C6	34:a:630:A:C4	3.04	0.46
34:a:653:U:C4'	41:h:55:LYS:HZ2	2.28	0.46
34:a:689:C:C2	34:a:690:G:C8	3.04	0.46
34:a:720:C:H1'	51:r:38:ILE:HD13	1.97	0.46
34:a:727:G:C4	34:a:729:A:OP2	2.68	0.46
34:a:858:G:H1	34:a:869:G:H3'	1.80	0.46
34:a:928:G:H5'	34:a:1503:A:N6	2.31	0.46
34:a:953:G:C6	34:a:1229:A:C6	3.04	0.46
34:a:957:U:H6	34:a:957:U:O5'	1.99	0.46
34:a:1024:G:C3'	34:a:1025:U:C6	2.98	0.46
34:a:1046:A:H61	34:a:1211:U:H1'	1.81	0.46
34:a:1054:C:C5	34:a:1196:A:C8	3.03	0.46
34:a:1084:G:C8	34:a:1085:U:H2'	2.51	0.46
34:a:1108:G:OP1	36:c:175:HIS:N	2.46	0.46
34:a:1125:U:O2'	34:a:1126:U:C6	2.67	0.46
34:a:1171:A:C6	34:a:1172:C:C4	3.04	0.46
34:a:1228:C:H2'	34:a:1229:A:C8	2.50	0.46
34:a:1295:U:H2'	34:a:1296:C:H6	1.81	0.46
34:a:1424:U:H2'	34:a:1425:U:O4'	2.15	0.46
36:c:133:MET:HE1	36:c:165:GLU:C	2.41	0.46
36:c:176:THR:CG2	36:c:178:ARG:HG2	2.46	0.46
37:d:49:ASP:HA	37:d:52:VAL:HG22	1.98	0.46
38:e:125:LYS:HD2	38:e:126:ALA:H	1.80	0.46
39:f:98:GLU:N	39:f:98:GLU:CD	2.74	0.46
43:j:41:PRO:O	43:j:71:LEU:O	2.33	0.46
45:l:113:ARG:HH21	45:l:120:ARG:HB3	1.80	0.46
51:r:38:ILE:HG12	51:r:58:ILE:HG21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:s:60:PHE:O	52:s:65:MET:SD	2.74	0.46
56:w:24:G:C2	56:w:25:C:C2	3.04	0.46
56:w:26:A:H2'	56:w:27:G:O4'	2.15	0.46
57:x:320:ALA:HB2	57:x:396:LEU:HD11	1.98	0.46
57:x:544:ILE:HD13	57:x:577:LEU:HD21	1.98	0.46
2:1:29:LYS:HZ1	8:A:2286:G:P	2.38	0.46
8:A:32:C:N3	8:A:474:G:C6	2.84	0.46
8:A:97:C:H2'	8:A:98:G:O4'	2.15	0.46
8:A:117:G:C2	8:A:119:A:N6	2.84	0.46
8:A:122:G:C6	8:A:123:G:C5	3.04	0.46
8:A:151:C:C2	8:A:152:A:C8	3.04	0.46
8:A:175:G:H2'	8:A:176:A:O4'	2.15	0.46
8:A:226:A:H1'	8:A:230:G:C2	2.51	0.46
8:A:302:C:C2	8:A:303:G:C8	3.03	0.46
8:A:542:C:H2'	8:A:543:G:C8	2.51	0.46
8:A:563:A:H61	8:A:578:G:H1	1.64	0.46
8:A:620:G:O3'	19:L:99:ASN:ND2	2.48	0.46
8:A:622:G:C2	8:A:623:C:C6	3.04	0.46
8:A:628:G:O2'	8:A:629:G:H5'	2.15	0.46
8:A:636:G:C5	19:L:111:ILE:HG21	2.50	0.46
8:A:643:A:C2	8:A:644:A:C4	3.04	0.46
8:A:685:A:H2	8:A:688:U:O2	1.99	0.46
8:A:691:C:C1'	10:C:42:ARG:NH2	2.78	0.46
8:A:727:A:C6	8:A:728:G:C6	3.03	0.46
8:A:777:G:O2'	10:C:47:ARG:NH2	2.45	0.46
8:A:980:A:C6	8:A:1136:G:C4'	2.99	0.46
8:A:999:U:O4	8:A:1155:A:N7	2.49	0.46
8:A:1007:C:H3'	8:A:1008:A:H2'	1.98	0.46
8:A:1022:G:C2	8:A:1141:U:N3	2.83	0.46
8:A:1080:A:H2'	8:A:1082:U:O4	2.15	0.46
8:A:1129:A:H1'	8:A:2516:A:C1'	2.46	0.46
8:A:1172:C:C4	8:A:1176:U:O4	2.68	0.46
8:A:1300:G:C2	8:A:1626:A:N6	2.84	0.46
8:A:1333:G:N1	8:A:1334:G:C5	2.84	0.46
8:A:1381:G:C6	8:A:1382:G:C5	3.04	0.46
8:A:1450:G:C5	8:A:1451:C:C4	3.03	0.46
8:A:1540:G:C6	8:A:1541:C:N4	2.83	0.46
8:A:1659:G:C6	8:A:2002:G:N1	2.83	0.46
8:A:1666:G:H4'	18:K:6:THR:HG23	1.98	0.46
8:A:1687:G:C2'	8:A:1701:A:H61	2.28	0.46
8:A:1727:C:H2'	8:A:1728:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1741:C:H2'	8:A:1742:U:O4'	2.16	0.46
8:A:1767:G:N1	8:A:1986:C:N3	2.64	0.46
8:A:1769:U:N3	8:A:1984:G:C6	2.84	0.46
8:A:1796:U:H4'	10:C:253:GLY:N	2.31	0.46
8:A:1814:G:O5'	8:A:1815:A:H2'	2.16	0.46
8:A:1819:A:P	10:C:154:ALA:H	2.39	0.46
8:A:1864:U:C2	8:A:1878:G:N1	2.83	0.46
8:A:2064:C:H1'	8:A:2450:A:C5	2.51	0.46
8:A:2071:A:C6	8:A:2072:C:N4	2.84	0.46
8:A:2096:C:H2'	8:A:2097:A:C8	2.50	0.46
8:A:2107:G:O6	8:A:2181:U:C4	2.69	0.46
8:A:2337:G:C6	8:A:2338:C:C4	3.03	0.46
8:A:2410:G:C2	8:A:2411:A:H1'	2.51	0.46
8:A:2466:C:H2'	8:A:2467:C:C6	2.51	0.46
8:A:2534:A:H2'	8:A:2535:G:O4'	2.15	0.46
8:A:2551:C:C4	8:A:2552:OMU:C4	2.99	0.46
8:A:2595:G:C4	8:A:2597:G:OP2	2.69	0.46
8:A:2674:G:C5'	18:K:30:ARG:NH1	2.79	0.46
8:A:2696:U:H2'	8:A:2697:G:H8	1.80	0.46
8:A:2727:A:C6	8:A:2728:U:O4	2.68	0.46
8:A:2733:A:C2	8:A:2734:A:N9	2.84	0.46
9:B:2:G:C6	9:B:3:C:N4	2.84	0.46
9:B:7:G:H4'	22:O:29:HIS:CD2	2.51	0.46
9:B:93:C:H2'	9:B:94:A:C8	2.51	0.46
10:C:136:VAL:CG1	10:C:164:VAL:O	2.64	0.46
10:C:137:GLY:O	10:C:162:GLN:CG	2.64	0.46
12:E:24:ASN:O	12:E:28:VAL:HG23	2.16	0.46
16:I:34:ILE:HA	16:I:37:PHE:CB	2.46	0.46
20:M:42:THR:O	20:M:46:ILE:HD12	2.15	0.46
20:M:58:LYS:HA	20:M:58:LYS:HD3	1.65	0.46
20:M:74:THR:HG22	20:M:89:VAL:HG22	1.96	0.46
21:N:100:CYS:SG	21:N:111:ALA:HA	2.55	0.46
25:R:16:GLU:HG3	25:R:101:ILE:CD1	2.46	0.46
26:S:6:LYS:HA	26:S:103:ILE:O	2.15	0.46
28:U:47:PRO:N	28:U:55:GLY:HA3	2.31	0.46
28:U:83:GLY:N	28:U:96:LYS:HE3	2.29	0.46
30:W:10:ARG:HD3	30:W:10:ARG:N	2.31	0.46
34:a:78:A:C8	34:a:78:A:OP2	2.69	0.46
34:a:122:G:C4	34:a:123:U:C5	3.04	0.46
34:a:126:G:C6	34:a:236:A:N6	2.84	0.46
34:a:155:A:N1	34:a:166:U:C4	2.82	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:169:C:H2'	34:a:170:U:C4'	2.45	0.46
34:a:204:G:N2	34:a:466:A:N3	2.64	0.46
34:a:300:A:C5	34:a:301:G:H1'	2.51	0.46
34:a:325:A:H2'	34:a:326:G:O4'	2.15	0.46
34:a:341:C:H2'	34:a:342:C:C6	2.51	0.46
34:a:394:G:H2'	34:a:395:C:H6	1.78	0.46
34:a:415:A:N7	34:a:428:G:O6	2.48	0.46
34:a:425:G:H2'	34:a:426:U:C6	2.50	0.46
34:a:661:G:C2	34:a:745:G:C2	3.04	0.46
34:a:675:A:C4	34:a:676:A:C8	3.03	0.46
34:a:711:G:C2	34:a:712:A:C5	3.04	0.46
34:a:740:U:O4'	48:o:41:HIS:CE1	2.69	0.46
34:a:786:G:C2	34:a:797:C:N3	2.84	0.46
34:a:829:G:C4	34:a:830:G:C8	3.04	0.46
34:a:885:G:N1	34:a:886:G:C5	2.84	0.46
34:a:888:G:H2'	34:a:908:A:H61	1.81	0.46
34:a:991:U:C6	34:a:1212:U:H1'	2.51	0.46
34:a:1004:A:OP1	34:a:1024:G:N2	2.49	0.46
34:a:1004:A:N7	34:a:1025:U:H4'	2.31	0.46
34:a:1142:G:N7	34:a:1143:G:N9	2.64	0.46
34:a:1158:C:O2'	35:b:131:LYS:HB3	2.16	0.46
34:a:1250:A:H2'	34:a:1251:A:O4'	2.16	0.46
34:a:1256:A:H2'	34:a:1278:G:N7	2.31	0.46
34:a:1261:A:H1'	34:a:1275:A:C2	2.51	0.46
34:a:1289:A:C2	34:a:1371:G:O2'	2.58	0.46
34:a:1318:A:H5'	52:s:2:ARG:NH1	2.31	0.46
34:a:1347:G:C2'	34:a:1373:G:H1	2.28	0.46
34:a:1444:U:H2'	34:a:1445:U:C6	2.51	0.46
34:a:1514:G:H2'	34:a:1515:G:O4'	2.15	0.46
36:c:166:TRP:CD2	36:c:166:TRP:C	2.94	0.46
37:d:74:TYR:HA	37:d:77:GLU:OE1	2.16	0.46
37:d:122:ILE:HD12	37:d:123:MET:H	1.80	0.46
38:e:45:VAL:O	38:e:70:MET:HA	2.16	0.46
38:e:98:ALA:HB1	38:e:102:THR:OG1	2.16	0.46
41:h:88:LYS:HA	41:h:91:LEU:HD11	1.97	0.46
43:j:23:ALA:O	43:j:27:GLU:HG2	2.15	0.46
44:k:28:ASN:ND2	44:k:47:GLY:H	2.13	0.46
53:t:34:VAL:HG22	53:t:49:ALA:HB1	1.97	0.46
55:v:48:C:H2'	55:v:59:A:H4'	1.98	0.46
55:v:59:A:H3'	55:v:60:U:H6	1.80	0.46
57:x:25:THR:HA	57:x:268:ALA:CB	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:96:ILE:HB	57:x:443:SER:HB3	1.98	0.46
57:x:144:ASP:OD2	62:x:801:GDP:N2	2.49	0.46
57:x:351:SER:HB2	57:x:403:ILE:HA	1.98	0.46
57:x:621:GLU:HG2	57:x:621:GLU:O	2.16	0.46
1:0:49:ARG:NH1	8:A:2884:U:C1'	2.78	0.46
2:1:9:LYS:HB3	2:1:52:LYS:C	2.41	0.46
5:4:4:ARG:HH22	8:A:2477:U:C2'	2.29	0.46
7:6:16:CYS:SG	7:6:36:VAL:N	2.89	0.46
8:A:24:G:H2'	8:A:25:U:O4'	2.16	0.46
8:A:80:G:C4	8:A:81:G:C8	3.04	0.46
8:A:118:A:C8	8:A:119:A:C8	3.04	0.46
8:A:189:G:C2'	8:A:207:A:H61	2.29	0.46
8:A:223:A:C2	8:A:407:G:O2'	2.61	0.46
8:A:227:A:O4'	8:A:229:C:N4	2.49	0.46
8:A:234:U:C4	8:A:235:U:C4	3.04	0.46
8:A:319:G:H2'	8:A:320:A:O4'	2.15	0.46
8:A:338:G:H2'	8:A:339:U:H6	1.81	0.46
8:A:425:G:N1	8:A:426:C:C4	2.84	0.46
8:A:428:A:O2'	8:A:429:A:H5'	2.16	0.46
8:A:449:A:H1'	24:Q:2:ARG:NH2	2.30	0.46
8:A:609:A:H3'	8:A:610:C:H6	1.81	0.46
8:A:698:C:C3'	8:A:734:A:H61	2.29	0.46
8:A:704:G:H22	8:A:726:G:H1'	1.81	0.46
8:A:904:G:C4	8:A:905:A:C8	3.04	0.46
8:A:979:A:C2'	8:A:982:C:H42	2.29	0.46
8:A:999:U:O4	8:A:1155:A:C8	2.68	0.46
8:A:1005:C:O2	8:A:1006:C:C5	2.69	0.46
8:A:1084:A:C4'	8:A:1105:U:H1'	2.46	0.46
8:A:1106:G:N3	8:A:1106:G:C2'	2.75	0.46
8:A:1437:C:O2'	8:A:1516:G:O2'	2.24	0.46
8:A:1588:G:C6	8:A:1589:U:C4	3.04	0.46
8:A:1672:A:H2'	8:A:1673:G:C8	2.50	0.46
8:A:1766:G:O2'	8:A:1767:G:H5'	2.15	0.46
8:A:1839:G:C8	8:A:1927:A:C4	3.03	0.46
8:A:1858:A:H8	8:A:1858:A:O5'	1.99	0.46
8:A:1880:U:H2'	8:A:1881:C:H6	1.81	0.46
8:A:1906:G:C8	8:A:1929:G:C2'	2.99	0.46
8:A:1948:G:C2	8:A:1959:G:C2	3.03	0.46
8:A:2055:C:OP1	8:A:2056:G:H4'	2.16	0.46
8:A:2056:G:C5	8:A:2577:A:C5	3.04	0.46
8:A:2070:A:C4	8:A:2071:A:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2087:G:H2'	8:A:2088:A:H8	1.81	0.46
8:A:2136:G:N7	8:A:2156:G:H1'	2.30	0.46
8:A:2136:G:O6	8:A:2154:A:C6	2.69	0.46
8:A:2190:G:H2'	8:A:2191:A:C8	2.51	0.46
8:A:2227:A:H3'	8:A:2228:G:C8	2.51	0.46
8:A:2274:A:N6	8:A:2276:G:C4	2.84	0.46
8:A:2295:C:P	22:O:10:ARG:HE	2.39	0.46
8:A:2472:G:C6	8:A:2475:C:C6	3.04	0.46
8:A:2495:G:C6	8:A:2496:C:N4	2.84	0.46
8:A:2643:G:C2	8:A:2772:C:N3	2.84	0.46
8:A:2720:U:O2	8:A:2873:A:C8	2.69	0.46
8:A:2725:A:H8	8:A:2725:A:OP2	1.98	0.46
8:A:2851:A:C6	8:A:2852:G:C5	3.04	0.46
9:B:14:U:O3'	9:B:107:G:O2'	2.33	0.46
9:B:28:C:H2'	9:B:29:A:O4'	2.16	0.46
9:B:75:G:O2'	29:V:88:HIS:CE1	2.69	0.46
9:B:81:G:C5	9:B:96:G:C2	3.04	0.46
9:B:117:G:C6	9:B:118:C:C4	3.03	0.46
10:C:74:PRO:CG	10:C:96:LYS:HZ2	2.29	0.46
11:D:107:VAL:CB	11:D:204:LYS:O	2.64	0.46
15:H:69:ALA:C	15:H:71:LYS:H	2.23	0.46
18:K:1:MET:HG2	18:K:32:TYR:CG	2.51	0.46
20:M:50:ARG:NH1	20:M:51:ARG:CG	2.79	0.46
21:N:102:PHE:HA	21:N:109:PRO:HA	1.96	0.46
29:V:44:HIS:O	29:V:48:MET:CB	2.63	0.46
32:Y:31:GLN:HG3	32:Y:36:GLN:CB	2.45	0.46
34:a:33:A:C2	34:a:552:U:C2	3.04	0.46
34:a:120:A:C4	34:a:122:G:C5	3.03	0.46
34:a:141:G:C2	34:a:223:A:C5	3.04	0.46
34:a:181:A:N3	34:a:195:A:C6	2.83	0.46
34:a:307:C:C5	34:a:308:C:C5	3.04	0.46
34:a:417:G:C5	34:a:418:C:C4	3.04	0.46
34:a:428:G:O4'	34:a:430:A:O4'	2.34	0.46
34:a:554:A:H2'	34:a:555:U:C5	2.50	0.46
34:a:598:U:H2'	34:a:599:C:H6	1.77	0.46
34:a:613:C:P	37:d:80:ARG:HH21	2.38	0.46
34:a:673:A:H4'	39:f:86:ARG:NH2	2.31	0.46
34:a:679:C:N3	34:a:712:A:N1	2.64	0.46
34:a:690:G:O6	44:k:52:ARG:NH2	2.49	0.46
34:a:692:U:C2'	34:a:694:A:H2	2.29	0.46
34:a:717:U:C2'	34:a:734:G:O4'	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:877:G:H2'	34:a:878:A:C8	2.51	0.46
34:a:931:C:C4	34:a:1387:G:N1	2.84	0.46
34:a:945:G:H2'	34:a:946:A:H5'	1.98	0.46
34:a:1093:A:H2'	34:a:1095:U:C6	2.51	0.46
34:a:1159:U:C5	34:a:1182:G:H2'	2.51	0.46
34:a:1172:C:C2'	34:a:1173:U:H5'	2.46	0.46
34:a:1261:A:N3	34:a:1275:A:C6	2.84	0.46
34:a:1288:A:C6	34:a:1289:A:C6	3.04	0.46
34:a:1312:G:N7	52:s:1:PRO:CD	2.79	0.46
34:a:1375:A:H2'	34:a:1376:U:C6	2.51	0.46
34:a:1460:C:C2	34:a:1461:G:C8	3.03	0.46
34:a:1486:G:C2'	34:a:1487:G:O4'	2.63	0.46
34:a:1502:A:N7	34:a:1504:G:C4	2.84	0.46
34:a:1517:G:C6	34:a:1518:MA6:C6	2.98	0.46
36:c:168:ARG:HD3	36:c:172:VAL:HB	1.97	0.46
38:e:59:ILE:CG2	38:e:63:MET:HE2	2.46	0.46
39:f:45:ARG:HD3	39:f:59:TYR:CD1	2.51	0.46
40:g:48:THR:HG22	40:g:52:ARG:HD3	1.96	0.46
42:i:54:VAL:HG22	42:i:55:ASP:OD1	2.15	0.46
42:i:68:GLY:O	42:i:74:GLN:HG2	2.16	0.46
49:p:6:LEU:HD23	49:p:6:LEU:N	2.30	0.46
50:q:45:VAL:HG22	50:q:72:TRP:CB	2.46	0.46
56:w:6:G:N1	56:w:68:C:N3	2.64	0.46
57:x:75:ALA:HB2	57:x:201:PHE:CD2	2.50	0.46
57:x:78:TYR:O	57:x:79:GLU:O	2.34	0.46
57:x:105:LEU:HD12	57:x:106:ASP:H	1.81	0.46
57:x:114:ALA:CB	57:x:140:VAL:HG12	2.46	0.46
57:x:193:ASN:HB3	57:x:197:GLN:C	2.41	0.46
57:x:411:PRO:HD2	57:x:443:SER:HB3	1.97	0.46
57:x:411:PRO:O	57:x:460:MET:HE1	2.16	0.46
57:x:496:LYS:CD	57:x:606:LYS:O	2.63	0.46
2:1:5:ARG:HD2	8:A:2284:A:H3'	1.98	0.46
8:A:56:A:H2'	8:A:57:C:O4'	2.16	0.46
8:A:71:A:C5	8:A:73:A:N1	2.84	0.46
8:A:242:G:H1'	8:A:243:U:C5	2.50	0.46
8:A:417:C:O5'	8:A:417:C:C6	2.67	0.46
8:A:582:A:H2'	8:A:583:G:H8	1.81	0.46
8:A:586:A:N1	8:A:810:U:O4'	2.49	0.46
8:A:631:A:N6	8:A:632:A:C2	2.84	0.46
8:A:693:A:C6	8:A:694:U:C4	3.04	0.46
8:A:744:U:H3'	8:A:745:1MG:C8	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:814:C:H1'	8:A:1225:G:N2	2.31	0.46
8:A:841:G:C2	8:A:938:G:C2	3.04	0.46
8:A:853:C:H2'	8:A:854:C:H6	1.80	0.46
8:A:863:A:H2'	8:A:864:G:H8	1.79	0.46
8:A:980:A:C5	8:A:981:A:C6	3.04	0.46
8:A:1002:G:N1	8:A:1003:G:C4	2.84	0.46
8:A:1047:G:O3'	8:A:1048:A:H8	1.99	0.46
8:A:1061:U:C4'	8:A:1070:A:H1'	2.46	0.46
8:A:1075:C:H2'	8:A:1076:C:C5	2.50	0.46
8:A:1093:G:H2'	8:A:1094:U:C1'	2.46	0.46
8:A:1125:G:C2	8:A:1126:A:N6	2.84	0.46
8:A:1151:A:H4'	24:Q:80:ASN:CG	2.41	0.46
8:A:1228:G:C6	8:A:1229:C:C4	3.04	0.46
8:A:1233:C:N3	8:A:1234:U:C5	2.84	0.46
8:A:1272:A:C2	8:A:1618:6MZ:C5	2.99	0.46
8:A:1311:G:H22	8:A:1604:C:H42	1.64	0.46
8:A:1364:G:C5	31:X:1:SER:OG	2.68	0.46
8:A:1407:G:N3	8:A:1408:G:C8	2.84	0.46
8:A:1416:G:C4	8:A:1417:C:C5	3.04	0.46
8:A:1484:U:C2	8:A:1485:U:C5	3.03	0.46
8:A:1549:A:C2	8:A:1550:C:C2	3.04	0.46
8:A:1640:A:H2'	8:A:1641:A:H8	1.78	0.46
8:A:1667:G:H22	8:A:1991:U:C3'	2.29	0.46
8:A:1731:G:C5	8:A:1733:G:C8	3.04	0.46
8:A:1746:A:C2	8:A:1747:U:C4	3.04	0.46
8:A:1785:A:N1	8:A:1787:A:H1'	2.31	0.46
8:A:1803:A:N6	8:A:1814:G:O2'	2.45	0.46
8:A:1851:U:H4'	55:v:3:C:O2	2.16	0.46
8:A:1932:A:H1'	8:A:1969:A:N6	2.31	0.46
8:A:1990:C:H6	8:A:1990:C:O5'	1.99	0.46
8:A:2143:C:N4	8:A:2149:U:N3	2.64	0.46
8:A:2154:A:H3'	8:A:2154:A:H8	1.79	0.46
8:A:2190:G:C2	8:A:2191:A:C5	3.04	0.46
8:A:2276:G:C2	8:A:2277:G:C4	3.04	0.46
8:A:2289:G:H5''	8:A:2384:U:H4'	1.97	0.46
8:A:2293:G:H2'	8:A:2294:G:H8	1.81	0.46
8:A:2300:C:C2	8:A:2301:C:C5	3.03	0.46
8:A:2314:A:C4	8:A:2315:G:C8	3.04	0.46
8:A:2349:G:C2	8:A:2369:A:C4	3.04	0.46
8:A:2445:2MG:C2	8:A:2446:G:C5	3.04	0.46
8:A:2459:A:C4	8:A:2460:U:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2590:A:C6	8:A:2605:PSU:N3	2.84	0.46
8:A:2676:C:H2'	8:A:2677:G:O4'	2.16	0.46
8:A:2731:G:O2'	8:A:2732:G:H5'	2.16	0.46
8:A:2788:C:O2	8:A:2809:A:H2	1.98	0.46
8:A:2799:A:N3	8:A:2801:G:H1'	2.30	0.46
8:A:2822:G:O2'	8:A:2824:C:OP2	2.27	0.46
8:A:2880:C:O2'	21:N:90:ARG:NH1	2.49	0.46
9:B:85:G:C2	9:B:92:C:N3	2.84	0.46
12:E:73:ILE:HA	12:E:78:TRP:CE3	2.51	0.46
14:G:85:LYS:HG2	14:G:164:ALA:CB	2.45	0.46
14:G:152:ARG:O	14:G:160:GLY:HA3	2.16	0.46
17:J:78:THR:N	17:J:83:GLY:O	2.33	0.46
18:K:18:ARG:O	18:K:44:LYS:N	2.45	0.46
21:N:102:PHE:CA	21:N:108:ALA:O	2.64	0.46
27:T:12:ARG:HG2	27:T:35:ALA:N	2.31	0.46
29:V:72:VAL:HA	29:V:93:ARG:HA	1.97	0.46
30:W:46:ASN:O	30:W:58:LYS:HB2	2.16	0.46
34:a:27:G:H2'	34:a:28:A:C8	2.51	0.46
34:a:33:A:C6	34:a:34:C:C4	3.04	0.46
34:a:155:A:H2	34:a:165:G:H22	1.64	0.46
34:a:174:A:H2'	34:a:174:A:N3	2.31	0.46
34:a:226:G:N1	34:a:227:G:C4	2.83	0.46
34:a:247:G:C6	34:a:278:G:C6	3.04	0.46
34:a:253:A:C2	34:a:254:G:C4	3.04	0.46
34:a:404:G:C2	34:a:405:U:C6	3.04	0.46
34:a:412:A:H61	34:a:431:A:H61	1.64	0.46
34:a:454:G:O6	34:a:479:U:O4	2.34	0.46
34:a:499:A:C6	34:a:546:A:H2'	2.50	0.46
34:a:583:A:C8	34:a:584:G:C8	3.04	0.46
34:a:600:A:C6	34:a:639:G:C6	3.04	0.46
34:a:604:G:C6	34:a:605:U:C4	3.04	0.46
34:a:639:G:N1	34:a:640:A:C4	2.84	0.46
34:a:770:C:H1'	34:a:900:A:C2	2.51	0.46
34:a:784:A:H2'	34:a:785:G:C8	2.50	0.46
34:a:832:G:C6	34:a:855:U:O4	2.69	0.46
34:a:832:G:C2	34:a:855:U:C2	3.03	0.46
34:a:887:G:N2	34:a:911:U:C2	2.84	0.46
34:a:892:A:N1	34:a:907:A:H1'	2.32	0.46
34:a:955:U:H6	34:a:955:U:O5'	1.99	0.46
34:a:959:A:N7	34:a:960:U:C6	2.84	0.46
34:a:1003:G:N2	34:a:1038:C:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1007:U:C2	34:a:1023:U:H1'	2.50	0.46
34:a:1032:G:P	34:a:1032:G:H21	2.38	0.46
34:a:1032:G:C2'	34:a:1034:G:H22	2.28	0.46
34:a:1054:C:O4'	34:a:1196:A:C2	2.69	0.46
34:a:1101:A:H1'	34:a:1102:A:O4'	2.15	0.46
34:a:1154:G:C2	34:a:1155:A:C8	3.04	0.46
34:a:1215:G:C4	34:a:1216:A:C8	3.04	0.46
34:a:1251:A:C4	34:a:1252:A:C8	3.04	0.46
34:a:1256:A:C8	34:a:1258:G:C2	3.04	0.46
34:a:1306:A:C4	34:a:1307:U:C6	3.04	0.46
34:a:1363:A:C5	34:a:1365:G:C6	3.04	0.46
34:a:1374:A:N3	34:a:1374:A:H2'	2.30	0.46
34:a:1401:G:H3'	34:a:1402:4OC:C6	2.46	0.46
34:a:1404:C:HO2'	34:a:1519:MA6:C3'	2.20	0.46
34:a:1432:G:H1'	34:a:1468:A:H62	1.81	0.46
34:a:1448:C:H2'	34:a:1449:C:H6	1.79	0.46
34:a:1526:G:C4	34:a:1527:U:C5	3.04	0.46
35:b:111:LYS:O	35:b:115:ASP:OD2	2.34	0.46
35:b:161:PHE:HZ	35:b:185:ILE:HD11	1.79	0.46
39:f:18:VAL:O	39:f:21:MET:HB2	2.16	0.46
40:g:15:PRO:HB2	42:i:45:MET:HB3	1.98	0.46
40:g:78:ARG:HE	40:g:83:THR:HG22	1.79	0.46
41:h:24:VAL:HG23	41:h:62:LEU:HD21	1.97	0.46
44:k:72:ALA:H	44:k:74:LYS:NZ	2.15	0.46
49:p:43:ALA:HB2	49:p:49:GLY:CA	2.46	0.46
49:p:56:ARG:HH21	49:p:59:HIS:CG	2.34	0.46
50:q:62:GLU:OE1	50:q:72:TRP:CE2	2.68	0.46
52:s:20:LYS:O	52:s:24:SER:OG	2.33	0.46
52:s:32:THR:O	52:s:51:HIS:N	2.49	0.46
53:t:35:TYR:O	53:t:38:ILE:HB	2.15	0.46
55:v:2:G:H8	55:v:2:G:O5'	1.99	0.46
55:v:53:G:C2	55:v:62:C:C2	3.03	0.46
57:x:11:ASN:C	57:x:12:ILE:HG23	2.40	0.46
57:x:18:ILE:HG13	57:x:91:HIS:CD2	2.50	0.46
57:x:170:LEU:CB	57:x:182:VAL:HB	2.40	0.46
57:x:251:LEU:O	57:x:259:GLU:OE2	2.34	0.46
57:x:312:ASP:OD1	57:x:312:ASP:N	2.47	0.46
57:x:316:PHE:HB3	57:x:398:ASP:CG	2.41	0.46
57:x:350:ASN:CG	57:x:355:ALA:HB3	2.40	0.46
57:x:375:GLU:N	57:x:375:GLU:OE1	2.48	0.46
57:x:496:LYS:CE	57:x:608:LYS:HZ2	2.27	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5:55:VAL:O	6:5:83:ALA:CB	2.64	0.45
8:A:5:A:C6	8:A:2899:A:C6	3.04	0.45
8:A:6:A:HO2'	17:J:135:GLN:CD	2.15	0.45
8:A:21:A:H2'	8:A:22:C:H6	1.81	0.45
8:A:24:G:H2'	8:A:25:U:H6	1.81	0.45
8:A:64:A:H1'	27:T:70:HIS:CB	2.46	0.45
8:A:80:G:C4	8:A:107:G:N2	2.84	0.45
8:A:85:G:C6	8:A:86:G:N7	2.84	0.45
8:A:121:G:C2	8:A:131:A:C5	3.04	0.45
8:A:431:U:C2	8:A:432:A:C8	3.04	0.45
8:A:451:U:O4	8:A:453:A:H2'	2.15	0.45
8:A:452:G:C4	8:A:458:G:C5	3.04	0.45
8:A:533:G:H4'	24:Q:27:ARG:HH12	1.81	0.45
8:A:583:G:C6	8:A:584:C:C4	3.04	0.45
8:A:673:C:N4	8:A:808:G:C6	2.84	0.45
8:A:699:A:H4'	8:A:1634:A:C6	2.51	0.45
8:A:704:G:N2	8:A:726:G:N3	2.65	0.45
8:A:713:G:C1'	8:A:718:A:H61	2.28	0.45
8:A:764:A:C6	8:A:781:A:C2	3.04	0.45
8:A:831:G:H2'	8:A:832:U:O4'	2.16	0.45
8:A:888:C:C5	52:s:27:LYS:HE2	2.50	0.45
8:A:888:C:C6	52:s:27:LYS:NZ	2.83	0.45
8:A:1014:A:H2'	8:A:1015:U:C6	2.51	0.45
8:A:1048:A:H2'	8:A:1049:C:H6	1.81	0.45
8:A:1087:G:C6	8:A:1089:A:N6	2.84	0.45
8:A:1152:C:O2'	24:Q:75:TYR:HE1	1.98	0.45
8:A:1165:A:N1	8:A:1185:G:C6	2.84	0.45
8:A:1178:C:H2'	8:A:1180:U:H6	1.82	0.45
8:A:1319:C:N4	8:A:1334:G:C6	2.84	0.45
8:A:1426:G:HO2'	8:A:1572:A:N6	2.10	0.45
8:A:1528:A:C5	8:A:1529:G:H1'	2.51	0.45
8:A:1591:A:H3'	8:A:1592:C:C6	2.51	0.45
8:A:1596:A:C6	8:A:1597:A:C6	3.04	0.45
8:A:1620:G:C4	8:A:1621:U:C5	3.04	0.45
8:A:1666:G:H3'	8:A:1667:G:H8	1.81	0.45
8:A:1689:A:C1'	8:A:1700:A:N6	2.80	0.45
8:A:1691:C:H2'	8:A:1692:U:O4'	2.16	0.45
8:A:1752:C:O2'	8:A:1753:G:H5'	2.15	0.45
8:A:1819:A:C2	10:C:270:ARG:HD3	2.50	0.45
8:A:1848:A:C8	34:a:702:A:C6	3.04	0.45
8:A:2024:G:N2	8:A:2039:U:O2	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2070:A:H2'	8:A:2071:A:H8	1.80	0.45
8:A:2085:U:C2	8:A:2235:G:N1	2.84	0.45
8:A:2095:A:C2	8:A:2195:U:C2	3.04	0.45
8:A:2204:G:N1	8:A:2205:A:C5	2.84	0.45
8:A:2204:G:P	10:C:146:LYS:HZ2	2.35	0.45
8:A:2261:C:H3'	30:W:12:SER:CB	2.46	0.45
8:A:2293:G:N1	8:A:2340:A:C6	2.84	0.45
8:A:2294:G:C4	8:A:2295:C:C5	3.04	0.45
8:A:2296:U:O2	8:A:2333:A:C2	2.69	0.45
8:A:2310:C:H2'	13:F:76:PHE:HE2	1.81	0.45
8:A:2461:A:C2	8:A:2462:C:C2	3.04	0.45
8:A:2462:C:C2	8:A:2463:C:C6	3.04	0.45
8:A:2469:A:N6	8:A:2481:G:H1'	2.31	0.45
8:A:2603:G:C6	8:A:2604:PSU:N1	2.83	0.45
8:A:2627:G:C5	8:A:2628:C:N4	2.84	0.45
8:A:2675:A:H2'	8:A:2676:C:O4'	2.16	0.45
8:A:2735:G:N1	8:A:2736:A:C5	2.84	0.45
8:A:2789:C:H6	8:A:2789:C:O5'	2.00	0.45
9:B:2:G:N1	9:B:119:A:C6	2.84	0.45
9:B:27:C:H2'	9:B:28:C:H6	1.81	0.45
9:B:33:G:C6	9:B:50:A:C6	3.04	0.45
10:C:78:GLU:OE2	10:C:92:LEU:CD2	2.64	0.45
10:C:129:LEU:HD23	10:C:129:LEU:N	2.31	0.45
10:C:132:ARG:O	10:C:166:ARG:CZ	2.64	0.45
10:C:141:HIS:CE1	10:C:190:THR:HG22	2.51	0.45
11:D:186:LEU:HD23	11:D:186:LEU:HA	1.77	0.45
12:E:27:LEU:O	12:E:31:VAL:HG23	2.15	0.45
13:F:66:ILE:H	13:F:66:ILE:HD12	1.81	0.45
14:G:74:MET:O	14:G:78:VAL:HG13	2.16	0.45
14:G:97:VAL:HG23	14:G:102:ILE:HG12	1.98	0.45
14:G:149:ALA:HA	14:G:152:ARG:HG3	1.98	0.45
19:L:110:VAL:HG12	19:L:131:ALA:HB1	1.98	0.45
21:N:106:ASP:OD1	21:N:106:ASP:N	2.46	0.45
22:O:40:ILE:CG2	22:O:44:GLY:HA2	2.46	0.45
24:Q:50:ARG:HD2	24:Q:50:ARG:N	2.30	0.45
25:R:68:ARG:N	25:R:93:PHE:CE2	2.84	0.45
29:V:4:ILE:HG12	29:V:50:MET:HE1	1.98	0.45
31:X:38:TRP:CH2	31:X:43:LYS:HA	2.51	0.45
32:Y:34:SER:OG	32:Y:36:GLN:HG2	2.16	0.45
34:a:39:G:C6	34:a:40:C:C4	3.04	0.45
34:a:49:U:H3	34:a:362:G:H1'	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:228:A:H4'	49:p:63:GLN:OE1	2.15	0.45
34:a:295:C:H2'	34:a:296:U:C6	2.51	0.45
34:a:476:U:C2	34:a:477:C:C5	3.04	0.45
34:a:506:G:C5	34:a:507:C:C4	3.05	0.45
34:a:513:C:C2	34:a:539:A:C2	3.03	0.45
34:a:687:A:H2'	34:a:701:U:C4	2.51	0.45
34:a:822:U:H2'	34:a:823:C:C6	2.52	0.45
34:a:854:U:H3'	34:a:871:U:H3	1.81	0.45
34:a:950:U:OP2	46:m:100:ARG:HD2	2.16	0.45
34:a:992:U:C5	34:a:1044:A:OP2	2.69	0.45
34:a:1088:G:N3	54:u:66:ARG:CB	2.79	0.45
34:a:1097:C:H1'	34:a:1169:A:C2	2.51	0.45
34:a:1106:G:C6	34:a:1107:C:C4	3.05	0.45
34:a:1269:A:OP2	34:a:1270:G:C8	2.69	0.45
34:a:1292:G:C4	34:a:1293:C:C5	3.04	0.45
34:a:1295:U:H2'	34:a:1296:C:C6	2.51	0.45
34:a:1319:A:C5	34:a:1323:G:C4	3.04	0.45
34:a:1328:C:O2'	34:a:1329:A:H5'	2.16	0.45
34:a:1402:4OC:CM2	34:a:1500:A:N1	2.80	0.45
34:a:1497:G:O2'	34:a:1518:MA6:H103	2.16	0.45
35:b:186:VAL:HG21	35:b:198:VAL:HG13	1.97	0.45
37:d:7:LYS:O	37:d:20:LEU:HD13	2.16	0.45
37:d:87:GLU:HA	37:d:90:LEU:HD12	1.97	0.45
38:e:148:SER:OG	38:e:151:MET:HG2	2.16	0.45
39:f:1:MET:HG2	39:f:67:PRO:HD3	1.99	0.45
39:f:11:HIS:O	39:f:13:ASP:N	2.46	0.45
39:f:20:GLY:O	39:f:23:GLU:HG3	2.16	0.45
39:f:38:ARG:O	39:f:62:MET:HA	2.16	0.45
39:f:63:ASN:CG	39:f:96:VAL:HB	2.40	0.45
43:j:67:ILE:HG12	47:n:96:LEU:CA	2.46	0.45
45:l:31:GLY:HA3	45:l:56:LEU:HD23	1.96	0.45
46:m:88:LEU:O	46:m:92:ARG:HG3	2.16	0.45
47:n:87:ALA:HA	47:n:90:ARG:CZ	2.46	0.45
52:s:31:ARG:HG2	52:s:56:HIS:CD2	2.50	0.45
55:v:63:G:H2'	55:v:64:G:H8	1.81	0.45
56:w:12:U:N3	56:w:24:G:N1	2.64	0.45
57:x:19:ASP:O	57:x:142:LYS:NZ	2.49	0.45
57:x:144:ASP:C	57:x:175:GLU:HA	2.42	0.45
57:x:232:LEU:CD1	57:x:242:LEU:HD21	2.45	0.45
57:x:297:ILE:HG22	57:x:404:ILE:HB	1.97	0.45
57:x:308:ARG:CD	57:x:339:SER:OG	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:335:PHE:CE1	57:x:382:ALA:C	2.94	0.45
57:x:556:ILE:O	57:x:560:LEU:HD13	2.16	0.45
57:x:565:LEU:HD13	57:x:609:PRO:CG	2.45	0.45
57:x:620:VAL:HG22	57:x:679:TYR:CB	2.45	0.45
3:2:37:LYS:HE3	8:A:469:G:O6	2.14	0.45
8:A:49:A:H2'	8:A:49:A:N3	2.31	0.45
8:A:139:U:OP2	8:A:140:C:N4	2.42	0.45
8:A:172:A:H2'	8:A:173:A:C8	2.51	0.45
8:A:380:G:N1	8:A:395:U:C2	2.84	0.45
8:A:408:G:N1	8:A:420:C:N3	2.63	0.45
8:A:442:G:O4'	12:E:41:GLN:NE2	2.50	0.45
8:A:452:G:C2	8:A:453:A:C4	3.05	0.45
8:A:470:A:C6	8:A:471:A:C5	3.04	0.45
8:A:481:G:H1	8:A:507:A:H1'	1.81	0.45
8:A:496:G:C2	8:A:497:A:H1'	2.51	0.45
8:A:533:G:H2'	8:A:534:U:H6	1.79	0.45
8:A:541:A:C6	8:A:542:C:C4	3.04	0.45
8:A:572:A:C6	8:A:573:U:N3	2.84	0.45
8:A:597:G:C6	8:A:598:U:C4	3.04	0.45
8:A:663:G:C2	8:A:664:G:C4	3.04	0.45
8:A:676:A:H1'	8:A:2443:C:H1'	1.99	0.45
8:A:729:G:C2	8:A:1775:U:C2	3.04	0.45
8:A:799:G:H3'	8:A:800:A:H2'	1.97	0.45
8:A:803:U:O2'	8:A:804:A:H5'	2.15	0.45
8:A:830:G:C4	8:A:2448:A:C6	3.04	0.45
8:A:856:G:C2	8:A:922:C:C2	3.04	0.45
8:A:918:A:H1'	9:B:80:U:H1'	1.98	0.45
8:A:1007:C:C2	8:A:1137:G:N2	2.84	0.45
8:A:1021:A:C6	8:A:1023:U:C4	3.05	0.45
8:A:1023:U:H2'	8:A:1024:G:O4'	2.16	0.45
8:A:1078:U:O4	8:A:1088:A:H3'	2.16	0.45
8:A:1083:U:O2'	8:A:1084:A:H8	2.00	0.45
8:A:1086:A:H5''	8:A:1087:G:H5'	1.98	0.45
8:A:1171:G:C2	8:A:1178:C:C4	3.04	0.45
8:A:1219:U:H2'	8:A:1220:G:O4'	2.16	0.45
8:A:1275:A:H3'	8:A:1645:G:O2'	2.16	0.45
8:A:1313:U:O2	8:A:1314:C:C6	2.68	0.45
8:A:1340:U:C6	8:A:1603:A:O4'	2.69	0.45
8:A:1385:A:N9	8:A:1386:C:C5	2.85	0.45
8:A:1427:A:H5'	8:A:1428:C:C2	2.51	0.45
8:A:1471:G:O6	8:A:1521:G:C2	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1501:G:H2'	8:A:1502:A:H8	1.81	0.45
8:A:1527:G:N2	8:A:1544:A:OP2	2.49	0.45
8:A:1530:G:N2	8:A:1542:U:H1'	2.32	0.45
8:A:1560:G:C4	8:A:1561:C:C5	3.04	0.45
8:A:1661:G:C2	8:A:2000:C:C2	3.04	0.45
8:A:1707:G:C1'	8:A:1756:G:H1'	2.46	0.45
8:A:1778:U:C4	8:A:1784:A:N3	2.83	0.45
8:A:1797:G:H2'	8:A:1798:U:H6	1.80	0.45
8:A:1842:G:O4'	10:C:242:HIS:NE2	2.44	0.45
8:A:1900:A:N1	8:A:1970:A:C6	2.84	0.45
8:A:2106:U:C4	8:A:2184:A:N6	2.77	0.45
8:A:2123:G:H4'	8:A:2123:G:OP1	2.16	0.45
8:A:2134:A:C5'	8:A:2158:A:H5'	2.43	0.45
8:A:2146:C:H1'	8:A:2148:G:H21	1.79	0.45
8:A:2175:C:H41	8:A:2177:C:H41	1.64	0.45
8:A:2204:G:H1	8:A:2220:U:H3	1.62	0.45
8:A:2246:G:H1'	8:A:2426:A:N1	2.31	0.45
8:A:2325:G:C6	8:A:2326:C:C4	3.04	0.45
8:A:2511:U:O2'	11:D:143:PRO:O	2.29	0.45
8:A:2559:C:H2'	8:A:2560:A:H8	1.81	0.45
8:A:2643:G:H2'	8:A:2644:G:H8	1.80	0.45
8:A:2681:C:O2'	8:A:2724:U:O4	2.25	0.45
8:A:2682:A:C5	8:A:2683:C:C6	3.04	0.45
8:A:2694:G:H2'	8:A:2695:U:C6	2.50	0.45
8:A:2740:A:H2'	8:A:2741:A:O4'	2.17	0.45
8:A:2799:A:N1	8:A:2801:G:C4	2.84	0.45
8:A:2842:G:N1	8:A:2876:G:C6	2.84	0.45
8:A:2850:A:C2	8:A:2851:A:C4	3.05	0.45
8:A:2870:C:H2'	8:A:2871:U:O4'	2.16	0.45
9:B:15:A:OP2	9:B:69:G:N1	2.47	0.45
9:B:40:U:H1'	9:B:43:C:C5	2.51	0.45
9:B:58:A:C4	9:B:59:A:C8	3.04	0.45
10:C:28:PRO:HB2	10:C:33:LEU:HD11	1.99	0.45
10:C:56:GLY:HA3	10:C:213:ARG:C	2.41	0.45
10:C:208:GLY:HA2	10:C:211:ARG:CG	2.46	0.45
10:C:244:VAL:HG12	10:C:250:GLN:CA	2.46	0.45
11:D:109:VAL:HA	11:D:202:ILE:O	2.16	0.45
12:E:4:VAL:HA	12:E:11:ALA:HA	1.98	0.45
13:F:134:GLN:HE22	13:F:147:ARG:C	2.24	0.45
17:J:13:ARG:HH12	17:J:49:ASP:HB3	1.81	0.45
17:J:55:ILE:HG23	17:J:125:TYR:CD2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:10:ARG:NH1	20:M:11:LYS:HE3	2.31	0.45
25:R:64:VAL:HG23	25:R:97:LYS:N	2.32	0.45
27:T:36:LYS:HD3	27:T:36:LYS:HA	1.71	0.45
28:U:95:PHE:CD1	28:U:102:ILE:HD11	2.51	0.45
30:W:46:ASN:C	30:W:58:LYS:HB2	2.41	0.45
31:X:35:HIS:O	31:X:37:PHE:CE2	2.69	0.45
32:Y:14:LEU:HA	32:Y:17:GLU:HG2	1.98	0.45
34:a:15:G:H1'	38:e:23:THR:OG1	2.16	0.45
34:a:33:A:N1	34:a:552:U:C4	2.85	0.45
34:a:80:A:N7	34:a:91:U:H1'	2.30	0.45
34:a:81:A:N1	34:a:90:C:N3	2.65	0.45
34:a:141:G:N2	34:a:223:A:C4	2.84	0.45
34:a:217:C:H2'	34:a:218:U:H6	1.82	0.45
34:a:246:A:C8	34:a:279:A:N1	2.84	0.45
34:a:246:A:N6	34:a:281:G:C1'	2.79	0.45
34:a:254:G:OP1	50:q:69:THR:OG1	2.26	0.45
34:a:310:G:C6	34:a:311:C:C4	3.04	0.45
34:a:406:G:H1'	34:a:495:A:N1	2.30	0.45
34:a:429:U:OP1	37:d:12:ARG:NH2	2.48	0.45
34:a:500:G:C5	34:a:546:A:C2	3.04	0.45
34:a:504:C:N3	34:a:542:G:C2	2.83	0.45
34:a:505:G:C4	34:a:535:A:C5	3.04	0.45
34:a:537:G:C4	34:a:538:G:C8	3.05	0.45
34:a:654:G:C2	34:a:655:A:H1'	2.51	0.45
34:a:696:A:C2'	34:a:786:G:HO2'	2.27	0.45
34:a:764:C:H2'	34:a:765:G:C5'	2.46	0.45
34:a:777:A:C2	34:a:778:G:H1'	2.51	0.45
34:a:833:G:H2'	34:a:834:U:C6	2.52	0.45
34:a:836:G:C5	34:a:851:G:C4	3.04	0.45
34:a:891:U:C2	34:a:907:A:N7	2.84	0.45
34:a:909:A:H2'	34:a:910:C:C6	2.50	0.45
34:a:934:C:C4	34:a:1345:U:C5	3.05	0.45
34:a:978:A:C6	34:a:1319:A:N3	2.85	0.45
34:a:1115:U:N3	34:a:1116:U:C5	2.84	0.45
34:a:1153:G:C2	34:a:1154:G:C4	3.05	0.45
34:a:1159:U:C4	34:a:1182:G:C5	3.04	0.45
34:a:1237:C:H4'	34:a:1303:C:O2	2.16	0.45
34:a:1244:G:C4	34:a:1294:G:C2	3.04	0.45
34:a:1270:G:C2	34:a:1271:A:C8	3.04	0.45
34:a:1303:C:C2'	34:a:1304:G:H5'	2.46	0.45
34:a:1320:C:N4	52:s:35:ARG:HB2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1348:U:P	42:i:111:GLU:H	2.38	0.45
34:a:1454:G:C2	34:a:1455:G:N9	2.85	0.45
35:b:95:TRP:CZ3	35:b:99:MET:SD	3.09	0.45
36:c:165:GLU:CD	36:c:166:TRP:H	2.24	0.45
37:d:21:LYS:O	37:d:23:GLY:N	2.48	0.45
37:d:52:VAL:HG23	37:d:53:GLN:N	2.32	0.45
37:d:168:THR:C	37:d:183:ARG:HH11	2.24	0.45
38:e:110:MET:O	38:e:114:LEU:HD12	2.16	0.45
39:f:49:TYR:CD2	51:r:68:PRO:HA	2.51	0.45
39:f:72:ASP:O	39:f:75:GLU:HB2	2.17	0.45
47:n:18:LYS:HG2	47:n:19:TYR:CD1	2.51	0.45
47:n:42:TRP:HZ3	52:s:8:PRO:HD2	1.80	0.45
50:q:14:ASP:CB	50:q:20:ILE:CG2	2.94	0.45
50:q:24:ILE:HG13	50:q:41:THR:H	1.81	0.45
50:q:39:ARG:HA	50:q:39:ARG:HD2	1.74	0.45
55:v:30:G:C4	55:v:31:G:C8	3.03	0.45
55:v:62:C:H2'	55:v:63:G:H8	1.81	0.45
56:w:20:U:C3'	56:w:21:A:H5'	2.45	0.45
57:x:71:TRP:NE1	57:x:278:LEU:HB3	2.31	0.45
57:x:135:PRO:HG3	57:x:256:LEU:O	2.16	0.45
57:x:167:PRO:O	57:x:184:LEU:CD1	2.65	0.45
57:x:267:SER:O	57:x:271:ASN:N	2.49	0.45
57:x:297:ILE:HD13	57:x:305:PRO:CG	2.42	0.45
8:A:2:G:C6	8:A:3:U:C4	3.04	0.45
8:A:54:G:O6	8:A:117:G:N2	2.50	0.45
8:A:121:G:H2'	8:A:122:G:C8	2.51	0.45
8:A:144:A:H2'	8:A:145:C:O4'	2.17	0.45
8:A:185:G:H2'	8:A:186:G:O4'	2.16	0.45
8:A:222:A:N6	8:A:232:G:H1'	2.31	0.45
8:A:234:U:C4	8:A:235:U:C5	3.04	0.45
8:A:240:C:P	8:A:241:A:HO2'	2.32	0.45
8:A:247:G:H4'	8:A:386:G:C5	2.50	0.45
8:A:305:C:C4	8:A:313:G:N1	2.85	0.45
8:A:312:G:N3	8:A:313:G:C8	2.85	0.45
8:A:327:G:N1	8:A:336:C:C4	2.84	0.45
8:A:335:C:H2'	8:A:336:C:C6	2.51	0.45
8:A:371:A:N6	8:A:401:A:C8	2.84	0.45
8:A:373:U:OP2	31:X:53:LYS:NZ	2.49	0.45
8:A:437:U:H2'	8:A:438:G:H8	1.81	0.45
8:A:488:G:C2'	8:A:491:G:N7	2.79	0.45
8:A:510:C:OP1	8:A:511:U:OP2	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:536:G:H2'	8:A:537:G:O4'	2.17	0.45
8:A:556:A:H3'	8:A:557:C:C6	2.50	0.45
8:A:566:U:O2'	8:A:809:G:OP2	2.30	0.45
8:A:611:C:N3	8:A:618:G:C2	2.84	0.45
8:A:620:G:H8	8:A:622:G:O6	1.99	0.45
8:A:741:U:N3	8:A:757:G:C2	2.85	0.45
8:A:772:C:H2'	8:A:773:U:C6	2.51	0.45
8:A:929:U:H5''	33:Z:37:ARG:NH2	2.31	0.45
8:A:953:G:C2	8:A:965:C:C2	3.04	0.45
8:A:1042:G:H2'	8:A:1043:C:H6	1.75	0.45
8:A:1069:A:H5'	8:A:1075:C:H5	1.81	0.45
8:A:1071:G:N3	8:A:1071:G:H2'	2.32	0.45
8:A:1114:C:H2'	8:A:1115:G:C8	2.51	0.45
8:A:1215:G:C4	8:A:1216:G:C8	3.04	0.45
8:A:1218:G:N1	8:A:1232:G:N7	2.65	0.45
8:A:1340:U:OP1	27:T:19:LYS:HE2	2.16	0.45
8:A:1359:A:N7	8:A:1372:U:C4	2.84	0.45
8:A:1469:A:H2'	8:A:1470:A:C8	2.50	0.45
8:A:1484:U:C2	8:A:1485:U:C6	3.05	0.45
8:A:1638:C:C2	8:A:1639:C:C6	3.04	0.45
8:A:1690:A:H3'	8:A:1691:C:H6	1.81	0.45
8:A:1710:G:H2'	8:A:1711:A:H8	1.78	0.45
8:A:1815:A:O4'	8:A:1817:G:C8	2.69	0.45
8:A:1819:A:H4'	8:A:1821:A:C8	2.51	0.45
8:A:1846:G:N1	8:A:1895:C:C4	2.84	0.45
8:A:2043:C:C4	8:A:2777:G:N3	2.84	0.45
8:A:2122:U:C5	8:A:2123:G:H1'	2.51	0.45
8:A:2191:A:H2'	8:A:2192:U:O4'	2.16	0.45
8:A:2221:G:H2'	8:A:2222:C:H6	1.81	0.45
8:A:2238:G:H2'	8:A:2238:G:N3	2.31	0.45
8:A:2269:G:N2	8:A:2270:A:H1'	2.32	0.45
8:A:2330:G:C6	8:A:2386:A:N6	2.85	0.45
8:A:2351:G:C2	8:A:2367:G:O6	2.69	0.45
8:A:2435:A:H2'	8:A:2436:G:O5'	2.16	0.45
8:A:2543:G:O4'	8:A:2766:A:H5''	2.17	0.45
8:A:2662:A:N6	8:A:2663:G:C2	2.85	0.45
8:A:2694:G:C2	8:A:2716:C:C2	3.04	0.45
8:A:2744:G:H21	14:G:142:GLN:CD	2.25	0.45
10:C:203:VAL:C	10:C:204:LEU:HG	2.41	0.45
10:C:208:GLY:HA2	10:C:211:ARG:CB	2.45	0.45
11:D:91:THR:OG1	11:D:94:GLN:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:E:2:GLU:OE1	12:E:11:ALA:HB3	2.15	0.45
13:F:60:SER:HB3	13:F:98:PHE:CE2	2.52	0.45
13:F:121:PHE:HA	13:F:127:TYR:HA	1.97	0.45
13:F:166:ARG:O	13:F:176:PHE:HE2	1.99	0.45
14:G:27:GLY:N	14:G:78:VAL:HB	2.31	0.45
14:G:32:LEU:CD1	14:G:74:MET:HA	2.46	0.45
14:G:89:VAL:HB	14:G:158:GLY:O	2.16	0.45
15:H:31:VAL:N	15:H:32:PRO:CD	2.78	0.45
17:J:12:LYS:O	17:J:12:LYS:HG3	2.15	0.45
17:J:42:ALA:O	24:Q:63:ARG:CG	2.64	0.45
18:K:58:LEU:HA	18:K:89:ASN:OD1	2.17	0.45
19:L:132:ARG:HG3	19:L:142:ILE:HD13	1.98	0.45
21:N:114:GLU:OE1	21:N:118:ARG:NE	2.49	0.45
24:Q:26:ALA:C	24:Q:28:SER:H	2.23	0.45
25:R:79:ARG:C	25:R:81:LYS:N	2.75	0.45
28:U:34:ILE:HG23	28:U:61:GLU:HG2	1.98	0.45
34:a:35:G:O6	34:a:550:G:C6	2.70	0.45
34:a:70:U:O2	34:a:99:C:O2	2.34	0.45
34:a:91:U:C2	34:a:92:U:C5	3.05	0.45
34:a:115:G:C6	34:a:313:A:C6	3.03	0.45
34:a:155:A:C2	34:a:166:U:N3	2.85	0.45
34:a:160:A:N7	34:a:161:A:C5	2.84	0.45
34:a:179:A:C4	34:a:180:U:C6	3.04	0.45
34:a:183:C:H5''	34:a:184:G:OP2	2.16	0.45
34:a:188:C:O2'	34:a:189:A:C4'	2.61	0.45
34:a:198:G:C6	34:a:220:G:C4	3.04	0.45
34:a:267:C:C4	34:a:268:U:C4	3.04	0.45
34:a:295:C:N3	34:a:303:A:N1	2.64	0.45
34:a:415:A:C4	34:a:416:G:C8	3.04	0.45
34:a:495:A:C2	34:a:496:A:C2	3.05	0.45
34:a:591:U:H2'	34:a:592:G:C8	2.51	0.45
34:a:660:C:H2'	34:a:661:G:O4'	2.15	0.45
34:a:670:G:O6	34:a:737:C:N4	2.50	0.45
34:a:824:G:H2'	34:a:825:A:H8	1.82	0.45
34:a:882:C:O2'	34:a:883:C:H5'	2.17	0.45
34:a:945:G:C2	34:a:1337:G:N2	2.83	0.45
34:a:1005:A:C8	34:a:1006:G:C8	3.05	0.45
34:a:1016:A:H5''	34:a:1017:U:OP2	2.17	0.45
34:a:1021:A:N1	34:a:1022:A:C6	2.84	0.45
34:a:1050:G:C2	34:a:1209:C:O2	2.69	0.45
34:a:1055:A:C2	34:a:1206:G:N9	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1135:U:H3	34:a:1140:C:N4	2.13	0.45
34:a:1151:A:N3	34:a:1152:A:N7	2.64	0.45
34:a:1246:A:N6	34:a:1292:G:O6	2.49	0.45
34:a:1349:A:N6	34:a:1373:G:H1'	2.31	0.45
34:a:1514:G:N1	34:a:1522:U:N3	2.64	0.45
34:a:1539:C:H2'	34:a:1540:U:H5'	1.98	0.45
35:b:105:THR:HA	35:b:108:GLN:HG3	1.98	0.45
36:c:86:LEU:O	36:c:90:VAL:HG22	2.16	0.45
36:c:120:THR:HA	36:c:123:LEU:HD12	1.99	0.45
37:d:18:LEU:C	37:d:19:PHE:CD2	2.94	0.45
37:d:36:ALA:O	37:d:38:GLY:N	2.50	0.45
37:d:97:LEU:HD23	37:d:117:VAL:CG1	2.46	0.45
38:e:78:GLY:O	38:e:120:HIS:N	2.45	0.45
39:f:49:TYR:HB2	51:r:73:HIS:HB3	1.98	0.45
40:g:118:ARG:O	40:g:121:ASN:HB2	2.16	0.45
41:h:40:LYS:HD2	41:h:48:PHE:CE1	2.50	0.45
48:o:70:LYS:HB2	48:o:77:TYR:CG	2.52	0.45
48:o:87:ARG:HD2	48:o:87:ARG:HA	1.79	0.45
55:v:18:G:N1	55:v:55:PSU:H1'	2.31	0.45
56:w:52:G:C6	56:w:53:G:C5	3.05	0.45
57:x:673:THR:HG21	57:x:677:ALA:HB3	1.98	0.45
2:1:5:ARG:CZ	8:A:2285:C:C5	2.98	0.45
3:2:11:LYS:CD	8:A:686:U:O2	2.65	0.45
4:3:24:LYS:CB	19:L:64:PHE:CD2	2.99	0.45
5:4:19:ARG:CZ	8:A:2755:C:H3'	2.46	0.45
8:A:111:A:H2'	8:A:112:U:O4'	2.15	0.45
8:A:175:G:H2'	8:A:176:A:H8	1.77	0.45
8:A:233:A:N3	8:A:233:A:H2'	2.31	0.45
8:A:263:G:N1	8:A:264:C:C4	2.84	0.45
8:A:325:G:C4	8:A:326:G:C8	3.04	0.45
8:A:352:A:C6	8:A:353:C:C4	3.05	0.45
8:A:465:G:O2'	8:A:466:A:O4'	2.33	0.45
8:A:482:A:C6	8:A:506:G:C4	3.05	0.45
8:A:514:A:H2'	8:A:515:A:C8	2.52	0.45
8:A:581:C:H5'	24:Q:30:VAL:HG22	1.97	0.45
8:A:592:A:H2'	8:A:593:U:H6	1.80	0.45
8:A:611:C:C2	8:A:618:G:C2	3.04	0.45
8:A:616:A:H4'	12:E:101:TYR:CZ	2.52	0.45
8:A:650:C:N4	8:A:651:G:N7	2.65	0.45
8:A:671:C:H3'	19:L:42:SER:OG	2.17	0.45
8:A:682:G:O6	8:A:796:C:N4	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:704:G:N2	8:A:726:G:O2'	2.41	0.45
8:A:705:A:N6	8:A:726:G:C1'	2.80	0.45
8:A:796:C:H2'	8:A:797:G:C8	2.52	0.45
8:A:898:C:H2'	8:A:898:C:O2	2.16	0.45
8:A:978:G:N1	8:A:986:C:C4	2.84	0.45
8:A:993:G:C6	8:A:1162:G:N1	2.83	0.45
8:A:1045:C:H42	8:A:1111:A:H2'	1.80	0.45
8:A:1054:A:H2'	8:A:1055:G:C8	2.52	0.45
8:A:1059:G:C4	16:I:131:THR:CB	2.99	0.45
8:A:1081:U:O2	8:A:1081:U:C2'	2.64	0.45
8:A:1166:G:C6	8:A:1167:C:N4	2.85	0.45
8:A:1220:G:C2	8:A:1230:A:C2	3.03	0.45
8:A:1315:C:C2	8:A:1338:G:N2	2.85	0.45
8:A:1353:A:OP2	8:A:1377:G:C6	2.69	0.45
8:A:1410:G:C6	8:A:1411:U:O4	2.69	0.45
8:A:1413:A:N6	8:A:1590:A:N6	2.65	0.45
8:A:1418:G:C1'	8:A:1580:A:H61	2.21	0.45
8:A:1509:A:N6	8:A:1510:G:C6	2.84	0.45
8:A:1553:A:N7	8:A:1555:G:C6	2.84	0.45
8:A:1643:G:C5	8:A:1644:C:C5	3.04	0.45
8:A:1677:A:C6	8:A:1678:A:C5	3.03	0.45
8:A:1834:U:C2	8:A:1970:A:N7	2.85	0.45
8:A:1917:PSU:C4	8:A:1918:A:C8	3.04	0.45
8:A:1932:A:N3	8:A:1969:A:C6	2.84	0.45
8:A:1936:A:P	8:A:1961:C:H41	2.39	0.45
8:A:2184:A:C6	8:A:2185:U:O2	2.69	0.45
8:A:2190:G:N1	8:A:2191:A:C6	2.85	0.45
8:A:2199:A:C5	8:A:2225:A:C4	3.03	0.45
8:A:2261:C:H3'	30:W:12:SER:HB3	1.98	0.45
8:A:2283:C:C5	8:A:2389:G:C5	3.05	0.45
8:A:2472:G:C2'	8:A:2478:A:N6	2.78	0.45
8:A:2482:A:C4	8:A:2483:C:C6	3.04	0.45
8:A:2516:A:O2'	8:A:2517:C:H5'	2.17	0.45
8:A:2563:U:H5''	18:K:27:GLY:H	1.81	0.45
8:A:2574:G:H8	8:A:2574:G:O5'	1.99	0.45
8:A:2695:U:H3	8:A:2714:G:H1	1.64	0.45
8:A:2720:U:C2	8:A:2873:A:N7	2.84	0.45
8:A:2836:U:C2	8:A:2883:A:C2	3.05	0.45
8:A:2846:G:N1	8:A:2871:U:C2	2.84	0.45
8:A:2854:G:C6	8:A:2855:C:C4	3.04	0.45
9:B:91:C:H2'	9:B:92:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:110:ILE:CD1	13:F:113:PHE:CD1	2.99	0.45
14:G:100:ASN:ND2	14:G:115:GLN:CD	2.73	0.45
17:J:42:ALA:O	24:Q:63:ARG:CD	2.65	0.45
20:M:71:LYS:O	20:M:92:TRP:HA	2.16	0.45
22:O:39:VAL:HB	22:O:49:VAL:HG22	1.97	0.45
24:Q:52:ARG:HG3	24:Q:56:PHE:CE2	2.51	0.45
25:R:68:ARG:HD3	25:R:90:ARG:NE	2.30	0.45
29:V:23:ALA:O	29:V:25:LYS:HE3	2.16	0.45
34:a:2:A:C2	34:a:613:C:O2	2.70	0.45
34:a:2:A:C5	34:a:3:A:C6	3.04	0.45
34:a:8:A:C6	37:d:205:LYS:HB2	2.51	0.45
34:a:116:A:OP2	34:a:117:G:OP2	2.35	0.45
34:a:123:U:C2	34:a:124:C:C5	3.04	0.45
34:a:131:A:N3	34:a:262:A:H2	2.14	0.45
34:a:138:G:C4	34:a:226:G:C2	3.04	0.45
34:a:152:A:C8	34:a:153:C:C5	3.04	0.45
34:a:206:C:H42	34:a:465:A:N6	2.15	0.45
34:a:293:G:O6	34:a:305:G:C6	2.70	0.45
34:a:338:A:C5	34:a:339:C:C5	3.04	0.45
34:a:342:C:N4	34:a:348:G:O6	2.49	0.45
34:a:461:A:H1'	34:a:471:U:O4	2.17	0.45
34:a:743:A:C6	34:a:744:C:C4	3.04	0.45
34:a:780:A:O2'	34:a:781:A:H5''	2.16	0.45
34:a:832:G:N1	34:a:855:U:C4	2.84	0.45
34:a:834:U:C4	34:a:835:U:C4	3.05	0.45
34:a:845:A:C6	51:r:9:PHE:HE1	2.34	0.45
34:a:881:G:C5	34:a:882:C:C5	3.04	0.45
34:a:899:C:H2'	34:a:900:A:C8	2.51	0.45
34:a:921:U:OP1	34:a:1081:A:C3'	2.64	0.45
34:a:1006:G:N1	34:a:1024:G:O4'	2.49	0.45
34:a:1048:G:N1	34:a:1210:C:C4	2.85	0.45
34:a:1068:G:C4	34:a:1069:C:C5	3.04	0.45
34:a:1074:G:C2'	34:a:1101:A:N1	2.77	0.45
34:a:1130:A:P	42:i:63:TYR:CE2	3.08	0.45
34:a:1250:A:N1	34:a:1354:U:H1'	2.31	0.45
34:a:1299:A:O2'	34:a:1301:U:O4'	2.32	0.45
34:a:1319:A:C2	34:a:1323:G:H1'	2.51	0.45
34:a:1484:C:H2'	34:a:1485:U:O4'	2.16	0.45
35:b:49:PHE:CE1	35:b:53:LEU:HD11	2.51	0.45
35:b:182:VAL:O	35:b:182:VAL:HG23	2.16	0.45
36:c:31:ASN:ND2	36:c:58:ARG:HE	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:3:TYR:O	37:d:4:LEU:HD23	2.16	0.45
37:d:25:ARG:HG2	37:d:25:ARG:NH2	2.30	0.45
37:d:123:MET:HG3	37:d:126:GLY:C	2.42	0.45
38:e:28:ARG:N	38:e:28:ARG:HD2	2.32	0.45
38:e:33:THR:HB	38:e:49:TYR:CZ	2.52	0.45
38:e:148:SER:OG	38:e:151:MET:CG	2.65	0.45
39:f:2:ARG:HD3	39:f:91:ARG:CZ	2.47	0.45
39:f:54:LEU:C	39:f:54:LEU:HD23	2.40	0.45
39:f:59:TYR:OH	51:r:64:LEU:O	2.30	0.45
40:g:16:LYS:NZ	42:i:45:MET:HE3	2.32	0.45
40:g:65:LEU:CD2	40:g:69:ARG:HE	2.30	0.45
40:g:67:ASN:OD1	40:g:129:ASN:OD1	2.34	0.45
42:i:108:ARG:O	42:i:108:ARG:HG3	2.16	0.45
44:k:25:SER:N	44:k:28:ASN:O	2.47	0.45
52:s:32:THR:O	52:s:56:HIS:CE1	2.69	0.45
53:t:53:MET:O	53:t:57:VAL:HG22	2.16	0.45
55:v:12:G:N1	55:v:24:U:C4	2.85	0.45
55:v:14:A:H3'	55:v:15:G:H8	1.81	0.45
55:v:21:A:C6	55:v:46:A:C4	3.05	0.45
55:v:24:U:H2'	55:v:25:C:O4'	2.16	0.45
55:v:38:A:C6	55:v:39:C:C2	3.05	0.45
56:w:67:C:C2	56:w:68:C:C5	3.04	0.45
56:w:71:G:C2	56:w:72:C:C2	3.04	0.45
57:x:225:ALA:HA	57:x:251:LEU:CD2	2.47	0.45
57:x:573:MET:SD	57:x:600:PHE:HE1	2.38	0.45
57:x:613:GLU:C	57:x:686:TYR:CD2	2.95	0.45
57:x:673:THR:HG21	57:x:677:ALA:N	2.31	0.45
5:4:9:LYS:HG2	5:4:14:CYS:CB	2.45	0.45
6:5:1:MET:H1	8:A:1105:U:P	2.39	0.45
7:6:9:TYR:CD2	13:F:94:ARG:CZ	3.00	0.45
8:A:2:G:H2'	8:A:3:U:C6	2.52	0.45
8:A:38:A:H4'	12:E:45:ALA:HB3	1.99	0.45
8:A:78:U:H2'	8:A:79:C:H6	1.81	0.45
8:A:129:C:H2'	8:A:130:C:H6	1.81	0.45
8:A:138:U:H3'	8:A:140:C:N4	2.31	0.45
8:A:141:G:H1'	8:A:142:A:O4'	2.17	0.45
8:A:161:A:H3'	8:A:162:U:H5''	1.99	0.45
8:A:181:A:H1'	8:A:435:C:C5'	2.46	0.45
8:A:196:A:C6	8:A:805:G:C2	3.05	0.45
8:A:220:G:H2'	8:A:221:A:C8	2.52	0.45
8:A:306:U:C1'	8:A:1211:C:H41	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:342:A:C6	8:A:343:C:C4	3.04	0.45
8:A:373:U:OP1	31:X:53:LYS:CE	2.64	0.45
8:A:435:C:C5	8:A:436:C:C5	3.04	0.45
8:A:477:A:H2'	8:A:478:A:O4'	2.16	0.45
8:A:481:G:N1	8:A:507:A:H1'	2.32	0.45
8:A:503:A:C4'	8:A:505:A:H5''	2.46	0.45
8:A:523:C:H2'	8:A:524:G:C8	2.51	0.45
8:A:554:U:H2'	8:A:555:G:C8	2.52	0.45
8:A:613:A:O5'	8:A:614:A:N7	2.49	0.45
8:A:617:G:H2'	8:A:618:G:O4'	2.16	0.45
8:A:632:A:H4'	19:L:66:PHE:CZ	2.51	0.45
8:A:635:C:O5'	19:L:109:LYS:HE3	2.17	0.45
8:A:638:G:C4	8:A:651:G:C2	3.05	0.45
8:A:682:G:N2	8:A:796:C:C2	2.85	0.45
8:A:687:C:C4	8:A:688:U:C2	3.04	0.45
8:A:741:U:H2'	8:A:742:A:C8	2.52	0.45
8:A:741:U:C2	8:A:757:G:N2	2.84	0.45
8:A:759:G:N2	8:A:760:G:N3	2.64	0.45
8:A:806:C:H2'	8:A:807:U:H6	1.81	0.45
8:A:825:A:C6	8:A:826:U:C4	3.05	0.45
8:A:898:C:H3'	8:A:899:A:C8	2.51	0.45
8:A:1019:U:C2	8:A:1144:A:C2	3.04	0.45
8:A:1063:G:H1	16:I:135:MET:N	2.14	0.45
8:A:1171:G:H22	8:A:1177:G:H22	1.64	0.45
8:A:1224:U:H4'	25:R:88:GLY:C	2.42	0.45
8:A:1247:A:C5	8:A:1249:U:C4	3.04	0.45
8:A:1258:U:H2'	8:A:1259:G:C8	2.52	0.45
8:A:1356:G:C2	8:A:1376:C:C2	3.04	0.45
8:A:1509:A:C5	8:A:1510:G:C5	3.05	0.45
8:A:1511:G:O2'	8:A:1512:C:H5'	2.17	0.45
8:A:1528:A:C6	8:A:1543:G:O2'	2.70	0.45
8:A:1575:C:H2'	8:A:1576:U:H6	1.81	0.45
8:A:1650:A:C2	8:A:2008:C:C2	3.05	0.45
8:A:1688:U:H1'	8:A:1701:A:C5	2.52	0.45
8:A:1744:A:H2'	8:A:1744:A:N3	2.32	0.45
8:A:1839:G:C8	8:A:1927:A:N9	2.85	0.45
8:A:1860:G:H1	8:A:1882:U:H3	1.63	0.45
8:A:1918:A:O2'	8:A:1920:C:N4	2.50	0.45
8:A:1932:A:N6	8:A:1968:G:H1'	2.30	0.45
8:A:1977:A:H2'	8:A:1978:A:O4'	2.16	0.45
8:A:2008:C:H2'	8:A:2009:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2094:A:C2	8:A:2196:C:C2	3.04	0.45
8:A:2124:G:C2	8:A:2175:C:N3	2.84	0.45
8:A:2231:U:N3	8:A:2232:C:C4	2.84	0.45
8:A:2252:G:C4	8:A:2253:G:C8	3.04	0.45
8:A:2373:G:C6	8:A:2374:C:N4	2.85	0.45
8:A:2375:G:N1	8:A:2379:G:C6	2.84	0.45
8:A:2405:G:H1'	8:A:2412:A:N6	2.26	0.45
8:A:2469:A:N6	8:A:2470:G:C2	2.84	0.45
8:A:2523:G:O4'	8:A:2765:A:C8	2.69	0.45
8:A:2526:G:N1	8:A:2538:C:C2	2.85	0.45
8:A:2683:C:C2	8:A:2684:U:C5	3.04	0.45
8:A:2783:U:C2	8:A:2784:U:C5	3.05	0.45
9:B:44:G:C2	9:B:48:U:C2	3.04	0.45
10:C:179:GLU:HB2	10:C:270:ARG:HB3	1.98	0.45
11:D:11:MET:HE1	11:D:23:PRO:HB2	1.98	0.45
11:D:107:VAL:HA	11:D:204:LYS:O	2.16	0.45
11:D:181:ASP:HB3	11:D:186:LEU:HB2	1.99	0.45
13:F:23:SER:O	13:F:26:GLN:N	2.49	0.45
13:F:92:GLY:O	13:F:96:TRP:CD1	2.69	0.45
16:I:21:PRO:HA	57:x:646:SER:HB2	1.99	0.45
18:K:20:MET:HB3	18:K:42:THR:HG22	1.99	0.45
18:K:108:ARG:NE	18:K:116:ILE:HG12	2.32	0.45
20:M:73:ILE:N	20:M:89:VAL:HG13	2.31	0.45
21:N:1:MET:SD	21:N:3:HIS:NE2	2.89	0.45
21:N:33:ILE:HG21	21:N:118:ARG:NH2	2.31	0.45
22:O:28:VAL:HG12	22:O:93:ASP:O	2.16	0.45
23:P:103:THR:CA	23:P:107:ALA:HB2	2.46	0.45
25:R:21:ARG:HD3	25:R:93:PHE:CD1	2.52	0.45
25:R:78:ARG:CG	25:R:81:LYS:HG3	2.47	0.45
26:S:86:MET:O	26:S:93:ALA:HA	2.17	0.45
27:T:12:ARG:HG2	27:T:34:VAL:HA	1.99	0.45
29:V:50:MET:HA	29:V:53:LYS:HZ2	1.80	0.45
34:a:41:G:N1	34:a:42:G:C5	2.85	0.45
34:a:47:C:H6	34:a:365:U:H2'	1.81	0.45
34:a:49:U:C5	34:a:364:A:C6	3.05	0.45
34:a:122:G:N2	34:a:123:U:H1'	2.31	0.45
34:a:139:A:N1	34:a:225:C:N3	2.64	0.45
34:a:174:A:C5	34:a:175:C:C5	3.05	0.45
34:a:244:U:C4	34:a:894:G:C4	3.04	0.45
34:a:267:C:OP2	50:q:68:LYS:HG3	2.16	0.45
34:a:376:G:C2	34:a:389:A:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:392:C:P	49:p:8:ARG:NH2	2.90	0.45
34:a:413:G:C6	37:d:31:CYS:HA	2.52	0.45
34:a:428:G:H5''	37:d:9:LYS:HD3	1.97	0.45
34:a:454:G:H1	34:a:478:A:N6	2.15	0.45
34:a:469:C:C5	34:a:470:C:O2'	2.67	0.45
34:a:537:G:OP1	45:l:109:ARG:NH1	2.49	0.45
34:a:538:G:H2'	34:a:539:A:C8	2.50	0.45
34:a:606:G:H1'	34:a:633:G:N1	2.32	0.45
34:a:630:A:N3	34:a:630:A:H2'	2.31	0.45
34:a:632:U:H3'	34:a:633:G:C5'	2.46	0.45
34:a:682:G:N1	34:a:709:U:C4	2.85	0.45
34:a:759:A:H2'	34:a:760:G:H5'	1.99	0.45
34:a:818:G:H1	34:a:820:U:HO2'	1.60	0.45
34:a:928:G:N1	34:a:1390:U:C2	2.84	0.45
34:a:974:A:P	47:n:69:ARG:HH12	2.38	0.45
34:a:988:G:N1	34:a:1218:C:N3	2.65	0.45
34:a:1006:G:C2	34:a:1024:G:H5'	2.51	0.45
34:a:1027:C:N3	34:a:1028:C:N3	2.65	0.45
34:a:1217:C:H2'	34:a:1218:C:C6	2.52	0.45
34:a:1375:A:H5''	40:g:24:LYS:NZ	2.32	0.45
34:a:1418:A:C4	34:a:1483:A:C2	3.04	0.45
35:b:202:ASN:OD1	35:b:203:ASP:N	2.49	0.45
36:c:93:ILE:HG13	36:c:94:ALA:N	2.31	0.45
37:d:169:TRP:CD2	37:d:170:LEU:HD21	2.52	0.45
37:d:197:HIS:HA	37:d:200:VAL:HG12	1.99	0.45
38:e:96:GLN:HG2	38:e:123:LEU:O	2.16	0.45
39:f:1:MET:SD	39:f:66:ALA:HA	2.56	0.45
40:g:15:PRO:HB2	42:i:45:MET:CB	2.46	0.45
41:h:23:ALA:HB1	41:h:60:LEU:O	2.17	0.45
41:h:100:ILE:HG13	41:h:128:VAL:HB	1.98	0.45
42:i:118:ARG:HH11	42:i:124:PRO:HA	1.82	0.45
44:k:125:LYS:HD2	54:u:36:PHE:CE2	2.51	0.45
45:l:84:GLY:O	45:l:95:HIS:ND1	2.47	0.45
45:l:101:LEU:C	45:l:103:CYS:H	2.24	0.45
47:n:10:VAL:HA	47:n:13:VAL:CG2	2.47	0.45
48:o:43:ALA:O	48:o:46:LYS:HE3	2.16	0.45
52:s:50:VAL:HG12	52:s:57:VAL:O	2.16	0.45
52:s:61:VAL:HA	52:s:65:MET:SD	2.56	0.45
55:v:2:G:H2'	55:v:3:C:O4'	2.16	0.45
55:v:67:C:C2	55:v:68:C:C5	3.05	0.45
56:w:3:C:H2'	56:w:4:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:w:26:A:C4	56:w:27:G:C8	3.04	0.45
57:x:335:PHE:CD1	57:x:382:ALA:O	2.70	0.45
57:x:412:GLU:OE1	57:x:413:PRO:HD2	2.16	0.45
3:2:19:ARG:HD3	8:A:125:A:H3'	1.98	0.45
5:4:16:ILE:CD1	5:4:25:VAL:HG22	2.46	0.45
7:6:13:THR:OG1	7:6:31:ASP:OD1	2.33	0.45
8:A:10:A:N3	8:A:10:A:H2'	2.31	0.45
8:A:17:G:C6	8:A:18:U:C4	3.05	0.45
8:A:19:A:H2'	8:A:20:C:C6	2.51	0.45
8:A:60:G:C2	8:A:74:A:C5	3.05	0.45
8:A:98:G:C6	8:A:99:U:C4	3.04	0.45
8:A:137:U:H2'	8:A:138:U:O4'	2.17	0.45
8:A:308:G:O2'	8:A:329:G:N2	2.49	0.45
8:A:433:C:O2'	8:A:434:U:H5'	2.16	0.45
8:A:495:G:O2'	26:S:57:ASN:HB3	2.16	0.45
8:A:539:G:C6	8:A:540:C:C4	3.05	0.45
8:A:634:C:OP2	19:L:70:LYS:HE2	2.16	0.45
8:A:645:C:C2'	8:A:647:G:C8	2.99	0.45
8:A:651:G:C5	8:A:652:U:C4	3.04	0.45
8:A:708:G:C4	8:A:709:U:C5	3.04	0.45
8:A:712:G:C4	8:A:713:G:C8	3.05	0.45
8:A:794:A:H2'	8:A:795:C:H6	1.80	0.45
8:A:811:U:C1'	8:A:1251:C:O4'	2.65	0.45
8:A:830:G:C6	8:A:2448:A:C8	3.04	0.45
8:A:839:U:N3	8:A:940:G:N1	2.65	0.45
8:A:854:C:C2	8:A:924:G:C2	3.04	0.45
8:A:878:A:H1'	8:A:900:A:C6	2.51	0.45
8:A:880:G:C2	8:A:898:C:C2	3.05	0.45
8:A:1060:U:C6	8:A:1088:A:N6	2.85	0.45
8:A:1093:G:C6	8:A:1094:U:N3	2.85	0.45
8:A:1131:G:OP1	17:J:81:ILE:O	2.34	0.45
8:A:1157:G:H2'	8:A:1158:C:C6	2.51	0.45
8:A:1275:A:H4'	8:A:1276:A:O5'	2.17	0.45
8:A:1296:G:N3	8:A:1645:G:C2	2.84	0.45
8:A:1350:C:N3	8:A:1382:G:C2	2.84	0.45
8:A:1407:G:H2'	8:A:1408:G:C8	2.52	0.45
8:A:1419:A:C2	8:A:1421:G:H1'	2.51	0.45
8:A:1444:G:N1	8:A:1548:A:C6	2.84	0.45
8:A:1450:G:N2	8:A:1462:C:C2	2.85	0.45
8:A:1488:C:N3	8:A:1502:A:N1	2.65	0.45
8:A:1495:A:H2'	8:A:1496:A:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1599:U:H2'	8:A:1600:C:H6	1.81	0.45
8:A:1703:G:C2	8:A:1704:C:C4	3.05	0.45
8:A:1831:G:C5	8:A:1975:G:C2	3.04	0.45
8:A:1907:G:C6	8:A:1924:C:C4	3.05	0.45
8:A:1975:G:C5	8:A:1976:U:C4	3.05	0.45
8:A:1981:A:H5''	8:A:1982:U:OP2	2.17	0.45
8:A:2013:A:N6	8:A:2014:A:N1	2.64	0.45
8:A:2029:G:N1	8:A:2033:A:C8	2.85	0.45
8:A:2043:C:N4	8:A:2777:G:C5	2.85	0.45
8:A:2071:A:C4	8:A:2072:C:C5	3.04	0.45
8:A:2083:G:N1	8:A:2236:U:N3	2.65	0.45
8:A:2114:A:H5''	8:A:2119:A:N3	2.31	0.45
8:A:2119:A:O2'	8:A:2171:A:C2	2.70	0.45
8:A:2137:U:O4	8:A:2156:G:C5	2.70	0.45
8:A:2253:G:C4	8:A:2254:C:C6	3.05	0.45
8:A:2278:A:P	20:M:11:LYS:NZ	2.90	0.45
8:A:2331:G:N1	8:A:2385:C:C4	2.85	0.45
8:A:2536:G:C5	8:A:2537:U:C4	3.05	0.45
8:A:2574:G:N3	11:D:148:GLN:HG3	2.32	0.45
8:A:2592:G:C6	8:A:2593:U:C4	3.05	0.45
8:A:2605:PSU:H2'	8:A:2606:C:H6	1.82	0.45
8:A:2620:C:H4'	11:D:159:LYS:O	2.17	0.45
8:A:2631:G:N2	8:A:2632:A:H1'	2.31	0.45
8:A:2632:A:C2	8:A:2787:C:N3	2.85	0.45
8:A:2648:G:C5	8:A:2673:G:C6	3.05	0.45
8:A:2668:G:O4'	14:G:110:HIS:CD2	2.69	0.45
8:A:2677:G:C2	8:A:2678:C:C2	3.05	0.45
8:A:2718:G:H3'	8:A:2719:G:H8	1.81	0.45
8:A:2721:A:H2'	8:A:2722:G:C8	2.52	0.45
8:A:2812:G:H2'	8:A:2813:A:O4'	2.16	0.45
8:A:2852:G:C4	8:A:2853:C:C5	3.05	0.45
8:A:2861:U:H2'	8:A:2862:G:C8	2.51	0.45
9:B:2:G:O6	9:B:119:A:N6	2.50	0.45
9:B:42:C:C2	13:F:89:THR:HB	2.52	0.45
10:C:125:PRO:HA	10:C:191:LEU:HB2	1.98	0.45
13:F:4:HIS:CD2	13:F:96:TRP:NE1	2.84	0.45
13:F:4:HIS:HD1	13:F:93:GLU:CD	2.23	0.45
13:F:102:LEU:CD2	13:F:103:ILE:HG22	2.47	0.45
14:G:16:VAL:C	14:G:17:LYS:HG3	2.41	0.45
14:G:176:LYS:CE	57:x:672:LEU:HD11	2.47	0.45
17:J:13:ARG:HB2	17:J:53:TYR:HE1	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:7:MET:HB3	18:K:18:ARG:NH1	2.32	0.45
18:K:101:GLY:O	18:K:120:PRO:HG2	2.17	0.45
21:N:21:PHE:HD1	21:N:24:MET:CE	2.28	0.45
22:O:8:ILE:O	22:O:12:THR:OG1	2.33	0.45
23:P:23:ASP:OD1	23:P:112:ARG:NH1	2.50	0.45
23:P:71:ARG:HB3	23:P:73:PHE:CZ	2.52	0.45
24:Q:75:TYR:CZ	24:Q:79:ILE:HG13	2.51	0.45
28:U:3:LYS:HA	28:U:93:ARG:HD3	1.98	0.45
29:V:68:LYS:HG2	29:V:69:GLU:N	2.31	0.45
33:Z:8:GLN:HB3	33:Z:30:ARG:O	2.16	0.45
34:a:6:G:O6	38:e:102:THR:HG21	2.17	0.45
34:a:47:C:H1'	34:a:365:U:C4	2.51	0.45
34:a:146:G:H2'	34:a:147:G:C8	2.51	0.45
34:a:195:A:N7	34:a:196:A:N6	2.64	0.45
34:a:209:U:H4'	34:a:210:C:C5	2.51	0.45
34:a:247:G:H2'	34:a:248:C:C6	2.51	0.45
34:a:362:G:C2'	34:a:364:A:N7	2.80	0.45
34:a:381:C:H2'	34:a:382:A:C8	2.52	0.45
34:a:442:G:C4	34:a:443:C:C6	3.04	0.45
34:a:484:G:C6	34:a:486:U:H1'	2.51	0.45
34:a:521:G:OP2	45:l:50:LYS:NZ	2.47	0.45
34:a:555:U:C2	34:a:556:C:C5	3.05	0.45
34:a:594:U:C4	34:a:595:A:N1	2.85	0.45
34:a:612:C:H2'	34:a:613:C:C6	2.51	0.45
34:a:618:C:H1'	49:p:14:ARG:NH1	2.31	0.45
34:a:628:G:H2'	34:a:629:A:O4'	2.16	0.45
34:a:640:A:C5	34:a:641:U:O4	2.70	0.45
34:a:727:G:C6	34:a:731:G:O6	2.69	0.45
34:a:739:C:H2'	34:a:740:U:O4'	2.16	0.45
34:a:780:A:H5''	44:k:124:LYS:HG2	1.98	0.45
34:a:811:C:H4'	34:a:901:A:H61	1.79	0.45
34:a:900:A:C6	34:a:901:A:C2	3.04	0.45
34:a:926:G:C2	34:a:1505:G:C5	3.04	0.45
34:a:1004:A:H1'	34:a:1036:A:N1	2.32	0.45
34:a:1060:U:C5'	43:j:53:ILE:CG2	2.95	0.45
34:a:1073:U:O3'	35:b:104:LYS:NZ	2.50	0.45
34:a:1135:U:O2'	34:a:1136:C:C2	2.69	0.45
34:a:1239:A:H1'	34:a:1241:G:C4	2.50	0.45
34:a:1251:A:H1'	34:a:1369:C:O2'	2.16	0.45
34:a:1279:G:O2'	34:a:1281:C:OP2	2.31	0.45
34:a:1304:G:C6	34:a:1334:G:O6	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1358:U:C5	34:a:1359:C:C2	3.05	0.45
34:a:1423:G:C2	34:a:1478:U:C2	3.05	0.45
34:a:1424:U:H2'	34:a:1425:U:H6	1.80	0.45
34:a:1439:G:OP1	53:t:32:LYS:HG2	2.17	0.45
34:a:1526:G:H8	54:u:39:LYS:HZ1	1.64	0.45
36:c:32:LEU:HD22	47:n:93:ILE:HD13	1.99	0.45
36:c:156:LEU:CD1	36:c:164:THR:HA	2.44	0.45
37:d:2:ARG:CG	37:d:4:LEU:HD21	2.46	0.45
38:e:88:HIS:HB3	38:e:138:ALA:HB2	1.99	0.45
38:e:110:MET:HA	38:e:113:VAL:HG12	1.99	0.45
38:e:132:PRO:HA	38:e:135:VAL:HG12	1.98	0.45
40:g:117:LEU:HD23	40:g:117:LEU:C	2.41	0.45
41:h:6:ILE:HG21	41:h:76:ARG:HH12	1.81	0.45
41:h:47:ASP:CG	41:h:48:PHE:N	2.74	0.45
41:h:74:ILE:O	41:h:74:ILE:HG23	2.17	0.45
42:i:42:THR:HG22	42:i:42:THR:O	2.16	0.45
43:j:21:ALA:HA	43:j:92:LEU:CD1	2.46	0.45
43:j:35:GLN:HB3	43:j:77:VAL:HB	1.98	0.45
44:k:93:GLU:O	44:k:97:ARG:HG2	2.16	0.45
45:l:79:ILE:HA	45:l:101:LEU:O	2.17	0.45
47:n:9:GLU:O	47:n:13:VAL:HG22	2.17	0.45
49:p:9:HIS:C	49:p:16:PHE:O	2.59	0.45
55:v:11:A:C2	55:v:25:C:C2	3.04	0.45
56:w:1:G:C6	56:w:73:A:N1	2.85	0.45
57:x:73:GLY:HA3	57:x:76:LYS:O	2.17	0.45
57:x:103:ARG:HH22	57:x:406:GLU:N	2.14	0.45
57:x:228:ALA:HB3	57:x:250:ALA:HB1	1.98	0.45
57:x:306:ALA:HB3	57:x:402:PRO:HB3	1.98	0.45
57:x:447:TRP:HB2	57:x:456:ILE:CB	2.47	0.45
57:x:531:LYS:C	57:x:533:TYR:H	2.23	0.45
57:x:645:GLU:OE2	57:x:652:LYS:HB3	2.17	0.45
3:2:11:LYS:NZ	8:A:686:U:H4'	2.31	0.45
8:A:13:A:H1'	8:A:14:A:N7	2.31	0.45
8:A:17:G:C2	8:A:524:G:C2	3.05	0.45
8:A:85:G:C5	8:A:98:G:N2	2.85	0.45
8:A:86:G:N2	8:A:97:C:C2	2.85	0.45
8:A:182:A:H2'	8:A:183:C:H6	1.81	0.45
8:A:285:G:C6	8:A:356:G:C6	3.05	0.45
8:A:289:G:C6	8:A:352:A:C6	3.04	0.45
8:A:442:G:N3	8:A:444:C:C5	2.85	0.45
8:A:495:G:C1'	26:S:57:ASN:ND2	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:675:A:C8	8:A:804:A:C2	3.05	0.45
8:A:677:A:O2'	8:A:2071:A:H5'	2.17	0.45
8:A:689:A:C6	8:A:690:G:C6	3.04	0.45
8:A:712:G:N1	8:A:720:U:C2	2.84	0.45
8:A:713:G:H2'	8:A:714:U:C6	2.52	0.45
8:A:715:A:N6	8:A:716:A:C6	2.85	0.45
8:A:722:A:C6	8:A:723:C:C4	3.05	0.45
8:A:729:G:H4'	8:A:763:G:C5'	2.47	0.45
8:A:856:G:O6	8:A:922:C:N4	2.49	0.45
8:A:898:C:C3'	8:A:899:A:H5'	2.46	0.45
8:A:954:G:C2	8:A:964:C:C2	3.05	0.45
8:A:995:C:C5	24:Q:56:PHE:CZ	3.05	0.45
8:A:1004:U:O4'	8:A:1010:A:C6	2.70	0.45
8:A:1078:U:H1'	16:I:134:SER:CB	2.47	0.45
8:A:1137:G:N1	8:A:1138:G:C4	2.85	0.45
8:A:1151:A:C5	8:A:1152:C:C5	3.05	0.45
8:A:1185:G:H5''	8:A:1186:G:OP1	2.17	0.45
8:A:1387:A:C5	8:A:1388:G:N7	2.85	0.45
8:A:1413:A:C6	8:A:1590:A:C6	3.04	0.45
8:A:1443:U:C4	8:A:1549:A:N1	2.85	0.45
8:A:1469:A:N1	8:A:1470:A:C5	2.85	0.45
8:A:1477:A:H61	8:A:1514:G:H1'	1.82	0.45
8:A:1510:G:H2'	8:A:1511:G:O4'	2.17	0.45
8:A:1582:C:N4	8:A:1583:A:C6	2.85	0.45
8:A:1735:A:H2'	8:A:1736:U:O4'	2.17	0.45
8:A:1749:A:C6	8:A:1750:G:C5	3.03	0.45
8:A:1749:A:C2	8:A:1750:G:C4	3.05	0.45
8:A:1764:C:N3	8:A:1765:U:C5	2.85	0.45
8:A:1797:G:N1	8:A:1823:G:C6	2.85	0.45
8:A:1797:G:C2	8:A:1823:G:C4	3.04	0.45
8:A:1838:C:C5	8:A:1899:A:N7	2.85	0.45
8:A:1871:A:C5	8:A:1872:A:C5	3.05	0.45
8:A:1872:A:N6	8:A:1873:G:N3	2.65	0.45
8:A:1948:G:O2'	8:A:1949:G:H5'	2.17	0.45
8:A:2025:C:OP1	11:D:154:LYS:HE2	2.17	0.45
8:A:2067:G:C5	8:A:2069:G7M:HN73	2.52	0.45
8:A:2075:U:O2	8:A:2077:A:C8	2.69	0.45
8:A:2085:U:C2	8:A:2235:G:C2	3.04	0.45
8:A:2323:G:C2	8:A:2324:U:C2	3.05	0.45
8:A:2412:A:C5	8:A:2413:G:C5	3.05	0.45
8:A:2642:G:OP2	17:J:85:LYS:HE3	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2662:A:H8	8:A:2662:A:O5'	2.00	0.45
8:A:2756:U:C4	8:A:2759:G:O6	2.70	0.45
8:A:2772:C:C2	8:A:2773:C:C5	3.05	0.45
8:A:2834:G:O6	8:A:2879:A:H2'	2.16	0.45
8:A:2899:A:C6	8:A:2900:A:N6	2.85	0.45
9:B:24:G:N7	9:B:56:G:C2'	2.79	0.45
9:B:94:A:H2'	9:B:95:U:C6	2.51	0.45
10:C:27:LYS:HD3	10:C:27:LYS:HA	1.77	0.45
10:C:60:ALA:H	10:C:62:ARG:HH12	1.64	0.45
10:C:106:PRO:HB3	10:C:141:HIS:CE1	2.51	0.45
10:C:164:VAL:CG2	10:C:180:MET:HE1	2.29	0.45
11:D:40:LEU:HD23	11:D:44:GLY:O	2.16	0.45
11:D:172:VAL:HB	11:D:175:LEU:HD11	1.99	0.45
12:E:134:LEU:HG	12:E:138:LEU:HD11	1.98	0.45
13:F:7:TYR:HA	13:F:11:VAL:CG2	2.46	0.45
13:F:122:ASP:CG	13:F:126:ASN:HB2	2.42	0.45
14:G:29:ASN:OD1	14:G:79:THR:C	2.59	0.45
15:H:9:VAL:N	15:H:13:GLY:HA3	2.30	0.45
17:J:49:ASP:OD2	17:J:121:LYS:HD3	2.17	0.45
19:L:82:LEU:HB2	19:L:116:VAL:HG23	1.99	0.45
20:M:32:GLY:HA2	20:M:103:TYR:O	2.17	0.45
21:N:55:ALA:HA	21:N:80:PHE:CE1	2.52	0.45
22:O:53:THR:O	22:O:59:ALA:HB2	2.16	0.45
23:P:58:PHE:CZ	23:P:73:PHE:CB	2.99	0.45
27:T:59:ASN:HB2	27:T:84:TYR:HB2	1.98	0.45
28:U:85:ARG:HG3	28:U:87:GLU:HG3	1.99	0.45
29:V:29:ILE:HG22	29:V:88:HIS:CE1	2.52	0.45
32:Y:53:VAL:HG12	32:Y:57:LEU:CD1	2.47	0.45
33:Z:39:ASP:OD1	33:Z:44:ARG:HD3	2.16	0.45
34:a:160:A:H1'	34:a:161:A:P	2.57	0.45
34:a:198:G:C2	34:a:220:G:H1'	2.52	0.45
34:a:210:C:H5'	34:a:211:G:C5'	2.35	0.45
34:a:301:G:C6	34:a:302:G:C6	3.05	0.45
34:a:355:C:H1'	34:a:388:G:H1'	1.99	0.45
34:a:380:G:N2	34:a:382:A:H3'	2.31	0.45
34:a:431:A:H3'	34:a:432:A:H8	1.81	0.45
34:a:455:G:C2	34:a:478:A:C2	3.04	0.45
34:a:456:A:C2	34:a:457:G:C5	3.05	0.45
34:a:810:C:C2	34:a:811:C:C5	3.05	0.45
34:a:893:C:H2'	34:a:894:G:O4'	2.17	0.45
34:a:904:U:C2	34:a:905:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1024:G:C3'	34:a:1025:U:H6	2.30	0.45
34:a:1031:C:H5''	34:a:1032:G:C4	2.52	0.45
34:a:1053:G:O2'	34:a:1199:U:H5	2.00	0.45
34:a:1061:G:C6	34:a:1197:A:N6	2.85	0.45
34:a:1110:A:C4	34:a:1111:A:C8	3.04	0.45
34:a:1137:C:O5'	34:a:1138:G:C2	2.69	0.45
34:a:1206:G:H3'	34:a:1207:2MG:H8	1.82	0.45
34:a:1300:G:H1'	34:a:1303:C:N4	2.32	0.45
34:a:1305:G:H5'	34:a:1332:A:H61	1.81	0.45
34:a:1353:G:H2'	34:a:1354:U:H6	1.81	0.45
34:a:1381:U:C2	34:a:1382:C:C6	3.04	0.45
35:b:10:LYS:CG	35:b:211:LEU:HD21	2.46	0.45
35:b:110:ILE:CD1	35:b:147:LEU:HB3	2.47	0.45
36:c:190:THR:OG1	36:c:191:THR:N	2.49	0.45
37:d:196:GLU:O	37:d:200:VAL:HG12	2.17	0.45
38:e:141:ASP:O	38:e:144:GLU:HG2	2.17	0.45
40:g:103:ILE:HD13	40:g:133:ALA:CB	2.47	0.45
43:j:24:GLU:OE1	43:j:92:LEU:CD2	2.65	0.45
45:l:65:TYR:CE2	45:l:67:GLY:HA2	2.51	0.45
47:n:80:SER:O	47:n:84:VAL:HG12	2.16	0.45
49:p:3:THR:HB	49:p:22:ALA:O	2.16	0.45
54:u:9:GLU:N	54:u:10:PRO:HD2	2.31	0.45
57:x:21:GLY:O	57:x:25:THR:HG23	2.17	0.45
57:x:74:MET:C	57:x:76:LYS:H	2.20	0.45
57:x:126:TRP:CD1	57:x:130:ASN:HD21	2.34	0.45
57:x:144:ASP:O	57:x:175:GLU:HA	2.17	0.45
57:x:314:GLU:O	57:x:340:GLY:HA2	2.17	0.45
57:x:359:PHE:HE1	57:x:362:ILE:HG12	1.81	0.45
57:x:422:LYS:HG2	57:x:479:GLU:C	2.42	0.45
4:3:23:HIS:NE2	4:3:47:ALA:HB3	2.32	0.45
7:6:1:MET:N	9:B:44:G:P	2.90	0.45
8:A:61:C:H2'	8:A:62:U:O4'	2.17	0.45
8:A:189:G:H2'	8:A:205:G:N2	2.31	0.45
8:A:236:C:C2	8:A:237:C:C5	3.05	0.45
8:A:271:G:C2	8:A:272:A:C4	3.04	0.45
8:A:303:G:N1	8:A:315:G:C4	2.85	0.45
8:A:345:A:HO2'	8:A:347:A:H62	1.55	0.45
8:A:358:U:H2'	8:A:359:G:C8	2.52	0.45
8:A:479:A:H4'	8:A:480:A:OP1	2.16	0.45
8:A:487:C:C4	8:A:488:G:C5	3.05	0.45
8:A:522:A:C6	8:A:523:C:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:578:G:OP1	8:A:1255:U:O2'	2.30	0.45
8:A:599:A:O2'	8:A:600:G:H5'	2.16	0.45
8:A:604:G:C6	8:A:605:G:C6	3.05	0.45
8:A:604:G:C2	8:A:605:G:C4	3.05	0.45
8:A:632:A:C2	8:A:633:A:C2	3.05	0.45
8:A:638:G:C5	8:A:639:U:C4	3.05	0.45
8:A:643:A:C6	8:A:644:A:C5	3.04	0.45
8:A:671:C:H6	19:L:33:ARG:NH1	2.14	0.45
8:A:692:C:N4	8:A:771:G:C6	2.85	0.45
8:A:770:G:H2'	8:A:771:G:O4'	2.17	0.45
8:A:818:G:O5'	8:A:818:G:C8	2.69	0.45
8:A:857:G:H2'	8:A:858:G:O4'	2.17	0.45
8:A:864:G:O2'	8:A:865:C:H5'	2.16	0.45
8:A:885:C:C4'	8:A:893:C:H3'	2.47	0.45
8:A:976:G:C2	8:A:977:G:C4	3.05	0.45
8:A:1072:C:N4	8:A:1092:C:N4	2.65	0.45
8:A:1079:C:O3'	8:A:1080:A:H3'	2.17	0.45
8:A:1182:G:C6	8:A:1183:U:N3	2.85	0.45
8:A:1206:G:H2'	8:A:1207:C:C6	2.52	0.45
8:A:1267:U:C5	8:A:2012:G:N2	2.85	0.45
8:A:1300:G:C2	8:A:1634:A:C4	3.05	0.45
8:A:1345:C:C2	8:A:1346:G:C8	3.05	0.45
8:A:1496:A:H2'	8:A:1498:C:N4	2.31	0.45
8:A:1511:G:C5	8:A:1512:C:C5	3.05	0.45
8:A:1613:G:C2	8:A:1617:C:C4	3.05	0.45
8:A:1619:G:N1	8:A:1620:G:C5	2.85	0.45
8:A:1652:A:C6	8:A:1653:G:C2	3.05	0.45
8:A:1664:A:C2	18:K:1:MET:HE1	2.51	0.45
8:A:1672:A:C6	8:A:1673:G:N1	2.85	0.45
8:A:1719:G:H2'	8:A:1720:U:O4'	2.16	0.45
8:A:1807:G:N2	8:A:1811:G:C5	2.85	0.45
8:A:1862:G:C6	8:A:1881:C:N4	2.85	0.45
8:A:1942:C:H6	8:A:1942:C:O5'	1.99	0.45
8:A:2204:G:H2'	8:A:2205:A:C8	2.52	0.45
8:A:2354:C:H1'	30:W:30:GLY:O	2.16	0.45
8:A:2450:A:C6	8:A:2451:A:C6	3.05	0.45
8:A:2529:G:H5'	14:G:174:LYS:HE2	1.99	0.45
8:A:2542:A:N1	8:A:2567:G:C6	2.84	0.45
8:A:2560:A:C6	8:A:2561:U:C4	3.04	0.45
8:A:2582:G:OP2	8:A:2583:G:OP2	2.35	0.45
8:A:2618:G:C6	8:A:2619:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2620:C:H2'	8:A:2621:G:O4'	2.17	0.45
8:A:2674:G:H2'	8:A:2675:A:C8	2.51	0.45
8:A:2699:C:C4	8:A:2709:G:O6	2.70	0.45
8:A:2721:A:C6	8:A:2722:G:C4	3.05	0.45
8:A:2828:G:H2'	8:A:2829:A:C8	2.51	0.45
9:B:9:G:N3	9:B:10:G:C8	2.85	0.45
9:B:18:G:C2	9:B:19:C:C2	3.05	0.45
9:B:49:C:OP1	22:O:101:GLY:HA3	2.16	0.45
9:B:91:C:C2	9:B:92:C:C5	3.04	0.45
10:C:59:GLN:HB2	10:C:84:PRO:HG2	1.98	0.45
10:C:156:SER:O	10:C:194:VAL:CB	2.65	0.45
10:C:260:LYS:C	10:C:263:ASP:OD1	2.60	0.45
12:E:23:PHE:HA	12:E:107:SER:OG	2.16	0.45
13:F:1:ALA:CB	13:F:96:TRP:CB	2.94	0.45
13:F:4:HIS:C	13:F:8:LYS:HE3	2.42	0.45
13:F:110:ILE:HD13	13:F:113:PHE:CD1	2.52	0.45
13:F:129:MET:HB3	13:F:129:MET:HE2	1.79	0.45
15:H:5:LEU:O	15:H:6:LEU:HD23	2.16	0.45
15:H:57:LYS:CE	15:H:58:LEU:HD22	2.46	0.45
18:K:7:MET:HB3	18:K:18:ARG:CZ	2.47	0.45
18:K:12:ASP:C	18:K:100:PHE:CE2	2.94	0.45
18:K:25:LEU:HD23	18:K:25:LEU:N	2.30	0.45
21:N:41:ALA:O	21:N:45:ARG:HG3	2.17	0.45
25:R:79:ARG:O	25:R:81:LYS:HE2	2.17	0.45
28:U:45:GLN:O	28:U:56:GLY:N	2.50	0.45
28:U:66:VAL:HA	28:U:69:VAL:HG22	1.98	0.45
29:V:77:VAL:HG22	29:V:89:ILE:CG2	2.47	0.45
30:W:42:HIS:HB3	30:W:75:PHE:CE2	2.51	0.45
30:W:66:GLU:HB2	30:W:75:PHE:HB2	1.98	0.45
34:a:22:G:H2'	34:a:23:C:C6	2.51	0.45
34:a:80:A:H2'	34:a:81:A:N3	2.32	0.45
34:a:113:G:C6	34:a:114:U:C4	3.05	0.45
34:a:438:U:O4	34:a:494:G:H3'	2.17	0.45
34:a:445:G:H2'	34:a:446:G:C8	2.51	0.45
34:a:500:G:H2'	34:a:501:C:H6	1.79	0.45
34:a:680:C:C2	34:a:711:G:C2	3.05	0.45
34:a:684:U:H3'	34:a:685:G:C8	2.52	0.45
34:a:708:C:H2'	34:a:709:U:C6	2.51	0.45
34:a:765:G:H3'	34:a:812:G:H22	1.82	0.45
34:a:781:A:C8	34:a:802:A:C6	3.05	0.45
34:a:880:C:OP1	45:l:4:ASN:OD1	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:959:A:N1	34:a:1221:G:O2'	2.48	0.45
34:a:976:G:N7	34:a:1359:C:H1'	2.31	0.45
34:a:997:U:C4	34:a:998:C:C5	3.04	0.45
34:a:1016:A:H2'	34:a:1017:U:O4'	2.16	0.45
34:a:1039:G:H2'	34:a:1040:U:C6	2.50	0.45
34:a:1043:G:C2	34:a:1044:A:C5	3.05	0.45
34:a:1052:U:O4	34:a:1207:2MG:N1	2.49	0.45
34:a:1130:A:C2	34:a:1131:G:C4	3.05	0.45
34:a:1133:G:C6	34:a:1141:C:N3	2.85	0.45
34:a:1148:U:H5'	42:i:6:TYR:OH	2.17	0.45
34:a:1151:A:N3	34:a:1152:A:C8	2.85	0.45
34:a:1160:G:N3	34:a:1161:C:C6	2.85	0.45
34:a:1191:A:H2'	34:a:1192:C:H6	1.80	0.45
34:a:1220:G:C2'	52:s:53:GLY:HA2	2.47	0.45
34:a:1317:C:N4	34:a:1318:A:C2	2.85	0.45
34:a:1348:U:C2	34:a:1349:A:C8	3.05	0.45
34:a:1351:U:H4'	40:g:32:ASP:OD1	2.17	0.45
36:c:133:MET:HE3	36:c:150:VAL:HG23	1.98	0.45
37:d:69:ARG:HA	37:d:72:ARG:CB	2.44	0.45
39:f:8:PHE:CZ	39:f:60:VAL:HG11	2.52	0.45
39:f:38:ARG:HH22	51:r:23:LYS:HZ2	1.63	0.45
39:f:47:LEU:HG	39:f:56:LYS:H	1.82	0.45
42:i:117:LEU:HD23	42:i:120:ALA:C	2.42	0.45
43:j:6:ILE:O	43:j:75:ASP:HA	2.17	0.45
45:l:86:VAL:O	45:l:87:LYS:HB3	2.17	0.45
53:t:45:ALA:O	53:t:48:LYS:HB3	2.17	0.45
56:w:52:G:N1	56:w:63:G:C6	2.85	0.45
57:x:105:LEU:CD2	57:x:107:GLY:O	2.65	0.45
57:x:545:PRO:O	57:x:547:GLU:CD	2.60	0.45
2:1:30:PRO:HD2	2:1:31:GLU:OE1	2.17	0.45
2:1:46:VAL:HG23	2:1:48:TYR:CE1	2.52	0.45
4:3:41:ARG:HG3	4:3:44:ARG:HH22	1.82	0.45
5:4:19:ARG:NH1	8:A:2755:C:C5	2.85	0.45
7:6:41:HIS:CA	7:6:50:ASP:OD2	2.65	0.45
8:A:151:C:C2	8:A:176:A:C2	3.04	0.45
8:A:163:C:H2'	8:A:164:C:O4'	2.16	0.45
8:A:250:G:H2'	8:A:251:A:O4'	2.17	0.45
8:A:260:G:C5'	8:A:621:A:H4'	2.47	0.45
8:A:301:G:H5'	8:A:334:C:H2'	1.99	0.45
8:A:317:G:C6	8:A:318:C:N4	2.85	0.45
8:A:448:U:O4'	12:E:79:ARG:NE	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:476:G:C2	8:A:479:A:OP2	2.69	0.45
8:A:477:A:H8	8:A:477:A:OP1	2.00	0.45
8:A:480:A:P	28:U:60:LYS:HZ2	2.39	0.45
8:A:538:A:C6	8:A:539:G:C4	3.04	0.45
8:A:699:A:O4'	8:A:734:A:C2	2.70	0.45
8:A:736:C:H2'	8:A:737:C:H6	1.82	0.45
8:A:771:G:C2	8:A:772:C:C5	3.05	0.45
8:A:776:G:O6	8:A:793:A:H2'	2.17	0.45
8:A:810:U:O2'	8:A:811:U:H5	2.00	0.45
8:A:1000:A:OP2	8:A:1154:G:C6	2.69	0.45
8:A:1095:A:C8	8:A:1096:A:N3	2.85	0.45
8:A:1103:A:OP2	8:A:1103:A:H8	1.99	0.45
8:A:1271:G:N1	8:A:1617:C:H4'	2.32	0.45
8:A:1281:G:N1	8:A:1290:C:C4	2.85	0.45
8:A:1299:G:H1	8:A:1640:A:P	2.37	0.45
8:A:1339:G:C2	8:A:1340:U:O4	2.70	0.45
8:A:1341:G:C4	27:T:84:TYR:CE1	3.05	0.45
8:A:1352:U:H5''	8:A:1377:G:O6	2.17	0.45
8:A:1385:A:N1	8:A:1402:U:N3	2.64	0.45
8:A:1403:A:H2'	8:A:1404:C:C6	2.52	0.45
8:A:1412:U:C2	8:A:1591:A:N1	2.85	0.45
8:A:1427:A:O4'	8:A:1428:C:C6	2.70	0.45
8:A:1461:C:H2'	8:A:1462:C:C6	2.52	0.45
8:A:1482:G:C6	8:A:1508:A:C2	3.05	0.45
8:A:1486:U:C4	8:A:1504:A:N1	2.85	0.45
8:A:1537:G:C6	8:A:1538:G:N3	2.85	0.45
8:A:1593:A:C2	8:A:1594:U:C2	3.04	0.45
8:A:1650:A:C6	8:A:1651:G:C5	3.05	0.45
8:A:1665:A:H2'	8:A:1666:G:O4'	2.17	0.45
8:A:1718:G:C4	8:A:1719:G:C8	3.04	0.45
8:A:1754:A:H2'	8:A:1755:A:O4'	2.17	0.45
8:A:1789:A:H3'	8:A:1790:C:C5	2.52	0.45
8:A:1799:G:O6	8:A:1819:A:H2'	2.16	0.45
8:A:1849:G:H2'	8:A:1850:G:C8	2.51	0.45
8:A:1850:G:C5	8:A:1851:U:C5	3.04	0.45
8:A:1955:U:C4	8:A:2552:OMU:H6	2.52	0.45
8:A:2064:C:H1'	8:A:2450:A:C6	2.52	0.45
8:A:2080:A:N6	8:A:2241:A:N6	2.64	0.45
8:A:2082:A:C5	8:A:2239:G:N1	2.85	0.45
8:A:2227:A:H2'	8:A:2228:G:C8	2.52	0.45
8:A:2277:G:C6	8:A:2278:A:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2347:C:H5'	8:A:2382:G:O2'	2.17	0.45
8:A:2505:G:HO2'	8:A:2506:U:P	2.40	0.45
8:A:2551:C:H42	8:A:2558:C:H42	1.64	0.45
8:A:2572:A:HO2'	8:A:2575:C:P	2.40	0.45
8:A:2604:PSU:C4	8:A:2605:PSU:N1	2.85	0.45
8:A:2642:G:H4'	17:J:80:HIS:NE2	2.31	0.45
8:A:2657:A:C8	8:A:2658:C:C5	3.05	0.45
10:C:85:ASN:HB2	10:C:86:ARG:HD2	1.99	0.45
11:D:34:VAL:HG12	11:D:92:VAL:HA	1.98	0.45
14:G:1:SER:O	14:G:4:ALA:HB3	2.17	0.45
16:I:89:SER:HA	16:I:135:MET:CB	2.47	0.45
18:K:5:GLN:N	18:K:21:CYS:O	2.43	0.45
18:K:20:MET:HE2	18:K:22:ILE:HG22	1.98	0.45
18:K:98:ARG:CZ	34:a:339:C:OP2	2.65	0.45
19:L:111:ILE:HA	19:L:128:THR:HG23	1.99	0.45
19:L:126:ARG:HA	19:L:144:GLU:OE1	2.17	0.45
21:N:32:GLU:HB3	21:N:115:LEU:HD12	1.98	0.45
21:N:72:ASP:HB3	21:N:75:ILE:CG1	2.47	0.45
21:N:78:LYS:HG2	21:N:83:LEU:CD1	2.46	0.45
22:O:66:GLY:C	22:O:102:ARG:HD3	2.42	0.45
25:R:24:LYS:HB2	25:R:92:TRP:CB	2.47	0.45
27:T:53:VAL:HG12	27:T:93:LEU:HD12	1.98	0.45
28:U:28:LEU:N	28:U:28:LEU:HD23	2.31	0.45
34:a:27:G:C6	34:a:28:A:C5	3.05	0.45
34:a:30:U:H3	34:a:553:A:N6	2.15	0.45
34:a:80:A:H61	34:a:92:U:C1'	2.30	0.45
34:a:124:C:N3	34:a:238:A:C2	2.85	0.45
34:a:149:A:N6	34:a:172:A:H62	2.15	0.45
34:a:175:C:H2'	34:a:176:C:C6	2.52	0.45
34:a:187:G:C5	34:a:189:A:OP2	2.70	0.45
34:a:254:G:OP1	50:q:69:THR:HG23	2.17	0.45
34:a:345:C:OP2	34:a:345:C:C6	2.70	0.45
34:a:382:A:H2'	34:a:383:A:C8	2.52	0.45
34:a:436:C:O2'	37:d:153:ARG:HD3	2.17	0.45
34:a:585:G:H2'	34:a:586:C:H6	1.81	0.45
34:a:660:C:C2	34:a:746:A:N1	2.85	0.45
34:a:665:A:H2'	34:a:725:G:N2	2.32	0.45
34:a:666:G:C2	34:a:741:G:C4	3.05	0.45
34:a:674:G:H21	44:k:117:HIS:HB2	1.82	0.45
34:a:716:A:N3	44:k:118:ASN:O	2.50	0.45
34:a:750:C:H2'	34:a:751:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:799:G:C6	34:a:800:G:C4	3.05	0.45
34:a:888:G:H2'	34:a:908:A:N6	2.31	0.45
34:a:943:U:H2'	34:a:944:G:C8	2.52	0.45
34:a:950:U:H3'	46:m:100:ARG:HH12	1.82	0.45
34:a:997:U:N3	34:a:998:C:C5	2.85	0.45
34:a:1000:A:N1	34:a:1041:G:C6	2.85	0.45
34:a:1003:G:C2	34:a:1033:G:O6	2.70	0.45
34:a:1017:U:C2	34:a:1018:G:C8	3.05	0.45
34:a:1074:G:C2'	34:a:1075:U:H5''	2.47	0.45
34:a:1125:U:O2	34:a:1280:A:C8	2.70	0.45
34:a:1225:A:C2	34:a:1226:C:C4	3.04	0.45
34:a:1264:U:N3	34:a:1272:G:N1	2.64	0.45
34:a:1375:A:H5''	40:g:24:LYS:HZ1	1.81	0.45
34:a:1380:U:O4	40:g:1:PRO:HD2	2.17	0.45
34:a:1430:A:C6	34:a:1471:U:C4	3.04	0.45
35:b:67:LEU:HB2	35:b:153:MET:HE1	1.98	0.45
35:b:100:LEU:HG	35:b:174:GLU:CD	2.42	0.45
36:c:147:GLY:CA	36:c:172:VAL:HG22	2.47	0.45
37:d:181:PHE:CD1	37:d:181:PHE:C	2.94	0.45
38:e:13:LYS:NZ	38:e:115:GLU:CB	2.80	0.45
38:e:40:ASP:CG	38:e:44:ARG:HB2	2.42	0.45
38:e:78:GLY:C	38:e:119:VAL:HA	2.41	0.45
38:e:98:ALA:CB	38:e:102:THR:OG1	2.65	0.45
39:f:37:HIS:C	39:f:97:THR:HG1	2.24	0.45
40:g:62:GLU:N	40:g:62:GLU:OE1	2.49	0.45
41:h:12:ARG:CZ	41:h:26:MET:CB	2.94	0.45
41:h:51:GLU:O	41:h:57:GLU:HG2	2.17	0.45
43:j:44:THR:HA	43:j:71:LEU:HD12	1.99	0.45
46:m:94:LEU:CD2	46:m:109:LYS:HG3	2.47	0.45
50:q:24:ILE:HG12	50:q:41:THR:O	2.17	0.45
52:s:66:VAL:HG13	52:s:67:GLY:N	2.32	0.45
56:w:36:A:H5'	57:x:583:HIS:NE2	2.31	0.45
56:w:38:A:C5	56:w:39:PSU:N3	2.85	0.45
57:x:126:TRP:CD1	57:x:130:ASN:ND2	2.85	0.45
57:x:193:ASN:HB2	57:x:200:THR:CG2	2.47	0.45
57:x:211:VAL:HG12	57:x:211:VAL:O	2.17	0.45
57:x:568:TYR:HB3	57:x:569:PRO:HD2	1.99	0.45
1:0:40:HIS:HE1	8:A:2815:C:O2	1.99	0.45
4:3:4:LYS:HE3	8:A:253:C:OP2	2.17	0.45
4:3:63:TYR:CE1	8:A:242:G:H5''	2.50	0.45
6:5:54:VAL:O	8:A:1084:A:C6	2.67	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6:9:TYR:CD2	7:6:25:ARG:HB3	2.52	0.45
8:A:45:G:N1	8:A:434:U:N3	2.64	0.45
8:A:63:A:C2	8:A:64:A:C4	3.04	0.45
8:A:106:C:H2'	8:A:107:G:C8	2.51	0.45
8:A:107:G:C2	8:A:108:G:N7	2.84	0.45
8:A:108:G:C4	8:A:109:C:C5	3.05	0.45
8:A:186:G:C2	8:A:211:C:N3	2.85	0.45
8:A:263:G:N2	8:A:264:C:C2	2.85	0.45
8:A:291:G:C2	8:A:350:G:C5	3.05	0.45
8:A:315:G:C2	8:A:316:C:C2	3.04	0.45
8:A:324:A:N6	8:A:339:U:O4'	2.50	0.45
8:A:425:G:C6	8:A:426:C:C5	3.05	0.45
8:A:447:A:C5	8:A:454:A:C5	3.05	0.45
8:A:542:C:H2'	8:A:543:G:H8	1.81	0.45
8:A:546:U:O2'	8:A:547:A:O4'	2.35	0.45
8:A:613:A:N3	8:A:613:A:H5'	2.32	0.45
8:A:629:G:O2'	8:A:639:U:O2'	2.33	0.45
8:A:699:A:N7	8:A:734:A:C5	2.85	0.45
8:A:703:U:C2	8:A:727:A:N6	2.85	0.45
8:A:780:G:H1'	8:A:785:G:C2	2.52	0.45
8:A:787:C:C5	8:A:791:C:C4	3.05	0.45
8:A:793:A:OP2	8:A:2071:A:O2'	2.31	0.45
8:A:979:A:C8	8:A:982:C:N4	2.85	0.45
8:A:992:C:N3	8:A:1163:G:N1	2.66	0.45
8:A:1056:G:N9	8:A:1103:A:N6	2.65	0.45
8:A:1168:G:C4	8:A:1182:G:C2	3.05	0.45
8:A:1216:G:C6	8:A:1217:U:C4	3.05	0.45
8:A:1319:C:O5'	8:A:1319:C:H6	2.00	0.45
8:A:1367:A:N7	8:A:1368:G:H1'	2.32	0.45
8:A:1409:U:C2	8:A:1594:U:O2	2.69	0.45
8:A:1426:G:C6	8:A:1427:A:C6	3.05	0.45
8:A:1604:C:H2'	8:A:1605:C:C6	2.52	0.45
8:A:1614:A:N1	26:S:91:GLY:O	2.50	0.45
8:A:1722:A:H2'	8:A:1723:G:H8	1.82	0.45
8:A:1744:A:H5'	8:A:1745:A:OP2	2.17	0.45
8:A:1797:G:N2	8:A:1823:G:C4	2.85	0.45
8:A:1805:A:C6	8:A:1813:G:C6	3.05	0.45
8:A:2014:A:H4'	26:S:92:ARG:NH2	2.31	0.45
8:A:2037:A:C6	8:A:2038:G:C6	3.05	0.45
8:A:2048:G:O6	8:A:2621:G:C6	2.70	0.45
8:A:2059:A:C2	8:A:2503:2MA:C6	3.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2061:G:O6	58:y:101:FME:O1	2.35	0.45
8:A:2065:C:H1'	8:A:2449:U:H3	1.82	0.45
8:A:2090:A:H2'	8:A:2091:C:C6	2.52	0.45
8:A:2114:A:OP1	8:A:2168:G:C2	2.70	0.45
8:A:2207:C:C2	8:A:2218:G:N2	2.85	0.45
8:A:2478:A:C4	8:A:2479:U:C6	3.05	0.45
8:A:2496:C:C5	8:A:2497:A:C6	3.05	0.45
8:A:2507:C:H2'	8:A:2508:G:O4'	2.17	0.45
8:A:2618:G:H2'	8:A:2619:C:H6	1.82	0.45
8:A:2619:C:O2'	8:A:2620:C:H5'	2.17	0.45
8:A:2798:U:C6	8:A:2798:U:OP1	2.70	0.45
9:B:42:C:O2'	13:F:62:GLN:CG	2.64	0.45
12:E:19:PHE:O	12:E:110:SER:HA	2.17	0.45
13:F:105:ILE:C	13:F:108:PRO:HD2	2.42	0.45
14:G:59:ASP:OD1	14:G:59:ASP:N	2.49	0.45
14:G:87:GLN:OE1	14:G:162:ARG:HD2	2.17	0.45
15:H:1:MET:CE	15:H:38:PRO:HA	2.47	0.45
15:H:115:VAL:O	15:H:116:ARG:NH2	2.50	0.45
21:N:35:LYS:HE2	21:N:110:MET:HB3	1.99	0.45
24:Q:12:ARG:O	24:Q:16:ILE:HG12	2.17	0.45
24:Q:60:TRP:CH2	24:Q:92:LYS:HB2	2.52	0.45
24:Q:60:TRP:O	24:Q:64:ILE:HD12	2.16	0.45
25:R:2:TYR:CE1	25:R:13:ARG:HD2	2.52	0.45
25:R:60:LYS:NZ	25:R:102:SER:OG	2.50	0.45
26:S:66:ILE:O	26:S:69:LEU:HB2	2.17	0.45
27:T:22:THR:HA	27:T:25:GLU:OE2	2.16	0.45
29:V:21:ARG:CZ	29:V:87:GLN:O	2.64	0.45
34:a:28:A:H2'	34:a:29:U:O4'	2.17	0.45
34:a:51:A:C6	34:a:116:A:C4	3.05	0.45
34:a:117:G:C4	34:a:118:U:C6	3.05	0.45
34:a:260:G:N2	34:a:265:G:C6	2.84	0.45
34:a:265:G:H2'	34:a:267:C:H5	1.80	0.45
34:a:340:U:C2	34:a:350:G:N2	2.85	0.45
34:a:408:A:C6	34:a:435:A:C6	3.04	0.45
34:a:424:G:C2	34:a:425:G:C4	3.05	0.45
34:a:428:G:OP2	37:d:6:PRO:HG2	2.16	0.45
34:a:485:U:O2'	34:a:486:U:H5''	2.17	0.45
34:a:502:A:H2'	34:a:503:C:H6	1.82	0.45
34:a:537:G:H2'	34:a:538:G:C8	2.52	0.45
34:a:565:U:C4	34:a:566:G:C5	3.04	0.45
34:a:632:U:P	34:a:633:G:C8	3.10	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:895:G:N1	34:a:904:U:N3	2.64	0.45
34:a:921:U:OP1	34:a:1081:A:H3'	2.16	0.45
34:a:929:G:C2	34:a:930:C:C2	3.05	0.45
34:a:985:C:N3	34:a:1221:G:N1	2.66	0.45
34:a:1012:A:C6	34:a:1018:G:C6	3.05	0.45
34:a:1014:A:H2'	34:a:1015:G:C8	2.51	0.45
34:a:1133:G:C6	34:a:1142:G:C4	3.05	0.45
34:a:1215:G:N1	34:a:1216:A:C5	2.85	0.45
34:a:1217:C:H2'	34:a:1218:C:H6	1.82	0.45
34:a:1237:C:O2'	34:a:1300:G:N2	2.49	0.45
34:a:1282:C:H2'	34:a:1283:U:C6	2.52	0.45
34:a:1346:A:N7	40:g:9:ARG:CZ	2.80	0.45
34:a:1405:G:C4'	34:a:1519:MA6:H4'	2.47	0.45
34:a:1429:A:N1	34:a:1472:U:C4	2.85	0.45
34:a:1475:G:C6	34:a:1476:A:C5	3.05	0.45
34:a:1519:MA6:H8	34:a:1519:MA6:H5''	1.99	0.45
34:a:1520:C:H2'	34:a:1521:C:C6	2.52	0.45
34:a:1521:C:C2	34:a:1522:U:C5	3.05	0.45
38:e:63:MET:O	38:e:66:ALA:N	2.46	0.45
38:e:105:ILE:HB	38:e:122:VAL:O	2.17	0.45
40:g:129:ASN:HA	40:g:134:VAL:HG11	1.99	0.45
41:h:12:ARG:HD3	41:h:26:MET:HB3	1.99	0.45
41:h:30:LYS:O	41:h:33:VAL:CG2	2.65	0.45
42:i:79:ARG:CZ	42:i:102:PHE:HD1	2.29	0.45
42:i:93:LEU:HA	42:i:96:GLU:OE2	2.17	0.45
43:j:24:GLU:HB3	43:j:92:LEU:HD22	1.99	0.45
44:k:63:GLN:OE1	44:k:94:SER:HB2	2.16	0.45
45:l:33:CYS:CA	45:l:54:VAL:HA	2.47	0.45
45:l:55:ARG:HH21	45:l:59:GLY:C	2.24	0.45
45:l:105:GLY:HA3	45:l:118:VAL:HG22	1.99	0.45
48:o:73:ASP:OD2	48:o:76:ARG:NE	2.49	0.45
49:p:79:ASN:C	49:p:81:ALA:H	2.24	0.45
50:q:20:ILE:HG13	50:q:45:VAL:HB	1.98	0.45
50:q:30:HIS:HE1	50:q:32:ILE:HD12	1.82	0.45
52:s:2:ARG:HE	52:s:6:LYS:HD2	1.81	0.45
53:t:3:ILE:C	53:t:4:LYS:HD2	2.42	0.45
55:v:51:C:C4	55:v:64:G:C6	3.04	0.45
56:w:29:G:C2	56:w:42:C:N3	2.85	0.45
57:x:119:GLN:H	57:x:122:SER:HG	1.58	0.45
57:x:188:LYS:HG2	57:x:205:ASP:HA	2.00	0.45
57:x:554:LYS:HB2	57:x:593:LYS:NZ	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:17:SER:OG	8:A:2045:C:O2'	2.33	0.44
1:0:38:LEU:O	1:0:39:ARG:C	2.60	0.44
7:6:10:GLU:H	7:6:10:GLU:CD	2.25	0.44
8:A:27:G:N2	8:A:513:A:C8	2.77	0.44
8:A:94:A:N6	8:A:95:A:N1	2.64	0.44
8:A:118:A:H2'	8:A:120:U:O4	2.18	0.44
8:A:161:A:C3'	8:A:162:U:H5''	2.47	0.44
8:A:305:C:C4	8:A:313:G:C6	3.05	0.44
8:A:324:A:C6	8:A:339:U:C4'	3.00	0.44
8:A:374:A:C8	8:A:375:G:N7	2.86	0.44
8:A:387:U:C5	8:A:388:G:C6	3.06	0.44
8:A:432:A:C5	8:A:433:C:C5	3.05	0.44
8:A:532:A:C2	8:A:2020:A:H1'	2.51	0.44
8:A:534:U:H2'	8:A:535:G:H8	1.82	0.44
8:A:690:G:C6	8:A:691:C:N4	2.85	0.44
8:A:705:A:H8	8:A:726:G:H21	1.52	0.44
8:A:714:U:H3	8:A:717:C:P	2.39	0.44
8:A:714:U:O2	8:A:717:C:O5'	2.34	0.44
8:A:774:G:O2'	8:A:775:G:H8	1.97	0.44
8:A:841:G:H2'	8:A:842:U:C6	2.51	0.44
8:A:848:C:C2	8:A:849:A:C8	3.05	0.44
8:A:885:C:C6	8:A:894:U:OP1	2.70	0.44
8:A:915:C:H3'	8:A:916:G:C8	2.52	0.44
8:A:924:G:C2	8:A:925:A:C4	3.05	0.44
8:A:927:A:C2	8:A:928:A:C4	3.05	0.44
8:A:985:C:H2'	8:A:986:C:H6	1.83	0.44
8:A:1009:A:C6	8:A:1010:A:N1	2.85	0.44
8:A:1022:G:C6	8:A:1141:U:C5	3.04	0.44
8:A:1047:G:HO2'	8:A:1110:G:H1	0.53	0.44
8:A:1090:A:N1	8:A:1102:C:H1'	2.31	0.44
8:A:1163:G:C2	8:A:1164:C:C6	3.05	0.44
8:A:1171:G:C2	8:A:1172:C:C5	3.05	0.44
8:A:1215:G:N1	8:A:1216:G:C5	2.85	0.44
8:A:1291:C:C2	8:A:1292:G:C8	3.05	0.44
8:A:1317:G:N1	8:A:1336:A:C6	2.85	0.44
8:A:1341:G:C2	27:T:84:TYR:CD2	3.05	0.44
8:A:1398:C:C5'	27:T:59:ASN:ND2	2.80	0.44
8:A:1425:G:C6	8:A:1426:G:N1	2.85	0.44
8:A:1482:G:C2	8:A:1483:G:C5	3.06	0.44
8:A:1532:A:C6	8:A:1540:G:N1	2.84	0.44
8:A:1614:A:N6	26:S:91:GLY:C	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1724:G:N1	8:A:1736:U:N3	2.64	0.44
8:A:1799:G:H5'	8:A:1800:C:C5	2.52	0.44
8:A:2048:G:C4	8:A:2049:G:C8	3.04	0.44
8:A:2092:U:P	15:H:27:ARG:HH21	2.40	0.44
8:A:2170:A:H1'	8:A:2171:A:N1	2.31	0.44
8:A:2283:C:C2	8:A:2389:G:C2	3.05	0.44
8:A:2294:G:C2	8:A:2295:C:C6	3.04	0.44
8:A:2294:G:C6	8:A:2339:C:N3	2.85	0.44
8:A:2308:G:HO2'	8:A:2309:A:P	2.36	0.44
8:A:2312:U:O2	13:F:36:ASN:ND2	2.50	0.44
8:A:2315:G:HO2'	13:F:124:ARG:HD2	1.81	0.44
8:A:2352:A:H3'	8:A:2353:G:H8	1.82	0.44
8:A:2383:G:H2'	8:A:2384:U:C6	2.52	0.44
8:A:2466:C:N3	8:A:2485:G:C2	2.85	0.44
8:A:2478:A:C5	8:A:2479:U:C5	3.05	0.44
8:A:2517:C:C2	8:A:2542:A:N6	2.85	0.44
8:A:2525:G:N1	8:A:2539:C:C4	2.85	0.44
8:A:2530:A:HO2'	8:A:2534:A:N6	2.15	0.44
8:A:2558:C:H2'	8:A:2559:C:O4'	2.17	0.44
8:A:2590:A:N6	8:A:2605:PSU:O2	2.46	0.44
8:A:2597:G:H5'	10:C:240:GLY:HA3	1.99	0.44
8:A:2643:G:C5	8:A:2644:G:C5	3.04	0.44
8:A:2651:C:H2'	8:A:2652:C:H6	1.82	0.44
8:A:2826:A:C5	8:A:2827:C:C5	3.05	0.44
8:A:2859:G:C6	8:A:2860:A:N6	2.85	0.44
9:B:21:G:C6	9:B:22:U:C4	3.05	0.44
9:B:51:G:H22	9:B:53:A:H62	1.65	0.44
9:B:88:C:H5'	9:B:88:C:H6	1.82	0.44
9:B:114:C:C2	9:B:115:A:C8	3.04	0.44
10:C:118:GLY:O	10:C:129:LEU:HB3	2.17	0.44
10:C:160:TYR:O	10:C:176:ARG:HD3	2.16	0.44
11:D:86:GLU:O	11:D:86:GLU:CD	2.60	0.44
11:D:106:LYS:O	11:D:206:ALA:N	2.35	0.44
11:D:172:VAL:HG11	11:D:175:LEU:HD21	1.98	0.44
12:E:44:ARG:O	12:E:89:PRO:HD3	2.17	0.44
12:E:192:ALA:O	12:E:196:VAL:HG23	2.17	0.44
13:F:39:VAL:HG21	13:F:49:LEU:CD1	2.47	0.44
13:F:120:SER:O	13:F:128:SER:N	2.33	0.44
14:G:39:ALA:C	14:G:54:ARG:HB2	2.43	0.44
18:K:61:VAL:O	18:K:61:VAL:HG13	2.17	0.44
20:M:4:PRO:CG	20:M:70:ASP:HA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:33:ILE:HA	21:N:113:ILE:O	2.16	0.44
21:N:67:PHE:CE1	21:N:71:ARG:C	2.95	0.44
33:Z:12:ALA:HA	33:Z:15:ARG:CG	2.47	0.44
34:a:27:G:C6	34:a:28:A:C6	3.05	0.44
34:a:36:C:O4'	45:l:114:SER:HB2	2.17	0.44
34:a:71:A:OP1	34:a:71:A:H8	2.00	0.44
34:a:147:G:N3	34:a:148:G:N7	2.65	0.44
34:a:149:A:C6	34:a:150:U:C4	3.06	0.44
34:a:214:C:O2	34:a:214:C:O4'	2.33	0.44
34:a:236:A:O3'	50:q:41:THR:HG21	2.17	0.44
34:a:237:G:H2'	34:a:238:A:C8	2.51	0.44
34:a:296:U:C4	34:a:297:G:N7	2.85	0.44
34:a:414:A:C2	34:a:415:A:H1'	2.51	0.44
34:a:416:G:N3	34:a:417:G:C8	2.85	0.44
34:a:502:A:N1	34:a:544:G:C6	2.85	0.44
34:a:519:C:N4	34:a:520:A:C2	2.85	0.44
34:a:544:G:H2'	34:a:545:C:C6	2.52	0.44
34:a:559:A:C8	34:a:561:U:N3	2.85	0.44
34:a:562:U:H1'	45:l:11:ARG:CD	2.47	0.44
34:a:596:A:N6	34:a:645:G:N1	2.65	0.44
34:a:602:A:N6	34:a:637:C:H42	2.15	0.44
34:a:675:A:H2'	34:a:676:A:C8	2.51	0.44
34:a:717:U:C5	34:a:734:G:N7	2.85	0.44
34:a:837:U:H2'	34:a:838:G:H8	1.82	0.44
34:a:886:G:C6	34:a:887:G:C5	3.04	0.44
34:a:896:C:N3	34:a:897:C:C4	2.85	0.44
34:a:904:U:C2	34:a:905:U:C6	3.05	0.44
34:a:925:G:O4'	34:a:1502:A:C2	2.71	0.44
34:a:948:C:H2'	34:a:949:A:H8	1.82	0.44
34:a:949:A:OP2	46:m:100:ARG:HG2	2.17	0.44
34:a:998:C:H42	34:a:1042:A:H61	1.65	0.44
34:a:1006:G:C2	34:a:1007:U:C6	3.05	0.44
34:a:1088:G:N1	34:a:1098:C:N3	2.65	0.44
34:a:1161:C:N3	34:a:1162:C:C4	2.85	0.44
34:a:1429:A:C2	34:a:1430:A:C8	3.05	0.44
34:a:1488:G:C6	34:a:1489:G:C6	3.05	0.44
34:a:1500:A:C5'	34:a:1508:A:H5''	2.46	0.44
35:b:10:LYS:HG3	35:b:211:LEU:HD11	1.98	0.44
36:c:31:ASN:CG	36:c:58:ARG:NE	2.74	0.44
36:c:41:TYR:O	36:c:44:LYS:HB3	2.17	0.44
36:c:151:GLU:HA	36:c:166:TRP:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:61:ARG:HD3	37:d:71:PHE:HZ	1.82	0.44
38:e:79:THR:HA	38:e:119:VAL:HG13	1.99	0.44
39:f:4:TYR:CE2	39:f:91:ARG:CD	3.00	0.44
39:f:45:ARG:HH21	51:r:66:LEU:HD22	1.82	0.44
39:f:63:ASN:ND2	39:f:96:VAL:CG1	2.79	0.44
39:f:67:PRO:HG2	39:f:70:VAL:HG22	1.99	0.44
40:g:103:ILE:HD13	40:g:133:ALA:HB2	1.98	0.44
41:h:5:PRO:HB2	41:h:32:LYS:NZ	2.32	0.44
43:j:92:LEU:C	43:j:92:LEU:HD12	2.42	0.44
45:l:31:GLY:HA2	45:l:56:LEU:HA	1.99	0.44
45:l:33:CYS:HA	45:l:54:VAL:HA	1.99	0.44
45:l:85:ARG:HH21	45:l:87:LYS:HD2	1.82	0.44
45:l:88:ASP:C	45:l:89:LEU:HD22	2.41	0.44
46:m:95:PRO:HB3	46:m:99:GLN:OE1	2.17	0.44
51:r:69:TYR:HB2	51:r:73:HIS:NE2	2.33	0.44
55:v:29:G:C2	55:v:30:G:C4	3.05	0.44
55:v:53:G:N1	55:v:62:C:C4	2.85	0.44
55:v:63:G:N1	55:v:64:G:C5	2.85	0.44
56:w:1:G:H2'	56:w:2:C:C6	2.52	0.44
57:x:28:ARG:CG	57:x:268:ALA:O	2.65	0.44
57:x:134:VAL:O	57:x:136:ARG:NH1	2.50	0.44
57:x:590:LEU:O	57:x:594:LEU:HD13	2.16	0.44
1:0:47:TYR:CE1	1:0:52:LYS:HD3	2.52	0.44
4:3:2:LYS:NZ	8:A:242:G:P	2.91	0.44
4:3:4:LYS:CE	8:A:254:G:N7	2.80	0.44
4:3:37:THR:HG21	8:A:2348:U:P	2.56	0.44
7:6:7:PRO:HG2	13:F:61:GLY:CA	2.44	0.44
8:A:9:G:C2	8:A:2629:U:C2	3.05	0.44
8:A:19:A:H2'	8:A:20:C:O4'	2.18	0.44
8:A:128:C:C2	8:A:129:C:C5	3.05	0.44
8:A:203:A:H2'	8:A:204:A:N7	2.33	0.44
8:A:207:A:H2'	8:A:208:C:H6	1.82	0.44
8:A:209:C:N3	8:A:210:C:C4	2.86	0.44
8:A:233:A:C4	8:A:234:U:C6	3.05	0.44
8:A:273:G:C6	8:A:274:C:C4	3.05	0.44
8:A:274:C:N3	8:A:364:C:N3	2.66	0.44
8:A:370:G:C2	8:A:424:G:C1'	3.01	0.44
8:A:456:C:C6	27:T:73:ARG:NH1	2.85	0.44
8:A:534:U:O2	8:A:559:G:N2	2.50	0.44
8:A:592:A:C6	8:A:593:U:C4	3.05	0.44
8:A:598:U:O2'	8:A:599:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:607:U:H3'	8:A:619:G:C6	2.52	0.44
8:A:607:U:C6	8:A:620:G:C5	3.05	0.44
8:A:620:G:H4'	8:A:621:A:H8	1.83	0.44
8:A:632:A:O4'	19:L:66:PHE:CE1	2.70	0.44
8:A:715:A:C6	8:A:716:A:C2	3.05	0.44
8:A:744:U:C3'	8:A:745:1MG:H8	2.30	0.44
8:A:855:G:C6	8:A:856:G:N7	2.85	0.44
8:A:858:G:O2'	8:A:2268:A:H1'	2.16	0.44
8:A:878:A:C8	8:A:879:G:C5	3.05	0.44
8:A:885:C:O2	8:A:894:U:C5	2.70	0.44
8:A:917:A:H5''	8:A:2268:A:N1	2.32	0.44
8:A:1005:C:H5'	8:A:1012:U:H5''	1.98	0.44
8:A:1028:A:C6	8:A:1029:A:C6	3.05	0.44
8:A:1048:A:H2'	8:A:1049:C:C6	2.52	0.44
8:A:1126:A:OP1	8:A:1126:A:H8	2.00	0.44
8:A:1140:C:O2'	17:J:27:ARG:NH2	2.51	0.44
8:A:1145:C:O2'	8:A:1146:C:H5'	2.17	0.44
8:A:1153:C:C4	8:A:1154:G:C5	3.05	0.44
8:A:1206:G:H2'	8:A:1207:C:H6	1.81	0.44
8:A:1281:G:C2	8:A:1290:C:N3	2.85	0.44
8:A:1300:G:H4'	8:A:1301:A:H5''	1.98	0.44
8:A:1346:G:N1	8:A:1601:G:C5	2.85	0.44
8:A:1348:C:H3'	8:A:1349:C:H6	1.81	0.44
8:A:1477:A:N6	8:A:1514:G:C2'	2.80	0.44
8:A:1565:C:H2'	8:A:1567:G:C6	2.52	0.44
8:A:1623:G:C6	8:A:1624:U:C4	3.05	0.44
8:A:1637:A:C6	8:A:1638:C:C4	3.05	0.44
8:A:1665:A:C4	8:A:1666:G:C8	3.05	0.44
8:A:1669:A:H2'	8:A:1670:C:H5'	1.99	0.44
8:A:1679:A:H2	8:A:1764:C:O4'	2.00	0.44
8:A:1704:C:H2'	8:A:1705:A:C8	2.52	0.44
8:A:1798:U:H3'	10:C:270:ARG:HH12	1.81	0.44
8:A:1799:G:O4'	8:A:1800:C:C5	2.70	0.44
8:A:1851:U:C5	8:A:1852:U:C4	3.04	0.44
8:A:1856:U:H2'	8:A:1857:G:C1'	2.48	0.44
8:A:1964:G:C2	8:A:1967:C:C4	3.05	0.44
8:A:2080:A:C2	8:A:2081:U:C2	3.06	0.44
8:A:2095:A:N1	8:A:2195:U:C4	2.85	0.44
8:A:2125:G:H22	8:A:2172:U:H4'	1.81	0.44
8:A:2198:A:O2'	8:A:2225:A:N6	2.50	0.44
8:A:2293:G:H2'	8:A:2294:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2498:OMC:OP2	8:A:2499:C:OP2	2.34	0.44
8:A:2515:C:C4	8:A:2570:G:N1	2.85	0.44
8:A:2534:A:C2	8:A:2535:G:H1'	2.52	0.44
8:A:2545:G:H2'	8:A:2546:U:C6	2.52	0.44
8:A:2585:U:OP1	8:A:2585:U:O4'	2.35	0.44
8:A:2653:U:H6	8:A:2653:U:O5'	2.00	0.44
8:A:2653:U:P	8:A:2654:A:H3'	2.58	0.44
8:A:2880:C:C2	8:A:2881:U:C5	3.05	0.44
9:B:13:G:H22	9:B:69:G:C2'	2.29	0.44
9:B:89:U:O5'	9:B:90:C:C6	2.71	0.44
10:C:43:ASN:O	10:C:46:GLY:N	2.34	0.44
10:C:179:GLU:HB2	10:C:270:ARG:N	2.32	0.44
11:D:34:VAL:HG22	11:D:50:VAL:HG12	2.00	0.44
11:D:116:LYS:HG3	21:N:1:MET:HE1	1.98	0.44
13:F:33:ILE:HG23	13:F:155:ILE:HG12	1.98	0.44
13:F:39:VAL:HG21	13:F:49:LEU:HD12	1.99	0.44
18:K:63:VAL:O	18:K:64:ARG:HG2	2.17	0.44
18:K:71:ARG:CB	18:K:73:ASP:OD1	2.66	0.44
19:L:27:LEU:H	19:L:27:LEU:CD1	2.28	0.44
19:L:119:PRO:HB3	19:L:139:GLY:O	2.17	0.44
20:M:42:THR:HG22	20:M:91:TYR:CD2	2.52	0.44
20:M:111:GLU:CD	20:M:112:LEU:N	2.76	0.44
21:N:10:LEU:HD13	21:N:12:ARG:NH2	2.32	0.44
23:P:64:SER:N	23:P:67:GLU:O	2.50	0.44
23:P:97:TYR:CD1	23:P:100:ARG:CZ	3.00	0.44
24:Q:85:ALA:O	24:Q:86:SER:OG	2.29	0.44
24:Q:99:VAL:C	24:Q:102:LYS:HZ2	2.25	0.44
26:S:46:LEU:N	26:S:46:LEU:CD2	2.81	0.44
26:S:58:ALA:O	26:S:63:GLY:C	2.59	0.44
27:T:58:VAL:HA	27:T:84:TYR:O	2.16	0.44
28:U:83:GLY:C	28:U:94:PHE:CE2	2.96	0.44
32:Y:6:LEU:HD12	32:Y:6:LEU:N	2.32	0.44
34:a:40:C:H2'	34:a:41:G:C8	2.52	0.44
34:a:110:C:C4	34:a:111:G:C4	3.05	0.44
34:a:116:A:H2'	34:a:117:G:O4'	2.16	0.44
34:a:144:G:O6	34:a:177:G:O6	2.36	0.44
34:a:230:G:C4'	49:p:25:ARG:HH22	2.30	0.44
34:a:253:A:N1	34:a:254:G:C6	2.86	0.44
34:a:310:G:C5	34:a:311:C:C5	3.06	0.44
34:a:369:G:C2	34:a:393:A:C4	3.04	0.44
34:a:373:A:H4'	34:a:451:A:H62	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:496:A:H1'	34:a:497:G:N7	2.32	0.44
34:a:505:G:N1	34:a:506:G:C5	2.85	0.44
34:a:538:G:OP1	45:l:110:LYS:N	2.47	0.44
34:a:553:A:C8	34:a:554:A:C8	3.06	0.44
34:a:567:G:C5	34:a:568:G:C8	3.05	0.44
34:a:584:G:H2'	34:a:585:G:C8	2.52	0.44
34:a:604:G:N1	34:a:605:U:C2	2.85	0.44
34:a:618:C:H5'	34:a:619:U:H5''	1.99	0.44
34:a:629:A:C2	34:a:630:A:H1'	2.53	0.44
34:a:679:C:C2	34:a:712:A:N1	2.86	0.44
34:a:720:C:H2'	34:a:721:G:N7	2.32	0.44
34:a:720:C:O2'	51:r:55:ALA:HB2	2.17	0.44
34:a:750:C:H2'	34:a:751:U:H6	1.83	0.44
34:a:784:A:H2'	34:a:785:G:H8	1.81	0.44
34:a:817:C:C2	34:a:819:A:H5'	2.52	0.44
34:a:859:G:N2	34:a:860:A:H1'	2.32	0.44
34:a:909:A:H2'	34:a:910:C:H6	1.83	0.44
34:a:975:A:N6	34:a:1366:C:O2'	2.50	0.44
34:a:991:U:N3	34:a:1213:A:C8	2.80	0.44
34:a:1032:G:H3'	34:a:1034:G:N1	2.31	0.44
34:a:1091:U:H3'	40:g:3:ARG:NH1	2.33	0.44
34:a:1179:A:H4'	42:i:103:VAL:O	2.18	0.44
34:a:1219:A:H2'	34:a:1220:G:C8	2.52	0.44
34:a:1306:A:H1'	34:a:1332:A:C2	2.52	0.44
34:a:1488:G:C2	34:a:1489:G:C5	3.05	0.44
34:a:1492:A:H2'	34:a:1493:A:C8	2.51	0.44
35:b:20:ARG:C	35:b:22:TRP:H	2.26	0.44
36:c:5:HIS:ND1	36:c:6:PRO:HD2	2.32	0.44
36:c:121:SER:CB	36:c:125:ARG:NH2	2.78	0.44
37:d:97:LEU:HD23	37:d:117:VAL:HG13	2.00	0.44
38:e:34:ALA:O	38:e:49:TYR:O	2.35	0.44
41:h:25:THR:HA	41:h:58:LEU:O	2.17	0.44
41:h:79:ARG:HG3	41:h:82:LEU:H	1.81	0.44
41:h:82:LEU:HD13	50:q:35:LYS:HA	1.99	0.44
41:h:95:MET:HB3	41:h:98:LEU:CD1	2.47	0.44
44:k:63:GLN:HG3	44:k:98:ALA:HB2	1.98	0.44
46:m:104:ASN:O	46:m:105:ALA:HB3	2.17	0.44
55:v:8:4SU:O2	55:v:15:G:C6	2.69	0.44
55:v:29:G:N1	55:v:30:G:C5	2.85	0.44
55:v:66:C:N4	55:v:67:C:N4	2.65	0.44
55:v:70:G:H2'	55:v:71:C:H6	1.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:w:5:G:O6	56:w:68:C:N4	2.50	0.44
57:x:243:THR:O	57:x:247:ILE:HG13	2.17	0.44
57:x:283:ASP:HB2	57:x:284:TYR:CE2	2.52	0.44
57:x:297:ILE:CG2	57:x:298:LEU:N	2.81	0.44
57:x:493:ILE:HG22	57:x:607:ALA:HB3	1.98	0.44
57:x:497:VAL:HA	57:x:521:MET:O	2.18	0.44
57:x:497:VAL:HG22	57:x:498:THR:N	2.32	0.44
1:0:1:ALA:C	8:A:2615:U:C5	2.95	0.44
1:0:48:TYR:CZ	1:0:49:ARG:HG3	2.51	0.44
5:4:13:ASN:O	5:4:27:CYS:HA	2.17	0.44
8:A:39:G:C2	8:A:441:U:N3	2.86	0.44
8:A:65:U:O2'	27:T:73:ARG:HD2	2.16	0.44
8:A:118:A:OP2	8:A:119:A:H2'	2.18	0.44
8:A:176:A:H3'	8:A:177:G:H21	1.81	0.44
8:A:179:C:H2'	8:A:180:G:C8	2.52	0.44
8:A:305:C:H6	8:A:305:C:O5'	2.00	0.44
8:A:374:A:C6	8:A:375:G:C4	3.06	0.44
8:A:383:C:H41	8:A:386:G:P	2.40	0.44
8:A:407:G:N1	8:A:421:C:C4	2.86	0.44
8:A:420:C:H2'	8:A:421:C:H6	1.83	0.44
8:A:520:G:C4	8:A:521:U:C5	3.05	0.44
8:A:563:A:C6	8:A:564:C:C4	3.05	0.44
8:A:627:A:O4'	8:A:637:A:N6	2.50	0.44
8:A:644:A:C2	8:A:645:C:C2	3.04	0.44
8:A:684:G:C2	8:A:794:A:C2	3.05	0.44
8:A:741:U:H2'	8:A:742:A:H8	1.81	0.44
8:A:820:A:C2	8:A:943:A:H4'	2.52	0.44
8:A:880:G:N2	8:A:898:C:C2	2.85	0.44
8:A:881:G:C6	8:A:882:G:C5	3.06	0.44
8:A:950:G:C5	8:A:951:C:C4	3.05	0.44
8:A:997:G:N2	8:A:998:C:C2	2.86	0.44
8:A:1011:G:C2	8:A:1013:C:N3	2.85	0.44
8:A:1017:G:C6	8:A:1146:C:N4	2.85	0.44
8:A:1022:G:C6	8:A:1141:U:C6	3.05	0.44
8:A:1039:A:C5	8:A:1040:A:C8	3.06	0.44
8:A:1075:C:N3	8:A:1076:C:C4	2.86	0.44
8:A:1116:G:C2'	8:A:1117:C:H5'	2.48	0.44
8:A:1117:C:O2'	8:A:1118:C:H5'	2.17	0.44
8:A:1131:G:C5	8:A:2025:C:H4'	2.52	0.44
8:A:1224:U:H4'	25:R:88:GLY:O	2.18	0.44
8:A:1265:A:O4'	8:A:1267:U:C6	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1279:G:C6	8:A:1292:G:N1	2.86	0.44
8:A:1314:C:OP1	8:A:1315:C:OP2	2.35	0.44
8:A:1319:C:C2	8:A:1320:C:C5	3.06	0.44
8:A:1358:G:N2	8:A:1372:U:OP2	2.50	0.44
8:A:1374:G:H2'	8:A:1375:U:C6	2.53	0.44
8:A:1408:G:N1	8:A:1594:U:N3	2.65	0.44
8:A:1419:A:C8	8:A:1579:A:C5	3.05	0.44
8:A:1424:G:C6	8:A:1425:G:C2	3.05	0.44
8:A:1451:C:H5''	8:A:1452:G:OP1	2.16	0.44
8:A:1454:C:P	21:N:63:ARG:NH2	2.90	0.44
8:A:1482:G:C2	8:A:1483:G:C4	3.05	0.44
8:A:1506:U:H2'	8:A:1507:C:H6	1.79	0.44
8:A:1525:A:H2'	8:A:1526:C:C6	2.52	0.44
8:A:1529:G:C6	8:A:1543:G:C2	3.05	0.44
8:A:1580:A:H3'	8:A:1581:G:H8	1.82	0.44
8:A:1609:A:O4'	8:A:1616:A:O4'	2.34	0.44
8:A:1628:G:C6	8:A:1629:U:C4	3.05	0.44
8:A:1677:A:H2'	8:A:1678:A:O4'	2.17	0.44
8:A:1749:A:N1	8:A:1750:G:C5	2.85	0.44
8:A:1829:A:N7	8:A:1830:C:C5	2.84	0.44
8:A:1906:G:H8	8:A:1929:G:C2'	2.30	0.44
8:A:1950:G:N1	8:A:1954:G:O2'	2.37	0.44
8:A:1975:G:C6	8:A:1976:U:C4	3.05	0.44
8:A:2024:G:C4	8:A:2025:C:C5	3.05	0.44
8:A:2043:C:O2	8:A:2044:C:C5	2.70	0.44
8:A:2142:A:N6	8:A:2144:G:C8	2.84	0.44
8:A:2143:C:N3	8:A:2148:G:C2'	2.79	0.44
8:A:2234:G:C2	8:A:2235:G:C4	3.06	0.44
8:A:2293:G:C2	8:A:2294:G:C4	3.05	0.44
8:A:2318:G:H2'	8:A:2319:G:O4'	2.18	0.44
8:A:2321:U:H5'	8:A:2322:A:OP2	2.18	0.44
8:A:2340:A:C2	8:A:2341:G:C5	3.05	0.44
8:A:2411:A:H2'	8:A:2412:A:H8	1.83	0.44
8:A:2431:U:C6	8:A:2433:A:OP2	2.71	0.44
8:A:2572:A:C8	11:D:150:GLN:HB3	2.53	0.44
8:A:2591:C:H2'	8:A:2592:G:H8	1.82	0.44
8:A:2627:G:N2	8:A:2777:G:OP2	2.36	0.44
8:A:2635:A:N1	8:A:2784:U:C4	2.86	0.44
8:A:2638:G:H1	8:A:2775:G:H2'	1.82	0.44
8:A:2662:A:C5	8:A:2663:G:H1'	2.53	0.44
8:A:2682:A:N6	8:A:2728:U:C1'	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2737:G:N1	8:A:2768:U:N3	2.65	0.44
8:A:2836:U:O4	8:A:2837:A:N6	2.49	0.44
8:A:2838:G:C6	8:A:2839:G:C5	3.06	0.44
8:A:2849:U:O4	23:P:20:ARG:CZ	2.65	0.44
9:B:101:A:H2'	9:B:102:G:O4'	2.16	0.44
10:C:19:VAL:HG23	10:C:19:VAL:O	2.17	0.44
11:D:124:ARG:CZ	11:D:161:MET:O	2.62	0.44
12:E:138:LEU:O	12:E:143:LEU:N	2.45	0.44
13:F:32:LYS:CE	13:F:156:THR:HB	2.47	0.44
14:G:41:GLU:CG	14:G:54:ARG:HE	2.29	0.44
14:G:43:LYS:O	14:G:49:LEU:HA	2.16	0.44
17:J:15:TRP:HA	17:J:53:TYR:HB2	1.98	0.44
23:P:44:GLY:C	23:P:60:VAL:HG13	2.42	0.44
23:P:77:SER:HB3	23:P:79:VAL:HG22	1.99	0.44
34:a:100:G:C2	34:a:101:A:C4	3.05	0.44
34:a:109:A:C4	34:a:327:A:C2	3.05	0.44
34:a:119:A:C5	34:a:287:U:C2	2.85	0.44
34:a:130:A:N6	34:a:233:C:O2	2.50	0.44
34:a:220:G:C2	34:a:221:C:C6	3.06	0.44
34:a:250:A:C6	34:a:274:A:C2	3.05	0.44
34:a:289:G:N1	34:a:312:C:N3	2.65	0.44
34:a:371:A:N6	34:a:391:G:C6	2.86	0.44
34:a:429:U:C4'	34:a:430:A:H5'	2.44	0.44
34:a:517:G:C5	34:a:531:U:C2	3.05	0.44
34:a:559:A:C5	34:a:561:U:O4	2.70	0.44
34:a:646:G:C6	34:a:647:C:N4	2.85	0.44
34:a:711:G:H2'	34:a:712:A:H8	1.81	0.44
34:a:724:G:C6	34:a:725:G:C5	3.05	0.44
34:a:760:G:C8	34:a:761:G:C8	3.06	0.44
34:a:839:C:O5'	34:a:839:C:H6	2.00	0.44
34:a:841:C:H4'	34:a:843:U:N1	2.31	0.44
34:a:844:G:C8	34:a:846:G:H5'	2.52	0.44
34:a:982:U:H4'	34:a:983:A:O4'	2.17	0.44
34:a:1048:G:H2'	34:a:1050:G:C8	2.52	0.44
34:a:1161:C:H2'	34:a:1162:C:C6	2.53	0.44
34:a:1250:A:C2	34:a:1370:G:H1'	2.52	0.44
34:a:1253:G:C6	34:a:1285:A:N1	2.86	0.44
34:a:1301:U:C5	34:a:1303:C:C5	3.04	0.44
34:a:1332:A:C6	34:a:1333:A:C6	3.05	0.44
34:a:1351:U:H2'	34:a:1352:C:C6	2.51	0.44
34:a:1353:G:C6	34:a:1370:G:N1	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1354:U:O2	34:a:1369:C:O2	2.36	0.44
34:a:1436:U:H2'	34:a:1437:A:H8	1.82	0.44
34:a:1439:G:C2	34:a:1440:U:C2	3.05	0.44
34:a:1488:G:C6	34:a:1489:G:C5	3.05	0.44
34:a:1507:A:H61	54:u:45:LYS:HZ3	1.65	0.44
34:a:1524:C:H5''	44:k:121:ARG:HH22	1.81	0.44
35:b:80:LYS:CD	35:b:90:PHE:CZ	3.00	0.44
37:d:85:THR:HG23	37:d:86:GLY:N	2.32	0.44
37:d:160:LEU:O	37:d:162:GLU:O	2.36	0.44
37:d:186:GLU:N	37:d:189:ASP:HB3	2.31	0.44
38:e:75:LEU:HD12	38:e:75:LEU:O	2.17	0.44
38:e:136:VAL:O	38:e:140:ILE:HB	2.16	0.44
39:f:18:VAL:N	39:f:19:PRO:CD	2.81	0.44
40:g:16:LYS:HE2	42:i:42:THR:HG23	1.99	0.44
40:g:40:SER:OG	40:g:41:ILE:HG23	2.17	0.44
41:h:24:VAL:N	41:h:60:LEU:O	2.45	0.44
41:h:44:PHE:CE2	41:h:100:ILE:HG21	2.52	0.44
42:i:9:GLY:HA3	42:i:81:GLY:N	2.32	0.44
44:k:23:HIS:HD2	44:k:30:ILE:HD12	1.83	0.44
44:k:116:PRO:C	44:k:117:HIS:HD1	2.26	0.44
45:l:65:TYR:O	45:l:96:THR:HG23	2.17	0.44
45:l:120:ARG:HD3	45:l:122:LYS:HD3	1.99	0.44
46:m:82:LEU:HD13	52:s:64:GLU:CB	2.48	0.44
46:m:99:GLN:OE1	46:m:99:GLN:N	2.50	0.44
48:o:85:GLY:C	48:o:86:LEU:HD12	2.42	0.44
55:v:37:A:C5	55:v:38:A:C8	3.05	0.44
56:w:29:G:H2'	56:w:30:G:O4'	2.18	0.44
57:x:103:ARG:NH2	57:x:406:GLU:HB2	2.32	0.44
57:x:119:GLN:HB3	57:x:120:PRO:CD	2.47	0.44
57:x:212:GLU:HG3	57:x:213:LEU:N	2.31	0.44
57:x:254:ARG:C	57:x:257:ASN:H	2.25	0.44
57:x:308:ARG:NH1	57:x:314:GLU:HB3	2.33	0.44
57:x:565:LEU:HD22	57:x:609:PRO:HB2	1.99	0.44
57:x:619:GLU:HB2	57:x:680:THR:OG1	2.17	0.44
58:y:101:FME:HE2	58:y:101:FME:HB3	1.55	0.44
1:0:2:VAL:N	8:A:2615:U:C4	2.85	0.44
1:0:45:ASP:HB3	1:0:52:LYS:HE3	2.00	0.44
3:2:5:PHE:HD2	8:A:1612:C:O3'	2.01	0.44
4:3:17:GLY:HA2	8:A:628:G:H5''	2.00	0.44
7:6:51:VAL:HB	7:6:53:THR:HG23	1.99	0.44
8:A:192:C:H42	8:A:203:A:H2'	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:221:A:C5	8:A:233:A:C2	3.06	0.44
8:A:372:G:H5''	31:X:60:LYS:CD	2.46	0.44
8:A:372:G:C6	31:X:56:ARG:NH2	2.85	0.44
8:A:458:G:O2'	8:A:459:U:C6	2.71	0.44
8:A:459:U:H2'	8:A:460:A:H8	1.82	0.44
8:A:496:G:C2	8:A:497:A:C1'	3.00	0.44
8:A:629:G:H5''	8:A:650:C:O2'	2.17	0.44
8:A:672:C:N3	8:A:809:G:N1	2.65	0.44
8:A:718:A:C6	8:A:719:C:C2	3.05	0.44
8:A:884:U:O2	8:A:894:U:C5'	2.65	0.44
8:A:1055:G:C2	8:A:1105:U:N3	2.86	0.44
8:A:1059:G:C5	8:A:1088:A:N6	2.84	0.44
8:A:1080:A:H3'	8:A:1080:A:P	2.58	0.44
8:A:1085:A:H4'	8:A:1086:A:OP1	2.15	0.44
8:A:1093:G:H2'	8:A:1094:U:H1'	1.98	0.44
8:A:1135:C:C4	8:A:1139:G:C6	3.05	0.44
8:A:1203:U:H2'	8:A:1204:A:C8	2.52	0.44
8:A:1265:A:N6	8:A:2014:A:C8	2.85	0.44
8:A:1265:A:OP1	8:A:1265:A:H8	2.01	0.44
8:A:1317:G:C6	8:A:1318:U:N3	2.86	0.44
8:A:1341:G:H1'	27:T:59:ASN:HB3	1.98	0.44
8:A:1364:G:C6	8:A:1368:G:C6	3.06	0.44
8:A:1387:A:C6	8:A:1401:G:C6	3.05	0.44
8:A:1387:A:C2	8:A:1388:G:C4	3.06	0.44
8:A:1413:A:C5	8:A:1414:C:C5	3.05	0.44
8:A:1416:G:N1	8:A:1583:A:C8	2.85	0.44
8:A:1435:G:N1	8:A:1558:C:N4	2.66	0.44
8:A:1492:G:C4	8:A:1496:A:C6	3.05	0.44
8:A:1516:G:N1	8:A:1517:G:C5	2.85	0.44
8:A:1521:G:H3'	8:A:1522:A:H2'	1.99	0.44
8:A:1536:C:H4'	8:A:1537:G:N3	2.33	0.44
8:A:1567:G:O4'	8:A:1568:G:C2	2.70	0.44
8:A:1668:A:H5''	18:K:5:GLN:OE1	2.18	0.44
8:A:1727:C:H2'	8:A:1728:C:C6	2.52	0.44
8:A:1839:G:C6	8:A:1840:G:N7	2.85	0.44
8:A:1870:C:H2'	8:A:1871:A:O4'	2.17	0.44
8:A:2093:G:H4'	15:H:25:TYR:H	1.82	0.44
8:A:2115:G:C5'	8:A:2119:A:H2	2.30	0.44
8:A:2190:G:O5'	8:A:2190:G:H8	2.00	0.44
8:A:2197:U:N3	8:A:2225:A:C8	2.71	0.44
8:A:2217:G:C5	8:A:2218:G:N7	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2294:G:C2	8:A:2295:C:C5	3.06	0.44
8:A:2311:A:C2	13:F:40:GLY:HA2	2.53	0.44
8:A:2322:A:C6	8:A:2333:A:N6	2.86	0.44
8:A:2395:C:C2	8:A:2396:G:C8	3.06	0.44
8:A:2415:G:N3	8:A:2416:C:C6	2.86	0.44
8:A:2417:C:H2'	8:A:2418:A:H8	1.83	0.44
8:A:2461:A:C1'	8:A:2492:U:C2	3.00	0.44
8:A:2484:G:N2	8:A:2485:G:H1'	2.33	0.44
8:A:2544:G:H2'	8:A:2545:G:C8	2.51	0.44
8:A:2621:G:H2'	8:A:2622:U:O4'	2.18	0.44
8:A:2675:A:N1	8:A:2732:G:N2	2.66	0.44
8:A:2727:A:C4	8:A:2728:U:C5	3.06	0.44
8:A:2811:G:N2	8:A:2812:G:H1'	2.32	0.44
9:B:20:G:C2	9:B:21:G:C4	3.05	0.44
9:B:28:C:OP1	22:O:34:HIS:HB2	2.17	0.44
9:B:28:C:OP1	22:O:31:THR:HG21	2.17	0.44
9:B:39:A:C6	9:B:44:G:N1	2.85	0.44
12:E:76:PRO:HB3	12:E:82:GLY:O	2.17	0.44
12:E:145:ASP:OD1	12:E:183:PHE:CD1	2.70	0.44
19:L:93:ASN:OD1	19:L:93:ASN:N	2.38	0.44
21:N:32:GLU:HA	21:N:115:LEU:HD12	1.99	0.44
24:Q:34:ALA:O	24:Q:38:VAL:N	2.42	0.44
26:S:40:ASN:C	26:S:41:LYS:HG2	2.43	0.44
27:T:14:PRO:HA	27:T:32:LEU:CD2	2.46	0.44
31:X:56:ARG:O	31:X:59:ASP:HB2	2.18	0.44
33:Z:3:THR:OG1	33:Z:36:GLU:HG2	2.18	0.44
34:a:4:U:O4	34:a:612:C:H4'	2.17	0.44
34:a:22:G:C6	34:a:23:C:C4	3.06	0.44
34:a:29:U:H4'	34:a:295:C:O3'	2.17	0.44
34:a:40:C:H2'	34:a:41:G:O4'	2.18	0.44
34:a:158:G:C8	34:a:163:C:C5'	2.98	0.44
34:a:184:G:H2'	34:a:185:U:C6	2.52	0.44
34:a:234:C:H2'	34:a:235:C:C6	2.49	0.44
34:a:242:G:C6	34:a:285:C:N4	2.86	0.44
34:a:371:A:C2	34:a:391:G:C2	3.04	0.44
34:a:410:G:H1'	34:a:433:G:N1	2.33	0.44
34:a:412:A:H62	34:a:414:A:C1'	2.30	0.44
34:a:436:C:O2'	37:d:153:ARG:CD	2.66	0.44
34:a:439:U:H2'	34:a:440:C:O4'	2.18	0.44
34:a:490:C:O2'	34:a:491:G:H5'	2.18	0.44
34:a:518:C:H5	34:a:530:G:H5'	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:635:A:O2'	34:a:636:U:H6	2.00	0.44
34:a:706:A:H2'	34:a:707:U:O4'	2.16	0.44
34:a:770:C:H2'	34:a:771:G:C8	2.53	0.44
34:a:773:G:H2'	34:a:774:G:O4'	2.18	0.44
34:a:821:G:C6	34:a:880:C:N4	2.85	0.44
34:a:869:G:H8	34:a:869:G:O5'	1.99	0.44
34:a:891:U:OP2	34:a:906:A:C6	2.70	0.44
34:a:1067:A:H1'	34:a:1068:G:O4'	2.18	0.44
34:a:1176:A:C6	34:a:1177:G:C4	3.05	0.44
34:a:1262:C:C2	34:a:1263:C:C6	3.05	0.44
34:a:1275:A:N6	34:a:1276:G:C2	2.85	0.44
34:a:1286:U:C4	34:a:1287:A:O2'	2.71	0.44
34:a:1309:G:H2'	34:a:1310:G:C8	2.52	0.44
34:a:1317:C:O3'	47:n:48:LEU:HD21	2.17	0.44
34:a:1361:G:C6	34:a:1362:A:C6	3.05	0.44
34:a:1374:A:O2'	40:g:27:ASN:HB3	2.16	0.44
34:a:1393:U:H2'	34:a:1395:C:H5	1.82	0.44
34:a:1403:C:H1'	34:a:1500:A:N6	2.32	0.44
34:a:1438:G:C4	34:a:1439:G:C8	3.05	0.44
34:a:1530:G:N1	34:a:1531:A:N6	2.65	0.44
36:c:168:ARG:HD3	36:c:172:VAL:CG2	2.48	0.44
37:d:123:MET:HB2	37:d:128:VAL:HG22	2.00	0.44
37:d:171:GLU:O	37:d:171:GLU:CD	2.61	0.44
38:e:38:VAL:HG12	38:e:46:GLY:O	2.17	0.44
39:f:22:ILE:O	39:f:26:THR:HG23	2.17	0.44
42:i:4:GLN:CD	42:i:19:PHE:HB3	2.42	0.44
50:q:46:HIS:ND1	50:q:70:LYS:CE	2.81	0.44
50:q:61:ARG:HG2	50:q:73:THR:CG2	2.48	0.44
56:w:24:G:C6	56:w:25:C:N4	2.86	0.44
57:x:347:THR:CG2	57:x:356:ARG:HD3	2.47	0.44
57:x:365:MET:CA	57:x:368:ASN:OD1	2.65	0.44
57:x:496:LYS:HG2	57:x:607:ALA:HA	1.98	0.44
57:x:507:GLN:O	57:x:508:SER:OG	2.30	0.44
57:x:549:ILE:CB	57:x:550:PRO:HD3	2.47	0.44
57:x:604:PHE:O	57:x:609:PRO:HG3	2.17	0.44
59:z:4:U:H2'	59:z:5:U:H6	1.81	0.44
5:4:32:LYS:HE3	8:A:2528:U:H5'	1.98	0.44
6:5:31:ARG:CB	8:A:1054:A:H4'	2.48	0.44
7:6:2:LYS:HG3	9:B:43:C:OP1	2.17	0.44
7:6:24:ILE:CD1	13:F:101:ARG:HD3	2.46	0.44
8:A:10:A:C4	8:A:11:C:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:14:A:N6	8:A:15:G:N3	2.65	0.44
8:A:21:A:C4	8:A:520:G:C2	3.06	0.44
8:A:42:A:H2'	8:A:43:G:O4'	2.18	0.44
8:A:139:U:H5''	8:A:140:C:H5	1.83	0.44
8:A:233:A:H61	8:A:429:A:N6	2.15	0.44
8:A:303:G:C5	8:A:304:U:C4	3.05	0.44
8:A:311:A:C5	8:A:328:U:N3	2.86	0.44
8:A:478:A:N6	8:A:502:A:N6	2.65	0.44
8:A:481:G:O2'	8:A:507:A:N6	2.51	0.44
8:A:545:U:H2'	8:A:546:U:N1	2.33	0.44
8:A:563:A:N6	8:A:2018:G:C8	2.85	0.44
8:A:582:A:N6	8:A:1259:G:O6	2.50	0.44
8:A:633:A:P	8:A:634:C:C5	3.11	0.44
8:A:650:C:H6	8:A:650:C:O5'	2.01	0.44
8:A:659:G:H4'	12:E:95:LYS:HD3	2.00	0.44
8:A:782:A:O4'	8:A:783:A:C5	2.71	0.44
8:A:784:G:O2'	8:A:785:G:H5''	2.17	0.44
8:A:828:U:C2	8:A:829:A:C6	3.06	0.44
8:A:864:G:N2	8:A:913:U:C2	2.84	0.44
8:A:1006:C:N3	8:A:1138:G:N2	2.65	0.44
8:A:1011:G:P	24:Q:75:TYR:HB3	2.58	0.44
8:A:1021:A:C8	8:A:1023:U:C2	3.06	0.44
8:A:1065:U:C5	8:A:1074:G:C8	3.06	0.44
8:A:1096:A:C2	16:I:26:ALA:HB2	2.52	0.44
8:A:1166:G:C4	8:A:1167:C:C5	3.05	0.44
8:A:1336:A:H2'	8:A:1337:G:C8	2.52	0.44
8:A:1420:A:H5'	8:A:1421:G:OP2	2.18	0.44
8:A:1439:A:N6	8:A:1552:A:C2'	2.81	0.44
8:A:1441:G:C4	8:A:1442:U:C5	3.06	0.44
8:A:1468:U:O2	8:A:1524:G:C2	2.71	0.44
8:A:1497:U:C4	8:A:1578:U:O5'	2.71	0.44
8:A:1577:C:H6	8:A:1577:C:O5'	2.00	0.44
8:A:1613:G:C5	8:A:1619:G:C6	3.05	0.44
8:A:1619:G:C2	8:A:1620:G:C4	3.06	0.44
8:A:1656:C:OP1	11:D:141:ARG:NE	2.50	0.44
8:A:1692:U:O2	8:A:1695:G:C6	2.70	0.44
8:A:1707:G:C5	8:A:1708:C:C5	3.06	0.44
8:A:1770:G:H2'	8:A:1771:C:C6	2.53	0.44
8:A:1787:A:H4'	8:A:2589:A:O2'	2.17	0.44
8:A:1832:C:C4	8:A:1833:C:C5	3.06	0.44
8:A:1833:C:N3	8:A:1973:G:C6	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1871:A:H2'	8:A:1872:A:O4'	2.17	0.44
8:A:1872:A:C6	8:A:1873:G:C4	3.06	0.44
8:A:1907:G:C5	8:A:1908:C:C5	3.05	0.44
8:A:1925:C:N3	8:A:1929:G:N1	2.64	0.44
8:A:1936:A:H2	8:A:1943:U:C4	2.35	0.44
8:A:1992:G:N2	8:A:1997:C:C6	2.86	0.44
8:A:2006:C:H5'	8:A:2049:G:OP1	2.18	0.44
8:A:2027:G:C2	8:A:2028:U:C2	3.05	0.44
8:A:2043:C:N3	8:A:2044:C:N4	2.65	0.44
8:A:2056:G:C5	8:A:2577:A:C4	3.05	0.44
8:A:2061:G:H1'	8:A:2062:A:N1	2.33	0.44
8:A:2061:G:C2	8:A:2063:C:C6	3.05	0.44
8:A:2087:G:N1	8:A:2088:A:C5	2.86	0.44
8:A:2126:A:H5''	8:A:2127:G:O5'	2.17	0.44
8:A:2223:G:C2	8:A:2224:G:H1'	2.52	0.44
8:A:2283:C:C6	8:A:2389:G:C4	3.06	0.44
8:A:2287:A:H1'	8:A:2288:A:OP1	2.17	0.44
8:A:2322:A:N6	8:A:2333:A:N6	2.66	0.44
8:A:2335:A:C8	8:A:2337:G:C5	3.06	0.44
8:A:2352:A:C8	8:A:2353:G:C8	3.04	0.44
8:A:2450:A:O2'	56:w:76:A:N1	2.38	0.44
8:A:2459:A:H2'	8:A:2460:U:O4'	2.17	0.44
8:A:2508:G:H2'	8:A:2509:G:H8	1.82	0.44
8:A:2590:A:H4'	10:C:237:ARG:CZ	2.48	0.44
8:A:2616:C:C2	8:A:2617:U:C6	3.05	0.44
8:A:2632:A:C2	8:A:2787:C:C2	3.06	0.44
8:A:2735:G:C4	8:A:2736:A:C8	3.06	0.44
8:A:2839:G:C5	8:A:2840:C:C4	3.06	0.44
8:A:2851:A:H2'	8:A:2852:G:O4'	2.16	0.44
9:B:42:C:O2	13:F:62:GLN:OE1	2.35	0.44
9:B:84:G:C2	9:B:93:C:N3	2.85	0.44
12:E:29:HIS:O	12:E:33:VAL:HG23	2.17	0.44
13:F:61:GLY:O	13:F:94:ARG:NH1	2.44	0.44
14:G:15:ASP:HB3	14:G:26:LYS:CB	2.48	0.44
14:G:48:THR:O	14:G:49:LEU:HG	2.18	0.44
14:G:116:LEU:HD11	14:G:122:ALA:HB2	1.99	0.44
14:G:130:ILE:HG22	14:G:131:VAL:N	2.32	0.44
15:H:21:VAL:HG21	15:H:26:ALA:HB2	1.99	0.44
15:H:86:ASP:O	15:H:87:GLU:HB2	2.17	0.44
15:H:94:ILE:CD1	15:H:122:LEU:HB2	2.47	0.44
16:I:100:ILE:O	16:I:139:VAL:HA	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:80:SER:C	19:L:84:LYS:HZ2	2.25	0.44
20:M:72:PRO:HB2	20:M:89:VAL:CG2	2.48	0.44
20:M:73:ILE:O	20:M:90:GLU:N	2.33	0.44
20:M:121:ALA:O	20:M:123:LYS:N	2.50	0.44
21:N:79:LEU:HD23	21:N:83:LEU:HB2	2.00	0.44
23:P:31:VAL:HG21	23:P:40:GLN:HE21	1.83	0.44
28:U:86:PHE:CE1	28:U:91:LYS:HB2	2.53	0.44
30:W:24:GLY:O	30:W:62:LYS:HD3	2.18	0.44
30:W:48:GLY:O	30:W:55:LEU:HD22	2.17	0.44
31:X:30:PRO:HG2	31:X:32:LEU:HD12	2.00	0.44
34:a:5:U:H4'	34:a:6:G:O5'	2.17	0.44
34:a:139:A:C6	34:a:140:U:C4	3.05	0.44
34:a:182:A:C2'	34:a:184:G:N7	2.80	0.44
34:a:262:A:H5'	53:t:67:HIS:CB	2.48	0.44
34:a:320:A:C2	34:a:334:C:C2	3.06	0.44
34:a:391:G:P	49:p:28:ARG:HH12	2.40	0.44
34:a:395:C:H2'	34:a:396:C:C6	2.52	0.44
34:a:395:C:H4'	57:x:358:ARG:HD2	2.00	0.44
34:a:404:G:N2	34:a:498:A:H2'	2.32	0.44
34:a:410:G:N2	34:a:431:A:C8	2.85	0.44
34:a:451:A:H4'	34:a:452:A:O5'	2.16	0.44
34:a:492:C:H1'	34:a:493:A:N7	2.32	0.44
34:a:510:A:H1'	34:a:543:U:C1'	2.47	0.44
34:a:522:C:H1'	34:a:536:C:C5'	2.47	0.44
34:a:596:A:N6	34:a:645:G:C6	2.85	0.44
34:a:608:A:C4	34:a:609:A:C8	3.06	0.44
34:a:616:G:N1	34:a:617:G:C6	2.86	0.44
34:a:745:G:C2	34:a:746:A:C5	3.06	0.44
34:a:790:A:H2'	34:a:791:G:C8	2.52	0.44
34:a:791:G:H1	34:a:792:A:H62	1.64	0.44
34:a:1000:A:H2'	34:a:1001:C:C6	2.53	0.44
34:a:1000:A:N6	34:a:1041:G:O6	2.51	0.44
34:a:1059:C:OP2	36:c:198:LYS:NZ	2.51	0.44
34:a:1088:G:N2	34:a:1167:A:N6	2.63	0.44
34:a:1108:G:H2'	34:a:1109:C:H5'	1.99	0.44
34:a:1129:C:C2	34:a:1139:G:C5	3.05	0.44
34:a:1130:A:OP2	42:i:63:TYR:CE2	2.71	0.44
34:a:1135:U:H3'	34:a:1137:C:H5	1.82	0.44
34:a:1312:G:C5	52:s:1:PRO:CD	3.00	0.44
34:a:1349:A:H61	34:a:1373:G:H1'	1.82	0.44
34:a:1350:A:H2'	34:a:1351:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1377:A:C6	40:g:6:ILE:HG21	2.52	0.44
34:a:1417:G:H2'	34:a:1482:G:C2	2.52	0.44
34:a:1419:G:C2	34:a:1481:U:O2	2.70	0.44
34:a:1438:G:H2'	34:a:1439:G:O4'	2.16	0.44
34:a:1454:G:C2	34:a:1455:G:C4	3.05	0.44
34:a:1518:MA6:C6	34:a:1519:MA6:N1	2.80	0.44
35:b:46:VAL:HG23	35:b:47:PRO:HD3	2.00	0.44
36:c:61:LYS:N	36:c:61:LYS:HD3	2.32	0.44
36:c:187:GLU:CG	36:c:189:HIS:CE1	3.01	0.44
37:d:27:ILE:HG13	37:d:31:CYS:HB2	1.99	0.44
38:e:18:ASN:N	38:e:33:THR:O	2.51	0.44
48:o:2:LEU:HD12	48:o:34:GLN:HB2	1.98	0.44
49:p:17:TYR:CD1	49:p:17:TYR:N	2.86	0.44
49:p:75:ILE:HG23	49:p:79:ASN:HD22	1.82	0.44
50:q:46:HIS:ND1	50:q:70:LYS:HE2	2.31	0.44
55:v:53:G:C2	55:v:62:C:N3	2.85	0.44
55:v:56:C:O2	55:v:56:C:H2'	2.17	0.44
57:x:497:VAL:HG23	57:x:522:TYR:HB3	1.99	0.44
1:0:11:LYS:HE2	8:A:2021:C:P	2.58	0.44
1:0:28:SER:O	1:0:36:LYS:HA	2.17	0.44
3:2:39:ARG:HH12	8:A:461:C:N4	2.16	0.44
4:3:9:ALA:HB1	4:3:13:PHE:CD2	2.52	0.44
8:A:7:G:H1'	17:J:135:GLN:HE21	1.82	0.44
8:A:74:A:N7	8:A:88:G:O6	2.50	0.44
8:A:96:C:H4'	32:Y:41:HIS:CE1	2.52	0.44
8:A:127:A:H5''	8:A:128:C:C6	2.53	0.44
8:A:230:G:H2'	8:A:231:A:C8	2.52	0.44
8:A:286:U:H2'	8:A:287:G:C8	2.52	0.44
8:A:309:A:H1'	8:A:329:G:N3	2.33	0.44
8:A:352:A:H2'	8:A:353:C:H6	1.81	0.44
8:A:417:C:H2'	8:A:418:C:H6	1.82	0.44
8:A:480:A:P	28:U:60:LYS:NZ	2.90	0.44
8:A:496:G:C5	8:A:497:A:C8	3.06	0.44
8:A:603:A:N7	8:A:655:A:C4	2.85	0.44
8:A:703:U:C4	8:A:704:G:C4	3.06	0.44
8:A:745:1MG:C2	8:A:753:A:C6	3.06	0.44
8:A:748:G:N1	26:S:90:LYS:HE2	2.31	0.44
8:A:751:A:C5	8:A:789:A:C6	3.06	0.44
8:A:864:G:C2	8:A:913:U:N3	2.85	0.44
8:A:895:U:OP1	8:A:896:A:N6	2.49	0.44
8:A:991:C:C4	8:A:1185:G:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:997:G:C6	8:A:1159:U:N3	2.85	0.44
8:A:1028:A:N7	8:A:1125:G:C2	2.86	0.44
8:A:1059:G:N9	8:A:1060:U:H5	2.14	0.44
8:A:1061:U:C1'	8:A:1070:A:H1'	2.47	0.44
8:A:1089:A:C2	8:A:1101:U:O4	2.70	0.44
8:A:1094:U:H4'	8:A:1095:A:N7	2.33	0.44
8:A:1141:U:O2	8:A:1142:A:C6	2.71	0.44
8:A:1145:C:N3	8:A:1146:C:C5	2.86	0.44
8:A:1190:G:N2	8:A:1191:G:C4	2.86	0.44
8:A:1307:A:C4	8:A:1308:A:C8	3.06	0.44
8:A:1341:G:C2	27:T:84:TYR:CG	3.05	0.44
8:A:1359:A:OP1	8:A:1360:G:OP2	2.36	0.44
8:A:1378:A:C8	8:A:1380:G:C5	3.06	0.44
8:A:1385:A:N6	8:A:1402:U:O4	2.51	0.44
8:A:1429:G:H1'	8:A:1568:G:C4	2.52	0.44
8:A:1452:G:C4	8:A:2702:G:C6	3.06	0.44
8:A:1469:A:C6	8:A:1470:A:C5	3.06	0.44
8:A:1638:C:C4	8:A:1639:C:C5	3.06	0.44
8:A:1750:G:O2'	8:A:2860:A:C2	2.61	0.44
8:A:1841:U:N3	8:A:1842:G:C5	2.86	0.44
8:A:1850:G:H2'	8:A:1851:U:C6	2.52	0.44
8:A:1865:U:O2'	8:A:1866:A:C8	2.71	0.44
8:A:1932:A:C2	8:A:1969:A:C5	3.06	0.44
8:A:1935:G:C3'	8:A:1962:5MC:HN41	2.28	0.44
8:A:1936:A:H2'	8:A:1945:G:O6	2.17	0.44
8:A:2143:C:N4	8:A:2148:G:N9	2.65	0.44
8:A:2265:U:C4	8:A:2266:A:C5	3.06	0.44
8:A:2322:A:C2	8:A:2323:G:H1'	2.53	0.44
8:A:2387:U:C1'	30:W:37:ARG:NH1	2.81	0.44
8:A:2440:C:N4	8:A:2441:U:C6	2.85	0.44
8:A:2509:G:C6	8:A:2510:C:C5	3.05	0.44
8:A:2535:G:C2	8:A:2536:G:C5	3.05	0.44
8:A:2592:G:C5	8:A:2593:U:C5	3.06	0.44
8:A:2643:G:C6	8:A:2644:G:C5	3.06	0.44
8:A:2661:G:H4'	57:x:18:ILE:HD13	1.99	0.44
8:A:2727:A:C6	8:A:2728:U:C4	3.06	0.44
8:A:2790:U:C4	8:A:2893:A:C2	3.05	0.44
9:B:57:A:C6	9:B:58:A:C5	3.06	0.44
9:B:75:G:C6	9:B:76:G:C5	3.06	0.44
9:B:83:G:C6	9:B:84:G:C5	3.05	0.44
9:B:102:G:N2	9:B:103:U:H1'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:D:108:ASP:HA	11:D:172:VAL:O	2.17	0.44
13:F:48:LEU:HD12	13:F:49:LEU:N	2.33	0.44
14:G:51:PHE:CZ	14:G:68:ARG:HA	2.53	0.44
15:H:71:LYS:HG2	15:H:74:ALA:HB2	1.99	0.44
15:H:122:LEU:N	15:H:122:LEU:HD22	2.33	0.44
15:H:129:GLU:OE2	15:H:141:LYS:O	2.36	0.44
18:K:77:ILE:HD11	23:P:71:ARG:CZ	2.47	0.44
20:M:20:LEU:CD1	29:V:81:PRO:HG2	2.48	0.44
20:M:29:GLY:HA2	20:M:106:ASP:HB2	1.99	0.44
20:M:57:VAL:HG12	20:M:112:LEU:CD2	2.47	0.44
20:M:58:LYS:C	20:M:60:GLN:N	2.76	0.44
20:M:63:ILE:HG13	20:M:105:MET:HE3	1.98	0.44
20:M:126:ILE:O	20:M:126:ILE:HG23	2.17	0.44
21:N:55:ALA:HA	21:N:80:PHE:CZ	2.52	0.44
24:Q:75:TYR:CE2	24:Q:79:ILE:HG13	2.52	0.44
25:R:79:ARG:C	25:R:81:LYS:H	2.24	0.44
28:U:53:GLN:OE1	28:U:53:GLN:N	2.51	0.44
29:V:9:ARG:HG2	29:V:41:GLU:CG	2.47	0.44
29:V:48:MET:HA	29:V:51:GLN:HG2	2.00	0.44
31:X:40:GLU:OE1	31:X:40:GLU:N	2.39	0.44
31:X:67:LEU:CB	31:X:71:ARG:HH21	2.30	0.44
34:a:1:A:C8	34:a:2:A:C5	3.05	0.44
34:a:28:A:HO2'	34:a:296:U:H5''	1.81	0.44
34:a:59:A:C2	34:a:354:G:C4	3.05	0.44
34:a:61:G:H2'	34:a:62:U:H6	1.81	0.44
34:a:62:U:H5''	34:a:385:C:H1'	1.99	0.44
34:a:112:G:H21	34:a:354:G:C5'	2.30	0.44
34:a:119:A:O4'	34:a:288:A:C2	2.71	0.44
34:a:142:G:N1	34:a:222:C:C4	2.86	0.44
34:a:193:C:O2'	53:t:55:PRO:HA	2.17	0.44
34:a:203:G:O6	34:a:214:C:OP2	2.36	0.44
34:a:207:C:H1'	34:a:212:G:H1'	1.97	0.44
34:a:240:G:C2	34:a:287:U:C2	3.06	0.44
34:a:376:G:C4	34:a:377:G:C8	3.06	0.44
34:a:413:G:O6	37:d:30:LYS:O	2.36	0.44
34:a:414:A:H3'	34:a:415:A:H8	1.81	0.44
34:a:429:U:C2	34:a:430:A:N7	2.86	0.44
34:a:439:U:O4	34:a:496:A:H2	2.00	0.44
34:a:446:G:C6	34:a:447:G:C5	3.05	0.44
34:a:448:A:H2'	34:a:448:A:N3	2.32	0.44
34:a:456:A:C2	34:a:476:U:O4	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:460:A:H2	34:a:473:U:C2	2.36	0.44
34:a:494:G:H2'	34:a:496:A:H8	1.80	0.44
34:a:511:C:HO2'	34:a:512:U:P	2.34	0.44
34:a:515:G:C4	34:a:516:PSU:N1	2.86	0.44
34:a:537:G:H2'	34:a:538:G:H8	1.81	0.44
34:a:680:C:H2'	34:a:681:A:C8	2.53	0.44
34:a:784:A:C6	34:a:799:G:C2	3.06	0.44
34:a:815:A:N6	34:a:1529:G:C8	2.85	0.44
34:a:816:A:OP1	34:a:1526:G:O2'	2.30	0.44
34:a:858:G:H1	34:a:870:U:P	2.40	0.44
34:a:951:G:C5	34:a:952:U:C5	3.06	0.44
34:a:966:2MG:C2	34:a:967:5MC:C2	3.06	0.44
34:a:1055:A:N1	34:a:1206:G:C8	2.86	0.44
34:a:1095:U:H5'	34:a:1109:C:H1'	1.99	0.44
34:a:1131:G:C2	34:a:1132:C:C4	3.06	0.44
34:a:1149:C:C2	34:a:1150:A:C8	3.05	0.44
34:a:1198:G:H2'	34:a:1199:U:C6	2.52	0.44
34:a:1277:C:C1'	34:a:1282:C:C2	3.01	0.44
34:a:1348:U:O4	34:a:1374:A:H8	2.00	0.44
34:a:1426:G:C6	34:a:1475:G:C5	3.05	0.44
34:a:1455:G:C6	34:a:1456:A:C6	3.05	0.44
34:a:1486:G:H2'	34:a:1487:G:C1'	2.47	0.44
40:g:3:ARG:HG3	40:g:4:ARG:HE	1.82	0.44
40:g:73:GLU:OE2	40:g:74:VAL:HG22	2.18	0.44
41:h:95:MET:CG	41:h:129:ALA:HB1	2.48	0.44
43:j:10:LEU:CD2	43:j:98:VAL:HG12	2.48	0.44
43:j:25:ILE:HD13	43:j:90:LEU:HD13	1.99	0.44
44:k:80:ASN:HB3	44:k:105:ARG:HB3	1.99	0.44
45:l:36:VAL:HG12	45:l:75:GLU:CD	2.43	0.44
45:l:113:ARG:O	45:l:118:VAL:N	2.46	0.44
47:n:23:ARG:HA	47:n:26:LEU:HB2	2.00	0.44
47:n:81:ARG:O	47:n:84:VAL:HG12	2.18	0.44
57:x:208:ALA:O	57:x:209:ASP:C	2.59	0.44
57:x:691:SER:HB3	57:x:693:VAL:HG13	2.00	0.44
8:A:14:A:C6	8:A:526:A:C2	3.05	0.44
8:A:54:G:C2	8:A:55:G:C4	3.05	0.44
8:A:70:G:C2	8:A:114:U:C4	3.06	0.44
8:A:89:A:C6	8:A:90:U:C4	3.06	0.44
8:A:142:A:H2'	8:A:143:C:C6	2.53	0.44
8:A:188:G:N1	8:A:209:C:N4	2.65	0.44
8:A:194:G:C2'	8:A:195:A:O4'	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:273:G:N1	8:A:365:U:C4	2.86	0.44
8:A:303:G:C4	8:A:315:G:C2	3.05	0.44
8:A:370:G:C5	8:A:424:G:C8	3.05	0.44
8:A:424:G:C6	8:A:425:G:N7	2.85	0.44
8:A:458:G:O6	12:E:53:THR:CG2	2.66	0.44
8:A:476:G:H1'	8:A:480:A:N6	2.33	0.44
8:A:538:A:C6	8:A:556:A:C8	3.06	0.44
8:A:559:G:C6	8:A:560:C:C4	3.06	0.44
8:A:563:A:P	25:R:79:ARG:HH22	2.41	0.44
8:A:642:U:C2	8:A:645:C:OP2	2.71	0.44
8:A:687:C:H3'	8:A:688:U:C6	2.53	0.44
8:A:713:G:H1'	8:A:718:A:N6	2.31	0.44
8:A:753:A:C4	8:A:754:U:C5	3.06	0.44
8:A:836:G:H1	8:A:942:G:H1	1.65	0.44
8:A:870:U:OP1	20:M:6:ARG:HD2	2.18	0.44
8:A:877:A:C2'	8:A:899:A:C2'	2.96	0.44
8:A:884:U:C4	8:A:896:A:N7	2.85	0.44
8:A:885:C:O2	8:A:891:G:C5	2.71	0.44
8:A:958:U:H5'	20:M:14:LYS:CE	2.48	0.44
8:A:1045:C:N4	8:A:1111:A:C8	2.85	0.44
8:A:1073:A:OP1	8:A:1094:U:C4	2.71	0.44
8:A:1160:G:C6	8:A:1161:C:C4	3.06	0.44
8:A:1204:A:N6	8:A:1242:U:C4	2.85	0.44
8:A:1279:G:H5'	21:N:34:ILE:HG22	2.00	0.44
8:A:1332:G:H2'	8:A:1332:G:N3	2.33	0.44
8:A:1355:G:N2	8:A:1377:G:H1'	2.32	0.44
8:A:1389:G:C2	8:A:1399:C:N3	2.86	0.44
8:A:1408:G:C4	8:A:1409:U:C5	3.06	0.44
8:A:1447:C:C2	8:A:1465:G:N1	2.86	0.44
8:A:1449:G:N1	8:A:1450:G:C5	2.86	0.44
8:A:1452:G:N2	8:A:1457:U:C2	2.86	0.44
8:A:1456:G:H2'	8:A:1457:U:H6	1.82	0.44
8:A:1573:G:C4	8:A:1574:C:C6	3.05	0.44
8:A:1580:A:N7	8:A:1581:G:N7	2.65	0.44
8:A:1655:A:H3'	8:A:1656:C:C6	2.53	0.44
8:A:1664:A:H2'	8:A:1665:A:C8	2.53	0.44
8:A:1684:G:O6	8:A:1705:A:N6	2.49	0.44
8:A:1798:U:C4	8:A:1819:A:C2	3.06	0.44
8:A:1799:G:N7	10:C:175:LEU:HD13	2.33	0.44
8:A:1815:A:C4	8:A:1817:G:C5	3.06	0.44
8:A:2051:A:H3'	8:A:2578:G:O5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2107:G:C8	8:A:2108:A:O4'	2.71	0.44
8:A:2124:G:C8	8:A:2176:A:N6	2.85	0.44
8:A:2214:C:C4	8:A:2215:C:C4	3.05	0.44
8:A:2294:G:C6	8:A:2295:C:C4	3.06	0.44
8:A:2348:U:C2	8:A:2370:G:N2	2.85	0.44
8:A:2435:A:C6	8:A:2436:G:C5	3.06	0.44
8:A:2451:A:C4'	56:w:76:A:C6	3.01	0.44
8:A:2583:G:C5	8:A:2584:U:C4	3.06	0.44
8:A:2618:G:H2'	8:A:2619:C:C6	2.53	0.44
8:A:2627:G:N3	8:A:2781:A:H2	2.15	0.44
8:A:2648:G:H2'	8:A:2649:C:H6	1.81	0.44
8:A:2680:U:OP1	11:D:194:PRO:HA	2.18	0.44
8:A:2681:C:N3	8:A:2725:A:N7	2.65	0.44
8:A:2720:U:C6	8:A:2872:A:N6	2.85	0.44
8:A:2721:A:C4	8:A:2722:G:C8	3.06	0.44
8:A:2803:G:H2'	8:A:2804:U:C6	2.53	0.44
8:A:2831:G:O4'	8:A:2883:A:C2	2.70	0.44
8:A:2831:G:N3	8:A:2883:A:H2'	2.33	0.44
9:B:10:G:N7	9:B:11:C:C4	2.86	0.44
9:B:35:C:O5'	9:B:35:C:H6	2.01	0.44
9:B:75:G:C2'	29:V:88:HIS:CE1	3.00	0.44
10:C:29:PHE:HB2	10:C:92:LEU:HD22	1.99	0.44
10:C:141:HIS:ND1	10:C:192:GLY:O	2.42	0.44
11:D:51:THR:OG1	11:D:76:GLY:HA3	2.17	0.44
13:F:134:GLN:HE22	13:F:149:ARG:N	2.15	0.44
14:G:21:GLN:HA	14:G:36:LEU:HD12	2.00	0.44
15:H:80:ILE:N	15:H:145:ASN:O	2.51	0.44
16:I:102:ARG:CB	16:I:141:ASP:C	2.91	0.44
21:N:102:PHE:CD1	21:N:102:PHE:N	2.85	0.44
22:O:33:ARG:CA	22:O:65:THR:O	2.62	0.44
23:P:58:PHE:CE1	23:P:73:PHE:HB2	2.53	0.44
24:Q:26:ALA:C	24:Q:28:SER:N	2.72	0.44
25:R:20:VAL:O	25:R:96:VAL:HG22	2.17	0.44
25:R:41:ILE:HD13	25:R:41:ILE:HA	1.90	0.44
25:R:78:ARG:HG2	25:R:81:LYS:HG3	1.98	0.44
26:S:28:LYS:HE3	26:S:70:LYS:HZ3	1.81	0.44
28:U:23:LYS:HB2	28:U:23:LYS:HE3	1.66	0.44
28:U:82:VAL:C	28:U:96:LYS:HE3	2.42	0.44
30:W:42:HIS:CE1	30:W:73:ARG:NH1	2.86	0.44
32:Y:43:LEU:O	32:Y:46:VAL:HG12	2.18	0.44
34:a:6:G:O2'	34:a:7:A:H8	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:13:U:N3	34:a:916:U:C4	2.86	0.44
34:a:37:U:OP1	45:l:120:ARG:HG2	2.17	0.44
34:a:75:G:H3'	34:a:76:G:H8	1.83	0.44
34:a:100:G:C6	34:a:101:A:C5	3.06	0.44
34:a:107:G:C6	34:a:108:G:H1'	2.52	0.44
34:a:122:G:C5	34:a:123:U:C5	3.06	0.44
34:a:250:A:O4'	34:a:252:U:N1	2.51	0.44
34:a:282:A:C5	34:a:283:U:C5	3.05	0.44
34:a:282:A:C4	34:a:283:U:C6	3.05	0.44
34:a:393:A:C4	34:a:394:G:C8	3.06	0.44
34:a:404:G:N3	34:a:405:U:C6	2.86	0.44
34:a:409:U:H3'	34:a:410:G:H8	1.81	0.44
34:a:428:G:H4'	34:a:429:U:OP1	2.17	0.44
34:a:450:G:OP1	34:a:452:A:OP1	2.36	0.44
34:a:547:A:OP1	37:d:67:LEU:HD12	2.18	0.44
34:a:588:G:N2	34:a:652:U:O2	2.51	0.44
34:a:592:G:N1	34:a:648:A:C6	2.86	0.44
34:a:633:G:C6	34:a:634:C:C4	3.05	0.44
34:a:673:A:C6	34:a:734:G:C6	3.06	0.44
34:a:698:G:H2'	34:a:699:C:H6	1.78	0.44
34:a:750:C:O3'	48:o:16:ARG:NH2	2.50	0.44
34:a:859:G:C6	34:a:860:A:C5	3.06	0.44
34:a:889:A:N6	34:a:908:A:C8	2.86	0.44
34:a:958:A:O2'	34:a:985:C:H4'	2.18	0.44
34:a:976:G:N2	34:a:1363:A:N3	2.66	0.44
34:a:1027:C:N3	34:a:1035:A:N9	2.65	0.44
34:a:1053:G:O2'	34:a:1199:U:C5	2.71	0.44
34:a:1101:A:H61	35:b:101:THR:HG21	1.83	0.44
34:a:1128:C:C4	34:a:1145:A:N1	2.85	0.44
34:a:1130:A:N6	34:a:1144:G:C1'	2.81	0.44
34:a:1297:G:C4	40:g:113:LYS:HE2	2.52	0.44
34:a:1316:G:OP2	47:n:27:LYS:NZ	2.50	0.44
34:a:1323:G:N1	34:a:1324:A:C6	2.85	0.44
34:a:1326:U:H2'	34:a:1327:C:H6	1.83	0.44
34:a:1329:A:C6	34:a:1330:U:O4	2.71	0.44
34:a:1423:G:H1	34:a:1477:U:H3	1.63	0.44
34:a:1477:U:H2'	34:a:1478:U:O4'	2.18	0.44
35:b:16:GLY:HA2	35:b:39:ILE:HA	2.00	0.44
35:b:71:THR:HG23	35:b:93:HIS:C	2.43	0.44
36:c:83:VAL:HG22	36:c:100:ILE:CD1	2.48	0.44
37:d:64:TYR:CE2	37:d:93:LEU:HD12	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:166:LYS:HZ2	37:d:168:THR:HA	1.81	0.44
38:e:40:ASP:C	38:e:42:ASN:N	2.75	0.44
38:e:155:LYS:HG3	41:h:65:PHE:CD2	2.53	0.44
40:g:17:PHE:CE2	40:g:43:TYR:CD1	3.05	0.44
42:i:71:ILE:HG13	42:i:72:SER:N	2.33	0.44
44:k:21:HIS:CE1	44:k:34:THR:CG2	3.01	0.44
45:l:112:ALA:HB1	45:l:115:LYS:HB2	1.99	0.44
46:m:15:VAL:CG2	46:m:33:LEU:HD22	2.48	0.44
47:n:26:LEU:O	47:n:30:ILE:HG13	2.17	0.44
52:s:35:ARG:HB3	52:s:71:GLY:CA	2.47	0.44
53:t:17:ARG:NH2	53:t:18:LYS:HZ3	2.16	0.44
54:u:10:PRO:O	54:u:13:VAL:HG23	2.17	0.44
57:x:14:ILE:O	57:x:14:ILE:HG13	2.16	0.44
57:x:28:ARG:HG3	57:x:271:ASN:OD1	2.18	0.44
57:x:110:MET:CE	57:x:136:ARG:HD2	2.48	0.44
57:x:169:GLN:HG2	57:x:264:THR:HG23	1.99	0.44
57:x:375:GLU:HG2	57:x:375:GLU:O	2.18	0.44
57:x:537:ASN:HA	57:x:577:LEU:HB3	1.99	0.44
1:0:43:THR:HG23	1:0:47:TYR:O	2.18	0.44
1:0:53:VAL:HG23	1:0:54:ILE:HG12	1.99	0.44
8:A:2:G:N1	8:A:3:U:C4	2.86	0.44
8:A:4:U:O2	8:A:2900:A:C2	2.71	0.44
8:A:6:A:C6	8:A:7:G:C5	3.05	0.44
8:A:23:G:C2	8:A:24:G:C8	3.05	0.44
8:A:66:C:C4'	8:A:456:C:N3	2.81	0.44
8:A:85:G:C2	8:A:86:G:C4	3.06	0.44
8:A:123:G:N2	8:A:129:C:C2	2.86	0.44
8:A:217:A:C6	8:A:218:A:C4	3.06	0.44
8:A:256:A:H2'	8:A:257:C:O4'	2.18	0.44
8:A:260:G:O2'	8:A:608:A:N1	2.36	0.44
8:A:372:G:N1	31:X:56:ARG:NH2	2.66	0.44
8:A:375:G:C2	8:A:400:G:H1'	2.52	0.44
8:A:379:G:N2	8:A:395:U:O2	2.44	0.44
8:A:385:C:O5'	8:A:385:C:H6	2.00	0.44
8:A:415:A:H2'	8:A:416:U:H6	1.83	0.44
8:A:457:A:C4	8:A:459:U:C4	3.06	0.44
8:A:458:G:C2'	8:A:469:G:N1	2.80	0.44
8:A:503:A:C5	8:A:505:A:C5	3.06	0.44
8:A:577:G:C6	8:A:578:G:C6	3.06	0.44
8:A:626:A:H2'	19:L:78:ARG:NH2	2.33	0.44
8:A:689:A:C2	8:A:690:G:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:812:C:C5	8:A:1250:G:C5	3.05	0.44
8:A:852:U:C2	8:A:853:C:C5	3.06	0.44
8:A:974:G:C1'	8:A:989:G:N2	2.80	0.44
8:A:1022:G:N7	8:A:1140:C:C4	2.86	0.44
8:A:1022:G:C2	8:A:1024:G:C2	3.05	0.44
8:A:1060:U:H4'	8:A:1061:U:H5''	2.00	0.44
8:A:1093:G:H2'	8:A:1094:U:O4'	2.18	0.44
8:A:1170:C:H2'	8:A:1171:G:O4'	2.16	0.44
8:A:1216:G:N2	8:A:1217:U:H1'	2.32	0.44
8:A:1227:G:N1	8:A:1228:G:C5	2.85	0.44
8:A:1264:A:H3'	8:A:1265:A:H8	1.83	0.44
8:A:1264:A:H2'	8:A:2015:A:H61	1.83	0.44
8:A:1283:G:C2	8:A:1286:A:C8	3.06	0.44
8:A:1307:A:C6	8:A:1308:A:C5	3.05	0.44
8:A:1353:A:C2	8:A:1378:A:C2	3.05	0.44
8:A:1358:G:O6	8:A:1371:G:H3'	2.18	0.44
8:A:1364:G:C2	8:A:1368:G:C4	3.06	0.44
8:A:1446:C:H2'	8:A:1447:C:H6	1.82	0.44
8:A:1450:G:N1	8:A:1462:C:N3	2.66	0.44
8:A:1528:A:C1'	8:A:1544:A:N6	2.81	0.44
8:A:1613:G:N2	8:A:1617:C:C2	2.85	0.44
8:A:1630:A:C6	8:A:1637:A:N6	2.85	0.44
8:A:1654:A:N7	8:A:2005:A:C2	2.86	0.44
8:A:1711:A:C2	8:A:1712:U:C2	3.05	0.44
8:A:1838:C:H4'	8:A:1839:G:C8	2.52	0.44
8:A:1997:C:OP2	11:D:129:THR:HB	2.17	0.44
8:A:2026:U:H2'	8:A:2027:G:O4'	2.18	0.44
8:A:2100:G:C2	8:A:2190:G:C8	3.06	0.44
8:A:2114:A:C2	8:A:2171:A:N1	2.86	0.44
8:A:2139:U:C4	8:A:2152:G:C6	3.06	0.44
8:A:2143:C:H3'	8:A:2143:C:H6	1.83	0.44
8:A:2251:OMG:C6	8:A:2252:G:C6	3.05	0.44
8:A:2260:C:H2'	8:A:2261:C:C6	2.52	0.44
8:A:2305:U:C4	13:F:150:GLY:C	2.96	0.44
8:A:2307:G:C8	8:A:2308:G:C6	3.06	0.44
8:A:2318:G:H2'	8:A:2319:G:H1'	1.98	0.44
8:A:2374:C:C2	8:A:2375:G:C8	3.06	0.44
8:A:2395:C:H2'	8:A:2396:G:O4'	2.18	0.44
8:A:2423:U:C2	8:A:2425:A:C4	3.06	0.44
8:A:2521:C:O2'	8:A:2522:U:H5'	2.17	0.44
8:A:2697:G:H2'	8:A:2698:U:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2699:C:N3	8:A:2709:G:O6	2.50	0.44
8:A:2724:U:O2'	8:A:2725:A:H5'	2.18	0.44
8:A:2762:C:C2	8:A:2763:G:C8	3.06	0.44
8:A:2808:G:N2	8:A:2891:U:C6	2.86	0.44
8:A:2841:C:C2	8:A:2877:G:N2	2.86	0.44
9:B:13:G:N2	9:B:69:G:C2'	2.81	0.44
9:B:50:A:C6	9:B:51:G:C5	3.06	0.44
9:B:76:G:C2	9:B:100:G:O6	2.70	0.44
9:B:85:G:C2	9:B:86:G:C4	3.05	0.44
10:C:137:GLY:O	10:C:162:GLN:HG3	2.18	0.44
11:D:101:PHE:CZ	11:D:203:VAL:HG12	2.53	0.44
12:E:129:PRO:HG3	12:E:156:ASN:OD1	2.18	0.44
13:F:1:ALA:HB3	13:F:96:TRP:HB3	2.00	0.44
14:G:139:VAL:HG13	14:G:140:ILE:N	2.32	0.44
17:J:15:TRP:O	17:J:137:PRO:HA	2.17	0.44
18:K:113:MET:HG3	18:K:114:LYS:N	2.32	0.44
19:L:123:ARG:CB	19:L:143:GLU:HG2	2.47	0.44
19:L:125:LEU:O	19:L:144:GLU:HB2	2.18	0.44
26:S:28:LYS:HE3	26:S:70:LYS:NZ	2.33	0.44
27:T:63:VAL:HG21	27:T:80:TRP:CZ2	2.53	0.44
28:U:45:GLN:O	28:U:55:GLY:C	2.61	0.44
29:V:8:VAL:HG13	29:V:39:ALA:O	2.18	0.44
31:X:36:ARG:HG3	31:X:47:THR:OG1	2.18	0.44
32:Y:5:GLU:C	32:Y:6:LEU:HD12	2.42	0.44
32:Y:16:THR:HG23	32:Y:17:GLU:N	2.33	0.44
33:Z:55:LYS:HG2	33:Z:56:VAL:H	1.82	0.44
34:a:161:A:C4	34:a:162:A:N1	2.86	0.44
34:a:165:G:C6	34:a:166:U:C5	3.06	0.44
34:a:227:G:C6	34:a:228:A:C5	3.06	0.44
34:a:262:A:H5'	53:t:67:HIS:CG	2.52	0.44
34:a:270:A:C6	34:a:271:C:C4	3.06	0.44
34:a:359:G:O4'	57:x:327:PRO:O	2.35	0.44
34:a:440:C:C4	34:a:441:A:N7	2.86	0.44
34:a:460:A:C2	34:a:473:U:O2	2.71	0.44
34:a:463:U:C2	34:a:464:U:C5	3.06	0.44
34:a:466:A:C5	34:a:468:A:O4'	2.70	0.44
34:a:502:A:H4'	45:l:115:LYS:HZ3	1.82	0.44
34:a:582:C:C2	34:a:760:G:N1	2.85	0.44
34:a:663:A:C2	34:a:743:A:C2	3.06	0.44
34:a:670:G:C2	34:a:737:C:N3	2.86	0.44
34:a:679:C:O2'	34:a:680:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:687:A:N1	34:a:704:A:N9	2.66	0.44
34:a:776:G:N2	34:a:802:A:OP2	2.51	0.44
34:a:886:G:H1	34:a:911:U:H3	1.66	0.44
34:a:945:G:C5	34:a:1337:G:C4	3.05	0.44
34:a:1012:A:C6	34:a:1013:G:N1	2.86	0.44
34:a:1081:A:C6	34:a:1082:A:N6	2.85	0.44
34:a:1131:G:H2'	34:a:1132:C:H6	1.75	0.44
34:a:1153:G:OP1	43:j:15:HIS:NE2	2.47	0.44
34:a:1272:G:C2	34:a:1273:C:C1'	3.00	0.44
34:a:1303:C:C2	34:a:1304:G:C8	3.06	0.44
34:a:1325:C:H2'	34:a:1326:U:C6	2.53	0.44
34:a:1339:A:C2	55:v:31:G:O4'	2.70	0.44
34:a:1436:U:C2	34:a:1437:A:N7	2.85	0.44
34:a:1458:G:H2'	34:a:1459:G:C8	2.52	0.44
34:a:1525:G:N1	34:a:1526:G:C5	2.86	0.44
34:a:1539:C:O2'	34:a:1540:U:OP1	2.25	0.44
35:b:167:HIS:HB3	35:b:168:GLU:OE1	2.18	0.44
36:c:153:SER:CA	36:c:164:THR:HG22	2.48	0.44
36:c:160:GLU:N	36:c:160:GLU:OE2	2.50	0.44
37:d:169:TRP:HA	37:d:183:ARG:CG	2.48	0.44
39:f:4:TYR:HA	39:f:90:MET:O	2.18	0.44
39:f:13:ASP:HB2	39:f:14:GLN:NE2	2.32	0.44
41:h:75:GLN:CD	41:h:127:TYR:HB2	2.43	0.44
45:l:31:GLY:O	45:l:78:VAL:HG23	2.17	0.44
47:n:19:TYR:O	47:n:22:LYS:HB2	2.18	0.44
47:n:20:PHE:CG	47:n:21:ALA:N	2.86	0.44
49:p:3:THR:CA	49:p:22:ALA:O	2.66	0.44
49:p:58:ALA:HA	49:p:61:VAL:CG2	2.48	0.44
49:p:79:ASN:O	49:p:82:ALA:N	2.39	0.44
51:r:46:THR:O	51:r:47:ARG:C	2.58	0.44
52:s:13:HIS:O	52:s:17:LYS:HG2	2.18	0.44
52:s:30:LEU:O	52:s:48:ILE:HG23	2.17	0.44
56:w:29:G:C2	56:w:30:G:C4	3.06	0.44
56:w:29:G:O6	56:w:42:C:N4	2.50	0.44
57:x:156:GLN:O	57:x:160:ARG:HG3	2.18	0.44
57:x:352:VAL:CG2	57:x:395:THR:HG23	2.48	0.44
57:x:494:ARG:N	57:x:608:LYS:O	2.47	0.44
57:x:584:ASP:OD1	57:x:585:VAL:N	2.51	0.44
57:x:673:THR:O	57:x:674:LYS:HB3	2.18	0.44
2:1:21:THR:HG22	4:3:33:THR:HG23	2.00	0.44
2:1:43:ARG:CZ	8:A:643:A:C8	3.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:39:ARG:NH2	8:A:469:G:C4	2.85	0.44
7:6:36:VAL:HG22	7:6:37:CYS:N	2.33	0.44
7:6:43:PHE:CD2	13:F:113:PHE:HE2	2.35	0.44
7:6:59:ARG:HA	7:6:62:LYS:CB	2.45	0.44
8:A:13:A:N3	8:A:15:G:C6	2.86	0.44
8:A:23:G:H2'	8:A:23:G:N3	2.33	0.44
8:A:65:U:C4	8:A:66:C:C5	3.06	0.44
8:A:123:G:C4	8:A:124:G:C8	3.06	0.44
8:A:139:U:N1	27:T:1:MET:HE1	2.33	0.44
8:A:195:A:H2'	8:A:198:C:H42	1.82	0.44
8:A:216:A:C1'	8:A:432:A:N6	2.81	0.44
8:A:309:A:O3'	28:U:15:GLY:HA2	2.18	0.44
8:A:317:G:C4	8:A:318:C:C5	3.06	0.44
8:A:414:C:C2	8:A:2410:G:N2	2.85	0.44
8:A:415:A:C6	8:A:2409:G:N1	2.86	0.44
8:A:540:C:C2	8:A:541:A:N7	2.86	0.44
8:A:606:U:OP2	12:E:99:LYS:HE3	2.18	0.44
8:A:695:G:C6	8:A:768:G:C6	3.05	0.44
8:A:699:A:C8	8:A:734:A:C4	3.06	0.44
8:A:704:G:H1'	8:A:727:A:H61	1.81	0.44
8:A:713:G:H2'	8:A:714:U:H6	1.83	0.44
8:A:764:A:H5'	10:C:208:GLY:O	2.17	0.44
8:A:806:C:O5'	19:L:41:ARG:NH1	2.48	0.44
8:A:864:G:N1	8:A:913:U:C4	2.86	0.44
8:A:939:G:N1	8:A:940:G:C5	2.85	0.44
8:A:1138:G:C4	8:A:1139:G:H1'	2.52	0.44
8:A:1168:G:C2	8:A:1182:G:C2	3.06	0.44
8:A:1268:A:H2'	8:A:1269:A:H8	1.83	0.44
8:A:1309:G:C5	8:A:1310:G:N7	2.86	0.44
8:A:1323:C:P	26:S:82:MET:HE1	2.58	0.44
8:A:1338:G:H2'	8:A:1339:G:H8	1.82	0.44
8:A:1375:U:C2	8:A:1376:C:C5	3.06	0.44
8:A:1379:U:H5''	8:A:1380:G:P	2.58	0.44
8:A:1454:C:N4	21:N:67:PHE:HB2	2.33	0.44
8:A:1473:G:C2	8:A:1519:G:C2	3.06	0.44
8:A:1497:U:OP2	8:A:1498:C:C5	2.71	0.44
8:A:1531:C:O2	8:A:1541:C:O2	2.35	0.44
8:A:1565:C:C2'	8:A:1567:G:N7	2.79	0.44
8:A:1572:A:C5	8:A:1573:G:C8	3.06	0.44
8:A:1576:U:O2'	8:A:1577:C:H5'	2.17	0.44
8:A:1582:C:N3	8:A:1583:A:C8	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1767:G:C6	8:A:1986:C:N4	2.86	0.44
8:A:1822:C:H2'	8:A:1823:G:H8	1.83	0.44
8:A:1879:C:C2	8:A:1880:U:C6	3.06	0.44
8:A:1926:U:O2'	8:A:1928:A:N7	2.40	0.44
8:A:1948:G:N1	8:A:1959:G:C6	2.86	0.44
8:A:2077:A:O2'	8:A:2434:A:O2'	2.24	0.44
8:A:2135:A:O2'	8:A:2136:G:H5'	2.17	0.44
8:A:2229:U:H2'	8:A:2230:G:C8	2.50	0.44
8:A:2246:G:H1'	8:A:2426:A:C2	2.53	0.44
8:A:2292:U:H2'	8:A:2293:G:C8	2.53	0.44
8:A:2295:C:H2'	8:A:2296:U:C6	2.53	0.44
8:A:2460:U:C2	8:A:2492:U:O4	2.71	0.44
8:A:2559:C:H2'	8:A:2560:A:C8	2.53	0.44
8:A:2564:A:H2'	8:A:2565:A:C8	2.53	0.44
8:A:2639:A:C8	8:A:2640:G:C8	3.06	0.44
8:A:2714:G:C6	8:A:2715:C:N4	2.86	0.44
8:A:2735:G:N3	8:A:2736:A:C8	2.86	0.44
8:A:2759:G:C4	8:A:2760:C:C5	3.06	0.44
8:A:2816:G:C6	8:A:2831:G:C6	3.06	0.44
8:A:2821:A:C6	8:A:2822:G:C5	3.06	0.44
9:B:16:G:N2	9:B:17:C:C2	2.86	0.44
9:B:115:A:C4	9:B:116:G:C8	3.05	0.44
10:C:158:GLY:CA	10:C:194:VAL:O	2.66	0.44
13:F:1:ALA:CB	13:F:96:TRP:HB3	2.47	0.44
14:G:94:ARG:CG	14:G:105:SER:HB3	2.44	0.44
17:J:44:TYR:C	24:Q:63:ARG:HH21	2.26	0.44
17:J:47:HIS:C	17:J:114:LEU:HD21	2.42	0.44
17:J:74:TYR:CD2	17:J:87:ALA:O	2.71	0.44
17:J:98:GLU:OE2	17:J:126:ALA:HB2	2.18	0.44
22:O:92:PHE:HB2	22:O:117:PHE:CD1	2.53	0.44
25:R:68:ARG:HG2	25:R:92:TRP:CZ2	2.53	0.44
33:Z:44:ARG:HD2	33:Z:47:ILE:HD12	2.00	0.44
34:a:42:G:N1	34:a:401:C:C2	2.86	0.44
34:a:50:A:N6	34:a:361:G:H5'	2.33	0.44
34:a:109:A:C6	34:a:326:G:C6	3.06	0.44
34:a:120:A:C6	34:a:122:G:C2	3.06	0.44
34:a:122:G:C4	34:a:123:U:C6	3.06	0.44
34:a:145:G:O2'	34:a:146:G:C8	2.70	0.44
34:a:188:C:C2'	34:a:189:A:C8	2.98	0.44
34:a:190:A:OP2	34:a:191:G:N7	2.51	0.44
34:a:244:U:C4	34:a:894:G:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:292:G:C2	34:a:309:A:N3	2.85	0.44
34:a:292:G:C2'	34:a:608:A:N6	2.81	0.44
34:a:300:A:H2'	34:a:564:C:H42	1.83	0.44
34:a:416:G:C8	34:a:416:G:OP2	2.71	0.44
34:a:416:G:C2	34:a:417:G:C5	3.05	0.44
34:a:460:A:H2	34:a:473:U:H3	1.66	0.44
34:a:539:A:H2'	34:a:540:G:H8	1.82	0.44
34:a:545:C:H2'	34:a:546:A:O4'	2.18	0.44
34:a:546:A:P	37:d:68:GLU:H	2.40	0.44
34:a:548:G:H2'	34:a:549:C:C6	2.52	0.44
34:a:550:G:N1	34:a:551:U:C4	2.85	0.44
34:a:563:A:N3	45:l:11:ARG:CZ	2.81	0.44
34:a:567:G:N1	34:a:884:U:O4	2.51	0.44
34:a:604:G:C5	34:a:605:U:C5	3.06	0.44
34:a:679:C:C2	34:a:680:C:C5	3.06	0.44
34:a:717:U:HO2'	34:a:734:G:C1'	2.31	0.44
34:a:846:G:C2'	34:a:847:G:O4'	2.66	0.44
34:a:860:A:N6	34:a:861:G:N1	2.66	0.44
34:a:866:C:C5	34:a:867:G:C4	3.06	0.44
34:a:880:C:OP2	45:l:2:THR:CG2	2.65	0.44
34:a:882:C:C2	34:a:883:C:C5	3.05	0.44
34:a:893:C:C2	34:a:894:G:C8	3.06	0.44
34:a:894:G:H2'	34:a:895:G:H8	1.83	0.44
34:a:895:G:C4	34:a:896:C:C5	3.06	0.44
34:a:921:U:O4'	34:a:1081:A:C5'	2.66	0.44
34:a:924:C:H2'	34:a:925:G:H8	1.83	0.44
34:a:993:G:N3	34:a:993:G:C2'	2.81	0.44
34:a:1052:U:O4	34:a:1206:G:O6	2.36	0.44
34:a:1118:U:H2'	34:a:1119:C:O4'	2.18	0.44
34:a:1118:U:N3	34:a:1156:G:N2	2.65	0.44
34:a:1150:A:N3	43:j:41:PRO:CG	2.81	0.44
34:a:1155:A:H2'	34:a:1156:G:C8	2.53	0.44
34:a:1164:G:C2	34:a:1173:U:N3	2.86	0.44
34:a:1184:G:C2	34:a:1185:G:C8	3.06	0.44
34:a:1228:C:H4'	46:m:114:PRO:O	2.17	0.44
34:a:1273:C:H5''	34:a:1274:A:OP2	2.18	0.44
34:a:1316:G:O6	52:s:2:ARG:CD	2.66	0.44
34:a:1345:U:C2	34:a:1377:A:C5	3.05	0.44
34:a:1360:A:H3'	34:a:1361:G:C8	2.53	0.44
34:a:1387:G:C6	34:a:1388:C:C4	3.06	0.44
34:a:1436:U:O4	34:a:1437:A:N6	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1456:A:C5	34:a:1457:G:C5	3.06	0.44
34:a:1507:A:C2	34:a:1530:G:C4	3.06	0.44
35:b:11:ALA:O	35:b:14:HIS:CE1	2.71	0.44
36:c:22:PHE:CE2	43:j:13:PHE:CD1	3.06	0.44
36:c:112:ALA:HB1	36:c:199:VAL:HG23	1.99	0.44
39:f:46:GLN:OE1	39:f:56:LYS:HB2	2.17	0.44
40:g:100:MET:O	40:g:104:VAL:HG22	2.18	0.44
43:j:27:GLU:O	43:j:31:ARG:CZ	2.62	0.44
43:j:32:THR:HG21	43:j:83:THR:CG2	2.47	0.44
43:j:79:PRO:O	43:j:81:GLU:OE1	2.36	0.44
44:k:28:ASN:HD21	44:k:47:GLY:H	1.66	0.44
45:l:1:ALA:O	45:l:6:LEU:HD12	2.18	0.44
46:m:113:LYS:HD3	46:m:113:LYS:N	2.32	0.44
55:v:8:4SU:O2	55:v:15:G:N1	2.51	0.44
55:v:8:4SU:C2	55:v:15:G:C6	3.01	0.44
55:v:49:G:H2'	55:v:49:G:N3	2.33	0.44
56:w:35:A:O2'	56:w:36:A:H5'	2.18	0.44
57:x:173:GLY:HA3	57:x:177:HIS:C	2.43	0.44
57:x:211:VAL:HA	57:x:214:ALA:HB3	2.00	0.44
3:2:21:ARG:C	3:2:31:LEU:HD11	2.43	0.43
3:2:24:THR:O	3:2:28:ARG:CG	2.66	0.43
6:5:56:ARG:HA	6:5:83:ALA:HB2	2.00	0.43
7:6:1:MET:H1	9:B:44:G:P	2.34	0.43
7:6:7:PRO:HG3	13:F:57:ALA:O	2.18	0.43
7:6:64:PHE:O	7:6:64:PHE:CD2	2.71	0.43
8:A:1:G:N1	8:A:2903:U:C2	2.86	0.43
8:A:16:C:H2'	8:A:17:G:C8	2.53	0.43
8:A:21:A:C5	8:A:520:G:N1	2.86	0.43
8:A:195:A:H61	8:A:198:C:H3'	1.82	0.43
8:A:231:A:C5	8:A:232:G:C6	3.06	0.43
8:A:260:G:C6	8:A:261:G:N7	2.86	0.43
8:A:339:U:C2	8:A:340:A:C8	3.06	0.43
8:A:410:G:H2'	8:A:2407:A:C8	2.52	0.43
8:A:451:U:C5	8:A:453:A:H3'	2.52	0.43
8:A:481:G:O5'	28:U:43:LYS:NZ	2.50	0.43
8:A:520:G:C6	8:A:521:U:C4	3.05	0.43
8:A:529:A:N3	8:A:2023:C:C6	2.86	0.43
8:A:569:U:C2'	8:A:570:G:O4'	2.63	0.43
8:A:575:A:H2'	8:A:576:U:C6	2.53	0.43
8:A:594:U:N3	8:A:664:G:C6	2.85	0.43
8:A:643:A:C5	8:A:644:A:C5	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:663:G:C4	8:A:664:G:C8	3.06	0.43
8:A:783:A:O3'	8:A:2588:G:O3'	2.36	0.43
8:A:784:G:C2	8:A:792:A:O4'	2.71	0.43
8:A:799:G:H2'	8:A:800:A:C8	2.53	0.43
8:A:818:G:N7	8:A:1187:G:C6	2.86	0.43
8:A:907:G:C2	8:A:908:C:C2	3.06	0.43
8:A:920:A:H2'	8:A:921:C:H6	1.82	0.43
8:A:936:A:C6	8:A:937:C:N4	2.86	0.43
8:A:1025:G:H1	8:A:1139:G:H1	1.64	0.43
8:A:1031:G:C2	8:A:1124:G:C2	3.06	0.43
8:A:1042:G:H1	8:A:1113:U:H3	1.65	0.43
8:A:1065:U:O2	8:A:1065:U:H2'	2.18	0.43
8:A:1076:C:C4	8:A:1077:A:H2	2.36	0.43
8:A:1142:A:N3	8:A:1144:A:C8	2.86	0.43
8:A:1186:G:C4	8:A:1187:G:C8	3.05	0.43
8:A:1256:G:C6	8:A:1257:C:N4	2.87	0.43
8:A:1279:G:C4	8:A:1280:G:C8	3.05	0.43
8:A:1287:A:H2'	8:A:1288:G:N3	2.33	0.43
8:A:1411:U:H2'	8:A:1412:U:C6	2.52	0.43
8:A:1487:U:C2	8:A:1488:C:C5	3.06	0.43
8:A:1598:A:N3	8:A:1598:A:H2'	2.32	0.43
8:A:1669:A:O2'	8:A:2549:G:H4'	2.18	0.43
8:A:1677:A:C4	8:A:1678:A:C8	3.06	0.43
8:A:1703:G:C4	8:A:1704:C:C5	3.06	0.43
8:A:1731:G:H2'	8:A:1732:C:H3'	2.00	0.43
8:A:1797:G:C5	8:A:1798:U:C5	3.06	0.43
8:A:1825:U:C2	8:A:1826:G:C8	3.06	0.43
8:A:1835:2MG:HM23	8:A:1836:C:N1	2.33	0.43
8:A:1848:A:C4	8:A:1849:G:C8	3.06	0.43
8:A:1935:G:N2	8:A:1964:G:C8	2.86	0.43
8:A:1945:G:N3	8:A:1946:U:C6	2.86	0.43
8:A:1999:C:H2'	8:A:2000:C:C6	2.53	0.43
8:A:2179:C:H5''	8:A:2180:U:C4	2.53	0.43
8:A:2201:G:H2'	8:A:2202:U:C6	2.53	0.43
8:A:2259:U:C2	8:A:2260:C:C6	3.06	0.43
8:A:2262:U:H5	30:W:12:SER:OG	2.00	0.43
8:A:2292:U:O2'	8:A:2293:G:H5'	2.18	0.43
8:A:2294:G:N1	8:A:2295:C:C4	2.86	0.43
8:A:2376:A:N6	8:A:2377:A:C2	2.86	0.43
8:A:2397:G:C6	8:A:2398:U:C4	3.06	0.43
8:A:2440:C:H2'	8:A:2441:U:H4'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2461:A:C6	8:A:2490:G:N2	2.86	0.43
8:A:2466:C:O2'	8:A:2467:C:H5'	2.17	0.43
8:A:2526:G:H2'	8:A:2527:C:H6	1.81	0.43
8:A:2582:G:C4	8:A:2583:G:C8	3.06	0.43
8:A:2643:G:C6	8:A:2644:G:C6	3.06	0.43
8:A:2650:U:N3	8:A:2671:G:N1	2.66	0.43
9:B:33:G:C2	9:B:34:A:C4	3.06	0.43
9:B:43:C:H2'	9:B:45:A:C8	2.53	0.43
10:C:29:PHE:CD2	10:C:31:PRO:HD2	2.53	0.43
10:C:78:GLU:N	10:C:92:LEU:O	2.48	0.43
10:C:143:VAL:O	10:C:151:GLY:HA2	2.17	0.43
12:E:73:ILE:HG23	12:E:74:LYS:CG	2.48	0.43
12:E:106:LYS:HE2	12:E:200:LEU:CA	2.48	0.43
12:E:188:MET:HE1	12:E:193:VAL:HA	2.00	0.43
13:F:121:PHE:CZ	13:F:169:LEU:HD12	2.52	0.43
14:G:96:ALA:O	14:G:102:ILE:HG23	2.18	0.43
14:G:98:LYS:CE	14:G:103:ASN:HB2	2.48	0.43
14:G:125:PRO:HG2	14:G:129:GLU:HG3	2.00	0.43
15:H:29:PHE:CD2	15:H:30:LEU:HD23	2.53	0.43
17:J:37:ARG:HA	17:J:118:MET:CE	2.48	0.43
17:J:47:HIS:CE1	17:J:48:VAL:HG23	2.53	0.43
18:K:3:GLN:O	18:K:21:CYS:HB3	2.18	0.43
18:K:98:ARG:NH1	34:a:339:C:C6	2.86	0.43
19:L:125:LEU:O	19:L:144:GLU:OE1	2.36	0.43
21:N:79:LEU:C	21:N:81:ASN:H	2.26	0.43
21:N:114:GLU:HB2	21:N:118:ARG:HE	1.82	0.43
22:O:30:ARG:HD3	22:O:103:VAL:HG23	2.00	0.43
23:P:58:PHE:CD1	23:P:58:PHE:N	2.86	0.43
25:R:17:GLY:H	25:R:98:ILE:HB	1.83	0.43
25:R:32:THR:HG23	25:R:61:ALA:O	2.18	0.43
25:R:34:GLU:N	25:R:34:GLU:CD	2.75	0.43
28:U:84:PHE:CE2	28:U:93:ARG:CG	2.99	0.43
29:V:35:GLU:HB2	29:V:93:ARG:CZ	2.47	0.43
33:Z:8:GLN:OE1	33:Z:30:ARG:O	2.36	0.43
34:a:2:A:N1	34:a:613:C:O2	2.51	0.43
34:a:80:A:H3'	34:a:81:A:H5''	2.00	0.43
34:a:109:A:C6	34:a:326:G:N1	2.86	0.43
34:a:158:G:C8	34:a:163:C:OP1	2.71	0.43
34:a:167:A:H2'	34:a:168:G:O4'	2.18	0.43
34:a:193:C:H1'	53:t:58:ASP:OD2	2.17	0.43
34:a:218:U:H2'	34:a:219:U:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:241:G:N1	34:a:286:C:C4	2.86	0.43
34:a:255:G:N2	34:a:272:C:C2	2.86	0.43
34:a:258:G:H2'	34:a:259:G:C8	2.53	0.43
34:a:293:G:C2	34:a:294:U:C5	3.06	0.43
34:a:336:A:C4	34:a:337:G:C8	3.06	0.43
34:a:513:C:H2'	34:a:514:C:C6	2.53	0.43
34:a:516:PSU:O2	34:a:533:A:OP1	2.36	0.43
34:a:600:A:C4	34:a:639:G:N2	2.85	0.43
34:a:695:A:H61	34:a:797:C:H1'	1.83	0.43
34:a:722:G:O6	34:a:733:G:N2	2.49	0.43
34:a:731:G:C6	34:a:732:C:C4	3.06	0.43
34:a:818:G:H2'	34:a:820:U:C5	2.52	0.43
34:a:870:U:C6	34:a:872:A:N1	2.86	0.43
34:a:923:A:C5	34:a:924:C:C4	3.06	0.43
34:a:925:G:H1	34:a:1391:U:H3	1.65	0.43
34:a:1030:U:H5''	34:a:1031:C:O4'	2.18	0.43
34:a:1032:G:OP2	34:a:1034:G:O6	2.36	0.43
34:a:1034:G:O4'	34:a:1034:G:N3	2.48	0.43
34:a:1118:U:H5''	42:i:105:ARG:HD3	1.99	0.43
34:a:1152:A:O5'	43:j:72:ARG:NH2	2.51	0.43
34:a:1219:A:C2	34:a:1220:G:C4	3.06	0.43
34:a:1305:G:N2	34:a:1331:G:H3'	2.32	0.43
34:a:1386:G:C2	34:a:1387:G:C5	3.06	0.43
36:c:129:PHE:CE2	36:c:130:ARG:HD3	2.53	0.43
37:d:169:TRP:CB	37:d:183:ARG:CZ	2.96	0.43
38:e:10:LEU:HD12	38:e:10:LEU:HA	1.86	0.43
38:e:39:GLY:HA2	38:e:45:VAL:HA	1.99	0.43
38:e:59:ILE:HG23	38:e:63:MET:HE2	2.00	0.43
40:g:119:LEU:HD23	40:g:123:LEU:HG	2.00	0.43
41:h:9:MET:HA	41:h:26:MET:HE1	2.00	0.43
41:h:92:PRO:HG3	41:h:127:TYR:OH	2.17	0.43
46:m:18:LEU:O	46:m:24:VAL:CG1	2.65	0.43
46:m:74:MET:O	46:m:77:LYS:HB3	2.18	0.43
47:n:62:ASN:OD1	47:n:73:PHE:CE2	2.71	0.43
49:p:17:TYR:O	49:p:38:PHE:HB2	2.18	0.43
49:p:77:GLU:O	49:p:82:ALA:HB2	2.18	0.43
54:u:36:PHE:HB2	54:u:38:GLU:OE2	2.18	0.43
57:x:12:ILE:C	57:x:105:LEU:HD13	2.43	0.43
57:x:17:HIS:CG	57:x:119:GLN:CB	3.01	0.43
57:x:132:TYR:HB2	57:x:134:VAL:HG23	2.00	0.43
57:x:193:ASN:H	57:x:198:GLY:HA2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:417:ILE:HG13	57:x:483:GLY:O	2.18	0.43
57:x:432:LEU:HA	57:x:432:LEU:HD13	1.78	0.43
57:x:462:GLU:O	57:x:466:ASP:HB2	2.18	0.43
57:x:692:ASN:HA	57:x:695:GLN:OE1	2.18	0.43
59:z:4:U:N3	59:z:5:U:C4	2.86	0.43
2:1:29:LYS:CE	8:A:2287:A:OP1	2.67	0.43
2:1:33:LEU:HD21	8:A:2286:G:O2'	2.18	0.43
4:3:20:GLY:C	4:3:48:MET:HE1	2.43	0.43
8:A:15:G:C6	8:A:16:C:C4	3.06	0.43
8:A:103:A:C6	8:A:104:A:C4	3.07	0.43
8:A:262:A:H2'	8:A:263:G:C8	2.53	0.43
8:A:263:G:H2'	8:A:264:C:O4'	2.18	0.43
8:A:409:G:C2	8:A:410:G:C5	3.05	0.43
8:A:494:G:H4'	26:S:6:LYS:O	2.17	0.43
8:A:620:G:N2	8:A:620:G:OP2	2.43	0.43
8:A:701:G:C2	8:A:732:C:N3	2.86	0.43
8:A:733:G:O6	8:A:761:A:C8	2.71	0.43
8:A:762:U:C2	8:A:763:G:C6	3.05	0.43
8:A:778:G:H5'	10:C:47:ARG:CZ	2.49	0.43
8:A:815:C:N3	8:A:1193:G:C2	2.86	0.43
8:A:853:C:N3	8:A:925:A:N1	2.66	0.43
8:A:859:G:H1'	8:A:916:G:N1	2.34	0.43
8:A:873:C:H2'	8:A:874:G:C8	2.53	0.43
8:A:874:G:N1	8:A:875:G:C5	2.86	0.43
8:A:885:C:H1'	8:A:893:C:O5'	2.19	0.43
8:A:992:C:C4	8:A:1163:G:N1	2.85	0.43
8:A:1010:A:P	24:Q:65:ASN:HD22	2.41	0.43
8:A:1163:G:N1	8:A:1164:C:C4	2.86	0.43
8:A:1169:A:C5	8:A:1170:C:C4	3.07	0.43
8:A:1177:G:N1	8:A:1178:C:C6	2.87	0.43
8:A:1199:U:H2'	8:A:1200:C:H6	1.82	0.43
8:A:1222:U:C2	8:A:1228:G:C2	3.06	0.43
8:A:1383:A:C2	8:A:1406:U:O4'	2.71	0.43
8:A:1394:U:N3	8:A:1395:A:C6	2.86	0.43
8:A:1427:A:N1	8:A:1571:A:OP2	2.52	0.43
8:A:1429:G:O4'	8:A:1568:G:H1'	2.17	0.43
8:A:1481:U:H3	8:A:1510:G:H1	1.65	0.43
8:A:1800:C:P	10:C:181:ARG:HH22	2.41	0.43
8:A:1822:C:O2'	8:A:1823:G:H5'	2.18	0.43
8:A:1824:G:C6	8:A:1825:U:C4	3.06	0.43
8:A:1840:G:C5	8:A:1841:U:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1872:A:H8	8:A:1872:A:O5'	2.00	0.43
8:A:1877:A:C2	8:A:1878:G:C4	3.07	0.43
8:A:1908:C:N3	8:A:1923:U:O2	2.51	0.43
8:A:1930:G:O2'	8:A:1968:G:C6	2.71	0.43
8:A:1935:G:N2	8:A:1964:G:OP2	2.51	0.43
8:A:1942:C:H3'	8:A:1943:U:H2'	2.00	0.43
8:A:1984:G:N1	8:A:1985:C:C4	2.86	0.43
8:A:2024:G:C6	8:A:2025:C:C4	3.06	0.43
8:A:2076:U:O2	8:A:2076:U:O4'	2.34	0.43
8:A:2097:A:C2	8:A:2193:G:C2	3.06	0.43
8:A:2117:A:N1	8:A:2171:A:N9	2.66	0.43
8:A:2266:A:N6	8:A:2273:A:C8	2.86	0.43
8:A:2286:G:H2'	8:A:2286:G:N3	2.33	0.43
8:A:2294:G:H2'	8:A:2295:C:C6	2.53	0.43
8:A:2425:A:O4'	8:A:2427:C:N1	2.50	0.43
8:A:2486:C:H2'	8:A:2487:G:O4'	2.18	0.43
8:A:2496:C:H2'	8:A:2497:A:O4'	2.17	0.43
8:A:2549:G:C6	8:A:2560:A:N6	2.86	0.43
8:A:2607:G:C6	8:A:2608:G:C6	3.06	0.43
8:A:2628:C:H1'	8:A:2781:A:C4	2.53	0.43
8:A:2637:U:H5'	11:D:45:TYR:CZ	2.53	0.43
8:A:2711:A:H3'	8:A:2714:G:H4'	2.00	0.43
8:A:2736:A:N1	8:A:2769:U:C2	2.86	0.43
8:A:2744:G:N1	8:A:2761:A:N7	2.66	0.43
8:A:2801:G:N1	8:A:2802:G:C5	2.86	0.43
8:A:2816:G:H5''	21:N:99:LYS:HE2	2.00	0.43
8:A:2828:G:O2'	8:A:2829:A:H5'	2.17	0.43
8:A:2889:C:H2'	8:A:2890:G:H8	1.81	0.43
9:B:31:C:C1'	9:B:54:G:H22	2.31	0.43
9:B:50:A:H2'	9:B:51:G:O4'	2.18	0.43
10:C:1:ALA:N	10:C:19:VAL:O	2.25	0.43
11:D:16:THR:HG22	11:D:18:ASP:H	1.84	0.43
11:D:107:VAL:HA	11:D:206:ALA:N	2.34	0.43
12:E:1:MET:CG	12:E:14:VAL:HG23	2.48	0.43
14:G:79:THR:HG23	14:G:80:GLU:HG2	1.99	0.43
14:G:83:THR:HA	14:G:132:LEU:O	2.18	0.43
19:L:121:THR:HG23	19:L:141:LYS:HE3	2.00	0.43
21:N:32:GLU:CB	21:N:115:LEU:HD12	2.47	0.43
21:N:67:PHE:O	21:N:71:ARG:HD2	2.18	0.43
23:P:39:LEU:HD21	23:P:81:ASP:HB3	2.00	0.43
25:R:2:TYR:C	25:R:2:TYR:CD1	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:22:THR:O	27:T:25:GLU:HB3	2.17	0.43
28:U:74:ALA:HA	28:U:77:GLY:HA2	2.00	0.43
31:X:5:GLN:NE2	31:X:48:LEU:HD23	2.33	0.43
34:a:27:G:C4	34:a:557:G:N2	2.86	0.43
34:a:94:G:H5''	34:a:95:C:H5	1.83	0.43
34:a:110:C:H3'	34:a:111:G:H8	1.81	0.43
34:a:236:A:OP1	50:q:43:LEU:HD21	2.18	0.43
34:a:249:U:C2	34:a:276:G:N1	2.86	0.43
34:a:253:A:P	50:q:68:LYS:NZ	2.91	0.43
34:a:254:G:C6	34:a:255:G:C5	3.06	0.43
34:a:263:A:OP1	53:t:73:ARG:NE	2.50	0.43
34:a:286:C:H2'	34:a:287:U:C6	2.53	0.43
34:a:292:G:C8	34:a:305:G:N2	2.86	0.43
34:a:306:A:C6	34:a:307:C:C6	3.07	0.43
34:a:324:G:N2	34:a:326:G:H2'	2.33	0.43
34:a:355:C:H1'	34:a:388:G:N3	2.33	0.43
34:a:369:G:H2'	34:a:370:C:C6	2.53	0.43
34:a:448:A:C5	34:a:449:G:C4	3.06	0.43
34:a:453:G:H2'	34:a:454:G:C8	2.53	0.43
34:a:456:A:N3	34:a:476:U:O4	2.51	0.43
34:a:483:C:C4	34:a:484:G:C5	3.05	0.43
34:a:502:A:N6	34:a:544:G:O6	2.51	0.43
34:a:525:C:N4	34:a:526:C:N4	2.65	0.43
34:a:558:G:H2'	34:a:559:A:H2	1.80	0.43
34:a:562:U:C1'	45:l:11:ARG:HD3	2.47	0.43
34:a:604:G:C2	34:a:635:A:N1	2.85	0.43
34:a:830:G:H2'	34:a:831:A:H8	1.83	0.43
34:a:831:A:H5'	35:b:20:ARG:NH1	2.33	0.43
34:a:843:U:OP1	34:a:846:G:P	2.77	0.43
34:a:927:G:H4'	34:a:1503:A:N7	2.33	0.43
34:a:928:G:C2	34:a:929:G:C5	3.06	0.43
34:a:943:U:H2'	34:a:944:G:O4'	2.18	0.43
34:a:985:C:H2'	34:a:986:U:C6	2.52	0.43
34:a:992:U:O2	34:a:993:G:N2	2.52	0.43
34:a:1010:U:C2	34:a:1020:G:C2	3.06	0.43
34:a:1127:G:C2	34:a:1128:C:C6	3.06	0.43
34:a:1169:A:H4'	35:b:138:ARG:HH12	1.83	0.43
34:a:1209:C:O3'	34:a:1214:C:N4	2.50	0.43
34:a:1242:G:N1	34:a:1296:C:C2	2.86	0.43
34:a:1343:G:O3'	42:i:123:ARG:HB2	2.17	0.43
34:a:1442:G:C4	34:a:1443:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1454:G:N2	34:a:1455:G:H1'	2.33	0.43
35:b:12:GLY:HA2	35:b:207:ARG:HE	1.83	0.43
35:b:76:SER:HB2	35:b:92:ASN:CB	2.48	0.43
35:b:96:LEU:O	35:b:99:MET:HG3	2.18	0.43
35:b:115:ASP:O	35:b:119:GLN:NE2	2.51	0.43
35:b:144:GLU:CD	35:b:144:GLU:C	2.86	0.43
36:c:137:VAL:HG11	36:c:169:GLU:OE2	2.17	0.43
36:c:166:TRP:CD2	36:c:166:TRP:O	2.71	0.43
38:e:105:ILE:HG21	38:e:123:LEU:HD23	2.01	0.43
38:e:110:MET:SD	38:e:124:ALA:HB1	2.58	0.43
51:r:19:GLU:O	51:r:19:GLU:HG3	2.17	0.43
51:r:49:LYS:HA	51:r:52:ARG:HH21	1.83	0.43
54:u:27:VAL:O	54:u:31:VAL:HG12	2.17	0.43
54:u:39:LYS:HG3	54:u:41:THR:HG22	1.99	0.43
56:w:36:A:C4	56:w:37:MIA:C8	3.00	0.43
57:x:99:GLU:OE1	57:x:409:GLU:OE2	2.36	0.43
57:x:137:ILE:HA	57:x:261:ILE:HG23	2.00	0.43
57:x:143:MET:HG2	57:x:266:GLY:O	2.18	0.43
57:x:475:GLU:HB2	57:x:476:PHE:CD2	2.53	0.43
57:x:491:GLU:HG2	57:x:569:PRO:O	2.18	0.43
57:x:502:GLY:O	57:x:595:ALA:HB1	2.18	0.43
58:y:101:FME:CN	58:y:101:FME:CG	2.95	0.43
2:1:13:SER:CB	2:1:49:LYS:HE3	2.48	0.43
2:1:38:PHE:HA	2:1:45:HIS:HA	1.99	0.43
3:2:33:ARG:NH1	8:A:467:G:OP1	2.52	0.43
5:4:15:LYS:HB2	5:4:26:ILE:CG1	2.46	0.43
5:4:18:LYS:HE2	5:4:21:GLY:HA2	1.99	0.43
8:A:46:G:C6	8:A:180:G:C2	3.06	0.43
8:A:62:U:H2'	8:A:63:A:C8	2.53	0.43
8:A:209:C:C2	8:A:210:C:C6	3.07	0.43
8:A:219:A:H2'	8:A:220:G:O4'	2.19	0.43
8:A:246:C:O4'	8:A:384:A:H2	2.01	0.43
8:A:301:G:H1'	8:A:302:C:C6	2.53	0.43
8:A:319:G:H1	8:A:323:C:H41	1.65	0.43
8:A:348:A:C6	8:A:349:U:C4	3.06	0.43
8:A:412:A:N6	8:A:2412:A:C1'	2.80	0.43
8:A:451:U:H4'	12:E:47:LYS:NZ	2.29	0.43
8:A:495:G:C2	8:A:496:G:C4	3.07	0.43
8:A:531:C:C4	8:A:2019:A:N1	2.86	0.43
8:A:536:G:C6	8:A:537:G:C4	3.06	0.43
8:A:545:U:O4	8:A:549:G:O6	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:563:A:C5	8:A:2018:G:C2	3.06	0.43
8:A:649:G:H2'	8:A:650:C:O4'	2.18	0.43
8:A:987:C:N4	8:A:988:A:C6	2.86	0.43
8:A:1016:G:N1	8:A:1017:G:C5	2.86	0.43
8:A:1056:G:H2'	8:A:1087:G:C2	2.52	0.43
8:A:1072:C:H4'	8:A:1089:A:H2'	2.01	0.43
8:A:1139:G:O5'	17:J:72:LYS:HE3	2.18	0.43
8:A:1158:C:H2'	8:A:1159:U:O4'	2.19	0.43
8:A:1182:G:C5	8:A:1183:U:C4	3.06	0.43
8:A:1210:G:O6	8:A:1237:A:C2'	2.66	0.43
8:A:1388:G:N1	8:A:1389:G:C5	2.86	0.43
8:A:1423:G:C2	8:A:1424:G:C4	3.06	0.43
8:A:1426:G:H1'	8:A:1572:A:N6	2.34	0.43
8:A:1429:G:N3	8:A:1568:G:C2	2.86	0.43
8:A:1479:G:H2'	8:A:1480:C:C6	2.54	0.43
8:A:1608:A:C4	8:A:1611:C:C4	3.07	0.43
8:A:1711:A:C2	8:A:1748:C:O2	2.71	0.43
8:A:1827:U:H5'	8:A:1971:U:H4'	1.99	0.43
8:A:1848:A:C4	34:a:702:A:N6	2.86	0.43
8:A:1857:G:H1'	8:A:1885:A:H62	1.83	0.43
8:A:1900:A:N3	8:A:1970:A:H2'	2.32	0.43
8:A:1916:A:H2'	8:A:1917:PSU:C6	2.53	0.43
8:A:2032:G:C4	11:D:150:GLN:NE2	2.86	0.43
8:A:2040:G:C2	8:A:2041:U:C2	3.06	0.43
8:A:2056:G:C6	8:A:2577:A:N9	2.86	0.43
8:A:2061:G:C4	8:A:2063:C:C5	3.06	0.43
8:A:2143:C:N4	8:A:2148:G:C4	2.85	0.43
8:A:2184:A:C5	8:A:2185:U:H1'	2.53	0.43
8:A:2216:G:N3	8:A:2217:G:C8	2.86	0.43
8:A:2259:U:N3	8:A:2260:C:C5	2.85	0.43
8:A:2400:G:N1	8:A:2417:C:N3	2.66	0.43
8:A:2472:G:OP2	8:A:2474:U:OP1	2.36	0.43
8:A:2508:G:H2'	8:A:2509:G:C8	2.54	0.43
8:A:2509:G:C2	8:A:2580:PSU:C4	3.07	0.43
8:A:2562:U:O2	8:A:2562:U:H2'	2.17	0.43
8:A:2630:G:C5	8:A:2894:G:C6	3.06	0.43
8:A:2680:U:C5'	11:D:193:VAL:O	2.67	0.43
8:A:2700:A:H2	21:N:71:ARG:HH12	1.66	0.43
8:A:2744:G:C5	8:A:2761:A:C6	3.06	0.43
8:A:2773:C:OP1	11:D:171:THR:OG1	2.36	0.43
8:A:2824:C:H3'	8:A:2825:G:N2	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2847:U:P	23:P:95:LYS:HZ3	2.41	0.43
9:B:7:G:H2'	9:B:8:C:H6	1.84	0.43
9:B:40:U:H1'	9:B:45:A:N6	2.34	0.43
10:C:76:VAL:O	10:C:76:VAL:HG13	2.17	0.43
11:D:1:MET:SD	11:D:100:LEU:HD21	2.59	0.43
11:D:116:LYS:HA	21:N:1:MET:SD	2.59	0.43
11:D:188:LEU:HD23	11:D:188:LEU:HA	1.80	0.43
13:F:109:ARG:HH11	13:F:136:ILE:C	2.25	0.43
13:F:121:PHE:HZ	13:F:169:LEU:HD12	1.84	0.43
14:G:126:THR:CG2	14:G:127:GLN:N	2.81	0.43
15:H:29:PHE:O	15:H:33:GLN:OE1	2.36	0.43
17:J:22:GLY:O	17:J:63:ALA:HB3	2.17	0.43
19:L:111:ILE:HG22	19:L:128:THR:CG2	2.47	0.43
21:N:84:GLY:N	21:N:85:PRO:CD	2.81	0.43
21:N:117:ASP:C	21:N:119:SER:H	2.25	0.43
22:O:94:ARG:HB3	22:O:97:PHE:O	2.18	0.43
26:S:97:LEU:HD23	26:S:97:LEU:HA	1.82	0.43
32:Y:1:MET:HE2	32:Y:6:LEU:HD11	2.00	0.43
34:a:62:U:O2	34:a:105:G:N2	2.37	0.43
34:a:64:G:C6	34:a:102:G:O6	2.72	0.43
34:a:80:A:C6	34:a:91:U:O2	2.71	0.43
34:a:180:U:C2	34:a:195:A:N7	2.86	0.43
34:a:343:U:O3'	34:a:344:A:H3'	2.18	0.43
34:a:523:A:N1	34:a:527:G7M:O6	2.51	0.43
34:a:533:A:N6	34:a:536:C:H1'	2.33	0.43
34:a:579:A:H4'	48:o:53:ARG:NH2	2.33	0.43
34:a:610:U:H2'	34:a:611:C:H6	1.84	0.43
34:a:613:C:N3	34:a:628:G:C2	2.87	0.43
34:a:650:G:C6	34:a:651:C:C4	3.06	0.43
34:a:680:C:C4	34:a:711:G:N1	2.86	0.43
34:a:709:U:H2'	34:a:710:G:H8	1.83	0.43
34:a:769:G:C6	34:a:770:C:C4	3.06	0.43
34:a:823:C:N3	34:a:878:A:N1	2.66	0.43
34:a:836:G:N7	34:a:837:U:C4	2.86	0.43
34:a:876:C:H2'	34:a:877:G:H8	1.82	0.43
34:a:891:U:C2	34:a:892:A:C8	3.06	0.43
34:a:921:U:OP1	34:a:1081:A:C1'	2.66	0.43
34:a:985:C:C2	34:a:1221:G:C2	3.07	0.43
34:a:1039:G:C4	34:a:1040:U:C5	3.06	0.43
34:a:1052:U:N3	34:a:1207:2MG:N2	2.66	0.43
34:a:1091:U:O2	34:a:1093:A:H3'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1095:U:H2'	34:a:1096:C:C6	2.53	0.43
34:a:1138:G:C6	34:a:1140:C:C2	3.07	0.43
34:a:1160:G:H1	34:a:1175:G:H1	1.65	0.43
34:a:1206:G:O4'	36:c:193:GLY:N	2.51	0.43
34:a:1232:U:C2	34:a:1233:G:C8	3.07	0.43
34:a:1296:C:H3'	34:a:1297:G:C8	2.53	0.43
34:a:1321:U:C5	34:a:1322:C:C2	3.06	0.43
34:a:1347:G:OP2	42:i:108:ARG:HD2	2.18	0.43
34:a:1412:C:C4	34:a:1489:G:N1	2.86	0.43
34:a:1424:U:H2'	34:a:1425:U:C6	2.53	0.43
34:a:1460:C:C4	34:a:1461:G:N7	2.86	0.43
35:b:9:LEU:HD12	35:b:14:HIS:CE1	2.53	0.43
35:b:83:ALA:O	35:b:88:GLN:N	2.41	0.43
36:c:150:VAL:HG12	36:c:199:VAL:HB	2.01	0.43
37:d:2:ARG:HG2	37:d:4:LEU:HD21	2.00	0.43
39:f:12:PRO:HD2	39:f:54:LEU:HD11	2.00	0.43
40:g:64:ALA:O	40:g:68:VAL:HG22	2.18	0.43
41:h:54:THR:HG23	41:h:55:LYS:HG3	2.00	0.43
42:i:44:ARG:HA	42:i:47:VAL:CG1	2.47	0.43
42:i:60:LEU:HD23	42:i:62:LEU:HD21	1.99	0.43
44:k:51:PHE:HB3	44:k:55:ARG:C	2.43	0.43
44:k:59:PRO:HB3	44:k:90:PRO:C	2.43	0.43
45:l:2:THR:C	45:l:4:ASN:N	2.75	0.43
45:l:22:ALA:HB3	45:l:94:TYR:CZ	2.54	0.43
50:q:24:ILE:HG13	50:q:24:ILE:O	2.18	0.43
52:s:16:LYS:HE2	52:s:20:LYS:HZ1	1.82	0.43
52:s:30:LEU:H	52:s:48:ILE:HD12	1.82	0.43
52:s:60:PHE:O	52:s:65:MET:HE1	2.18	0.43
55:v:63:G:C6	55:v:64:G:N7	2.87	0.43
56:w:12:U:C2	56:w:24:G:C2	3.05	0.43
57:x:108:ALA:HB3	57:x:136:ARG:HB3	1.99	0.43
57:x:154:VAL:HG13	57:x:165:PRO:HB2	1.99	0.43
57:x:534:GLU:CD	57:x:534:GLU:C	2.85	0.43
57:x:571:VAL:HG12	57:x:572:ASP:H	1.83	0.43
57:x:646:SER:O	57:x:647:GLU:C	2.61	0.43
7:6:24:ILE:HD12	13:F:101:ARG:HB2	1.99	0.43
7:6:41:HIS:HE1	13:F:113:PHE:HD2	1.66	0.43
8:A:19:A:C6	8:A:522:A:C6	3.06	0.43
8:A:24:G:C2	8:A:25:U:C2	3.06	0.43
8:A:32:C:C2	8:A:474:G:C2	3.07	0.43
8:A:35:G:C1'	8:A:454:A:N3	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:64:A:C5	8:A:65:U:C5	3.07	0.43
8:A:132:G:C4	8:A:133:U:C5	3.07	0.43
8:A:144:A:C6	8:A:145:C:N4	2.86	0.43
8:A:146:A:H2'	8:A:147:C:O4'	2.18	0.43
8:A:192:C:C2'	8:A:193:U:H5'	2.48	0.43
8:A:266:G:O6	8:A:267:C:C4	2.71	0.43
8:A:269:C:C4	8:A:424:G:N1	2.86	0.43
8:A:406:G:H2'	8:A:407:G:H8	1.83	0.43
8:A:479:A:H2'	8:A:481:G:C8	2.53	0.43
8:A:483:A:O2'	28:U:56:GLY:CA	2.66	0.43
8:A:514:A:C6	8:A:515:A:C5	3.07	0.43
8:A:563:A:N7	8:A:2018:G:C6	2.86	0.43
8:A:585:G:H22	8:A:1253:A:P	2.41	0.43
8:A:597:G:C6	8:A:661:A:N1	2.86	0.43
8:A:607:U:C5	8:A:620:G:C5	3.06	0.43
8:A:622:G:C2	8:A:623:C:C5	3.06	0.43
8:A:628:G:C6	8:A:629:G:C6	3.06	0.43
8:A:633:A:H1'	8:A:2403:C:H4'	2.00	0.43
8:A:642:U:O2	8:A:645:C:OP2	2.36	0.43
8:A:699:A:H62	8:A:733:G:H21	1.66	0.43
8:A:745:1MG:C2	8:A:746:PSU:O4	2.72	0.43
8:A:764:A:O4'	10:C:211:ARG:HG3	2.17	0.43
8:A:813:U:C4	8:A:1195:G:C6	3.07	0.43
8:A:836:G:C4	8:A:837:C:C5	3.07	0.43
8:A:852:U:H1'	33:Z:42:ALA:HB2	2.00	0.43
8:A:885:C:O2	8:A:894:U:H5	2.01	0.43
8:A:895:U:C2'	8:A:897:C:H41	2.31	0.43
8:A:896:A:O3'	8:A:897:C:H6	2.01	0.43
8:A:897:C:C3'	8:A:898:C:H6	2.31	0.43
8:A:939:G:C4	8:A:940:G:C8	3.06	0.43
8:A:953:G:C4	8:A:954:G:C8	3.06	0.43
8:A:1026:G:C8	8:A:1134:A:C4	3.06	0.43
8:A:1056:G:O3'	8:A:1086:A:H8	2.02	0.43
8:A:1057:A:O5'	8:A:1086:A:C8	2.72	0.43
8:A:1072:C:O2	8:A:1101:U:O4	2.37	0.43
8:A:1078:U:C2'	8:A:1080:A:H62	2.26	0.43
8:A:1155:A:OP1	24:Q:54:ARG:HD3	2.18	0.43
8:A:1166:G:H1	8:A:1183:U:H3	1.67	0.43
8:A:1224:U:H5''	25:R:71:LYS:HZ1	1.83	0.43
8:A:1385:A:C8	8:A:1403:A:C2	3.06	0.43
8:A:1428:C:H5	8:A:1570:A:OP2	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1429:G:C4	8:A:1568:G:C5	3.07	0.43
8:A:1501:G:N1	8:A:1502:A:C5	2.86	0.43
8:A:1510:G:N1	8:A:1511:G:C5	2.86	0.43
8:A:1535:A:H8	8:A:1537:G:N7	2.16	0.43
8:A:1593:A:C6	8:A:1594:U:C4	3.07	0.43
8:A:1609:A:N6	8:A:1616:A:C6	2.86	0.43
8:A:1681:G:C6	8:A:1762:A:C6	3.06	0.43
8:A:1687:G:N2	8:A:1688:U:C2	2.86	0.43
8:A:1733:G:C4	8:A:1734:G:C8	3.06	0.43
8:A:1754:A:C4'	23:P:98:TYR:CE2	3.01	0.43
8:A:1764:C:C4	8:A:1989:G:N2	2.86	0.43
8:A:1781:U:H4'	8:A:1782:U:H5'	2.01	0.43
8:A:1796:U:O3'	10:C:253:GLY:HA2	2.18	0.43
8:A:1820:U:O2'	10:C:157:ALA:HB3	2.18	0.43
8:A:1863:G:C6	8:A:1864:U:C4	3.07	0.43
8:A:1864:U:O2	8:A:1878:G:N2	2.51	0.43
8:A:1912:A:N7	8:A:1916:A:N6	2.67	0.43
8:A:1948:G:C6	8:A:1959:G:C6	3.07	0.43
8:A:2024:G:H2'	8:A:2025:C:O4'	2.18	0.43
8:A:2051:A:C5	8:A:2614:A:C5	3.06	0.43
8:A:2127:G:C2	8:A:2162:G:N2	2.86	0.43
8:A:2136:G:C6	8:A:2154:A:C6	3.07	0.43
8:A:2177:C:C4	8:A:2178:C:N3	2.86	0.43
8:A:2267:A:N6	8:A:2272:U:C2	2.74	0.43
8:A:2293:G:C4	8:A:2294:G:C8	3.07	0.43
8:A:2346:A:C4	8:A:2383:G:C6	3.06	0.43
8:A:2397:G:H2'	8:A:2398:U:H6	1.84	0.43
8:A:2406:A:C5	19:L:69:ARG:CZ	3.01	0.43
8:A:2461:A:H2'	8:A:2462:C:H6	1.79	0.43
8:A:2495:G:H2'	8:A:2496:C:C6	2.53	0.43
8:A:2497:A:H8	8:A:2497:A:O5'	2.01	0.43
8:A:2503:2MA:H2'	8:A:2503:2MA:N3	2.33	0.43
8:A:2507:C:C5'	8:A:2573:C:N4	2.81	0.43
8:A:2549:G:C2	8:A:2550:G:C5	3.07	0.43
8:A:2638:G:C6	8:A:2775:G:C5	3.07	0.43
8:A:2657:A:H61	8:A:2664:G:C1'	2.32	0.43
8:A:2756:U:C2	8:A:2758:A:N7	2.86	0.43
8:A:2802:G:C5	8:A:2803:G:N7	2.87	0.43
8:A:2895:G:C6	8:A:2896:C:C4	3.06	0.43
9:B:20:G:H2'	9:B:21:G:H8	1.81	0.43
9:B:31:C:O2	9:B:31:C:H2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:66:A:N9	9:B:108:A:N6	2.67	0.43
9:B:79:G:H2'	9:B:80:U:O4'	2.18	0.43
9:B:115:A:H2'	9:B:116:G:C8	2.53	0.43
10:C:128:THR:OG1	10:C:190:THR:OG1	2.21	0.43
10:C:144:GLU:HG2	10:C:150:GLY:H	1.84	0.43
10:C:159:THR:HB	10:C:176:ARG:HG2	2.00	0.43
10:C:225:ASN:HB3	10:C:227:VAL:HG12	1.99	0.43
11:D:8:LYS:O	11:D:198:GLY:N	2.46	0.43
11:D:13:ARG:CG	23:P:54:LEU:HD21	2.49	0.43
11:D:28:GLU:HG2	11:D:30:GLU:HG3	2.00	0.43
12:E:48:THR:C	12:E:50:ALA:N	2.76	0.43
12:E:117:ARG:HH22	12:E:181:ILE:HG23	1.84	0.43
12:E:157:LEU:CG	12:E:169:VAL:HG11	2.48	0.43
13:F:102:LEU:HD23	13:F:103:ILE:CG2	2.48	0.43
17:J:55:ILE:HG21	17:J:130:HIS:HB3	2.00	0.43
17:J:125:TYR:CE2	17:J:130:HIS:CB	3.01	0.43
20:M:74:THR:HG22	20:M:89:VAL:CG2	2.49	0.43
21:N:66:ALA:O	21:N:70:THR:HG23	2.18	0.43
26:S:25:ARG:HE	26:S:74:ILE:HG23	1.84	0.43
26:S:76:VAL:HG12	26:S:101:SER:HB2	2.01	0.43
27:T:15:HIS:H	27:T:32:LEU:HA	1.83	0.43
27:T:21:SER:O	27:T:25:GLU:HB2	2.18	0.43
28:U:3:LYS:HG2	28:U:84:PHE:HZ	1.83	0.43
29:V:89:ILE:CG2	29:V:91:PHE:CZ	3.01	0.43
34:a:71:A:C6	34:a:72:A:C5	3.06	0.43
34:a:74:A:C2	34:a:75:G:C4	3.06	0.43
34:a:143:A:H2	34:a:220:G:H1	1.66	0.43
34:a:145:G:C2	34:a:177:G:O6	2.72	0.43
34:a:243:A:N6	34:a:281:G:H1'	2.34	0.43
34:a:251:G:C6	34:a:266:G:C6	3.07	0.43
34:a:258:G:H2'	34:a:259:G:H8	1.83	0.43
34:a:283:U:C5	34:a:284:C:C4	3.06	0.43
34:a:292:G:C2'	34:a:608:A:H62	2.30	0.43
34:a:310:G:H2'	34:a:311:C:H6	1.83	0.43
34:a:338:A:H2'	34:a:339:C:O4'	2.18	0.43
34:a:343:U:H2'	34:a:345:C:C5	2.54	0.43
34:a:406:G:H21	37:d:115:GLN:NE2	2.14	0.43
34:a:433:G:H2'	34:a:434:U:C6	2.54	0.43
34:a:568:G:C2	34:a:883:C:C4	3.07	0.43
34:a:570:G:C6	34:a:873:A:C2	3.06	0.43
34:a:588:G:C6	34:a:753:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:599:C:O2'	34:a:600:A:H5'	2.17	0.43
34:a:624:C:H6	34:a:624:C:OP2	2.01	0.43
34:a:675:A:C1'	44:k:117:HIS:CD2	3.00	0.43
34:a:691:G:H2'	34:a:692:U:C6	2.54	0.43
34:a:703:G:H2'	34:a:704:A:OP2	2.19	0.43
34:a:709:U:H2'	34:a:710:G:C8	2.53	0.43
34:a:809:G:C6	34:a:810:C:C5	3.06	0.43
34:a:1007:U:H2'	34:a:1008:U:O4'	2.18	0.43
34:a:1060:U:OP2	36:c:1:GLY:CA	2.66	0.43
34:a:1141:C:O5'	34:a:1141:C:H6	2.00	0.43
34:a:1220:G:H2'	52:s:53:GLY:HA2	2.00	0.43
34:a:1242:G:C5	34:a:1243:C:C5	3.06	0.43
34:a:1249:C:N4	34:a:1287:A:H3'	2.33	0.43
34:a:1309:G:H2'	34:a:1310:G:O4'	2.18	0.43
34:a:1320:C:C4	34:a:1321:U:C4	3.07	0.43
34:a:1330:U:C5	34:a:1331:G:N3	2.86	0.43
34:a:1333:A:C8	34:a:1334:G:C8	3.06	0.43
34:a:1345:U:O2'	34:a:1346:A:OP2	2.30	0.43
34:a:1377:A:OP1	40:g:91:ARG:NH2	2.36	0.43
34:a:1416:G:H2'	34:a:1417:G:O4'	2.18	0.43
34:a:1481:U:H2'	34:a:1482:G:C8	2.53	0.43
35:b:67:LEU:HD23	35:b:90:PHE:HA	2.00	0.43
35:b:95:TRP:CE3	35:b:99:MET:SD	3.11	0.43
35:b:108:GLN:O	35:b:112:ARG:CD	2.66	0.43
37:d:29:THR:HG23	37:d:30:LYS:CG	2.49	0.43
37:d:43:ARG:HB2	37:d:43:ARG:CZ	2.49	0.43
37:d:123:MET:HB3	37:d:145:ARG:HB2	2.00	0.43
38:e:48:GLY:O	38:e:62:ALA:HB1	2.18	0.43
40:g:16:LYS:HG3	40:g:43:TYR:CZ	2.53	0.43
41:h:6:ILE:CG2	41:h:76:ARG:NH1	2.81	0.43
41:h:64:TYR:HB3	41:h:68:LYS:O	2.18	0.43
43:j:36:VAL:HG11	43:j:74:VAL:HG13	1.99	0.43
45:l:29:LYS:C	45:l:80:LEU:HD12	2.42	0.43
48:o:73:ASP:OD2	48:o:76:ARG:CG	2.64	0.43
52:s:2:ARG:NE	52:s:6:LYS:CD	2.81	0.43
52:s:48:ILE:O	52:s:58:PRO:HA	2.19	0.43
55:v:1:C:C4	55:v:73:A:C2	3.07	0.43
57:x:167:PRO:C	57:x:169:GLN:H	2.24	0.43
57:x:326:ASP:OD2	57:x:329:VAL:HG23	2.18	0.43
57:x:345:GLY:HA2	57:x:359:PHE:O	2.18	0.43
57:x:587:SER:O	57:x:587:SER:OG	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1:ALA:CB	8:A:2614:A:C8	3.02	0.43
2:1:43:ARG:CZ	8:A:643:A:C4	3.02	0.43
3:2:33:ARG:HA	3:2:36:ALA:HB3	2.01	0.43
5:4:24:ARG:HH12	8:A:2742:G:P	2.41	0.43
8:A:2:G:N1	8:A:2902:C:C4	2.86	0.43
8:A:30:G:H2'	8:A:31:C:H6	1.79	0.43
8:A:39:G:C4	8:A:40:U:C5	3.07	0.43
8:A:51:G:N3	8:A:119:A:C2	2.86	0.43
8:A:85:G:C2	8:A:98:G:C2	3.06	0.43
8:A:122:G:H2'	8:A:123:G:H8	1.84	0.43
8:A:187:G:H2'	8:A:188:G:O4'	2.19	0.43
8:A:199:A:N6	8:A:2434:A:C5	2.87	0.43
8:A:325:G:H2'	8:A:326:G:H8	1.83	0.43
8:A:338:G:H2'	8:A:338:G:N3	2.33	0.43
8:A:408:G:H2'	8:A:409:G:C8	2.54	0.43
8:A:546:U:O2'	8:A:547:A:N9	2.47	0.43
8:A:607:U:H3'	8:A:619:G:H1	1.84	0.43
8:A:646:U:N3	8:A:2368:C:H1'	2.34	0.43
8:A:703:U:C2'	8:A:704:G:O4'	2.66	0.43
8:A:736:C:C2	8:A:737:C:C5	3.06	0.43
8:A:804:A:H2'	8:A:806:C:N4	2.34	0.43
8:A:809:G:C5	8:A:810:U:C4	3.06	0.43
8:A:851:C:O4'	33:Z:46:MET:HG2	2.18	0.43
8:A:855:G:H2'	8:A:856:G:H5''	2.01	0.43
8:A:882:G:H1	8:A:894:U:H4'	1.83	0.43
8:A:885:C:C2	8:A:894:U:C5	3.02	0.43
8:A:976:G:C5'	8:A:1156:A:N6	2.82	0.43
8:A:978:G:N1	8:A:979:A:C5	2.87	0.43
8:A:1050:A:C2	8:A:1051:G:C1'	3.01	0.43
8:A:1076:C:C1'	16:I:90:GLY:HA2	2.48	0.43
8:A:1082:U:H5''	8:A:1083:U:P	2.58	0.43
8:A:1214:A:N6	8:A:1235:G:H1'	2.34	0.43
8:A:1216:G:C2	8:A:1217:U:C2	3.06	0.43
8:A:1225:G:C2	8:A:1226:A:N1	2.87	0.43
8:A:1232:G:C4	8:A:1233:C:C6	3.06	0.43
8:A:1272:A:C6	8:A:1618:6MZ:C4	3.02	0.43
8:A:1287:A:C8	21:N:105:GLY:HA3	2.54	0.43
8:A:1299:G:C2	8:A:1640:A:N7	2.87	0.43
8:A:1337:G:H2'	8:A:1338:G:H8	1.83	0.43
8:A:1338:G:H2'	8:A:1339:G:C8	2.53	0.43
8:A:1348:C:C4	8:A:1349:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1374:G:C6	8:A:1375:U:C4	3.06	0.43
8:A:1413:A:H2'	8:A:1414:C:H6	1.83	0.43
8:A:1444:G:C5	8:A:1445:G:N7	2.87	0.43
8:A:1446:C:C2	8:A:1466:U:O2	2.71	0.43
8:A:1498:C:H2'	8:A:1499:C:H6	1.84	0.43
8:A:1518:C:H2'	8:A:1519:G:C8	2.54	0.43
8:A:1532:A:N1	8:A:1540:G:C6	2.87	0.43
8:A:1604:C:N3	8:A:1605:C:C5	2.86	0.43
8:A:1730:C:OP1	8:A:1730:C:H6	2.01	0.43
8:A:1731:G:C4	8:A:1733:G:C8	3.06	0.43
8:A:1753:G:N2	8:A:1756:G:P	2.90	0.43
8:A:1820:U:N3	10:C:197:ALA:O	2.49	0.43
8:A:1857:G:H1'	8:A:1885:A:N6	2.33	0.43
8:A:1862:G:C2	8:A:1881:C:N3	2.86	0.43
8:A:1885:A:C4	8:A:1886:U:C6	3.06	0.43
8:A:1911:PSU:C2	8:A:1918:A:C5	3.06	0.43
8:A:2048:G:C5	8:A:2049:G:N7	2.86	0.43
8:A:2051:A:N7	8:A:2614:A:C5	2.87	0.43
8:A:2100:G:C2	8:A:2189:U:C2	3.01	0.43
8:A:2126:A:C4	8:A:2163:A:O2'	2.70	0.43
8:A:2170:A:C1'	8:A:2171:A:C6	3.01	0.43
8:A:2198:A:O2'	8:A:2224:G:N2	2.50	0.43
8:A:2216:G:C4	8:A:2217:G:C8	3.06	0.43
8:A:2231:U:H2'	8:A:2232:C:H6	1.84	0.43
8:A:2255:G:C6	8:A:2256:G:C4	3.07	0.43
8:A:2355:G:H1'	30:W:32:ILE:CD1	2.48	0.43
8:A:2356:U:O2	8:A:2361:G:C2	2.70	0.43
8:A:2365:G:C2'	8:A:2366:A:C8	3.01	0.43
8:A:2373:G:H2'	8:A:2374:C:H6	1.77	0.43
8:A:2412:A:C4	8:A:2413:G:C8	3.06	0.43
8:A:2516:A:C6	8:A:2569:G:C2	3.06	0.43
8:A:2589:A:N1	8:A:2590:A:C5	2.87	0.43
8:A:2652:C:C4	8:A:2669:G:N1	2.87	0.43
8:A:2669:G:N1	8:A:2670:A:C5	2.87	0.43
8:A:2727:A:N1	8:A:2728:U:C4	2.87	0.43
8:A:2782:G:C2	8:A:2783:U:C6	3.07	0.43
8:A:2788:C:H4'	8:A:2810:A:O4'	2.18	0.43
8:A:2792:A:C2	8:A:2805:C:C2	3.06	0.43
8:A:2803:G:N1	8:A:2804:U:C4	2.86	0.43
8:A:2808:G:C2'	8:A:2809:A:OP2	2.66	0.43
8:A:2821:A:H4'	11:D:167:ASN:ND2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2855:C:O2'	8:A:2856:A:H5'	2.17	0.43
9:B:2:G:C5	9:B:3:C:C5	3.07	0.43
9:B:39:A:H1'	9:B:46:A:N1	2.34	0.43
9:B:51:G:H5'	22:O:63:LYS:NZ	2.32	0.43
9:B:111:U:H2'	9:B:112:G:C8	2.53	0.43
10:C:36:ASN:HB2	10:C:61:TYR:HB2	2.00	0.43
10:C:70:LYS:HD2	10:C:101:ARG:CZ	2.48	0.43
10:C:77:VAL:HB	10:C:112:GLY:H	1.83	0.43
11:D:1:MET:HE3	11:D:205:PRO:HG3	2.00	0.43
12:E:48:THR:C	12:E:50:ALA:H	2.26	0.43
14:G:38:ASP:OD2	14:G:57:TYR:OH	2.27	0.43
14:G:131:VAL:HG12	14:G:133:LYS:HZ3	1.84	0.43
15:H:23:ALA:O	15:H:27:ARG:CB	2.66	0.43
16:I:85:ILE:CB	16:I:98:GLY:HA3	2.49	0.43
17:J:34:ARG:HH12	17:J:40:HIS:CB	2.30	0.43
19:L:23:ILE:HD12	25:R:84:ARG:HG2	2.00	0.43
20:M:26:VAL:HG13	20:M:104:GLU:HG2	1.99	0.43
23:P:25:VAL:HA	23:P:84:SER:O	2.18	0.43
24:Q:55:GLN:HA	24:Q:58:GLN:HG2	2.00	0.43
25:R:29:THR:HA	25:R:63:VAL:HG11	1.99	0.43
26:S:3:THR:HG21	26:S:58:ALA:CA	2.49	0.43
28:U:3:LYS:HG2	28:U:84:PHE:CE1	2.54	0.43
30:W:36:GLN:OE1	30:W:40:LYS:HB2	2.19	0.43
34:a:31:G:C2'	34:a:48:C:N4	2.82	0.43
34:a:77:A:N1	34:a:93:U:C4	2.87	0.43
34:a:130:A:H1'	34:a:263:A:O2'	2.19	0.43
34:a:160:A:O2'	34:a:162:A:OP2	2.27	0.43
34:a:201:G:H1	34:a:216:U:H3	1.66	0.43
34:a:216:U:O2	34:a:468:A:H2	2.01	0.43
34:a:296:U:H3	34:a:301:G:H1	1.66	0.43
34:a:393:A:C6	34:a:394:G:N7	2.86	0.43
34:a:429:U:H5''	37:d:31:CYS:SG	2.59	0.43
34:a:450:G:O6	34:a:484:G:N1	2.52	0.43
34:a:497:G:N2	34:a:498:A:C6	2.86	0.43
34:a:604:G:O6	34:a:635:A:N6	2.51	0.43
34:a:606:G:N3	34:a:633:G:C6	2.87	0.43
34:a:617:G:H2'	34:a:618:C:O4'	2.18	0.43
34:a:644:U:C5	34:a:645:G:N7	2.86	0.43
34:a:710:G:C2	34:a:711:G:C4	3.07	0.43
34:a:764:C:C4	34:a:765:G:C4	3.07	0.43
34:a:769:G:N1	34:a:770:C:C4	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:774:G:H2'	34:a:775:G:O4'	2.18	0.43
34:a:909:A:C4	34:a:910:C:C6	3.06	0.43
34:a:1000:A:H8	34:a:1000:A:OP2	2.00	0.43
34:a:1029:U:C2'	34:a:1032:G:N2	2.81	0.43
34:a:1032:G:C3'	34:a:1034:G:H22	2.31	0.43
34:a:1072:G:C5	34:a:1104:G:C2	3.06	0.43
34:a:1074:G:H2'	34:a:1075:U:C4'	2.48	0.43
34:a:1084:G:C5	34:a:1085:U:C4	3.06	0.43
34:a:1149:C:H2'	34:a:1150:A:C8	2.49	0.43
34:a:1190:G:OP1	36:c:4:VAL:HG12	2.18	0.43
34:a:1205:U:O2'	36:c:193:GLY:HA2	2.17	0.43
34:a:1213:A:N1	34:a:1215:G:H1'	2.34	0.43
34:a:1275:A:H2'	34:a:1276:G:O4'	2.19	0.43
34:a:1314:C:H2'	34:a:1315:U:C6	2.53	0.43
34:a:1316:G:P	47:n:27:LYS:NZ	2.92	0.43
34:a:1339:A:C2	55:v:31:G:H4'	2.53	0.43
34:a:1345:U:C6	34:a:1377:A:C2	3.07	0.43
34:a:1347:G:C2'	34:a:1348:U:OP2	2.67	0.43
34:a:1350:A:C8	42:i:119:LYS:NZ	2.86	0.43
34:a:1419:G:C6	34:a:1482:G:C2	3.07	0.43
34:a:1457:G:N2	34:a:1458:G:C4	2.87	0.43
34:a:1460:C:C4	34:a:1461:G:C5	3.05	0.43
34:a:1465:A:H2'	34:a:1466:C:O4'	2.18	0.43
36:c:79:LYS:HB2	36:c:81:GLU:OE2	2.18	0.43
36:c:183:TYR:HA	36:c:199:VAL:O	2.18	0.43
37:d:7:LYS:O	37:d:20:LEU:CD1	2.67	0.43
37:d:102:TYR:O	37:d:164:ARG:NH2	2.52	0.43
41:h:26:MET:O	41:h:58:LEU:CA	2.62	0.43
43:j:60:ASP:OD1	43:j:60:ASP:N	2.49	0.43
50:q:20:ILE:HD12	50:q:22:VAL:HG23	2.00	0.43
53:t:43:LYS:NZ	53:t:83:ASN:O	2.51	0.43
54:u:13:VAL:CG1	54:u:16:ARG:HH11	2.31	0.43
55:v:18:G:C2	55:v:58:A:C4	3.07	0.43
57:x:103:ARG:NH1	57:x:319:LEU:HD21	2.33	0.43
57:x:252:ARG:O	57:x:253:GLN:C	2.58	0.43
57:x:276:ALA:C	57:x:278:LEU:H	2.27	0.43
57:x:362:ILE:O	57:x:372:GLU:HA	2.19	0.43
57:x:537:ASN:OD1	57:x:549:ILE:HD13	2.18	0.43
57:x:594:LEU:O	57:x:598:ILE:HG13	2.17	0.43
2:1:5:ARG:HA	2:1:24:LYS:O	2.18	0.43
2:1:32:LYS:HB3	2:1:50:GLU:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6:20:ASN:ND2	7:6:37:CYS:SG	2.90	0.43
8:A:7:G:H2'	8:A:8:C:O4'	2.18	0.43
8:A:9:G:H1	8:A:2629:U:HO2'	1.65	0.43
8:A:14:A:C5	8:A:526:A:N1	2.86	0.43
8:A:104:A:C6	8:A:105:C:C4	3.06	0.43
8:A:134:G:C6	8:A:146:A:N6	2.87	0.43
8:A:266:G:N1	8:A:427:U:C2	2.87	0.43
8:A:326:G:C2	8:A:337:C:N3	2.87	0.43
8:A:381:G:N1	8:A:394:C:N3	2.65	0.43
8:A:408:G:C2	8:A:420:C:C2	3.06	0.43
8:A:482:A:H1'	8:A:498:G:N2	2.33	0.43
8:A:524:G:C2	8:A:525:U:C2	3.07	0.43
8:A:560:C:C4	8:A:561:G:N7	2.86	0.43
8:A:602:A:O2'	8:A:655:A:N1	2.42	0.43
8:A:627:A:C6	8:A:637:A:C8	3.07	0.43
8:A:641:U:O2'	8:A:2350:C:OP1	2.35	0.43
8:A:684:G:C5	8:A:774:G:C6	3.06	0.43
8:A:688:U:O2'	8:A:786:C:O2'	2.23	0.43
8:A:749:A:C5	8:A:1618:6MZ:C2	3.01	0.43
8:A:764:A:H62	8:A:1776:G:H1'	1.82	0.43
8:A:775:G:N3	8:A:777:G:C6	2.87	0.43
8:A:828:U:C2	8:A:829:A:N6	2.87	0.43
8:A:864:G:H2'	8:A:865:C:H6	1.83	0.43
8:A:868:U:H2'	8:A:869:G:O4'	2.19	0.43
8:A:907:G:C6	8:A:908:C:C4	3.07	0.43
8:A:925:A:C4	8:A:926:G:C8	3.06	0.43
8:A:978:G:C6	8:A:986:C:N4	2.87	0.43
8:A:1014:A:N6	8:A:1149:G:C6	2.87	0.43
8:A:1037:G:O2'	8:A:1038:G:H5'	2.18	0.43
8:A:1057:A:C6	8:A:1058:U:O4	2.72	0.43
8:A:1058:U:O4	8:A:1080:A:C2	2.71	0.43
8:A:1072:C:C1'	8:A:1089:A:C8	3.01	0.43
8:A:1085:A:O3'	8:A:1086:A:N3	2.52	0.43
8:A:1168:G:O2'	8:A:1169:A:H5'	2.19	0.43
8:A:1228:G:H2'	8:A:1229:C:H6	1.82	0.43
8:A:1234:U:O2'	8:A:1235:G:H5'	2.18	0.43
8:A:1266:G:N1	8:A:2013:A:OP2	2.46	0.43
8:A:1287:A:C4'	21:N:103:ARG:NH1	2.79	0.43
8:A:1306:C:C2	8:A:1307:A:C8	3.06	0.43
8:A:1352:U:H1'	8:A:1570:A:H2	1.84	0.43
8:A:1362:C:C4	8:A:1363:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1381:G:N1	8:A:1382:G:C5	2.87	0.43
8:A:1391:U:N3	8:A:1394:U:OP2	2.34	0.43
8:A:1443:U:N3	8:A:1549:A:C2	2.86	0.43
8:A:1639:C:O2'	8:A:1640:A:H5'	2.18	0.43
8:A:1819:A:H5''	10:C:156:SER:CB	2.48	0.43
8:A:1881:C:H2'	8:A:1882:U:O4'	2.19	0.43
8:A:1950:G:H1	8:A:1954:G:C2'	2.30	0.43
8:A:2057:G:H2'	8:A:2058:A:H8	1.82	0.43
8:A:2081:U:H2'	8:A:2082:A:H8	1.82	0.43
8:A:2097:A:C4	8:A:2098:U:C5	3.06	0.43
8:A:2263:C:H2'	8:A:2264:C:H6	1.84	0.43
8:A:2289:G:C2	8:A:2290:G:C8	3.06	0.43
8:A:2363:G:N2	30:W:32:ILE:HD11	2.34	0.43
8:A:2489:U:H2'	8:A:2490:G:O4'	2.18	0.43
8:A:2540:C:H4'	8:A:2741:A:H4'	2.00	0.43
8:A:2602:A:H4'	8:A:2603:G:C5'	2.48	0.43
8:A:2682:A:C8	11:D:11:MET:SD	3.12	0.43
8:A:2703:C:N3	8:A:2704:C:C5	2.86	0.43
9:B:30:C:C5	9:B:31:C:C6	3.06	0.43
9:B:46:A:C6	9:B:47:C:C4	3.07	0.43
9:B:50:A:C5	9:B:51:G:C8	3.07	0.43
9:B:59:A:H2'	9:B:60:C:C6	2.54	0.43
9:B:101:A:C2	9:B:102:G:H1'	2.54	0.43
9:B:114:C:H2'	9:B:115:A:C8	2.53	0.43
10:C:160:TYR:N	10:C:176:ARG:HE	2.16	0.43
12:E:88:ARG:HD3	12:E:88:ARG:HA	1.72	0.43
12:E:150:THR:N	12:E:170:ARG:O	2.51	0.43
13:F:72:SER:HB3	13:F:79:ARG:HE	1.83	0.43
14:G:151:ARG:HB3	14:G:161:VAL:HG23	1.99	0.43
15:H:82:SER:C	15:H:149:GLU:O	2.62	0.43
17:J:55:ILE:HD13	17:J:130:HIS:CG	2.53	0.43
18:K:58:LEU:HG	18:K:59:LYS:O	2.18	0.43
18:K:99:ILE:HD12	18:K:118:LEU:HB2	2.00	0.43
19:L:143:GLU:HG2	19:L:143:GLU:O	2.19	0.43
21:N:52:ILE:HD13	21:N:94:TYR:HB2	2.00	0.43
24:Q:90:ASP:OD1	24:Q:93:ILE:HG12	2.18	0.43
25:R:24:LYS:CG	25:R:92:TRP:HB3	2.48	0.43
26:S:86:MET:HE3	26:S:87:PRO:HD2	2.01	0.43
28:U:5:ARG:HG2	28:U:93:ARG:CZ	2.48	0.43
29:V:72:VAL:HA	29:V:94:ALA:H	1.84	0.43
33:Z:3:THR:HG21	33:Z:36:GLU:OE2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Z:43:ILE:O	33:Z:46:MET:HB2	2.18	0.43
34:a:13:U:O2	34:a:915:A:C8	2.72	0.43
34:a:35:G:C6	34:a:36:C:C4	3.07	0.43
34:a:53:A:N1	34:a:359:G:C6	2.87	0.43
34:a:124:C:C4	34:a:238:A:N1	2.86	0.43
34:a:250:A:O4'	34:a:252:U:C6	2.72	0.43
34:a:320:A:C2'	34:a:321:A:O4'	2.65	0.43
34:a:324:G:H22	34:a:327:A:C5'	2.32	0.43
34:a:343:U:N3	34:a:347:G:N1	2.66	0.43
34:a:400:C:H2'	34:a:401:C:H6	1.83	0.43
34:a:448:A:H3'	34:a:449:G:C8	2.53	0.43
34:a:462:G:H3'	34:a:462:G:H8	1.84	0.43
34:a:504:C:H1'	34:a:510:A:C8	2.53	0.43
34:a:560:A:N1	34:a:566:G:H5'	2.33	0.43
34:a:577:G:O4'	34:a:816:A:C5	2.72	0.43
34:a:582:C:OP1	48:o:64:LYS:HE2	2.18	0.43
34:a:609:A:C5	34:a:610:U:C5	3.06	0.43
34:a:695:A:C6	34:a:696:A:C5	3.06	0.43
34:a:704:A:H3'	34:a:705:G:H8	1.83	0.43
34:a:838:G:N1	34:a:849:G:C4	2.86	0.43
34:a:859:G:N3	34:a:859:G:C2'	2.81	0.43
34:a:951:G:H2'	34:a:952:U:H6	1.83	0.43
34:a:978:A:C6	34:a:1318:A:N7	2.86	0.43
34:a:1032:G:N3	34:a:1034:G:N1	2.67	0.43
34:a:1050:G:N1	34:a:1209:C:C2	2.86	0.43
34:a:1078:U:C4	34:a:1079:G:C6	3.06	0.43
34:a:1091:U:H2'	34:a:1093:A:OP2	2.18	0.43
34:a:1091:U:H1'	34:a:1095:U:C2	2.53	0.43
34:a:1160:G:C5	34:a:1161:C:C5	3.06	0.43
34:a:1176:A:C2	34:a:1177:G:H1'	2.54	0.43
34:a:1184:G:C6	34:a:1185:G:C8	3.06	0.43
34:a:1239:A:N3	34:a:1241:G:C2	2.87	0.43
34:a:1291:U:H2'	34:a:1292:G:C8	2.53	0.43
34:a:1331:G:OP1	34:a:1332:A:OP1	2.36	0.43
34:a:1358:U:H3'	34:a:1359:C:H6	1.82	0.43
34:a:1360:A:H2'	34:a:1360:A:N3	2.34	0.43
34:a:1396:A:C2	38:e:23:THR:CG2	3.01	0.43
34:a:1442:G:H2'	34:a:1443:C:H6	1.84	0.43
34:a:1458:G:H2'	34:a:1459:G:H8	1.83	0.43
35:b:13:VAL:HA	35:b:15:PHE:CE2	2.53	0.43
35:b:56:LEU:CD2	35:b:220:VAL:HG12	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:c:28:PHE:CE1	36:c:32:LEU:HD11	2.53	0.43
36:c:133:MET:HE1	36:c:166:TRP:N	2.34	0.43
37:d:160:LEU:CD1	37:d:163:GLN:OE1	2.66	0.43
38:e:106:ALA:HB2	38:e:124:ALA:HB3	2.01	0.43
38:e:110:MET:HB3	38:e:114:LEU:HD12	2.00	0.43
39:f:3:HIS:CD2	39:f:93:LYS:C	2.97	0.43
39:f:10:VAL:HB	39:f:58:HIS:HB3	1.99	0.43
40:g:28:ILE:HG22	40:g:104:VAL:HG11	1.99	0.43
40:g:112:ASP:CG	40:g:117:LEU:HD22	2.43	0.43
40:g:114:SER:C	40:g:118:ARG:HH21	2.27	0.43
46:m:13:HIS:ND1	46:m:41:ASP:HA	2.34	0.43
46:m:18:LEU:HD23	46:m:29:SER:C	2.44	0.43
48:o:43:ALA:O	48:o:46:LYS:CE	2.66	0.43
49:p:53:ASP:O	49:p:57:ILE:HG12	2.18	0.43
50:q:12:VAL:HG21	50:q:23:ALA:HB2	2.01	0.43
52:s:29:PRO:HB3	52:s:48:ILE:HA	2.00	0.43
54:u:20:ARG:O	54:u:24:LYS:HG2	2.19	0.43
55:v:57:A:H2'	55:v:57:A:N3	2.34	0.43
56:w:39:PSU:O4	56:w:39:PSU:O4'	2.35	0.43
57:x:17:HIS:HB2	57:x:119:GLN:HB2	2.00	0.43
57:x:333:THR:O	57:x:383:ALA:HB1	2.18	0.43
57:x:621:GLU:CD	57:x:621:GLU:H	2.27	0.43
1:0:8:THR:O	1:0:12:ARG:HB2	2.19	0.43
6:5:26:VAL:HA	6:5:84:TYR:HA	2.01	0.43
6:5:58:THR:CB	6:5:80:THR:O	2.67	0.43
8:A:5:A:C6	8:A:2899:A:N6	2.87	0.43
8:A:55:G:H2'	8:A:56:A:C8	2.54	0.43
8:A:213:A:O2'	8:A:214:G:H5'	2.19	0.43
8:A:250:G:N1	8:A:251:A:C2	2.87	0.43
8:A:307:G:C2'	8:A:309:A:N7	2.81	0.43
8:A:356:G:C6	8:A:357:C:C4	3.07	0.43
8:A:451:U:P	12:E:47:LYS:NZ	2.91	0.43
8:A:491:G:H2'	8:A:491:G:N3	2.34	0.43
8:A:528:A:N1	8:A:2043:C:O5'	2.52	0.43
8:A:581:C:H2'	8:A:582:A:C8	2.53	0.43
8:A:582:A:C6	8:A:1259:G:N1	2.87	0.43
8:A:628:G:C4	8:A:629:G:C8	3.06	0.43
8:A:656:G:H2'	8:A:657:U:H6	1.81	0.43
8:A:690:G:H4'	10:C:216:ARG:NH2	2.34	0.43
8:A:715:A:C6	8:A:716:A:C6	3.07	0.43
8:A:798:G:C2	8:A:799:G:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:847:U:N3	8:A:848:C:C5	2.87	0.43
8:A:874:G:C6	8:A:904:G:C6	3.07	0.43
8:A:888:C:C6	8:A:889:C:O2	2.72	0.43
8:A:915:C:C4	8:A:916:G:C4	3.06	0.43
8:A:997:G:O2'	8:A:998:C:H5'	2.19	0.43
8:A:997:G:OP1	24:Q:91:ARG:HD2	2.18	0.43
8:A:1002:G:C2	8:A:1003:G:H1'	2.54	0.43
8:A:1004:U:O4'	8:A:1010:A:C4	2.71	0.43
8:A:1029:A:C6	8:A:1030:C:C2	3.07	0.43
8:A:1079:C:N3	8:A:1083:U:C2	2.87	0.43
8:A:1094:U:O2'	8:A:1095:A:C8	2.71	0.43
8:A:1112:G:C6	8:A:1113:U:C4	3.06	0.43
8:A:1139:G:H2'	8:A:1140:C:C6	2.54	0.43
8:A:1268:A:C6	8:A:1269:A:C4	3.07	0.43
8:A:1386:C:H2'	8:A:1387:A:H8	1.80	0.43
8:A:1412:U:C4	8:A:1591:A:N6	2.85	0.43
8:A:1431:A:C4	8:A:1432:G:C8	3.06	0.43
8:A:1536:C:H5'	8:A:1537:G:O4'	2.18	0.43
8:A:1589:U:H2'	8:A:1590:A:H8	1.83	0.43
8:A:1655:A:H1'	11:D:118:PHE:CD1	2.54	0.43
8:A:1682:G:H2'	8:A:1683:U:H6	1.80	0.43
8:A:1690:A:H3'	8:A:1691:C:C6	2.53	0.43
8:A:1698:A:C8	8:A:1700:A:H1'	2.54	0.43
8:A:1702:G:N1	8:A:1703:G:C5	2.87	0.43
8:A:1788:C:O5'	8:A:1788:C:C6	2.72	0.43
8:A:1798:U:P	10:C:269:ARG:HH12	2.39	0.43
8:A:1831:G:C4	8:A:1975:G:C2	3.07	0.43
8:A:1906:G:O6	8:A:1925:C:N4	2.51	0.43
8:A:2024:G:C6	8:A:2025:C:N4	2.87	0.43
8:A:2044:C:C4	8:A:2625:G:C2	3.07	0.43
8:A:2085:U:O2	8:A:2235:G:C2	2.72	0.43
8:A:2141:G:C2	8:A:2150:C:N4	2.87	0.43
8:A:2155:U:C5	8:A:2156:G:O2'	2.65	0.43
8:A:2160:C:H6	8:A:2160:C:H3'	1.83	0.43
8:A:2176:A:C8	8:A:2177:C:C5	3.06	0.43
8:A:2185:U:N3	8:A:2186:G:C6	2.86	0.43
8:A:2199:A:H3'	8:A:2200:C:C5	2.53	0.43
8:A:2315:G:C5	8:A:2316:G:N7	2.87	0.43
8:A:2588:G:H2'	8:A:2589:A:O4'	2.19	0.43
8:A:2638:G:N2	8:A:2775:G:H2'	2.31	0.43
8:A:2648:G:C2	8:A:2649:C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2652:C:N4	8:A:2669:G:C6	2.87	0.43
8:A:2656:U:N3	8:A:2665:A:C8	2.75	0.43
8:A:2692:G:C4	8:A:2693:G:C8	3.07	0.43
8:A:2697:G:C6	8:A:2711:A:C6	3.07	0.43
8:A:2720:U:C6	8:A:2872:A:C6	3.07	0.43
8:A:2722:G:C5	8:A:2723:C:C4	3.06	0.43
8:A:2766:A:C5	8:A:2767:C:C5	3.06	0.43
8:A:2873:A:O4'	21:N:6:SER:HB3	2.17	0.43
9:B:66:A:C4	9:B:108:A:C6	3.06	0.43
10:C:136:VAL:HG11	10:C:164:VAL:O	2.19	0.43
10:C:160:TYR:H	10:C:176:ARG:HE	1.66	0.43
14:G:43:LYS:HG2	14:G:50:THR:OG1	2.19	0.43
15:H:1:MET:N	15:H:21:VAL:O	2.51	0.43
17:J:35:ARG:HD3	17:J:140:LEU:HD21	2.00	0.43
17:J:57:LEU:CD2	17:J:125:TYR:HB2	2.46	0.43
20:M:57:VAL:CG1	20:M:112:LEU:HG	2.45	0.43
22:O:36:TYR:HD2	22:O:52:SER:CB	2.32	0.43
24:Q:40:LYS:HA	24:Q:43:GLN:CD	2.43	0.43
24:Q:66:ALA:O	24:Q:70:GLN:HB2	2.18	0.43
24:Q:81:GLY:HA2	24:Q:84:LYS:HD2	2.01	0.43
25:R:89:HIS:NE2	25:R:91:GLN:HB2	2.34	0.43
26:S:56:ALA:O	26:S:60:HIS:HB3	2.18	0.43
27:T:61:LEU:O	27:T:82:LYS:N	2.44	0.43
27:T:91:GLN:NE2	27:T:91:GLN:HA	2.33	0.43
28:U:10:VAL:C	28:U:21:ARG:HG3	2.43	0.43
29:V:5:ASN:HA	29:V:64:VAL:O	2.19	0.43
29:V:49:ASN:O	29:V:52:ALA:HB3	2.18	0.43
34:a:29:U:O2'	34:a:295:C:H4'	2.19	0.43
34:a:44:A:H2'	34:a:45:G:C8	2.54	0.43
34:a:59:A:C4	34:a:331:G:N2	2.86	0.43
34:a:75:G:C4	34:a:76:G:C8	3.07	0.43
34:a:81:A:C6	34:a:90:C:C4	3.07	0.43
34:a:90:C:H3'	34:a:90:C:OP2	2.18	0.43
34:a:118:U:H3'	34:a:288:A:N6	2.33	0.43
34:a:293:G:C6	34:a:305:G:C6	3.06	0.43
34:a:300:A:C2'	34:a:564:C:N4	2.82	0.43
34:a:321:A:C2	34:a:322:C:C4	3.07	0.43
34:a:332:G:C6	34:a:333:U:C4	3.07	0.43
34:a:351:G:C8	34:a:351:G:OP2	2.71	0.43
34:a:355:C:C2	34:a:356:A:C8	3.06	0.43
34:a:370:C:H2'	34:a:371:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:495:A:C5	34:a:496:A:C6	3.07	0.43
34:a:510:A:H1'	34:a:543:U:O4'	2.18	0.43
34:a:563:A:C3'	45:l:11:ARG:HH21	2.31	0.43
34:a:678:U:C2	34:a:713:G:N2	2.86	0.43
34:a:704:A:C8	34:a:705:G:N7	2.87	0.43
34:a:739:C:C4	34:a:740:U:C4	3.06	0.43
34:a:815:A:H4'	34:a:817:C:C5	2.53	0.43
34:a:825:A:H61	34:a:876:C:N4	2.16	0.43
34:a:833:G:N1	34:a:854:U:N3	2.66	0.43
34:a:913:A:OP1	45:l:87:LYS:CE	2.66	0.43
34:a:936:C:C4	34:a:937:A:N7	2.87	0.43
34:a:947:G:H2'	34:a:948:C:C6	2.54	0.43
34:a:1053:G:H4'	34:a:1054:C:H5''	1.99	0.43
34:a:1166:G:C2	34:a:1171:A:C6	3.06	0.43
34:a:1243:C:O2'	34:a:1244:G:H5'	2.19	0.43
34:a:1309:G:O6	34:a:1329:A:N6	2.51	0.43
34:a:1317:C:O2	47:n:53:ARG:HB3	2.18	0.43
34:a:1405:G:N1	34:a:1406:U:C4	2.86	0.43
34:a:1457:G:C2	34:a:1458:G:N9	2.86	0.43
34:a:1519:MA6:H5''	34:a:1520:C:C6	2.54	0.43
36:c:52:SER:HG	36:c:111:ASP:CG	2.21	0.43
39:f:12:PRO:C	39:f:44:ARG:HH12	2.26	0.43
40:g:68:VAL:HG11	40:g:133:ALA:HB1	2.00	0.43
41:h:12:ARG:NH1	41:h:26:MET:HB3	2.34	0.43
41:h:24:VAL:O	41:h:60:LEU:HG	2.18	0.43
42:i:6:TYR:HE1	42:i:17:ARG:HB3	1.82	0.43
42:i:118:ARG:NH1	42:i:124:PRO:HA	2.33	0.43
43:j:29:ALA:C	43:j:31:ARG:H	2.26	0.43
44:k:125:LYS:NZ	44:k:126:ARG:O	2.49	0.43
47:n:25:GLU:OE2	47:n:26:LEU:CD1	2.66	0.43
47:n:25:GLU:OE2	47:n:26:LEU:HD12	2.19	0.43
47:n:64:CYS:HB2	47:n:67:THR:HG22	2.00	0.43
49:p:20:VAL:HG21	49:p:32:PHE:CB	2.48	0.43
50:q:8:GLN:O	50:q:24:ILE:HG22	2.19	0.43
53:t:7:LYS:O	53:t:10:ALA:HB3	2.18	0.43
56:w:72:C:C4	56:w:73:A:N7	2.87	0.43
57:x:25:THR:HA	57:x:268:ALA:HB1	2.00	0.43
57:x:66:ALA:CB	57:x:86:ILE:HG12	2.48	0.43
57:x:190:ILE:CG2	57:x:192:TRP:CZ2	3.01	0.43
57:x:205:ASP:C	57:x:206:ILE:HG12	2.44	0.43
57:x:531:LYS:HG3	57:x:533:TYR:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:673:THR:O	57:x:676:ARG:HB2	2.19	0.43
3:2:6:GLN:O	8:A:686:U:H1'	2.19	0.43
4:3:29:ARG:HE	8:A:2394:C:P	2.40	0.43
7:6:13:THR:CG2	7:6:31:ASP:OD1	2.67	0.43
8:A:39:G:N2	8:A:441:U:C2	2.86	0.43
8:A:80:G:H2'	8:A:81:G:O4'	2.18	0.43
8:A:81:G:C2	8:A:106:C:N3	2.87	0.43
8:A:102:U:H4'	8:A:103:A:OP1	2.18	0.43
8:A:131:A:C2	8:A:132:G:C5	3.07	0.43
8:A:153:U:C2	8:A:154:U:C6	3.07	0.43
8:A:178:G:H2'	8:A:179:C:H6	1.84	0.43
8:A:248:G:O2'	8:A:2432:A:OP1	2.37	0.43
8:A:273:G:C2	8:A:365:U:C2	3.07	0.43
8:A:466:A:N3	8:A:683:U:H1'	2.34	0.43
8:A:489:G:C8	26:S:49:LYS:NZ	2.87	0.43
8:A:513:A:H2'	8:A:514:A:H8	1.84	0.43
8:A:570:G:H2'	8:A:2030:6MZ:N7	2.33	0.43
8:A:591:U:C2	8:A:592:A:N7	2.87	0.43
8:A:642:U:H3	8:A:645:C:P	2.41	0.43
8:A:652:U:H6	8:A:652:U:O5'	2.01	0.43
8:A:780:G:C4	8:A:782:A:N6	2.87	0.43
8:A:799:G:C6	8:A:800:A:C6	3.06	0.43
8:A:802:A:C5	8:A:803:U:C4	3.06	0.43
8:A:851:C:H1'	33:Z:46:MET:CE	2.44	0.43
8:A:932:U:O4'	8:A:933:A:C4	2.72	0.43
8:A:997:G:OP1	24:Q:90:ASP:HB2	2.19	0.43
8:A:999:U:H3'	8:A:1154:G:C6	2.53	0.43
8:A:1005:C:O2	17:J:30:THR:CG2	2.61	0.43
8:A:1007:C:C2	8:A:1137:G:C2	3.06	0.43
8:A:1007:C:O2'	17:J:109:LEU:O	2.36	0.43
8:A:1011:G:OP1	24:Q:75:TYR:N	2.52	0.43
8:A:1034:G:C2	8:A:1035:U:C2	3.07	0.43
8:A:1040:A:C6	8:A:1041:G:N7	2.87	0.43
8:A:1057:A:C2	8:A:1082:U:C4	3.06	0.43
8:A:1091:G:C6	8:A:1092:C:C4	3.07	0.43
8:A:1108:U:C4	8:A:1109:C:N4	2.87	0.43
8:A:1135:C:C6	8:A:1137:G:OP2	2.72	0.43
8:A:1163:G:C2	8:A:1164:C:C5	3.07	0.43
8:A:1219:U:C2	8:A:1231:U:O2	2.72	0.43
8:A:1268:A:C5	8:A:1269:A:C5	3.07	0.43
8:A:1336:A:C6	8:A:1337:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1406:U:H2'	8:A:1407:G:H8	1.83	0.43
8:A:1492:G:N1	8:A:1499:C:C4	2.87	0.43
8:A:1534:U:O2	8:A:1537:G:O6	2.36	0.43
8:A:1632:A:H2'	8:A:1633:G:C8	2.54	0.43
8:A:1735:A:C5	8:A:1736:U:C4	3.07	0.43
8:A:1954:G:H22	8:A:1986:C:P	2.41	0.43
8:A:2052:A:C8	11:D:146:ILE:HD11	2.54	0.43
8:A:2056:G:C6	8:A:2577:A:C4	3.07	0.43
8:A:2205:A:C5	8:A:2206:C:C5	3.06	0.43
8:A:2244:U:H1'	8:A:2434:A:C4	2.54	0.43
8:A:2248:C:H2'	8:A:2249:U:O4'	2.18	0.43
8:A:2254:C:H2'	8:A:2255:G:O4'	2.18	0.43
8:A:2282:G:O3'	8:A:2390:U:C4	2.72	0.43
8:A:2350:C:C4	8:A:2351:G:C5	3.06	0.43
8:A:2362:C:H2'	8:A:2363:G:O4'	2.19	0.43
8:A:2391:G:C2	8:A:2424:C:C6	3.07	0.43
8:A:2396:G:C2	8:A:2421:G:C2	3.06	0.43
8:A:2523:G:C2	8:A:2524:G:C8	3.07	0.43
8:A:2547:A:N7	8:A:2566:A:C8	2.87	0.43
8:A:2592:G:C2	8:A:2603:G:C6	3.07	0.43
8:A:2616:C:H2'	8:A:2617:U:H6	1.84	0.43
8:A:2634:A:N6	8:A:2785:C:H42	2.17	0.43
8:A:2644:G:C6	8:A:2645:G:C6	3.07	0.43
8:A:2679:A:C6	8:A:2729:G:O6	2.71	0.43
8:A:2685:G:N2	8:A:2686:G:C4	2.87	0.43
8:A:2692:G:H2'	8:A:2693:G:H8	1.83	0.43
8:A:2805:C:H2'	8:A:2806:C:O4'	2.19	0.43
8:A:2816:G:C4	8:A:2831:G:C2	3.06	0.43
9:B:13:G:H5''	9:B:15:A:C5	2.53	0.43
9:B:37:C:H2'	9:B:38:C:O4'	2.19	0.43
9:B:90:C:H2'	9:B:91:C:O4'	2.17	0.43
10:C:110:LYS:HE3	10:C:113:ASP:OD1	2.19	0.43
13:F:4:HIS:ND1	13:F:93:GLU:CD	2.76	0.43
13:F:39:VAL:O	13:F:41:GLU:OE1	2.36	0.43
13:F:145:VAL:HG22	13:F:147:ARG:H	1.84	0.43
15:H:3:VAL:HG23	15:H:37:VAL:C	2.44	0.43
15:H:14:SER:CB	15:H:17:ASP:CG	2.92	0.43
18:K:105:ARG:HA	18:K:108:ARG:HG3	1.99	0.43
19:L:28:GLY:O	19:L:29:LYS:HB3	2.19	0.43
20:M:29:GLY:N	20:M:104:GLU:OE1	2.51	0.43
21:N:48:VAL:HA	21:N:51:LEU:CG	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:52:ILE:HD13	21:N:94:TYR:CB	2.49	0.43
22:O:36:TYR:CD2	22:O:52:SER:CB	3.02	0.43
26:S:51:LEU:O	26:S:55:ILE:HD12	2.18	0.43
28:U:43:LYS:O	28:U:57:ILE:HA	2.19	0.43
30:W:64:LYS:HB2	30:W:79:GLU:HG3	2.00	0.43
30:W:67:VAL:CG1	30:W:72:ASN:O	2.67	0.43
32:Y:1:MET:CE	32:Y:6:LEU:HD11	2.49	0.43
34:a:1:A:H8	34:a:2:A:C5	2.36	0.43
34:a:80:A:O5'	34:a:86:G:O6	2.36	0.43
34:a:109:A:C5	34:a:326:G:C2	3.07	0.43
34:a:161:A:C2'	34:a:162:A:O4'	2.67	0.43
34:a:203:G:H21	34:a:216:U:H5'	1.82	0.43
34:a:253:A:N1	34:a:254:G:C5	2.86	0.43
34:a:341:C:H2'	34:a:342:C:H6	1.83	0.43
34:a:341:C:N3	34:a:349:A:N1	2.66	0.43
34:a:458:U:H3	34:a:474:G:H1	1.66	0.43
34:a:533:A:C6	34:a:536:C:C2	3.07	0.43
34:a:551:U:C2	34:a:552:U:C5	3.07	0.43
34:a:552:U:C4	34:a:553:A:C2	3.07	0.43
34:a:554:A:C2	34:a:555:U:C4	3.06	0.43
34:a:563:A:C4'	34:a:566:G:N3	2.82	0.43
34:a:688:G:C6	34:a:700:G:C6	3.07	0.43
34:a:795:C:H5''	34:a:796:C:OP2	2.19	0.43
34:a:949:A:C5	34:a:1233:G:N1	2.87	0.43
34:a:951:G:O2'	34:a:952:U:H5'	2.19	0.43
34:a:1039:G:C6	34:a:1040:U:C4	3.07	0.43
34:a:1099:G:H2'	34:a:1100:C:O4'	2.19	0.43
34:a:1157:A:N6	34:a:1180:A:N7	2.67	0.43
34:a:1234:C:H1'	34:a:1364:U:O2	2.19	0.43
34:a:1261:A:C5	34:a:1275:A:C4	3.07	0.43
34:a:1325:C:O2'	34:a:1326:U:H5'	2.19	0.43
34:a:1358:U:C5	34:a:1359:C:N3	2.87	0.43
34:a:1358:U:C6	34:a:1359:C:C5	3.07	0.43
34:a:1366:C:O2'	43:j:62:ARG:NH2	2.49	0.43
34:a:1402:4OC:HM22	34:a:1403:C:O4'	2.18	0.43
34:a:1412:C:C2	34:a:1489:G:N2	2.87	0.43
36:c:6:PRO:O	36:c:9:ILE:HG22	2.18	0.43
36:c:10:ARG:HB2	36:c:15:LYS:HG2	2.00	0.43
36:c:13:ILE:HG22	36:c:14:VAL:HG13	2.00	0.43
37:d:63:ILE:HG22	37:d:64:TYR:CE1	2.53	0.43
37:d:68:GLU:OE2	37:d:71:PHE:CZ	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:d:97:LEU:HD23	37:d:131:ILE:O	2.18	0.43
37:d:116:LEU:HD12	37:d:116:LEU:N	2.34	0.43
38:e:104:ILE:HD11	38:e:120:HIS:HA	2.00	0.43
39:f:36:ILE:HG21	39:f:39:LEU:HG	2.01	0.43
43:j:54:SER:O	47:n:81:ARG:CZ	2.66	0.43
46:m:40:GLU:HG2	46:m:41:ASP:H	1.83	0.43
47:n:69:ARG:HG2	47:n:70:PRO:HD2	2.00	0.43
49:p:39:PHE:HD1	49:p:50:THR:HG1	1.64	0.43
50:q:17:GLU:O	50:q:18:LYS:HB3	2.19	0.43
52:s:39:ILE:HG21	52:s:65:MET:O	2.19	0.43
57:x:16:ALA:CB	57:x:111:VAL:HB	2.49	0.43
57:x:350:ASN:CG	57:x:353:LYS:HD2	2.44	0.43
57:x:682:GLU:O	57:x:682:GLU:HG3	2.17	0.43
1:0:39:ARG:CZ	8:A:2884:U:C2	3.02	0.43
3:2:33:ARG:NE	8:A:467:G:OP1	2.51	0.43
4:3:30:HIS:O	4:3:32:LEU:HG	2.17	0.43
4:3:38:LYS:HE3	4:3:42:HIS:HE1	1.83	0.43
7:6:1:MET:HA	9:B:40:U:O4	2.19	0.43
7:6:65:ASN:OD1	52:s:8:PRO:HD3	2.19	0.43
8:A:1:G:N1	8:A:2:G:C6	2.87	0.43
8:A:9:G:C6	8:A:2629:U:C6	3.07	0.43
8:A:35:G:C6	8:A:446:G:N1	2.87	0.43
8:A:54:G:C6	8:A:55:G:N7	2.87	0.43
8:A:66:C:N3	8:A:89:A:C6	2.87	0.43
8:A:187:G:C2	8:A:210:C:N3	2.87	0.43
8:A:396:G:O4'	31:X:28:PHE:HB3	2.19	0.43
8:A:485:C:H2'	8:A:486:C:H6	1.82	0.43
8:A:528:A:N1	8:A:2042:A:H2'	2.33	0.43
8:A:533:G:C4	8:A:561:G:N2	2.87	0.43
8:A:541:A:N6	8:A:553:G:C6	2.87	0.43
8:A:630:G:H4'	8:A:640:C:O4'	2.19	0.43
8:A:633:A:H5''	19:L:70:LYS:CD	2.46	0.43
8:A:659:G:C6	8:A:660:C:N4	2.87	0.43
8:A:715:A:H2'	8:A:716:A:C8	2.53	0.43
8:A:772:C:C2	8:A:773:U:C5	3.06	0.43
8:A:803:U:C2'	8:A:804:A:H5'	2.49	0.43
8:A:943:A:H8	8:A:943:A:O5'	2.02	0.43
8:A:1060:U:O4	8:A:1080:A:H2	2.01	0.43
8:A:1076:C:C5	8:A:1077:A:H2	2.37	0.43
8:A:1090:A:C2	8:A:1102:C:O4'	2.72	0.43
8:A:1116:G:C2	8:A:1117:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1138:G:C2	17:J:108:MET:SD	3.12	0.43
8:A:1166:G:H2'	8:A:1167:C:O4'	2.18	0.43
8:A:1254:A:OP2	8:A:1256:G:C8	2.72	0.43
8:A:1268:A:C4	8:A:1269:A:C8	3.06	0.43
8:A:1277:G:H4'	21:N:20:MET:HG3	2.01	0.43
8:A:1304:A:O2'	8:A:1305:C:H5'	2.18	0.43
8:A:1310:G:N2	8:A:1610:A:C2	2.87	0.43
8:A:1317:G:H2'	8:A:1318:U:H6	1.84	0.43
8:A:1337:G:H2'	8:A:1338:G:C8	2.54	0.43
8:A:1369:G:N2	8:A:1370:C:C2	2.86	0.43
8:A:1426:G:C2'	8:A:1572:A:H61	2.22	0.43
8:A:1509:A:C6	8:A:1510:G:C6	3.07	0.43
8:A:1525:A:H2'	8:A:1526:C:O4'	2.19	0.43
8:A:1549:A:C5	8:A:1550:C:C4	3.06	0.43
8:A:1585:C:N3	8:A:1586:A:H1'	2.34	0.43
8:A:1717:A:C6	8:A:1718:G:C4	3.06	0.43
8:A:1753:G:C5'	23:P:92:ARG:NH1	2.82	0.43
8:A:1817:G:C6	8:A:1818:U:C4	3.07	0.43
8:A:1823:G:H2'	8:A:1824:G:C8	2.52	0.43
8:A:1965:C:C6	8:A:1966:A:C8	3.07	0.43
8:A:2014:A:C2	8:A:2015:A:C2	3.07	0.43
8:A:2078:C:H2'	8:A:2079:U:O4'	2.19	0.43
8:A:2088:A:N6	8:A:2232:C:H42	2.17	0.43
8:A:2109:U:OP1	8:A:2143:C:P	2.77	0.43
8:A:2114:A:H3'	8:A:2114:A:C8	2.54	0.43
8:A:2176:A:C8	8:A:2177:C:H5	2.37	0.43
8:A:2251:OMG:H3'	8:A:2252:G:H8	1.83	0.43
8:A:2256:G:H2'	8:A:2257:U:H6	1.83	0.43
8:A:2300:C:O2	8:A:2300:C:H2'	2.18	0.43
8:A:2328:A:O2'	8:A:2329:U:H5'	2.18	0.43
8:A:2366:A:H3'	8:A:2367:G:H8	1.84	0.43
8:A:2367:G:H2'	8:A:2368:C:H6	1.83	0.43
8:A:2440:C:C4	8:A:2441:U:C6	3.07	0.43
8:A:2444:G:C6	8:A:2445:2MG:C6	3.07	0.43
8:A:2451:A:H1'	56:w:76:A:C4	2.54	0.43
8:A:2457:PSU:C2	8:A:2458:G:C6	3.07	0.43
8:A:2484:G:H2'	8:A:2485:G:O4'	2.19	0.43
8:A:2520:C:O2'	8:A:2565:A:O2'	2.32	0.43
8:A:2525:G:C6	8:A:2539:C:N4	2.87	0.43
8:A:2583:G:H2'	8:A:2584:U:O4'	2.19	0.43
8:A:2725:A:N7	8:A:2727:A:C5	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2816:G:O2'	8:A:2817:U:H5'	2.19	0.43
8:A:2835:A:C5	8:A:2879:A:C5	3.06	0.43
8:A:2900:A:C2	8:A:2901:C:C2	3.07	0.43
9:B:32:U:C2	9:B:33:G:C8	3.06	0.43
10:C:109:LEU:HD12	10:C:109:LEU:HA	1.87	0.43
11:D:152:PRO:C	11:D:154:LYS:N	2.77	0.43
12:E:7:ASP:OD2	12:E:122:GLU:HB2	2.18	0.43
13:F:129:MET:HE3	13:F:153:ILE:HB	2.00	0.43
14:G:121:THR:HG1	14:G:133:LYS:HB2	1.83	0.43
14:G:156:TYR:CE1	14:G:173:ALA:HA	2.54	0.43
16:I:76:ALA:C	16:I:79:LEU:H	2.27	0.43
20:M:20:LEU:HD13	29:V:81:PRO:HG3	1.98	0.43
22:O:58:ILE:HG21	22:O:74:VAL:HG22	1.99	0.43
23:P:93:LYS:HD2	23:P:98:TYR:CE1	2.53	0.43
25:R:38:VAL:O	25:R:53:PHE:HA	2.19	0.43
29:V:6:ALA:HB2	29:V:42:LEU:CD2	2.49	0.43
29:V:62:THR:HG23	29:V:62:THR:O	2.18	0.43
29:V:62:THR:HB	29:V:71:LYS:HD3	2.00	0.43
30:W:79:GLU:C	30:W:81:GLU:N	2.77	0.43
31:X:7:THR:OG1	31:X:9:LYS:HG3	2.19	0.43
34:a:15:G:H5'	38:e:28:ARG:HH22	1.83	0.43
34:a:54:C:O2	34:a:358:U:N3	2.51	0.43
34:a:65:A:C6	34:a:381:C:C4	3.06	0.43
34:a:68:G:H5'	34:a:171:A:O2'	2.18	0.43
34:a:78:A:C2	34:a:92:U:N3	2.87	0.43
34:a:108:G:OP2	34:a:109:A:C2	2.72	0.43
34:a:146:G:C2	34:a:177:G:C8	3.07	0.43
34:a:181:A:N6	34:a:194:C:C2'	2.81	0.43
34:a:257:G:N3	34:a:258:G:C8	2.87	0.43
34:a:292:G:N2	34:a:309:A:C4	2.87	0.43
34:a:298:A:N6	34:a:299:G:C2	2.86	0.43
34:a:363:A:C6	34:a:364:A:C4	3.07	0.43
34:a:374:A:C8	34:a:375:U:C6	3.06	0.43
34:a:451:A:H2'	34:a:481:G:C6	2.54	0.43
34:a:483:C:C6	34:a:484:G:C8	3.06	0.43
34:a:506:G:H2'	34:a:507:C:O4'	2.18	0.43
34:a:592:G:N1	34:a:648:A:C5	2.87	0.43
34:a:599:C:C2	34:a:600:A:C8	3.06	0.43
34:a:606:G:C4	34:a:633:G:C6	3.07	0.43
34:a:645:G:N1	34:a:646:G:C5	2.86	0.43
34:a:658:C:H1'	48:o:21:THR:OG1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:821:G:N1	34:a:880:C:N3	2.67	0.43
34:a:829:G:C6	34:a:858:G:C2	3.07	0.43
34:a:851:G:N1	34:a:852:G:C6	2.87	0.43
34:a:888:G:C8	34:a:889:A:H2'	2.53	0.43
34:a:985:C:C2	34:a:1221:G:N2	2.87	0.43
34:a:1000:A:C5	34:a:1001:C:C5	3.06	0.43
34:a:1009:U:N3	34:a:1021:A:C6	2.87	0.43
34:a:1114:C:H2'	34:a:1115:U:H6	1.83	0.43
34:a:1148:U:C5	34:a:1149:C:C4	3.07	0.43
34:a:1186:G:H21	47:n:101:TRP:C	2.27	0.43
34:a:1223:C:P	34:a:1224:U:H2'	2.59	0.43
34:a:1228:C:H2'	34:a:1229:A:H8	1.84	0.43
34:a:1316:G:C5	34:a:1318:A:H5''	2.54	0.43
34:a:1360:A:C5	34:a:1361:G:C5	3.07	0.43
34:a:1413:A:H61	34:a:1487:G:H1	1.67	0.43
34:a:1450:U:H1'	34:a:1454:G:N2	2.34	0.43
34:a:1501:C:C5	34:a:1504:G:C4	3.06	0.43
35:b:113:LEU:HD13	35:b:143:LEU:HB2	1.99	0.43
35:b:173:LYS:HA	35:b:176:ASN:HB2	2.01	0.43
36:c:133:MET:HE1	36:c:166:TRP:CA	2.49	0.43
37:d:89:LEU:HD23	37:d:89:LEU:C	2.44	0.43
38:e:11:GLN:O	38:e:38:VAL:HA	2.19	0.43
39:f:38:ARG:HG3	39:f:40:GLU:OE1	2.18	0.43
40:g:68:VAL:HG11	40:g:133:ALA:CB	2.49	0.43
45:l:33:CYS:N	45:l:54:VAL:HA	2.34	0.43
46:m:11:HIS:C	46:m:43:LYS:HD3	2.44	0.43
50:q:4:ILE:HD11	50:q:75:VAL:HG21	1.99	0.43
50:q:6:THR:HG21	50:q:59:GLU:HB3	2.01	0.43
54:u:48:LYS:HD2	54:u:48:LYS:HA	1.80	0.43
55:v:64:G:H2'	55:v:65:C:H6	1.79	0.43
56:w:15:G:H8	56:w:15:G:O5'	2.02	0.43
57:x:28:ARG:HH11	57:x:269:PHE:HA	1.84	0.43
57:x:98:VAL:HG11	57:x:125:VAL:HG23	2.00	0.43
57:x:170:LEU:HB2	57:x:184:LEU:HD21	2.00	0.43
57:x:550:PRO:O	57:x:554:LYS:HD3	2.18	0.43
2:1:44:GLN:HA	2:1:44:GLN:NE2	2.34	0.43
3:2:26:ASN:HB2	8:A:683:U:OP1	2.19	0.43
5:4:30:GLU:HB2	5:4:33:HIS:CG	2.53	0.43
7:6:1:MET:CA	9:B:40:U:O4	2.67	0.43
7:6:9:TYR:CE2	13:F:94:ARG:HD2	2.54	0.43
7:6:11:GLU:HG2	7:6:23:LYS:HE3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6:51:VAL:CB	7:6:53:THR:HG23	2.49	0.43
8:A:7:G:C6	8:A:8:C:C4	3.07	0.43
8:A:52:A:C5	8:A:118:A:C2	3.07	0.43
8:A:85:G:C4	8:A:98:G:C2	3.06	0.43
8:A:187:G:C2	8:A:188:G:C4	3.06	0.43
8:A:214:G:H2'	8:A:215:G:C8	2.54	0.43
8:A:301:G:C2	8:A:302:C:C2	3.06	0.43
8:A:359:G:O2'	8:A:360:U:H5'	2.19	0.43
8:A:396:G:C5	8:A:397:U:C5	3.06	0.43
8:A:457:A:N6	8:A:470:A:C8	2.87	0.43
8:A:483:A:C4	8:A:484:C:C6	3.06	0.43
8:A:539:G:C6	8:A:555:G:N2	2.87	0.43
8:A:569:U:H2'	8:A:570:G:C8	2.54	0.43
8:A:569:U:HO2'	8:A:983:A:N6	2.17	0.43
8:A:582:A:C6	8:A:583:G:C5	3.07	0.43
8:A:585:G:C8	24:Q:5:ARG:NH1	2.87	0.43
8:A:595:C:H2'	8:A:596:U:C6	2.54	0.43
8:A:636:G:H1'	8:A:638:G:O2'	2.19	0.43
8:A:684:G:C5	8:A:774:G:C5	3.06	0.43
8:A:704:G:C2	8:A:726:G:N3	2.87	0.43
8:A:712:G:C2	8:A:720:U:C2	3.06	0.43
8:A:787:C:H3'	8:A:791:C:N4	2.33	0.43
8:A:857:G:N2	8:A:920:A:N1	2.65	0.43
8:A:858:G:C4	8:A:2268:A:C2	3.06	0.43
8:A:938:G:C2	8:A:939:G:N7	2.87	0.43
8:A:1009:A:C5	8:A:1010:A:C6	3.06	0.43
8:A:1046:A:H3'	8:A:1047:G:H5'	2.01	0.43
8:A:1093:G:C5	8:A:1094:U:C2	3.07	0.43
8:A:1105:U:C2'	8:A:1106:G:H5'	2.48	0.43
8:A:1307:A:N6	8:A:1606:C:O2'	2.51	0.43
8:A:1310:G:H2'	8:A:1311:G:O4'	2.19	0.43
8:A:1319:C:N4	8:A:1334:G:O6	2.52	0.43
8:A:1340:U:P	27:T:61:LEU:HD21	2.58	0.43
8:A:1349:C:H2'	8:A:1350:C:C6	2.54	0.43
8:A:1419:A:N7	8:A:1579:A:C5	2.87	0.43
8:A:1479:G:C6	8:A:1480:C:N4	2.87	0.43
8:A:1581:G:C2	8:A:1582:C:C2	3.06	0.43
8:A:1630:A:H2'	8:A:1631:G:O4'	2.19	0.43
8:A:1651:G:C2	8:A:1652:A:C4	3.07	0.43
8:A:1664:A:C2'	18:K:67:LYS:HZ2	2.32	0.43
8:A:1747:U:O2'	8:A:1748:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1750:G:H2'	8:A:1751:U:H6	1.81	0.43
8:A:1768:C:H2'	8:A:1769:U:O4'	2.19	0.43
8:A:1846:G:N2	8:A:1895:C:C2	2.87	0.43
8:A:1858:A:N3	8:A:1885:A:H1'	2.34	0.43
8:A:2027:G:C6	8:A:2037:A:C6	3.07	0.43
8:A:2051:A:C8	8:A:2614:A:N6	2.87	0.43
8:A:2097:A:N1	8:A:2193:G:C6	2.87	0.43
8:A:2112:G:C5	8:A:2113:U:C2	3.07	0.43
8:A:2142:A:N3	8:A:2150:C:C2	2.87	0.43
8:A:2168:G:O6	8:A:2171:A:C2	2.72	0.43
8:A:2263:C:C4	8:A:2278:A:C2	3.07	0.43
8:A:2267:A:H5''	8:A:2268:A:H5'	2.01	0.43
8:A:2298:A:C2	8:A:2321:U:C4	3.07	0.43
8:A:2305:U:C5	13:F:151:LEU:CA	3.02	0.43
8:A:2312:U:H1'	13:F:38:GLY:HA2	2.00	0.43
8:A:2315:G:C6	8:A:2316:G:C5	3.07	0.43
8:A:2349:G:N1	8:A:2369:A:C5	2.86	0.43
8:A:2399:G:H2'	8:A:2400:G:O4'	2.19	0.43
8:A:2454:G:H1	8:A:2498:OMC:N4	2.17	0.43
8:A:2515:C:C2	8:A:2570:G:N2	2.87	0.43
8:A:2547:A:H1'	8:A:2566:A:C6	2.54	0.43
8:A:2600:A:H2'	8:A:2601:C:H6	1.78	0.43
8:A:2600:A:N7	10:C:235:GLU:CB	2.82	0.43
8:A:2648:G:C6	8:A:2649:C:C4	3.07	0.43
8:A:2655:G:H22	8:A:2664:G:H3'	1.83	0.43
8:A:2704:C:N4	8:A:2705:A:C6	2.87	0.43
8:A:2707:U:O2	21:N:71:ARG:NH1	2.50	0.43
8:A:2789:C:H3'	8:A:2893:A:N6	2.34	0.43
8:A:2815:C:H2'	8:A:2816:G:O4'	2.19	0.43
8:A:2816:G:N3	8:A:2831:G:C2	2.87	0.43
8:A:2881:U:N3	8:A:2882:A:N7	2.67	0.43
9:B:29:A:H2	9:B:57:A:N6	2.17	0.43
9:B:84:G:N1	9:B:93:C:C4	2.87	0.43
10:C:2:VAL:HG13	10:C:16:VAL:HG13	2.01	0.43
10:C:160:TYR:CD1	10:C:193:GLU:HG2	2.53	0.43
10:C:259:ASN:C	10:C:261:ARG:H	2.26	0.43
11:D:88:GLU:HB2	11:D:90:PHE:CE1	2.54	0.43
12:E:7:ASP:OD1	12:E:7:ASP:N	2.36	0.43
12:E:117:ARG:NH2	12:E:181:ILE:HA	2.34	0.43
15:H:96:THR:HA	15:H:99:ILE:CG2	2.49	0.43
15:H:99:ILE:HG23	15:H:100:ALA:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:79:LEU:HD11	19:L:112:LEU:HD12	2.01	0.43
20:M:71:LYS:N	20:M:92:TRP:CE3	2.85	0.43
21:N:20:MET:O	21:N:24:MET:HG3	2.19	0.43
22:O:34:HIS:H	22:O:65:THR:C	2.26	0.43
23:P:31:VAL:CG2	23:P:40:GLN:HE21	2.32	0.43
24:Q:11:ALA:O	24:Q:15:LYS:HB3	2.18	0.43
25:R:37:GLU:OE1	25:R:39:LEU:HD21	2.19	0.43
27:T:69:ARG:HH11	27:T:74:ILE:HD11	1.84	0.43
31:X:6:VAL:HG23	31:X:50:VAL:HG12	2.00	0.43
31:X:70:LEU:CG	31:X:73:ARG:NH2	2.82	0.43
33:Z:37:ARG:HD3	33:Z:37:ARG:HA	1.90	0.43
34:a:14:U:O2	34:a:17:U:H5	2.02	0.43
34:a:95:C:H2'	34:a:96:U:C6	2.54	0.43
34:a:127:G:N1	34:a:235:C:C4	2.87	0.43
34:a:246:A:C5'	34:a:282:A:H61	2.31	0.43
34:a:299:G:C6	34:a:300:A:C6	3.06	0.43
34:a:372:C:N4	34:a:390:U:N3	2.66	0.43
34:a:375:U:P	49:p:70:ARG:HG3	2.59	0.43
34:a:486:U:H2'	34:a:487:A:C8	2.54	0.43
34:a:541:G:N1	34:a:542:G:C5	2.87	0.43
34:a:642:A:C4	41:h:105:THR:O	2.71	0.43
34:a:679:C:N4	34:a:712:A:H61	2.17	0.43
34:a:727:G:C6	34:a:731:G:C6	3.07	0.43
34:a:818:G:N1	34:a:820:U:O2'	2.48	0.43
34:a:842:U:H5	34:a:844:G:OP2	2.02	0.43
34:a:874:G:N1	34:a:875:U:C4	2.87	0.43
34:a:890:G:N2	34:a:907:A:O5'	2.39	0.43
34:a:891:U:C2	34:a:892:A:N7	2.86	0.43
34:a:936:C:C2	34:a:937:A:C8	3.07	0.43
34:a:948:C:H3'	46:m:104:ASN:ND2	2.34	0.43
34:a:979:C:H2'	34:a:980:C:C5'	2.49	0.43
34:a:985:C:O2'	34:a:986:U:H5'	2.19	0.43
34:a:1032:G:N3	34:a:1032:G:O5'	2.51	0.43
34:a:1073:U:C2	34:a:1074:G:C8	3.07	0.43
34:a:1081:A:O4'	34:a:1081:A:P	2.77	0.43
34:a:1087:G:N2	54:u:66:ARG:CB	2.82	0.43
34:a:1186:G:C6	34:a:1187:G:C5	3.07	0.43
34:a:1216:A:N1	34:a:1217:C:N4	2.67	0.43
34:a:1220:G:O2'	52:s:53:GLY:N	2.52	0.43
34:a:1240:U:C4	40:g:115:MET:HE2	2.53	0.43
34:a:1397:C:O2	59:z:9:U:C4	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1441:A:H3'	34:a:1441:A:N3	2.34	0.43
34:a:1530:G:H2'	34:a:1531:A:H8	1.84	0.43
36:c:41:TYR:CZ	36:c:89:VAL:HG11	2.54	0.43
36:c:86:LEU:O	36:c:90:VAL:HG13	2.18	0.43
37:d:124:VAL:O	37:d:125:ASN:OD1	2.37	0.43
38:e:45:VAL:CG2	38:e:46:GLY:N	2.80	0.43
38:e:88:HIS:O	38:e:134:ASN:HB3	2.19	0.43
39:f:1:MET:HB3	39:f:66:ALA:C	2.43	0.43
40:g:133:ALA:HA	40:g:136:LYS:HE2	2.01	0.43
41:h:17:GLN:NE2	41:h:62:LEU:HB3	2.34	0.43
42:i:9:GLY:HA3	42:i:81:GLY:CA	2.48	0.43
42:i:23:GLY:O	42:i:59:LYS:C	2.62	0.43
42:i:61:ASP:OD1	42:i:61:ASP:C	2.61	0.43
43:j:30:LYS:HE2	43:j:36:VAL:HB	2.01	0.43
45:l:50:LYS:HB3	45:l:66:ILE:HB	2.01	0.43
46:m:19:THR:HG22	46:m:25:GLY:O	2.19	0.43
48:o:73:ASP:CB	48:o:76:ARG:HH21	2.32	0.43
51:r:25:ILE:CG2	51:r:29:LYS:NZ	2.82	0.43
51:r:38:ILE:HD11	51:r:59:LYS:HE3	2.00	0.43
53:t:17:ARG:HH22	53:t:18:LYS:HZ3	1.66	0.43
55:v:6:G:N1	55:v:68:C:N3	2.67	0.43
57:x:7:ALA:HA	57:x:289:VAL:CG1	2.49	0.43
57:x:259:GLU:HG3	57:x:260:ILE:H	1.84	0.43
57:x:364:GLN:HB3	57:x:373:ILE:HG13	2.01	0.43
57:x:366:HIS:O	57:x:371:GLU:OE1	2.37	0.43
57:x:533:TYR:HE2	57:x:553:ASP:OD1	2.02	0.43
57:x:560:LEU:O	57:x:569:PRO:HA	2.19	0.43
57:x:590:LEU:H	57:x:590:LEU:CD2	2.29	0.43
57:x:620:VAL:C	57:x:652:LYS:HD3	2.44	0.43
57:x:673:THR:HG23	57:x:676:ARG:N	2.33	0.43
1:0:49:ARG:HG2	8:A:2884:U:C5	2.54	0.42
2:1:3:GLY:HA3	8:A:2283:C:O3'	2.19	0.42
2:1:21:THR:HG22	4:3:33:THR:CG2	2.49	0.42
4:3:15:LYS:HB2	4:3:21:PHE:CE1	2.54	0.42
7:6:37:CYS:C	13:F:108:PRO:HG2	2.44	0.42
7:6:41:HIS:ND1	7:6:44:PHE:HD1	2.17	0.42
8:A:64:A:H2'	8:A:65:U:C6	2.53	0.42
8:A:146:A:C6	8:A:147:C:C4	3.07	0.42
8:A:267:C:N3	8:A:426:C:N3	2.67	0.42
8:A:327:G:N1	8:A:336:C:N3	2.66	0.42
8:A:374:A:C4	8:A:375:G:C8	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:383:C:H5'	8:A:384:A:H5''	2.00	0.42
8:A:412:A:C2	8:A:413:C:C1'	3.02	0.42
8:A:535:G:C2	8:A:559:G:C4	3.07	0.42
8:A:627:A:C6	19:L:111:ILE:HD12	2.54	0.42
8:A:684:G:N1	8:A:794:A:C6	2.87	0.42
8:A:687:C:H42	8:A:787:C:H4'	1.84	0.42
8:A:695:G:C2	8:A:768:G:C5	3.07	0.42
8:A:699:A:C8	8:A:734:A:C6	3.06	0.42
8:A:788:A:H5''	8:A:790:U:C5	2.54	0.42
8:A:805:G:N2	8:A:831:G:C2	2.86	0.42
8:A:844:A:C2	8:A:845:A:N7	2.87	0.42
8:A:848:C:H1'	8:A:934:U:O4'	2.19	0.42
8:A:859:G:H22	8:A:917:A:P	2.42	0.42
8:A:882:G:N2	8:A:894:U:H5''	2.34	0.42
8:A:984:A:P	8:A:985:C:H5	2.42	0.42
8:A:1059:G:H5'	8:A:1060:U:C5	2.54	0.42
8:A:1112:G:C2	8:A:1113:U:C2	3.06	0.42
8:A:1171:G:N2	8:A:1177:G:H22	2.16	0.42
8:A:1199:U:H2'	8:A:1200:C:C6	2.54	0.42
8:A:1203:U:H2'	8:A:1241:A:N6	2.34	0.42
8:A:1246:A:H2'	8:A:1247:A:O4'	2.19	0.42
8:A:1287:A:C4'	21:N:103:ARG:HH11	2.32	0.42
8:A:1314:C:C2	8:A:1339:G:C2	3.07	0.42
8:A:1469:A:C5	8:A:1470:A:N7	2.87	0.42
8:A:1529:G:H2'	8:A:1530:G:C8	2.54	0.42
8:A:1598:A:C5	8:A:1599:U:C5	3.07	0.42
8:A:1659:G:C6	8:A:2002:G:C6	3.07	0.42
8:A:1730:C:O2	8:A:1731:G:C6	2.71	0.42
8:A:1851:U:C4	8:A:1852:U:N3	2.87	0.42
8:A:1872:A:N6	8:A:1873:G:C4	2.87	0.42
8:A:1978:A:H2'	8:A:1979:U:O4'	2.18	0.42
8:A:2024:G:N1	8:A:2040:G:C4	2.87	0.42
8:A:2031:A:N3	8:A:2455:G:O2'	2.51	0.42
8:A:2077:A:C4	8:A:2435:A:N7	2.87	0.42
8:A:2204:G:N3	8:A:2205:A:C8	2.87	0.42
8:A:2215:C:H2'	8:A:2216:G:H8	1.84	0.42
8:A:2235:G:C5	8:A:2236:U:C5	3.07	0.42
8:A:2282:G:C5	8:A:2425:A:N1	2.87	0.42
8:A:2309:A:C5	8:A:2310:C:C4	3.06	0.42
8:A:2327:A:N7	8:A:2388:A:N6	2.68	0.42
8:A:2331:G:H2'	8:A:2332:C:C6	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2361:G:C2	8:A:2362:C:C2	3.07	0.42
8:A:2364:C:C2	8:A:2365:G:C8	3.07	0.42
8:A:2366:A:C2	8:A:2367:G:H1'	2.54	0.42
8:A:2406:A:C6	19:L:69:ARG:CZ	3.02	0.42
8:A:2423:U:C2	8:A:2425:A:C5	3.07	0.42
8:A:2530:A:H5''	14:G:174:LYS:HE3	2.00	0.42
8:A:2535:G:H2'	8:A:2536:G:H8	1.84	0.42
8:A:2603:G:C2	8:A:2604:PSU:C6	3.06	0.42
8:A:2667:C:N4	8:A:2668:G:C5	2.86	0.42
8:A:2695:U:H2'	8:A:2696:U:C6	2.54	0.42
8:A:2739:U:H3'	8:A:2763:G:H1	1.84	0.42
8:A:2766:A:C2	8:A:2767:C:C6	3.07	0.42
8:A:2841:C:C2	8:A:2877:G:C2	3.07	0.42
9:B:1:U:H2'	9:B:2:G:C8	2.52	0.42
9:B:13:G:O2'	9:B:15:A:H2'	2.19	0.42
9:B:30:C:O2	9:B:55:U:O2	2.36	0.42
9:B:78:A:C4	9:B:79:G:C8	3.07	0.42
9:B:93:C:H2'	9:B:94:A:H8	1.83	0.42
9:B:101:A:C5	9:B:102:G:C8	3.07	0.42
10:C:172:THR:HG22	10:C:173:LEU:N	2.34	0.42
11:D:15:PHE:HB3	23:P:78:PRO:HD3	2.01	0.42
11:D:61:THR:OG1	11:D:63:PRO:HD2	2.19	0.42
11:D:101:PHE:CE1	11:D:203:VAL:HG12	2.54	0.42
14:G:14:VAL:HG12	14:G:27:GLY:HA2	1.99	0.42
14:G:51:PHE:CD1	14:G:51:PHE:N	2.87	0.42
14:G:84:LYS:H	14:G:140:ILE:HD11	1.84	0.42
15:H:121:VAL:HG12	15:H:122:LEU:N	2.33	0.42
20:M:19:GLY:H	20:M:38:ARG:NH2	2.16	0.42
20:M:28:PHE:HB2	20:M:64:TRP:CG	2.53	0.42
21:N:35:LYS:HA	21:N:111:ALA:O	2.19	0.42
21:N:87:PHE:CE1	21:N:117:ASP:OD2	2.72	0.42
21:N:90:ARG:CB	21:N:94:TYR:CE1	3.02	0.42
22:O:31:THR:HB	22:O:33:ARG:O	2.18	0.42
25:R:5:PHE:HB2	25:R:37:GLU:OE2	2.19	0.42
26:S:11:ARG:HH21	26:S:98:LYS:HD2	1.84	0.42
28:U:76:THR:OG1	28:U:78:LYS:CG	2.66	0.42
28:U:95:PHE:CD1	28:U:102:ILE:HG12	2.53	0.42
32:Y:5:GLU:O	32:Y:8:GLU:OE2	2.37	0.42
34:a:18:C:C4	34:a:19:A:N7	2.87	0.42
34:a:20:U:O4'	34:a:572:A:C6	2.72	0.42
34:a:49:U:C4	34:a:364:A:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:58:C:C2	34:a:59:A:C8	3.07	0.42
34:a:74:A:C6	34:a:97:G:C6	3.07	0.42
34:a:117:G:O6	34:a:289:G:O4'	2.36	0.42
34:a:138:G:C6	34:a:226:G:C5	3.06	0.42
34:a:161:A:H5''	34:a:348:G:O2'	2.19	0.42
34:a:291:U:H2'	34:a:292:G:C8	2.54	0.42
34:a:407:U:H5''	37:d:111:ALA:HB1	2.00	0.42
34:a:500:G:C6	34:a:546:A:N1	2.87	0.42
34:a:518:C:N4	34:a:530:G:OP2	2.45	0.42
34:a:533:A:HO2'	34:a:535:A:P	2.33	0.42
34:a:583:A:C2	34:a:759:A:C5	3.07	0.42
34:a:627:G:P	49:p:51:ARG:HH22	2.40	0.42
34:a:649:A:C6	34:a:650:G:N7	2.87	0.42
34:a:654:G:C5	34:a:753:A:C5	3.07	0.42
34:a:736:C:C2	34:a:737:C:C5	3.07	0.42
34:a:776:G:N2	34:a:802:A:P	2.90	0.42
34:a:810:C:N3	34:a:811:C:C5	2.87	0.42
34:a:892:A:N7	34:a:906:A:H2	2.17	0.42
34:a:914:A:C6	34:a:915:A:C5	3.07	0.42
34:a:924:C:H2'	34:a:925:G:C8	2.54	0.42
34:a:947:G:C5	34:a:948:C:C5	3.07	0.42
34:a:963:G:N3	34:a:963:G:H2'	2.32	0.42
34:a:1019:A:C6	34:a:1020:G:C5	3.07	0.42
34:a:1022:A:H3'	34:a:1023:U:C5	2.54	0.42
34:a:1028:C:C4	34:a:1029:U:N3	2.87	0.42
34:a:1033:G:O6	34:a:1037:C:N3	2.51	0.42
34:a:1115:U:O2	34:a:1185:G:N2	2.37	0.42
34:a:1120:C:C2	34:a:1121:U:C5	3.07	0.42
34:a:1220:G:C6	34:a:1221:G:C6	3.07	0.42
34:a:1244:G:H2'	34:a:1245:C:H6	1.81	0.42
34:a:1311:A:C2	34:a:1327:C:N3	2.87	0.42
34:a:1320:C:OP1	52:s:69:LYS:HE3	2.19	0.42
34:a:1421:G:C6	34:a:1422:G:N7	2.87	0.42
34:a:1495:U:H2'	34:a:1496:C:H6	1.84	0.42
34:a:1513:A:C6	34:a:1523:G:O6	2.72	0.42
35:b:72:LYS:O	35:b:76:SER:HB3	2.19	0.42
36:c:11:LEU:CD2	36:c:16:PRO:O	2.67	0.42
36:c:139:ASN:O	36:c:142:ARG:HG2	2.19	0.42
36:c:148:ILE:HG13	36:c:201:ILE:HG13	2.01	0.42
37:d:18:LEU:HB2	37:d:20:LEU:CG	2.48	0.42
37:d:170:LEU:O	37:d:171:GLU:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:e:65:LYS:HD3	38:e:68:ARG:HH11	1.83	0.42
40:g:52:ARG:HH21	40:g:124:SER:CB	2.32	0.42
40:g:70:PRO:O	40:g:95:ARG:HG2	2.18	0.42
40:g:87:PRO:HG2	40:g:148:LYS:HD3	2.00	0.42
40:g:112:ASP:OD1	40:g:112:ASP:N	2.52	0.42
46:m:65:GLU:O	46:m:69:ARG:HD2	2.19	0.42
47:n:36:ALA:C	47:n:38:ASP:H	2.27	0.42
47:n:86:GLU:HG3	47:n:87:ALA:N	2.34	0.42
48:o:1:SER:HA	48:o:34:GLN:OE1	2.19	0.42
49:p:18:GLN:CD	49:p:35:ARG:HE	2.17	0.42
53:t:43:LYS:NZ	53:t:83:ASN:HA	2.34	0.42
55:v:18:G:O6	55:v:55:PSU:H1'	2.19	0.42
55:v:29:G:C4	55:v:30:G:C8	3.07	0.42
56:w:37:MIA:H113	59:z:4:U:C5	2.54	0.42
57:x:10:ARG:NH2	57:x:252:ARG:NH2	2.67	0.42
57:x:144:ASP:OD2	57:x:270:LYS:CG	2.67	0.42
57:x:295:ASN:O	57:x:406:GLU:OE2	2.37	0.42
57:x:320:ALA:N	57:x:396:LEU:HG	2.34	0.42
57:x:349:LEU:HA	57:x:355:ALA:O	2.19	0.42
57:x:387:LEU:C	57:x:388:LYS:HG2	2.44	0.42
57:x:422:LYS:HG3	57:x:479:GLU:HG2	2.01	0.42
2:1:33:LEU:CD2	8:A:2286:G:O2'	2.67	0.42
2:1:38:PHE:CZ	2:1:43:ARG:HA	2.54	0.42
3:2:19:ARG:H	8:A:126:A:P	2.40	0.42
8:A:71:A:N1	8:A:73:A:C2	2.87	0.42
8:A:85:G:C5	8:A:98:G:C2	3.08	0.42
8:A:134:G:H2'	8:A:135:U:H6	1.80	0.42
8:A:202:U:C2'	8:A:203:A:O4'	2.66	0.42
8:A:225:C:H2'	8:A:226:A:O4'	2.19	0.42
8:A:393:C:H2'	8:A:394:C:H6	1.83	0.42
8:A:396:G:H1'	31:X:28:PHE:HD2	1.84	0.42
8:A:407:G:C2	8:A:421:C:N3	2.86	0.42
8:A:607:U:O4	8:A:620:G:H5'	2.18	0.42
8:A:620:G:H4'	8:A:621:A:O5'	2.19	0.42
8:A:655:A:H1'	8:A:656:G:C8	2.53	0.42
8:A:677:A:H2'	8:A:677:A:N3	2.33	0.42
8:A:781:A:C6	8:A:1777:U:H5'	2.54	0.42
8:A:887:A:H5'	8:A:890:C:N3	2.34	0.42
8:A:907:G:N3	8:A:908:C:C6	2.87	0.42
8:A:953:G:N1	8:A:954:G:C5	2.88	0.42
8:A:976:G:H4'	8:A:1156:A:C5	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:983:A:C5	8:A:984:A:N6	2.87	0.42
8:A:1007:C:O5'	8:A:1008:A:H2'	2.19	0.42
8:A:1064:C:O3'	16:I:90:GLY:HA3	2.19	0.42
8:A:1070:A:H5''	8:A:1096:A:OP1	2.18	0.42
8:A:1139:G:H2'	8:A:1140:C:H6	1.84	0.42
8:A:1238:G:C6	8:A:1239:G:C5	3.07	0.42
8:A:1311:G:N2	8:A:1604:C:N4	2.67	0.42
8:A:1322:A:C4	8:A:1323:C:C5	3.07	0.42
8:A:1376:C:H2'	8:A:1377:G:C8	2.54	0.42
8:A:1427:A:O4'	8:A:1428:C:C4	2.72	0.42
8:A:1444:G:C2	8:A:1445:G:C4	3.06	0.42
8:A:1462:C:C2	8:A:1463:C:C5	3.06	0.42
8:A:1483:G:H1	8:A:1506:U:H3	1.66	0.42
8:A:1489:C:C4	8:A:1501:G:N1	2.86	0.42
8:A:1532:A:N1	8:A:1540:G:C5	2.86	0.42
8:A:1549:A:H2'	8:A:1550:C:O4'	2.19	0.42
8:A:1573:G:C8	8:A:1574:C:C5	3.07	0.42
8:A:1705:A:C5	8:A:1706:C:C4	3.07	0.42
8:A:1708:C:H2'	8:A:1709:U:C6	2.53	0.42
8:A:1715:G:H22	8:A:1743:G:H3'	1.81	0.42
8:A:1739:A:H3'	8:A:1740:G:H8	1.83	0.42
8:A:1796:U:H2'	8:A:1797:G:H8	1.81	0.42
8:A:1807:G:C2	8:A:1811:G:C6	3.07	0.42
8:A:1906:G:H8	8:A:1929:G:O2'	2.02	0.42
8:A:2046:G:H2'	8:A:2047:C:H6	1.84	0.42
8:A:2057:G:H2'	8:A:2058:A:C8	2.53	0.42
8:A:2116:G:H22	8:A:2163:A:P	2.34	0.42
8:A:2241:A:C4	8:A:2242:G:C8	3.07	0.42
8:A:2262:U:C4	8:A:2279:G:C2	3.07	0.42
8:A:2281:A:N1	8:A:2282:G:C5	2.87	0.42
8:A:2282:G:H4'	8:A:2389:G:O2'	2.19	0.42
8:A:2327:A:N7	8:A:2388:A:C6	2.87	0.42
8:A:2449:U:O2'	8:A:2501:C:N4	2.52	0.42
8:A:2548:U:H2'	8:A:2549:G:O4'	2.18	0.42
8:A:2624:G:C6	8:A:2625:G:C5	3.07	0.42
8:A:2631:G:N2	8:A:2788:C:C2	2.87	0.42
8:A:2646:C:C4	8:A:2647:U:C4	3.06	0.42
8:A:2669:G:C6	8:A:2670:A:C5	3.08	0.42
8:A:2685:G:C5	8:A:2725:A:N1	2.87	0.42
8:A:2733:A:C5	8:A:2734:A:C8	3.07	0.42
8:A:2795:C:C2	8:A:2802:G:N2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2837:A:C4	8:A:2838:G:C8	3.07	0.42
8:A:2857:G:H2'	8:A:2859:G:N7	2.34	0.42
8:A:2902:C:C6	8:A:2902:C:OP2	2.73	0.42
9:B:57:A:C2	9:B:58:A:C4	3.07	0.42
10:C:203:VAL:C	10:C:205:GLY:H	2.27	0.42
10:C:239:PHE:O	10:C:241:LYS:CD	2.67	0.42
10:C:245:THR:HB	10:C:246:PRO:CD	2.49	0.42
13:F:71:LYS:HA	13:F:80:GLN:CG	2.49	0.42
14:G:44:HIS:O	14:G:48:THR:O	2.36	0.42
14:G:76:ILE:HA	14:G:79:THR:HG22	2.00	0.42
15:H:57:LYS:HE3	15:H:58:LEU:HD22	2.01	0.42
15:H:66:ASN:OD1	15:H:134:VAL:HG22	2.18	0.42
17:J:56:VAL:O	17:J:125:TYR:O	2.37	0.42
17:J:84:ILE:HG23	17:J:84:ILE:O	2.20	0.42
20:M:7:THR:OG1	20:M:8:LYS:N	2.52	0.42
20:M:101:VAL:C	20:M:102:LEU:HD23	2.44	0.42
23:P:103:THR:HA	23:P:107:ALA:CB	2.48	0.42
26:S:70:LYS:HB3	26:S:110:ARG:HH21	1.83	0.42
28:U:81:ARG:O	28:U:96:LYS:HG2	2.19	0.42
29:V:2:PHE:HB3	29:V:50:MET:CE	2.47	0.42
29:V:35:GLU:OE2	29:V:93:ARG:HD2	2.19	0.42
32:Y:2:LYS:HB2	32:Y:5:GLU:OE1	2.18	0.42
32:Y:2:LYS:O	32:Y:6:LEU:HD13	2.19	0.42
32:Y:18:LEU:H	32:Y:21:LEU:HB2	1.84	0.42
34:a:14:U:H2'	34:a:16:A:OP2	2.18	0.42
34:a:62:U:H1'	34:a:379:C:H1'	2.00	0.42
34:a:74:A:C2	34:a:97:G:C5	3.07	0.42
34:a:77:A:C2	34:a:93:U:N3	2.87	0.42
34:a:78:A:C6	34:a:79:G:C4	3.08	0.42
34:a:82:G:N2	34:a:87:C:N4	2.67	0.42
34:a:144:G:C6	34:a:179:A:N7	2.87	0.42
34:a:144:G:N7	34:a:179:A:N9	2.67	0.42
34:a:242:G:N1	34:a:285:C:N4	2.66	0.42
34:a:252:U:O4	34:a:253:A:N6	2.51	0.42
34:a:297:G:C4	34:a:299:G:OP2	2.72	0.42
34:a:319:G:C2	34:a:320:A:C4	3.07	0.42
34:a:319:G:H2'	34:a:320:A:H8	1.83	0.42
34:a:322:C:C2	34:a:329:A:N6	2.86	0.42
34:a:414:A:C4	34:a:415:A:C8	3.08	0.42
34:a:487:A:H3'	34:a:488:C:H6	1.84	0.42
34:a:515:G:C6	34:a:537:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:567:G:C6	34:a:568:G:N7	2.87	0.42
34:a:608:A:C6	34:a:609:A:C4	3.06	0.42
34:a:649:A:N1	34:a:650:G:C5	2.87	0.42
34:a:663:A:H2'	34:a:664:G:O4'	2.19	0.42
34:a:718:A:O2'	54:u:33:ARG:NH2	2.52	0.42
34:a:763:G:H2'	34:a:764:C:H6	1.84	0.42
34:a:794:A:C5	34:a:795:C:C4	3.07	0.42
34:a:886:G:O6	34:a:912:C:N4	2.52	0.42
34:a:974:A:OP1	47:n:69:ARG:CZ	2.67	0.42
34:a:1004:A:C5'	34:a:1033:G:H1	2.32	0.42
34:a:1048:G:H2'	34:a:1050:G:H8	1.84	0.42
34:a:1049:U:C1'	34:a:1201:A:C8	3.01	0.42
34:a:1052:U:C2	34:a:1207:2MG:N2	2.87	0.42
34:a:1065:U:H5''	34:a:1190:G:N2	2.34	0.42
34:a:1133:G:C6	34:a:1141:C:C4	3.07	0.42
34:a:1133:G:N2	34:a:1142:G:H1'	2.34	0.42
34:a:1202:U:H2'	34:a:1203:C:C5'	2.49	0.42
34:a:1227:A:N9	52:s:82:HIS:CB	2.82	0.42
34:a:1227:A:C1'	52:s:82:HIS:HB2	2.49	0.42
34:a:1238:A:C5	34:a:1299:A:N6	2.87	0.42
34:a:1251:A:H4'	34:a:1370:G:H4'	2.01	0.42
34:a:1273:C:H2'	34:a:1274:A:O4'	2.19	0.42
34:a:1287:A:C5	34:a:1288:A:N6	2.87	0.42
34:a:1316:G:O6	52:s:2:ARG:HD2	2.19	0.42
34:a:1412:C:C2	34:a:1489:G:C2	3.06	0.42
34:a:1457:G:N1	34:a:1458:G:C5	2.87	0.42
34:a:1517:G:C5	34:a:1518:MA6:H93	2.54	0.42
34:a:1526:G:C5	34:a:1527:U:C5	3.07	0.42
35:b:15:PHE:CE1	35:b:34:ARG:NH2	2.87	0.42
36:c:89:VAL:O	36:c:93:ILE:HG23	2.20	0.42
37:d:123:MET:CG	37:d:126:GLY:C	2.92	0.42
41:h:46:GLU:HG2	41:h:63:LYS:CA	2.49	0.42
42:i:24:ASN:O	42:i:58:GLU:OE2	2.37	0.42
42:i:119:LYS:HG2	42:i:122:ARG:CB	2.49	0.42
46:m:49:GLU:HA	46:m:52:ILE:HB	2.01	0.42
46:m:82:LEU:HD13	52:s:64:GLU:HB3	2.01	0.42
49:p:20:VAL:HG22	49:p:21:VAL:N	2.34	0.42
50:q:58:VAL:CG1	50:q:76:ARG:O	2.67	0.42
51:r:9:PHE:HA	51:r:11:ARG:NH1	2.34	0.42
51:r:10:CYS:SG	51:r:45:GLY:HA3	2.59	0.42
55:v:18:G:H21	55:v:58:A:C5'	2.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:v:29:G:C6	55:v:42:G:C6	3.07	0.42
55:v:38:A:C5	55:v:39:C:C5	3.06	0.42
55:v:50:U:O2	55:v:65:C:O2	2.37	0.42
55:v:59:A:N3	55:v:59:A:H2'	2.33	0.42
56:w:7:A:C6	56:w:49:C:C4	3.06	0.42
57:x:17:HIS:CE1	57:x:18:ILE:CD1	3.02	0.42
57:x:351:SER:O	57:x:403:ILE:CG2	2.66	0.42
57:x:395:THR:HG22	57:x:405:LEU:HB2	2.00	0.42
57:x:691:SER:HB3	57:x:693:VAL:CG1	2.49	0.42
1:0:9:ARG:HG2	8:A:517:C:OP1	2.19	0.42
1:0:48:TYR:CE1	1:0:49:ARG:HG3	2.54	0.42
2:1:9:LYS:O	2:1:51:ALA:HB3	2.19	0.42
2:1:50:GLU:HG2	2:1:51:ALA:N	2.34	0.42
7:6:47:LYS:HE3	7:6:50:ASP:HA	2.01	0.42
8:A:71:A:C6	8:A:73:A:C2	3.08	0.42
8:A:114:U:H2'	8:A:115:C:H6	1.83	0.42
8:A:132:G:C6	8:A:133:U:C4	3.06	0.42
8:A:259:G:O2'	8:A:621:A:O3'	2.36	0.42
8:A:310:A:C2	8:A:312:G:H1'	2.54	0.42
8:A:346:A:N6	8:A:347:A:C6	2.87	0.42
8:A:348:A:H2'	8:A:349:U:C6	2.54	0.42
8:A:374:A:H61	8:A:400:G:H1'	1.84	0.42
8:A:500:G:H2'	8:A:502:A:N7	2.33	0.42
8:A:600:G:H1	8:A:657:U:H3	1.66	0.42
8:A:630:G:H4'	8:A:640:C:C4'	2.49	0.42
8:A:647:G:C5	8:A:648:G:C5	3.06	0.42
8:A:729:G:C6	10:C:206:LYS:HB2	2.54	0.42
8:A:729:G:H4'	8:A:763:G:O5'	2.18	0.42
8:A:850:U:H3	8:A:927:A:H61	1.66	0.42
8:A:1169:A:H2'	8:A:1170:C:O4'	2.18	0.42
8:A:1208:C:N4	8:A:1239:G:C6	2.87	0.42
8:A:1301:A:H2'	8:A:1303:G:N7	2.35	0.42
8:A:1395:A:C2	8:A:1398:C:C6	3.08	0.42
8:A:1511:G:H2'	8:A:1512:C:C6	2.54	0.42
8:A:1601:G:C6	8:A:1602:U:C4	3.08	0.42
8:A:1619:G:N3	8:A:1620:G:C8	2.88	0.42
8:A:1665:A:H5''	18:K:66:LYS:HE2	2.01	0.42
8:A:1672:A:N6	8:A:1673:G:N1	2.67	0.42
8:A:1709:U:N3	8:A:1750:G:N1	2.66	0.42
8:A:1710:G:N1	8:A:1711:A:C6	2.87	0.42
8:A:1717:A:C4	8:A:1744:A:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1740:G:C5	8:A:1741:C:C5	3.06	0.42
8:A:1864:U:N3	8:A:1878:G:N1	2.67	0.42
8:A:1866:A:H61	8:A:1875:G:H1'	1.83	0.42
8:A:1931:U:N3	8:A:1969:A:C8	2.76	0.42
8:A:1979:U:N3	8:A:1980:G:N7	2.67	0.42
8:A:2014:A:H2	8:A:2613:U:C2	2.37	0.42
8:A:2038:G:C5	8:A:2039:U:C5	3.08	0.42
8:A:2074:U:O2'	8:A:2597:G:N3	2.49	0.42
8:A:2078:C:O2'	8:A:2079:U:H5'	2.18	0.42
8:A:2143:C:N4	8:A:2149:U:C2	2.87	0.42
8:A:2205:A:H2'	8:A:2206:C:H6	1.85	0.42
8:A:2284:A:C2	8:A:2285:C:C2	3.08	0.42
8:A:2284:A:H1'	8:A:2325:G:C2	2.55	0.42
8:A:2286:G:C2	8:A:2346:A:C6	3.08	0.42
8:A:2313:C:H5'	13:F:67:THR:HG21	2.01	0.42
8:A:2337:G:N1	8:A:2338:C:C4	2.87	0.42
8:A:2407:A:H2'	8:A:2408:U:C6	2.54	0.42
8:A:2526:G:C6	8:A:2538:C:C4	3.07	0.42
8:A:2563:U:H2'	8:A:2565:A:OP2	2.19	0.42
8:A:2636:C:H1'	11:D:38:LYS:NZ	2.35	0.42
8:A:2756:U:O2	8:A:2758:A:C8	2.73	0.42
8:A:2801:G:C6	8:A:2802:G:C6	3.07	0.42
8:A:2843:G:N2	8:A:2875:C:C2	2.87	0.42
8:A:2845:U:C2	8:A:2846:G:C8	3.07	0.42
8:A:2851:A:C4	8:A:2852:G:C8	3.07	0.42
8:A:2856:A:C6	8:A:2857:G:C6	3.07	0.42
9:B:10:G:N1	9:B:111:U:C2	2.87	0.42
9:B:16:G:C6	9:B:17:C:C4	3.06	0.42
9:B:86:G:C2	9:B:88:C:O4'	2.73	0.42
11:D:33:ARG:HH22	11:D:53:GLY:H	1.66	0.42
11:D:85:ALA:N	11:D:88:GLU:OE2	2.49	0.42
12:E:188:MET:HE2	12:E:188:MET:HB3	1.91	0.42
22:O:92:PHE:HB2	22:O:117:PHE:HB2	2.01	0.42
26:S:23:LEU:HD23	26:S:23:LEU:HA	1.82	0.42
26:S:69:LEU:CD2	26:S:108:SER:N	2.83	0.42
29:V:41:GLU:O	29:V:42:LEU:HD23	2.19	0.42
31:X:5:GLN:OE1	31:X:49:ARG:N	2.35	0.42
33:Z:8:GLN:NE2	33:Z:31:ILE:HG12	2.35	0.42
34:a:51:A:C4	34:a:116:A:H1'	2.54	0.42
34:a:144:G:C5	34:a:179:A:C4	3.08	0.42
34:a:154:U:O5'	34:a:154:U:H6	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:159:G:OP2	34:a:160:A:C2'	2.67	0.42
34:a:159:G:O3'	34:a:160:A:H3'	2.20	0.42
34:a:166:U:N3	34:a:167:A:N7	2.67	0.42
34:a:259:G:C2	34:a:260:G:C8	3.07	0.42
34:a:341:C:C2	34:a:342:C:C5	3.07	0.42
34:a:362:G:N2	34:a:364:A:H3'	2.34	0.42
34:a:374:A:C6	34:a:375:U:C4	3.08	0.42
34:a:410:G:H1'	34:a:432:A:N6	2.34	0.42
34:a:427:U:O5'	34:a:428:G:H2'	2.19	0.42
34:a:446:G:N1	34:a:489:C:C4	2.88	0.42
34:a:474:G:C6	34:a:475:C:N4	2.87	0.42
34:a:521:G:C6	34:a:522:C:N4	2.88	0.42
34:a:528:C:H2'	34:a:529:G:O4'	2.19	0.42
34:a:568:G:N3	34:a:568:G:H2'	2.34	0.42
34:a:604:G:C6	34:a:635:A:C6	3.07	0.42
34:a:671:G:C2	34:a:736:C:C2	3.07	0.42
34:a:706:A:O2'	44:k:32:THR:CG2	2.67	0.42
34:a:754:C:C1'	48:o:68:TYR:CD1	3.01	0.42
34:a:784:A:N6	34:a:799:G:C6	2.87	0.42
34:a:799:G:H2'	34:a:800:G:O4'	2.19	0.42
34:a:837:U:H2'	34:a:838:G:C8	2.54	0.42
34:a:935:A:C2	34:a:936:C:C2	3.07	0.42
34:a:1006:G:N1	34:a:1023:U:O2'	2.52	0.42
34:a:1015:G:N1	34:a:1016:A:C2	2.87	0.42
34:a:1016:A:H4'	34:a:1218:C:C4'	2.48	0.42
34:a:1031:C:O5'	34:a:1031:C:H6	2.03	0.42
34:a:1074:G:H2'	34:a:1075:U:C5'	2.48	0.42
34:a:1076:U:C4	34:a:1077:G:N7	2.87	0.42
34:a:1111:A:H61	36:c:176:THR:HA	1.85	0.42
34:a:1177:G:O5'	42:i:98:ARG:NH1	2.52	0.42
34:a:1245:C:N3	34:a:1293:C:N3	2.67	0.42
34:a:1273:C:C2	34:a:1274:A:H1'	2.54	0.42
34:a:1300:G:H1'	34:a:1303:C:H42	1.83	0.42
34:a:1308:U:O4	34:a:1330:U:O4	2.38	0.42
34:a:1423:G:C5	34:a:1424:U:C5	3.07	0.42
34:a:1507:A:C5	34:a:1530:G:C2	3.07	0.42
35:b:56:LEU:O	35:b:59:ILE:HG12	2.19	0.42
35:b:105:THR:O	35:b:108:GLN:HG3	2.19	0.42
37:d:69:ARG:O	37:d:70:GLN:C	2.62	0.42
37:d:84:ASN:OD1	37:d:85:THR:N	2.52	0.42
37:d:186:GLU:HG2	37:d:187:ARG:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:g:23:ALA:O	40:g:26:VAL:HB	2.19	0.42
40:g:90:VAL:HG23	40:g:95:ARG:HG3	2.00	0.42
40:g:105:GLU:HA	40:g:108:ARG:HD2	2.00	0.42
40:g:109:LYS:C	40:g:111:GLY:N	2.77	0.42
40:g:110:ARG:CZ	40:g:121:ASN:HB3	2.48	0.42
40:g:130:LYS:HD3	40:g:130:LYS:C	2.44	0.42
41:h:26:MET:HG3	41:h:27:PRO:O	2.19	0.42
42:i:65:THR:O	42:i:65:THR:HG23	2.18	0.42
44:k:35:ASP:OD2	44:k:37:GLN:HB2	2.19	0.42
44:k:73:VAL:O	44:k:76:TYR:HB2	2.19	0.42
46:m:13:HIS:ND1	46:m:41:ASP:CG	2.77	0.42
47:n:62:ASN:CG	47:n:73:PHE:CE2	2.97	0.42
48:o:2:LEU:HD22	48:o:7:THR:HB	2.00	0.42
48:o:31:LEU:HD13	48:o:62:ARG:CA	2.49	0.42
54:u:7:GLU:OE1	54:u:11:PHE:HA	2.19	0.42
55:v:44:A:H2'	55:v:45:G:O4'	2.19	0.42
56:w:38:A:C2	56:w:39:PSU:C5	3.07	0.42
57:x:31:PHE:CE1	57:x:196:ASP:OD1	2.72	0.42
57:x:288:PRO:HA	57:x:291:VAL:CG1	2.49	0.42
57:x:332:LEU:HD12	57:x:385:ILE:CD1	2.49	0.42
57:x:624:GLU:CG	57:x:625:GLU:N	2.82	0.42
59:z:5:U:C4	59:z:6:U:C5	3.07	0.42
1:0:12:ARG:HD3	1:0:16:ARG:CZ	2.49	0.42
2:1:39:ASP:HA	2:1:48:TYR:OH	2.20	0.42
3:2:10:LEU:HD21	3:2:14:ARG:CZ	2.49	0.42
4:3:17:GLY:CA	8:A:628:G:H5''	2.49	0.42
8:A:36:G:C6	8:A:445:C:N4	2.86	0.42
8:A:178:G:N1	8:A:179:C:C4	2.87	0.42
8:A:185:G:C6	8:A:186:G:C5	3.07	0.42
8:A:188:G:N2	8:A:209:C:C2	2.87	0.42
8:A:207:A:C4	8:A:208:C:C6	3.08	0.42
8:A:214:G:N2	8:A:215:G:C2	2.87	0.42
8:A:233:A:C2	8:A:234:U:C1'	3.02	0.42
8:A:253:C:H2'	8:A:254:G:O4'	2.19	0.42
8:A:266:G:C5	8:A:267:C:C5	3.07	0.42
8:A:268:C:H2'	8:A:269:C:H6	1.84	0.42
8:A:270:A:N1	8:A:370:G:C4	2.87	0.42
8:A:274:C:O2	8:A:364:C:C2	2.73	0.42
8:A:305:C:N3	8:A:313:G:C6	2.88	0.42
8:A:374:A:H1'	8:A:401:A:N1	2.34	0.42
8:A:410:G:OP1	8:A:411:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:455:C:N4	8:A:472:A:C8	2.87	0.42
8:A:690:G:C4	8:A:691:C:C5	3.07	0.42
8:A:692:C:N3	8:A:771:G:C2	2.88	0.42
8:A:747:5MC:C4	8:A:2613:U:O4	2.72	0.42
8:A:792:A:C6	8:A:2440:C:O4'	2.72	0.42
8:A:852:U:C4	8:A:926:G:N1	2.88	0.42
8:A:857:G:C5'	30:W:65:PHE:CD2	3.02	0.42
8:A:882:G:H2'	8:A:884:U:N3	2.34	0.42
8:A:921:C:H2'	8:A:922:C:H6	1.85	0.42
8:A:1003:G:C2	8:A:1004:U:C4	3.07	0.42
8:A:1007:C:H5''	17:J:37:ARG:NE	2.33	0.42
8:A:1025:G:C4	8:A:1135:C:C1'	3.03	0.42
8:A:1176:U:C5	8:A:1177:G:N7	2.87	0.42
8:A:1177:G:H2'	8:A:1178:C:H5''	1.99	0.42
8:A:1179:G:OP2	8:A:1180:U:H5''	2.19	0.42
8:A:1216:G:C5	8:A:1217:U:C5	3.08	0.42
8:A:1235:G:C6	8:A:1236:G:N1	2.87	0.42
8:A:1309:G:H2'	8:A:1310:G:O4'	2.18	0.42
8:A:1343:G:H1'	8:A:1597:A:H2'	2.02	0.42
8:A:1360:G:C2	8:A:1372:U:C2	3.06	0.42
8:A:1369:G:C2	8:A:1370:C:C2	3.07	0.42
8:A:1372:U:H2'	8:A:1373:A:H8	1.84	0.42
8:A:1403:A:C2	8:A:1404:C:C2	3.07	0.42
8:A:1407:G:C6	8:A:1596:A:C6	3.07	0.42
8:A:1469:A:C6	8:A:1470:A:N7	2.88	0.42
8:A:1470:A:C5	8:A:1471:G:C5	3.07	0.42
8:A:1528:A:H62	8:A:1543:G:H1'	1.84	0.42
8:A:1566:A:H3'	10:C:82:TYR:OH	2.19	0.42
8:A:1586:A:N6	8:A:1587:G:C6	2.88	0.42
8:A:1679:A:C6	8:A:1680:U:C4	3.07	0.42
8:A:1692:U:H6	8:A:1692:U:O5'	2.02	0.42
8:A:1693:U:H4'	8:A:1694:C:OP2	2.19	0.42
8:A:1696:G:H2'	8:A:1697:G:O4'	2.20	0.42
8:A:1901:A:H2'	8:A:1902:C:H6	1.85	0.42
8:A:1933:G:C6	8:A:1934:C:C4	3.07	0.42
8:A:1933:G:O2'	8:A:1974:C:O4'	2.36	0.42
8:A:1953:A:O2'	8:A:2559:C:H1'	2.18	0.42
8:A:2056:G:N3	8:A:2577:A:C2	2.87	0.42
8:A:2057:G:C5	8:A:2058:A:N7	2.87	0.42
8:A:2177:C:P	8:A:2178:C:OP2	2.77	0.42
8:A:2192:U:C2	8:A:2193:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2294:G:C6	8:A:2295:C:N4	2.87	0.42
8:A:2478:A:C8	8:A:2529:G:C6	3.07	0.42
8:A:2499:C:H2'	8:A:2500:U:N1	2.34	0.42
8:A:2507:C:N3	8:A:2583:G:C2	2.88	0.42
8:A:2508:G:H1	8:A:2580:PSU:HN3	1.68	0.42
8:A:2515:C:N3	8:A:2570:G:N1	2.67	0.42
8:A:2535:G:N3	8:A:2536:G:C8	2.88	0.42
8:A:2540:C:H2'	8:A:2541:A:O4'	2.19	0.42
8:A:2549:G:C6	8:A:2550:G:O6	2.72	0.42
8:A:2578:G:C2	8:A:2579:C:C4	3.07	0.42
8:A:2580:PSU:C6	8:A:2581:G:C6	3.07	0.42
8:A:2581:G:N2	8:A:2610:C:C6	2.88	0.42
8:A:2599:G:N3	8:A:2600:A:C8	2.88	0.42
8:A:2683:C:H5''	23:P:55:HIS:HB3	2.01	0.42
8:A:2695:U:O2	8:A:2714:G:N2	2.46	0.42
8:A:2698:U:H2'	8:A:2699:C:H6	1.82	0.42
8:A:2702:G:C6	8:A:2703:C:C4	3.07	0.42
8:A:2720:U:N3	8:A:2721:A:C5	2.88	0.42
8:A:2727:A:C2	8:A:2728:U:C4	3.07	0.42
8:A:2790:U:P	8:A:2893:A:H62	2.42	0.42
8:A:2802:G:H2'	8:A:2803:G:O4'	2.19	0.42
8:A:2806:C:H2'	8:A:2807:U:C6	2.54	0.42
8:A:2814:A:H2'	8:A:2815:C:H6	1.84	0.42
8:A:2836:U:N3	8:A:2837:A:C5	2.87	0.42
8:A:2855:C:N4	8:A:2863:C:H42	2.17	0.42
8:A:2900:A:C5	8:A:2901:C:C4	3.07	0.42
9:B:7:G:C2	9:B:114:C:C2	3.07	0.42
9:B:13:G:N2	9:B:69:G:O2'	2.50	0.42
9:B:31:C:H1'	9:B:54:G:C2	2.54	0.42
9:B:50:A:C4	9:B:51:G:C8	3.08	0.42
9:B:57:A:H1'	13:F:26:GLN:HA	2.01	0.42
9:B:101:A:C6	9:B:102:G:C4	3.08	0.42
9:B:115:A:H2'	9:B:116:G:H8	1.85	0.42
10:C:88:ALA:HA	10:C:196:ASN:HB3	2.01	0.42
10:C:164:VAL:CG2	10:C:174:ARG:HB2	2.50	0.42
10:C:198:GLU:HA	10:C:201:LEU:CD1	2.42	0.42
11:D:33:ARG:NH2	11:D:52:THR:HA	2.35	0.42
13:F:63:LYS:HG3	13:F:64:PRO:CD	2.49	0.42
13:F:67:THR:OG1	13:F:85:GLY:HA3	2.19	0.42
14:G:26:LYS:HA	14:G:30:GLY:O	2.19	0.42
14:G:41:GLU:CA	14:G:54:ARG:HH21	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:155:PRO:HA	14:G:170:THR:HA	1.99	0.42
15:H:80:ILE:HB	15:H:146:VAL:HG22	2.00	0.42
15:H:115:VAL:O	15:H:116:ARG:CZ	2.68	0.42
17:J:37:ARG:NH2	17:J:110:PRO:CG	2.83	0.42
20:M:21:ALA:HB1	20:M:100:LYS:CD	2.49	0.42
22:O:106:LEU:HD23	22:O:106:LEU:C	2.45	0.42
23:P:35:SER:O	23:P:37:LYS:N	2.53	0.42
23:P:39:LEU:HD12	23:P:39:LEU:HA	1.72	0.42
23:P:39:LEU:HD21	23:P:81:ASP:CB	2.49	0.42
23:P:95:LYS:HG2	23:P:97:TYR:CZ	2.53	0.42
24:Q:81:GLY:HA3	24:Q:116:LEU:HG	2.01	0.42
25:R:1:MET:CE	25:R:41:ILE:HD12	2.50	0.42
26:S:3:THR:HB	26:S:58:ALA:HB2	2.01	0.42
27:T:12:ARG:HG2	27:T:34:VAL:CA	2.49	0.42
27:T:69:ARG:HD2	27:T:72:GLN:CD	2.44	0.42
32:Y:6:LEU:HB3	32:Y:56:LEU:HD13	2.01	0.42
34:a:15:G:O6	34:a:921:U:O4	2.38	0.42
34:a:68:G:H21	34:a:151:A:H2	1.66	0.42
34:a:70:U:H4'	34:a:71:A:OP1	2.19	0.42
34:a:119:A:C8	34:a:288:A:C5	3.08	0.42
34:a:293:G:C6	34:a:305:G:N1	2.87	0.42
34:a:299:G:C6	34:a:300:A:N1	2.88	0.42
34:a:327:A:C4	34:a:329:A:C4	3.07	0.42
34:a:483:C:P	34:a:484:G:HO2'	2.38	0.42
34:a:536:C:H6	34:a:536:C:O5'	2.01	0.42
34:a:550:G:C6	34:a:551:U:C4	3.07	0.42
34:a:594:U:C2	34:a:646:G:N1	2.87	0.42
34:a:604:G:C2	34:a:635:A:C2	3.06	0.42
34:a:632:U:O5'	34:a:632:U:C6	2.73	0.42
34:a:653:U:H1'	41:h:55:LYS:HD2	2.02	0.42
34:a:663:A:H2	34:a:742:G:H22	1.67	0.42
34:a:678:U:H2'	34:a:679:C:O4'	2.19	0.42
34:a:706:A:H1'	44:k:32:THR:HG21	2.01	0.42
34:a:716:A:H2'	34:a:717:U:C6	2.53	0.42
34:a:747:A:C6	34:a:748:G:C5	3.06	0.42
34:a:781:A:C8	34:a:801:U:O4	2.72	0.42
34:a:828:U:N3	34:a:859:G:H1'	2.33	0.42
34:a:1053:G:C2'	34:a:1199:U:OP2	2.67	0.42
34:a:1053:G:C8	34:a:1199:U:H3'	2.55	0.42
34:a:1071:C:C2	34:a:1072:G:C8	3.07	0.42
34:a:1095:U:C4	34:a:1096:C:N4	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1351:U:C4'	40:g:32:ASP:OD1	2.67	0.42
34:a:1365:G:C4	34:a:1366:C:C5	3.07	0.42
34:a:1386:G:N1	34:a:1387:G:C5	2.87	0.42
36:c:2:GLN:H	36:c:3:LYS:HZ3	1.67	0.42
36:c:21:TRP:CD1	36:c:58:ARG:HD3	2.54	0.42
36:c:152:VAL:O	36:c:164:THR:CA	2.66	0.42
37:d:70:GLN:O	37:d:71:PHE:HD1	2.02	0.42
38:e:10:LEU:HD11	38:e:70:MET:CE	2.50	0.42
38:e:88:HIS:CD2	38:e:137:ARG:HB2	2.55	0.42
39:f:38:ARG:NH1	39:f:98:GLU:H	2.18	0.42
40:g:44:SER:O	40:g:47:GLU:HB2	2.20	0.42
40:g:50:ALA:HA	40:g:55:LYS:O	2.19	0.42
40:g:138:GLU:OE2	40:g:142:ARG:NE	2.53	0.42
41:h:95:MET:HG3	41:h:129:ALA:HB1	2.01	0.42
42:i:44:ARG:HG3	42:i:48:ARG:NH2	2.34	0.42
47:n:10:VAL:O	47:n:13:VAL:HG22	2.19	0.42
48:o:63:ARG:NH2	48:o:66:LEU:HB3	2.34	0.42
49:p:5:ARG:NH2	49:p:24:SER:C	2.78	0.42
50:q:58:VAL:HG11	50:q:74:LEU:CD1	2.50	0.42
52:s:79:TYR:CZ	52:s:81:GLY:HA2	2.53	0.42
55:v:2:G:H2'	55:v:3:C:C6	2.54	0.42
55:v:4:G:C2	55:v:70:G:C6	3.07	0.42
56:w:37:MIA:C2	56:w:38:A:H1'	2.48	0.42
56:w:38:A:H2'	56:w:39:PSU:O4	2.19	0.42
56:w:51:C:N3	56:w:64:A:N1	2.67	0.42
57:x:69:ALA:O	57:x:82:ARG:HA	2.18	0.42
57:x:195:ALA:HA	57:x:271:ASN:HB2	2.00	0.42
57:x:361:ARG:HA	57:x:372:GLU:OE2	2.19	0.42
57:x:365:MET:HA	57:x:368:ASN:OD1	2.19	0.42
7:6:1:MET:HB2	9:B:43:C:OP1	2.20	0.42
7:6:65:ASN:OD1	52:s:7:GLY:HA3	2.20	0.42
8:A:2:G:H2'	8:A:3:U:H6	1.83	0.42
8:A:31:C:C2	8:A:32:C:C5	3.07	0.42
8:A:56:A:H2'	8:A:57:C:C6	2.55	0.42
8:A:111:A:C2	8:A:112:U:C2	3.08	0.42
8:A:207:A:H2'	8:A:208:C:C6	2.54	0.42
8:A:221:A:C4	8:A:266:G:C8	3.07	0.42
8:A:297:G:N1	8:A:342:A:C6	2.88	0.42
8:A:350:G:C2	8:A:351:C:C2	3.07	0.42
8:A:406:G:H2'	8:A:407:G:C8	2.55	0.42
8:A:409:G:N1	8:A:410:G:C6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:443:A:OP1	12:E:41:GLN:HB3	2.20	0.42
8:A:449:A:H2'	8:A:450:G:O4'	2.19	0.42
8:A:458:G:N3	8:A:469:G:C6	2.88	0.42
8:A:469:G:H8	8:A:469:G:O5'	2.03	0.42
8:A:538:A:N1	8:A:556:A:C8	2.87	0.42
8:A:633:A:H3'	8:A:634:C:H6	1.83	0.42
8:A:706:A:H3'	8:A:707:G:H8	1.85	0.42
8:A:725:G:H2'	8:A:726:G:O4'	2.20	0.42
8:A:752:A:C5	8:A:1781:U:O4'	2.72	0.42
8:A:881:G:C2	8:A:897:C:N4	2.87	0.42
8:A:898:C:C5	8:A:899:A:N7	2.88	0.42
8:A:999:U:H3'	8:A:1154:G:O6	2.19	0.42
8:A:1013:C:C2	8:A:1014:A:N7	2.87	0.42
8:A:1039:A:C2	8:A:1117:C:O2	2.73	0.42
8:A:1076:C:H1'	16:I:90:GLY:O	2.19	0.42
8:A:1098:A:H5'	8:A:1099:G:P	2.59	0.42
8:A:1138:G:C5	8:A:1139:G:H1'	2.55	0.42
8:A:1138:G:N1	8:A:1143:A:C2	2.88	0.42
8:A:1178:C:C2	8:A:1180:U:C6	3.07	0.42
8:A:1321:A:N3	8:A:1321:A:H2'	2.33	0.42
8:A:1342:A:O2'	8:A:1344:U:OP1	2.36	0.42
8:A:1343:G:N2	8:A:1344:U:C2	2.88	0.42
8:A:1384:A:H1'	8:A:1405:U:H1'	2.01	0.42
8:A:1412:U:N3	8:A:1591:A:N1	2.68	0.42
8:A:1435:G:O2'	8:A:1436:G:H5'	2.20	0.42
8:A:1639:C:C2'	8:A:1640:A:H5'	2.50	0.42
8:A:1649:G:N1	8:A:1650:A:C5	2.87	0.42
8:A:1650:A:C5	8:A:1651:G:C8	3.08	0.42
8:A:1655:A:C4	8:A:1656:C:C6	3.07	0.42
8:A:1672:A:C6	8:A:1673:G:C2	3.08	0.42
8:A:1712:U:C5	8:A:1713:A:O2'	2.73	0.42
8:A:1799:G:C4'	8:A:1800:C:H6	2.32	0.42
8:A:1807:G:C6	8:A:1809:A:P	3.12	0.42
8:A:1835:2MG:C6	8:A:1930:G:N2	2.86	0.42
8:A:1849:G:C2	8:A:1850:G:N7	2.87	0.42
8:A:1868:C:C4	8:A:1869:G:C8	3.07	0.42
8:A:2074:U:C2	8:A:2436:G:C2	3.08	0.42
8:A:2082:A:C6	8:A:2083:G:C4	3.08	0.42
8:A:2088:A:C5	8:A:2089:C:C5	3.07	0.42
8:A:2142:A:C2	8:A:2150:C:C2	3.07	0.42
8:A:2225:A:N3	8:A:2225:A:O2'	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2256:G:C4	8:A:2257:U:C5	3.08	0.42
8:A:2295:C:O2'	8:A:2296:U:H5'	2.19	0.42
8:A:2299:U:H2'	8:A:2300:C:C6	2.54	0.42
8:A:2333:A:C6	8:A:2335:A:C6	3.07	0.42
8:A:2346:A:C4	8:A:2383:G:C5	3.07	0.42
8:A:2448:A:OP1	8:A:2499:C:OP1	2.37	0.42
8:A:2475:C:C2'	8:A:2476:A:H5'	2.49	0.42
8:A:2487:G:N1	8:A:2488:G:C5	2.88	0.42
8:A:2578:G:N3	8:A:2579:C:C5	2.87	0.42
8:A:2640:G:C6	8:A:2775:G:C2	3.08	0.42
8:A:2656:U:O2	8:A:2657:A:C8	2.73	0.42
8:A:2685:G:O2'	8:A:2686:G:H5'	2.18	0.42
8:A:2711:A:N7	8:A:2714:G:C8	2.88	0.42
8:A:2731:G:C2	8:A:2732:G:N1	2.88	0.42
8:A:2765:A:H5'	8:A:2766:A:OP2	2.19	0.42
8:A:2876:G:C2	8:A:2877:G:C4	3.07	0.42
8:A:2893:A:H4'	8:A:2894:G:O4'	2.19	0.42
9:B:2:G:C4	9:B:3:C:C5	3.07	0.42
9:B:18:G:C4	9:B:19:C:C5	3.08	0.42
9:B:75:G:H5''	29:V:12:GLN:HE22	1.84	0.42
11:D:20:VAL:HG22	18:K:72:PRO:HB2	2.01	0.42
12:E:12:LEU:HD12	12:E:12:LEU:HA	1.87	0.42
13:F:68:LYS:HA	13:F:82:TYR:O	2.19	0.42
13:F:131:VAL:HG23	13:F:153:ILE:CD1	2.50	0.42
14:G:94:ARG:HE	14:G:127:GLN:NE2	2.18	0.42
14:G:148:ARG:NH2	14:G:153:PRO:HD2	2.35	0.42
17:J:17:VAL:HG23	17:J:137:PRO:CB	2.48	0.42
17:J:45:THR:O	17:J:48:VAL:O	2.38	0.42
18:K:7:MET:HE2	18:K:18:ARG:NE	2.34	0.42
18:K:38:ILE:HG23	18:K:60:ALA:O	2.20	0.42
19:L:95:LEU:HD23	19:L:100:ILE:HD12	2.01	0.42
20:M:24:THR:HA	20:M:101:VAL:HG23	2.00	0.42
22:O:43:ASN:HD21	22:O:46:GLU:CG	2.32	0.42
23:P:60:VAL:HB	23:P:73:PHE:CE2	2.55	0.42
26:S:41:LYS:O	26:S:44:ALA:HB3	2.19	0.42
26:S:72:THR:HG22	26:S:110:ARG:NE	2.35	0.42
29:V:24:ASN:OD1	29:V:44:HIS:HB3	2.18	0.42
31:X:61:LYS:H	31:X:61:LYS:HG3	1.68	0.42
34:a:1:A:N7	34:a:2:A:C2	2.87	0.42
34:a:21:G:C2	34:a:22:G:C5	3.07	0.42
34:a:104:G:N1	34:a:105:G:C5	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:317:U:C4	34:a:337:G:N1	2.87	0.42
34:a:322:C:O2'	34:a:323:U:H5'	2.19	0.42
34:a:414:A:C6	34:a:415:A:C5	3.07	0.42
34:a:446:G:N3	34:a:446:G:H2'	2.34	0.42
34:a:447:G:H22	34:a:486:U:H3'	1.84	0.42
34:a:451:A:C6	34:a:480:U:H2'	2.55	0.42
34:a:472:U:O2'	34:a:473:U:O5'	2.32	0.42
34:a:499:A:C4	34:a:546:A:C2	3.08	0.42
34:a:505:G:P	34:a:535:A:H5'	2.59	0.42
34:a:581:G:C5	34:a:758:C:C5	3.07	0.42
34:a:584:G:C6	34:a:585:G:C6	3.08	0.42
34:a:588:G:H2'	34:a:589:U:H6	1.84	0.42
34:a:600:A:C6	34:a:639:G:C2	3.08	0.42
34:a:607:A:H2'	34:a:608:A:C8	2.54	0.42
34:a:620:C:C4	34:a:621:A:C5	3.07	0.42
34:a:631:C:OP1	34:a:632:U:H4'	2.18	0.42
34:a:910:C:C2	34:a:911:U:C5	3.08	0.42
34:a:915:A:C2	34:a:916:U:H1'	2.55	0.42
34:a:979:C:O5'	34:a:980:C:H5	2.03	0.42
34:a:980:C:O3'	47:n:12:ARG:NH2	2.52	0.42
34:a:1021:A:C6	34:a:1022:A:C6	3.08	0.42
34:a:1024:G:H3'	34:a:1025:U:C6	2.54	0.42
34:a:1061:G:H2'	34:a:1062:U:C6	2.55	0.42
34:a:1130:A:C6	34:a:1144:G:O4'	2.72	0.42
34:a:1157:A:N3	34:a:1181:G:C2	2.88	0.42
34:a:1171:A:C6	34:a:1172:C:N4	2.88	0.42
34:a:1266:G:N2	34:a:1268:G:H3'	2.34	0.42
34:a:1338:G:C6	34:a:1339:A:N1	2.88	0.42
34:a:1437:A:H5''	53:t:28:ARG:NH1	2.34	0.42
34:a:1465:A:C6	34:a:1466:C:C4	3.07	0.42
61:a:2001:AM2:HA5	61:a:2001:AM2:HC61	1.85	0.42
35:b:95:TRP:CZ2	35:b:99:MET:CB	3.02	0.42
36:c:35:ASP:O	36:c:38:VAL:HG12	2.19	0.42
37:d:22:SER:CB	37:d:108:ALA:HB1	2.49	0.42
37:d:103:ARG:CZ	37:d:110:ARG:HH22	2.32	0.42
38:e:80:LEU:HB2	38:e:97:PRO:HD3	2.02	0.42
38:e:125:LYS:HE3	38:e:126:ALA:O	2.19	0.42
38:e:132:PRO:O	38:e:135:VAL:HG12	2.20	0.42
39:f:74:LEU:HD21	39:f:78:PHE:CE2	2.54	0.42
41:h:79:ARG:NH1	41:h:81:GLY:HA3	2.35	0.42
42:i:51:LEU:HA	42:i:54:VAL:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:i:101:GLY:C	42:i:103:VAL:H	2.27	0.42
43:j:42:LEU:HD21	43:j:73:LEU:HD13	2.02	0.42
46:m:3:ILE:HA	46:m:56:ARG:NE	2.35	0.42
46:m:10:ASP:O	46:m:11:HIS:C	2.62	0.42
47:n:35:ALA:HB1	47:n:41:ARG:N	2.26	0.42
50:q:6:THR:HG23	50:q:60:ILE:N	2.35	0.42
50:q:12:VAL:O	50:q:54:ILE:HG21	2.20	0.42
54:u:15:LEU:HD23	54:u:15:LEU:C	2.45	0.42
56:w:36:A:C6	56:w:37:MIA:C5	3.02	0.42
57:x:503:LYS:CD	57:x:516:HIS:HB2	2.49	0.42
57:x:504:HIS:CE1	57:x:506:LYS:HG3	2.54	0.42
57:x:539:ILE:HD12	57:x:579:PHE:HA	2.02	0.42
57:x:623:PRO:HD3	57:x:676:ARG:O	2.20	0.42
1:0:18:HIS:CD2	8:A:2046:G:O4'	2.73	0.42
1:0:42:ILE:HD11	21:N:100:CYS:HA	2.01	0.42
3:2:4:THR:HG22	8:A:789:A:H5'	2.02	0.42
5:4:20:ASP:H	8:A:2757:A:P	2.40	0.42
5:4:23:ILE:O	5:4:36:ARG:O	2.37	0.42
7:6:6:HIS:CE1	9:B:43:C:H5'	2.51	0.42
7:6:32:LEU:HD21	13:F:138:PRO:CB	2.49	0.42
8:A:9:G:N3	8:A:2895:G:C2	2.88	0.42
8:A:35:G:C4	8:A:36:G:C8	3.08	0.42
8:A:39:G:N1	8:A:441:U:C4	2.88	0.42
8:A:48:G:C2	8:A:178:G:C6	3.08	0.42
8:A:53:A:C6	8:A:54:G:C4	3.07	0.42
8:A:77:G:H2'	8:A:78:U:H6	1.85	0.42
8:A:85:G:N1	8:A:86:G:C4	2.88	0.42
8:A:173:A:C2	8:A:174:U:C2	3.08	0.42
8:A:230:G:C4	8:A:231:A:C8	3.07	0.42
8:A:260:G:C4'	8:A:621:A:H4'	2.48	0.42
8:A:287:G:H2'	8:A:288:U:C6	2.54	0.42
8:A:310:A:C4	8:A:312:G:C5	3.08	0.42
8:A:324:A:C5	8:A:339:U:C4'	3.02	0.42
8:A:333:G:C6	8:A:334:C:N4	2.87	0.42
8:A:388:G:C4	8:A:390:U:C4	3.08	0.42
8:A:392:U:C2	8:A:393:C:C5	3.06	0.42
8:A:454:A:H4'	8:A:455:C:OP2	2.20	0.42
8:A:455:C:H42	8:A:472:A:H3'	1.84	0.42
8:A:479:A:C4	8:A:481:G:O4'	2.72	0.42
8:A:510:C:C2	8:A:511:U:C5	3.07	0.42
8:A:518:G:O5'	26:S:18:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:529:A:C4	8:A:2023:C:C4	3.08	0.42
8:A:540:C:N4	8:A:541:A:H62	2.17	0.42
8:A:549:G:C4	8:A:550:C:C6	3.08	0.42
8:A:563:A:C4	8:A:2018:G:C2	3.07	0.42
8:A:598:U:H1'	19:L:12:SER:CB	2.50	0.42
8:A:601:C:C2	8:A:602:A:C8	3.08	0.42
8:A:682:G:C2	8:A:683:U:C4	3.07	0.42
8:A:715:A:C6	8:A:716:A:C4	3.08	0.42
8:A:729:G:C6	8:A:1775:U:N3	2.87	0.42
8:A:769:U:H1'	8:A:1379:U:H1'	2.00	0.42
8:A:875:G:OP2	8:A:875:G:C8	2.73	0.42
8:A:882:G:O2'	8:A:884:U:O4	2.37	0.42
8:A:975:A:H62	8:A:988:A:H2	1.68	0.42
8:A:1040:A:C6	8:A:1116:G:O6	2.72	0.42
8:A:1064:C:C3'	8:A:1075:C:N3	2.83	0.42
8:A:1068:G:C5	8:A:1069:A:C2	3.08	0.42
8:A:1079:C:N4	8:A:1085:A:H5'	2.35	0.42
8:A:1093:G:N2	8:A:1097:U:P	2.93	0.42
8:A:1199:U:C2	8:A:1200:C:C5	3.07	0.42
8:A:1205:A:C5	12:E:165:HIS:CD2	3.08	0.42
8:A:1257:C:C2	8:A:1258:U:C5	3.07	0.42
8:A:1295:C:O2'	21:N:19:ALA:HB1	2.19	0.42
8:A:1367:A:C6	8:A:1368:G:H1'	2.54	0.42
8:A:1385:A:C5	8:A:1403:A:C4	3.08	0.42
8:A:1469:A:C2	8:A:1470:A:C4	3.08	0.42
8:A:1500:G:H2'	8:A:1501:G:O4'	2.20	0.42
8:A:1655:A:N7	8:A:1656:C:C4	2.87	0.42
8:A:1664:A:H2'	8:A:1665:A:H8	1.85	0.42
8:A:1664:A:H1'	8:A:2726:A:N1	2.34	0.42
8:A:1668:A:C8	8:A:1674:G:C6	3.08	0.42
8:A:1670:C:P	8:A:1671:U:H5	2.42	0.42
8:A:1718:G:H2'	8:A:1719:G:O4'	2.19	0.42
8:A:1764:C:C2	8:A:1765:U:C6	3.08	0.42
8:A:1892:C:C2	8:A:1893:C:C6	3.07	0.42
8:A:1906:G:C2	8:A:1925:C:C2	3.07	0.42
8:A:1994:C:H2'	8:A:1995:U:C6	2.54	0.42
8:A:2107:G:O6	8:A:2181:U:C5	2.73	0.42
8:A:2109:U:C6	8:A:2180:U:C2	3.08	0.42
8:A:2143:C:C4	8:A:2149:U:C2	3.07	0.42
8:A:2246:G:C4	8:A:2426:A:C5	3.08	0.42
8:A:2263:C:C2	8:A:2264:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2333:A:H5'	8:A:2335:A:H1'	2.01	0.42
8:A:2412:A:C6	8:A:2413:G:C5	3.08	0.42
8:A:2436:G:C2	8:A:2437:G:C8	3.08	0.42
8:A:2472:G:C5	8:A:2475:C:C5	3.08	0.42
8:A:2472:G:C3'	8:A:2475:C:H42	2.32	0.42
8:A:2484:G:C4	8:A:2485:G:C8	3.08	0.42
8:A:2543:G:C4	8:A:2544:G:C8	3.07	0.42
8:A:2552:OMU:CM2	8:A:2553:G:C8	3.02	0.42
8:A:2598:A:OP2	8:A:2599:G:N7	2.52	0.42
8:A:2870:C:C4	8:A:2871:U:C4	3.08	0.42
9:B:2:G:C4	9:B:119:A:C2	3.07	0.42
9:B:99:A:C6	9:B:100:G:C4	3.07	0.42
10:C:20:ASN:ND2	10:C:23:LEU:HD21	2.35	0.42
10:C:78:GLU:OE2	10:C:92:LEU:HD21	2.20	0.42
10:C:107:LYS:HD3	10:C:195:GLY:HA2	2.02	0.42
11:D:32:ASN:HB3	11:D:50:VAL:CG2	2.49	0.42
12:E:20:GLY:HA2	12:E:110:SER:HB2	2.01	0.42
12:E:73:ILE:HA	12:E:78:TRP:CZ3	2.55	0.42
13:F:107:VAL:HA	13:F:110:ILE:HD11	2.01	0.42
13:F:174:PHE:HD2	13:F:176:PHE:CD1	2.38	0.42
14:G:85:LYS:HZ3	14:G:131:VAL:HG13	1.85	0.42
14:G:94:ARG:O	14:G:104:LEU:HA	2.20	0.42
15:H:16:GLY:CA	15:H:47:PHE:CE2	3.03	0.42
17:J:38:GLY:O	17:J:44:TYR:HB2	2.19	0.42
18:K:58:LEU:CB	18:K:89:ASN:ND2	2.82	0.42
23:P:52:ARG:HB2	23:P:55:HIS:O	2.20	0.42
24:Q:12:ARG:O	24:Q:16:ILE:CG1	2.67	0.42
24:Q:44:TYR:HD1	24:Q:47:ARG:CZ	2.32	0.42
25:R:87:GLN:HG2	25:R:88:GLY:O	2.20	0.42
25:R:90:ARG:HG2	25:R:90:ARG:HH11	1.85	0.42
27:T:11:LEU:O	32:Y:29:ARG:NE	2.53	0.42
28:U:5:ARG:C	28:U:27:VAL:CG2	2.92	0.42
32:Y:19:LEU:O	32:Y:23:ARG:CZ	2.67	0.42
34:a:8:A:H62	37:d:204:SER:C	2.27	0.42
34:a:55:A:C2	34:a:56:U:C1'	3.03	0.42
34:a:74:A:N3	34:a:97:G:C2	2.87	0.42
34:a:107:G:N7	53:t:9:ARG:NH2	2.68	0.42
34:a:149:A:C4	34:a:150:U:C5	3.07	0.42
34:a:159:G:C5	34:a:164:G:C5'	3.03	0.42
34:a:164:G:C2'	34:a:165:G:O5'	2.67	0.42
34:a:188:C:N4	34:a:189:A:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:206:C:N3	34:a:465:A:C2	2.87	0.42
34:a:275:G:C4	34:a:276:G:C8	3.07	0.42
34:a:289:G:C6	34:a:290:C:N4	2.87	0.42
34:a:320:A:N1	34:a:334:C:N3	2.68	0.42
34:a:323:U:H6	34:a:323:U:O5'	2.02	0.42
34:a:354:G:C6	34:a:355:C:N4	2.87	0.42
34:a:413:G:H1'	34:a:428:G:N2	2.34	0.42
34:a:454:G:H1	34:a:478:A:H61	1.68	0.42
34:a:514:C:H2'	34:a:515:G:H8	1.84	0.42
34:a:563:A:H5'	34:a:566:G:C2	2.55	0.42
34:a:594:U:H2'	34:a:595:A:N9	2.34	0.42
34:a:679:C:N3	34:a:712:A:C6	2.88	0.42
34:a:731:G:H2'	34:a:732:C:C6	2.55	0.42
34:a:739:C:H2'	34:a:740:U:C6	2.54	0.42
34:a:754:C:H4'	48:o:71:ARG:NH2	2.34	0.42
34:a:755:G:N1	34:a:756:C:C4	2.87	0.42
34:a:892:A:C2	34:a:907:A:C4	3.08	0.42
34:a:944:G:C4	34:a:1340:A:N1	2.87	0.42
34:a:949:A:O4'	34:a:1364:U:N3	2.53	0.42
34:a:1031:C:O3'	34:a:1032:G:N2	2.52	0.42
34:a:1112:C:C1'	36:c:178:ARG:HH21	2.33	0.42
34:a:1133:G:N1	34:a:1142:G:C4	2.88	0.42
34:a:1312:G:C2	34:a:1326:U:N3	2.88	0.42
34:a:1316:G:C2	34:a:1318:A:H3'	2.55	0.42
34:a:1329:A:N6	34:a:1330:U:O4	2.53	0.42
34:a:1330:U:O4	34:a:1331:G:N3	2.53	0.42
34:a:1413:A:C5	34:a:1414:U:C5	3.06	0.42
34:a:1440:U:O2	34:a:1461:G:N2	2.48	0.42
34:a:1476:A:C6	34:a:1477:U:C4	3.07	0.42
36:c:38:VAL:O	36:c:42:LEU:HG	2.19	0.42
39:f:6:ILE:HG23	39:f:89:VAL:HG12	2.00	0.42
41:h:30:LYS:O	41:h:33:VAL:HG22	2.20	0.42
41:h:31:LEU:HG	41:h:35:ILE:CD1	2.50	0.42
43:j:48:ARG:NH2	47:n:101:TRP:CD2	2.87	0.42
43:j:66:GLU:HA	43:j:66:GLU:OE1	2.20	0.42
44:k:15:VAL:HG22	44:k:17:ASP:O	2.20	0.42
45:l:19:ASN:C	45:l:21:PRO:HD3	2.44	0.42
50:q:19:SER:HA	50:q:47:ASP:H	1.85	0.42
51:r:41:SER:C	51:r:43:ILE:N	2.77	0.42
55:v:24:U:C2	55:v:25:C:C6	3.08	0.42
55:v:52:G:C2	55:v:53:G:N9	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:1:ALA:HA	57:x:377:ARG:HH12	1.84	0.42
57:x:2:ARG:NE	57:x:312:ASP:CG	2.78	0.42
57:x:24:THR:OG1	62:x:801:GDP:PA	2.78	0.42
57:x:96:ILE:HD12	57:x:96:ILE:HA	1.86	0.42
57:x:224:SER:HB2	57:x:260:ILE:CD1	2.50	0.42
57:x:352:VAL:HG21	57:x:395:THR:H	1.85	0.42
57:x:443:SER:O	57:x:464:HIS:CD2	2.72	0.42
57:x:462:GLU:OE2	57:x:667:THR:HG21	2.19	0.42
57:x:489:TYR:CB	57:x:611:LEU:HD21	2.48	0.42
57:x:514:TYR:HB3	57:x:583:HIS:HB3	2.01	0.42
57:x:649:THR:HG23	57:x:650:GLY:N	2.35	0.42
5:4:27:CYS:HB2	5:4:33:HIS:CB	2.45	0.42
7:6:10:GLU:OE2	7:6:29:GLY:N	2.53	0.42
8:A:7:G:C2	8:A:2897:U:C2	3.07	0.42
8:A:36:G:C2	8:A:445:C:N3	2.87	0.42
8:A:56:A:N1	8:A:115:C:N3	2.67	0.42
8:A:106:C:C2	8:A:107:G:C8	3.07	0.42
8:A:173:A:H2'	8:A:174:U:H6	1.84	0.42
8:A:242:G:H1'	8:A:243:U:H5	1.83	0.42
8:A:250:G:O6	8:A:386:G:C2	2.73	0.42
8:A:265:A:N6	8:A:428:A:O4'	2.53	0.42
8:A:268:C:C2	8:A:425:G:C2	3.07	0.42
8:A:294:A:C6	8:A:345:A:C4	3.07	0.42
8:A:296:U:H2'	8:A:297:G:C8	2.55	0.42
8:A:301:G:P	28:U:81:ARG:HH12	2.41	0.42
8:A:310:A:O2'	8:A:311:A:H2'	2.20	0.42
8:A:418:C:C4	8:A:419:U:C4	3.08	0.42
8:A:488:G:C6	8:A:491:G:OP2	2.72	0.42
8:A:519:U:H2'	8:A:520:G:C8	2.54	0.42
8:A:529:A:C8	8:A:2042:A:C6	3.08	0.42
8:A:559:G:H2'	8:A:560:C:C6	2.55	0.42
8:A:560:C:O2	24:Q:47:ARG:NH1	2.38	0.42
8:A:579:G:C6	8:A:1262:A:N6	2.88	0.42
8:A:583:G:C6	8:A:584:C:N4	2.87	0.42
8:A:709:U:H2'	8:A:710:U:O4'	2.19	0.42
8:A:715:A:N6	8:A:716:A:C2	2.88	0.42
8:A:740:C:H2'	8:A:741:U:C6	2.55	0.42
8:A:855:G:C3'	8:A:856:G:H5''	2.50	0.42
8:A:911:A:H5''	8:A:912:C:H5''	2.01	0.42
8:A:952:G:C5	8:A:953:G:C8	3.08	0.42
8:A:1050:A:C2	8:A:1051:G:H1'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1084:A:C2'	8:A:1085:A:O4'	2.67	0.42
8:A:1093:G:N3	8:A:1097:U:C5	2.88	0.42
8:A:1214:A:H61	8:A:1235:G:H1'	1.84	0.42
8:A:1216:G:C4	8:A:1217:U:C6	3.07	0.42
8:A:1277:G:C2	8:A:1294:U:C2	3.08	0.42
8:A:1358:G:C6	8:A:1371:G:H3'	2.53	0.42
8:A:1362:C:C2	8:A:1363:C:C5	3.08	0.42
8:A:1429:G:H2'	8:A:1430:G:C8	2.51	0.42
8:A:1473:G:C6	8:A:1519:G:N1	2.87	0.42
8:A:1571:A:C4	8:A:1572:A:C8	3.07	0.42
8:A:1649:G:C2	8:A:1650:A:C8	3.07	0.42
8:A:1658:C:C5'	11:D:138:LEU:HD22	2.47	0.42
8:A:1668:A:C5	8:A:1674:G:C4	3.08	0.42
8:A:1686:C:C4	8:A:1703:G:C6	3.07	0.42
8:A:1686:C:C4	8:A:1703:G:N1	2.87	0.42
8:A:1718:G:H1	8:A:1742:U:H3	1.66	0.42
8:A:1845:G:C5	8:A:1846:G:N7	2.88	0.42
8:A:1850:G:H2'	8:A:1851:U:O4'	2.19	0.42
8:A:1866:A:C4	8:A:1876:A:C5	3.07	0.42
8:A:1933:G:C5	8:A:1934:C:C5	3.07	0.42
8:A:2044:C:N3	8:A:2625:G:C2	2.87	0.42
8:A:2114:A:H2'	8:A:2166:U:O4	2.20	0.42
8:A:2116:G:H1	8:A:2117:A:H62	1.67	0.42
8:A:2174:C:O2	8:A:2175:C:C6	2.73	0.42
8:A:2294:G:N2	8:A:2339:C:C2	2.87	0.42
8:A:2301:C:C4	8:A:2316:G:N1	2.88	0.42
8:A:2454:G:C2	8:A:2455:G:C8	3.07	0.42
8:A:2550:G:C4	8:A:2551:C:C5	3.08	0.42
8:A:2574:G:H2'	8:A:2575:C:C6	2.54	0.42
8:A:2809:A:P	8:A:2890:G:H1	2.42	0.42
8:A:2834:G:H4'	11:D:56:LYS:NZ	2.35	0.42
8:A:2887:A:C2	8:A:2888:C:C6	3.08	0.42
9:B:19:C:H2'	9:B:20:G:C8	2.55	0.42
9:B:23:G:C2	9:B:61:G:C2	3.08	0.42
9:B:23:G:C2	9:B:61:G:C4	3.08	0.42
9:B:45:A:C2	9:B:46:A:C1'	3.03	0.42
9:B:75:G:N3	29:V:88:HIS:CE1	2.88	0.42
9:B:102:G:C5	9:B:103:U:C5	3.08	0.42
10:C:132:ARG:CZ	10:C:185:ALA:HB3	2.49	0.42
11:D:3:GLY:CA	11:D:203:VAL:O	2.67	0.42
12:E:165:HIS:CD2	12:E:166:LYS:HG3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:F:47:LYS:HZ2	13:F:51:ASN:N	2.16	0.42
14:G:21:GLN:NE2	14:G:36:LEU:HD12	2.35	0.42
14:G:39:ALA:HA	14:G:54:ARG:HB3	2.00	0.42
14:G:158:GLY:HA3	14:G:162:ARG:HH12	1.84	0.42
15:H:5:LEU:HD12	15:H:5:LEU:N	2.35	0.42
15:H:77:THR:HB	15:H:143:ILE:CG1	2.49	0.42
15:H:99:ILE:CG2	15:H:115:VAL:HG21	2.48	0.42
17:J:57:LEU:HB3	17:J:127:GLY:O	2.20	0.42
19:L:91:ASP:HB3	19:L:94:THR:CB	2.50	0.42
21:N:90:ARG:CB	21:N:94:TYR:CD1	3.02	0.42
22:O:67:ASN:OD1	22:O:70:ALA:N	2.44	0.42
23:P:4:ILE:O	23:P:8:GLU:HG3	2.19	0.42
23:P:13:LYS:NZ	23:P:77:SER:N	2.68	0.42
24:Q:13:HIS:O	24:Q:16:ILE:HB	2.19	0.42
27:T:90:GLY:O	27:T:91:GLN:HB2	2.19	0.42
28:U:12:VAL:CG1	28:U:17:ASP:O	2.68	0.42
33:Z:7:THR:HA	33:Z:33:HIS:O	2.20	0.42
34:a:38:G:H1'	34:a:397:A:N6	2.35	0.42
34:a:60:A:N1	34:a:108:G:H4'	2.35	0.42
34:a:123:U:O5'	34:a:123:U:H6	2.01	0.42
34:a:138:G:C2	34:a:226:G:C4	3.08	0.42
34:a:184:G:H5'	34:a:224:U:O2'	2.19	0.42
34:a:251:G:C2	34:a:266:G:N1	2.88	0.42
34:a:405:U:C5	37:d:2:ARG:HB3	2.54	0.42
34:a:409:U:P	37:d:22:SER:H	2.42	0.42
34:a:466:A:C4	34:a:468:A:H5'	2.55	0.42
34:a:514:C:H2'	34:a:515:G:H5'	2.01	0.42
34:a:564:C:OP2	45:l:11:ARG:NH2	2.53	0.42
34:a:595:A:O2'	34:a:641:U:C4	2.65	0.42
34:a:615:G:H1'	34:a:626:G:N2	2.34	0.42
34:a:683:G:N2	44:k:38:GLY:O	2.52	0.42
34:a:778:G:C2	34:a:779:C:C2	3.07	0.42
34:a:827:U:N3	34:a:874:G:N1	2.68	0.42
34:a:852:G:C6	34:a:853:C:N4	2.88	0.42
34:a:921:U:O4'	34:a:1082:A:OP2	2.38	0.42
34:a:964:A:H3'	34:a:965:U:C6	2.55	0.42
34:a:1030:U:H5''	34:a:1031:C:C4'	2.49	0.42
34:a:1067:A:N6	34:a:1191:A:N7	2.67	0.42
34:a:1108:G:P	36:c:174:LEU:H	2.40	0.42
34:a:1117:A:O2'	42:i:105:ARG:HG2	2.20	0.42
34:a:1154:G:H2'	34:a:1155:A:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1248:A:O2'	34:a:1249:C:P	2.78	0.42
34:a:1294:G:H2'	34:a:1295:U:C6	2.54	0.42
34:a:1308:U:P	46:m:97:ARG:HB2	2.59	0.42
34:a:1311:A:N1	34:a:1327:C:N4	2.67	0.42
34:a:1399:C:O4'	34:a:1401:G:C8	2.72	0.42
34:a:1407:5MC:N3	34:a:1495:U:C2	2.88	0.42
34:a:1461:G:C5	34:a:1462:C:C5	3.07	0.42
34:a:1515:G:C4	34:a:1516:2MG:C8	3.08	0.42
36:c:150:VAL:CB	36:c:199:VAL:HG12	2.50	0.42
37:d:169:TRP:H	37:d:170:LEU:HD22	1.85	0.42
38:e:63:MET:C	38:e:67:ARG:HD3	2.45	0.42
38:e:75:LEU:CD1	38:e:78:GLY:H	2.33	0.42
41:h:94:VAL:HB	41:h:99:GLY:O	2.20	0.42
43:j:41:PRO:HB3	43:j:72:ARG:CZ	2.50	0.42
44:k:22:ILE:HB	44:k:85:VAL:HA	2.01	0.42
44:k:121:ARG:HG2	44:k:122:PRO:O	2.20	0.42
48:o:70:LYS:HB2	48:o:77:TYR:CD2	2.55	0.42
50:q:58:VAL:HG11	50:q:74:LEU:HD12	2.02	0.42
55:v:53:G:H3'	55:v:54:5MU:H73	2.00	0.42
56:w:34:G:C5	59:z:7:G:O6	2.72	0.42
57:x:22:LYS:CG	57:x:111:VAL:HG21	2.50	0.42
57:x:72:SER:CB	57:x:77:GLN:HB2	2.50	0.42
57:x:98:VAL:CG1	57:x:128:GLN:HB3	2.49	0.42
57:x:150:PHE:CZ	57:x:263:VAL:HG23	2.55	0.42
57:x:328:PHE:CD2	57:x:329:VAL:HG23	2.55	0.42
57:x:365:MET:SD	57:x:368:ASN:CG	3.03	0.42
57:x:507:GLN:C	57:x:508:SER:OG	2.63	0.42
1:0:26:SER:OG	8:A:2887:A:O2'	1.87	0.42
2:1:18:HIS:CE1	2:1:20:TYR:CE1	3.07	0.42
4:3:37:THR:HA	4:3:40:LYS:HE3	2.01	0.42
8:A:13:A:C1'	8:A:526:A:N6	2.82	0.42
8:A:30:G:C6	8:A:31:C:C4	3.08	0.42
8:A:31:C:C4	8:A:32:C:C5	3.07	0.42
8:A:121:G:N1	8:A:122:G:C5	2.87	0.42
8:A:184:C:C2	8:A:185:G:C8	3.08	0.42
8:A:261:G:C6	8:A:262:A:N7	2.88	0.42
8:A:362:A:C8	8:A:363:G:C8	3.07	0.42
8:A:391:A:O2'	8:A:411:G:O4'	2.38	0.42
8:A:519:U:H2'	8:A:520:G:H8	1.85	0.42
8:A:569:U:O2'	8:A:983:A:C6	2.73	0.42
8:A:575:A:OP2	8:A:2055:C:N4	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:579:G:C4'	8:A:2017:U:H2'	2.50	0.42
8:A:603:A:N6	8:A:656:G:O4'	2.53	0.42
8:A:607:U:O2	8:A:607:U:C2'	2.67	0.42
8:A:695:G:H1	8:A:767:U:H3	1.68	0.42
8:A:703:U:O5'	8:A:703:U:H6	2.02	0.42
8:A:705:A:C8	8:A:726:G:N2	2.70	0.42
8:A:740:C:H6	8:A:740:C:O5'	2.03	0.42
8:A:858:G:H21	8:A:2268:A:H2'	1.85	0.42
8:A:957:C:C2	8:A:959:A:C8	3.07	0.42
8:A:1057:A:H61	8:A:1079:C:H1'	1.84	0.42
8:A:1064:C:O3'	8:A:1075:C:O2	2.38	0.42
8:A:1068:G:H2'	8:A:1069:A:O4'	2.20	0.42
8:A:1069:A:N7	8:A:1073:A:C6	2.88	0.42
8:A:1070:A:C8	8:A:1095:A:O3'	2.73	0.42
8:A:1079:C:H2'	8:A:1081:U:OP2	2.20	0.42
8:A:1084:A:C5	8:A:1085:A:C6	3.08	0.42
8:A:1287:A:N1	8:A:1649:G:H4'	2.34	0.42
8:A:1312:U:H1'	8:A:1314:C:C5	2.55	0.42
8:A:1344:U:H4'	8:A:1384:A:C6	2.54	0.42
8:A:1419:A:N3	8:A:1421:G:C8	2.87	0.42
8:A:1459:G:C4	8:A:1461:C:C6	3.07	0.42
8:A:1722:A:N6	8:A:1738:G:O2'	2.53	0.42
8:A:1773:A:N7	8:A:1829:A:H1'	2.35	0.42
8:A:1799:G:O6	10:C:177:SER:HB3	2.19	0.42
8:A:1819:A:C1'	8:A:1821:A:C6	3.03	0.42
8:A:1963:U:H6	8:A:1963:U:O5'	2.02	0.42
8:A:2038:G:C5	8:A:2039:U:C4	3.06	0.42
8:A:2065:C:H2'	8:A:2066:C:H6	1.84	0.42
8:A:2114:A:N9	8:A:2116:G:N7	2.67	0.42
8:A:2162:G:C6	8:A:2163:A:C2	3.07	0.42
8:A:2186:G:C8	8:A:2186:G:H3'	2.54	0.42
8:A:2281:A:O2'	8:A:2282:G:H5'	2.19	0.42
8:A:2290:G:C6	8:A:2343:U:O2	2.72	0.42
8:A:2338:C:O2'	8:A:2339:C:H5'	2.19	0.42
8:A:2530:A:H5'	14:G:174:LYS:NZ	2.35	0.42
8:A:2550:G:N1	8:A:2559:C:C2	2.87	0.42
8:A:2611:C:C4	8:A:2612:C:C5	3.08	0.42
8:A:2690:U:C4	21:N:6:SER:O	2.72	0.42
8:A:2733:A:N1	8:A:2734:A:C4	2.88	0.42
8:A:2737:G:C6	8:A:2738:A:C6	3.07	0.42
8:A:2791:G:C5	8:A:2892:G:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2885:G:C6	8:A:2886:A:H1'	2.55	0.42
9:B:40:U:C1'	9:B:45:A:N6	2.83	0.42
9:B:86:G:N2	9:B:91:C:C2	2.88	0.42
9:B:88:C:H2'	9:B:88:C:OP2	2.20	0.42
9:B:114:C:H1'	22:O:47:VAL:HG21	2.01	0.42
10:C:172:THR:HG23	10:C:267:VAL:HG21	2.01	0.42
10:C:172:THR:O	10:C:173:LEU:HD23	2.19	0.42
10:C:209:ALA:O	10:C:212:TRP:CD1	2.73	0.42
11:D:106:LYS:HD3	11:D:174:SER:C	2.44	0.42
11:D:172:VAL:CG1	11:D:175:LEU:HD11	2.49	0.42
12:E:106:LYS:HE2	12:E:200:LEU:HB3	2.01	0.42
14:G:17:LYS:O	14:G:23:ILE:HG13	2.19	0.42
14:G:132:LEU:HD21	14:G:143:VAL:CG1	2.48	0.42
15:H:58:LEU:O	15:H:61:VAL:HG12	2.20	0.42
17:J:47:HIS:HA	17:J:114:LEU:CD2	2.50	0.42
18:K:4:GLU:HA	18:K:21:CYS:O	2.20	0.42
18:K:7:MET:HE1	18:K:18:ARG:HB3	2.02	0.42
20:M:32:GLY:O	20:M:131:VAL:HG22	2.20	0.42
22:O:18:LEU:HD23	22:O:21:LEU:HD12	2.02	0.42
22:O:39:VAL:HG13	22:O:90:VAL:HG11	2.01	0.42
24:Q:30:VAL:HG12	24:Q:32:ARG:N	2.34	0.42
24:Q:59:LEU:HD12	24:Q:59:LEU:O	2.20	0.42
28:U:24:VAL:HG22	28:U:35:VAL:HG22	2.00	0.42
29:V:70:ILE:HG22	29:V:72:VAL:CG1	2.50	0.42
32:Y:34:SER:OG	32:Y:36:GLN:CG	2.68	0.42
33:Z:40:THR:OG1	33:Z:43:ILE:HB	2.20	0.42
34:a:31:G:N1	34:a:48:C:O5'	2.53	0.42
34:a:33:A:C6	34:a:552:U:N3	2.88	0.42
34:a:49:U:C6	34:a:364:A:N6	2.88	0.42
34:a:51:A:N3	34:a:116:A:H1'	2.35	0.42
34:a:94:G:C2	34:a:98:A:C2	3.08	0.42
34:a:113:G:O4'	34:a:354:G:H4'	2.19	0.42
34:a:200:G:H2'	34:a:201:G:C8	2.55	0.42
34:a:247:G:H2'	34:a:248:C:H6	1.85	0.42
34:a:296:U:H2'	34:a:297:G:O4'	2.20	0.42
34:a:403:C:OP1	37:d:133:SER:HB3	2.19	0.42
34:a:415:A:C6	34:a:416:G:C4	3.07	0.42
34:a:417:G:N1	34:a:427:U:C2	2.88	0.42
34:a:442:G:C5	34:a:443:C:C5	3.08	0.42
34:a:509:A:N7	34:a:510:A:C2	2.87	0.42
34:a:511:C:N4	34:a:541:G:N1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:635:A:O2'	34:a:636:U:C6	2.73	0.42
34:a:667:G:OP1	34:a:732:C:O2'	2.31	0.42
34:a:777:A:C6	34:a:778:G:C4	3.08	0.42
34:a:886:G:C2	34:a:912:C:C2	3.08	0.42
34:a:901:A:C5	34:a:902:G:H1'	2.55	0.42
34:a:943:U:H2'	34:a:944:G:H8	1.84	0.42
34:a:957:U:O2	34:a:960:U:C2	2.72	0.42
34:a:990:C:H2'	34:a:991:U:C6	2.55	0.42
34:a:1027:C:N4	34:a:1034:G:H2'	2.34	0.42
34:a:1095:U:N3	34:a:1096:C:C4	2.88	0.42
34:a:1160:G:H5''	35:b:130:LYS:HD2	2.00	0.42
34:a:1164:G:N1	34:a:1173:U:C4	2.88	0.42
34:a:1175:G:C6	34:a:1176:A:N7	2.88	0.42
34:a:1176:A:H3'	34:a:1177:G:C8	2.52	0.42
34:a:1210:C:H3'	34:a:1211:U:C6	2.55	0.42
34:a:1225:A:H2'	34:a:1225:A:N3	2.34	0.42
34:a:1239:A:O4'	34:a:1241:G:H1'	2.19	0.42
34:a:1338:G:H2'	34:a:1339:A:O4'	2.20	0.42
34:a:1357:A:H61	34:a:1365:G:H1	1.65	0.42
34:a:1365:G:C6	34:a:1366:C:C5	3.08	0.42
34:a:1405:G:C2	34:a:1406:U:C5	3.07	0.42
34:a:1454:G:C4	34:a:1455:G:C8	3.08	0.42
34:a:1495:U:H2'	34:a:1496:C:C6	2.55	0.42
35:b:41:ASN:HD21	35:b:43:GLU:HB2	1.84	0.42
35:b:110:ILE:HD13	35:b:147:LEU:HD22	2.02	0.42
35:b:185:ILE:CG2	35:b:203:ASP:OD1	2.67	0.42
36:c:18:ASN:ND2	36:c:53:ARG:HG3	2.34	0.42
36:c:173:PRO:HD2	36:c:202:PHE:CD2	2.55	0.42
37:d:70:GLN:O	37:d:70:GLN:CG	2.68	0.42
37:d:142:VAL:O	37:d:143:SER:C	2.60	0.42
38:e:106:ALA:HB1	38:e:110:MET:CB	2.49	0.42
40:g:109:LYS:HD3	40:g:109:LYS:HA	1.83	0.42
41:h:25:THR:HG23	41:h:59:GLU:HB2	2.02	0.42
42:i:7:GLY:O	42:i:18:VAL:HG22	2.20	0.42
42:i:24:ASN:O	42:i:58:GLU:O	2.37	0.42
42:i:24:ASN:C	42:i:58:GLU:O	2.63	0.42
43:j:15:HIS:N	43:j:70:HIS:CD2	2.88	0.42
46:m:18:LEU:CD2	46:m:29:SER:O	2.67	0.42
50:q:18:LYS:C	50:q:47:ASP:O	2.62	0.42
50:q:25:GLU:OE2	50:q:38:LYS:HD2	2.20	0.42
52:s:44:ILE:HA	52:s:61:VAL:CG1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:s:50:VAL:O	52:s:56:HIS:HA	2.19	0.42
53:t:36:ALA:HA	53:t:39:GLU:HG2	2.02	0.42
53:t:50:PHE:C	53:t:53:MET:HG3	2.44	0.42
54:u:13:VAL:HG12	54:u:16:ARG:HH11	1.85	0.42
54:u:13:VAL:HG12	54:u:16:ARG:NH1	2.34	0.42
55:v:14:A:H3'	55:v:15:G:C8	2.55	0.42
55:v:14:A:C8	55:v:22:G:N2	2.87	0.42
55:v:58:A:C6	55:v:61:C:C2	3.08	0.42
56:w:1:G:C2	56:w:2:C:C4	3.08	0.42
56:w:6:G:C6	56:w:68:C:N4	2.88	0.42
56:w:36:A:H1'	57:x:510:GLY:HA2	2.01	0.42
56:w:37:MIA:H2'	56:w:38:A:O4'	2.20	0.42
57:x:5:PRO:HG2	57:x:8:ARG:CZ	2.49	0.42
57:x:105:LEU:CD1	57:x:107:GLY:O	2.68	0.42
57:x:128:GLN:O	57:x:131:LYS:HB3	2.19	0.42
57:x:220:ASN:O	57:x:223:GLU:HB3	2.20	0.42
57:x:228:ALA:CB	57:x:250:ALA:HB1	2.49	0.42
57:x:297:ILE:O	57:x:298:LEU:HD23	2.18	0.42
57:x:522:TYR:CE2	57:x:574:GLY:HA3	2.55	0.42
2:1:7:LYS:NZ	8:A:2420:C:H5''	2.34	0.42
3:2:25:LYS:O	3:2:29:GLN:N	2.48	0.42
4:3:38:LYS:NZ	8:A:2365:G:C5	2.78	0.42
5:4:30:GLU:OE1	5:4:30:GLU:N	2.53	0.42
7:6:2:LYS:N	9:B:43:C:OP1	2.31	0.42
8:A:18:U:H2'	8:A:19:A:C8	2.54	0.42
8:A:75:G:N1	8:A:76:C:C4	2.88	0.42
8:A:363:G:C6	8:A:364:C:N4	2.87	0.42
8:A:476:G:H4'	8:A:505:A:N3	2.35	0.42
8:A:500:G:C2'	8:A:502:A:N7	2.83	0.42
8:A:520:G:N1	8:A:521:U:C4	2.88	0.42
8:A:569:U:C4	8:A:570:G:N1	2.88	0.42
8:A:595:C:C2	8:A:663:G:C2	3.07	0.42
8:A:628:G:N1	8:A:629:G:C6	2.88	0.42
8:A:630:G:N1	8:A:634:C:N4	2.67	0.42
8:A:631:A:C5	8:A:632:A:C5	3.08	0.42
8:A:632:A:O2'	8:A:633:A:O4'	2.38	0.42
8:A:635:C:OP2	19:L:126:ARG:NE	2.53	0.42
8:A:638:G:C5	8:A:651:G:N1	2.88	0.42
8:A:693:A:C2	8:A:694:U:C2	3.08	0.42
8:A:704:G:H2'	8:A:726:G:C2	2.54	0.42
8:A:748:G:N9	8:A:750:A:N7	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:846:U:H4'	8:A:847:U:H5	1.85	0.42
8:A:856:G:O2'	30:W:65:PHE:CE1	2.73	0.42
8:A:897:C:H3'	8:A:898:C:C6	2.55	0.42
8:A:920:A:H2'	8:A:921:C:C6	2.54	0.42
8:A:933:A:H5'	8:A:934:U:OP2	2.20	0.42
8:A:934:U:H2'	8:A:935:C:H6	1.83	0.42
8:A:945:A:C4	8:A:2448:A:C2	3.07	0.42
8:A:964:C:H2'	8:A:965:C:O4'	2.19	0.42
8:A:991:C:C6	8:A:1185:G:C5	3.08	0.42
8:A:998:C:N3	8:A:1158:C:N3	2.67	0.42
8:A:1071:G:N2	8:A:1072:C:N3	2.67	0.42
8:A:1071:G:N2	8:A:1101:U:C5	2.88	0.42
8:A:1183:U:H4'	33:Z:29:ARG:NH1	2.35	0.42
8:A:1203:U:OP2	8:A:1204:A:C2'	2.68	0.42
8:A:1215:G:C2	8:A:1234:U:O2	2.73	0.42
8:A:1287:A:H3'	8:A:1288:G:C2	2.55	0.42
8:A:1300:G:N2	8:A:1634:A:N3	2.68	0.42
8:A:1352:U:H3'	8:A:1377:G:O6	2.20	0.42
8:A:1358:G:H1	8:A:1371:G:H3'	1.85	0.42
8:A:1365:A:OP1	31:X:2:ARG:HD2	2.20	0.42
8:A:1385:A:N7	8:A:1403:A:C6	2.88	0.42
8:A:1418:G:H1	8:A:1578:U:H3'	1.84	0.42
8:A:1432:G:N1	8:A:1433:A:C6	2.88	0.42
8:A:1450:G:H2'	8:A:1451:C:O4'	2.19	0.42
8:A:1466:U:H2'	8:A:1547:C:C5	2.55	0.42
8:A:1469:A:N7	8:A:1521:G:C2	2.88	0.42
8:A:1517:G:C6	8:A:1518:C:N4	2.87	0.42
8:A:1564:C:O2'	8:A:1565:C:H5'	2.19	0.42
8:A:1613:G:C6	8:A:1619:G:C6	3.07	0.42
8:A:1636:U:N3	8:A:1637:A:N7	2.68	0.42
8:A:1641:A:C5	8:A:1642:G:C4	3.08	0.42
8:A:1651:G:C6	8:A:1652:A:C6	3.07	0.42
8:A:1682:G:C8	8:A:1757:A:N3	2.88	0.42
8:A:1707:G:N9	8:A:1756:G:C4	2.88	0.42
8:A:1767:G:H2'	8:A:1768:C:H6	1.85	0.42
8:A:1780:A:OP2	8:A:1781:U:H3'	2.19	0.42
8:A:1785:A:N6	8:A:1787:A:N3	2.68	0.42
8:A:1810:A:N6	8:A:1811:G:C2	2.88	0.42
8:A:1821:A:C6	8:A:1822:C:C4	3.07	0.42
8:A:1861:G:C6	8:A:1862:G:N7	2.88	0.42
8:A:1866:A:C2	8:A:1876:A:N9	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1892:C:O2'	55:v:71:C:H5''	2.20	0.42
8:A:1894:C:H2'	8:A:1895:C:H6	1.84	0.42
8:A:1906:G:C2	8:A:1907:G:C8	3.08	0.42
8:A:1908:C:H2'	8:A:1909:C:H6	1.85	0.42
8:A:2011:U:OP1	26:S:42:LYS:HE2	2.20	0.42
8:A:2034:U:N3	8:A:2035:G:C5	2.87	0.42
8:A:2040:G:N1	8:A:2041:U:C2	2.87	0.42
8:A:2096:C:H2'	8:A:2097:A:H8	1.85	0.42
8:A:2119:A:O3'	8:A:2171:A:H2	2.02	0.42
8:A:2155:U:C5	8:A:2156:G:O3'	2.73	0.42
8:A:2158:A:OP2	8:A:2158:A:C8	2.72	0.42
8:A:2199:A:N7	8:A:2200:C:C4	2.87	0.42
8:A:2278:A:OP1	20:M:10:ARG:CZ	2.68	0.42
8:A:2292:U:H2'	8:A:2293:G:H8	1.84	0.42
8:A:2292:U:H4'	8:A:2375:G:O2'	2.20	0.42
8:A:2425:A:O4'	8:A:2427:C:C2	2.73	0.42
8:A:2489:U:C4	8:A:2490:G:C6	3.07	0.42
8:A:2526:G:C4	8:A:2527:C:C5	3.08	0.42
8:A:2540:C:C4'	8:A:2741:A:H4'	2.49	0.42
8:A:2543:G:C6	8:A:2765:A:C8	3.08	0.42
8:A:2603:G:H2'	8:A:2604:PSU:H6	1.85	0.42
8:A:2606:C:H2'	8:A:2607:G:C8	2.55	0.42
8:A:2643:G:C4	8:A:2644:G:C8	3.08	0.42
8:A:2694:G:N1	8:A:2716:C:N3	2.68	0.42
8:A:2728:U:H4'	8:A:2729:G:OP1	2.19	0.42
8:A:2731:G:O3'	11:D:208:LYS:NZ	2.32	0.42
8:A:2772:C:H2'	8:A:2773:C:C6	2.53	0.42
8:A:2776:A:C6	8:A:2782:G:H1'	2.55	0.42
8:A:2790:U:O4'	8:A:2893:A:C5	2.73	0.42
8:A:2808:G:H2'	8:A:2809:A:OP2	2.20	0.42
8:A:2820:A:O2'	8:A:2821:A:OP2	2.38	0.42
8:A:2876:G:H4'	23:P:2:ASN:OD1	2.19	0.42
8:A:2881:U:H5''	21:N:96:ARG:NH1	2.35	0.42
9:B:9:G:C4	9:B:112:G:C2	3.07	0.42
9:B:15:A:O4'	9:B:109:A:C1'	2.68	0.42
9:B:60:C:H2'	9:B:61:G:O4'	2.20	0.42
9:B:74:U:C4	9:B:103:U:O2	2.73	0.42
10:C:128:THR:CG2	10:C:188:ARG:HB3	2.50	0.42
13:F:168:LEU:O	13:F:171:ALA:HB3	2.19	0.42
15:H:99:ILE:HD13	15:H:130:VAL:HG11	2.02	0.42
15:H:135:HIS:H	15:H:138:VAL:HG21	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:M:19:GLY:O	20:M:38:ARG:NH1	2.43	0.42
20:M:21:ALA:HB1	20:M:100:LYS:HD2	2.01	0.42
20:M:69:PRO:O	20:M:70:ASP:OD1	2.37	0.42
22:O:34:HIS:N	22:O:65:THR:OG1	2.53	0.42
23:P:12:MET:HE3	23:P:76:HIS:CE1	2.54	0.42
23:P:88:ARG:NH1	23:P:113:LEU:H	2.17	0.42
24:Q:93:ILE:HG13	25:R:11:GLN:HB2	2.00	0.42
25:R:5:PHE:CE1	25:R:12:HIS:HB2	2.55	0.42
25:R:21:ARG:HG2	25:R:93:PHE:HB2	2.02	0.42
26:S:83:LYS:HG3	26:S:97:LEU:HD23	2.02	0.42
28:U:70:ALA:HB1	28:U:79:ALA:HB1	2.01	0.42
29:V:8:VAL:HA	29:V:40:ILE:HG22	2.01	0.42
29:V:62:THR:HB	29:V:71:LYS:HE3	2.02	0.42
31:X:36:ARG:NH1	31:X:45:PHE:CG	2.88	0.42
34:a:47:C:C5	34:a:365:U:H3'	2.55	0.42
34:a:61:G:C5	34:a:62:U:C4	3.07	0.42
34:a:76:G:H2'	34:a:77:A:O4'	2.20	0.42
34:a:107:G:H2'	34:a:108:G:O4'	2.19	0.42
34:a:111:G:H22	34:a:330:C:N4	2.18	0.42
34:a:142:G:C6	34:a:143:A:C5	3.07	0.42
34:a:144:G:H2'	34:a:145:G:H5'	2.02	0.42
34:a:175:C:O2	34:a:1447:A:H2	2.02	0.42
34:a:199:A:C6	34:a:219:U:N3	2.88	0.42
34:a:316:C:C2	34:a:317:U:C5	3.07	0.42
34:a:452:A:H5''	34:a:452:A:N3	2.34	0.42
34:a:461:A:H2	34:a:472:U:O2	2.03	0.42
34:a:584:G:N1	34:a:585:G:C5	2.88	0.42
34:a:588:G:C8	34:a:753:A:N3	2.88	0.42
34:a:717:U:O2'	34:a:734:G:O4'	2.38	0.42
34:a:722:G:C2	34:a:724:G:C8	3.08	0.42
34:a:746:A:H2'	34:a:747:A:C8	2.55	0.42
34:a:747:A:C2	34:a:748:G:C4	3.07	0.42
34:a:782:A:H4'	34:a:1514:G:O2'	2.20	0.42
34:a:921:U:H6	34:a:1082:A:OP1	2.03	0.42
34:a:977:A:C2	34:a:1224:U:C4	3.08	0.42
34:a:1072:G:C4	34:a:1104:G:C2	3.07	0.42
34:a:1083:U:O2'	34:a:1084:G:OP1	2.30	0.42
34:a:1110:A:N6	34:a:1111:A:N6	2.68	0.42
34:a:1113:C:O5'	34:a:1113:C:C6	2.73	0.42
34:a:1143:G:N1	34:a:1144:G:C6	2.88	0.42
34:a:1166:G:N2	34:a:1169:A:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1201:A:H4'	34:a:1202:U:H5''	2.02	0.42
34:a:1220:G:H2'	34:a:1220:G:N3	2.35	0.42
34:a:1258:G:C2	34:a:1259:C:C2	3.07	0.42
34:a:1372:U:H3'	34:a:1373:G:H8	1.84	0.42
34:a:1375:A:C2'	34:a:1376:U:O4'	2.68	0.42
34:a:1513:A:C5	34:a:1523:G:C6	3.08	0.42
36:c:11:LEU:HD22	36:c:17:TRP:CE3	2.55	0.42
36:c:89:VAL:O	36:c:89:VAL:HG22	2.20	0.42
37:d:104:MET:HG2	37:d:167:PRO:HG2	2.01	0.42
37:d:197:HIS:HA	37:d:200:VAL:CG1	2.50	0.42
38:e:83:PRO:HB3	38:e:96:GLN:CB	2.49	0.42
41:h:12:ARG:NH1	41:h:25:THR:O	2.53	0.42
42:i:79:ARG:HD3	42:i:102:PHE:CD1	2.55	0.42
46:m:3:ILE:HB	46:m:56:ARG:HE	1.85	0.42
46:m:80:MET:CE	46:m:90:HIS:HB3	2.50	0.42
50:q:61:ARG:HB3	50:q:75:VAL:HG21	2.00	0.42
51:r:9:PHE:CD1	51:r:9:PHE:N	2.88	0.42
55:v:64:G:H2'	55:v:65:C:O4'	2.20	0.42
56:w:25:C:C2	56:w:26:A:C8	3.08	0.42
57:x:12:ILE:HD11	57:x:85:ILE:HG12	2.01	0.42
57:x:17:HIS:CG	57:x:18:ILE:H	2.37	0.42
57:x:297:ILE:CB	57:x:404:ILE:HB	2.50	0.42
7:6:28:VAL:HG23	13:F:139:GLU:HG3	2.00	0.42
7:6:41:HIS:CG	7:6:42:PRO:HD2	2.55	0.42
8:A:21:A:C5	8:A:22:C:C5	3.08	0.42
8:A:31:C:C2	8:A:32:C:C6	3.07	0.42
8:A:36:G:N1	8:A:445:C:N4	2.67	0.42
8:A:39:G:C1'	12:E:43:THR:HG21	2.47	0.42
8:A:66:C:H2'	8:A:67:U:H6	1.85	0.42
8:A:81:G:C6	8:A:106:C:N4	2.88	0.42
8:A:174:U:N3	8:A:175:G:N7	2.68	0.42
8:A:267:C:H2'	8:A:268:C:C6	2.54	0.42
8:A:310:A:O2'	8:A:311:A:P	2.78	0.42
8:A:379:G:C2	8:A:396:G:C6	3.08	0.42
8:A:408:G:H2'	8:A:409:G:H8	1.84	0.42
8:A:412:A:C5	8:A:413:C:C5	3.08	0.42
8:A:412:A:C6	8:A:2412:A:O4'	2.72	0.42
8:A:564:C:H1'	24:Q:36:GLN:OE1	2.20	0.42
8:A:587:C:N3	8:A:671:C:C6	2.88	0.42
8:A:593:U:C2	8:A:594:U:C5	3.08	0.42
8:A:597:G:C2	8:A:598:U:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:714:U:H2'	8:A:716:A:N7	2.34	0.42
8:A:767:U:H2'	8:A:768:G:C8	2.52	0.42
8:A:775:G:C5	8:A:794:A:C8	3.08	0.42
8:A:882:G:C2	8:A:895:U:H1'	2.55	0.42
8:A:907:G:N2	8:A:908:C:C2	2.88	0.42
8:A:956:G:OP1	20:M:76:LYS:HD3	2.20	0.42
8:A:974:G:C6	8:A:1186:G:C5	3.08	0.42
8:A:995:C:N4	17:J:2:LYS:HE2	2.35	0.42
8:A:1017:G:N1	8:A:1146:C:N3	2.68	0.42
8:A:1024:G:C8	8:A:1025:G:C2'	3.03	0.42
8:A:1076:C:N1	16:I:90:GLY:HA2	2.35	0.42
8:A:1093:G:C1'	8:A:1097:U:H5	2.31	0.42
8:A:1099:G:C6	8:A:1100:C:C4	3.08	0.42
8:A:1168:G:C2	8:A:1169:A:C5	3.08	0.42
8:A:1221:C:H2'	8:A:1222:U:H6	1.85	0.42
8:A:1253:A:OP1	24:Q:32:ARG:NH1	2.53	0.42
8:A:1268:A:H2'	8:A:1269:A:C8	2.55	0.42
8:A:1268:A:C1'	8:A:2013:A:N6	2.83	0.42
8:A:1301:A:C6	8:A:1303:G:C4	3.08	0.42
8:A:1338:G:C6	8:A:1339:G:C5	3.08	0.42
8:A:1356:G:H2'	8:A:1357:C:H6	1.84	0.42
8:A:1407:G:C2	8:A:1408:G:C5	3.08	0.42
8:A:1423:G:C6	8:A:1576:U:N3	2.88	0.42
8:A:1435:G:C2	8:A:1558:C:N4	2.87	0.42
8:A:1444:G:H2'	8:A:1445:G:C8	2.55	0.42
8:A:1511:G:H2'	8:A:1512:C:H6	1.84	0.42
8:A:1599:U:C2	8:A:1600:C:C6	3.07	0.42
8:A:1783:A:N1	8:A:2587:A:C2	2.88	0.42
8:A:1877:A:C6	8:A:1878:G:C6	3.08	0.42
8:A:1903:G:N2	8:A:1904:G:C4	2.88	0.42
8:A:1909:C:C2	8:A:1922:G:N2	2.88	0.42
8:A:1916:A:H2'	8:A:1917:PSU:H6	1.84	0.42
8:A:1955:U:C4	8:A:2552:OMU:H1'	2.55	0.42
8:A:1996:C:OP2	18:K:31:ARG:CZ	2.68	0.42
8:A:2051:A:O3'	11:D:146:ILE:HD11	2.20	0.42
8:A:2092:U:H5''	15:H:24:GLY:HA2	2.01	0.42
8:A:2111:U:O4'	8:A:2118:U:O2	2.38	0.42
8:A:2163:A:OP1	8:A:2165:C:N4	2.53	0.42
8:A:2190:G:H2'	8:A:2191:A:H8	1.85	0.42
8:A:2205:A:H2'	8:A:2206:C:C6	2.55	0.42
8:A:2246:G:C4	8:A:2426:A:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2282:G:O3'	8:A:2390:U:O4	2.38	0.42
8:A:2291:U:C4	8:A:2341:G:O6	2.73	0.42
8:A:2317:A:N6	8:A:2318:G:C2	2.88	0.42
8:A:2400:G:C5	8:A:2401:U:C4	3.08	0.42
8:A:2507:C:N4	8:A:2583:G:C6	2.88	0.42
8:A:2509:G:C6	8:A:2510:C:C4	3.08	0.42
8:A:2521:C:H2'	8:A:2522:U:C6	2.55	0.42
8:A:2521:C:C4	8:A:2545:G:N1	2.88	0.42
8:A:2632:A:N1	8:A:2787:C:C4	2.88	0.42
8:A:2633:G:H2'	8:A:2634:A:O4'	2.20	0.42
8:A:2644:G:O5'	8:A:2645:G:N2	2.53	0.42
8:A:2689:U:C2	8:A:2713:U:C6	3.08	0.42
8:A:2696:U:C4	8:A:2714:G:N1	2.88	0.42
8:A:2743:U:H2'	8:A:2744:G:C4'	2.49	0.42
8:A:2845:U:N3	8:A:2846:G:C5	2.88	0.42
8:A:2868:A:N6	8:A:2869:G:C6	2.88	0.42
9:B:9:G:H1'	22:O:45:SER:HA	2.02	0.42
9:B:9:G:C6	9:B:112:G:C6	3.08	0.42
9:B:15:A:H3'	9:B:16:G:C8	2.50	0.42
9:B:18:G:C5	9:B:19:C:C4	3.07	0.42
9:B:20:G:N1	9:B:21:G:C5	2.88	0.42
9:B:23:G:N1	9:B:61:G:C6	2.88	0.42
9:B:30:C:H2'	9:B:31:C:O4'	2.20	0.42
9:B:42:C:O2	13:F:89:THR:HB	2.20	0.42
9:B:104:A:N6	9:B:105:G:C2	2.88	0.42
9:B:105:G:C2	9:B:106:G:C4	3.08	0.42
9:B:114:C:O4'	22:O:47:VAL:CG2	2.68	0.42
10:C:2:VAL:HA	10:C:17:LYS:O	2.20	0.42
10:C:132:ARG:HG3	10:C:166:ARG:NH2	2.34	0.42
11:D:8:LYS:HE3	11:D:193:VAL:O	2.20	0.42
11:D:17:GLU:H	11:D:17:GLU:CD	2.28	0.42
11:D:108:ASP:OD1	11:D:174:SER:N	2.51	0.42
12:E:49:ARG:HB3	12:E:82:GLY:HA3	2.02	0.42
13:F:1:ALA:HB3	13:F:96:TRP:HB2	2.01	0.42
13:F:4:HIS:O	13:F:8:LYS:HG3	2.19	0.42
14:G:132:LEU:HD13	14:G:140:ILE:HG13	2.02	0.42
15:H:26:ALA:O	15:H:31:VAL:HG23	2.20	0.42
20:M:74:THR:CA	20:M:89:VAL:HA	2.49	0.42
20:M:112:LEU:HD12	20:M:112:LEU:HA	1.80	0.42
20:M:115:GLU:HG3	20:M:116:ALA:N	2.34	0.42
21:N:14:SER:HA	21:N:17:ARG:NE	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:49:GLU:N	21:N:50:PRO:CD	2.83	0.42
21:N:102:PHE:HA	21:N:110:MET:H	1.85	0.42
26:S:81:SER:OG	26:S:99:ARG:HA	2.20	0.42
33:Z:26:LEU:HD21	33:Z:46:MET:SD	2.60	0.42
34:a:22:G:N3	34:a:23:C:C6	2.88	0.42
34:a:33:A:N3	45:l:28:GLN:NE2	2.62	0.42
34:a:42:G:C5	34:a:43:C:C4	3.08	0.42
34:a:90:C:H2'	34:a:91:U:C6	2.55	0.42
34:a:103:U:H1'	34:a:171:A:N1	2.35	0.42
34:a:115:G:N3	34:a:289:G:C8	2.88	0.42
34:a:115:G:H1'	34:a:116:A:N7	2.35	0.42
34:a:123:U:N3	34:a:239:U:O2	2.53	0.42
34:a:144:G:C5	34:a:179:A:C5	3.08	0.42
34:a:160:A:H62	34:a:161:A:N6	2.18	0.42
34:a:316:C:H5	34:a:351:G:C8	2.38	0.42
34:a:336:A:C6	34:a:337:G:C5	3.08	0.42
34:a:363:A:P	45:l:29:LYS:NZ	2.93	0.42
34:a:375:U:H4'	49:p:6:LEU:HD12	2.02	0.42
34:a:376:G:H2'	34:a:377:G:H8	1.85	0.42
34:a:428:G:O4'	34:a:430:A:N9	2.53	0.42
34:a:462:G:C6	34:a:470:C:C4	3.08	0.42
34:a:499:A:N1	34:a:546:A:O2'	2.47	0.42
34:a:509:A:N1	34:a:544:G:H4'	2.34	0.42
34:a:558:G:C8	34:a:559:A:H2'	2.55	0.42
34:a:565:U:C6	34:a:566:G:C8	3.08	0.42
34:a:607:A:C6	34:a:608:A:C5	3.07	0.42
34:a:652:U:O4	34:a:753:A:C8	2.73	0.42
34:a:674:G:H8	34:a:674:G:O5'	2.02	0.42
34:a:676:A:H2'	34:a:677:U:C6	2.54	0.42
34:a:727:G:N2	34:a:730:G:OP2	2.33	0.42
34:a:768:A:H1'	34:a:1512:U:H1'	2.01	0.42
34:a:824:G:C6	34:a:877:G:O6	2.73	0.42
34:a:849:G:C6	34:a:850:U:N3	2.88	0.42
34:a:895:G:H2'	34:a:896:C:H6	1.85	0.42
34:a:909:A:C8	34:a:910:C:C5	3.08	0.42
34:a:921:U:O4'	34:a:1081:A:C3'	2.67	0.42
34:a:926:G:C6	34:a:1505:G:C6	3.08	0.42
34:a:964:A:HO2'	34:a:965:U:P	2.42	0.42
34:a:976:G:N2	34:a:1363:A:O4'	2.53	0.42
34:a:981:U:C6	34:a:982:U:H2'	2.54	0.42
34:a:1041:G:H2'	34:a:1042:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1054:C:N4	56:w:34:G:C8	2.88	0.42
34:a:1101:A:C8	35:b:97:GLY:HA3	2.54	0.42
34:a:1107:C:H2'	34:a:1108:G:O4'	2.20	0.42
34:a:1107:C:O3'	36:c:173:PRO:HA	2.20	0.42
34:a:1110:A:C2	34:a:1111:A:C4	3.07	0.42
34:a:1118:U:OP1	42:i:105:ARG:NE	2.43	0.42
34:a:1135:U:H5	34:a:1137:C:C2	2.38	0.42
34:a:1148:U:O4'	42:i:17:ARG:CD	2.68	0.42
34:a:1160:G:C5	34:a:1181:G:C6	3.08	0.42
34:a:1270:G:N3	34:a:1271:A:C8	2.88	0.42
34:a:1328:C:H2'	34:a:1329:A:C8	2.55	0.42
34:a:1397:C:H1'	59:z:9:U:C4	2.55	0.42
34:a:1425:U:H2'	34:a:1426:G:H8	1.85	0.42
34:a:1495:U:N3	34:a:1496:C:C5	2.88	0.42
34:a:1523:G:C2	34:a:1524:C:C4	3.07	0.42
35:b:31:PHE:HB2	35:b:41:ASN:HA	2.01	0.42
37:d:12:ARG:HG3	37:d:36:ALA:N	2.35	0.42
37:d:64:TYR:CD2	37:d:93:LEU:HD12	2.55	0.42
38:e:132:PRO:C	38:e:135:VAL:HG12	2.45	0.42
40:g:86:VAL:O	40:g:86:VAL:HG23	2.20	0.42
40:g:96:ASN:OD1	40:g:96:ASN:C	2.62	0.42
41:h:12:ARG:CZ	41:h:26:MET:HB2	2.50	0.42
41:h:27:PRO:HA	41:h:56:PRO:O	2.20	0.42
41:h:88:LYS:HG3	41:h:120:LEU:N	2.34	0.42
42:i:84:ARG:O	42:i:87:MET:HB2	2.20	0.42
43:j:14:ASP:HB3	43:j:17:LEU:CB	2.49	0.42
45:l:82:ARG:HB3	45:l:97:VAL:HG13	2.02	0.42
45:l:113:ARG:NH2	45:l:120:ARG:HB3	2.35	0.42
46:m:33:LEU:HA	46:m:33:LEU:HD12	1.80	0.42
50:q:27:PHE:CE1	50:q:38:LYS:HG2	2.54	0.42
51:r:70:THR:HG22	51:r:73:HIS:CD2	2.54	0.42
55:v:2:G:O6	55:v:72:A:C6	2.72	0.42
56:w:6:G:N1	56:w:7:A:C6	2.88	0.42
57:x:172:ILE:HA	57:x:210:MET:SD	2.59	0.42
57:x:262:LEU:HD23	57:x:262:LEU:HA	1.84	0.42
57:x:419:VAL:HG13	57:x:455:THR:HG23	2.02	0.42
57:x:498:THR:HG21	57:x:606:LYS:HG3	2.02	0.42
5:4:14:CYS:SG	5:4:27:CYS:CB	3.08	0.41
8:A:2:G:C4	8:A:3:U:C5	3.07	0.41
8:A:74:A:C8	8:A:88:G:C6	3.08	0.41
8:A:75:G:C6	8:A:76:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:134:G:C6	8:A:146:A:N1	2.88	0.41
8:A:151:C:H2'	8:A:152:A:C8	2.51	0.41
8:A:191:A:C5	8:A:204:A:N6	2.87	0.41
8:A:195:A:N6	8:A:198:C:H3'	2.35	0.41
8:A:300:A:H2'	8:A:334:C:H1'	2.02	0.41
8:A:409:G:C6	8:A:410:G:C6	3.08	0.41
8:A:462:C:C4	8:A:463:G:N7	2.88	0.41
8:A:490:C:H6	8:A:490:C:O5'	2.02	0.41
8:A:534:U:N3	8:A:559:G:N1	2.68	0.41
8:A:582:A:C5	8:A:583:G:N7	2.88	0.41
8:A:585:G:C2'	8:A:1251:C:H42	2.30	0.41
8:A:645:C:H2'	8:A:647:G:N7	2.34	0.41
8:A:657:U:C2	8:A:658:U:C5	3.08	0.41
8:A:659:G:C2	8:A:660:C:C2	3.08	0.41
8:A:674:G:C8	8:A:804:A:N6	2.88	0.41
8:A:680:C:H2'	8:A:681:G:C8	2.55	0.41
8:A:736:C:H2'	8:A:737:C:C6	2.55	0.41
8:A:742:A:N6	8:A:756:A:C6	2.88	0.41
8:A:753:A:O2'	8:A:754:U:H5'	2.20	0.41
8:A:754:U:O2'	8:A:755:U:H5'	2.20	0.41
8:A:763:G:C5	8:A:765:C:C4	3.08	0.41
8:A:812:C:N3	8:A:1196:C:N3	2.68	0.41
8:A:836:G:O6	8:A:942:G:O6	2.38	0.41
8:A:917:A:C6	8:A:918:A:C5	3.08	0.41
8:A:952:G:C6	8:A:966:G:O6	2.73	0.41
8:A:1003:G:C6	8:A:1004:U:O4	2.73	0.41
8:A:1028:A:C8	8:A:1126:A:N6	2.88	0.41
8:A:1034:G:N1	8:A:1122:G:C4	2.88	0.41
8:A:1041:G:N1	8:A:1042:G:C5	2.88	0.41
8:A:1075:C:H2'	8:A:1076:C:H6	1.84	0.41
8:A:1103:A:C6	8:A:1104:C:N3	2.88	0.41
8:A:1138:G:O2'	17:J:104:ALA:O	2.38	0.41
8:A:1193:G:O2'	8:A:1194:A:H5'	2.18	0.41
8:A:1199:U:C2	8:A:1200:C:C6	3.08	0.41
8:A:1264:A:O5'	8:A:1265:A:H2'	2.20	0.41
8:A:1317:G:C2	8:A:1318:U:C2	3.06	0.41
8:A:1372:U:H2'	8:A:1373:A:O4'	2.20	0.41
8:A:1440:U:H2'	8:A:1441:G:H8	1.85	0.41
8:A:1470:A:C8	8:A:1471:G:N7	2.88	0.41
8:A:1483:G:H2'	8:A:1484:U:H6	1.85	0.41
8:A:1498:C:C2	8:A:1499:C:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1528:A:C4	8:A:1529:G:H1'	2.55	0.41
8:A:1561:C:N3	8:A:1562:U:C4	2.88	0.41
8:A:1562:U:C4	8:A:1563:U:C4	3.07	0.41
8:A:1591:A:H2'	8:A:1592:C:C6	2.55	0.41
8:A:1605:C:H2'	8:A:1606:C:O4'	2.20	0.41
8:A:1627:G:N2	8:A:1640:A:H1'	2.34	0.41
8:A:1652:A:H2'	8:A:1653:G:O4'	2.20	0.41
8:A:1698:A:C8	8:A:1700:A:C1'	3.03	0.41
8:A:1700:A:H5'	8:A:1701:A:OP2	2.20	0.41
8:A:1750:G:C2	8:A:1751:U:C2	3.08	0.41
8:A:1840:G:H2'	8:A:1841:U:C6	2.55	0.41
8:A:1873:G:N2	8:A:1874:C:C2	2.87	0.41
8:A:1903:G:N3	8:A:1903:G:H2'	2.35	0.41
8:A:1923:U:H2'	8:A:1924:C:C6	2.55	0.41
8:A:1973:G:C6	8:A:1974:C:C4	3.08	0.41
8:A:2000:C:O2'	8:A:2001:C:H5'	2.20	0.41
8:A:2065:C:N3	8:A:2066:C:C5	2.88	0.41
8:A:2077:A:H1'	8:A:2435:A:C8	2.54	0.41
8:A:2123:G:OP1	8:A:2176:A:N1	2.53	0.41
8:A:2133:G:H8	8:A:2156:G:OP1	2.03	0.41
8:A:2175:C:H41	8:A:2177:C:N4	2.18	0.41
8:A:2244:U:H2'	8:A:2245:U:H6	1.82	0.41
8:A:2251:OMG:C6	8:A:2252:G:C5	3.08	0.41
8:A:2288:A:H2	8:A:2325:G:C5	2.37	0.41
8:A:2289:G:H5''	8:A:2384:U:C4'	2.49	0.41
8:A:2295:C:OP1	22:O:10:ARG:CZ	2.66	0.41
8:A:2297:A:C6	8:A:2298:A:N7	2.88	0.41
8:A:2318:G:C6	8:A:2319:G:N1	2.88	0.41
8:A:2388:A:C8	8:A:2389:G:C5	3.08	0.41
8:A:2451:A:H2	58:y:101:FME:O	2.03	0.41
8:A:2513:A:C4	8:A:2514:U:C5	3.08	0.41
8:A:2605:PSU:C4	8:A:2606:C:C5	3.07	0.41
8:A:2667:C:H1'	14:G:108:PHE:HB3	2.01	0.41
8:A:2680:U:C2	8:A:2681:C:C5	3.08	0.41
8:A:2696:U:O4	8:A:2714:G:N1	2.53	0.41
8:A:2723:C:O5'	8:A:2723:C:H6	2.03	0.41
8:A:2731:G:C3'	11:D:208:LYS:HZ3	2.27	0.41
8:A:2735:G:H1	8:A:2769:U:H3	1.67	0.41
8:A:2835:A:C8	8:A:2879:A:C6	3.08	0.41
8:A:2838:G:C2	8:A:2839:G:H1'	2.55	0.41
8:A:2844:G:H2'	8:A:2845:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2859:G:C6	8:A:2860:A:C6	3.08	0.41
8:A:2889:C:C4	8:A:2890:G:C5	3.08	0.41
9:B:43:C:N3	9:B:45:A:C5	2.88	0.41
9:B:74:U:H1'	29:V:37:PRO:CG	2.50	0.41
9:B:75:G:O4'	29:V:29:ILE:HD13	2.20	0.41
9:B:117:G:H2'	9:B:118:C:H6	1.81	0.41
10:C:239:PHE:C	10:C:241:LYS:N	2.76	0.41
10:C:244:VAL:HA	10:C:249:VAL:O	2.19	0.41
13:F:90:LEU:C	13:F:95:MET:HB2	2.44	0.41
13:F:116:LEU:HG	13:F:175:PRO:HG2	2.00	0.41
16:I:60:VAL:HA	16:I:66:PHE:HA	2.02	0.41
16:I:109:ALA:O	16:I:113:ALA:HB2	2.20	0.41
19:L:79:LEU:HA	19:L:82:LEU:CD1	2.50	0.41
20:M:19:GLY:N	20:M:38:ARG:NH1	2.68	0.41
20:M:135:VAL:O	20:M:135:VAL:HG23	2.20	0.41
23:P:21:PRO:HA	23:P:46:VAL:O	2.20	0.41
25:R:14:VAL:HG21	25:R:59:ILE:HD13	2.02	0.41
28:U:85:ARG:NH1	28:U:94:PHE:CD1	2.88	0.41
30:W:34:VAL:HG12	30:W:55:LEU:HB2	2.02	0.41
30:W:44:GLY:CA	30:W:76:ILE:O	2.67	0.41
30:W:66:GLU:O	30:W:74:LYS:CA	2.67	0.41
34:a:45:G:C2	34:a:46:G:C4	3.08	0.41
34:a:50:A:O3'	34:a:52:C:C6	2.73	0.41
34:a:100:G:C4	34:a:101:A:C8	3.08	0.41
34:a:136:C:N3	34:a:137:U:C5	2.88	0.41
34:a:229:U:H2'	34:a:230:G:O4'	2.20	0.41
34:a:236:A:H5''	50:q:43:LEU:HD21	2.01	0.41
34:a:295:C:H6	34:a:295:C:O5'	2.03	0.41
34:a:299:G:N2	34:a:565:U:O2	2.50	0.41
34:a:310:G:C4	34:a:311:C:C5	3.08	0.41
34:a:316:C:N3	34:a:338:A:N1	2.68	0.41
34:a:320:A:C2	34:a:334:C:N3	2.88	0.41
34:a:429:U:H4'	34:a:430:A:OP1	2.20	0.41
34:a:461:A:C2	34:a:472:U:O2	2.72	0.41
34:a:509:A:H5'	37:d:50:TYR:CD2	2.50	0.41
34:a:584:G:H2'	34:a:585:G:H8	1.85	0.41
34:a:735:C:H2'	34:a:736:C:H6	1.81	0.41
34:a:824:G:H2'	34:a:825:A:C8	2.55	0.41
34:a:980:C:C4'	47:n:59:ARG:HH21	2.33	0.41
34:a:981:U:H2'	34:a:982:U:C6	2.54	0.41
34:a:990:C:N3	34:a:1216:A:C2	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:993:G:H1'	34:a:994:A:N7	2.35	0.41
34:a:1007:U:O4	34:a:1023:U:O2	2.38	0.41
34:a:1012:A:N6	34:a:1018:G:C6	2.87	0.41
34:a:1022:A:H3'	34:a:1023:U:C6	2.55	0.41
34:a:1079:G:C5	34:a:1080:A:N6	2.88	0.41
34:a:1084:G:O2'	34:a:1103:C:C5	2.73	0.41
34:a:1118:U:H1'	34:a:1179:A:C8	2.55	0.41
34:a:1129:C:C5'	42:i:17:ARG:NH2	2.83	0.41
34:a:1146:A:C6	34:a:1147:C:C2	3.07	0.41
34:a:1253:G:N1	34:a:1285:A:N1	2.68	0.41
34:a:1291:U:C2	34:a:1292:G:N7	2.87	0.41
34:a:1296:C:H5'	34:a:1302:C:N4	2.35	0.41
34:a:1321:U:OP2	34:a:1322:C:C3'	2.68	0.41
34:a:1349:A:C8	34:a:1350:A:C8	3.08	0.41
34:a:1354:U:H2'	34:a:1355:G:H8	1.85	0.41
34:a:1426:G:H2'	34:a:1427:C:H6	1.84	0.41
34:a:1444:U:O2	34:a:1459:G:C2	2.73	0.41
34:a:1452:C:C4'	34:a:1453:G:H5'	2.48	0.41
35:b:71:THR:OG1	35:b:168:GLU:OE2	2.38	0.41
35:b:82:ALA:CB	35:b:213:LEU:HD22	2.49	0.41
36:c:41:TYR:OH	36:c:89:VAL:HG11	2.20	0.41
36:c:52:SER:HB2	36:c:114:LEU:HG	2.02	0.41
37:d:26:ALA:O	37:d:29:THR:HG22	2.20	0.41
37:d:46:ARG:HD3	37:d:46:ARG:N	2.35	0.41
37:d:162:GLU:OE1	37:d:163:GLN:HB2	2.20	0.41
37:d:170:LEU:O	37:d:181:PHE:CA	2.68	0.41
39:f:47:LEU:HG	39:f:56:LYS:N	2.35	0.41
41:h:6:ILE:HB	41:h:76:ARG:NH2	2.35	0.41
41:h:49:LYS:HG3	41:h:50:VAL:N	2.35	0.41
42:i:26:LYS:H	42:i:61:ASP:HA	1.85	0.41
47:n:20:PHE:C	47:n:22:LYS:H	2.27	0.41
47:n:93:ILE:O	47:n:94:PRO:C	2.63	0.41
52:s:33:TRP:HA	52:s:51:HIS:CB	2.49	0.41
53:t:47:GLN:HG3	53:t:51:ASN:OD1	2.20	0.41
54:u:48:LYS:O	54:u:52:VAL:HG23	2.20	0.41
55:v:5:G:C2	55:v:6:G:C4	3.08	0.41
55:v:52:G:N1	55:v:63:G:C6	2.88	0.41
57:x:207:PRO:C	57:x:211:VAL:HG23	2.44	0.41
57:x:620:VAL:HB	57:x:653:ILE:HB	2.01	0.41
3:2:3:ARG:C	3:2:6:GLN:HE21	2.25	0.41
3:2:24:THR:O	3:2:28:ARG:CZ	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5:54:VAL:N	8:A:1083:U:C5'	2.84	0.41
7:6:41:HIS:CE1	7:6:43:PHE:H	2.38	0.41
8:A:12:U:O4	8:A:526:A:N7	2.53	0.41
8:A:24:G:N1	8:A:517:C:C4	2.88	0.41
8:A:206:U:C2	8:A:207:A:C8	3.07	0.41
8:A:222:A:N6	8:A:231:A:C2	2.88	0.41
8:A:247:G:C8	8:A:249:C:C5	3.08	0.41
8:A:295:G:C6	8:A:344:A:C5	3.08	0.41
8:A:300:A:C2	8:A:333:G:N3	2.89	0.41
8:A:391:A:C4	8:A:411:G:C4	3.08	0.41
8:A:485:C:N3	8:A:496:G:C2	2.88	0.41
8:A:499:U:C4	8:A:500:G:C6	3.08	0.41
8:A:503:A:C2	8:A:505:A:H2'	2.55	0.41
8:A:545:U:C2	8:A:546:U:C2	3.08	0.41
8:A:574:A:O3'	8:A:2055:C:C5	2.74	0.41
8:A:575:A:C2	8:A:576:U:C5	3.07	0.41
8:A:627:A:P	19:L:78:ARG:NH1	2.93	0.41
8:A:628:G:C4	8:A:636:G:N2	2.88	0.41
8:A:703:U:H3'	8:A:704:G:O4'	2.20	0.41
8:A:716:A:C2	8:A:717:C:H1'	2.55	0.41
8:A:803:U:N3	8:A:804:A:N7	2.68	0.41
8:A:847:U:C4	8:A:848:C:C5	3.08	0.41
8:A:1039:A:N1	8:A:1117:C:C2	2.88	0.41
8:A:1067:A:H2	57:x:641:LEU:HD23	1.80	0.41
8:A:1069:A:OP2	8:A:1074:G:O6	2.38	0.41
8:A:1090:A:N3	8:A:1090:A:H2'	2.33	0.41
8:A:1130:U:O4	11:D:152:PRO:HA	2.19	0.41
8:A:1170:C:H42	8:A:1178:C:N4	2.18	0.41
8:A:1206:G:C5	8:A:1207:C:C5	3.07	0.41
8:A:1222:U:N3	8:A:1228:G:N1	2.68	0.41
8:A:1259:G:C4	8:A:1260:A:C8	3.08	0.41
8:A:1278:C:H42	8:A:1293:C:H42	1.66	0.41
8:A:1288:G:N1	21:N:105:GLY:HA3	2.35	0.41
8:A:1334:G:H2'	8:A:1335:C:H6	1.85	0.41
8:A:1339:G:H4'	27:T:19:LYS:HZ2	1.84	0.41
8:A:1351:C:H1'	8:A:1572:A:H1'	2.02	0.41
8:A:1374:G:H2'	8:A:1375:U:H6	1.85	0.41
8:A:1414:C:H2'	8:A:1415:U:O4'	2.20	0.41
8:A:1441:G:C6	8:A:1551:A:C6	3.09	0.41
8:A:1444:G:H2'	8:A:1445:G:H8	1.85	0.41
8:A:1471:G:H2'	8:A:1472:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1483:G:O4'	8:A:1509:A:H2	2.03	0.41
8:A:1495:A:C6	8:A:1496:A:C6	3.07	0.41
8:A:1575:C:C2	8:A:1576:U:C5	3.08	0.41
8:A:1593:A:H2'	8:A:1594:U:C6	2.55	0.41
8:A:1686:C:C2	8:A:1703:G:N1	2.89	0.41
8:A:1693:U:O4	8:A:1976:U:O2'	2.29	0.41
8:A:1710:G:N1	8:A:1749:A:C6	2.88	0.41
8:A:1817:G:C4	8:A:1818:U:C5	3.08	0.41
8:A:1862:G:N1	8:A:1863:G:C5	2.88	0.41
8:A:2012:G:O3'	26:S:96:ILE:HG23	2.20	0.41
8:A:2032:G:H21	11:D:151:THR:CA	2.33	0.41
8:A:2040:G:H2'	8:A:2041:U:O4'	2.20	0.41
8:A:2166:U:H5''	8:A:2167:U:C5	2.55	0.41
8:A:2170:A:C2'	8:A:2171:A:C4	3.03	0.41
8:A:2217:G:C6	8:A:2218:G:C5	3.07	0.41
8:A:2270:A:C2	8:A:2271:G:H1'	2.55	0.41
8:A:2286:G:O4'	8:A:2287:A:C4	2.73	0.41
8:A:2292:U:N3	8:A:2341:G:N1	2.68	0.41
8:A:2297:A:N6	8:A:2319:G:H1'	2.35	0.41
8:A:2298:A:H61	8:A:2318:G:H1'	1.85	0.41
8:A:2397:G:N1	8:A:2420:C:C2	2.88	0.41
8:A:2484:G:O3'	20:M:45:GLN:HG2	2.20	0.41
8:A:2547:A:C1'	8:A:2566:A:C6	3.03	0.41
8:A:2631:G:N1	8:A:2788:C:N3	2.68	0.41
8:A:2642:G:N1	8:A:2773:C:N3	2.67	0.41
8:A:2680:U:H5''	11:D:194:PRO:HA	2.00	0.41
8:A:2759:G:C6	8:A:2760:C:N4	2.87	0.41
9:B:9:G:C2	9:B:10:G:C8	3.08	0.41
9:B:12:C:O2'	30:W:70:PRO:HA	2.20	0.41
9:B:20:G:C6	9:B:21:G:C5	3.08	0.41
9:B:57:A:N3	13:F:25:MET:HB3	2.35	0.41
9:B:86:G:H3'	9:B:88:C:H41	1.84	0.41
9:B:113:C:O2'	22:O:47:VAL:N	2.34	0.41
9:B:115:A:C2	9:B:116:G:C4	3.09	0.41
10:C:67:LYS:HD3	10:C:150:GLY:CA	2.51	0.41
10:C:67:LYS:HA	10:C:144:GLU:OE2	2.19	0.41
10:C:119:VAL:HG21	15:H:91:PHE:HB3	2.03	0.41
11:D:14:ILE:O	11:D:22:ILE:HG13	2.20	0.41
11:D:148:GLN:N	11:D:148:GLN:OE1	2.53	0.41
12:E:6:LYS:C	12:E:9:GLN:NE2	2.76	0.41
12:E:27:LEU:HD21	12:E:104:ALA:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:E:146:VAL:HG22	12:E:147:LEU:N	2.35	0.41
15:H:5:LEU:C	15:H:6:LEU:HD23	2.45	0.41
15:H:135:HIS:CG	15:H:136:SER:H	2.37	0.41
18:K:74:GLY:O	23:P:74:GLN:NE2	2.53	0.41
19:L:82:LEU:CB	19:L:116:VAL:HG23	2.49	0.41
19:L:114:GLY:O	19:L:115:GLU:C	2.63	0.41
20:M:32:GLY:CA	20:M:103:TYR:O	2.68	0.41
22:O:51:ALA:HB3	22:O:78:VAL:CG2	2.50	0.41
24:Q:15:LYS:O	24:Q:19:GLN:HG3	2.19	0.41
24:Q:94:LEU:HD23	24:Q:94:LEU:HA	1.69	0.41
26:S:83:LYS:C	26:S:84:ARG:HH21	2.26	0.41
31:X:70:LEU:HG	31:X:73:ARG:CZ	2.49	0.41
32:Y:1:MET:CE	32:Y:9:LYS:HE3	2.50	0.41
33:Z:28:LEU:HD22	33:Z:33:HIS:HB3	2.01	0.41
34:a:19:A:N1	34:a:917:G:C6	2.88	0.41
34:a:61:G:C6	34:a:62:U:C4	3.08	0.41
34:a:82:G:O6	34:a:88:U:H1'	2.21	0.41
34:a:123:U:H2'	34:a:124:C:C6	2.56	0.41
34:a:129:A:C2	34:a:233:C:O2	2.73	0.41
34:a:176:C:H5''	53:t:23:ARG:HH21	1.84	0.41
34:a:184:G:H2'	34:a:185:U:H6	1.84	0.41
34:a:189:A:N6	34:a:190:A:C2	2.88	0.41
34:a:335:C:C2	34:a:336:A:C8	3.08	0.41
34:a:347:G:C6	34:a:348:G:N7	2.88	0.41
34:a:358:U:H2'	34:a:359:G:H8	1.83	0.41
34:a:378:G:H2'	34:a:379:C:H6	1.84	0.41
34:a:406:G:C6	34:a:495:A:C8	3.08	0.41
34:a:419:C:H2'	34:a:420:U:C6	2.55	0.41
34:a:425:G:C2	34:a:426:U:C2	3.08	0.41
34:a:429:U:C3'	37:d:8:LEU:HD12	2.50	0.41
34:a:510:A:H1'	34:a:543:U:H1'	2.02	0.41
34:a:552:U:C2	34:a:553:A:N3	2.88	0.41
34:a:568:G:C6	34:a:569:C:C4	3.08	0.41
34:a:573:A:H2'	34:a:574:A:C4	2.54	0.41
34:a:594:U:C5	34:a:595:A:C6	3.08	0.41
34:a:614:C:N3	34:a:627:G:C2	2.88	0.41
34:a:656:G:C4	34:a:657:U:C5	3.08	0.41
34:a:669:G:C2	34:a:738:C:N3	2.88	0.41
34:a:677:U:H3	34:a:713:G:N2	2.17	0.41
34:a:677:U:H3	34:a:713:G:H1	1.68	0.41
34:a:710:G:N1	34:a:711:G:C5	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:722:G:H3'	34:a:722:G:N3	2.35	0.41
34:a:786:G:H2'	34:a:787:A:O4'	2.20	0.41
34:a:825:A:H2'	34:a:826:C:H6	1.82	0.41
34:a:892:A:H61	34:a:906:A:C2'	2.33	0.41
34:a:1007:U:H2'	34:a:1008:U:H6	1.83	0.41
34:a:1028:C:O2	34:a:1034:G:C8	2.73	0.41
34:a:1074:G:N2	34:a:1102:A:C5	2.88	0.41
34:a:1093:A:C4	34:a:1095:U:O4'	2.74	0.41
34:a:1107:C:P	36:c:171:ARG:CZ	3.08	0.41
34:a:1129:C:O2	34:a:1139:G:C6	2.73	0.41
34:a:1203:C:H2'	34:a:1204:A:O4'	2.20	0.41
34:a:1222:G:C2'	34:a:1223:C:O4'	2.67	0.41
34:a:1233:G:C6	34:a:1234:C:C4	3.08	0.41
34:a:1247:U:H2'	34:a:1248:A:C8	2.55	0.41
34:a:1250:A:C6	34:a:1251:A:C5	3.08	0.41
34:a:1287:A:H3'	34:a:1288:A:C8	2.54	0.41
34:a:1346:A:H61	34:a:1374:A:H5''	1.84	0.41
34:a:1349:A:C6	34:a:1374:A:C8	3.07	0.41
34:a:1459:G:C5	34:a:1460:C:C5	3.08	0.41
34:a:1506:U:O2	44:k:127:ARG:HD2	2.20	0.41
34:a:1510:C:H2'	34:a:1511:G:H8	1.82	0.41
35:b:42:LEU:C	35:b:42:LEU:HD12	2.45	0.41
35:b:47:PRO:HG2	35:b:48:MET:H	1.85	0.41
35:b:107:ARG:CZ	35:b:107:ARG:HB3	2.50	0.41
35:b:108:GLN:O	35:b:111:LYS:HB3	2.20	0.41
37:d:25:ARG:CZ	37:d:30:LYS:HZ1	2.32	0.41
37:d:69:ARG:O	37:d:70:GLN:HG2	2.19	0.41
41:h:85:TYR:CE1	41:h:123:GLU:HB2	2.54	0.41
43:j:14:ASP:CG	43:j:16:ARG:HG3	2.45	0.41
43:j:91:ASP:OD1	43:j:91:ASP:O	2.38	0.41
45:l:80:LEU:CB	45:l:101:LEU:HB2	2.50	0.41
47:n:23:ARG:NH2	47:n:56:SER:HB2	2.34	0.41
47:n:29:ILE:C	47:n:32:ASP:OD1	2.62	0.41
55:v:5:G:C6	55:v:69:C:N3	2.88	0.41
55:v:26:G:C4	55:v:27:U:C5	3.08	0.41
56:w:6:G:C2	56:w:68:C:N3	2.88	0.41
57:x:7:ALA:HB1	57:x:289:VAL:HG21	2.01	0.41
57:x:350:ASN:HB2	57:x:355:ALA:HB3	2.02	0.41
57:x:352:VAL:HG21	57:x:395:THR:HG23	2.01	0.41
57:x:499:ASP:HB3	57:x:520:ASP:OD1	2.20	0.41
57:x:533:TYR:CG	57:x:534:GLU:N	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:551:ALA:HB2	57:x:589:GLU:OE2	2.20	0.41
57:x:616:MET:HG2	57:x:657:VAL:O	2.20	0.41
1:0:6:LYS:HE3	8:A:1263:U:C1'	2.50	0.41
2:1:5:ARG:CZ	8:A:2285:C:C6	3.04	0.41
3:2:45:SER:HB3	8:A:126:A:C8	2.55	0.41
4:3:24:LYS:HD2	19:L:64:PHE:CB	2.50	0.41
8:A:45:G:C2	8:A:434:U:N3	2.88	0.41
8:A:60:G:H21	8:A:74:A:H2'	1.85	0.41
8:A:84:A:C6	8:A:103:A:N7	2.88	0.41
8:A:209:C:N3	8:A:210:C:C5	2.88	0.41
8:A:291:G:C2	8:A:350:G:C4	3.08	0.41
8:A:373:U:O2	8:A:373:U:H2'	2.21	0.41
8:A:460:A:N6	8:A:469:G:H1'	2.35	0.41
8:A:597:G:N2	19:L:12:SER:O	2.53	0.41
8:A:918:A:N6	8:A:2268:A:C8	2.88	0.41
8:A:920:A:C5	8:A:921:C:C5	3.08	0.41
8:A:924:G:C2	8:A:925:A:C5	3.08	0.41
8:A:941:A:H2'	8:A:942:G:C8	2.56	0.41
8:A:949:G:C4	8:A:950:G:C8	3.08	0.41
8:A:1024:G:C8	8:A:1025:G:O2'	2.74	0.41
8:A:1087:G:H1'	8:A:1089:A:C2	2.55	0.41
8:A:1157:G:C4	8:A:1158:C:C5	3.08	0.41
8:A:1163:G:H5'	25:R:24:LYS:CE	2.50	0.41
8:A:1168:G:C5	8:A:1182:G:N1	2.88	0.41
8:A:1175:A:H3'	8:A:1176:U:O4'	2.19	0.41
8:A:1187:G:O2'	8:A:1188:U:O5'	2.30	0.41
8:A:1193:G:C2	8:A:1194:A:C4	3.08	0.41
8:A:1203:U:C2	8:A:1242:U:O4	2.74	0.41
8:A:1234:U:H2'	8:A:1235:G:C8	2.56	0.41
8:A:1331:G:N1	8:A:1333:G:H1'	2.36	0.41
8:A:1429:G:C5	8:A:1568:G:C6	3.08	0.41
8:A:1567:G:P	10:C:84:PRO:CB	3.06	0.41
8:A:1608:A:H1'	8:A:1610:A:OP2	2.20	0.41
8:A:1631:G:N2	8:A:1633:G:C8	2.88	0.41
8:A:1664:A:C8	8:A:2726:A:N6	2.88	0.41
8:A:1693:U:O5'	8:A:1694:C:H5	2.03	0.41
8:A:1695:G:H2'	8:A:1696:G:O4'	2.19	0.41
8:A:1772:A:C6	8:A:1980:G:C6	3.08	0.41
8:A:1885:A:C5	8:A:1886:U:C5	3.08	0.41
8:A:1905:C:C2'	8:A:1930:G:H5'	2.48	0.41
8:A:1922:G:C6	8:A:1923:U:C4	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1926:U:H6	8:A:1926:U:O5'	2.03	0.41
8:A:1953:A:H2	8:A:2549:G:N3	2.18	0.41
8:A:2063:C:C4	8:A:2064:C:C5	3.09	0.41
8:A:2168:G:C8	8:A:2168:G:H3'	2.56	0.41
8:A:2205:A:N1	8:A:2220:U:C2	2.88	0.41
8:A:2216:G:N1	8:A:2217:G:C5	2.88	0.41
8:A:2290:G:C5	8:A:2291:U:C5	3.09	0.41
8:A:2293:G:C6	8:A:2294:G:N7	2.89	0.41
8:A:2311:A:C2	13:F:40:GLY:C	2.98	0.41
8:A:2352:A:C8	8:A:2365:G:N2	2.82	0.41
8:A:2540:C:H4'	8:A:2741:A:O4'	2.20	0.41
8:A:2562:U:O4	8:A:2566:A:C8	2.74	0.41
8:A:2595:G:C5	8:A:2597:G:OP2	2.72	0.41
8:A:2643:G:N1	8:A:2772:C:C4	2.88	0.41
8:A:2654:A:H8	8:A:2654:A:O5'	2.03	0.41
8:A:2731:G:H4'	11:D:208:LYS:NZ	2.35	0.41
8:A:2820:A:C4	11:D:196:ALA:HB1	2.56	0.41
8:A:2837:A:H2'	8:A:2838:G:H8	1.85	0.41
8:A:2850:A:C6	8:A:2851:A:C6	3.09	0.41
8:A:2852:G:C5	8:A:2853:C:C5	3.07	0.41
8:A:2868:A:H2'	8:A:2869:G:C8	2.55	0.41
9:B:29:A:N1	9:B:56:G:C6	2.89	0.41
9:B:54:G:C2	9:B:55:U:N3	2.88	0.41
9:B:54:G:C6	9:B:55:U:O4	2.73	0.41
10:C:70:LYS:CD	10:C:101:ARG:CZ	2.98	0.41
11:D:114:LYS:O	11:D:116:LYS:HD2	2.20	0.41
13:F:11:VAL:O	13:F:15:LEU:HG	2.20	0.41
14:G:93:TYR:CD1	14:G:106:LEU:HA	2.55	0.41
15:H:8:LYS:NZ	15:H:15:LEU:HD13	2.34	0.41
17:J:57:LEU:HD13	17:J:128:ASN:OD1	2.20	0.41
18:K:16:ALA:HB2	18:K:52:VAL:HG21	2.02	0.41
20:M:40:ARG:O	20:M:41:LEU:HD23	2.21	0.41
21:N:33:ILE:O	21:N:33:ILE:HG23	2.18	0.41
21:N:87:PHE:CZ	21:N:117:ASP:HB2	2.56	0.41
23:P:46:VAL:CG1	23:P:49:ILE:HD11	2.50	0.41
23:P:98:TYR:CZ	23:P:99:LEU:HD21	2.54	0.41
26:S:4:ILE:HD12	26:S:4:ILE:N	2.35	0.41
26:S:24:ILE:O	26:S:71:VAL:HG11	2.20	0.41
26:S:83:LYS:HE2	26:S:83:LYS:N	2.35	0.41
31:X:69:GLU:O	31:X:72:ALA:HB3	2.20	0.41
32:Y:17:GLU:HA	32:Y:20:ASN:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Y:56:LEU:HA	32:Y:59:GLU:HB2	2.02	0.41
33:Z:9:THR:HG21	33:Z:55:LYS:HB2	2.01	0.41
34:a:10:A:C2	34:a:25:C:C2	3.07	0.41
34:a:19:A:N3	34:a:572:A:H2	2.18	0.41
34:a:30:U:C4	34:a:553:A:N6	2.88	0.41
34:a:41:G:C2	34:a:42:G:C5	3.08	0.41
34:a:42:G:O6	34:a:401:C:N4	2.54	0.41
34:a:83:C:O2	34:a:86:G:O4'	2.38	0.41
34:a:100:G:N2	34:a:101:A:H1'	2.35	0.41
34:a:109:A:C4	34:a:326:G:C2	3.08	0.41
34:a:185:U:H5'	53:t:68:LYS:NZ	2.35	0.41
34:a:186:C:N4	34:a:187:G:C6	2.88	0.41
34:a:249:U:N3	34:a:276:G:C6	2.88	0.41
34:a:329:A:O2'	34:a:332:G:N7	2.43	0.41
34:a:368:U:C6	57:x:361:ARG:NH2	2.88	0.41
34:a:380:G:C6	34:a:384:G:O6	2.73	0.41
34:a:429:U:H3'	37:d:8:LEU:HD11	2.02	0.41
34:a:440:C:C4	34:a:441:A:C5	3.09	0.41
34:a:499:A:H4'	34:a:500:G:H5'	2.01	0.41
34:a:547:A:N3	34:a:548:G:H1'	2.36	0.41
34:a:598:U:H4'	41:h:85:TYR:HB2	2.02	0.41
34:a:836:G:O6	34:a:851:G:N7	2.53	0.41
34:a:872:A:N7	34:a:874:G:C8	2.88	0.41
34:a:921:U:H4'	38:e:22:LYS:HE2	2.03	0.41
34:a:932:C:H2'	34:a:933:G:C8	2.55	0.41
34:a:969:A:C5	34:a:970:C:C4	3.09	0.41
34:a:979:C:H3'	34:a:980:C:C6	2.56	0.41
34:a:1074:G:O2'	35:b:101:THR:CG2	2.68	0.41
34:a:1077:G:C6	34:a:1081:A:N6	2.88	0.41
34:a:1097:C:C4	34:a:1098:C:C4	3.08	0.41
34:a:1120:C:C4	34:a:1154:G:N1	2.88	0.41
34:a:1175:G:C4	34:a:1176:A:C8	3.08	0.41
34:a:1185:G:C6	34:a:1186:G:C6	3.08	0.41
34:a:1203:C:C2	34:a:1204:A:C8	3.09	0.41
34:a:1298:U:O4'	34:a:1299:A:C6	2.73	0.41
34:a:1303:C:C4	34:a:1304:G:C5	3.08	0.41
34:a:1304:G:HO2'	34:a:1305:G:C1'	2.33	0.41
34:a:1333:A:H3'	34:a:1334:G:H8	1.85	0.41
34:a:1373:G:H5''	40:g:35:LYS:CD	2.47	0.41
34:a:1373:G:H5''	40:g:35:LYS:HB2	2.02	0.41
37:d:80:ARG:O	37:d:80:ARG:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:h:23:ALA:CB	41:h:61:THR:HA	2.50	0.41
43:j:32:THR:HG21	43:j:83:THR:CB	2.50	0.41
43:j:65:TYR:HD1	47:n:98:LYS:HA	1.86	0.41
44:k:35:ASP:OD2	44:k:39:ASN:ND2	2.45	0.41
44:k:49:SER:O	44:k:51:PHE:CD2	2.73	0.41
44:k:53:GLY:O	44:k:56:LYS:CG	2.68	0.41
44:k:109:ILE:HD12	44:k:109:ILE:N	2.35	0.41
45:l:2:THR:O	45:l:3:VAL:C	2.62	0.41
50:q:9:GLY:O	50:q:57:VAL:HG13	2.20	0.41
51:r:33:THR:HG22	51:r:37:LYS:O	2.20	0.41
51:r:64:LEU:HD13	51:r:66:LEU:CD1	2.50	0.41
53:t:33:LYS:HE3	53:t:33:LYS:HB2	1.86	0.41
54:u:5:VAL:HG21	54:u:18:PHE:HA	2.01	0.41
54:u:5:VAL:HG11	54:u:18:PHE:HB2	2.02	0.41
55:v:2:G:C5	55:v:72:A:C2	3.08	0.41
55:v:29:G:C4	55:v:42:G:C2	3.08	0.41
55:v:47:U:H5''	55:v:48:C:H5'	2.01	0.41
55:v:52:G:N2	55:v:63:G:C4	2.88	0.41
56:w:37:MIA:S10	59:z:4:U:C2	3.14	0.41
56:w:40:C:N3	56:w:41:C:C4	2.88	0.41
57:x:24:THR:HG21	57:x:269:PHE:N	2.36	0.41
57:x:193:ASN:HB3	57:x:197:GLN:HB3	2.01	0.41
57:x:316:PHE:C	57:x:316:PHE:CD2	2.98	0.41
57:x:460:MET:H	57:x:464:HIS:CD2	2.39	0.41
57:x:496:LYS:HB2	57:x:608:LYS:HG2	2.02	0.41
57:x:519:ILE:HA	57:x:576:ARG:O	2.20	0.41
57:x:521:MET:CE	57:x:573:MET:HE1	2.45	0.41
57:x:531:LYS:NZ	57:x:534:GLU:HA	2.36	0.41
1:0:49:ARG:CB	1:0:51:ARG:NH1	2.84	0.41
2:1:39:ASP:HB2	2:1:46:VAL:CG2	2.50	0.41
5:4:4:ARG:NH2	8:A:2477:U:O2'	2.53	0.41
8:A:65:U:O2'	8:A:456:C:N3	2.39	0.41
8:A:121:G:C2	8:A:122:G:C5	3.08	0.41
8:A:177:G:N2	8:A:177:G:OP2	2.37	0.41
8:A:187:G:C2	8:A:188:G:H1'	2.55	0.41
8:A:251:A:C5	8:A:252:G:H1'	2.56	0.41
8:A:251:A:H8	8:A:251:A:O5'	2.02	0.41
8:A:261:G:O4'	8:A:609:A:H2	2.04	0.41
8:A:342:A:C6	8:A:343:C:C5	3.08	0.41
8:A:374:A:C5	8:A:375:G:C8	3.08	0.41
8:A:396:G:H2'	8:A:397:U:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:475:C:C5	8:A:476:G:C5	3.09	0.41
8:A:511:U:C4	8:A:512:G:C6	3.08	0.41
8:A:536:G:C2	8:A:558:U:O2	2.74	0.41
8:A:553:G:C5	8:A:554:U:C5	3.09	0.41
8:A:597:G:H21	19:L:12:SER:CA	2.34	0.41
8:A:681:G:H2'	8:A:682:G:O4'	2.21	0.41
8:A:705:A:N7	8:A:726:G:N3	2.68	0.41
8:A:707:G:C6	8:A:708:G:C6	3.08	0.41
8:A:718:A:C8	8:A:719:C:C5	3.08	0.41
8:A:741:U:C2	8:A:742:A:C8	3.07	0.41
8:A:834:G:H8	8:A:834:G:O5'	2.04	0.41
8:A:869:G:C4	8:A:870:U:C6	3.08	0.41
8:A:938:G:C2	8:A:939:G:C8	3.08	0.41
8:A:961:C:C2	8:A:2031:A:N6	2.88	0.41
8:A:1001:A:C5	8:A:1002:G:C4	3.08	0.41
8:A:1013:C:O2	8:A:1014:A:C8	2.73	0.41
8:A:1027:A:N6	8:A:1126:A:C1'	2.82	0.41
8:A:1057:A:C4	8:A:1058:U:H5	2.39	0.41
8:A:1257:C:H2'	8:A:1258:U:C6	2.56	0.41
8:A:1300:G:C4	8:A:1626:A:C6	3.08	0.41
8:A:1338:G:C4	8:A:1339:G:C8	3.08	0.41
8:A:1341:G:C5	27:T:84:TYR:CZ	3.08	0.41
8:A:1383:A:C2	8:A:1406:U:C1'	3.04	0.41
8:A:1410:G:H2'	8:A:1410:G:N3	2.35	0.41
8:A:1412:U:O4	8:A:1591:A:N6	2.54	0.41
8:A:1516:G:N3	8:A:1517:G:C8	2.88	0.41
8:A:1650:A:N1	8:A:2008:C:C4	2.89	0.41
8:A:1668:A:C6	8:A:1993:U:C6	3.09	0.41
8:A:1689:A:C5	8:A:1700:A:C4	3.08	0.41
8:A:1693:U:C5	8:A:1977:A:H1'	2.55	0.41
8:A:1850:G:C2	8:A:1851:U:C2	3.08	0.41
8:A:1867:G:H2'	8:A:1868:C:C6	2.55	0.41
8:A:2024:G:N2	8:A:2040:G:H1'	2.35	0.41
8:A:2029:G:C2	8:A:2033:A:C8	3.08	0.41
8:A:2080:A:C5	8:A:2081:U:C4	3.08	0.41
8:A:2083:G:C4	8:A:2084:C:C5	3.08	0.41
8:A:2087:G:C2	8:A:2088:A:C8	3.08	0.41
8:A:2128:G:C1'	8:A:2173:A:O2'	2.69	0.41
8:A:2137:U:N3	8:A:2154:A:C6	2.88	0.41
8:A:2199:A:C6	8:A:2225:A:C4	3.08	0.41
8:A:2230:G:N1	8:A:2231:U:C4	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2264:C:C2	8:A:2277:G:C2	3.08	0.41
8:A:2271:G:H4'	30:W:16:ARG:CZ	2.51	0.41
8:A:2331:G:P	30:W:40:LYS:HD3	2.59	0.41
8:A:2333:A:N1	8:A:2335:A:N6	2.68	0.41
8:A:2353:G:C6	8:A:2354:C:C4	3.09	0.41
8:A:2414:G:H2'	8:A:2415:G:H8	1.83	0.41
8:A:2422:C:P	55:v:76:A:N6	2.93	0.41
8:A:2440:C:N3	8:A:2441:U:H1'	2.35	0.41
8:A:2445:2MG:N2	8:A:2446:G:C2	2.88	0.41
8:A:2461:A:O4'	8:A:2492:U:C2	2.73	0.41
8:A:2574:G:H1'	11:D:148:GLN:CB	2.51	0.41
8:A:2578:G:OP2	8:A:2578:G:H4'	2.20	0.41
8:A:2670:A:C2	8:A:2671:G:C4	3.08	0.41
8:A:2694:G:N1	8:A:2716:C:C2	2.88	0.41
8:A:2705:A:C6	8:A:2706:A:C4	3.08	0.41
8:A:2714:G:H2'	8:A:2715:C:H6	1.86	0.41
8:A:2720:U:H2'	8:A:2720:U:O2	2.20	0.41
8:A:2789:C:N4	8:A:2893:A:C2	2.88	0.41
8:A:2831:G:O2'	8:A:2832:U:H5	2.04	0.41
8:A:2854:G:H2'	8:A:2855:C:C6	2.56	0.41
8:A:2881:U:C2	8:A:2882:A:C8	3.08	0.41
9:B:9:G:C2	9:B:111:U:O2	2.71	0.41
9:B:75:G:H1'	29:V:29:ILE:HG21	2.00	0.41
10:C:244:VAL:HB	10:C:248:GLY:O	2.21	0.41
11:D:79:LEU:C	11:D:80:TRP:CE3	2.99	0.41
11:D:88:GLU:HB2	11:D:90:PHE:HE1	1.85	0.41
12:E:131:THR:HG23	12:E:164:LEU:HG	2.01	0.41
13:F:5:ASP:HA	13:F:8:LYS:CE	2.46	0.41
13:F:72:SER:HA	13:F:78:ILE:O	2.20	0.41
13:F:74:ALA:HB1	13:F:77:LYS:HE3	2.01	0.41
14:G:148:ARG:HD3	14:G:163:TYR:CZ	2.54	0.41
15:H:3:VAL:HG12	15:H:19:VAL:O	2.21	0.41
15:H:42:LYS:HB2	15:H:46:PHE:CE2	2.56	0.41
18:K:5:GLN:HA	18:K:20:MET:HE3	2.03	0.41
19:L:79:LEU:HA	19:L:82:LEU:HD12	2.02	0.41
23:P:33:GLU:OE1	34:a:346:G:OP1	2.37	0.41
24:Q:84:LYS:HZ3	24:Q:116:LEU:HA	1.84	0.41
26:S:70:LYS:HB3	26:S:110:ARG:NH2	2.35	0.41
27:T:50:LEU:C	27:T:52:GLU:N	2.76	0.41
34:a:20:U:C4	34:a:21:G:C5	3.08	0.41
34:a:32:A:H2'	34:a:33:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:71:A:C1'	34:a:100:G:H1'	2.51	0.41
34:a:74:A:C2	34:a:97:G:C4	3.08	0.41
34:a:103:U:C4	34:a:104:G:N7	2.88	0.41
34:a:139:A:H2'	34:a:140:U:C6	2.55	0.41
34:a:188:C:C6	34:a:188:C:OP1	2.73	0.41
34:a:231:U:H2'	34:a:232:G:H8	1.85	0.41
34:a:261:U:OP1	53:t:70:LYS:NZ	2.50	0.41
34:a:268:U:H2'	34:a:269:C:H6	1.84	0.41
34:a:295:C:N3	34:a:303:A:C2	2.89	0.41
34:a:295:C:O2'	34:a:296:U:H5'	2.20	0.41
34:a:363:A:N6	34:a:364:A:C6	2.88	0.41
34:a:412:A:H62	34:a:414:A:H1'	1.85	0.41
34:a:439:U:O5'	34:a:440:C:OP2	2.39	0.41
34:a:456:A:N1	34:a:457:G:C6	2.88	0.41
34:a:525:C:C4	34:a:526:C:N4	2.88	0.41
34:a:544:G:C6	34:a:545:C:N4	2.88	0.41
34:a:600:A:C6	34:a:639:G:N1	2.88	0.41
34:a:681:A:O2'	34:a:682:G:H5'	2.21	0.41
34:a:682:G:H2'	34:a:683:G:C8	2.51	0.41
34:a:682:G:C2	34:a:709:U:N3	2.88	0.41
34:a:727:G:C2	34:a:731:G:C6	3.09	0.41
34:a:892:A:H2'	34:a:893:C:O4'	2.20	0.41
34:a:915:A:N3	34:a:915:A:H2'	2.34	0.41
34:a:1002:G:OP2	34:a:1002:G:H8	2.04	0.41
34:a:1048:G:OP1	47:n:3:GLN:OE1	2.38	0.41
34:a:1152:A:O3'	43:j:15:HIS:CD2	2.73	0.41
34:a:1210:C:H4'	57:x:540:LYS:HZ1	1.85	0.41
34:a:1215:G:C5	34:a:1216:A:N7	2.88	0.41
34:a:1298:U:H4'	34:a:1299:A:N9	2.35	0.41
34:a:1350:A:C6	34:a:1351:U:C4	3.08	0.41
34:a:1383:C:H2'	34:a:1384:C:C6	2.55	0.41
34:a:1403:C:H6	34:a:1403:C:O5'	2.03	0.41
34:a:1442:G:C2	34:a:1443:C:C4	3.07	0.41
34:a:1507:A:C4	34:a:1530:G:N3	2.89	0.41
35:b:76:SER:HB2	35:b:92:ASN:CA	2.49	0.41
35:b:143:LEU:HA	35:b:146:SER:OG	2.21	0.41
36:c:84:GLU:HA	36:c:87:ARG:NH1	2.35	0.41
40:g:90:VAL:HG23	40:g:95:ARG:CG	2.50	0.41
42:i:25:GLY:HA2	42:i:61:ASP:HA	2.03	0.41
42:i:41:GLU:HB2	42:i:44:ARG:HH22	1.86	0.41
42:i:83:THR:HB	42:i:97:LEU:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:i:114:LYS:NZ	42:i:120:ALA:HB1	2.36	0.41
46:m:88:LEU:HD23	46:m:91:ARG:NH1	2.36	0.41
47:n:37:SER:O	47:n:42:TRP:HB2	2.19	0.41
47:n:76:LYS:HG3	47:n:77:PHE:CE1	2.55	0.41
48:o:48:ASP:O	48:o:52:ARG:HB2	2.20	0.41
48:o:70:LYS:HA	48:o:73:ASP:O	2.20	0.41
50:q:51:GLU:HG3	50:q:52:CYS:SG	2.61	0.41
51:r:64:LEU:C	51:r:66:LEU:H	2.29	0.41
53:t:57:VAL:HG23	53:t:58:ASP:N	2.36	0.41
53:t:78:LEU:O	53:t:82:ILE:HG13	2.19	0.41
54:u:41:THR:CG2	54:u:42:THR:N	2.84	0.41
57:x:96:ILE:CD1	57:x:410:PHE:CB	2.93	0.41
57:x:193:ASN:O	57:x:198:GLY:HA2	2.20	0.41
57:x:206:ILE:C	57:x:211:VAL:HG21	2.45	0.41
57:x:471:ARG:HG2	57:x:474:ARG:HH12	1.86	0.41
57:x:495:GLN:N	57:x:523:PRO:HG3	2.35	0.41
57:x:561:LYS:HD2	57:x:561:LYS:H	1.85	0.41
57:x:662:MET:CE	57:x:679:TYR:CE2	3.03	0.41
1:0:16:ARG:NH2	8:A:1266:G:OP2	2.54	0.41
2:1:3:GLY:CA	8:A:2283:C:O3'	2.69	0.41
4:3:39:ARG:O	4:3:43:LEU:HG	2.20	0.41
7:6:6:HIS:CE1	9:B:42:C:O3'	2.73	0.41
7:6:28:VAL:CG1	7:6:30:HIS:CD2	3.04	0.41
8:A:36:G:N1	8:A:445:C:C4	2.89	0.41
8:A:39:G:H1'	12:E:43:THR:CG2	2.46	0.41
8:A:85:G:C6	8:A:98:G:C2	3.09	0.41
8:A:111:A:H2'	8:A:112:U:C6	2.55	0.41
8:A:126:A:C2	8:A:127:A:C2	3.08	0.41
8:A:179:C:C2	8:A:180:G:C8	3.08	0.41
8:A:204:A:O4'	8:A:206:U:C6	2.74	0.41
8:A:322:A:OP2	12:E:163:ASN:HB2	2.20	0.41
8:A:520:G:C6	8:A:521:U:O4	2.73	0.41
8:A:533:G:N3	24:Q:44:TYR:CE2	2.89	0.41
8:A:534:U:P	24:Q:23:TYR:HE1	2.42	0.41
8:A:548:G:H2'	8:A:549:G:O4'	2.20	0.41
8:A:558:U:H1'	17:J:47:HIS:HB3	2.03	0.41
8:A:619:G:H3'	8:A:620:G:H21	1.83	0.41
8:A:656:G:H2'	8:A:657:U:O4'	2.21	0.41
8:A:701:G:N1	8:A:732:C:C4	2.89	0.41
8:A:704:G:N2	8:A:726:G:H1'	2.36	0.41
8:A:714:U:C5	48:o:88:ARG:HG3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:723:C:H2'	8:A:724:U:C6	2.55	0.41
8:A:848:C:O2'	8:A:849:A:H5'	2.21	0.41
8:A:915:C:H2'	8:A:916:G:O4'	2.20	0.41
8:A:1001:A:C8	8:A:1002:G:C8	3.09	0.41
8:A:1127:A:C2'	8:A:2518:A:H2	2.33	0.41
8:A:1226:A:OP2	8:A:1227:G:C8	2.73	0.41
8:A:1271:G:N7	8:A:1325:U:H5	2.17	0.41
8:A:1287:A:H61	8:A:1648:U:H2'	1.85	0.41
8:A:1359:A:C5	8:A:1360:G:H1'	2.56	0.41
8:A:1365:A:C6	8:A:1366:A:C5	3.09	0.41
8:A:1391:U:H6	8:A:1391:U:O5'	2.03	0.41
8:A:1403:A:C5	8:A:1404:C:C5	3.08	0.41
8:A:1407:G:C6	8:A:1596:A:N1	2.88	0.41
8:A:1470:A:C5	8:A:1471:G:C8	3.09	0.41
8:A:1476:U:H1'	8:A:1732:C:N3	2.35	0.41
8:A:1482:G:O2'	8:A:1483:G:H5'	2.19	0.41
8:A:1482:G:C4	8:A:1483:G:C8	3.08	0.41
8:A:1611:C:N3	8:A:1612:C:C5	2.89	0.41
8:A:1619:G:C5	8:A:1620:G:N7	2.88	0.41
8:A:1636:U:H2'	8:A:1637:A:H8	1.84	0.41
8:A:1652:A:H3'	8:A:1653:G:C8	2.55	0.41
8:A:1665:A:P	18:K:66:LYS:NZ	2.92	0.41
8:A:1681:G:N2	8:A:1763:G:OP2	2.54	0.41
8:A:1753:G:H5''	23:P:92:ARG:NH1	2.35	0.41
8:A:1847:G:H1'	34:a:702:A:C2	2.56	0.41
8:A:1906:G:N7	8:A:1929:G:H2'	2.35	0.41
8:A:1926:U:C2	8:A:1929:G:N1	2.89	0.41
8:A:1936:A:C2	8:A:1943:U:N3	2.89	0.41
8:A:2037:A:H2'	8:A:2038:G:H8	1.80	0.41
8:A:2077:A:C4	8:A:2435:A:C8	3.09	0.41
8:A:2082:A:N6	8:A:2237:G:C2'	2.83	0.41
8:A:2083:G:C5	8:A:2084:C:C5	3.08	0.41
8:A:2193:G:C4	8:A:2194:U:C5	3.09	0.41
8:A:2464:G:C4	8:A:2487:G:C2	3.08	0.41
8:A:2470:G:N2	8:A:2481:G:H1'	2.35	0.41
8:A:2521:C:N3	8:A:2522:U:C4	2.89	0.41
8:A:2578:G:H2'	8:A:2579:C:H6	1.86	0.41
8:A:2832:U:C2	8:A:2834:G:C2	3.08	0.41
8:A:2846:G:H2'	8:A:2847:U:O4'	2.20	0.41
9:B:18:G:C6	9:B:67:G:O6	2.73	0.41
9:B:34:A:H2'	9:B:44:G:N7	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:43:C:O5'	9:B:43:C:H6	2.02	0.41
9:B:90:C:C4	9:B:91:C:C5	3.08	0.41
9:B:114:C:H2'	9:B:115:A:O4'	2.20	0.41
10:C:80:LEU:HD13	10:C:80:LEU:HA	1.90	0.41
12:E:172:ALA:O	12:E:175:ILE:HG23	2.21	0.41
13:F:35:LEU:HD12	13:F:88:VAL:CG2	2.51	0.41
17:J:72:LYS:HD3	17:J:74:TYR:OH	2.20	0.41
18:K:49:ARG:NH2	34:a:1423:G:H5''	2.34	0.41
18:K:58:LEU:HA	18:K:89:ASN:ND2	2.35	0.41
19:L:93:ASN:HA	19:L:96:LYS:HB2	2.01	0.41
20:M:3:GLN:HG3	20:M:92:TRP:CD1	2.56	0.41
21:N:54:LEU:HD11	21:N:62:ASN:ND2	2.34	0.41
21:N:77:ALA:O	21:N:79:LEU:O	2.38	0.41
22:O:11:ALA:HB2	22:O:96:GLY:N	2.36	0.41
22:O:51:ALA:CB	22:O:78:VAL:HB	2.48	0.41
24:Q:56:PHE:HB3	24:Q:60:TRP:CH2	2.56	0.41
25:R:4:VAL:HG12	25:R:39:LEU:HD12	2.02	0.41
25:R:37:GLU:HB2	25:R:53:PHE:CD1	2.55	0.41
27:T:8:LEU:O	32:Y:29:ARG:NH1	2.47	0.41
27:T:30:ILE:HG23	27:T:85:VAL:HB	2.02	0.41
28:U:24:VAL:HG12	28:U:25:LYS:N	2.36	0.41
32:Y:6:LEU:CD1	32:Y:6:LEU:N	2.83	0.41
34:a:37:U:P	45:l:119:LYS:HZ3	2.42	0.41
34:a:51:A:C4	34:a:353:A:N1	2.88	0.41
34:a:63:C:N4	34:a:105:G:C6	2.88	0.41
34:a:108:G:OP2	34:a:326:G:N1	2.45	0.41
34:a:147:G:C2	34:a:176:C:N3	2.88	0.41
34:a:149:A:C2	34:a:150:U:C2	3.09	0.41
34:a:186:C:C2	34:a:187:G:C8	3.09	0.41
34:a:203:G:C2'	34:a:203:G:N3	2.81	0.41
34:a:236:A:C6	34:a:237:G:C6	3.08	0.41
34:a:243:A:H62	34:a:281:G:H1'	1.84	0.41
34:a:335:C:H2'	34:a:336:A:O4'	2.20	0.41
34:a:340:U:H2'	34:a:341:C:H6	1.84	0.41
34:a:355:C:C4	34:a:356:A:N7	2.88	0.41
34:a:382:A:C2	34:a:383:A:C4	3.08	0.41
34:a:382:A:H2'	34:a:383:A:H8	1.85	0.41
34:a:391:G:C5	34:a:392:C:C5	3.07	0.41
34:a:408:A:C4	34:a:409:U:C6	3.08	0.41
34:a:426:U:H2'	34:a:427:U:O4'	2.20	0.41
34:a:521:G:C5	34:a:522:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:542:G:C4	34:a:543:U:C5	3.09	0.41
34:a:635:A:N3	34:a:636:U:C6	2.88	0.41
34:a:648:A:C6	34:a:649:A:C5	3.08	0.41
34:a:665:A:C8	34:a:733:G:C2	3.08	0.41
34:a:777:A:H3'	34:a:778:G:C8	2.55	0.41
34:a:792:A:C5	34:a:794:A:N6	2.89	0.41
34:a:814:A:C8	34:a:816:A:C4	3.09	0.41
34:a:838:G:C5	34:a:849:G:N1	2.89	0.41
34:a:901:A:O5'	34:a:901:A:H8	2.03	0.41
34:a:921:U:P	34:a:1082:A:O4'	2.78	0.41
34:a:927:G:N2	34:a:1391:U:H1'	2.35	0.41
34:a:937:A:C2'	34:a:1378:C:N4	2.84	0.41
34:a:988:G:C6	34:a:989:U:C4	3.08	0.41
34:a:1007:U:C4	34:a:1023:U:O2	2.73	0.41
34:a:1052:U:C2	34:a:1207:2MG:CM2	3.03	0.41
34:a:1054:C:P	34:a:1198:G:OP2	2.79	0.41
34:a:1072:G:C6	34:a:1104:G:C6	3.08	0.41
34:a:1080:A:H5''	34:a:1081:A:H8	1.85	0.41
34:a:1088:G:N2	34:a:1098:C:C2	2.83	0.41
34:a:1108:G:C5	34:a:1109:C:C5	3.09	0.41
34:a:1159:U:C6	34:a:1182:G:H2'	2.55	0.41
34:a:1227:A:H5''	52:s:82:HIS:ND1	2.34	0.41
34:a:1241:G:N1	34:a:1242:G:C6	2.89	0.41
34:a:1297:G:H1'	34:a:1298:U:C5	2.55	0.41
34:a:1302:C:H41	46:m:13:HIS:CD2	2.38	0.41
34:a:1404:C:N3	34:a:1498:UR3:C5	2.83	0.41
34:a:1418:A:N6	34:a:1482:G:C2'	2.80	0.41
34:a:1429:A:C4	34:a:1430:A:C8	3.08	0.41
34:a:1436:U:N3	34:a:1437:A:C5	2.89	0.41
34:a:1523:G:C4	34:a:1524:C:C5	3.09	0.41
34:a:1530:G:C5	54:u:45:LYS:NZ	2.89	0.41
35:b:99:MET:C	35:b:100:LEU:HD23	2.46	0.41
36:c:29:ALA:HB1	47:n:65:ARG:HH21	1.84	0.41
36:c:153:SER:O	36:c:195:ILE:CG2	2.68	0.41
36:c:154:GLY:O	36:c:162:ALA:HB1	2.20	0.41
36:c:166:TRP:C	36:c:166:TRP:CE3	2.99	0.41
37:d:53:GLN:HG2	37:d:198:LEU:CD1	2.51	0.41
37:d:169:TRP:CD2	37:d:170:LEU:CD2	3.04	0.41
40:g:17:PHE:CE2	40:g:46:LEU:HD22	2.55	0.41
40:g:52:ARG:NH1	40:g:120:ALA:C	2.79	0.41
44:k:59:PRO:HA	44:k:91:GLY:HA3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:l:21:PRO:O	45:l:24:GLU:OE2	2.39	0.41
45:l:106:VAL:HG12	45:l:107:LYS:H	1.86	0.41
47:n:7:ALA:O	47:n:10:VAL:HG12	2.21	0.41
47:n:61:ARG:HG3	47:n:70:PRO:HA	2.00	0.41
48:o:79:GLN:CA	48:o:82:GLU:HG2	2.50	0.41
50:q:20:ILE:HG23	50:q:47:ASP:CB	2.51	0.41
53:t:81:GLN:CA	53:t:84:LYS:HE2	2.50	0.41
55:v:11:A:C2	55:v:12:G:C4	3.08	0.41
55:v:29:G:C2	55:v:42:G:C2	3.08	0.41
55:v:65:C:O2'	55:v:66:C:H5'	2.20	0.41
57:x:206:ILE:CA	57:x:211:VAL:HG21	2.50	0.41
57:x:241:GLU:OE1	57:x:242:LEU:O	2.38	0.41
57:x:516:HIS:HB3	57:x:581:SER:OG	2.20	0.41
57:x:613:GLU:HG3	57:x:615:ILE:CD1	2.51	0.41
4:3:31:ILE:O	4:3:35:LYS:HD2	2.20	0.41
7:6:6:HIS:ND1	13:F:62:GLN:HA	2.35	0.41
7:6:16:CYS:CA	7:6:34:LEU:HB2	2.51	0.41
8:A:28:A:H1'	8:A:513:A:C4	2.56	0.41
8:A:53:A:H62	8:A:117:G:N2	2.17	0.41
8:A:93:G:N1	8:A:94:A:C5	2.88	0.41
8:A:123:G:H2'	8:A:124:G:O4'	2.20	0.41
8:A:138:U:C2	8:A:142:A:N1	2.89	0.41
8:A:138:U:O2	8:A:141:G:N7	2.53	0.41
8:A:221:A:C4	8:A:233:A:N3	2.89	0.41
8:A:238:C:C4	8:A:260:G:N1	2.89	0.41
8:A:252:G:N1	8:A:253:C:C4	2.88	0.41
8:A:289:G:C5	8:A:290:U:C5	3.08	0.41
8:A:300:A:N6	8:A:334:C:H5'	2.36	0.41
8:A:518:G:H4'	26:S:18:ARG:NE	2.35	0.41
8:A:531:C:C2	8:A:2019:A:C2	3.08	0.41
8:A:579:G:H5'	8:A:2018:G:OP2	2.20	0.41
8:A:617:G:N2	8:A:618:G:H1'	2.36	0.41
8:A:777:G:C2	8:A:778:G:C8	3.08	0.41
8:A:813:U:C3'	25:R:86:GLN:HE22	2.32	0.41
8:A:871:U:O2'	8:A:872:U:H5'	2.19	0.41
8:A:897:C:H2'	8:A:898:C:C6	2.55	0.41
8:A:953:G:C6	8:A:954:G:N7	2.89	0.41
8:A:966:G:C6	8:A:967:U:O4	2.74	0.41
8:A:1005:C:C5	8:A:1143:A:O4'	2.73	0.41
8:A:1032:A:H2	8:A:1122:G:H22	1.67	0.41
8:A:1062:G:C2	8:A:1078:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1089:A:C2	8:A:1102:C:C6	3.07	0.41
8:A:1120:G:C6	8:A:1121:C:C4	3.09	0.41
8:A:1183:U:O3'	33:Z:29:ARG:CZ	2.69	0.41
8:A:1277:G:C6	8:A:1278:C:N4	2.89	0.41
8:A:1277:G:O6	8:A:1294:U:C4	2.74	0.41
8:A:1359:A:C6	8:A:1360:G:H1'	2.55	0.41
8:A:1388:G:C5	8:A:1389:G:N7	2.89	0.41
8:A:1406:U:H2'	8:A:1407:G:C8	2.55	0.41
8:A:1456:G:C6	8:A:1457:U:C4	3.09	0.41
8:A:1489:C:N3	8:A:1501:G:N1	2.68	0.41
8:A:1605:C:C4'	8:A:1610:A:N6	2.84	0.41
8:A:1641:A:C6	8:A:1642:G:C4	3.09	0.41
8:A:1664:A:H2	18:K:1:MET:SD	2.44	0.41
8:A:1718:G:C2	8:A:1719:G:C4	3.08	0.41
8:A:1718:G:O6	8:A:1743:G:C2	2.73	0.41
8:A:1825:U:O2	10:C:252:LYS:CE	2.69	0.41
8:A:1871:A:N6	8:A:1872:A:C2	2.88	0.41
8:A:1909:C:N3	8:A:1922:G:C6	2.89	0.41
8:A:1999:C:N3	8:A:2000:C:C5	2.89	0.41
8:A:2062:A:H3'	8:A:2062:A:N3	2.35	0.41
8:A:2133:G:C6	8:A:2157:G:C5	3.08	0.41
8:A:2158:A:OP2	8:A:2158:A:H3'	2.20	0.41
8:A:2168:G:C8	8:A:2169:A:C8	3.09	0.41
8:A:2240:U:O2'	8:A:2241:A:H5'	2.21	0.41
8:A:2259:U:C4'	8:A:2427:C:H2'	2.51	0.41
8:A:2282:G:C6	8:A:2425:A:N1	2.88	0.41
8:A:2305:U:C5	13:F:151:LEU:HA	2.55	0.41
8:A:2307:G:OP1	8:A:2307:G:H8	2.03	0.41
8:A:2308:G:H4'	8:A:2309:A:OP2	2.20	0.41
8:A:2455:G:H2'	8:A:2456:C:H6	1.84	0.41
8:A:2468:A:C2	8:A:2482:A:N7	2.89	0.41
8:A:2532:G:C5	8:A:2533:U:C4	3.08	0.41
8:A:2551:C:C5	8:A:2552:OMU:O4	2.74	0.41
8:A:2623:G:C4	8:A:2624:G:C8	3.09	0.41
8:A:2791:G:C6	8:A:2792:A:C5	3.09	0.41
8:A:2792:A:N1	8:A:2805:C:C4	2.89	0.41
8:A:2814:A:C4	8:A:2815:C:C5	3.08	0.41
8:A:2858:C:H2'	8:A:2859:G:O4'	2.20	0.41
9:B:1:U:C2	9:B:120:U:O2	2.74	0.41
9:B:3:C:C4	9:B:4:C:C5	3.09	0.41
9:B:51:G:N1	9:B:52:A:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:51:G:OP2	22:O:67:ASN:HB3	2.21	0.41
10:C:74:PRO:O	10:C:96:LYS:HG2	2.20	0.41
11:D:57:ALA:HA	11:D:60:VAL:CG1	2.51	0.41
11:D:156:PHE:CD1	17:J:81:ILE:HD13	2.56	0.41
12:E:130:LYS:CB	12:E:133:LEU:HG	2.51	0.41
12:E:136:GLN:O	12:E:140:ASP:CG	2.63	0.41
12:E:175:ILE:HD11	12:E:199:MET:HE1	2.01	0.41
13:F:4:HIS:CD2	13:F:96:TRP:CE2	3.08	0.41
13:F:101:ARG:O	13:F:105:ILE:HD13	2.21	0.41
14:G:101:VAL:CG2	14:G:115:GLN:NE2	2.84	0.41
17:J:42:ALA:O	24:Q:63:ARG:HG2	2.21	0.41
26:S:48:LYS:O	26:S:52:GLU:HG3	2.20	0.41
26:S:75:PHE:CE1	26:S:104:THR:HG21	2.55	0.41
27:T:6:ARG:HH22	27:T:37:ASP:HB3	1.86	0.41
28:U:73:ASN:OD1	28:U:75:ALA:HB3	2.20	0.41
29:V:20:LEU:HD12	29:V:20:LEU:HA	1.84	0.41
31:X:7:THR:C	31:X:9:LYS:N	2.77	0.41
34:a:24:U:O2'	34:a:524:G:O2'	2.29	0.41
34:a:60:A:N3	34:a:107:G:N2	2.68	0.41
34:a:78:A:H2'	34:a:79:G:C1'	2.51	0.41
34:a:181:A:N1	34:a:194:C:C2	2.89	0.41
34:a:226:G:C6	34:a:227:G:N7	2.88	0.41
34:a:247:G:C6	34:a:248:C:C4	3.08	0.41
34:a:257:G:H2'	34:a:258:G:C8	2.52	0.41
34:a:259:G:H2'	34:a:260:G:H8	1.85	0.41
34:a:263:A:OP1	53:t:73:ARG:CZ	2.68	0.41
34:a:301:G:H2'	34:a:302:G:C8	2.55	0.41
34:a:320:A:H2'	34:a:321:A:C8	2.56	0.41
34:a:384:G:C4	34:a:385:C:C5	3.07	0.41
34:a:385:C:H2'	34:a:386:C:H6	1.84	0.41
34:a:444:G:N2	34:a:491:G:C8	2.88	0.41
34:a:525:C:N3	34:a:526:C:C4	2.89	0.41
34:a:570:G:C2	34:a:571:U:C4	3.08	0.41
34:a:676:A:C2	34:a:677:U:C5	3.09	0.41
34:a:687:A:C2	34:a:704:A:C4	3.08	0.41
34:a:717:U:O2'	34:a:734:G:C1'	2.69	0.41
34:a:765:G:H1	34:a:812:G:C2'	2.31	0.41
34:a:855:U:O2'	34:a:856:C:H5'	2.20	0.41
34:a:864:A:O2'	34:a:1078:U:O4	2.39	0.41
34:a:920:U:C4	34:a:921:U:C5	3.08	0.41
34:a:934:C:C2	34:a:938:A:N6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:996:A:H61	34:a:1044:A:N6	2.18	0.41
34:a:1004:A:C6	34:a:1026:G:H1'	2.56	0.41
34:a:1092:A:N1	34:a:1110:A:C5'	2.83	0.41
34:a:1101:A:H4'	34:a:1102:A:C5'	2.50	0.41
34:a:1111:A:C5	34:a:1112:C:C5	3.08	0.41
34:a:1171:A:H2'	34:a:1172:C:H6	1.83	0.41
34:a:1239:A:H3'	40:g:118:ARG:HH22	1.84	0.41
34:a:1250:A:N6	34:a:1251:A:C6	2.88	0.41
34:a:1316:G:C2	34:a:1318:A:H5''	2.56	0.41
34:a:1317:C:P	47:n:23:ARG:NH2	2.94	0.41
34:a:1349:A:H3'	42:i:119:LYS:HZ2	1.85	0.41
34:a:1491:G:H21	61:a:2001:AM2:HB61	1.85	0.41
34:a:1498:UR3:O2	34:a:1498:UR3:O5'	2.38	0.41
35:b:137:THR:O	35:b:141:GLU:HG3	2.21	0.41
36:c:183:TYR:OH	36:c:185:THR:CG2	2.69	0.41
38:e:106:ALA:HB1	38:e:110:MET:HB3	2.02	0.41
39:f:46:GLN:OE1	39:f:56:LYS:HE2	2.20	0.41
40:g:16:LYS:CG	42:i:42:THR:HG23	2.49	0.41
40:g:98:LEU:CD2	40:g:101:ARG:HH22	2.32	0.41
42:i:33:SER:OG	42:i:34:LEU:N	2.45	0.41
43:j:51:VAL:C	43:j:62:ARG:HG2	2.46	0.41
46:m:18:LEU:HD23	46:m:29:SER:O	2.20	0.41
46:m:85:TYR:HB3	52:s:72:GLU:OE2	2.20	0.41
48:o:62:ARG:HG2	48:o:66:LEU:HD11	2.01	0.41
48:o:68:TYR:HA	48:o:71:ARG:NE	2.35	0.41
48:o:73:ASP:HB3	48:o:76:ARG:HE	1.85	0.41
49:p:34:GLU:OE2	49:p:56:ARG:HD3	2.21	0.41
50:q:13:SER:OG	50:q:21:VAL:CG2	2.67	0.41
51:r:25:ILE:HA	51:r:28:LEU:HD12	2.02	0.41
51:r:36:GLY:HA3	51:r:69:TYR:O	2.19	0.41
53:t:14:GLU:HG3	53:t:17:ARG:NH2	2.35	0.41
53:t:43:LYS:CD	53:t:86:ALA:HA	2.48	0.41
53:t:53:MET:O	53:t:56:ILE:N	2.54	0.41
55:v:11:A:N1	55:v:25:C:N3	2.68	0.41
55:v:29:G:C2	55:v:42:G:C4	3.09	0.41
55:v:52:G:C4	55:v:63:G:C2	3.09	0.41
56:w:50:U:H2'	56:w:51:C:H6	1.84	0.41
56:w:53:G:C2	56:w:62:C:C2	3.09	0.41
57:x:121:GLN:O	57:x:125:VAL:HG12	2.21	0.41
57:x:252:ARG:O	57:x:254:ARG:N	2.53	0.41
57:x:261:ILE:N	57:x:261:ILE:HD12	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:349:LEU:HB2	57:x:355:ALA:O	2.21	0.41
57:x:353:LYS:HD3	57:x:389:ASP:OD2	2.21	0.41
57:x:417:ILE:HG23	57:x:457:ILE:CG1	2.50	0.41
57:x:447:TRP:CB	57:x:456:ILE:HB	2.50	0.41
57:x:468:ILE:O	57:x:472:MET:HG3	2.21	0.41
1:0:49:ARG:HB3	1:0:51:ARG:NH1	2.36	0.41
3:2:18:PHE:CD2	8:A:126:A:C1'	3.03	0.41
4:3:32:LEU:O	4:3:35:LYS:HB2	2.21	0.41
4:3:34:LYS:HG3	4:3:35:LYS:HG3	2.02	0.41
5:4:11:CYS:HB3	5:4:33:HIS:CE1	2.55	0.41
8:A:30:G:C5	8:A:31:C:N4	2.88	0.41
8:A:63:A:C2	27:T:70:HIS:NE2	2.88	0.41
8:A:65:U:O2'	27:T:73:ARG:CD	2.69	0.41
8:A:92:U:C4	8:A:93:G:C5	3.09	0.41
8:A:123:G:C2	8:A:129:C:C2	3.09	0.41
8:A:123:G:N1	8:A:129:C:C4	2.89	0.41
8:A:218:A:N6	8:A:219:A:C6	2.89	0.41
8:A:221:A:C5	8:A:233:A:N3	2.89	0.41
8:A:221:A:H2'	8:A:266:G:O6	2.21	0.41
8:A:233:A:C2	8:A:234:U:H1'	2.56	0.41
8:A:245:G:C2	8:A:254:G:H1'	2.56	0.41
8:A:245:G:N2	8:A:254:G:H1'	2.36	0.41
8:A:332:A:N9	8:A:335:C:N4	2.68	0.41
8:A:387:U:C4	8:A:388:G:O6	2.74	0.41
8:A:407:G:H2'	8:A:408:G:C8	2.53	0.41
8:A:416:U:H2'	8:A:417:C:C6	2.55	0.41
8:A:463:G:N1	8:A:467:G:C6	2.88	0.41
8:A:475:C:O4'	8:A:509:C:C4	2.73	0.41
8:A:507:A:H1'	8:A:509:C:N3	2.36	0.41
8:A:557:C:O2'	17:J:114:LEU:HD22	2.21	0.41
8:A:565:C:H4'	8:A:1253:A:C6	2.55	0.41
8:A:572:A:H3'	8:A:573:U:O4'	2.20	0.41
8:A:579:G:O4'	8:A:2017:U:H2'	2.20	0.41
8:A:605:G:H2'	8:A:606:U:C6	2.56	0.41
8:A:607:U:H3'	8:A:619:G:N1	2.35	0.41
8:A:609:A:N6	8:A:619:G:O2'	2.47	0.41
8:A:625:G:C2	8:A:626:A:C4	3.09	0.41
8:A:664:G:C4	8:A:665:U:C5	3.08	0.41
8:A:678:C:C2	8:A:679:C:C5	3.09	0.41
8:A:806:C:P	19:L:41:ARG:HH11	2.43	0.41
8:A:822:G:OP2	8:A:946:C:H5''	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:849:A:N6	8:A:928:A:N6	2.69	0.41
8:A:876:C:C5	8:A:877:A:C8	3.09	0.41
8:A:918:A:N7	8:A:919:U:C5	2.89	0.41
8:A:924:G:N1	8:A:925:A:C5	2.89	0.41
8:A:939:G:C6	8:A:940:G:C5	3.09	0.41
8:A:1036:G:C6	8:A:1120:G:C6	3.08	0.41
8:A:1036:G:H2'	8:A:1037:G:O4'	2.20	0.41
8:A:1045:C:C5	8:A:1111:A:C5	3.09	0.41
8:A:1087:G:N3	8:A:1102:C:C4	2.88	0.41
8:A:1093:G:O4'	8:A:1097:U:O4	2.39	0.41
8:A:1095:A:C2	57:x:627:THR:CG2	3.04	0.41
8:A:1142:A:C5	8:A:1144:A:C5	3.09	0.41
8:A:1190:G:N3	8:A:1191:G:C8	2.89	0.41
8:A:1196:C:H4'	8:A:1226:A:C5	2.55	0.41
8:A:1199:U:N3	8:A:1247:A:C2	2.88	0.41
8:A:1309:G:C2	8:A:1310:G:C5	3.08	0.41
8:A:1310:G:C6	8:A:1311:G:N1	2.88	0.41
8:A:1341:G:C6	27:T:84:TYR:CE2	3.08	0.41
8:A:1356:G:O2'	8:A:1357:C:H5'	2.20	0.41
8:A:1416:G:C6	8:A:1583:A:N7	2.89	0.41
8:A:1438:U:H2'	8:A:1439:A:O4'	2.20	0.41
8:A:1471:G:C6	8:A:1472:C:N4	2.88	0.41
8:A:1524:G:C2	8:A:1525:A:C4	3.08	0.41
8:A:1570:A:C2	8:A:1571:A:C4	3.09	0.41
8:A:1649:G:O6	8:A:2009:A:N6	2.53	0.41
8:A:1651:G:H2'	8:A:1652:A:H8	1.85	0.41
8:A:1710:G:O2'	8:A:1711:A:H5'	2.21	0.41
8:A:1726:C:C2	8:A:1727:C:C6	3.09	0.41
8:A:1852:U:O5'	8:A:1852:U:H6	2.04	0.41
8:A:1917:PSU:H2'	8:A:1918:A:O4'	2.19	0.41
8:A:1919:A:C1'	34:a:1407:5MC:O2'	2.69	0.41
8:A:1945:G:N3	8:A:1946:U:C5	2.89	0.41
8:A:1956:U:O2	8:A:1956:U:H2'	2.20	0.41
8:A:1982:U:H2'	8:A:1983:G:H8	1.86	0.41
8:A:1984:G:C4	8:A:1985:C:C5	3.09	0.41
8:A:2045:C:C4	8:A:2624:G:N1	2.89	0.41
8:A:2067:G:N2	8:A:2444:G:H1'	2.36	0.41
8:A:2241:A:C2	8:A:2242:G:C4	3.09	0.41
8:A:2262:U:OP2	30:W:12:SER:CB	2.68	0.41
8:A:2288:A:C2	8:A:2325:G:C5	3.09	0.41
8:A:2298:A:OP1	13:F:70:ARG:HD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2307:G:N1	13:F:40:GLY:HA3	2.35	0.41
8:A:2392:A:H2'	8:A:2393:U:O4'	2.21	0.41
8:A:2447:G:C2	8:A:2501:C:C4	3.08	0.41
8:A:2460:U:O2	8:A:2492:U:C4	2.72	0.41
8:A:2573:C:OP1	8:A:2574:G:H5''	2.21	0.41
8:A:2594:C:C2	8:A:2595:G:C8	3.09	0.41
8:A:2598:A:C8	8:A:2599:G:H1'	2.56	0.41
8:A:2656:U:O2	8:A:2656:U:H2'	2.20	0.41
8:A:2686:G:C2	8:A:2724:U:O2	2.74	0.41
8:A:2702:G:C4	8:A:2703:C:C5	3.09	0.41
8:A:2802:G:C5	8:A:2803:G:C8	3.09	0.41
9:B:23:G:H2'	9:B:24:G:C8	2.55	0.41
9:B:66:A:H5''	9:B:67:G:OP1	2.20	0.41
9:B:95:U:H2'	9:B:96:G:C8	2.56	0.41
9:B:109:A:C6	9:B:110:C:N3	2.88	0.41
10:C:236:GLY:O	10:C:237:ARG:C	2.63	0.41
10:C:245:THR:C	10:C:247:TRP:N	2.77	0.41
10:C:250:GLN:OE1	10:C:254:LYS:HB2	2.20	0.41
11:D:207:VAL:O	11:D:209:ALA:N	2.54	0.41
12:E:180:LEU:N	12:E:180:LEU:HD23	2.35	0.41
16:I:102:ARG:HA	16:I:105:LEU:CB	2.50	0.41
17:J:37:ARG:NH2	17:J:110:PRO:HG2	2.35	0.41
17:J:58:ASN:CA	17:J:126:ALA:O	2.68	0.41
21:N:14:SER:N	21:N:17:ARG:NH1	2.69	0.41
22:O:31:THR:C	22:O:33:ARG:N	2.78	0.41
23:P:28:LYS:HB3	23:P:28:LYS:HE2	1.79	0.41
24:Q:5:ARG:CB	24:Q:8:ILE:HD11	2.50	0.41
24:Q:84:LYS:HZ2	24:Q:116:LEU:HD23	1.86	0.41
25:R:1:MET:HA	25:R:43:ASN:HA	2.02	0.41
25:R:2:TYR:CD1	25:R:13:ARG:CG	3.03	0.41
25:R:68:ARG:HB2	25:R:90:ARG:CZ	2.51	0.41
25:R:83:TYR:O	25:R:83:TYR:CD2	2.73	0.41
29:V:10:LYS:H	29:V:10:LYS:HG2	1.62	0.41
34:a:15:G:C4	34:a:16:A:C8	3.09	0.41
34:a:76:G:C5	34:a:77:A:C8	3.09	0.41
34:a:144:G:C5	34:a:179:A:C8	3.09	0.41
34:a:162:A:N7	34:a:346:G:O6	2.54	0.41
34:a:199:A:C2	34:a:219:U:O2	2.73	0.41
34:a:283:U:C2	34:a:284:C:C6	3.09	0.41
34:a:291:U:N3	34:a:310:G:C6	2.89	0.41
34:a:321:A:C2	34:a:322:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:323:U:C2	34:a:327:A:N7	2.88	0.41
34:a:337:G:C2	34:a:338:A:C5	3.09	0.41
34:a:420:U:H2'	34:a:422:C:C5	2.55	0.41
34:a:451:A:H2'	34:a:481:G:H1	1.86	0.41
34:a:454:G:C4	34:a:455:G:C8	3.08	0.41
34:a:514:C:N3	34:a:538:G:N1	2.69	0.41
34:a:520:A:H62	34:a:529:G:N2	2.18	0.41
34:a:551:U:H2'	34:a:552:U:C6	2.51	0.41
34:a:562:U:H5'	34:a:563:A:C5	2.55	0.41
34:a:579:A:H4'	48:o:53:ARG:HH22	1.85	0.41
34:a:642:A:H1'	41:h:105:THR:O	2.21	0.41
34:a:689:C:C4	34:a:690:G:N7	2.89	0.41
34:a:717:U:H2'	34:a:734:G:C8	2.56	0.41
34:a:747:A:H2'	34:a:748:G:C8	2.56	0.41
34:a:775:G:C6	34:a:776:G:C5	3.09	0.41
34:a:836:G:N3	34:a:836:G:H2'	2.34	0.41
34:a:851:G:C6	34:a:852:G:C5	3.09	0.41
34:a:894:G:N1	34:a:895:G:C5	2.88	0.41
34:a:927:G:C2	34:a:1390:U:O2	2.73	0.41
34:a:933:G:OP2	40:g:2:ARG:HB2	2.21	0.41
34:a:976:G:N2	34:a:1363:A:C4	2.88	0.41
34:a:991:U:C5	34:a:1212:U:H1'	2.56	0.41
34:a:1028:C:C4	34:a:1029:U:C2	3.09	0.41
34:a:1032:G:H3'	34:a:1034:G:N2	2.34	0.41
34:a:1053:G:H2'	34:a:1199:U:OP2	2.20	0.41
34:a:1108:G:N7	34:a:1109:C:C5	2.88	0.41
34:a:1117:A:O4'	42:i:107:ALA:HB1	2.20	0.41
34:a:1176:A:C5	34:a:1177:G:C5	3.08	0.41
34:a:1229:A:C6	34:a:1230:C:C4	3.09	0.41
34:a:1250:A:H2	34:a:1370:G:H1'	1.85	0.41
34:a:1279:G:H1'	34:a:1282:C:H42	1.85	0.41
34:a:1294:G:C6	34:a:1295:U:C4	3.08	0.41
34:a:1312:G:N7	52:s:1:PRO:HD3	2.36	0.41
34:a:1350:A:OP2	42:i:119:LYS:HD2	2.21	0.41
34:a:1371:G:H2'	34:a:1372:U:C6	2.55	0.41
34:a:1450:U:H2'	34:a:1453:G:O6	2.21	0.41
34:a:1506:U:O2	44:k:127:ARG:HB3	2.21	0.41
35:b:56:LEU:HA	35:b:59:ILE:HG12	2.02	0.41
35:b:102:ASN:O	35:b:105:THR:HG22	2.21	0.41
36:c:141:MET:SD	36:c:169:GLU:O	2.79	0.41
37:d:197:HIS:O	37:d:201:GLU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:e:45:VAL:CA	38:e:70:MET:SD	3.09	0.41
41:h:48:PHE:HA	41:h:60:LEU:HA	2.03	0.41
42:i:41:GLU:H	42:i:41:GLU:CD	2.27	0.41
44:k:110:THR:HG22	44:k:112:VAL:HG13	2.02	0.41
45:l:79:ILE:HA	45:l:101:LEU:HB3	2.02	0.41
46:m:15:VAL:HG23	46:m:33:LEU:CD2	2.51	0.41
48:o:1:SER:HA	48:o:34:GLN:HE22	1.86	0.41
48:o:69:LEU:HD11	48:o:76:ARG:CZ	2.51	0.41
50:q:21:VAL:HG12	50:q:44:HIS:CE1	2.56	0.41
56:w:6:G:C6	56:w:68:C:C4	3.09	0.41
56:w:37:MIA:S10	56:w:38:A:H1'	2.61	0.41
57:x:185:VAL:HG23	57:x:186:LYS:H	1.85	0.41
57:x:248:LYS:HB3	57:x:284:TYR:CE1	2.55	0.41
57:x:248:LYS:HG2	57:x:284:TYR:OH	2.21	0.41
57:x:269:PHE:HB3	62:x:801:GDP:C5	2.55	0.41
57:x:444:PHE:CZ	57:x:457:ILE:HB	2.55	0.41
57:x:461:GLY:H	57:x:464:HIS:CB	2.33	0.41
57:x:493:ILE:CG2	57:x:604:PHE:CD1	3.04	0.41
57:x:581:SER:O	57:x:592:PHE:CZ	2.74	0.41
57:x:638:ARG:HB2	57:x:661:GLU:HG3	2.02	0.41
57:x:691:SER:C	57:x:693:VAL:N	2.78	0.41
1:0:15:ARG:CZ	8:A:1266:G:OP2	2.68	0.41
1:0:42:ILE:HD11	21:N:100:CYS:CB	2.51	0.41
2:1:5:ARG:O	2:1:23:THR:HB	2.21	0.41
3:2:39:ARG:HD3	8:A:459:U:OP2	2.21	0.41
6:5:1:MET:N	8:A:1105:U:P	2.94	0.41
7:6:40:CYS:O	7:6:40:CYS:SG	2.78	0.41
8:A:13:A:N6	8:A:525:U:H3'	2.36	0.41
8:A:60:G:C2	8:A:74:A:C4	3.09	0.41
8:A:86:G:C2	8:A:97:C:N3	2.89	0.41
8:A:122:G:N1	8:A:123:G:C5	2.89	0.41
8:A:122:G:C6	8:A:130:C:N3	2.89	0.41
8:A:147:C:H2'	8:A:148:U:H6	1.85	0.41
8:A:186:G:C2	8:A:211:C:C4	3.09	0.41
8:A:189:G:P	31:X:25:LYS:HZ1	2.43	0.41
8:A:189:G:H1'	8:A:207:A:H61	1.86	0.41
8:A:194:G:C6	8:A:195:A:C2	3.09	0.41
8:A:289:G:C6	8:A:352:A:N1	2.89	0.41
8:A:293:U:C2	8:A:348:A:C2	3.09	0.41
8:A:317:G:H2'	8:A:318:C:H6	1.82	0.41
8:A:396:G:C5	8:A:397:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:576:U:C2	8:A:577:G:N7	2.89	0.41
8:A:588:U:N3	8:A:589:U:C4	2.89	0.41
8:A:668:A:C6	8:A:670:A:N3	2.88	0.41
8:A:677:A:N6	8:A:800:A:C2	2.87	0.41
8:A:704:G:C2'	8:A:704:G:N3	2.81	0.41
8:A:711:G:H2'	8:A:712:G:H8	1.86	0.41
8:A:723:C:H2'	8:A:724:U:O4'	2.21	0.41
8:A:764:A:C6	8:A:781:A:N1	2.89	0.41
8:A:765:C:C4	8:A:766:U:C4	3.09	0.41
8:A:774:G:H5''	10:C:47:ARG:NH2	2.35	0.41
8:A:827:U:O5'	8:A:828:U:C4	2.74	0.41
8:A:847:U:H1'	8:A:934:U:O2	2.20	0.41
8:A:938:G:N1	8:A:939:G:C5	2.89	0.41
8:A:1000:A:N6	8:A:1155:A:C8	2.89	0.41
8:A:1006:C:C2	8:A:1007:C:C6	3.09	0.41
8:A:1031:G:C6	8:A:1124:G:C6	3.09	0.41
8:A:1040:A:C6	8:A:1041:G:C8	3.09	0.41
8:A:1048:A:C4	8:A:1049:C:C5	3.09	0.41
8:A:1062:G:C8	8:A:1088:A:C8	3.09	0.41
8:A:1072:C:O2	8:A:1101:U:N3	2.54	0.41
8:A:1083:U:H4'	8:A:1084:A:N7	2.35	0.41
8:A:1130:U:C4	11:D:152:PRO:HA	2.55	0.41
8:A:1300:G:C2	8:A:1626:A:C6	3.08	0.41
8:A:1304:A:C6	8:A:1305:C:C4	3.08	0.41
8:A:1322:A:H61	8:A:1333:G:H1'	1.85	0.41
8:A:1340:U:O2	8:A:1340:U:O4'	2.37	0.41
8:A:1354:A:H2'	8:A:1355:G:O4'	2.21	0.41
8:A:1376:C:H2'	8:A:1377:G:O4'	2.19	0.41
8:A:1478:G:H2'	8:A:1479:G:H8	1.83	0.41
8:A:1549:A:C6	8:A:1550:C:C4	3.08	0.41
8:A:1608:A:C8	8:A:1611:C:N4	2.88	0.41
8:A:1681:G:C2	8:A:1762:A:C5	3.09	0.41
8:A:1689:A:C8	8:A:1700:A:C5	3.09	0.41
8:A:1691:C:N4	8:A:1697:G:N2	2.69	0.41
8:A:1709:U:H1'	8:A:2860:A:H1'	2.03	0.41
8:A:1726:C:N4	8:A:1735:A:N6	2.67	0.41
8:A:1776:G:C6	8:A:1789:A:N1	2.89	0.41
8:A:1801:A:C2	8:A:2203:U:O4	2.74	0.41
8:A:1841:U:C2	8:A:1842:G:N7	2.88	0.41
8:A:1860:G:C4	8:A:1861:G:C8	3.08	0.41
8:A:1918:A:O3'	8:A:1919:A:C8	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1979:U:C4	8:A:1980:G:N7	2.88	0.41
8:A:1998:A:C5	8:A:1999:C:C5	3.09	0.41
8:A:2024:G:OP2	8:A:2034:U:H4'	2.21	0.41
8:A:2027:G:C4	8:A:2028:U:C5	3.09	0.41
8:A:2038:G:C6	8:A:2039:U:C4	3.09	0.41
8:A:2052:A:OP1	11:D:146:ILE:HG12	2.21	0.41
8:A:2154:A:C6	8:A:2156:G:N3	2.88	0.41
8:A:2170:A:H1'	8:A:2171:A:C6	2.56	0.41
8:A:2198:A:C2	8:A:2225:A:N6	2.87	0.41
8:A:2258:C:O2	8:A:2426:A:O4'	2.39	0.41
8:A:2263:C:N4	8:A:2278:A:C6	2.89	0.41
8:A:2377:A:N1	8:A:2378:A:C2	2.88	0.41
8:A:2411:A:H2'	8:A:2412:A:C8	2.56	0.41
8:A:2414:G:C2	8:A:2415:G:C8	3.09	0.41
8:A:2469:A:C2	8:A:2482:A:H1'	2.56	0.41
8:A:2516:A:C6	8:A:2517:C:C4	3.08	0.41
8:A:2523:G:C8	8:A:2765:A:N7	2.88	0.41
8:A:2618:G:C2	8:A:2619:C:C2	3.09	0.41
8:A:2653:U:H3'	8:A:2654:A:H8	1.85	0.41
8:A:2693:G:H2'	8:A:2694:G:H8	1.85	0.41
8:A:2712:C:H6	8:A:2712:C:P	2.44	0.41
8:A:2746:U:C1'	14:G:138:GLN:CG	2.98	0.41
8:A:2792:A:C5	8:A:2793:C:C5	3.09	0.41
8:A:2812:G:C2	8:A:2813:A:C4	3.09	0.41
8:A:2819:G:N1	8:A:2828:G:C6	2.89	0.41
8:A:2835:A:C4	8:A:2879:A:C5	3.09	0.41
8:A:2849:U:O4'	8:A:2867:G:N2	2.48	0.41
9:B:18:G:C6	9:B:19:C:C4	3.08	0.41
9:B:31:C:O2'	9:B:54:G:C2	2.74	0.41
9:B:37:C:N3	9:B:49:C:O4'	2.54	0.41
9:B:51:G:C2	9:B:52:A:C4	3.08	0.41
9:B:75:G:O2'	29:V:29:ILE:HB	2.21	0.41
11:D:8:LYS:HE3	11:D:193:VAL:CG2	2.51	0.41
11:D:9:VAL:HG23	11:D:27:ILE:HA	2.03	0.41
12:E:36:ALA:O	12:E:39:ALA:HB3	2.20	0.41
12:E:175:ILE:HD11	12:E:199:MET:CE	2.51	0.41
12:E:197:GLU:O	12:E:201:ALA:HB3	2.20	0.41
13:F:3:LEU:HD13	13:F:99:PHE:CD2	2.56	0.41
13:F:72:SER:OG	56:w:56:C:C6	2.72	0.41
13:F:141:ASP:O	13:F:142:TYR:HB3	2.21	0.41
14:G:76:ILE:HA	14:G:79:THR:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:116:LEU:HD11	14:G:122:ALA:HB3	2.01	0.41
14:G:154:GLU:OE2	14:G:157:LYS:C	2.64	0.41
17:J:20:ALA:HB3	17:J:58:ASN:C	2.46	0.41
17:J:62:VAL:HG22	17:J:63:ALA:N	2.36	0.41
18:K:7:MET:SD	18:K:19:VAL:O	2.79	0.41
22:O:25:ARG:HG3	22:O:27:VAL:HG23	2.01	0.41
22:O:41:ALA:HB2	22:O:48:LEU:HD21	2.02	0.41
23:P:26:GLU:N	23:P:84:SER:O	2.45	0.41
27:T:56:GLU:OE1	27:T:88:LYS:HG2	2.21	0.41
28:U:13:LEU:HG	28:U:68:ASN:O	2.21	0.41
28:U:28:LEU:HD12	28:U:32:LYS:HB2	2.02	0.41
30:W:21:ARG:HB3	30:W:25:GLU:OE1	2.20	0.41
30:W:26:SER:HA	30:W:61:GLY:O	2.21	0.41
34:a:3:A:O3'	34:a:4:U:C6	2.74	0.41
34:a:13:U:O2	34:a:915:A:N7	2.54	0.41
34:a:19:A:C2	34:a:20:U:C2	3.09	0.41
34:a:39:G:C5	34:a:404:G:C6	3.09	0.41
34:a:47:C:O4'	34:a:365:U:C2	2.73	0.41
34:a:100:G:C6	34:a:101:A:C6	3.09	0.41
34:a:161:A:C4	34:a:162:A:C6	3.08	0.41
34:a:222:C:C2	34:a:223:A:C8	3.09	0.41
34:a:296:U:C2	34:a:297:G:C8	3.09	0.41
34:a:298:A:C5	34:a:299:G:C5	3.09	0.41
34:a:325:A:C6	34:a:326:G:C6	3.08	0.41
34:a:338:A:H2'	34:a:339:C:C6	2.56	0.41
34:a:381:C:C4	34:a:382:A:C4	3.09	0.41
34:a:402:G:C2	34:a:403:C:C2	3.08	0.41
34:a:410:G:H1'	34:a:432:A:H61	1.85	0.41
34:a:430:A:H4'	37:d:6:PRO:CB	2.51	0.41
34:a:465:A:H2'	34:a:466:A:C8	2.56	0.41
34:a:465:A:H3'	34:a:466:A:C8	2.55	0.41
34:a:576:C:C2'	34:a:578:C:OP2	2.69	0.41
34:a:596:A:H2'	34:a:597:G:H8	1.84	0.41
34:a:599:C:H5''	41:h:87:ARG:HA	2.02	0.41
34:a:645:G:C2	34:a:646:G:C8	3.09	0.41
34:a:692:U:O2'	34:a:694:A:C2	2.71	0.41
34:a:733:G:H4'	34:a:734:G:OP1	2.21	0.41
34:a:739:C:O2	48:o:45:HIS:CE1	2.74	0.41
34:a:766:A:N7	34:a:814:A:N7	2.69	0.41
34:a:858:G:N1	34:a:869:G:H3'	2.36	0.41
34:a:925:G:C6	34:a:1392:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:988:G:C5	34:a:989:U:C5	3.09	0.41
34:a:1015:G:O2'	34:a:1218:C:H4'	2.20	0.41
34:a:1032:G:N3	34:a:1034:G:C2	2.89	0.41
34:a:1110:A:C6	34:a:1111:A:C6	3.09	0.41
34:a:1114:C:C4	34:a:1115:U:C4	3.09	0.41
34:a:1258:G:C6	34:a:1259:C:C4	3.09	0.41
34:a:1292:G:N1	34:a:1293:C:C4	2.89	0.41
34:a:1336:C:H4'	34:a:1337:G:C4	2.55	0.41
34:a:1401:G:C2'	34:a:1402:4OC:H6	2.51	0.41
34:a:1426:G:C4	34:a:1475:G:C2	3.09	0.41
34:a:1430:A:C5	34:a:1431:A:C5	3.09	0.41
34:a:1438:G:C2	34:a:1464:U:C2	3.08	0.41
35:b:34:ARG:HG3	35:b:37:VAL:HG13	2.02	0.41
35:b:169:HIS:HA	35:b:172:ILE:CG1	2.51	0.41
35:b:186:VAL:HG11	35:b:192:PRO:HB3	2.03	0.41
36:c:81:GLU:HA	36:c:84:GLU:CG	2.50	0.41
37:d:84:ASN:OD1	37:d:87:GLU:N	2.32	0.41
37:d:103:ARG:NH1	37:d:110:ARG:HH22	2.19	0.41
37:d:104:MET:CB	37:d:106:PHE:HE2	2.33	0.41
38:e:78:GLY:O	38:e:119:VAL:HA	2.21	0.41
39:f:8:PHE:HA	39:f:87:SER:HA	2.02	0.41
39:f:49:TYR:CE2	51:r:65:SER:HA	2.55	0.41
41:h:28:SER:OG	41:h:29:SER:N	2.53	0.41
41:h:88:LYS:HE2	41:h:119:GLY:HA2	2.03	0.41
44:k:44:ALA:CB	44:k:69:CYS:HB2	2.47	0.41
44:k:125:LYS:HD2	54:u:36:PHE:CD2	2.55	0.41
45:l:107:LYS:HA	45:l:107:LYS:HE2	2.03	0.41
47:n:51:LEU:O	47:n:52:PRO:C	2.64	0.41
47:n:62:ASN:ND2	47:n:73:PHE:CD2	2.89	0.41
48:o:77:TYR:CD2	48:o:78:THR:HG23	2.55	0.41
49:p:50:THR:HG22	49:p:51:ARG:N	2.36	0.41
57:x:2:ARG:HH21	57:x:341:VAL:HB	1.85	0.41
57:x:92:VAL:O	57:x:92:VAL:HG22	2.20	0.41
57:x:182:VAL:HG11	57:x:214:ALA:CB	2.50	0.41
57:x:199:VAL:O	57:x:199:VAL:HG12	2.21	0.41
57:x:316:PHE:HA	57:x:340:GLY:CA	2.43	0.41
57:x:350:ASN:HB3	57:x:353:LYS:CB	2.46	0.41
57:x:471:ARG:HG2	57:x:474:ARG:NH2	2.36	0.41
57:x:495:GLN:N	57:x:495:GLN:CD	2.78	0.41
59:z:5:U:C4	59:z:6:U:C4	3.08	0.41
2:1:8:ILE:CD1	2:1:22:THR:HG23	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:13:SER:CA	2:1:49:LYS:HE3	2.50	0.41
3:2:4:THR:HG21	8:A:789:A:O5'	2.21	0.41
3:2:18:PHE:N	8:A:126:A:OP2	2.54	0.41
5:4:23:ILE:HB	5:4:38:GLY:O	2.21	0.41
8:A:1:G:C6	8:A:2:G:O6	2.73	0.41
8:A:16:C:O2'	8:A:17:G:H5'	2.20	0.41
8:A:30:G:C4	8:A:31:C:C5	3.09	0.41
8:A:39:G:H2'	8:A:40:U:H6	1.82	0.41
8:A:43:G:C2	8:A:437:U:N3	2.89	0.41
8:A:54:G:N1	8:A:55:G:C5	2.89	0.41
8:A:66:C:N4	8:A:89:A:N6	2.68	0.41
8:A:74:A:O2'	8:A:88:G:N7	2.49	0.41
8:A:103:A:C5	8:A:104:A:C8	3.09	0.41
8:A:181:A:N1	8:A:435:C:C5	2.89	0.41
8:A:197:A:C2	8:A:2430:A:C2	3.09	0.41
8:A:220:G:H22	8:A:428:A:P	2.39	0.41
8:A:247:G:C8	8:A:249:C:C4	3.09	0.41
8:A:249:C:C2'	19:L:63:LYS:NZ	2.81	0.41
8:A:294:A:C5	8:A:345:A:C4	3.09	0.41
8:A:301:G:C5	8:A:302:C:C4	3.09	0.41
8:A:310:A:C6	8:A:312:G:N3	2.89	0.41
8:A:311:A:C8	8:A:332:A:C5	3.08	0.41
8:A:311:A:H62	8:A:328:U:H2'	1.86	0.41
8:A:313:G:C5	8:A:314:C:C4	3.09	0.41
8:A:319:G:C2	8:A:333:G:C2	3.09	0.41
8:A:374:A:N3	8:A:401:A:C2	2.89	0.41
8:A:379:G:N3	31:X:28:PHE:CE2	2.89	0.41
8:A:388:G:C8	8:A:390:U:C5	3.09	0.41
8:A:407:G:C2	8:A:408:G:C8	3.09	0.41
8:A:431:U:O2	8:A:432:A:C8	2.74	0.41
8:A:458:G:HO2'	8:A:459:U:H5	1.66	0.41
8:A:464:U:C4	8:A:788:A:C5	3.09	0.41
8:A:467:G:N2	8:A:468:G:C4	2.89	0.41
8:A:481:G:C5	8:A:507:A:C2	3.09	0.41
8:A:494:G:O2'	8:A:495:G:H5'	2.21	0.41
8:A:495:G:C6	8:A:496:G:C5	3.09	0.41
8:A:500:G:H22	8:A:503:A:P	2.36	0.41
8:A:517:C:O2'	26:S:18:ARG:NH1	2.49	0.41
8:A:528:A:H2'	8:A:2042:A:N1	2.36	0.41
8:A:560:C:C2	8:A:561:G:C8	3.09	0.41
8:A:563:A:N6	8:A:578:G:H1	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:564:C:O4'	24:Q:36:GLN:CD	2.63	0.41
8:A:601:C:HO2'	8:A:605:G:H5''	1.86	0.41
8:A:607:U:N3	8:A:608:A:C8	2.89	0.41
8:A:627:A:N1	8:A:636:G:H2'	2.36	0.41
8:A:636:G:C2	19:L:111:ILE:CD1	3.04	0.41
8:A:637:A:O5'	19:L:112:LEU:HB3	2.21	0.41
8:A:660:C:H2'	8:A:661:A:H8	1.85	0.41
8:A:741:U:C4	8:A:757:G:N1	2.89	0.41
8:A:764:A:N3	10:C:211:ARG:HD3	2.35	0.41
8:A:768:G:C2	8:A:769:U:C2	3.08	0.41
8:A:806:C:P	19:L:41:ARG:NH1	2.94	0.41
8:A:820:A:H2'	8:A:821:A:O4'	2.20	0.41
8:A:827:U:O4	8:A:2430:A:C4	2.74	0.41
8:A:828:U:H4'	8:A:831:G:C6	2.55	0.41
8:A:841:G:H2'	8:A:842:U:H6	1.86	0.41
8:A:844:A:N3	8:A:845:A:N7	2.69	0.41
8:A:845:A:C2	8:A:847:U:C5	3.07	0.41
8:A:858:G:N3	8:A:2268:A:N3	2.69	0.41
8:A:869:G:C6	8:A:909:A:N6	2.89	0.41
8:A:877:A:H1'	8:A:901:C:N4	2.35	0.41
8:A:882:G:N2	8:A:896:A:N7	2.59	0.41
8:A:890:C:H2'	8:A:891:G:N9	2.36	0.41
8:A:923:G:O2'	8:A:924:G:H5'	2.20	0.41
8:A:949:G:C2	8:A:950:G:C5	3.09	0.41
8:A:953:G:N2	8:A:965:C:C2	2.89	0.41
8:A:953:G:N3	8:A:954:G:C8	2.89	0.41
8:A:962:G:C5	8:A:963:U:C5	3.09	0.41
8:A:974:G:N9	8:A:989:G:C2	2.88	0.41
8:A:993:G:H2'	8:A:994:C:C6	2.55	0.41
8:A:1012:U:OP2	24:Q:69:ARG:NH1	2.54	0.41
8:A:1028:A:H61	8:A:1125:G:C2'	2.33	0.41
8:A:1037:G:N1	8:A:1119:U:C2	2.89	0.41
8:A:1056:G:H1'	8:A:1103:A:C6	2.56	0.41
8:A:1064:C:C4	8:A:1068:G:O3'	2.74	0.41
8:A:1082:U:C6	8:A:1083:U:N3	2.88	0.41
8:A:1137:G:C4	8:A:1138:G:C8	3.09	0.41
8:A:1139:G:C2	8:A:1140:C:C2	3.09	0.41
8:A:1196:C:H2'	8:A:1197:G:O4'	2.21	0.41
8:A:1205:A:C6	12:E:165:HIS:CG	3.09	0.41
8:A:1224:U:H4'	25:R:88:GLY:CA	2.51	0.41
8:A:1227:G:C5	8:A:1228:G:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1260:A:H2'	8:A:1261:C:C6	2.56	0.41
8:A:1275:A:H2	8:A:1295:C:O2	2.03	0.41
8:A:1296:G:C4	8:A:1645:G:C2	3.09	0.41
8:A:1305:C:H2'	8:A:1306:C:O4'	2.21	0.41
8:A:1310:G:C5	8:A:1311:G:C6	3.09	0.41
8:A:1337:G:C2	8:A:1338:G:C4	3.09	0.41
8:A:1337:G:C6	8:A:1338:G:C5	3.08	0.41
8:A:1362:C:H2'	8:A:1363:C:H6	1.85	0.41
8:A:1394:U:C4	8:A:1395:A:C6	3.09	0.41
8:A:1399:C:O2'	8:A:1400:U:H5'	2.21	0.41
8:A:1419:A:C4	8:A:1421:G:C8	3.09	0.41
8:A:1448:G:N1	8:A:1464:G:C6	2.89	0.41
8:A:1459:G:C2'	8:A:1460:U:H5''	2.51	0.41
8:A:1470:A:N6	8:A:1521:G:C2'	2.83	0.41
8:A:1471:G:C6	8:A:1472:C:C4	3.09	0.41
8:A:1482:G:C6	8:A:1483:G:C5	3.09	0.41
8:A:1487:U:N3	8:A:1503:A:C2	2.89	0.41
8:A:1507:C:H2'	8:A:1508:A:O4'	2.20	0.41
8:A:1572:A:C6	8:A:1573:G:N7	2.88	0.41
8:A:1585:C:C4	8:A:1586:A:C4	3.09	0.41
8:A:1586:A:C5	8:A:1587:G:C5	3.09	0.41
8:A:1587:G:C6	8:A:1588:G:C6	3.09	0.41
8:A:1641:A:C8	8:A:1642:G:C8	3.09	0.41
8:A:1641:A:H3'	8:A:1642:G:H8	1.86	0.41
8:A:1654:A:H1'	8:A:2823:A:H5'	2.01	0.41
8:A:1658:C:C5'	11:D:138:LEU:CD2	2.99	0.41
8:A:1712:U:O5'	8:A:1713:A:H2'	2.21	0.41
8:A:1726:C:O2'	8:A:1727:C:H5'	2.21	0.41
8:A:1754:A:O3'	23:P:102:ARG:NH2	2.52	0.41
8:A:1759:A:H2'	8:A:1760:C:C6	2.56	0.41
8:A:1773:A:O4'	8:A:1829:A:C8	2.74	0.41
8:A:1799:G:O6	10:C:177:SER:CB	2.69	0.41
8:A:1839:G:C5	8:A:1840:G:C8	3.08	0.41
8:A:1839:G:N2	8:A:1840:G:H1'	2.36	0.41
8:A:1845:G:C6	8:A:1896:G:N1	2.89	0.41
8:A:1845:G:H2'	8:A:1846:G:C8	2.55	0.41
8:A:1846:G:H2'	8:A:1847:G:N9	2.36	0.41
8:A:1848:A:C6	8:A:1849:G:C4	3.09	0.41
8:A:1879:C:O5'	8:A:1879:C:H6	2.04	0.41
8:A:1903:G:N1	8:A:1904:G:C5	2.88	0.41
8:A:1912:A:C2	8:A:1919:A:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1917:PSU:N3	8:A:1918:A:C5	2.88	0.41
8:A:1929:G:O5'	8:A:1929:G:N3	2.54	0.41
8:A:1947:C:O2'	8:A:1948:G:H5'	2.21	0.41
8:A:1984:G:C6	8:A:1985:C:N4	2.89	0.41
8:A:1992:G:C2	8:A:1997:C:C2	3.09	0.41
8:A:1998:A:C2	8:A:1999:C:C2	3.09	0.41
8:A:1999:C:H5''	8:A:2723:C:O2'	2.21	0.41
8:A:2001:C:H1'	8:A:2689:U:C4	2.55	0.41
8:A:2049:G:N2	11:D:161:MET:CE	2.84	0.41
8:A:2059:A:H4'	12:E:64:GLY:O	2.20	0.41
8:A:2078:C:O4'	8:A:2434:A:O4'	2.39	0.41
8:A:2133:G:C5	8:A:2155:U:O2'	2.66	0.41
8:A:2135:A:H61	8:A:2160:C:H5''	1.86	0.41
8:A:2191:A:C5	8:A:2192:U:C5	3.09	0.41
8:A:2204:G:C4	8:A:2205:A:C8	3.09	0.41
8:A:2209:G:C5'	8:A:2210:U:H5''	2.50	0.41
8:A:2246:G:H2'	8:A:2247:A:C8	2.50	0.41
8:A:2250:G:N2	20:M:83:GLY:HA3	2.36	0.41
8:A:2277:G:C5	8:A:2278:A:C8	3.09	0.41
8:A:2284:A:O2'	8:A:2288:A:C6	2.65	0.41
8:A:2298:A:H62	8:A:2318:G:N2	2.18	0.41
8:A:2335:A:C8	8:A:2337:G:C6	3.09	0.41
8:A:2355:G:C1'	30:W:32:ILE:CD1	2.97	0.41
8:A:2389:G:H5''	8:A:2390:U:O4'	2.20	0.41
8:A:2431:U:O2	8:A:2433:A:C8	2.74	0.41
8:A:2508:G:C4	8:A:2509:G:C8	3.09	0.41
8:A:2508:G:N2	8:A:2509:G:H1'	2.36	0.41
8:A:2525:G:H2'	8:A:2526:G:C8	2.56	0.41
8:A:2530:A:N7	14:G:171:LYS:CE	2.84	0.41
8:A:2572:A:O2'	8:A:2575:C:OP1	2.37	0.41
8:A:2582:G:N3	8:A:2583:G:C8	2.89	0.41
8:A:2586:U:H2'	8:A:2587:A:C8	2.56	0.41
8:A:2630:G:C4	8:A:2631:G:C8	3.09	0.41
8:A:2630:G:H1'	8:A:2894:G:N3	2.36	0.41
8:A:2640:G:C6	8:A:2641:G:C5	3.09	0.41
8:A:2653:U:OP2	8:A:2654:A:O2'	2.34	0.41
8:A:2670:A:H2'	8:A:2671:G:H8	1.86	0.41
8:A:2682:A:C2	8:A:2683:C:C1'	3.04	0.41
8:A:2718:G:N3	8:A:2718:G:H2'	2.35	0.41
8:A:2729:G:C6	8:A:2730:C:C4	3.09	0.41
8:A:2737:G:C2	8:A:2738:A:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2739:U:C5'	8:A:2763:G:O6	2.68	0.41
8:A:2836:U:C4	8:A:2837:A:N7	2.88	0.41
8:A:2848:G:H2'	8:A:2867:G:H22	1.86	0.41
8:A:2887:A:C6	8:A:2888:C:C5	3.09	0.41
9:B:9:G:C6	9:B:112:G:C5	3.09	0.41
9:B:26:C:C4	9:B:27:C:C5	3.08	0.41
9:B:27:C:O3'	22:O:36:TYR:OH	2.39	0.41
9:B:33:G:C6	9:B:50:A:N6	2.88	0.41
9:B:44:G:C2	9:B:48:U:O2	2.73	0.41
9:B:76:G:C3'	29:V:21:ARG:HH22	2.30	0.41
9:B:76:G:O4'	29:V:88:HIS:CG	2.74	0.41
9:B:85:G:N2	9:B:92:C:C2	2.89	0.41
9:B:89:U:H5'	9:B:90:C:O4'	2.21	0.41
10:C:40:GLY:HA3	10:C:42:ARG:HH11	1.86	0.41
11:D:1:MET:HE3	11:D:104:VAL:CG2	2.51	0.41
11:D:40:LEU:HD12	11:D:46:ARG:HG2	2.02	0.41
12:E:23:PHE:HB2	12:E:114:ARG:HH21	1.85	0.41
13:F:121:PHE:CD1	13:F:127:TYR:HD1	2.39	0.41
14:G:27:GLY:HA3	14:G:78:VAL:CB	2.51	0.41
14:G:85:LYS:NZ	14:G:131:VAL:HG22	2.36	0.41
14:G:155:PRO:O	14:G:170:THR:CA	2.68	0.41
15:H:93:SER:HB2	15:H:121:VAL:HG12	2.03	0.41
17:J:5:THR:HG23	17:J:7:LYS:NZ	2.36	0.41
17:J:69:ARG:HD3	17:J:89:PHE:CD1	2.56	0.41
19:L:82:LEU:CD1	19:L:116:VAL:HB	2.51	0.41
19:L:110:VAL:HB	19:L:127:VAL:HG22	2.03	0.41
21:N:10:LEU:HB3	21:N:12:ARG:NH2	2.36	0.41
21:N:61:ALA:O	21:N:65:LEU:HD13	2.20	0.41
21:N:61:ALA:O	21:N:65:LEU:HD12	2.21	0.41
21:N:92:GLY:HA2	21:N:94:TYR:CZ	2.55	0.41
21:N:103:ARG:HD3	21:N:110:MET:HE2	2.03	0.41
22:O:35:ILE:HG22	22:O:53:THR:CG2	2.51	0.41
22:O:79:ALA:CB	22:O:115:LEU:HD13	2.47	0.41
23:P:24:THR:HB	23:P:87:ARG:HB3	2.02	0.41
23:P:56:SER:O	23:P:75:THR:HB	2.21	0.41
24:Q:106:THR:O	24:Q:110:GLU:HG2	2.21	0.41
25:R:81:LYS:O	25:R:82:HIS:C	2.64	0.41
26:S:2:GLU:HA	26:S:108:SER:HB2	2.03	0.41
26:S:72:THR:H	26:S:72:THR:HG1	1.61	0.41
27:T:30:ILE:HD11	27:T:32:LEU:HD21	2.03	0.41
27:T:31:VAL:HG13	27:T:83:ALA:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:41:VAL:O	28:U:59:GLU:HA	2.21	0.41
28:U:84:PHE:HA	28:U:92:VAL:O	2.20	0.41
30:W:8:ASN:C	30:W:10:ARG:NH1	2.79	0.41
31:X:5:GLN:CD	31:X:48:LEU:HD23	2.45	0.41
32:Y:15:ASN:O	32:Y:19:LEU:HB3	2.20	0.41
33:Z:52:PHE:CD2	33:Z:53:MET:N	2.89	0.41
34:a:12:U:H3	34:a:22:G:H1	1.69	0.41
34:a:31:G:N2	34:a:47:C:OP1	2.54	0.41
34:a:33:A:C5	34:a:34:C:C5	3.09	0.41
34:a:37:U:O2	34:a:547:A:C2	2.73	0.41
34:a:92:U:H2'	34:a:93:U:C6	2.56	0.41
34:a:94:G:C5'	34:a:95:C:C5	3.03	0.41
34:a:119:A:N6	34:a:287:U:C2'	2.83	0.41
34:a:123:U:H2'	34:a:124:C:H6	1.85	0.41
34:a:148:G:C4	34:a:149:A:C8	3.09	0.41
34:a:152:A:C6	34:a:170:U:N3	2.75	0.41
34:a:184:G:O2'	53:t:68:LYS:NZ	2.54	0.41
34:a:230:G:N2	34:a:231:U:C2	2.89	0.41
34:a:232:G:H2'	34:a:233:C:H6	1.85	0.41
34:a:249:U:C2	34:a:276:G:C2	3.09	0.41
34:a:250:A:C4	34:a:252:U:C2	3.09	0.41
34:a:255:G:C4	34:a:256:U:C5	3.09	0.41
34:a:264:C:N4	34:a:265:G:C6	2.89	0.41
34:a:266:G:H3'	50:q:68:LYS:HB2	2.03	0.41
34:a:275:G:C6	34:a:276:G:C5	3.09	0.41
34:a:302:G:O2'	34:a:556:C:H5''	2.21	0.41
34:a:355:C:N3	34:a:356:A:N7	2.69	0.41
34:a:486:U:H6	34:a:486:U:P	2.44	0.41
34:a:511:C:C4	34:a:541:G:N2	2.89	0.41
34:a:521:G:C6	34:a:522:C:C4	3.09	0.41
34:a:521:G:H1'	34:a:536:C:O2'	2.21	0.41
34:a:562:U:O2	45:l:11:ARG:HA	2.21	0.41
34:a:573:A:OP2	34:a:574:A:OP2	2.39	0.41
34:a:596:A:H2'	34:a:597:G:C8	2.56	0.41
34:a:596:A:N1	34:a:645:G:C4	2.88	0.41
34:a:645:G:C4	34:a:646:G:C8	3.09	0.41
34:a:667:G:O2'	48:o:48:ASP:HA	2.21	0.41
34:a:684:U:H2'	34:a:685:G:C8	2.55	0.41
34:a:686:U:O4	34:a:703:G:C4	2.74	0.41
34:a:710:G:C4	34:a:711:G:C8	3.09	0.41
34:a:738:C:OP1	39:f:2:ARG:NH2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:745:G:C6	34:a:746:A:N6	2.89	0.41
34:a:765:G:C2	34:a:812:G:O2'	2.69	0.41
34:a:775:G:H2'	34:a:776:G:O4'	2.21	0.41
34:a:794:A:H2'	34:a:795:C:H6	1.81	0.41
34:a:832:G:N1	34:a:833:G:C5	2.88	0.41
34:a:834:U:H3	34:a:852:G:H1	1.67	0.41
34:a:842:U:H2'	34:a:845:A:OP2	2.21	0.41
34:a:843:U:P	34:a:846:G:C8	3.14	0.41
34:a:861:G:H2'	34:a:862:C:H6	1.84	0.41
34:a:892:A:C6	34:a:907:A:C8	3.09	0.41
34:a:895:G:C6	34:a:896:C:C4	3.09	0.41
34:a:902:G:C4	34:a:903:G:C8	3.08	0.41
34:a:909:A:C6	34:a:910:C:C2	3.08	0.41
34:a:920:U:O2'	34:a:1080:A:C6	2.74	0.41
34:a:929:G:C5	34:a:930:C:C5	3.09	0.41
34:a:933:G:OP2	40:g:2:ARG:CG	2.67	0.41
34:a:937:A:C6	34:a:938:A:N7	2.89	0.41
34:a:949:A:C4	34:a:950:U:C6	3.08	0.41
34:a:976:G:P	34:a:1358:U:O2'	2.79	0.41
34:a:994:A:C1'	34:a:1216:A:HO2'	2.32	0.41
34:a:1009:U:H2'	34:a:1010:U:C6	2.56	0.41
34:a:1014:A:C6	34:a:1015:G:N1	2.88	0.41
34:a:1016:A:C4'	34:a:1218:C:C4'	2.98	0.41
34:a:1048:G:OP1	47:n:3:GLN:NE2	2.54	0.41
34:a:1057:G:C2	34:a:1204:A:C2	3.09	0.41
34:a:1060:U:N3	34:a:1198:G:N1	2.68	0.41
34:a:1071:C:C4	34:a:1105:A:N1	2.89	0.41
34:a:1073:U:H2'	34:a:1074:G:O4'	2.20	0.41
34:a:1089:G:H2'	34:a:1090:U:O4'	2.21	0.41
34:a:1105:A:C4	34:a:1106:G:C8	3.09	0.41
34:a:1114:C:H2'	34:a:1115:U:C6	2.55	0.41
34:a:1144:G:N2	34:a:1146:A:H62	2.18	0.41
34:a:1152:A:C4	34:a:1153:G:C8	3.09	0.41
34:a:1160:G:C4'	35:b:130:LYS:HE3	2.49	0.41
34:a:1161:C:N3	34:a:1162:C:C5	2.88	0.41
34:a:1166:G:C1'	34:a:1170:A:H61	2.34	0.41
34:a:1186:G:C5	34:a:1187:G:C8	3.08	0.41
34:a:1216:A:C6	34:a:1217:C:N4	2.88	0.41
34:a:1221:G:H4'	52:s:76:THR:CG2	2.51	0.41
34:a:1312:G:C6	34:a:1326:U:C4	3.08	0.41
34:a:1348:U:OP1	42:i:111:GLU:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1379:G:H2'	34:a:1380:U:C6	2.56	0.41
34:a:1397:C:H1'	59:z:9:U:C6	2.54	0.41
34:a:1404:C:H6	34:a:1404:C:O5'	2.04	0.41
34:a:1413:A:H2'	34:a:1414:U:H6	1.86	0.41
34:a:1439:G:C2	34:a:1463:U:O2	2.74	0.41
34:a:1488:G:H2'	34:a:1489:G:H8	1.82	0.41
34:a:1509:C:H2'	34:a:1510:C:H6	1.86	0.41
35:b:44:LYS:C	35:b:47:PRO:HD2	2.45	0.41
35:b:68:PHE:HB2	35:b:83:ALA:HB2	2.03	0.41
35:b:69:VAL:O	35:b:163:ILE:HG23	2.20	0.41
35:b:107:ARG:O	35:b:110:ILE:HG22	2.21	0.41
35:b:169:HIS:HA	35:b:172:ILE:CD1	2.50	0.41
35:b:182:VAL:HG23	35:b:196:ASP:H	1.86	0.41
36:c:28:PHE:CZ	47:n:94:PRO:HD2	2.55	0.41
36:c:39:ARG:NH2	36:c:56:ILE:CG1	2.83	0.41
36:c:150:VAL:O	36:c:166:TRP:HA	2.20	0.41
36:c:150:VAL:HA	36:c:199:VAL:HA	2.02	0.41
37:d:11:SER:HA	37:d:18:LEU:CD1	2.50	0.41
37:d:63:ILE:HG22	37:d:64:TYR:CD1	2.55	0.41
37:d:78:ALA:HB1	37:d:85:THR:O	2.20	0.41
37:d:168:THR:C	37:d:183:ARG:NH1	2.79	0.41
38:e:65:LYS:HE2	38:e:65:LYS:HB2	1.86	0.41
38:e:149:PRO:HA	38:e:152:VAL:HG12	2.02	0.41
39:f:18:VAL:HG12	39:f:22:ILE:HD11	2.02	0.41
39:f:93:LYS:HG3	39:f:94:HIS:CD2	2.56	0.41
40:g:24:LYS:HG2	40:g:28:ILE:HG13	2.03	0.41
41:h:4:ASP:OD2	41:h:7:ALA:HB2	2.21	0.41
42:i:22:PRO:HA	42:i:60:LEU:HA	2.03	0.41
42:i:60:LEU:HD23	42:i:62:LEU:CD2	2.50	0.41
44:k:33:ILE:HG22	44:k:41:LEU:HD12	2.03	0.41
44:k:71:ASP:CB	44:k:74:LYS:HE3	2.50	0.41
44:k:122:PRO:HG2	54:u:37:TYR:CA	2.51	0.41
47:n:15:LEU:HD21	47:n:52:PRO:HG2	2.02	0.41
47:n:64:CYS:HB2	47:n:67:THR:CG2	2.51	0.41
47:n:81:ARG:NH1	47:n:82:ILE:CD1	2.81	0.41
49:p:15:PRO:HB2	49:p:17:TYR:CE1	2.55	0.41
50:q:66:LEU:CG	50:q:70:LYS:O	2.69	0.41
52:s:20:LYS:N	52:s:20:LYS:HD3	2.35	0.41
52:s:46:LEU:HD23	52:s:46:LEU:HA	1.67	0.41
54:u:3:ILE:C	54:u:5:VAL:HG23	2.45	0.41
54:u:28:LEU:HD12	54:u:28:LEU:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:v:1:C:C2'	55:v:2:G:O5'	2.68	0.41
55:v:38:A:C8	55:v:39:C:C5	3.08	0.41
56:w:29:G:C6	56:w:30:G:C5	3.09	0.41
57:x:165:PRO:O	57:x:167:PRO:HD3	2.21	0.41
57:x:193:ASN:HB2	57:x:200:THR:HG23	2.02	0.41
57:x:207:PRO:O	57:x:208:ALA:C	2.63	0.41
57:x:213:LEU:C	57:x:213:LEU:HD12	2.45	0.41
57:x:270:LYS:HE2	57:x:270:LYS:HA	2.02	0.41
57:x:329:VAL:O	57:x:329:VAL:HG12	2.20	0.41
57:x:395:THR:HG21	57:x:404:ILE:CA	2.50	0.41
57:x:443:SER:HA	57:x:460:MET:HE3	2.02	0.41
57:x:471:ARG:O	57:x:475:GLU:HG3	2.20	0.41
57:x:500:VAL:HG22	57:x:519:ILE:HG13	2.02	0.41
57:x:504:HIS:CD2	57:x:594:LEU:HD22	2.55	0.41
57:x:622:THR:O	57:x:650:GLY:CA	2.66	0.41
57:x:662:MET:CE	57:x:681:MET:HB3	2.51	0.41
57:x:670:ARG:HA	57:x:675:GLY:HA2	2.03	0.41
59:z:4:U:C2	59:z:5:U:C5	3.09	0.41
3:2:18:PHE:CG	8:A:126:A:C8	3.09	0.41
3:2:39:ARG:NH2	8:A:468:G:C6	2.89	0.41
5:4:20:ASP:HA	8:A:2757:A:P	2.60	0.41
7:6:48:GLN:O	7:6:49:ARG:CB	2.67	0.41
8:A:184:C:O5'	8:A:184:C:H6	2.03	0.41
8:A:190:A:H2'	8:A:191:A:C8	2.56	0.41
8:A:226:A:C2	8:A:227:A:C4	3.09	0.41
8:A:333:G:C6	8:A:334:C:C4	3.09	0.41
8:A:419:U:H6	8:A:419:U:O5'	2.03	0.41
8:A:449:A:H4'	24:Q:2:ARG:NH1	2.36	0.41
8:A:465:G:H21	8:A:683:U:H1'	1.85	0.41
8:A:469:G:C8	8:A:469:G:C3'	3.04	0.41
8:A:476:G:O2'	8:A:480:A:N6	2.53	0.41
8:A:476:G:N2	8:A:479:A:C8	2.89	0.41
8:A:528:A:N1	8:A:2043:C:C5'	2.84	0.41
8:A:556:A:H2'	8:A:557:C:O4'	2.21	0.41
8:A:570:G:C6	8:A:2030:6MZ:N1	2.89	0.41
8:A:571:U:HO2'	8:A:573:U:P	2.41	0.41
8:A:590:A:H2'	8:A:591:U:H6	1.82	0.41
8:A:602:A:C2	8:A:656:G:C5	3.09	0.41
8:A:611:C:H2'	8:A:612:G:C8	2.56	0.41
8:A:615:U:N3	12:E:35:TYR:CE1	2.89	0.41
8:A:647:G:C4	8:A:648:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:657:U:H2'	8:A:658:U:H6	1.79	0.41
8:A:751:A:C6	8:A:789:A:C6	3.09	0.41
8:A:765:C:H2'	8:A:766:U:C6	2.55	0.41
8:A:776:G:H22	8:A:2072:C:H5'	1.86	0.41
8:A:783:A:O3'	8:A:2588:G:H4'	2.21	0.41
8:A:826:U:O2'	19:L:53:GLY:HA3	2.21	0.41
8:A:831:G:N1	8:A:832:U:C2	2.89	0.41
8:A:848:C:C1'	8:A:934:U:O4'	2.69	0.41
8:A:900:A:C2	8:A:901:C:H1'	2.56	0.41
8:A:907:G:OP1	20:M:23:GLY:HA2	2.21	0.41
8:A:928:A:C6	8:A:929:U:C4	3.09	0.41
8:A:998:C:OP1	24:Q:91:ARG:NH2	2.54	0.41
8:A:1005:C:N4	8:A:1143:A:N3	2.68	0.41
8:A:1060:U:O4'	8:A:1062:G:H5'	2.21	0.41
8:A:1076:C:H1'	16:I:90:GLY:HA2	2.03	0.41
8:A:1125:G:H2'	8:A:1126:A:N7	2.35	0.41
8:A:1142:A:C5	8:A:1144:A:N7	2.88	0.41
8:A:1189:A:C2	8:A:1190:G:H1'	2.56	0.41
8:A:1196:C:O4'	8:A:1226:A:C4	2.74	0.41
8:A:1214:A:C6	8:A:1215:G:C4	3.08	0.41
8:A:1264:A:C8	8:A:1265:A:C8	3.09	0.41
8:A:1266:G:H22	8:A:2012:G:C3'	2.33	0.41
8:A:1275:A:C2	8:A:1295:C:O2	2.74	0.41
8:A:1278:C:O2'	8:A:1279:G:H5'	2.20	0.41
8:A:1388:G:C6	8:A:1389:G:C6	3.08	0.41
8:A:1392:A:C6	8:A:1393:A:N6	2.89	0.41
8:A:1452:G:O2'	8:A:2702:G:N7	2.55	0.41
8:A:1465:G:C2	8:A:1466:U:C2	3.09	0.41
8:A:1476:U:O4	8:A:1515:A:C8	2.74	0.41
8:A:1566:A:C6	10:C:212:TRP:CE3	3.09	0.41
8:A:1608:A:C8	8:A:1611:C:C4	3.08	0.41
8:A:1668:A:O4'	8:A:1669:A:C6	2.74	0.41
8:A:1678:A:C4	8:A:1679:A:C8	3.09	0.41
8:A:1780:A:C2'	8:A:1781:U:H2'	2.51	0.41
8:A:1790:C:H2'	8:A:1791:A:C5	2.56	0.41
8:A:1794:A:C6	8:A:1826:G:C6	3.09	0.41
8:A:1871:A:N6	8:A:1872:A:N1	2.69	0.41
8:A:1871:A:H3'	8:A:1872:A:C8	2.56	0.41
8:A:1945:G:C6	8:A:1946:U:C4	3.08	0.41
8:A:2046:G:C6	8:A:2623:G:C5	3.09	0.41
8:A:2087:G:C2	8:A:2088:A:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2090:A:N1	8:A:2230:G:C6	2.89	0.41
8:A:2270:A:C6	8:A:2271:G:C5	3.08	0.41
8:A:2298:A:C2	8:A:2321:U:N3	2.89	0.41
8:A:2303:G:C2	8:A:2304:G:C4	3.09	0.41
8:A:2355:G:H1'	30:W:32:ILE:HD12	2.00	0.41
8:A:2418:A:H2'	8:A:2419:U:O4'	2.21	0.41
8:A:2472:G:H1	8:A:2475:C:H2'	1.85	0.41
8:A:2473:U:C6	8:A:2474:U:C6	3.09	0.41
8:A:2512:C:H42	8:A:2575:C:H42	1.69	0.41
8:A:2589:A:C2	8:A:2590:A:C5	3.09	0.41
8:A:2649:C:O2	8:A:2672:U:O2	2.39	0.41
8:A:2666:C:C4	8:A:2667:C:C4	3.09	0.41
8:A:2741:A:C8	8:A:2742:G:C8	3.09	0.41
8:A:2742:G:H2'	8:A:2743:U:H6	1.86	0.41
8:A:2776:A:C2	8:A:2778:A:C4	3.09	0.41
8:A:2836:U:C2	8:A:2837:A:C8	3.08	0.41
8:A:2842:G:N2	8:A:2876:G:C4	2.89	0.41
8:A:2848:G:C2	8:A:2867:G:C2	3.09	0.41
8:A:2848:G:H22	8:A:2867:G:H1'	1.86	0.41
9:B:16:G:N3	9:B:17:C:C6	2.89	0.41
9:B:115:A:H2'	9:B:116:G:O4'	2.21	0.41
10:C:78:GLU:OE2	10:C:100:ARG:HD3	2.21	0.41
10:C:116:GLN:O	10:C:127:ASN:OD1	2.39	0.41
10:C:128:THR:HG22	10:C:188:ARG:HH11	1.86	0.41
10:C:245:THR:O	10:C:247:TRP:N	2.54	0.41
11:D:9:VAL:CG2	11:D:28:GLU:H	2.34	0.41
11:D:15:PHE:CE2	23:P:54:LEU:HD11	2.56	0.41
11:D:21:SER:N	18:K:73:ASP:HA	2.36	0.41
12:E:141:MET:HB2	12:E:143:LEU:HD12	2.03	0.41
13:F:161:SER:HB2	13:F:163:GLU:HG2	2.03	0.41
15:H:83:LYS:HD2	15:H:83:LYS:H	1.85	0.41
15:H:93:SER:CB	15:H:122:LEU:O	2.68	0.41
15:H:117:LEU:HD13	15:H:117:LEU:HA	1.90	0.41
16:I:78:LEU:C	16:I:80:LYS:H	2.29	0.41
17:J:1:MET:SD	24:Q:96:ASP:OD2	2.79	0.41
17:J:75:TYR:HA	17:J:86:GLN:HA	2.03	0.41
18:K:63:VAL:HG11	18:K:85:VAL:CG2	2.48	0.41
20:M:62:LYS:HD3	20:M:64:TRP:CZ2	2.56	0.41
23:P:87:ARG:HH22	23:P:110:LYS:C	2.29	0.41
25:R:62:GLU:O	25:R:64:VAL:HG23	2.21	0.41
26:S:69:LEU:HD22	26:S:107:VAL:HB	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:U:82:VAL:HA	28:U:94:PHE:O	2.21	0.41
28:U:86:PHE:CZ	28:U:91:LYS:HB2	2.55	0.41
30:W:79:GLU:HB3	30:W:81:GLU:CG	2.51	0.41
34:a:72:A:C6	34:a:73:C:C4	3.08	0.41
34:a:237:G:C6	34:a:238:A:C6	3.09	0.41
34:a:240:G:N1	34:a:287:U:N3	2.68	0.41
34:a:319:G:H2'	34:a:320:A:C8	2.55	0.41
34:a:415:A:C2	34:a:416:G:H1'	2.55	0.41
34:a:462:G:O6	34:a:470:C:C4	2.73	0.41
34:a:515:G:C6	34:a:537:G:N1	2.89	0.41
34:a:581:G:C3'	34:a:758:C:H42	2.28	0.41
34:a:582:C:N3	34:a:759:A:C5	2.89	0.41
34:a:587:G:C2	34:a:754:C:OP2	2.75	0.41
34:a:594:U:N3	34:a:646:G:N1	2.69	0.41
34:a:600:A:C4	34:a:639:G:C2	3.09	0.41
34:a:678:U:O2'	34:a:778:G:OP1	2.34	0.41
34:a:781:A:C8	34:a:802:A:N1	2.89	0.41
34:a:792:A:C2	34:a:794:A:C5	3.09	0.41
34:a:859:G:H2'	34:a:860:A:H8	1.86	0.41
34:a:904:U:N3	34:a:905:U:C5	2.89	0.41
34:a:986:U:H2'	34:a:987:G:C8	2.56	0.41
34:a:1032:G:N2	34:a:1034:G:C6	2.89	0.41
34:a:1089:G:C6	34:a:1090:U:C4	3.08	0.41
34:a:1093:A:OP2	40:g:3:ARG:CZ	2.69	0.41
34:a:1123:U:H4'	43:j:38:GLY:HA3	2.03	0.41
34:a:1149:C:H2'	34:a:1150:A:O4'	2.21	0.41
34:a:1152:A:C2	34:a:1153:G:C4	3.08	0.41
34:a:1184:G:N1	34:a:1185:G:C8	2.89	0.41
34:a:1188:A:O3'	47:n:98:LYS:HE2	2.21	0.41
34:a:1220:G:C2	34:a:1221:G:C4	3.09	0.41
34:a:1222:G:H3'	34:a:1222:G:H8	1.86	0.41
34:a:1233:G:C4	34:a:1234:C:C5	3.09	0.41
34:a:1301:U:C2	34:a:1303:C:C5	3.09	0.41
34:a:1349:A:C5	34:a:1374:A:N7	2.89	0.41
34:a:1417:G:C5	34:a:1482:G:C6	3.09	0.41
34:a:1428:A:C6	34:a:1473:G:C6	3.09	0.41
34:a:1475:G:N1	34:a:1476:A:C5	2.89	0.41
34:a:1497:G:C6	34:a:1498:UR3:C4	3.04	0.41
34:a:1498:UR3:O2	34:a:1498:UR3:O4'	2.38	0.41
34:a:1498:UR3:HO2'	34:a:1499:A:P	2.40	0.41
34:a:1516:2MG:C2	34:a:1518:MA6:P	3.14	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1518:MA6:C10	34:a:1519:MA6:H102	2.51	0.41
35:b:14:HIS:HA	35:b:202:ASN:H	1.85	0.41
35:b:43:GLU:N	35:b:43:GLU:CD	2.79	0.41
35:b:53:LEU:O	35:b:219:THR:HG21	2.21	0.41
35:b:178:LEU:HD22	35:b:178:LEU:N	2.35	0.41
36:c:22:PHE:CD2	43:j:12:ALA:HA	2.56	0.41
36:c:87:ARG:HD2	36:c:98:ALA:O	2.20	0.41
38:e:40:ASP:OD2	38:e:44:ARG:HG3	2.20	0.41
38:e:80:LEU:CB	38:e:82:HIS:O	2.69	0.41
40:g:42:VAL:O	40:g:46:LEU:CD1	2.67	0.41
40:g:110:ARG:NE	40:g:121:ASN:HB3	2.36	0.41
43:j:5:ARG:NH2	43:j:102:LEU:HD21	2.36	0.41
43:j:10:LEU:HD22	43:j:98:VAL:HG12	2.03	0.41
44:k:53:GLY:O	44:k:56:LYS:HE2	2.21	0.41
49:p:51:ARG:C	49:p:52:LEU:HD12	2.45	0.41
49:p:75:ILE:O	49:p:79:ASN:CB	2.69	0.41
50:q:8:GLN:HA	50:q:58:VAL:O	2.21	0.41
52:s:39:ILE:O	52:s:66:VAL:O	2.39	0.41
56:w:28:G:C4	56:w:29:G:C8	3.09	0.41
56:w:69:G:C4	56:w:70:G:C8	3.08	0.41
57:x:209:ASP:OD1	57:x:209:ASP:N	2.52	0.41
57:x:363:VAL:HG12	57:x:365:MET:CE	2.50	0.41
57:x:459:GLY:H	57:x:465:LEU:CD2	2.34	0.41
57:x:583:HIS:CD2	57:x:585:VAL:H	2.39	0.41
57:x:664:GLY:O	57:x:665:TYR:C	2.61	0.41
4:3:7:ARG:O	4:3:11:LYS:HE3	2.21	0.40
5:4:32:LYS:HE3	8:A:2528:U:H5'	2.03	0.40
8:A:58:G:C2	8:A:70:G:N1	2.89	0.40
8:A:60:G:N9	8:A:62:U:H5	2.18	0.40
8:A:75:G:C4	8:A:76:C:C5	3.10	0.40
8:A:79:C:N3	8:A:108:G:N1	2.68	0.40
8:A:84:A:C2	8:A:98:G:N3	2.89	0.40
8:A:98:G:H2'	8:A:99:U:H6	1.86	0.40
8:A:108:G:C2	8:A:109:C:C2	3.09	0.40
8:A:149:A:H2'	8:A:150:U:H6	1.83	0.40
8:A:204:A:C4'	8:A:206:U:O4'	2.69	0.40
8:A:205:G:C2	8:A:206:U:O4	2.73	0.40
8:A:219:A:C6	8:A:220:G:N1	2.89	0.40
8:A:255:A:C6	8:A:256:A:C5	3.09	0.40
8:A:263:G:H1'	8:A:430:A:N3	2.36	0.40
8:A:305:C:H2'	8:A:306:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:333:G:N2	8:A:334:C:C2	2.89	0.40
8:A:333:G:H2'	8:A:334:C:C6	2.56	0.40
8:A:342:A:C5	8:A:343:C:C5	3.09	0.40
8:A:375:G:C2	8:A:399:U:O2	2.75	0.40
8:A:399:U:H2'	8:A:400:G:O4'	2.21	0.40
8:A:404:A:C6	8:A:421:C:C2	3.09	0.40
8:A:510:C:H2'	8:A:511:U:H6	1.86	0.40
8:A:622:G:C4	8:A:623:C:C5	3.09	0.40
8:A:628:G:C2	8:A:629:G:C5	3.09	0.40
8:A:639:U:H3	8:A:649:G:H1	1.68	0.40
8:A:729:G:H4'	8:A:763:G:H5'	2.03	0.40
8:A:748:G:C5	8:A:750:A:C5	3.09	0.40
8:A:752:A:N7	8:A:1781:U:C2	2.88	0.40
8:A:768:G:N2	8:A:1379:U:O2'	2.55	0.40
8:A:812:C:O2	8:A:1226:A:O2'	2.38	0.40
8:A:831:G:C6	8:A:832:U:C4	3.09	0.40
8:A:841:G:C2	8:A:938:G:N3	2.89	0.40
8:A:895:U:C6	8:A:897:C:N4	2.90	0.40
8:A:942:G:OP2	19:L:39:LYS:NZ	2.47	0.40
8:A:947:A:H2'	8:A:948:C:H6	1.77	0.40
8:A:1022:G:C5	8:A:1141:U:C5	3.09	0.40
8:A:1079:C:C2	8:A:1086:A:C2	3.09	0.40
8:A:1092:C:C5	8:A:1093:G:N7	2.89	0.40
8:A:1137:G:N2	8:A:1138:G:H1'	2.37	0.40
8:A:1170:C:H6	8:A:1170:C:O5'	2.04	0.40
8:A:1174:U:HO2'	8:A:1175:A:C1'	2.25	0.40
8:A:1188:U:O2'	8:A:1189:A:H5'	2.21	0.40
8:A:1225:G:H2'	8:A:1226:A:N9	2.37	0.40
8:A:1281:G:N2	8:A:1290:C:C2	2.90	0.40
8:A:1296:G:H2'	8:A:1297:C:C6	2.57	0.40
8:A:1314:C:H2'	8:A:1315:C:C6	2.56	0.40
8:A:1321:A:C2	8:A:1322:A:C1'	3.05	0.40
8:A:1323:C:H2'	8:A:1324:G:H5'	2.02	0.40
8:A:1351:C:H2'	8:A:1352:U:O4'	2.21	0.40
8:A:1410:G:C6	8:A:1593:A:N6	2.89	0.40
8:A:1425:G:H8	8:A:1425:G:O5'	2.04	0.40
8:A:1458:U:C2	8:A:1459:G:C6	3.09	0.40
8:A:1469:A:N7	8:A:1521:G:N2	2.68	0.40
8:A:1473:G:H2'	8:A:1474:U:O4'	2.20	0.40
8:A:1517:G:C6	8:A:1518:C:C4	3.09	0.40
8:A:1588:G:N1	8:A:1589:U:C4	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1600:C:C4	8:A:1601:G:N7	2.89	0.40
8:A:1710:G:C2	8:A:1711:A:C4	3.09	0.40
8:A:1711:A:N1	8:A:1748:C:C2	2.90	0.40
8:A:1724:G:H2'	8:A:1725:U:C6	2.56	0.40
8:A:1782:U:OP1	8:A:1783:A:OP2	2.40	0.40
8:A:1800:C:C5	8:A:1802:A:H1'	2.57	0.40
8:A:1846:G:N1	8:A:1847:G:C2	2.89	0.40
8:A:1907:G:C4	8:A:1908:C:C5	3.09	0.40
8:A:1933:G:C4	8:A:1934:C:C6	3.09	0.40
8:A:2078:C:H1'	8:A:2434:A:H1'	2.02	0.40
8:A:2095:A:C6	8:A:2096:C:C4	3.08	0.40
8:A:2259:U:N3	8:A:2282:G:C6	2.88	0.40
8:A:2269:G:C2	8:A:2270:A:C4	3.10	0.40
8:A:2366:A:C5	8:A:2367:G:C5	3.08	0.40
8:A:2366:A:H4'	30:W:58:LYS:HG2	2.03	0.40
8:A:2377:A:H8	8:A:2377:A:O5'	2.04	0.40
8:A:2394:C:O3'	19:L:63:LYS:HE2	2.21	0.40
8:A:2415:G:C6	8:A:2416:C:C4	3.09	0.40
8:A:2435:A:C2'	8:A:2436:G:O5'	2.69	0.40
8:A:2520:C:O2	8:A:2546:U:O2	2.39	0.40
8:A:2549:G:N1	8:A:2550:G:C6	2.89	0.40
8:A:2607:G:C2	8:A:2608:G:C4	3.09	0.40
8:A:2667:C:N3	14:G:109:SER:CB	2.81	0.40
8:A:2683:C:C2	8:A:2727:A:O2'	2.71	0.40
8:A:2714:G:H2'	8:A:2715:C:C6	2.56	0.40
8:A:2791:G:C5	8:A:2892:G:N2	2.89	0.40
8:A:2868:A:H3'	8:A:2869:G:H8	1.86	0.40
9:B:13:G:H4'	9:B:15:A:C4	2.56	0.40
9:B:57:A:C4	13:F:25:MET:CB	3.04	0.40
9:B:71:C:C2	9:B:72:G:C8	3.08	0.40
10:C:132:ARG:CD	15:H:123:ARG:CZ	2.99	0.40
10:C:229:HIS:CD2	10:C:230:PRO:HD2	2.55	0.40
11:D:124:ARG:HH11	11:D:162:ALA:C	2.29	0.40
12:E:48:THR:OG1	12:E:51:GLU:CD	2.64	0.40
13:F:25:MET:CA	13:F:29:ARG:HH22	2.34	0.40
14:G:53:PRO:HB3	14:G:60:GLY:C	2.46	0.40
14:G:92:GLY:O	14:G:105:SER:O	2.39	0.40
15:H:26:ALA:CA	15:H:30:LEU:HD12	2.51	0.40
17:J:75:TYR:CD2	17:J:86:GLN:HB3	2.57	0.40
17:J:82:GLY:C	17:J:84:ILE:H	2.29	0.40
18:K:14:SER:HA	18:K:51:LYS:NZ	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:O:51:ALA:HB2	22:O:81:ARG:NH2	2.36	0.40
23:P:43:GLU:CD	23:P:86:LYS:HG3	2.46	0.40
24:Q:98:ALA:O	24:Q:102:LYS:HD3	2.21	0.40
26:S:82:MET:HB2	26:S:98:LYS:HB2	2.02	0.40
28:U:90:LYS:O	28:U:92:VAL:HG13	2.20	0.40
34:a:2:A:C2	34:a:613:C:C2'	3.04	0.40
34:a:8:A:N3	38:e:111:ARG:NH2	2.69	0.40
34:a:76:G:C6	34:a:77:A:C5	3.08	0.40
34:a:77:A:C6	34:a:78:A:C6	3.09	0.40
34:a:79:G:C5	34:a:88:U:C5	3.09	0.40
34:a:134:G:H3'	34:a:135:C:C5	2.56	0.40
34:a:139:A:N6	34:a:225:C:N4	2.68	0.40
34:a:157:U:H5'	34:a:163:C:C5	2.56	0.40
34:a:220:G:C4	34:a:221:C:C5	3.09	0.40
34:a:251:G:O4'	34:a:252:U:C5	2.73	0.40
34:a:293:G:C2	34:a:294:U:C4	3.09	0.40
34:a:376:G:N3	34:a:377:G:C8	2.89	0.40
34:a:462:G:C8	34:a:462:G:H3'	2.57	0.40
34:a:597:G:C4	34:a:598:U:C6	3.09	0.40
34:a:657:U:H2'	34:a:658:C:C6	2.52	0.40
34:a:692:U:O2'	34:a:694:A:H2	2.02	0.40
34:a:771:G:C6	34:a:809:G:N1	2.89	0.40
34:a:824:G:O4'	41:h:1:SER:HA	2.21	0.40
34:a:843:U:OP2	34:a:846:G:O4'	2.39	0.40
34:a:865:A:C2'	34:a:866:C:O4'	2.68	0.40
34:a:876:C:H2'	34:a:877:G:C8	2.56	0.40
34:a:887:G:C2	34:a:911:U:N3	2.89	0.40
34:a:915:A:C5	34:a:916:U:C6	3.09	0.40
34:a:921:U:O3'	38:e:22:LYS:HE2	2.20	0.40
34:a:951:G:H2'	34:a:952:U:O4'	2.21	0.40
34:a:957:U:H5''	34:a:958:A:OP2	2.20	0.40
34:a:1007:U:N3	34:a:1023:U:O2	2.54	0.40
34:a:1019:A:N1	34:a:1020:G:C4	2.89	0.40
34:a:1035:A:C4	34:a:1036:A:C8	3.09	0.40
34:a:1049:U:C5'	34:a:1201:A:OP1	2.69	0.40
34:a:1053:G:H5''	34:a:1055:A:OP1	2.21	0.40
34:a:1126:U:C5	43:j:7:ARG:NH1	2.89	0.40
34:a:1142:G:H5'	34:a:1143:G:OP2	2.21	0.40
34:a:1316:G:N1	34:a:1318:A:H5''	2.35	0.40
34:a:1333:A:OP2	34:a:1333:A:H8	2.04	0.40
34:a:1333:A:N6	34:a:1334:G:C2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1414:U:H2'	34:a:1415:G:C8	2.51	0.40
34:a:1425:U:O2'	34:a:1426:G:H5'	2.21	0.40
34:a:1442:G:O5'	34:a:1442:G:C8	2.74	0.40
35:b:26:MET:SD	35:b:192:PRO:HG3	2.60	0.40
35:b:90:PHE:HE2	35:b:92:ASN:HB3	1.85	0.40
36:c:46:LEU:HD22	36:c:46:LEU:N	2.36	0.40
36:c:112:ALA:O	36:c:115:VAL:HG22	2.21	0.40
36:c:181:ILE:HA	36:c:201:ILE:O	2.21	0.40
37:d:68:GLU:OE2	37:d:203:TYR:OH	2.39	0.40
38:e:96:GLN:O	38:e:122:VAL:HA	2.20	0.40
40:g:14:ASP:OD1	40:g:43:TYR:OH	2.21	0.40
41:h:75:GLN:O	41:h:126:CYS:HB2	2.21	0.40
43:j:52:LEU:C	47:n:81:ARG:NH1	2.78	0.40
44:k:63:GLN:OE1	44:k:94:SER:O	2.39	0.40
46:m:70:ARG:O	46:m:74:MET:HE2	2.21	0.40
46:m:73:SER:O	46:m:76:ILE:HG12	2.21	0.40
48:o:11:VAL:HG12	48:o:26:VAL:CG2	2.51	0.40
48:o:41:HIS:C	48:o:43:ALA:N	2.80	0.40
50:q:64:ARG:HG3	50:q:65:PRO:HD2	2.03	0.40
50:q:66:LEU:HG	50:q:70:LYS:O	2.21	0.40
50:q:76:ARG:NH2	50:q:78:VAL:HG12	2.36	0.40
56:w:16:U:OP1	56:w:16:U:H4'	2.21	0.40
56:w:40:C:N3	56:w:41:C:C5	2.90	0.40
56:w:51:C:C2	56:w:64:A:N1	2.89	0.40
56:w:52:G:C4	56:w:63:G:C2	3.08	0.40
57:x:20:ALA:O	62:x:801:GDP:O2A	2.39	0.40
57:x:140:VAL:HG21	57:x:150:PHE:HD1	1.86	0.40
57:x:195:ALA:HA	57:x:271:ASN:CG	2.46	0.40
57:x:308:ARG:HH11	57:x:317:SER:CB	2.33	0.40
57:x:563:GLY:HA3	57:x:568:TYR:O	2.21	0.40
57:x:638:ARG:NH1	57:x:689:ALA:HB1	2.36	0.40
57:x:665:TYR:CD2	57:x:679:TYR:CG	3.09	0.40
4:3:7:ARG:NH2	8:A:254:G:N2	2.68	0.40
4:3:23:HIS:CB	19:L:61:LEU:CD1	2.99	0.40
4:3:44:ARG:NH2	8:A:2349:G:OP1	2.55	0.40
4:3:60:CYS:O	4:3:62:PRO:HD3	2.21	0.40
8:A:35:G:H1'	8:A:450:G:H22	1.86	0.40
8:A:49:A:C8	8:A:51:G:C2	3.10	0.40
8:A:53:A:C2	8:A:54:G:H1'	2.56	0.40
8:A:55:G:N1	8:A:116:C:C4	2.89	0.40
8:A:66:C:C4'	8:A:456:C:C4	3.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:102:U:C5	32:Y:4:LYS:HE3	2.57	0.40
8:A:107:G:N1	8:A:108:G:C5	2.89	0.40
8:A:188:G:C2	8:A:209:C:C4	3.09	0.40
8:A:263:G:H8	8:A:263:G:O5'	2.04	0.40
8:A:374:A:C1'	8:A:401:A:N6	2.84	0.40
8:A:465:G:H2'	8:A:466:A:O4'	2.20	0.40
8:A:481:G:C2'	8:A:507:A:N6	2.84	0.40
8:A:515:A:H3'	8:A:516:C:H6	1.84	0.40
8:A:534:U:H5'	24:Q:41:ALA:HB1	2.03	0.40
8:A:582:A:N1	8:A:1259:G:C6	2.89	0.40
8:A:608:A:OP2	8:A:619:G:C6	2.74	0.40
8:A:621:A:OP2	19:L:99:ASN:OD1	2.39	0.40
8:A:632:A:O4'	19:L:66:PHE:CZ	2.74	0.40
8:A:641:U:H3'	8:A:642:U:C6	2.56	0.40
8:A:706:A:C5	8:A:707:G:C8	3.09	0.40
8:A:713:G:N1	8:A:714:U:C4	2.89	0.40
8:A:771:G:H2'	8:A:772:C:H6	1.85	0.40
8:A:776:G:N2	8:A:2072:C:H5'	2.36	0.40
8:A:802:A:C6	8:A:803:U:C2	3.09	0.40
8:A:833:A:C4'	19:L:51:GLU:HA	2.51	0.40
8:A:877:A:OP2	8:A:877:A:H8	2.04	0.40
8:A:956:G:H22	8:A:959:A:H3'	1.86	0.40
8:A:984:A:H2'	8:A:984:A:N3	2.36	0.40
8:A:1029:A:H62	8:A:1125:G:N2	2.19	0.40
8:A:1059:G:H21	16:I:127:SER:C	2.29	0.40
8:A:1068:G:O2'	8:A:1070:A:O4'	2.38	0.40
8:A:1110:G:O2'	8:A:1111:A:C8	2.69	0.40
8:A:1141:U:O2'	17:J:65:THR:HG21	2.21	0.40
8:A:1160:G:C2	8:A:1161:C:C2	3.10	0.40
8:A:1227:G:H2'	8:A:1228:G:H8	1.86	0.40
8:A:1310:G:N2	8:A:1610:A:H2	2.18	0.40
8:A:1356:G:N2	8:A:1375:U:O2	2.38	0.40
8:A:1445:G:C5	8:A:1446:C:C4	3.10	0.40
8:A:1473:G:O2'	8:A:1474:U:H5'	2.21	0.40
8:A:1476:U:H2'	8:A:1477:A:H8	1.86	0.40
8:A:1483:G:H2'	8:A:1484:U:C6	2.56	0.40
8:A:1483:G:C2	8:A:1484:U:C2	3.09	0.40
8:A:1572:A:C5	8:A:1573:G:N7	2.90	0.40
8:A:1657:U:C2	8:A:1658:C:C6	3.10	0.40
8:A:1692:U:O2'	8:A:1695:G:O6	2.36	0.40
8:A:1693:U:O2	10:C:13:ARG:CZ	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1709:U:C4	8:A:1750:G:N1	2.90	0.40
8:A:1779:U:C5	8:A:1784:A:C5	3.09	0.40
8:A:1856:U:O2	8:A:1886:U:C4	2.74	0.40
8:A:1857:G:H22	8:A:1884:G:C2'	2.34	0.40
8:A:1904:G:N3	8:A:1928:A:H2	2.19	0.40
8:A:1947:C:H2'	8:A:1948:G:C8	2.57	0.40
8:A:1973:G:C5	8:A:1974:C:C4	3.10	0.40
8:A:2067:G:N1	8:A:2444:G:C4	2.90	0.40
8:A:2075:U:C4	8:A:2238:G:C6	3.09	0.40
8:A:2094:A:H4'	15:H:25:TYR:CZ	2.55	0.40
8:A:2166:U:C5	8:A:2167:U:O2	2.74	0.40
8:A:2241:A:C6	8:A:2242:G:C5	3.09	0.40
8:A:2274:A:C6	8:A:2276:G:C4	3.10	0.40
8:A:2394:C:N3	55:v:76:A:O3'	2.54	0.40
8:A:2405:G:HO2'	8:A:2406:A:P	2.42	0.40
8:A:2470:G:C6	8:A:2481:G:N3	2.89	0.40
8:A:2509:G:O6	8:A:2580:PSU:O2	2.39	0.40
8:A:2515:C:H2'	8:A:2516:A:C8	2.49	0.40
8:A:2524:G:C4	8:A:2525:G:C8	3.09	0.40
8:A:2546:U:H6	8:A:2546:U:O5'	2.04	0.40
8:A:2599:G:N7	10:C:234:GLY:HA2	2.36	0.40
8:A:2685:G:C4	8:A:2725:A:C2	3.08	0.40
8:A:2757:A:C6	8:A:2758:A:N7	2.89	0.40
8:A:2849:U:C2	8:A:2867:G:N3	2.89	0.40
9:B:3:C:H2'	9:B:4:C:C6	2.56	0.40
9:B:41:G:P	9:B:43:C:H41	2.45	0.40
9:B:42:C:H2'	13:F:62:GLN:OE1	2.21	0.40
9:B:43:C:C4	9:B:45:A:C6	3.10	0.40
10:C:5:CYS:HB3	10:C:15:VAL:HB	2.02	0.40
11:D:14:ILE:HD13	23:P:11:GLN:HE22	1.86	0.40
11:D:39:ASP:OD1	11:D:39:ASP:N	2.54	0.40
11:D:58:ASN:OD1	11:D:59:ARG:N	2.55	0.40
11:D:110:THR:HG21	11:D:169:ARG:NH1	2.36	0.40
11:D:116:LYS:HD2	11:D:116:LYS:N	2.35	0.40
13:F:24:VAL:HA	13:F:27:VAL:CG2	2.51	0.40
13:F:24:VAL:HA	13:F:27:VAL:HG23	2.02	0.40
13:F:153:ILE:N	13:F:153:ILE:HD12	2.36	0.40
21:N:66:ALA:HB3	21:N:76:VAL:HG23	2.03	0.40
22:O:67:ASN:OD1	22:O:69:ASP:HB2	2.21	0.40
24:Q:31:TYR:O	24:Q:35:PHE:HB2	2.22	0.40
26:S:3:THR:CB	26:S:58:ALA:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:T:53:VAL:CG1	27:T:93:LEU:H	2.34	0.40
28:U:5:ARG:HG2	28:U:93:ARG:NH1	2.36	0.40
29:V:89:ILE:HG21	29:V:91:PHE:CE1	2.56	0.40
34:a:3:A:C2	34:a:628:G:N3	2.89	0.40
34:a:3:A:CI'	34:a:613:C:O4'	2.69	0.40
34:a:9:G:C2	34:a:26:A:C2	3.10	0.40
34:a:65:A:N6	34:a:381:C:C4	2.89	0.40
34:a:114:U:O2'	34:a:115:G:H5'	2.21	0.40
34:a:126:G:C6	34:a:236:A:C6	3.09	0.40
34:a:131:A:C6	34:a:132:C:N4	2.89	0.40
34:a:141:G:C6	34:a:142:G:C5	3.09	0.40
34:a:167:A:O2'	34:a:168:G:O4'	2.34	0.40
34:a:236:A:O2'	34:a:237:G:H5'	2.22	0.40
34:a:244:U:N3	34:a:893:C:O2	2.42	0.40
34:a:370:C:C2	34:a:392:C:O2	2.74	0.40
34:a:376:G:N3	34:a:389:A:C2	2.90	0.40
34:a:380:G:C2	34:a:384:G:O6	2.74	0.40
34:a:447:G:C2	34:a:488:C:C4	3.10	0.40
34:a:461:A:H2	34:a:472:U:H3	1.67	0.40
34:a:499:A:C4	34:a:546:A:H2	2.39	0.40
34:a:505:G:C2	34:a:506:G:C5	3.09	0.40
34:a:509:A:O5'	37:d:50:TYR:CD2	2.75	0.40
34:a:514:C:C2	34:a:515:G:N7	2.90	0.40
34:a:560:A:H2'	34:a:560:A:OP1	2.21	0.40
34:a:697:U:O2	34:a:798:U:H1'	2.22	0.40
34:a:849:G:C2	34:a:850:U:H1'	2.56	0.40
34:a:867:G:H2'	34:a:868:C:C6	2.56	0.40
34:a:878:A:H2'	34:a:879:C:H6	1.84	0.40
34:a:950:U:O4'	34:a:971:G:C6	2.74	0.40
34:a:958:A:H1'	34:a:985:C:O2'	2.21	0.40
34:a:978:A:N6	34:a:1318:A:N7	2.69	0.40
34:a:979:C:C2	34:a:980:C:O4'	2.74	0.40
34:a:990:C:N4	34:a:1216:A:N6	2.69	0.40
34:a:1106:G:H4'	36:c:171:ARG:HD2	2.03	0.40
34:a:1130:A:H1'	34:a:1146:A:C4	2.56	0.40
34:a:1227:A:C4	52:s:82:HIS:ND1	2.89	0.40
34:a:1291:U:OP1	40:g:36:SER:OG	2.38	0.40
34:a:1292:G:C2	34:a:1293:C:C4	3.09	0.40
34:a:1328:C:HO2'	46:m:28:ARG:HE	1.70	0.40
34:a:1347:G:N7	42:i:12:LYS:NZ	2.69	0.40
34:a:1351:U:O2'	34:a:1352:C:H5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1406:U:C2	34:a:1407:5MC:C6	3.09	0.40
34:a:1415:G:C4	34:a:1486:G:C2	3.09	0.40
34:a:1416:G:C6	34:a:1417:G:C5	3.09	0.40
34:a:1427:C:H2'	34:a:1428:A:C8	2.55	0.40
34:a:1437:A:H5''	53:t:28:ARG:HH12	1.85	0.40
34:a:1455:G:H2'	34:a:1456:A:C8	2.56	0.40
34:a:1488:G:N1	34:a:1489:G:C6	2.89	0.40
34:a:1504:G:OP1	34:a:1507:A:H4'	2.21	0.40
35:b:169:HIS:HA	35:b:172:ILE:HG13	2.03	0.40
36:c:31:ASN:ND2	36:c:58:ARG:NE	2.70	0.40
37:d:122:ILE:O	37:d:128:VAL:HG13	2.22	0.40
38:e:10:LEU:CD1	38:e:70:MET:HE3	2.51	0.40
38:e:21:SER:HA	38:e:29:ILE:O	2.22	0.40
38:e:156:ARG:HD3	41:h:44:PHE:CE1	2.57	0.40
42:i:27:ILE:HA	42:i:62:LEU:HB2	2.02	0.40
46:m:9:PRO:HG2	46:m:17:ALA:CB	2.51	0.40
48:o:43:ALA:C	48:o:46:LYS:CE	2.94	0.40
50:q:56:ASP:OD2	50:q:80:LYS:HA	2.21	0.40
51:r:36:GLY:O	51:r:62:ARG:NH2	2.32	0.40
56:w:67:C:N4	56:w:68:C:N4	2.69	0.40
56:w:69:G:H2'	56:w:70:G:H8	1.86	0.40
57:x:244:GLU:O	57:x:244:GLU:CD	2.64	0.40
57:x:344:SER:HB3	57:x:374:LYS:CB	2.51	0.40
1:0:39:ARG:NH2	8:A:2884:U:C2	2.89	0.40
1:0:51:ARG:HG3	1:0:53:VAL:CG1	2.51	0.40
8:A:25:U:O2'	8:A:26:G:H5'	2.20	0.40
8:A:38:A:N1	8:A:39:G:C4	2.90	0.40
8:A:78:U:O2	8:A:108:G:C2	2.72	0.40
8:A:144:A:H2'	8:A:145:C:H6	1.81	0.40
8:A:374:A:C2	8:A:401:A:C4	3.10	0.40
8:A:375:G:H1	8:A:399:U:H3	1.69	0.40
8:A:377:G:H2'	8:A:378:C:H6	1.87	0.40
8:A:409:G:N1	8:A:410:G:C5	2.90	0.40
8:A:412:A:C8	8:A:413:C:C5	3.09	0.40
8:A:447:A:C5	8:A:473:G:C4	3.09	0.40
8:A:632:A:C4'	19:L:66:PHE:CZ	3.05	0.40
8:A:640:C:C2	8:A:649:G:N2	2.89	0.40
8:A:681:G:C4	8:A:682:G:C8	3.09	0.40
8:A:836:G:C2	8:A:837:C:C6	3.09	0.40
8:A:856:G:H1'	30:W:23:GLY:H	1.85	0.40
8:A:871:U:H4'	20:M:68:PHE:CD1	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:887:A:H4'	8:A:890:C:N3	2.36	0.40
8:A:953:G:N1	8:A:965:C:N3	2.69	0.40
8:A:956:G:H5''	20:M:76:LYS:CG	2.51	0.40
8:A:997:G:N1	8:A:1159:U:C2	2.89	0.40
8:A:1047:G:O2'	8:A:1110:G:N1	2.00	0.40
8:A:1063:G:N1	16:I:135:MET:N	2.69	0.40
8:A:1076:C:C2	8:A:1077:A:C2	3.10	0.40
8:A:1085:A:O2'	8:A:1103:A:N1	2.48	0.40
8:A:1087:G:C5	8:A:1089:A:N6	2.89	0.40
8:A:1115:G:C2	8:A:1116:G:C5	3.09	0.40
8:A:1140:C:O4'	8:A:1143:A:C2	2.74	0.40
8:A:1206:G:N1	8:A:1240:U:C2	2.89	0.40
8:A:1212:G:O2'	8:A:1236:G:C2	2.75	0.40
8:A:1264:A:N7	8:A:1265:A:C5	2.89	0.40
8:A:1287:A:O2'	8:A:1288:G:H5'	2.21	0.40
8:A:1292:G:C4	8:A:1293:C:C5	3.10	0.40
8:A:1296:G:C6	8:A:1297:C:N4	2.90	0.40
8:A:1308:A:C5	8:A:1309:G:C5	3.09	0.40
8:A:1317:G:C2	8:A:1336:A:C4	3.09	0.40
8:A:1343:G:C6	8:A:1344:U:O4	2.74	0.40
8:A:1356:G:H2'	8:A:1357:C:C6	2.56	0.40
8:A:1421:G:C2	8:A:1578:U:O2	2.75	0.40
8:A:1484:U:N3	8:A:1485:U:C5	2.89	0.40
8:A:1580:A:C6	8:A:1581:G:C4	3.09	0.40
8:A:1586:A:C5	8:A:1587:G:C8	3.09	0.40
8:A:1730:C:O2'	8:A:1731:G:P	2.80	0.40
8:A:1751:U:H2'	8:A:1752:C:C5	2.55	0.40
8:A:1754:A:C6	8:A:1755:A:C6	3.10	0.40
8:A:1754:A:O4'	23:P:98:TYR:CE2	2.74	0.40
8:A:1774:C:O2	8:A:1774:C:H2'	2.20	0.40
8:A:1790:C:H2'	8:A:1791:A:N7	2.36	0.40
8:A:1911:PSU:HN3	8:A:1920:C:N4	2.19	0.40
8:A:1975:G:C6	8:A:1976:U:C2	3.09	0.40
8:A:1996:C:H5	18:K:32:TYR:OH	2.02	0.40
8:A:2019:A:N1	8:A:2035:G:N2	2.65	0.40
8:A:2043:C:N4	8:A:2777:G:C4	2.89	0.40
8:A:2067:G:O6	8:A:2444:G:C6	2.74	0.40
8:A:2083:G:C6	8:A:2237:G:N3	2.89	0.40
8:A:2094:A:C6	8:A:2196:C:N3	2.89	0.40
8:A:2138:G:H2'	8:A:2138:G:N3	2.36	0.40
8:A:2139:U:H2'	8:A:2140:G:C4'	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2245:U:C2'	8:A:2436:G:OP2	2.69	0.40
8:A:2249:U:H2'	8:A:2252:G:OP1	2.22	0.40
8:A:2295:C:P	22:O:9:ARG:HH22	2.44	0.40
8:A:2352:A:N1	30:W:30:GLY:HA3	2.36	0.40
8:A:2401:U:O2	8:A:2415:G:N1	2.54	0.40
8:A:2410:G:C6	8:A:2411:A:C4	3.09	0.40
8:A:2443:C:O2'	8:A:2444:G:H5'	2.21	0.40
8:A:2454:G:C6	8:A:2499:C:N4	2.90	0.40
8:A:2464:G:C4	8:A:2465:C:C5	3.10	0.40
8:A:2467:C:H1'	20:M:122:ALA:CB	2.52	0.40
8:A:2558:C:C2	8:A:2559:C:C5	3.10	0.40
8:A:2572:A:N7	11:D:150:GLN:HB2	2.36	0.40
8:A:2578:G:O6	11:D:145:SER:HB2	2.20	0.40
8:A:2624:G:C2	8:A:2625:G:C8	3.09	0.40
8:A:2633:G:N1	8:A:2786:U:N3	2.69	0.40
8:A:2638:G:O2'	8:A:2639:A:H8	2.04	0.40
8:A:2642:G:H2'	8:A:2643:G:H8	1.87	0.40
8:A:2644:G:C8	8:A:2645:G:C2	3.09	0.40
8:A:2674:G:C5'	18:K:30:ARG:CZ	2.99	0.40
8:A:2684:U:C2	8:A:2685:G:C8	3.09	0.40
8:A:2688:G:C6	8:A:2719:G:H2'	2.56	0.40
8:A:2762:C:N3	8:A:2763:G:C4	2.90	0.40
8:A:2770:G:C5	8:A:2771:C:C5	3.09	0.40
8:A:2787:C:H2'	8:A:2788:C:C6	2.57	0.40
9:B:7:G:N2	9:B:114:C:C2	2.89	0.40
9:B:17:C:C4	9:B:18:G:C8	3.09	0.40
9:B:67:G:O6	9:B:108:A:C2	2.74	0.40
9:B:76:G:C2	9:B:77:U:N1	2.89	0.40
9:B:76:G:HO2'	29:V:78:GLN:CD	2.22	0.40
10:C:54:GLY:O	10:C:214:GLY:HA2	2.21	0.40
10:C:141:HIS:HB3	10:C:192:GLY:O	2.20	0.40
10:C:160:TYR:CD1	10:C:176:ARG:NE	2.90	0.40
12:E:46:GLN:OE1	12:E:87:ALA:N	2.50	0.40
12:E:48:THR:HB	12:E:50:ALA:H	1.86	0.40
13:F:1:ALA:HB2	13:F:97:GLU:HG3	2.03	0.40
14:G:108:PHE:HB2	14:G:109:SER:H	1.77	0.40
17:J:20:ALA:HB3	17:J:57:LEU:O	2.21	0.40
17:J:36:LEU:HA	17:J:51:GLY:HA3	2.03	0.40
17:J:92:MET:HG3	17:J:100:VAL:HG23	2.03	0.40
23:P:25:VAL:HG12	23:P:27:VAL:HG23	2.02	0.40
25:R:20:VAL:HG12	25:R:22:LEU:CD2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R:67:GLY:C	25:R:93:PHE:CE2	3.00	0.40
25:R:77:PHE:HD1	25:R:84:ARG:HB3	1.86	0.40
26:S:23:LEU:O	26:S:27:LYS:HE2	2.20	0.40
29:V:28:ALA:O	29:V:39:ALA:HA	2.20	0.40
29:V:44:HIS:CE1	29:V:85:LYS:HG2	2.56	0.40
29:V:51:GLN:HG3	29:V:52:ALA:N	2.36	0.40
31:X:68:ALA:HA	31:X:71:ARG:CZ	2.52	0.40
33:Z:2:LYS:CD	33:Z:39:ASP:HB3	2.51	0.40
34:a:8:A:C2	37:d:205:LYS:HD3	2.57	0.40
34:a:45:G:H2'	34:a:46:G:C8	2.57	0.40
34:a:49:U:O4	34:a:365:U:H5	2.05	0.40
34:a:49:U:O2	34:a:362:G:H1'	2.21	0.40
34:a:57:G:C6	34:a:58:C:C4	3.09	0.40
34:a:98:A:O2'	34:a:99:C:H5'	2.22	0.40
34:a:131:A:C6	34:a:132:C:C4	3.09	0.40
34:a:137:U:H2'	34:a:138:G:C8	2.55	0.40
34:a:146:G:O2'	34:a:147:G:C5'	2.69	0.40
34:a:182:A:C4	34:a:184:G:C8	3.09	0.40
34:a:257:G:C6	34:a:270:A:N6	2.90	0.40
34:a:258:G:C2	34:a:268:U:O2	2.74	0.40
34:a:318:G:C6	34:a:336:A:N1	2.89	0.40
34:a:363:A:OP2	45:l:30:ARG:NE	2.54	0.40
34:a:374:A:H2'	34:a:375:U:H5'	2.02	0.40
34:a:404:G:N2	34:a:498:A:C2'	2.85	0.40
34:a:424:G:C6	34:a:425:G:C5	3.10	0.40
34:a:667:G:C2	34:a:668:G:C4	3.09	0.40
34:a:668:G:O2'	48:o:45:HIS:CD2	2.75	0.40
34:a:741:G:C4	34:a:742:G:C8	3.09	0.40
34:a:787:A:C4	34:a:788:U:C6	3.09	0.40
34:a:811:C:O4'	34:a:900:A:N6	2.55	0.40
34:a:955:U:C4	34:a:956:U:C4	3.09	0.40
34:a:963:G:C2'	34:a:964:A:H5'	2.51	0.40
34:a:964:A:O2'	34:a:965:U:OP1	2.34	0.40
34:a:1000:A:N6	34:a:1041:G:C6	2.89	0.40
34:a:1086:U:H6	34:a:1086:U:OP2	2.04	0.40
34:a:1088:G:H2'	34:a:1089:G:O4'	2.22	0.40
34:a:1227:A:N3	34:a:1227:A:H5''	2.35	0.40
34:a:1347:G:N3	34:a:1348:U:H5	2.19	0.40
34:a:1406:U:C5	34:a:1407:5MC:CM5	3.04	0.40
34:a:1489:G:C5	34:a:1490:U:C5	3.09	0.40
34:a:1511:G:H2'	34:a:1512:U:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:b:90:PHE:H	35:b:149:GLY:HA3	1.86	0.40
35:b:125:PHE:O	35:b:125:PHE:CG	2.73	0.40
36:c:10:ARG:CB	36:c:15:LYS:HG2	2.51	0.40
37:d:68:GLU:HA	37:d:71:PHE:HE1	1.83	0.40
37:d:104:MET:HB2	37:d:106:PHE:CE2	2.55	0.40
37:d:140:ASP:C	37:d:180:THR:HG22	2.47	0.40
37:d:159:GLU:O	37:d:162:GLU:HG3	2.20	0.40
37:d:165:GLU:HG3	37:d:166:LYS:N	2.36	0.40
37:d:167:PRO:C	37:d:170:LEU:HD23	2.46	0.40
37:d:171:GLU:HB2	37:d:182:LYS:HB2	2.03	0.40
38:e:78:GLY:HA2	38:e:119:VAL:HA	2.03	0.40
40:g:53:SER:C	40:g:55:LYS:N	2.78	0.40
46:m:18:LEU:HD23	46:m:29:SER:OG	2.21	0.40
52:s:13:HIS:O	52:s:17:LYS:CG	2.70	0.40
52:s:57:VAL:HG21	52:s:74:ALA:CB	2.51	0.40
56:w:51:C:N3	56:w:64:A:C6	2.90	0.40
56:w:52:G:N3	56:w:63:G:C2	2.88	0.40
57:x:173:GLY:O	57:x:178:PHE:HD1	2.05	0.40
57:x:186:LYS:C	57:x:188:LYS:N	2.79	0.40
57:x:295:ASN:O	57:x:406:GLU:OE1	2.38	0.40
57:x:307:GLU:CD	57:x:309:HIS:HD1	2.24	0.40
57:x:344:SER:HB3	57:x:374:LYS:CA	2.52	0.40
57:x:413:PRO:CB	57:x:458:ALA:C	2.94	0.40
57:x:536:ILE:O	57:x:536:ILE:HG23	2.22	0.40
1:0:28:SER:HB3	8:A:2885:G:O6	2.21	0.40
2:1:39:ASP:HB3	2:1:42:VAL:CG2	2.52	0.40
8:A:64:A:H5''	27:T:76:ARG:C	2.46	0.40
8:A:88:G:C2	8:A:89:A:C5	3.10	0.40
8:A:196:A:C5	8:A:805:G:C5	3.09	0.40
8:A:196:A:C6	8:A:805:G:N1	2.89	0.40
8:A:307:G:H1'	8:A:330:A:H61	1.87	0.40
8:A:374:A:N6	8:A:400:G:C1'	2.84	0.40
8:A:374:A:H1'	8:A:401:A:C6	2.57	0.40
8:A:443:A:C5	12:E:40:ARG:HD2	2.56	0.40
8:A:448:U:C4'	12:E:79:ARG:NE	2.84	0.40
8:A:470:A:N3	8:A:471:A:C8	2.90	0.40
8:A:501:A:C6	8:A:502:A:C6	3.09	0.40
8:A:538:A:H61	8:A:555:G:H1'	1.86	0.40
8:A:603:A:N1	8:A:625:G:O2'	2.47	0.40
8:A:604:G:N1	8:A:605:G:C5	2.89	0.40
8:A:635:C:C2'	8:A:639:U:H5''	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:708:G:N2	8:A:724:U:H1'	2.36	0.40
8:A:738:G:C5	8:A:739:A:C6	3.09	0.40
8:A:743:A:H2'	8:A:744:U:O4'	2.22	0.40
8:A:751:A:H2'	8:A:789:A:C2	2.57	0.40
8:A:811:U:C2	8:A:1251:C:C6	3.09	0.40
8:A:811:U:H1'	8:A:1251:C:C5'	2.51	0.40
8:A:821:A:H3'	8:A:946:C:C6	2.56	0.40
8:A:833:A:H4'	19:L:51:GLU:CD	2.46	0.40
8:A:835:C:C2	8:A:836:G:C8	3.10	0.40
8:A:864:G:C2	8:A:913:U:C2	3.09	0.40
8:A:865:C:C4	8:A:909:A:N6	2.80	0.40
8:A:878:A:C8	8:A:879:G:C4	3.10	0.40
8:A:906:U:O3'	20:M:66:ARG:NH2	2.55	0.40
8:A:948:C:C2	8:A:949:G:C8	3.10	0.40
8:A:997:G:P	24:Q:90:ASP:HB2	2.61	0.40
8:A:1028:A:N6	8:A:1029:A:N6	2.70	0.40
8:A:1062:G:C6	8:A:1064:C:O2	2.74	0.40
8:A:1129:A:H1'	8:A:2516:A:H1'	2.04	0.40
8:A:1241:A:C5	8:A:1242:U:C5	3.09	0.40
8:A:1300:G:N3	8:A:1626:A:N6	2.70	0.40
8:A:1321:A:C6	8:A:1322:A:C5	3.10	0.40
8:A:1362:C:H2'	8:A:1363:C:O4'	2.20	0.40
8:A:1387:A:H2'	8:A:1388:G:H8	1.87	0.40
8:A:1451:C:H2'	8:A:1458:U:C5	2.56	0.40
8:A:1471:G:H1	8:A:1520:U:H3	1.69	0.40
8:A:1510:G:C5	8:A:1511:G:N7	2.89	0.40
8:A:1561:C:C2	8:A:1562:U:C5	3.08	0.40
8:A:1565:C:C6	8:A:1567:G:C6	3.09	0.40
8:A:1583:A:O3'	8:A:1584:U:H6	2.05	0.40
8:A:1668:A:O4'	8:A:1669:A:N1	2.55	0.40
8:A:1724:G:O6	8:A:1737:G:C2	2.70	0.40
8:A:1753:G:N1	8:A:1756:G:N1	2.70	0.40
8:A:1770:G:C5	8:A:1771:C:C5	3.09	0.40
8:A:1773:A:C8	8:A:1829:A:C1'	3.05	0.40
8:A:1786:A:C5	8:A:1938:A:C6	3.09	0.40
8:A:1800:C:C6	8:A:1802:A:C1'	3.05	0.40
8:A:1815:A:C5	8:A:1817:G:C6	3.09	0.40
8:A:1889:A:C6	8:A:1890:A:C5	3.10	0.40
8:A:1896:G:N1	8:A:1897:G:C5	2.90	0.40
8:A:1922:G:C2	8:A:1923:U:C2	3.09	0.40
8:A:2015:A:O5'	8:A:2015:A:H8	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:2161:C:N4	8:A:2162:G:C2	2.89	0.40
8:A:2199:A:O4'	15:H:28:ASN:HB3	2.22	0.40
8:A:2242:G:C4	8:A:2243:U:C6	3.09	0.40
8:A:2259:U:H1'	8:A:2427:C:C2	2.56	0.40
8:A:2271:G:H2'	8:A:2272:U:H6	1.83	0.40
8:A:2271:G:C6	8:A:2272:U:C4	3.08	0.40
8:A:2291:U:N3	8:A:2341:G:N1	2.68	0.40
8:A:2350:C:C2	8:A:2368:C:N3	2.89	0.40
8:A:2357:G:N2	8:A:2361:G:C8	2.90	0.40
8:A:2366:A:C8	8:A:2367:G:C8	3.10	0.40
8:A:2377:A:C2'	8:A:2378:A:O4'	2.69	0.40
8:A:2448:A:OP2	8:A:2499:C:OP2	2.39	0.40
8:A:2461:A:O4'	8:A:2492:U:N3	2.55	0.40
8:A:2477:U:H6	8:A:2477:U:O5'	2.04	0.40
8:A:2496:C:C5	8:A:2497:A:N6	2.90	0.40
8:A:2519:U:C2	8:A:2542:A:C6	3.09	0.40
8:A:2536:G:C6	8:A:2537:U:O4	2.75	0.40
8:A:2682:A:O2'	8:A:2683:C:H5'	2.20	0.40
8:A:2683:C:C2'	18:K:70:ARG:HH22	2.35	0.40
8:A:2725:A:C8	8:A:2727:A:C5	3.09	0.40
8:A:2764:A:C5	8:A:2766:A:N7	2.90	0.40
9:B:61:G:C5	9:B:62:C:C5	3.10	0.40
9:B:69:G:C2	9:B:70:C:H1'	2.57	0.40
9:B:73:A:C6	9:B:104:A:H1'	2.56	0.40
9:B:116:G:C2	9:B:117:G:C5	3.09	0.40
10:C:94:LEU:HD12	10:C:99:GLU:O	2.21	0.40
10:C:259:ASN:HD21	10:C:261:ARG:HB3	1.86	0.40
10:C:269:ARG:NH2	10:C:270:ARG:NH1	2.70	0.40
11:D:60:VAL:HA	11:D:64:GLU:OE1	2.21	0.40
11:D:62:LYS:N	11:D:63:PRO:CD	2.85	0.40
16:I:79:LEU:HA	16:I:83:ALA:HB3	2.02	0.40
17:J:29:ALA:HB1	17:J:105:VAL:HG22	2.04	0.40
19:L:132:ARG:HG3	19:L:142:ILE:CD1	2.50	0.40
20:M:59:ARG:NE	20:M:59:ARG:CA	2.84	0.40
22:O:7:ARG:HA	22:O:10:ARG:NH2	2.36	0.40
23:P:25:VAL:O	23:P:43:GLU:HA	2.22	0.40
23:P:26:GLU:OE1	23:P:41:ALA:HB2	2.21	0.40
26:S:83:LYS:O	26:S:84:ARG:HD3	2.21	0.40
28:U:11:ILE:HG13	28:U:19:GLY:O	2.21	0.40
28:U:47:PRO:C	28:U:53:GLN:HB2	2.47	0.40
28:U:71:ILE:O	28:U:71:ILE:HG13	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:V:79:ARG:HA	29:V:86:LEU:HA	2.02	0.40
30:W:62:LYS:HB2	30:W:79:GLU:HB2	2.04	0.40
34:a:2:A:C2	34:a:614:C:O4'	2.75	0.40
34:a:3:A:C6	34:a:629:A:C4'	3.05	0.40
34:a:63:C:C4	34:a:105:G:N1	2.88	0.40
34:a:109:A:N3	34:a:326:G:N2	2.70	0.40
34:a:159:G:O6	34:a:164:G:N9	2.54	0.40
34:a:159:G:C2	34:a:164:G:P	3.15	0.40
34:a:208:U:C2	34:a:210:C:H1'	2.56	0.40
34:a:232:G:C5	34:a:233:C:C5	3.09	0.40
34:a:243:A:C2	34:a:245:U:C2	3.09	0.40
34:a:279:A:H1'	34:a:281:G:C5	2.57	0.40
34:a:288:A:H2'	34:a:289:G:H4'	2.02	0.40
34:a:292:G:C6	34:a:309:A:C6	3.10	0.40
34:a:439:U:C4	34:a:440:C:N3	2.89	0.40
34:a:439:U:O4	34:a:496:A:C2	2.74	0.40
34:a:460:A:H2	34:a:473:U:N3	2.19	0.40
34:a:563:A:N3	34:a:563:A:H2'	2.37	0.40
34:a:577:G:C4	34:a:578:C:C5	3.10	0.40
34:a:590:U:C4	34:a:650:G:C6	3.10	0.40
34:a:677:U:C2	34:a:678:U:C6	3.09	0.40
34:a:683:G:C6	34:a:707:U:N3	2.90	0.40
34:a:715:A:O2'	34:a:716:A:H5'	2.21	0.40
34:a:728:A:H2'	34:a:729:A:O4'	2.21	0.40
34:a:752:G:H1'	34:a:754:C:N4	2.36	0.40
34:a:765:G:O5'	34:a:765:G:H8	2.04	0.40
34:a:786:G:C4	34:a:787:A:C8	3.10	0.40
34:a:799:G:C2	34:a:800:G:H1'	2.57	0.40
34:a:825:A:C6	34:a:826:C:C4	3.10	0.40
34:a:843:U:OP2	34:a:846:G:C1'	2.70	0.40
34:a:844:G:H3'	34:a:846:G:OP2	2.22	0.40
34:a:888:G:O2'	34:a:909:A:N6	2.53	0.40
34:a:934:C:O2	34:a:937:A:N6	2.55	0.40
34:a:937:A:C2	34:a:938:A:C8	3.10	0.40
34:a:975:A:N6	43:j:62:ARG:HH12	2.20	0.40
34:a:1006:G:C6	34:a:1007:U:C5	3.10	0.40
34:a:1070:U:H2'	34:a:1071:C:C6	2.56	0.40
34:a:1110:A:C5	34:a:1111:A:N7	2.89	0.40
34:a:1116:U:C4	34:a:1185:G:C6	3.10	0.40
34:a:1126:U:OP2	34:a:1127:G:N7	2.55	0.40
34:a:1160:G:O6	34:a:1182:G:C6	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:1219:A:C5	34:a:1220:G:N7	2.90	0.40
34:a:1240:U:OP1	40:g:115:MET:HB2	2.20	0.40
34:a:1242:G:N2	34:a:1295:U:O2	2.53	0.40
34:a:1249:C:OP1	42:i:32:ARG:NH1	2.55	0.40
34:a:1272:G:N1	34:a:1273:C:C2	2.90	0.40
34:a:1319:A:C2	34:a:1323:G:C1'	3.04	0.40
34:a:1413:A:C2	34:a:1487:G:N2	2.78	0.40
34:a:1461:G:H2'	34:a:1462:C:O4'	2.21	0.40
35:b:11:ALA:O	35:b:14:HIS:HE1	2.05	0.40
35:b:92:ASN:CG	35:b:93:HIS:CE1	3.00	0.40
36:c:150:VAL:O	36:c:166:TRP:CA	2.69	0.40
36:c:153:SER:O	36:c:196:GLY:N	2.54	0.40
36:c:175:HIS:N	36:c:175:HIS:CD2	2.88	0.40
37:d:3:TYR:HE2	37:d:7:LYS:HD3	1.86	0.40
37:d:115:GLN:OE1	37:d:153:ARG:NH1	2.51	0.40
37:d:117:VAL:HG11	37:d:131:ILE:C	2.46	0.40
38:e:65:LYS:HD3	38:e:68:ARG:NH1	2.37	0.40
38:e:105:ILE:HD13	38:e:123:LEU:HD23	2.04	0.40
38:e:131:ASN:O	38:e:135:VAL:HG12	2.22	0.40
38:e:155:LYS:HA	41:h:65:PHE:CZ	2.57	0.40
39:f:45:ARG:O	39:f:56:LYS:HA	2.21	0.40
40:g:102:TRP:HB3	40:g:136:LYS:CE	2.49	0.40
41:h:18:ALA:C	41:h:20:ASN:H	2.30	0.40
41:h:23:ALA:HA	41:h:60:LEU:O	2.22	0.40
41:h:23:ALA:CA	41:h:61:THR:HA	2.51	0.40
42:i:64:ILE:HG22	42:i:65:THR:N	2.37	0.40
44:k:82:GLU:HB3	44:k:107:THR:HB	2.03	0.40
45:l:30:ARG:NH1	45:l:57:THR:HG21	2.37	0.40
46:m:7:ASN:O	46:m:8:ILE:C	2.64	0.40
52:s:47:THR:HB	52:s:60:PHE:HD1	1.86	0.40
53:t:17:ARG:NH1	53:t:18:LYS:HG2	2.36	0.40
55:v:53:G:C5	55:v:54:5MU:H71	2.56	0.40
55:v:58:A:C2	55:v:61:C:C6	3.09	0.40
56:w:6:G:O6	56:w:67:C:N4	2.48	0.40
56:w:35:A:C2	56:w:36:A:C4	3.10	0.40
57:x:28:ARG:CG	57:x:271:ASN:OD1	2.69	0.40
57:x:138:ALA:O	57:x:263:VAL:HA	2.22	0.40
57:x:308:ARG:NE	57:x:314:GLU:OE1	2.54	0.40
57:x:499:ASP:HA	57:x:520:ASP:HA	2.04	0.40
57:x:559:GLN:CB	57:x:600:PHE:CD2	3.05	0.40
57:x:603:GLY:O	57:x:607:ALA:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:49:ARG:NH2	8:A:2884:U:H1'	2.36	0.40
1:0:52:LYS:NZ	1:0:55:ALA:HA	2.36	0.40
2:1:10:LEU:O	2:1:19:PHE:HA	2.21	0.40
4:3:13:PHE:C	4:3:14:LYS:HG2	2.46	0.40
5:4:16:ILE:HD13	5:4:16:ILE:HA	1.96	0.40
7:6:64:PHE:CD2	7:6:64:PHE:C	2.99	0.40
8:A:19:A:C5	8:A:20:C:C5	3.10	0.40
8:A:35:G:C4	8:A:446:G:N2	2.90	0.40
8:A:90:U:OP2	8:A:91:A:O2'	2.29	0.40
8:A:190:A:C8	8:A:207:A:C6	3.09	0.40
8:A:230:G:N1	8:A:231:A:C5	2.90	0.40
8:A:345:A:C2	8:A:346:A:N6	2.87	0.40
8:A:373:U:OP1	31:X:53:LYS:HE3	2.22	0.40
8:A:464:U:C2	8:A:788:A:C6	3.10	0.40
8:A:487:C:N4	8:A:488:G:C6	2.89	0.40
8:A:535:G:C6	8:A:559:G:C6	3.10	0.40
8:A:545:U:H3'	8:A:546:U:C5	2.56	0.40
8:A:586:A:N6	8:A:1251:C:C2	2.89	0.40
8:A:647:G:H3'	8:A:648:G:H8	1.87	0.40
8:A:660:C:OP1	12:E:94:GLN:HB2	2.22	0.40
8:A:696:G:H1	8:A:766:U:H3	1.67	0.40
8:A:704:G:H22	8:A:726:G:C2'	2.33	0.40
8:A:711:G:H2'	8:A:712:G:C8	2.56	0.40
8:A:727:A:C2	8:A:728:G:C2	3.09	0.40
8:A:749:A:H5'	8:A:1271:G:H1'	2.03	0.40
8:A:887:A:H5'	8:A:891:G:N1	2.36	0.40
8:A:949:G:C6	8:A:969:G:C6	3.10	0.40
8:A:952:G:H2'	8:A:953:G:O4'	2.21	0.40
8:A:1013:C:N3	8:A:1014:A:N7	2.69	0.40
8:A:1038:G:C2	8:A:1118:C:O2	2.75	0.40
8:A:1069:A:H5'	8:A:1075:C:C5	2.57	0.40
8:A:1071:G:N2	8:A:1072:C:C4	2.90	0.40
8:A:1120:G:H2'	8:A:1121:C:H6	1.76	0.40
8:A:1170:C:H2'	8:A:1171:G:C1'	2.51	0.40
8:A:1220:G:C5	8:A:1230:A:N1	2.89	0.40
8:A:1258:U:C2	8:A:1259:G:C8	3.10	0.40
8:A:1295:C:H2'	8:A:1296:G:O4'	2.21	0.40
8:A:1297:C:N3	8:A:1644:C:N3	2.70	0.40
8:A:1303:G:C2	8:A:1304:A:C8	3.10	0.40
8:A:1353:A:H2'	8:A:1354:A:H8	1.79	0.40
8:A:1446:C:H6	8:A:1446:C:O5'	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:1475:G:O2'	8:A:1476:U:O4'	2.39	0.40
8:A:1496:A:H4'	8:A:1497:U:C5	2.56	0.40
8:A:1502:A:C6	8:A:1503:A:C5	3.10	0.40
8:A:1527:G:H1'	8:A:1546:G:H22	1.86	0.40
8:A:1642:G:N1	8:A:1643:G:C5	2.89	0.40
8:A:1717:A:H1'	8:A:1744:A:C6	2.56	0.40
8:A:1777:U:H2'	8:A:1778:U:H6	1.86	0.40
8:A:1836:C:N3	8:A:1905:C:C2	2.89	0.40
8:A:1907:G:C6	8:A:1924:C:N3	2.90	0.40
8:A:1908:C:H2'	8:A:1909:C:C6	2.57	0.40
8:A:1936:A:H4'	8:A:1937:A:C8	2.56	0.40
8:A:1999:C:C2	8:A:2000:C:C5	3.09	0.40
8:A:2005:A:H3'	8:A:2006:C:C5	2.57	0.40
8:A:2059:A:N9	8:A:2503:2MA:HM23	2.37	0.40
8:A:2060:A:OP2	12:E:65:THR:O	2.40	0.40
8:A:2085:U:O2	8:A:2234:G:C2	2.74	0.40
8:A:2204:G:P	10:C:146:LYS:NZ	2.93	0.40
8:A:2355:G:C6	8:A:2356:U:C4	3.08	0.40
8:A:2487:G:C2	8:A:2488:G:C5	3.09	0.40
8:A:2499:C:C4	8:A:2500:U:O4	2.74	0.40
8:A:2508:G:H2'	8:A:2509:G:O4'	2.22	0.40
8:A:2524:G:H2'	8:A:2525:G:O4'	2.22	0.40
8:A:2531:A:H4'	14:G:156:TYR:CE2	2.57	0.40
8:A:2652:C:N3	8:A:2669:G:C2	2.90	0.40
8:A:2686:G:C6	8:A:2687:U:C4	3.09	0.40
8:A:2709:G:C6	8:A:2710:C:C4	3.10	0.40
8:A:2831:G:C2'	8:A:2884:U:OP1	2.70	0.40
8:A:2838:G:C5	8:A:2839:G:C8	3.10	0.40
8:A:2850:A:OP2	8:A:2866:U:C2	2.74	0.40
8:A:2858:C:N4	8:A:2859:G:N1	2.69	0.40
8:A:2884:U:H2'	8:A:2885:G:C8	2.56	0.40
9:B:13:G:H4'	9:B:15:A:C8	2.57	0.40
9:B:18:G:H2'	9:B:19:C:C6	2.56	0.40
9:B:35:C:C4	9:B:36:C:C1'	3.04	0.40
9:B:57:A:O4'	13:F:26:GLN:HB2	2.22	0.40
9:B:70:C:H2'	9:B:71:C:H6	1.86	0.40
11:D:107:VAL:CA	11:D:204:LYS:O	2.69	0.40
13:F:32:LYS:HE3	13:F:156:THR:CB	2.52	0.40
13:F:37:MET:CE	13:F:151:LEU:HD23	2.52	0.40
13:F:37:MET:O	13:F:85:GLY:HA2	2.21	0.40
13:F:174:PHE:CG	13:F:175:PRO:HD2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:G:125:PRO:HG2	14:G:129:GLU:OE2	2.21	0.40
15:H:33:GLN:OE1	15:H:33:GLN:N	2.54	0.40
15:H:56:ALA:O	15:H:60:GLU:HG2	2.22	0.40
15:H:122:LEU:N	15:H:122:LEU:CD2	2.85	0.40
17:J:78:THR:HG23	17:J:83:GLY:O	2.21	0.40
17:J:113:PRO:HA	17:J:116:ARG:CZ	2.52	0.40
18:K:107:LEU:HD12	18:K:107:LEU:HA	1.94	0.40
19:L:85:VAL:O	19:L:85:VAL:HG22	2.21	0.40
23:P:32:VAL:CG1	23:P:34:GLY:O	2.69	0.40
25:R:51:VAL:HG12	25:R:52:PRO:HD3	2.02	0.40
26:S:26:GLY:H	26:S:71:VAL:HB	1.86	0.40
26:S:79:GLY:HA2	26:S:102:HIS:CE1	2.57	0.40
27:T:57:VAL:HG22	27:T:58:VAL:N	2.36	0.40
27:T:58:VAL:HG22	27:T:85:VAL:HA	2.04	0.40
27:T:68:LYS:O	27:T:75:GLY:N	2.46	0.40
27:T:69:ARG:HB2	27:T:74:ILE:HD13	2.03	0.40
28:U:47:PRO:O	28:U:53:GLN:HB2	2.22	0.40
29:V:6:ALA:HB2	29:V:42:LEU:HD21	2.04	0.40
29:V:41:GLU:C	29:V:42:LEU:HG	2.47	0.40
30:W:47:VAL:HG13	30:W:56:PHE:O	2.21	0.40
33:Z:8:GLN:HB2	33:Z:28:LEU:HD13	2.03	0.40
33:Z:28:LEU:HD23	33:Z:35:VAL:HG13	2.03	0.40
34:a:51:A:C2	34:a:353:A:N1	2.90	0.40
34:a:61:G:C6	34:a:107:G:N1	2.89	0.40
34:a:119:A:C8	34:a:288:A:C6	3.10	0.40
34:a:123:U:H4'	34:a:311:C:O2	2.21	0.40
34:a:142:G:N2	34:a:222:C:C2	2.90	0.40
34:a:208:U:C2'	34:a:209:U:H5''	2.51	0.40
34:a:354:G:C6	34:a:355:C:C4	3.09	0.40
34:a:376:G:C2	34:a:377:G:C8	3.09	0.40
34:a:417:G:C6	34:a:418:C:C4	3.10	0.40
34:a:429:U:C2	34:a:431:A:C8	3.10	0.40
34:a:438:U:C2	34:a:494:G:N1	2.90	0.40
34:a:444:G:H2'	34:a:445:G:O4'	2.22	0.40
34:a:448:A:OP2	34:a:486:U:O4	2.40	0.40
34:a:512:U:O4'	37:d:40:HIS:NE2	2.55	0.40
34:a:577:G:O4'	34:a:816:A:C4	2.75	0.40
34:a:579:A:H2'	34:a:580:C:C6	2.56	0.40
34:a:582:C:C2	34:a:583:A:C8	3.10	0.40
34:a:648:A:C4	34:a:649:A:C8	3.09	0.40
34:a:665:A:C8	34:a:733:G:N3	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:a:667:G:N1	34:a:740:U:C2	2.89	0.40
34:a:677:U:H1'	44:k:120:CYS:SG	2.61	0.40
34:a:687:A:N7	34:a:703:G:C2	2.87	0.40
34:a:724:G:N1	34:a:733:G:N1	2.70	0.40
34:a:781:A:N7	34:a:782:A:C8	2.90	0.40
34:a:904:U:H2'	34:a:905:U:H6	1.87	0.40
34:a:929:G:H2'	34:a:930:C:H6	1.86	0.40
34:a:1002:G:C6	34:a:1003:G:C6	3.09	0.40
34:a:1016:A:O2'	34:a:1217:C:O2	2.40	0.40
34:a:1068:G:OP2	34:a:1094:G:H5''	2.22	0.40
34:a:1070:U:N3	34:a:1106:G:C6	2.89	0.40
34:a:1124:G:C6	34:a:1150:A:N6	2.89	0.40
34:a:1200:C:HO2'	34:a:1201:A:P	2.34	0.40
34:a:1239:A:C2	34:a:1297:G:N3	2.89	0.40
34:a:1294:G:C6	34:a:1295:U:N3	2.90	0.40
34:a:1342:C:O3'	42:i:126:PHE:HD2	2.04	0.40
34:a:1355:G:C4	34:a:1368:A:C2	3.10	0.40
34:a:1381:U:O2'	40:g:78:ARG:O	2.34	0.40
34:a:1462:C:H2'	34:a:1463:U:O4'	2.22	0.40
35:b:46:VAL:HA	35:b:49:PHE:HB3	2.03	0.40
35:b:100:LEU:HD23	35:b:100:LEU:N	2.36	0.40
35:b:127:LYS:O	35:b:127:LYS:HG2	2.20	0.40
35:b:185:ILE:HG22	35:b:203:ASP:OD1	2.21	0.40
36:c:71:ARG:O	36:c:75:VAL:HG23	2.22	0.40
37:d:74:TYR:HA	37:d:77:GLU:CG	2.50	0.40
37:d:124:VAL:HA	37:d:142:VAL:O	2.22	0.40
38:e:63:MET:O	38:e:64:GLU:C	2.63	0.40
38:e:65:LYS:O	38:e:69:ASN:HB2	2.21	0.40
41:h:17:GLN:OE1	41:h:69:ALA:HB2	2.21	0.40
43:j:28:THR:O	43:j:32:THR:HG22	2.20	0.40
43:j:30:LYS:NZ	43:j:36:VAL:H	2.19	0.40
43:j:69:THR:O	43:j:69:THR:HG23	2.21	0.40
45:l:3:VAL:O	45:l:7:VAL:CG2	2.59	0.40
47:n:69:ARG:HH11	47:n:71:HIS:C	2.29	0.40
48:o:32:THR:HG22	48:o:62:ARG:HH11	1.87	0.40
50:q:24:ILE:O	50:q:40:THR:HA	2.22	0.40
51:r:67:LEU:CD2	51:r:68:PRO:HD2	2.52	0.40
53:t:50:PHE:CE1	53:t:75:LYS:HG2	2.57	0.40
55:v:3:C:H2'	55:v:4:G:O4'	2.21	0.40
57:x:68:THR:HA	57:x:84:ASN:HA	2.03	0.40
57:x:254:ARG:O	57:x:257:ASN:C	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:x:405:LEU:HD13	57:x:405:LEU:HA	1.84	0.40
57:x:534:GLU:HB3	57:x:574:GLY:CA	2.44	0.40
57:x:559:GLN:HB3	57:x:600:PHE:CD2	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	0	54/57 (95%)	53 (98%)	1 (2%)	0	100	100
2	1	48/55 (87%)	46 (96%)	2 (4%)	0	100	100
3	2	44/46 (96%)	41 (93%)	3 (7%)	0	100	100
4	3	62/65 (95%)	56 (90%)	5 (8%)	1 (2%)	7	37
5	4	36/38 (95%)	31 (86%)	5 (14%)	0	100	100
6	5	129/165 (78%)	107 (83%)	22 (17%)	0	100	100
7	6	64/70 (91%)	57 (89%)	5 (8%)	2 (3%)	3	22
10	C	269/273 (98%)	245 (91%)	24 (9%)	0	100	100
11	D	207/209 (99%)	190 (92%)	17 (8%)	0	100	100
12	E	199/201 (99%)	191 (96%)	8 (4%)	0	100	100
13	F	175/179 (98%)	157 (90%)	18 (10%)	0	100	100
14	G	174/177 (98%)	163 (94%)	11 (6%)	0	100	100
15	H	147/149 (99%)	126 (86%)	21 (14%)	0	100	100
16	I	139/142 (98%)	124 (89%)	14 (10%)	1 (1%)	18	56
17	J	140/142 (99%)	134 (96%)	6 (4%)	0	100	100
18	K	120/123 (98%)	109 (91%)	11 (9%)	0	100	100
19	L	141/144 (98%)	124 (88%)	17 (12%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	M	134/136 (98%)	122 (91%)	12 (9%)	0	100	100
21	N	118/127 (93%)	109 (92%)	9 (8%)	0	100	100
22	O	114/117 (97%)	107 (94%)	7 (6%)	0	100	100
23	P	112/115 (97%)	101 (90%)	11 (10%)	0	100	100
24	Q	115/118 (98%)	113 (98%)	2 (2%)	0	100	100
25	R	101/103 (98%)	91 (90%)	9 (9%)	1 (1%)	12	48
26	S	108/110 (98%)	99 (92%)	9 (8%)	0	100	100
27	T	91/100 (91%)	81 (89%)	9 (10%)	1 (1%)	11	46
28	U	100/104 (96%)	89 (89%)	10 (10%)	1 (1%)	12	48
29	V	92/94 (98%)	92 (100%)	0	0	100	100
30	W	73/85 (86%)	68 (93%)	5 (7%)	0	100	100
31	X	75/78 (96%)	70 (93%)	5 (7%)	0	100	100
32	Y	61/63 (97%)	57 (93%)	3 (5%)	1 (2%)	7	37
33	Z	56/59 (95%)	55 (98%)	1 (2%)	0	100	100
35	b	216/240 (90%)	180 (83%)	35 (16%)	1 (0%)	24	63
36	c	204/233 (88%)	193 (95%)	11 (5%)	0	100	100
37	d	203/206 (98%)	172 (85%)	30 (15%)	1 (0%)	24	63
38	e	155/167 (93%)	140 (90%)	15 (10%)	0	100	100
39	f	98/135 (73%)	89 (91%)	9 (9%)	0	100	100
40	g	149/179 (83%)	134 (90%)	15 (10%)	0	100	100
41	h	127/130 (98%)	118 (93%)	9 (7%)	0	100	100
42	i	125/130 (96%)	106 (85%)	19 (15%)	0	100	100
43	j	96/103 (93%)	78 (81%)	18 (19%)	0	100	100
44	k	114/129 (88%)	103 (90%)	11 (10%)	0	100	100
45	l	121/124 (98%)	104 (86%)	16 (13%)	1 (1%)	16	54
46	m	112/118 (95%)	100 (89%)	12 (11%)	0	100	100
47	n	99/102 (97%)	90 (91%)	9 (9%)	0	100	100
48	o	86/89 (97%)	82 (95%)	4 (5%)	0	100	100
49	p	80/82 (98%)	68 (85%)	12 (15%)	0	100	100
50	q	78/84 (93%)	65 (83%)	13 (17%)	0	100	100
51	r	63/75 (84%)	54 (86%)	9 (14%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	s	80/92 (87%)	72 (90%)	8 (10%)	0	100	100
53	t	83/87 (95%)	82 (99%)	1 (1%)	0	100	100
54	u	63/71 (89%)	51 (81%)	12 (19%)	0	100	100
57	x	666/704 (95%)	588 (88%)	71 (11%)	7 (1%)	11	46
All	All	6516/6924 (94%)	5877 (90%)	621 (10%)	18 (0%)	37	72

All (18) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
7	6	64	PHE
57	x	387	LEU
57	x	545	PRO
57	x	546	GLY
4	3	31	ILE
57	x	647	GLU
28	U	98	ASN
57	x	507	GLN
57	x	508	SER
32	Y	19	LEU
35	b	20	ARG
57	x	79	GLU
25	R	52	PRO
27	T	88	LYS
45	l	41	PRO
7	6	51	VAL
16	I	22	PRO
37	d	144	ILE

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 PDB entries followed by that with respect to all EM entries.

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	
1	0	47/48 (98%)	47 (100%)	0	100	100
2	1	45/49 (92%)	45 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	2	38/38 (100%)	38 (100%)	0	100	100
4	3	51/52 (98%)	51 (100%)	0	100	100
5	4	34/34 (100%)	34 (100%)	0	100	100
7	6	59/62 (95%)	57 (97%)	2 (3%)	32	54
10	C	216/218 (99%)	214 (99%)	2 (1%)	70	78
11	D	164/164 (100%)	164 (100%)	0	100	100
12	E	165/165 (100%)	165 (100%)	0	100	100
13	F	148/150 (99%)	148 (100%)	0	100	100
14	G	137/138 (99%)	136 (99%)	1 (1%)	76	81
15	H	114/114 (100%)	112 (98%)	2 (2%)	51	68
17	J	116/116 (100%)	116 (100%)	0	100	100
18	K	103/104 (99%)	99 (96%)	4 (4%)	28	49
19	L	102/103 (99%)	102 (100%)	0	100	100
20	M	109/109 (100%)	109 (100%)	0	100	100
21	N	100/103 (97%)	100 (100%)	0	100	100
22	O	86/87 (99%)	86 (100%)	0	100	100
23	P	99/100 (99%)	99 (100%)	0	100	100
24	Q	89/90 (99%)	89 (100%)	0	100	100
25	R	84/84 (100%)	84 (100%)	0	100	100
26	S	93/93 (100%)	92 (99%)	1 (1%)	65	76
27	T	80/84 (95%)	80 (100%)	0	100	100
28	U	83/85 (98%)	83 (100%)	0	100	100
29	V	78/78 (100%)	78 (100%)	0	100	100
30	W	57/63 (90%)	57 (100%)	0	100	100
31	X	67/68 (98%)	67 (100%)	0	100	100
32	Y	55/55 (100%)	55 (100%)	0	100	100
33	Z	48/49 (98%)	48 (100%)	0	100	100
35	b	180/198 (91%)	178 (99%)	2 (1%)	65	76
36	c	170/190 (90%)	170 (100%)	0	100	100
37	d	172/173 (99%)	172 (100%)	0	100	100
38	e	114/126 (90%)	113 (99%)	1 (1%)	70	78

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	f	87/116 (75%)	87 (100%)	0	100	100
40	g	124/147 (84%)	123 (99%)	1 (1%)	73	80
41	h	104/105 (99%)	104 (100%)	0	100	100
42	i	105/107 (98%)	105 (100%)	0	100	100
43	j	86/90 (96%)	86 (100%)	0	100	100
44	k	89/99 (90%)	88 (99%)	1 (1%)	65	76
45	l	103/104 (99%)	102 (99%)	1 (1%)	68	78
46	m	92/96 (96%)	92 (100%)	0	100	100
47	n	79/84 (94%)	79 (100%)	0	100	100
48	o	76/77 (99%)	76 (100%)	0	100	100
49	p	65/65 (100%)	65 (100%)	0	100	100
50	q	74/78 (95%)	74 (100%)	0	100	100
51	r	56/65 (86%)	56 (100%)	0	100	100
52	s	72/79 (91%)	72 (100%)	0	100	100
53	t	65/66 (98%)	65 (100%)	0	100	100
54	u	46/61 (75%)	46 (100%)	0	100	100
57	x	551/578 (95%)	546 (99%)	5 (1%)	70	78
58	y	1/1 (100%)	1 (100%)	0	100	100
All	All	5178/5408 (96%)	5155 (100%)	23 (0%)	81	84

All (23) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
7	6	20	ASN
7	6	51	VAL
10	C	43	ASN
10	C	85	ASN
14	G	2	ARG
15	H	58	LEU
15	H	143	ILE
18	K	37	ASP
18	K	88	ASN
18	K	90	ASN
18	K	93	GLN
26	S	46	LEU
35	b	108	GLN

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Mol	Chain	Res	Type
35	b	183	PHE
38	e	81	GLN
40	g	10	LYS
44	k	118	ASN
45	l	46	SER
57	x	23	THR
57	x	84	ASN
57	x	481	ASN
57	x	529	ASN
57	x	578	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (32) such sidechains are listed below:

Mol	Chain	Res	Type
2	1	18	HIS
2	1	25	ASN
2	1	44	GLN
11	D	130	GLN
14	G	44	HIS
14	G	114	HIS
17	J	77	HIS
17	J	135	GLN
18	K	9	ASN
19	L	99	ASN
21	N	81	ASN
22	O	98	GLN
23	P	11	GLN
23	P	40	GLN
24	Q	13	HIS
24	Q	80	ASN
26	S	7	HIS
27	T	92	ASN
29	V	75	GLN
35	b	41	ASN
36	c	189	HIS
37	d	53	GLN
38	e	81	GLN
40	g	147	ASN
43	j	20	GLN
48	o	49	HIS
49	p	29	ASN
51	r	73	HIS

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Mol	Chain	Res	Type
52	s	68	HIS
57	x	504	HIS
57	x	513	GLN
57	x	626	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
34	a	1539/1542 (99%)	448 (29%)	0
55	v	76/77 (98%)	20 (26%)	0
56	w	75/76 (98%)	23 (30%)	0
59	z	9/33 (27%)	3 (33%)	0
8	A	2902/2903 (99%)	594 (20%)	39 (1%)
9	B	119/120 (99%)	21 (17%)	3 (2%)
All	All	4720/4751 (99%)	1109 (23%)	42 (0%)

All (1109) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
8	A	10	A
8	A	34	U
8	A	35	G
8	A	46	G
8	A	62	U
8	A	63	A
8	A	64	A
8	A	71	A
8	A	74	A
8	A	75	G
8	A	91	A
8	A	101	A
8	A	102	U
8	A	103	A
8	A	118	A
8	A	119	A
8	A	120	U
8	A	131	A
8	A	139	U
8	A	141	G
8	A	142	A
8	A	157	C

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Mol	Chain	Res	Type
8	A	158	U
8	A	159	G
8	A	160	A
8	A	162	U
8	A	163	C
8	A	167	A
8	A	169	G
8	A	181	A
8	A	196	A
8	A	199	A
8	A	215	G
8	A	216	A
8	A	221	A
8	A	222	A
8	A	224	U
8	A	225	C
8	A	228	C
8	A	229	C
8	A	233	A
8	A	242	G
8	A	243	U
8	A	248	G
8	A	250	G
8	A	255	A
8	A	266	G
8	A	271	G
8	A	272	A
8	A	273	G
8	A	274	C
8	A	275	C
8	A	276	U
8	A	277	G
8	A	278	A
8	A	287	G
8	A	288	U
8	A	291	G
8	A	294	A
8	A	311	A
8	A	330	A
8	A	331	C
8	A	345	A
8	A	346	A

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Mol	Chain	Res	Type
8	A	355	U
8	A	356	G
8	A	362	A
8	A	369	U
8	A	371	A
8	A	372	G
8	A	373	U
8	A	377	G
8	A	383	C
8	A	386	G
8	A	395	U
8	A	396	G
8	A	401	A
8	A	403	U
8	A	404	A
8	A	405	U
8	A	406	G
8	A	411	G
8	A	424	G
8	A	434	U
8	A	435	C
8	A	452	G
8	A	455	C
8	A	457	A
8	A	458	G
8	A	459	U
8	A	475	C
8	A	480	A
8	A	481	G
8	A	489	G
8	A	491	G
8	A	496	G
8	A	501	A
8	A	505	A
8	A	509	C
8	A	513	A
8	A	529	A
8	A	532	A
8	A	548	G
8	A	549	G
8	A	556	A
8	A	563	A

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Mol	Chain	Res	Type
8	A	568	U
8	A	571	U
8	A	573	U
8	A	575	A
8	A	603	A
8	A	613	A
8	A	614	A
8	A	615	U
8	A	622	G
8	A	627	A
8	A	637	A
8	A	645	C
8	A	646	U
8	A	647	G
8	A	653	U
8	A	654	A
8	A	655	A
8	A	669	G
8	A	670	A
8	A	677	A
8	A	682	G
8	A	685	A
8	A	686	U
8	A	730	A
8	A	740	C
8	A	747	5MC
8	A	762	U
8	A	764	A
8	A	765	C
8	A	774	G
8	A	775	G
8	A	776	G
8	A	782	A
8	A	784	G
8	A	785	G
8	A	791	C
8	A	792	A
8	A	805	G
8	A	812	C
8	A	819	A
8	A	827	U
8	A	828	U

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Mol	Chain	Res	Type
8	A	831	G
8	A	845	A
8	A	846	U
8	A	847	U
8	A	856	G
8	A	859	G
8	A	866	A
8	A	869	G
8	A	874	G
8	A	875	G
8	A	876	C
8	A	877	A
8	A	882	G
8	A	883	G
8	A	884	U
8	A	885	C
8	A	886	A
8	A	887	A
8	A	888	C
8	A	890	C
8	A	891	G
8	A	892	A
8	A	893	C
8	A	894	U
8	A	895	U
8	A	896	A
8	A	899	A
8	A	903	C
8	A	907	G
8	A	910	A
8	A	914	G
8	A	927	A
8	A	931	U
8	A	938	G
8	A	941	A
8	A	945	A
8	A	946	C
8	A	959	A
8	A	961	C
8	A	973	A
8	A	974	G
8	A	983	A

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Mol	Chain	Res	Type
8	A	984	A
8	A	990	A
8	A	995	C
8	A	996	A
8	A	999	U
8	A	1005	C
8	A	1012	U
8	A	1013	C
8	A	1025	G
8	A	1026	G
8	A	1033	U
8	A	1040	A
8	A	1044	C
8	A	1045	C
8	A	1046	A
8	A	1047	G
8	A	1048	A
8	A	1057	A
8	A	1058	U
8	A	1059	G
8	A	1060	U
8	A	1061	U
8	A	1062	G
8	A	1063	G
8	A	1064	C
8	A	1065	U
8	A	1066	U
8	A	1067	A
8	A	1068	G
8	A	1069	A
8	A	1070	A
8	A	1072	C
8	A	1073	A
8	A	1074	G
8	A	1075	C
8	A	1076	C
8	A	1079	C
8	A	1080	A
8	A	1081	U
8	A	1082	U
8	A	1083	U
8	A	1084	A

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Mol	Chain	Res	Type
8	A	1085	A
8	A	1086	A
8	A	1087	G
8	A	1088	A
8	A	1089	A
8	A	1091	G
8	A	1092	C
8	A	1093	G
8	A	1094	U
8	A	1095	A
8	A	1097	U
8	A	1099	G
8	A	1100	C
8	A	1101	U
8	A	1102	C
8	A	1103	A
8	A	1105	U
8	A	1106	G
8	A	1107	G
8	A	1111	A
8	A	1112	G
8	A	1115	G
8	A	1117	C
8	A	1120	G
8	A	1130	U
8	A	1132	U
8	A	1133	A
8	A	1135	C
8	A	1139	G
8	A	1172	C
8	A	1174	U
8	A	1175	A
8	A	1176	U
8	A	1177	G
8	A	1178	C
8	A	1179	G
8	A	1180	U
8	A	1204	A
8	A	1227	G
8	A	1247	A
8	A	1253	A
8	A	1255	U

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Mol	Chain	Res	Type
8	A	1256	G
8	A	1271	G
8	A	1272	A
8	A	1294	U
8	A	1300	G
8	A	1301	A
8	A	1332	G
8	A	1341	G
8	A	1345	C
8	A	1359	A
8	A	1365	A
8	A	1368	G
8	A	1378	A
8	A	1379	U
8	A	1380	G
8	A	1383	A
8	A	1395	A
8	A	1408	G
8	A	1415	U
8	A	1416	G
8	A	1419	A
8	A	1420	A
8	A	1427	A
8	A	1428	C
8	A	1433	A
8	A	1452	G
8	A	1454	C
8	A	1455	G
8	A	1458	U
8	A	1460	U
8	A	1461	C
8	A	1482	G
8	A	1490	A
8	A	1491	G
8	A	1493	C
8	A	1497	U
8	A	1498	C
8	A	1515	A
8	A	1523	U
8	A	1529	G
8	A	1534	U
8	A	1535	A

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Mol	Chain	Res	Type
8	A	1536	C
8	A	1558	C
8	A	1566	A
8	A	1569	A
8	A	1578	U
8	A	1583	A
8	A	1584	U
8	A	1585	C
8	A	1603	A
8	A	1608	A
8	A	1610	A
8	A	1634	A
8	A	1647	U
8	A	1648	U
8	A	1649	G
8	A	1654	A
8	A	1674	G
8	A	1675	C
8	A	1698	A
8	A	1715	G
8	A	1729	U
8	A	1730	C
8	A	1731	G
8	A	1732	C
8	A	1738	G
8	A	1744	A
8	A	1757	A
8	A	1764	C
8	A	1773	A
8	A	1784	A
8	A	1786	A
8	A	1787	A
8	A	1789	A
8	A	1790	C
8	A	1800	C
8	A	1801	A
8	A	1807	G
8	A	1808	A
8	A	1809	A
8	A	1811	G
8	A	1816	C
8	A	1827	U

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Mol	Chain	Res	Type
8	A	1829	A
8	A	1835	2MG
8	A	1848	A
8	A	1857	G
8	A	1869	G
8	A	1884	G
8	A	1896	G
8	A	1900	A
8	A	1901	A
8	A	1906	G
8	A	1912	A
8	A	1913	A
8	A	1914	C
8	A	1927	A
8	A	1929	G
8	A	1930	G
8	A	1931	U
8	A	1937	A
8	A	1938	A
8	A	1939	5MU
8	A	1955	U
8	A	1960	A
8	A	1967	C
8	A	1970	A
8	A	1971	U
8	A	1972	G
8	A	1982	U
8	A	1991	U
8	A	1997	C
8	A	2020	A
8	A	2022	U
8	A	2023	C
8	A	2030	6MZ
8	A	2031	A
8	A	2032	G
8	A	2033	A
8	A	2036	C
8	A	2043	C
8	A	2049	G
8	A	2055	C
8	A	2056	G
8	A	2060	A

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Mol	Chain	Res	Type
8	A	2061	G
8	A	2062	A
8	A	2069	G7M
8	A	2072	C
8	A	2100	G
8	A	2104	C
8	A	2105	U
8	A	2107	G
8	A	2108	A
8	A	2109	U
8	A	2110	G
8	A	2111	U
8	A	2112	G
8	A	2113	U
8	A	2114	A
8	A	2115	G
8	A	2116	G
8	A	2118	U
8	A	2120	G
8	A	2121	G
8	A	2123	G
8	A	2125	G
8	A	2126	A
8	A	2129	C
8	A	2131	U
8	A	2132	U
8	A	2133	G
8	A	2134	A
8	A	2136	G
8	A	2140	G
8	A	2141	G
8	A	2143	C
8	A	2144	G
8	A	2145	C
8	A	2146	C
8	A	2147	A
8	A	2149	U
8	A	2151	U
8	A	2153	C
8	A	2155	U
8	A	2156	G
8	A	2157	G

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Mol	Chain	Res	Type
8	A	2158	A
8	A	2159	G
8	A	2164	C
8	A	2165	C
8	A	2170	A
8	A	2171	A
8	A	2172	U
8	A	2173	A
8	A	2174	C
8	A	2176	A
8	A	2177	C
8	A	2179	C
8	A	2181	U
8	A	2185	U
8	A	2186	G
8	A	2187	U
8	A	2188	U
8	A	2189	U
8	A	2193	G
8	A	2198	A
8	A	2203	U
8	A	2204	G
8	A	2208	C
8	A	2210	U
8	A	2211	A
8	A	2225	A
8	A	2238	G
8	A	2239	G
8	A	2266	A
8	A	2273	A
8	A	2278	A
8	A	2279	G
8	A	2283	C
8	A	2287	A
8	A	2288	A
8	A	2289	G
8	A	2297	A
8	A	2305	U
8	A	2309	A
8	A	2310	C
8	A	2312	U
8	A	2319	G

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Mol	Chain	Res	Type
8	A	2320	U
8	A	2322	A
8	A	2325	G
8	A	2333	A
8	A	2334	U
8	A	2336	A
8	A	2344	U
8	A	2345	G
8	A	2346	A
8	A	2347	C
8	A	2350	C
8	A	2357	G
8	A	2361	G
8	A	2371	G
8	A	2381	A
8	A	2382	G
8	A	2383	G
8	A	2385	C
8	A	2402	U
8	A	2406	A
8	A	2407	A
8	A	2408	U
8	A	2410	G
8	A	2423	U
8	A	2425	A
8	A	2426	A
8	A	2428	G
8	A	2429	G
8	A	2430	A
8	A	2432	A
8	A	2435	A
8	A	2441	U
8	A	2445	2MG
8	A	2447	G
8	A	2448	A
8	A	2475	C
8	A	2476	A
8	A	2478	A
8	A	2487	G
8	A	2494	G
8	A	2502	G
8	A	2503	2MA

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Mol	Chain	Res	Type
8	A	2505	G
8	A	2518	A
8	A	2520	C
8	A	2529	G
8	A	2535	G
8	A	2547	A
8	A	2554	U
8	A	2556	C
8	A	2566	A
8	A	2567	G
8	A	2573	C
8	A	2576	G
8	A	2584	U
8	A	2585	U
8	A	2602	A
8	A	2609	U
8	A	2613	U
8	A	2615	U
8	A	2619	C
8	A	2621	G
8	A	2629	U
8	A	2630	G
8	A	2638	G
8	A	2646	C
8	A	2654	A
8	A	2656	U
8	A	2663	G
8	A	2689	U
8	A	2690	U
8	A	2702	G
8	A	2714	G
8	A	2718	G
8	A	2725	A
8	A	2726	A
8	A	2729	G
8	A	2732	G
8	A	2733	A
8	A	2739	U
8	A	2744	G
8	A	2747	G
8	A	2748	A
8	A	2749	A

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Mol	Chain	Res	Type
8	A	2750	A
8	A	2751	G
8	A	2752	C
8	A	2754	U
8	A	2755	C
8	A	2765	A
8	A	2778	A
8	A	2779	U
8	A	2791	G
8	A	2793	C
8	A	2798	U
8	A	2799	A
8	A	2800	A
8	A	2808	G
8	A	2818	U
8	A	2820	A
8	A	2821	A
8	A	2849	U
8	A	2867	G
8	A	2872	A
8	A	2873	A
8	A	2880	C
8	A	2884	U
8	A	2886	A
8	A	2891	U
8	A	2902	C
9	B	9	G
9	B	18	G
9	B	25	U
9	B	35	C
9	B	36	C
9	B	37	C
9	B	41	G
9	B	42	C
9	B	44	G
9	B	45	A
9	B	51	G
9	B	52	A
9	B	53	A
9	B	56	G
9	B	67	G
9	B	73	A

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Mol	Chain	Res	Type
9	B	88	C
9	B	89	U
9	B	108	A
9	B	109	A
9	B	120	U
34	a	2	A
34	a	5	U
34	a	6	G
34	a	7	A
34	a	9	G
34	a	16	A
34	a	22	G
34	a	31	G
34	a	32	A
34	a	37	U
34	a	39	G
34	a	46	G
34	a	47	C
34	a	48	C
34	a	50	A
34	a	51	A
34	a	64	G
34	a	69	G
34	a	71	A
34	a	73	C
34	a	74	A
34	a	77	A
34	a	78	A
34	a	79	G
34	a	80	A
34	a	81	A
34	a	83	C
34	a	84	U
34	a	85	U
34	a	86	G
34	a	88	U
34	a	89	U
34	a	90	C
34	a	92	U
34	a	94	G
34	a	97	G
34	a	114	U

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Mol	Chain	Res	Type
34	a	121	U
34	a	131	A
34	a	133	U
34	a	140	U
34	a	141	G
34	a	144	G
34	a	145	G
34	a	146	G
34	a	148	G
34	a	155	A
34	a	156	C
34	a	157	U
34	a	158	G
34	a	159	G
34	a	160	A
34	a	161	A
34	a	162	A
34	a	163	C
34	a	164	G
34	a	165	G
34	a	167	A
34	a	169	C
34	a	170	U
34	a	171	A
34	a	173	U
34	a	174	A
34	a	179	A
34	a	180	U
34	a	182	A
34	a	183	C
34	a	186	C
34	a	188	C
34	a	189	A
34	a	197	A
34	a	198	G
34	a	201	G
34	a	202	G
34	a	204	G
34	a	205	A
34	a	206	C
34	a	207	C
34	a	208	U

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Mol	Chain	Res	Type
34	a	209	U
34	a	210	C
34	a	211	G
34	a	212	G
34	a	213	G
34	a	214	C
34	a	216	U
34	a	219	U
34	a	221	C
34	a	224	U
34	a	226	G
34	a	240	G
34	a	245	U
34	a	246	A
34	a	247	G
34	a	251	G
34	a	253	A
34	a	262	A
34	a	266	G
34	a	267	C
34	a	271	C
34	a	279	A
34	a	281	G
34	a	289	G
34	a	298	A
34	a	299	G
34	a	301	G
34	a	316	C
34	a	317	U
34	a	321	A
34	a	322	C
34	a	328	C
34	a	330	C
34	a	342	C
34	a	344	A
34	a	345	C
34	a	346	G
34	a	347	G
34	a	351	G
34	a	352	C
34	a	354	G
34	a	363	A

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Mol	Chain	Res	Type
34	a	367	U
34	a	372	C
34	a	373	A
34	a	374	A
34	a	375	U
34	a	376	G
34	a	384	G
34	a	388	G
34	a	392	C
34	a	397	A
34	a	405	U
34	a	406	G
34	a	411	A
34	a	414	A
34	a	415	A
34	a	421	U
34	a	422	C
34	a	423	G
34	a	428	G
34	a	429	U
34	a	430	A
34	a	435	A
34	a	436	C
34	a	439	U
34	a	442	G
34	a	443	C
34	a	447	G
34	a	448	A
34	a	454	G
34	a	457	G
34	a	458	U
34	a	460	A
34	a	462	G
34	a	463	U
34	a	464	U
34	a	467	U
34	a	468	A
34	a	469	C
34	a	470	C
34	a	471	U
34	a	472	U
34	a	473	U

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Mol	Chain	Res	Type
34	a	476	U
34	a	477	C
34	a	479	U
34	a	482	A
34	a	484	G
34	a	492	C
34	a	495	A
34	a	496	A
34	a	497	G
34	a	505	G
34	a	509	A
34	a	510	A
34	a	511	C
34	a	512	U
34	a	515	G
34	a	516	PSU
34	a	518	C
34	a	524	G
34	a	530	G
34	a	532	A
34	a	547	A
34	a	560	A
34	a	562	U
34	a	564	C
34	a	570	G
34	a	572	A
34	a	573	A
34	a	574	A
34	a	575	G
34	a	576	C
34	a	577	G
34	a	583	A
34	a	596	A
34	a	607	A
34	a	614	C
34	a	618	C
34	a	620	C
34	a	623	C
34	a	624	C
34	a	633	G
34	a	635	A
34	a	636	U

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Mol	Chain	Res	Type
34	a	639	G
34	a	641	U
34	a	650	G
34	a	661	G
34	a	662	U
34	a	665	A
34	a	676	A
34	a	686	U
34	a	687	A
34	a	690	G
34	a	693	G
34	a	695	A
34	a	700	G
34	a	702	A
34	a	703	G
34	a	710	G
34	a	721	G
34	a	723	U
34	a	724	G
34	a	731	G
34	a	733	G
34	a	734	G
34	a	736	C
34	a	739	C
34	a	753	A
34	a	755	G
34	a	777	A
34	a	781	A
34	a	782	A
34	a	793	U
34	a	794	A
34	a	799	G
34	a	812	G
34	a	815	A
34	a	817	C
34	a	818	G
34	a	819	A
34	a	820	U
34	a	821	G
34	a	833	G
34	a	836	G
34	a	837	U

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Mol	Chain	Res	Type
34	a	840	C
34	a	842	U
34	a	843	U
34	a	845	A
34	a	849	G
34	a	864	A
34	a	865	A
34	a	872	A
34	a	876	C
34	a	885	G
34	a	890	G
34	a	891	U
34	a	902	G
34	a	914	A
34	a	920	U
34	a	921	U
34	a	926	G
34	a	927	G
34	a	934	C
34	a	935	A
34	a	945	G
34	a	946	A
34	a	958	A
34	a	960	U
34	a	961	U
34	a	964	A
34	a	965	U
34	a	966	2MG
34	a	967	5MC
34	a	969	A
34	a	975	A
34	a	976	G
34	a	977	A
34	a	979	C
34	a	980	C
34	a	982	U
34	a	984	C
34	a	989	U
34	a	992	U
34	a	993	G
34	a	994	A
34	a	995	C

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Mol	Chain	Res	Type
34	a	996	A
34	a	997	U
34	a	1000	A
34	a	1002	G
34	a	1004	A
34	a	1009	U
34	a	1010	U
34	a	1011	C
34	a	1012	A
34	a	1022	A
34	a	1023	U
34	a	1026	G
34	a	1027	C
34	a	1028	C
34	a	1029	U
34	a	1030	U
34	a	1031	C
34	a	1032	G
34	a	1033	G
34	a	1034	G
34	a	1037	C
34	a	1041	G
34	a	1045	C
34	a	1049	U
34	a	1050	G
34	a	1064	G
34	a	1065	U
34	a	1075	U
34	a	1080	A
34	a	1081	A
34	a	1082	A
34	a	1083	U
34	a	1084	G
34	a	1085	U
34	a	1086	U
34	a	1094	G
34	a	1100	C
34	a	1101	A
34	a	1102	A
34	a	1105	A
34	a	1108	G
34	a	1120	C

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Mol	Chain	Res	Type
34	a	1124	G
34	a	1126	U
34	a	1127	G
34	a	1130	A
34	a	1131	G
34	a	1133	G
34	a	1134	G
34	a	1136	C
34	a	1137	C
34	a	1138	G
34	a	1140	C
34	a	1142	G
34	a	1143	G
34	a	1145	A
34	a	1146	A
34	a	1154	G
34	a	1159	U
34	a	1160	G
34	a	1167	A
34	a	1168	U
34	a	1169	A
34	a	1173	U
34	a	1176	A
34	a	1183	U
34	a	1184	G
34	a	1193	G
34	a	1196	A
34	a	1197	A
34	a	1200	C
34	a	1201	A
34	a	1202	U
34	a	1210	C
34	a	1212	U
34	a	1213	A
34	a	1214	C
34	a	1227	A
34	a	1228	C
34	a	1236	A
34	a	1239	A
34	a	1242	G
34	a	1249	C
34	a	1250	A

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Mol	Chain	Res	Type
34	a	1257	A
34	a	1260	G
34	a	1261	A
34	a	1262	C
34	a	1263	C
34	a	1264	U
34	a	1267	C
34	a	1269	A
34	a	1270	G
34	a	1274	A
34	a	1275	A
34	a	1280	A
34	a	1285	A
34	a	1287	A
34	a	1300	G
34	a	1301	U
34	a	1302	C
34	a	1303	C
34	a	1312	G
34	a	1317	C
34	a	1318	A
34	a	1319	A
34	a	1320	C
34	a	1322	C
34	a	1330	U
34	a	1331	G
34	a	1332	A
34	a	1333	A
34	a	1335	U
34	a	1336	C
34	a	1338	G
34	a	1346	A
34	a	1347	G
34	a	1348	U
34	a	1349	A
34	a	1353	G
34	a	1360	A
34	a	1366	C
34	a	1370	G
34	a	1378	C
34	a	1381	U
34	a	1394	A

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Mol	Chain	Res	Type
34	a	1395	C
34	a	1397	C
34	a	1398	A
34	a	1400	C
34	a	1408	A
34	a	1410	A
34	a	1419	G
34	a	1422	G
34	a	1441	A
34	a	1444	U
34	a	1446	A
34	a	1447	A
34	a	1450	U
34	a	1452	C
34	a	1453	G
34	a	1454	G
34	a	1456	A
34	a	1472	U
34	a	1492	A
34	a	1497	G
34	a	1499	A
34	a	1503	A
34	a	1506	U
34	a	1517	G
34	a	1519	MA6
34	a	1520	C
34	a	1529	G
34	a	1530	G
34	a	1534	A
34	a	1536	C
34	a	1538	C
34	a	1539	C
34	a	1540	U
55	v	9	G
55	v	17(A)	U
55	v	19	G
55	v	20	H2U
55	v	21	A
55	v	22	G
55	v	23	C
55	v	33	U
55	v	36	U

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Mol	Chain	Res	Type
55	v	38	A
55	v	40	C
55	v	41	C
55	v	47	U
55	v	48	C
55	v	54	5MU
55	v	60	U
55	v	68	C
55	v	73	A
55	v	74	C
55	v	75	C
56	w	9	A
56	w	10	G
56	w	13	C
56	w	16	U
56	w	17	C
56	w	19	G
56	w	20	U
56	w	21	A
56	w	22	G
56	w	28	G
56	w	45	U
56	w	46	G7M
56	w	47	U
56	w	48	C
56	w	49	C
56	w	57	G
56	w	58	A
56	w	59	U
56	w	60	U
56	w	61	C
56	w	69	G
56	w	73	A
56	w	76	A
59	z	2	U
59	z	4	U
59	z	9	U

All (42) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
8	A	102	U

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Mol	Chain	Res	Type
8	A	141	G
8	A	160	A
8	A	162	U
8	A	242	G
8	A	310	A
8	A	555	G
8	A	733	G
8	A	746	PSU
8	A	784	G
8	A	882	G
8	A	885	C
8	A	1078	U
8	A	1085	A
8	A	1090	A
8	A	1091	G
8	A	1173	U
8	A	1178	C
8	A	1182	G
8	A	1200	C
8	A	1300	G
8	A	1358	G
8	A	1454	C
8	A	1490	A
8	A	1730	C
8	A	1789	A
8	A	1847	G
8	A	2192	U
8	A	2287	A
8	A	2308	G
8	A	2324	U
8	A	2345	G
8	A	2346	A
8	A	2381	A
8	A	2405	G
8	A	2406	A
8	A	2728	U
8	A	2750	A
8	A	2820	A
9	B	44	G
9	B	52	A
9	B	66	A

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

46 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$
8	OMU	A	2552	8	19,22,23	2.66	5 (26%)	26,31,34	2.07	6 (23%)
8	OMG	A	2251	56,8	23,26,27	2.43	7 (30%)	33,38,41	2.48	11 (33%)
8	1MG	A	745	8	22,26,27	2.48	7 (31%)	33,39,42	1.94	9 (27%)
8	2MA	A	2503	8	22,25,26	3.54	9 (40%)	33,37,40	2.12	13 (39%)
8	OMC	A	2498	8	19,22,23	3.08	8 (42%)	26,31,34	0.84	0
34	UR3	a	1498	34	19,22,23	2.46	6 (31%)	26,32,35	1.12	2 (7%)
8	5MC	A	747	8	18,22,23	3.41	7 (38%)	26,32,35	1.39	2 (7%)
34	4OC	a	1402	34	20,23,24	3.16	8 (40%)	26,32,35	1.13	3 (11%)
55	4SU	v	8	55	18,21,22	3.41	8 (44%)	26,30,33	2.15	4 (15%)
55	5MU	v	54	55	19,22,23	4.60	7 (36%)	28,32,35	3.73	10 (35%)
8	6MZ	A	2030	8	22,25,26	2.32	7 (31%)	30,36,39	2.66	12 (40%)
34	2MG	a	966	34	23,26,27	1.25	3 (13%)	32,38,41	2.26	7 (21%)
8	PSU	A	955	8	18,21,22	3.55	7 (38%)	22,30,33	1.98	4 (18%)
8	5MC	A	1962	8	18,22,23	2.96	7 (38%)	26,32,35	1.34	2 (7%)
34	MA6	a	1519	34	23,26,27	1.71	5 (21%)	34,38,41	3.25	14 (41%)
34	G7M	a	527	34	23,26,27	2.27	5 (21%)	35,39,42	3.43	12 (34%)
56	4SU	w	8	56	18,21,22	1.89	5 (27%)	26,30,33	2.11	6 (23%)
8	PSU	A	2457	8	18,21,22	3.52	8 (44%)	22,30,33	2.16	4 (18%)
56	PSU	w	39	56	18,21,22	3.75	6 (33%)	22,30,33	2.22	5 (22%)
34	5MC	a	967	34	18,22,23	3.28	7 (38%)	26,32,35	1.29	4 (15%)
56	PSU	w	55	56	18,21,22	1.43	3 (16%)	22,30,33	1.91	5 (22%)
8	6MZ	A	1618	8	22,25,26	2.29	8 (36%)	30,36,39	2.76	11 (36%)
8	2MG	A	2445	8	23,26,27	2.43	7 (30%)	32,38,41	1.66	8 (25%)
55	H2U	v	20	55	18,21,22	3.58	3 (16%)	21,30,33	2.03	5 (23%)
8	PSU	A	2504	8	18,21,22	3.85	7 (38%)	22,30,33	1.84	4 (18%)
34	2MG	a	1207	34	23,26,27	2.47	8 (34%)	32,38,41	1.95	11 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
8	3TD	A	1915	8	18,22,23	7.27	11 (61%)	22,32,35	1.73	2 (9%)
8	PSU	A	2605	8	18,21,22	3.48	7 (38%)	22,30,33	2.27	6 (27%)
8	5MU	A	1939	8	19,22,23	4.63	7 (36%)	28,32,35	3.83	9 (32%)
34	PSU	a	516	34	18,21,22	3.65	7 (38%)	22,30,33	1.90	5 (22%)
56	PSU	w	32	56	18,21,22	3.91	6 (33%)	22,30,33	1.85	6 (27%)
56	MIA	w	37	56	28,31,32	2.53	8 (28%)	40,44,47	2.60	14 (35%)
56	G7M	w	46	56	23,26,27	4.12	16 (69%)	35,39,42	2.90	15 (42%)
8	PSU	A	1917	8	18,21,22	3.68	6 (33%)	22,30,33	1.92	5 (22%)
56	5MU	w	54	56	19,22,23	1.38	6 (31%)	28,32,35	2.21	9 (32%)
58	FME	y	101	58	8,9,10	1.03	1 (12%)	7,9,11	1.05	1 (14%)
34	2MG	a	1516	34	23,26,27	2.69	9 (39%)	32,38,41	2.08	10 (31%)
8	PSU	A	2604	8	18,21,22	3.51	8 (44%)	22,30,33	2.41	6 (27%)
8	PSU	A	2580	8	18,21,22	3.28	7 (38%)	22,30,33	2.54	6 (27%)
34	MA6	a	1518	34	23,26,27	1.64	5 (21%)	34,38,41	3.18	13 (38%)
34	5MC	a	1407	34	18,22,23	3.16	7 (38%)	26,32,35	1.09	2 (7%)
55	PSU	v	55	55	18,21,22	3.82	6 (33%)	22,30,33	1.89	5 (22%)
8	2MG	A	1835	8	23,26,27	2.57	8 (34%)	32,38,41	2.39	8 (25%)
8	PSU	A	746	8	18,21,22	3.74	6 (33%)	22,30,33	1.68	5 (22%)
8	PSU	A	1911	8	18,21,22	3.58	7 (38%)	22,30,33	1.96	5 (22%)
8	G7M	A	2069	8	23,26,27	2.18	7 (30%)	35,39,42	3.22	13 (37%)

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
8	OMU	A	2552	8	-	2/9/27/28	0/2/2/2
8	OMG	A	2251	56,8	-	0/9/27/28	0/3/3/3
8	1MG	A	745	8	-	0/7/25/26	0/3/3/3
8	2MA	A	2503	8	-	2/7/25/26	0/3/3/3
8	OMC	A	2498	8	-	2/9/27/28	0/2/2/2
34	UR3	a	1498	34	-	2/7/25/26	0/2/2/2
8	5MC	A	747	8	-	2/7/25/26	0/2/2/2
34	4OC	a	1402	34	-	0/9/29/30	0/2/2/2
55	4SU	v	8	55	-	0/7/25/26	0/2/2/2
55	5MU	v	54	55	-	3/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
8	6MZ	A	2030	8	-	3/9/27/28	0/3/3/3
34	2MG	a	966	34	-	3/9/27/28	0/3/3/3
8	PSU	A	955	8	-	0/7/25/26	0/2/2/2
8	5MC	A	1962	8	-	0/7/25/26	0/2/2/2
34	MA6	a	1519	34	-	4/11/29/30	0/3/3/3
34	G7M	a	527	34	-	2/7/25/26	0/3/3/3
56	4SU	w	8	56	-	0/7/25/26	0/2/2/2
8	PSU	A	2457	8	-	0/7/25/26	0/2/2/2
56	PSU	w	39	56	-	3/7/25/26	0/2/2/2
34	5MC	a	967	34	-	2/7/25/26	0/2/2/2
56	PSU	w	55	56	-	1/7/25/26	0/2/2/2
8	6MZ	A	1618	8	-	2/9/27/28	0/3/3/3
8	2MG	A	2445	8	-	2/9/27/28	0/3/3/3
55	H2U	v	20	55	-	1/7/38/39	0/2/2/2
8	PSU	A	2504	8	-	0/7/25/26	0/2/2/2
34	2MG	a	1207	34	-	0/9/27/28	0/3/3/3
8	3TD	A	1915	8	-	2/7/25/26	0/2/2/2
8	PSU	A	2605	8	-	0/7/25/26	0/2/2/2
8	5MU	A	1939	8	-	2/7/25/26	0/2/2/2
34	PSU	a	516	34	-	0/7/25/26	0/2/2/2
56	PSU	w	32	56	-	2/7/25/26	0/2/2/2
56	MIA	w	37	56	-	3/15/33/34	0/3/3/3
56	G7M	w	46	56	-	1/7/25/26	0/3/3/3
8	PSU	A	1917	8	-	0/7/25/26	0/2/2/2
56	5MU	w	54	56	-	0/7/25/26	0/2/2/2
58	FME	y	101	58	-	4/7/9/11	-
34	2MG	a	1516	34	-	0/9/27/28	0/3/3/3
8	PSU	A	2604	8	-	1/7/25/26	0/2/2/2
8	PSU	A	2580	8	-	0/7/25/26	0/2/2/2
34	MA6	a	1518	34	-	0/11/29/30	0/3/3/3
34	5MC	a	1407	34	-	0/7/25/26	0/2/2/2
55	PSU	v	55	55	-	2/7/25/26	0/2/2/2
8	2MG	A	1835	8	-	2/9/27/28	0/3/3/3
8	PSU	A	746	8	-	1/7/25/26	0/2/2/2
8	PSU	A	1911	8	-	0/7/25/26	0/2/2/2
8	G7M	A	2069	8	-	1/7/25/26	0/3/3/3

All (313) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	A	1915	3TD	O4'-C1'	17.31	1.67	1.43
8	A	1915	3TD	C2'-C1'	-15.67	1.33	1.53
8	A	1915	3TD	C6-C5	13.05	1.50	1.35
55	v	20	H2U	C2-N1	12.16	1.53	1.35
8	A	1939	5MU	C2-N1	10.72	1.55	1.38
55	v	54	5MU	C2-N1	10.49	1.55	1.38
8	A	2503	2MA	C4-N3	10.37	1.47	1.34
56	w	46	G7M	C2'-C3'	-10.12	1.25	1.53
55	v	54	5MU	C4-C5	9.93	1.61	1.44
8	A	746	PSU	C6-C5	9.86	1.46	1.35
55	v	54	5MU	C6-N1	9.70	1.54	1.38
56	w	32	PSU	C6-C5	9.63	1.46	1.35
8	A	1915	3TD	C2-N1	9.58	1.49	1.37
8	A	2504	PSU	C2-N1	9.58	1.49	1.36
8	A	1939	5MU	C6-N1	9.55	1.54	1.38
8	A	1939	5MU	C4-C5	9.43	1.60	1.44
56	w	32	PSU	C2-N1	9.35	1.49	1.36
55	v	55	PSU	C2-N1	9.33	1.49	1.36
8	A	747	5MC	C6-C5	9.32	1.49	1.34
56	w	39	PSU	C2-N1	9.18	1.49	1.36
8	A	955	PSU	C2-N1	9.14	1.49	1.36
8	A	2604	PSU	C2-N1	9.14	1.49	1.36
8	A	2457	PSU	C2-N1	8.92	1.48	1.36
56	w	39	PSU	C6-C5	8.91	1.45	1.35
8	A	2504	PSU	C6-C5	8.86	1.45	1.35
34	a	516	PSU	C6-C5	8.85	1.45	1.35
8	A	1917	PSU	C2-N1	8.77	1.48	1.36
8	A	1911	PSU	C2-N1	8.75	1.48	1.36
8	A	1917	PSU	C6-C5	8.68	1.45	1.35
55	v	55	PSU	C6-C5	8.63	1.45	1.35
8	A	746	PSU	C2-N1	8.47	1.48	1.36
8	A	2605	PSU	C2-N1	8.45	1.48	1.36
34	a	516	PSU	C2-N1	8.35	1.48	1.36
34	a	1407	5MC	C6-C5	8.31	1.48	1.34
8	A	1911	PSU	C6-C5	8.31	1.45	1.35
8	A	1939	5MU	C4-N3	-8.18	1.23	1.38
34	a	967	5MC	C6-C5	8.14	1.48	1.34
55	v	8	4SU	C4-N3	7.99	1.46	1.37
8	A	955	PSU	C6-C5	7.93	1.44	1.35
8	A	2605	PSU	C6-C5	7.90	1.44	1.35
34	a	1402	4OC	C4-N3	7.71	1.46	1.32
55	v	54	5MU	C4-N3	-7.65	1.24	1.38
8	A	2580	PSU	C2-N1	7.64	1.47	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	A	2604	PSU	C6-C5	7.59	1.44	1.35
8	A	2457	PSU	C6-C5	7.55	1.44	1.35
8	A	1835	2MG	C2-N3	7.32	1.45	1.31
8	A	2580	PSU	C6-C5	7.32	1.43	1.35
8	A	1962	5MC	C6-C5	7.29	1.46	1.34
56	w	37	MIA	C13-C14	7.27	1.53	1.32
34	a	1516	2MG	C2-N3	7.09	1.45	1.31
55	v	55	PSU	C2-N3	6.91	1.49	1.37
8	A	1618	6MZ	C6-N6	6.86	1.41	1.34
56	w	32	PSU	C2-N3	6.79	1.49	1.37
8	A	1917	PSU	C2-N3	6.78	1.49	1.37
55	v	20	H2U	C2-N3	6.75	1.50	1.38
34	a	527	G7M	C4-N3	6.70	1.50	1.34
8	A	2504	PSU	C2-N3	6.70	1.49	1.37
8	A	2030	6MZ	C6-N6	6.67	1.41	1.34
34	a	516	PSU	C2-N3	6.61	1.48	1.37
8	A	2605	PSU	C2-N3	6.60	1.48	1.37
8	A	2503	2MA	C2-N3	6.59	1.45	1.34
56	w	37	MIA	C2-S10	6.55	1.81	1.75
8	A	1911	PSU	C2-N3	6.47	1.48	1.37
34	a	1402	4OC	C2-N3	6.41	1.49	1.36
56	w	39	PSU	C2-N3	6.41	1.48	1.37
8	A	2445	2MG	C2-N3	6.38	1.44	1.31
8	A	2552	OMU	C2-N1	6.35	1.48	1.38
8	A	746	PSU	C2-N3	6.33	1.48	1.37
34	a	967	5MC	C4-N3	6.29	1.44	1.34
8	A	1915	3TD	O4'-C4'	-6.29	1.30	1.45
8	A	2498	OMC	C6-C5	6.25	1.49	1.35
56	w	46	G7M	C4-N3	6.23	1.49	1.34
8	A	2251	OMG	C4-N3	6.20	1.49	1.34
8	A	2580	PSU	C2-N3	6.18	1.48	1.37
56	w	46	G7M	C3'-C4'	6.13	1.68	1.53
34	a	1498	UR3	C2-N1	6.12	1.47	1.38
8	A	2498	OMC	C2-N3	6.11	1.48	1.36
8	A	955	PSU	C2-N3	6.08	1.47	1.37
34	a	1516	2MG	C4-N3	6.07	1.48	1.34
8	A	2457	PSU	C2-N3	6.07	1.47	1.37
34	a	1207	2MG	C2-N3	6.07	1.43	1.31
8	A	1835	2MG	C4-N3	6.06	1.48	1.34
55	v	8	4SU	C2-N3	6.01	1.48	1.38
8	A	2604	PSU	C2-N3	5.95	1.47	1.37
56	w	46	G7M	C2-N3	5.87	1.47	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	A	2503	2MA	C6-N1	5.87	1.43	1.35
8	A	2552	OMU	C2-N3	5.77	1.48	1.38
56	w	46	G7M	O4'-C4'	-5.76	1.32	1.45
8	A	747	5MC	C4-N3	5.74	1.43	1.34
8	A	1962	5MC	C4-N3	5.74	1.43	1.34
8	A	1915	3TD	C6-N1	5.72	1.45	1.36
34	a	967	5MC	C2-N3	5.65	1.47	1.36
8	A	2445	2MG	C4-N3	5.59	1.47	1.34
8	A	747	5MC	C2-N3	5.54	1.47	1.36
8	A	2503	2MA	C2-N1	5.53	1.43	1.34
55	v	20	H2U	C4-N3	5.53	1.47	1.37
8	A	745	1MG	C4-N3	5.51	1.47	1.34
56	w	37	MIA	C6-N6	5.50	1.43	1.34
34	a	1402	4OC	C6-C5	5.49	1.47	1.35
34	a	1498	UR3	C6-C5	5.40	1.47	1.35
8	A	2069	G7M	C5-N7	-5.39	1.32	1.39
8	A	2498	OMC	C4-N4	5.37	1.46	1.33
8	A	2498	OMC	C4-N3	5.36	1.45	1.34
8	A	2552	OMU	C6-C5	5.36	1.47	1.35
8	A	745	1MG	C2-N2	5.35	1.43	1.34
34	a	1407	5MC	C4-N3	5.34	1.43	1.34
8	A	1939	5MU	C6-C5	5.33	1.43	1.34
55	v	8	4SU	C6-C5	5.26	1.47	1.35
56	w	46	G7M	C5-N7	-5.25	1.33	1.39
8	A	1962	5MC	C2-N3	5.13	1.46	1.36
55	v	8	4SU	C4-S4	-5.09	1.58	1.68
8	A	2251	OMG	C2-N3	5.08	1.45	1.33
34	a	1207	2MG	C4-N3	5.07	1.46	1.34
8	A	2504	PSU	C6-N1	5.02	1.44	1.36
34	a	1407	5MC	C2-N3	5.01	1.46	1.36
34	a	1402	4OC	C4-N4	4.99	1.46	1.35
55	v	8	4SU	C2-N1	4.98	1.46	1.38
8	A	1915	3TD	C2-N3	4.97	1.49	1.38
55	v	55	PSU	C6-N1	4.96	1.44	1.36
56	w	32	PSU	C6-N1	4.91	1.44	1.36
34	a	1516	2MG	C2-N2	4.88	1.44	1.33
55	v	54	5MU	C6-C5	4.74	1.42	1.34
8	A	2069	G7M	C4-N3	4.73	1.45	1.34
8	A	1915	3TD	O3'-C3'	-4.69	1.31	1.43
56	w	39	PSU	C6-N1	4.65	1.43	1.36
34	a	1519	MA6	C5-C4	-4.55	1.30	1.39
34	a	527	G7M	C5-N7	-4.53	1.33	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	w	8	4SU	C4-S4	-4.49	1.59	1.68
34	a	1518	MA6	C5-C4	-4.49	1.30	1.39
8	A	746	PSU	C6-N1	4.49	1.43	1.36
8	A	2251	OMG	C2-N2	4.40	1.44	1.34
8	A	1917	PSU	C6-N1	4.36	1.43	1.36
34	a	1407	5MC	C6-N1	4.33	1.45	1.38
8	A	745	1MG	C2-N3	4.30	1.42	1.34
34	a	516	PSU	C6-N1	4.26	1.43	1.36
8	A	955	PSU	C6-N1	4.25	1.43	1.36
34	a	527	G7M	C2-N3	4.25	1.43	1.33
8	A	2503	2MA	C5-C6	4.23	1.52	1.41
8	A	2457	PSU	C6-N1	4.21	1.43	1.36
8	A	2498	OMC	C2-N1	4.16	1.49	1.40
8	A	1911	PSU	C6-N1	4.15	1.43	1.36
56	w	46	G7M	C2-N2	4.12	1.44	1.34
8	A	747	5MC	C4-N4	4.07	1.44	1.34
56	w	46	G7M	C1'-N9	-4.07	1.35	1.47
34	a	1498	UR3	C2-N3	4.06	1.46	1.39
8	A	745	1MG	C4-N9	-4.06	1.27	1.38
8	A	2030	6MZ	C5-N7	-3.99	1.31	1.39
56	w	8	4SU	C4-N3	-3.98	1.33	1.37
55	v	8	4SU	C5-C4	3.97	1.47	1.42
8	A	747	5MC	C2-N1	3.94	1.48	1.40
8	A	747	5MC	C6-N1	3.94	1.44	1.38
34	a	967	5MC	C2-N1	3.91	1.48	1.40
56	w	46	G7M	O4'-C1'	3.83	1.51	1.42
8	A	2605	PSU	C6-N1	3.83	1.42	1.36
34	a	967	5MC	C6-N1	3.79	1.44	1.38
34	a	1407	5MC	C4-N4	3.78	1.43	1.34
34	a	527	G7M	C2-N2	3.78	1.43	1.34
34	a	967	5MC	C4-N4	3.78	1.43	1.34
34	a	1207	2MG	C2-N2	3.76	1.41	1.33
8	A	1835	2MG	C2-N2	3.74	1.41	1.33
8	A	2604	PSU	C6-N1	3.73	1.42	1.36
8	A	2445	2MG	C5-N7	-3.72	1.31	1.39
8	A	2069	G7M	C4-N9	-3.72	1.28	1.38
34	a	1207	2MG	C2-N1	3.71	1.42	1.36
56	w	37	MIA	C5-C4	-3.70	1.32	1.39
8	A	1618	6MZ	C5-C4	-3.68	1.32	1.39
34	a	1402	4OC	C5-C4	3.67	1.48	1.40
8	A	1618	6MZ	C5-N7	-3.63	1.32	1.39
56	w	55	PSU	C6-C5	3.61	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	w	46	G7M	C5-C6	3.53	1.53	1.43
34	a	1402	4OC	C2-N1	3.52	1.47	1.40
56	w	46	G7M	O3'-C3'	3.50	1.51	1.43
8	A	2552	OMU	C4-N3	3.50	1.44	1.38
34	a	1516	2MG	C2-N1	3.48	1.42	1.36
34	a	1407	5MC	C2-N1	3.44	1.47	1.40
8	A	745	1MG	C5-N7	-3.43	1.32	1.39
34	a	1518	MA6	C6-N6	3.40	1.46	1.36
8	A	2445	2MG	C2-N2	3.38	1.40	1.33
34	a	1519	MA6	C6-N6	3.32	1.46	1.36
8	A	2251	OMG	C5-N7	-3.32	1.32	1.39
8	A	2069	G7M	C2-N2	3.31	1.42	1.34
8	A	2030	6MZ	C5-C4	-3.29	1.32	1.39
8	A	1962	5MC	C2-N1	3.29	1.47	1.40
34	a	1207	2MG	C4-N9	-3.28	1.29	1.38
55	v	55	PSU	C4-N3	3.28	1.44	1.38
56	w	32	PSU	C4-N3	3.28	1.44	1.38
8	A	1962	5MC	C6-N1	3.25	1.43	1.38
34	a	1207	2MG	C5-N7	-3.23	1.32	1.39
8	A	2503	2MA	C5-N7	-3.20	1.33	1.39
8	A	2503	2MA	C6-N6	-3.13	1.26	1.34
56	w	37	MIA	C4-N9	-3.12	1.30	1.37
56	w	46	G7M	O2'-C2'	3.11	1.50	1.43
8	A	2580	PSU	C6-N1	3.11	1.41	1.36
8	A	2445	2MG	C4-N9	-3.10	1.30	1.38
8	A	2030	6MZ	C5-C6	-3.10	1.33	1.41
34	a	1516	2MG	C5-N7	-3.08	1.33	1.39
8	A	2030	6MZ	C6-N1	-3.08	1.30	1.35
8	A	1962	5MC	C4-N4	3.07	1.42	1.34
56	w	8	4SU	C5-C4	-3.06	1.38	1.42
8	A	2030	6MZ	C8-N9	-3.06	1.32	1.37
8	A	1835	2MG	C5-N7	-3.05	1.33	1.39
8	A	1835	2MG	O6-C6	-3.05	1.17	1.23
34	a	516	PSU	O4'-C1'	-2.96	1.39	1.43
8	A	2580	PSU	C1'-C5	-2.95	1.43	1.50
8	A	2251	OMG	O6-C6	-2.94	1.18	1.23
8	A	2030	6MZ	C9-N6	-2.93	1.40	1.45
8	A	1939	5MU	O4-C4	-2.92	1.18	1.23
8	A	1962	5MC	O2-C2	-2.92	1.18	1.23
8	A	2445	2MG	O6-C6	-2.92	1.18	1.23
8	A	2504	PSU	C4-N3	2.90	1.44	1.38
56	w	46	G7M	O6-C6	-2.90	1.18	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	A	1618	6MZ	C4-N9	-2.89	1.31	1.37
56	w	54	5MU	C4-N3	-2.86	1.33	1.38
8	A	2251	OMG	C4-N9	-2.84	1.30	1.38
8	A	1618	6MZ	C8-N9	-2.84	1.32	1.37
8	A	2498	OMC	C6-N1	2.83	1.44	1.38
56	w	55	PSU	C4-N3	-2.83	1.33	1.38
8	A	1915	3TD	C4-N3	2.82	1.46	1.40
34	a	966	2MG	C5-C4	2.82	1.46	1.38
55	v	8	4SU	C6-N1	2.80	1.44	1.38
8	A	747	5MC	O2-C2	-2.80	1.18	1.23
8	A	1618	6MZ	C5-C6	-2.78	1.34	1.41
8	A	745	1MG	CM1-N1	-2.78	1.41	1.47
34	a	1519	MA6	C4-N9	-2.77	1.31	1.37
34	a	1516	2MG	O6-C6	-2.76	1.18	1.23
8	A	1917	PSU	C4-N3	2.74	1.43	1.38
56	w	46	G7M	C2-N1	2.74	1.44	1.37
55	v	55	PSU	O4-C4	-2.72	1.18	1.23
8	A	2580	PSU	O4'-C1'	-2.70	1.40	1.43
34	a	1407	5MC	O2-C2	-2.69	1.18	1.23
8	A	2498	OMC	C5-C4	2.68	1.49	1.42
55	v	54	5MU	O4-C4	-2.67	1.18	1.23
8	A	2604	PSU	O4'-C1'	-2.67	1.40	1.43
8	A	2605	PSU	C4-N3	2.66	1.43	1.38
8	A	746	PSU	C4-N3	2.65	1.43	1.38
34	a	1516	2MG	C4-N9	-2.65	1.31	1.38
34	a	967	5MC	O2-C2	-2.65	1.18	1.23
34	a	1207	2MG	O6-C6	-2.61	1.18	1.23
34	a	1402	4OC	O2-C2	-2.58	1.18	1.23
34	a	516	PSU	C4-N3	2.57	1.43	1.38
8	A	1911	PSU	C4-N3	2.57	1.43	1.38
34	a	1498	UR3	C6-N1	2.57	1.44	1.38
8	A	1618	6MZ	C6-N1	-2.56	1.31	1.35
56	w	39	PSU	O4-C4	-2.53	1.18	1.23
56	w	37	MIA	C5-N7	-2.53	1.34	1.39
8	A	2457	PSU	C1'-C5	-2.52	1.44	1.50
8	A	1835	2MG	C2-N1	2.52	1.40	1.36
34	a	1519	MA6	C10-N6	-2.52	1.39	1.45
8	A	745	1MG	O6-C6	-2.51	1.17	1.23
56	w	39	PSU	C4-N3	2.50	1.43	1.38
34	a	527	G7M	C5-C6	2.50	1.50	1.43
8	A	1915	3TD	C3'-C4'	2.49	1.59	1.53
8	A	1939	5MU	O2-C2	-2.48	1.18	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	a	1498	UR3	O4-C4	-2.48	1.18	1.23
8	A	2580	PSU	O4-C4	-2.47	1.18	1.23
55	v	8	4SU	O2-C2	-2.46	1.18	1.23
8	A	2498	OMC	O2-C2	-2.46	1.19	1.23
8	A	2503	2MA	C4-N9	-2.45	1.32	1.37
56	w	46	G7M	C2'-C1'	2.45	1.61	1.53
8	A	2457	PSU	C4-N3	2.44	1.43	1.38
8	A	2069	G7M	C2-N3	2.44	1.39	1.33
8	A	2604	PSU	C4-N3	2.43	1.43	1.38
34	a	1498	UR3	O2-C2	-2.42	1.18	1.22
55	v	54	5MU	O2-C2	-2.41	1.18	1.23
34	a	1207	2MG	C5-C6	2.39	1.53	1.44
8	A	2445	2MG	CM2-N2	-2.37	1.41	1.45
56	w	37	MIA	C8-N9	-2.37	1.33	1.37
8	A	2605	PSU	O4-C4	-2.36	1.19	1.23
8	A	955	PSU	C4-N3	2.35	1.43	1.38
34	a	966	2MG	C6-N1	-2.35	1.34	1.38
8	A	2457	PSU	O4-C4	-2.34	1.19	1.23
56	w	46	G7M	C6-N1	2.33	1.43	1.38
8	A	955	PSU	O4-C4	-2.32	1.19	1.23
8	A	746	PSU	O4-C4	-2.31	1.19	1.23
34	a	966	2MG	C5-N7	-2.30	1.34	1.39
8	A	1835	2MG	C4-N9	-2.30	1.32	1.38
8	A	2605	PSU	O4'-C1'	-2.29	1.40	1.43
8	A	1917	PSU	O4-C4	-2.29	1.19	1.23
34	a	1402	4OC	C6-N1	2.28	1.43	1.38
56	w	8	4SU	C2-N3	-2.28	1.33	1.38
8	A	1835	2MG	C5-C6	2.27	1.52	1.44
8	A	2069	G7M	C6-N1	2.27	1.43	1.38
8	A	2457	PSU	O4'-C1'	-2.27	1.40	1.43
56	w	37	MIA	C5-C6	-2.26	1.36	1.41
56	w	54	5MU	C6-N1	-2.25	1.34	1.38
8	A	1911	PSU	O4-C4	-2.24	1.19	1.23
8	A	2604	PSU	C1'-C5	-2.23	1.45	1.50
8	A	955	PSU	C1'-C5	-2.23	1.45	1.50
34	a	516	PSU	O4-C4	-2.22	1.19	1.23
8	A	1618	6MZ	C9-N6	-2.22	1.41	1.45
8	A	1911	PSU	O4'-C1'	-2.21	1.40	1.43
8	A	2604	PSU	O4-C4	-2.21	1.19	1.23
8	A	2552	OMU	O4-C4	-2.20	1.20	1.24
34	a	1516	2MG	C6-N1	2.20	1.42	1.38
56	w	32	PSU	O4-C4	-2.20	1.19	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	A	2504	PSU	O4-C4	-2.20	1.19	1.23
56	w	54	5MU	C2-N1	2.20	1.42	1.38
56	w	54	5MU	C2-N3	-2.16	1.34	1.38
8	A	2069	G7M	C2-N1	2.15	1.43	1.37
56	w	54	5MU	C4-C5	2.14	1.48	1.44
34	a	1518	MA6	C4-N9	-2.13	1.32	1.37
56	w	8	4SU	C2-N1	2.13	1.41	1.38
8	A	2503	2MA	C5-C4	-2.13	1.35	1.39
58	y	101	FME	CA-N	-2.11	1.43	1.46
34	a	1518	MA6	C10-N6	-2.10	1.40	1.45
56	w	54	5MU	C6-C5	2.10	1.38	1.34
56	w	55	PSU	C2-N3	-2.10	1.33	1.37
34	a	1516	2MG	C5-C6	2.10	1.52	1.44
34	a	1519	MA6	C8-N9	-2.06	1.33	1.37
8	A	2251	OMG	C2-N1	2.05	1.42	1.37
8	A	1915	3TD	O5'-C5'	-2.03	1.39	1.44
34	a	1518	MA6	C4-N3	2.02	1.38	1.34
8	A	2504	PSU	O4'-C1'	-2.01	1.41	1.43

All (319) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	1939	5MU	C5-C4-N3	13.01	126.41	115.31
34	a	1519	MA6	N1-C6-N6	-12.48	103.44	117.08
34	a	1518	MA6	N1-C6-N6	-12.13	103.82	117.08
55	v	54	5MU	C5-C4-N3	12.04	125.59	115.31
34	a	527	G7M	CN7-N7-C5	10.69	140.05	126.77
8	A	1939	5MU	C5-C6-N1	-10.62	112.41	123.34
8	A	2069	G7M	CN7-N7-C5	10.47	139.78	126.77
34	a	527	G7M	CN7-N7-C8	-9.35	110.41	124.84
8	A	2069	G7M	CN7-N7-C8	-9.31	110.48	124.84
8	A	1618	6MZ	C9-N6-C6	-8.57	115.49	122.87
55	v	54	5MU	C5-C6-N1	-8.38	114.72	123.34
8	A	2251	OMG	C1'-N9-C8	-7.90	104.20	126.70
56	w	37	MIA	C12-C13-C14	-7.85	111.86	127.14
34	a	966	2MG	C2-N3-C4	7.42	121.23	112.04
34	a	527	G7M	C1'-N9-C4	7.35	148.33	126.50
55	v	8	4SU	C4-N3-C2	-7.25	120.30	127.34
55	v	54	5MU	C5M-C5-C4	7.23	126.72	118.77
8	A	2580	PSU	C6-C5-C4	7.12	123.17	118.20
34	a	527	G7M	C1'-N9-C8	-6.99	103.14	126.74
55	v	20	H2U	C4-N3-C2	-6.84	120.11	125.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	2251	OMG	C1'-N9-C4	6.64	146.22	126.50
8	A	2030	6MZ	C9-N6-C6	-6.57	117.22	122.87
8	A	2604	PSU	C6-C5-C4	6.52	122.76	118.20
56	w	46	G7M	CN7-N7-C5	6.39	134.71	126.77
8	A	2457	PSU	C6-C5-C4	6.21	122.54	118.20
8	A	2552	OMU	C4-N3-C2	-6.12	118.50	126.58
8	A	1835	2MG	C2-N1-C6	-5.98	117.60	124.48
34	a	1519	MA6	N9-C8-N7	-5.95	105.78	113.91
56	w	55	PSU	N1-C2-N3	5.93	121.85	115.13
34	a	1518	MA6	N1-C2-N3	-5.92	119.34	128.60
34	a	1516	2MG	C2-N3-C4	5.87	119.32	112.04
56	w	46	G7M	C2'-C3'-C4'	5.85	114.01	102.64
8	A	1618	6MZ	N1-C2-N3	-5.84	119.46	128.60
8	A	1939	5MU	O4-C4-C5	-5.84	118.13	124.90
34	a	966	2MG	C5-C4-N3	-5.80	119.05	128.46
8	A	2030	6MZ	C5-C4-N3	-5.79	119.20	126.75
55	v	54	5MU	C5M-C5-C6	-5.76	115.16	122.85
8	A	1939	5MU	C4-N3-C2	-5.73	119.93	127.35
34	a	1519	MA6	C4-N9-C8	5.73	111.93	105.73
34	a	1519	MA6	N1-C2-N3	-5.70	119.69	128.60
56	w	8	4SU	C4-N3-C2	-5.63	121.87	127.34
56	w	46	G7M	C2'-C1'-N9	5.61	129.11	113.22
55	v	8	4SU	C5-C4-N3	5.55	119.84	114.69
8	A	2605	PSU	N1-C2-N3	5.52	121.38	115.13
8	A	1835	2MG	C2-N3-C4	5.50	118.85	112.04
34	a	1518	MA6	N9-C8-N7	-5.48	106.42	113.91
8	A	1835	2MG	CM2-N2-C2	-5.44	111.83	123.86
8	A	745	1MG	C1'-N9-C4	-5.44	110.35	126.50
8	A	2604	PSU	C4-N3-C2	-5.36	118.62	126.34
56	w	37	MIA	C12-N6-C6	-5.26	114.76	122.55
56	w	54	5MU	N3-C2-N1	5.26	121.87	114.89
8	A	2503	2MA	N9-C8-N7	-5.18	106.83	113.91
56	w	37	MIA	N9-C8-N7	-5.17	106.84	113.91
56	w	39	PSU	C6-C5-C4	5.15	121.80	118.20
8	A	2030	6MZ	N1-C2-N3	-5.15	120.55	128.60
8	A	2069	G7M	C1'-N9-C8	-5.14	109.38	126.74
8	A	1915	3TD	N1-C2-N3	5.14	120.19	116.14
8	A	2604	PSU	N1-C2-N3	5.13	120.94	115.13
8	A	2605	PSU	C4-N3-C2	-5.09	119.00	126.34
8	A	2580	PSU	N1-C2-N3	5.07	120.87	115.13
8	A	1835	2MG	C5-C4-N3	-5.07	120.24	128.46
56	w	39	PSU	N1-C2-N3	4.98	120.77	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	w	46	G7M	O3'-C3'-C4'	4.94	125.33	111.05
8	A	2069	G7M	C1'-N9-C4	4.90	141.06	126.50
56	w	39	PSU	C4-N3-C2	-4.89	119.29	126.34
56	w	8	4SU	C5-C4-N3	4.85	119.19	114.69
8	A	2503	2MA	C5-C4-N3	-4.83	121.75	127.19
55	v	55	PSU	C4-N3-C2	-4.82	119.39	126.34
55	v	54	5MU	O4-C4-C5	-4.80	119.34	124.90
8	A	955	PSU	C6-C5-C4	4.77	121.53	118.20
8	A	745	1MG	C1'-N9-C8	4.70	140.08	126.70
8	A	955	PSU	C4-N3-C2	-4.68	119.59	126.34
34	a	1207	2MG	C2-N1-C6	-4.65	119.13	124.48
8	A	1911	PSU	C4-N3-C2	-4.64	119.66	126.34
8	A	1939	5MU	N3-C2-N1	4.64	121.04	114.89
8	A	1618	6MZ	C5-C4-N3	-4.63	120.71	126.75
56	w	32	PSU	C4-N3-C2	-4.62	119.68	126.34
56	w	54	5MU	C4-N3-C2	-4.57	121.43	127.35
8	A	2030	6MZ	N3-C4-N9	4.56	134.60	127.08
8	A	1618	6MZ	N9-C8-N7	-4.56	107.68	113.91
34	a	1518	MA6	C4-N9-C8	4.56	110.67	105.73
8	A	2504	PSU	C4-N3-C2	-4.53	119.82	126.34
8	A	2605	PSU	C6-N1-C2	-4.52	118.06	122.68
8	A	2069	G7M	N2-C2-N1	4.52	126.33	116.71
56	w	46	G7M	C5-C4-N3	-4.49	119.54	128.15
56	w	37	MIA	C16-C14-C13	-4.49	109.67	122.65
34	a	967	5MC	C5-C6-N1	-4.49	118.72	123.34
34	a	1518	MA6	C5-C4-N3	-4.47	120.92	126.75
34	a	527	G7M	C5-C4-N3	-4.47	119.58	128.15
8	A	2580	PSU	C6-N1-C2	-4.46	118.12	122.68
56	w	54	5MU	C5M-C5-C4	4.45	123.67	118.77
56	w	8	4SU	N3-C2-N1	4.44	120.78	114.89
56	w	46	G7M	O6-C6-C5	-4.43	118.06	128.06
8	A	2457	PSU	C4-N3-C2	-4.42	119.97	126.34
8	A	1917	PSU	C4-N3-C2	-4.41	119.99	126.34
56	w	37	MIA	C15-C14-C13	-4.40	109.94	122.65
8	A	2030	6MZ	C4-C5-C6	4.38	120.20	116.81
8	A	1911	PSU	N1-C2-N3	4.37	120.08	115.13
8	A	747	5MC	C5-C6-N1	-4.37	118.84	123.34
55	v	54	5MU	C4-N3-C2	-4.27	121.83	127.35
55	v	8	4SU	C5-C4-S4	-4.27	118.97	124.47
56	w	46	G7M	C2-N3-C4	4.26	119.89	112.30
8	A	1917	PSU	N1-C2-N3	4.21	119.90	115.13
8	A	2580	PSU	C4-N3-C2	-4.21	120.27	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	1915	3TD	C4-N3-C2	-4.19	120.06	124.61
56	w	46	G7M	C5-C6-N1	4.18	120.53	111.79
56	w	46	G7M	CN7-N7-C8	-4.14	118.44	124.84
8	A	1962	5MC	C5-C6-N1	-4.14	119.08	123.34
8	A	2457	PSU	N1-C2-N3	4.12	119.80	115.13
56	w	32	PSU	N1-C2-N3	4.12	119.79	115.13
34	a	1516	2MG	C5-C4-N3	-4.11	121.79	128.46
56	w	37	MIA	N3-C2-N1	-4.11	119.42	126.95
34	a	1518	MA6	C5-C6-N6	4.09	132.43	125.30
8	A	1911	PSU	C6-C5-C4	4.08	121.05	118.20
8	A	955	PSU	N1-C2-N3	4.08	119.75	115.13
34	a	516	PSU	N1-C2-N3	4.06	119.73	115.13
34	a	527	G7M	C5-C6-N1	4.05	120.24	111.79
34	a	1207	2MG	C2-N3-C4	4.04	117.05	112.04
34	a	966	2MG	N9-C4-N3	4.04	134.05	125.94
34	a	516	PSU	C4-N3-C2	-4.04	120.52	126.34
8	A	2504	PSU	C6-C5-C4	4.01	121.00	118.20
8	A	2552	OMU	C5-C4-N3	4.00	120.83	114.84
34	a	527	G7M	C2-N3-C4	3.95	119.34	112.30
34	a	1407	5MC	C5-C6-N1	-3.94	119.28	123.34
34	a	1519	MA6	C5-C6-N6	3.93	132.15	125.30
56	w	37	MIA	C4-N9-C8	3.89	109.94	105.73
8	A	2069	G7M	N2-C2-N3	-3.86	112.21	119.73
34	a	1516	2MG	C2-N1-C6	-3.85	120.05	124.48
55	v	55	PSU	N1-C2-N3	3.84	119.48	115.13
8	A	2030	6MZ	N9-C8-N7	-3.84	108.67	113.91
8	A	2605	PSU	C6-C5-C4	3.82	120.87	118.20
34	a	1518	MA6	N3-C4-N9	3.81	133.36	127.08
34	a	1498	UR3	C4-N3-C2	-3.81	120.97	124.56
8	A	1917	PSU	C6-C5-C4	3.79	120.85	118.20
56	w	46	G7M	N9-C4-N3	3.79	133.54	125.94
8	A	746	PSU	N1-C2-N3	3.77	119.40	115.13
56	w	55	PSU	C4-N3-C2	-3.76	120.92	126.34
8	A	2504	PSU	N1-C2-N3	3.74	119.37	115.13
8	A	2552	OMU	N3-C2-N1	3.73	119.84	114.89
34	a	516	PSU	C6-C5-C4	3.68	120.77	118.20
8	A	745	1MG	CM1-N1-C2	-3.68	116.90	120.72
8	A	2030	6MZ	C5-C6-N1	3.67	122.11	118.20
56	w	37	MIA	C5-C4-N3	-3.66	123.07	127.19
34	a	1207	2MG	CM2-N2-C2	-3.64	115.81	123.86
8	A	2445	2MG	CM2-N2-C2	-3.64	115.81	123.86
55	v	54	5MU	N3-C2-N1	3.61	119.69	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	2445	2MG	C5-C4-N3	-3.61	122.61	128.46
8	A	1618	6MZ	C2-N3-C4	3.60	120.26	111.75
34	a	1519	MA6	C5-C4-N3	-3.60	122.06	126.75
34	a	1207	2MG	C5-C4-N3	-3.60	122.63	128.46
55	v	55	PSU	C6-C5-C4	3.59	120.71	118.20
56	w	37	MIA	C11-S10-C2	3.59	104.95	102.27
56	w	54	5MU	C5-C4-N3	3.57	118.36	115.31
8	A	2251	OMG	N9-C8-N7	-3.57	106.67	113.39
56	w	46	G7M	C2-N1-C6	-3.57	118.60	125.10
56	w	39	PSU	C6-N1-C2	-3.56	119.04	122.68
34	a	1518	MA6	C2-N3-C4	3.56	120.16	111.75
8	A	746	PSU	C4-N3-C2	-3.55	121.22	126.34
56	w	54	5MU	C5M-C5-C6	-3.55	118.10	122.85
34	a	966	2MG	C6-C5-N7	3.53	136.82	130.25
8	A	2251	OMG	C2-N3-C4	3.52	118.57	112.30
8	A	1917	PSU	C6-N1-C2	-3.49	119.11	122.68
34	a	516	PSU	C6-N1-C2	-3.49	119.12	122.68
8	A	2251	OMG	C5-C4-N3	-3.47	122.84	128.46
8	A	746	PSU	C6-N1-C2	-3.46	119.14	122.68
8	A	2503	2MA	C4-N9-C1'	-3.44	118.39	126.59
8	A	2069	G7M	O6-C6-C5	-3.43	120.32	128.06
8	A	1835	2MG	C5-C6-N1	3.39	121.79	113.19
8	A	2069	G7M	C5-C6-N1	3.38	118.85	111.79
8	A	745	1MG	C6-C5-C4	-3.37	116.24	119.97
8	A	1618	6MZ	C5-C6-N1	3.35	121.77	118.20
8	A	2552	OMU	O4-C4-C5	-3.35	119.28	125.16
34	a	1519	MA6	C9-N6-C6	-3.34	111.73	120.40
34	a	1519	MA6	C10-N6-C9	3.34	126.90	116.12
8	A	2030	6MZ	C2-N3-C4	3.33	119.61	111.75
8	A	1835	2MG	N9-C4-N3	3.32	132.61	125.94
8	A	1618	6MZ	N3-C4-N9	3.30	132.52	127.08
34	a	1519	MA6	N3-C4-N9	3.30	132.51	127.08
8	A	2503	2MA	C5-N7-C8	3.29	108.19	103.51
34	a	1519	MA6	C2-N3-C4	3.29	119.51	111.75
8	A	1835	2MG	N9-C8-N7	-3.28	107.20	113.39
8	A	746	PSU	C6-C5-C4	3.28	120.49	118.20
34	a	527	G7M	N9-C4-N3	3.27	132.50	125.94
8	A	1911	PSU	C6-N1-C2	-3.27	119.34	122.68
34	a	1516	2MG	N9-C8-N7	-3.27	107.23	113.39
8	A	2503	2MA	CM2-C2-N1	3.23	122.19	117.15
8	A	1618	6MZ	C4-N9-C8	3.22	109.22	105.73
56	w	8	4SU	C5-C4-S4	-3.19	120.36	124.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	2445	2MG	C2-N1-C6	-3.17	120.83	124.48
8	A	2069	G7M	C6-C5-N7	3.17	136.08	132.25
8	A	2503	2MA	N6-C6-N1	3.14	121.47	117.03
34	a	1518	MA6	C10-N6-C9	3.14	126.24	116.12
55	v	20	H2U	N3-C2-N1	3.12	119.95	116.65
8	A	2580	PSU	O2-C2-N1	-3.11	119.37	122.79
8	A	1962	5MC	C1'-N1-C6	-3.11	115.95	121.12
34	a	1516	2MG	C1'-N9-C4	-3.09	117.32	126.50
34	a	1207	2MG	C1'-N9-C4	-3.09	117.32	126.50
34	a	516	PSU	O2-C2-N1	-3.08	119.40	122.79
8	A	2503	2MA	C4-N9-C8	3.08	109.06	105.73
55	v	54	5MU	C1'-N1-C2	3.08	123.14	117.57
8	A	2069	G7M	C2-N1-C6	-3.06	119.51	125.10
56	w	37	MIA	S10-C2-N1	3.04	126.52	116.01
56	w	55	PSU	O2-C2-N1	-3.02	119.47	122.79
34	a	527	G7M	O6-C6-C5	-3.01	121.27	128.06
34	a	1207	2MG	C1'-N9-C8	3.01	135.26	126.70
56	w	46	G7M	O4'-C1'-N9	3.01	115.23	108.36
56	w	32	PSU	C6-C5-C4	2.98	120.28	118.20
8	A	1939	5MU	C5M-C5-C6	-2.97	118.88	122.85
8	A	955	PSU	C6-N1-C2	-2.95	119.66	122.68
34	a	527	G7M	C2-N1-C6	-2.95	119.71	125.10
8	A	2445	2MG	C1'-N9-C4	-2.94	117.76	126.50
8	A	745	1MG	N9-C8-N7	-2.94	107.85	113.39
8	A	1618	6MZ	C4-N9-C1'	-2.93	119.62	126.59
8	A	2069	G7M	C2-N3-C4	2.92	117.50	112.30
55	v	8	4SU	N3-C2-N1	2.90	118.75	114.89
8	A	2552	OMU	CM2-O2'-C2'	-2.90	106.92	114.52
55	v	20	H2U	C5-C4-N3	2.89	119.89	116.65
8	A	2503	2MA	N3-C2-N1	-2.88	120.42	125.72
55	v	20	H2U	O2-C2-N1	-2.87	119.50	123.11
8	A	2069	G7M	N9-C8-N7	-2.86	105.13	112.21
8	A	2457	PSU	C6-N1-C2	-2.86	119.76	122.68
56	w	46	G7M	C1'-N9-C4	-2.86	118.02	126.50
34	a	1516	2MG	C5-C6-N1	2.83	120.37	113.19
34	a	966	2MG	C4-C5-N7	-2.80	106.30	110.72
8	A	2604	PSU	C6-N1-C2	-2.79	119.83	122.68
56	w	54	5MU	O4-C4-C5	-2.78	121.68	124.90
8	A	2445	2MG	N9-C8-N7	-2.77	108.18	113.39
55	v	20	H2U	C5-C6-N1	2.73	120.59	111.61
8	A	2504	PSU	C6-N1-C2	-2.72	119.90	122.68
8	A	2251	OMG	O6-C6-C5	-2.72	119.39	126.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	w	32	PSU	C6-N1-C2	-2.72	119.91	122.68
8	A	2580	PSU	O4'-C1'-C2'	2.72	108.97	105.14
56	w	8	4SU	C6-N1-C2	-2.70	117.54	120.99
34	a	1518	MA6	C2-N1-C6	2.70	118.13	111.75
8	A	2251	OMG	C5-C6-N1	2.69	120.01	113.19
34	a	1516	2MG	O6-C6-C5	-2.68	119.48	126.60
8	A	2605	PSU	O2-C2-N1	-2.67	119.85	122.79
8	A	2251	OMG	C2'-C1'-N9	-2.67	109.05	114.22
34	a	1516	2MG	N1-C2-N3	-2.66	119.84	123.95
34	a	1516	2MG	N9-C4-N3	2.65	131.26	125.94
8	A	1911	PSU	O2-C2-N1	-2.64	119.88	122.79
56	w	54	5MU	C6-N1-C2	-2.64	118.63	121.30
34	a	1518	MA6	C9-N6-C6	-2.63	113.57	120.40
55	v	54	5MU	O4-C4-N3	-2.63	115.07	120.12
34	a	1519	MA6	C2-N1-C6	2.63	117.97	111.75
34	a	1519	MA6	C5-C6-N1	2.63	124.41	118.60
8	A	1618	6MZ	C4-C5-C6	2.63	118.84	116.81
56	w	54	5MU	C3'-C2'-C1'	2.62	106.41	101.43
55	v	55	PSU	C6-N1-C2	-2.62	120.01	122.68
8	A	747	5MC	CM5-C5-C6	-2.61	119.36	122.85
55	v	54	5MU	C1'-N1-C6	-2.61	116.79	121.12
34	a	1402	4OC	C5-C4-N4	-2.60	117.32	122.61
8	A	1917	PSU	O2-C2-N1	-2.52	120.01	122.79
56	w	39	PSU	O2-C2-N1	-2.52	120.02	122.79
8	A	2503	2MA	N3-C4-N9	2.52	130.49	126.99
8	A	1939	5MU	O2-C2-N1	-2.49	119.47	122.79
8	A	2445	2MG	C2-N3-C4	2.49	115.13	112.04
56	w	37	MIA	C5-N7-C8	2.47	107.02	103.51
8	A	2030	6MZ	C6-C5-N7	-2.45	129.75	132.39
8	A	1939	5MU	O4-C4-N3	-2.44	115.44	120.12
8	A	1939	5MU	C5M-C5-C4	2.44	121.45	118.77
8	A	2030	6MZ	C4-N9-C8	2.44	108.37	105.73
8	A	745	1MG	C2-N3-C4	2.42	117.42	111.98
56	w	37	MIA	C2-N3-C4	2.40	118.66	112.35
34	a	1407	5MC	CM5-C5-C6	-2.39	119.65	122.85
56	w	32	PSU	O4'-C1'-C2'	2.38	108.50	105.14
34	a	967	5MC	C5-C4-N4	-2.37	117.93	121.48
56	w	55	PSU	C6-C5-C4	-2.37	116.54	118.20
34	a	527	G7M	N2-C2-N3	2.37	124.34	119.73
34	a	1207	2MG	N9-C8-N7	-2.37	108.94	113.39
8	A	2605	PSU	O4'-C1'-C2'	2.36	108.48	105.14
8	A	2552	OMU	C2'-C1'-N1	-2.36	109.64	114.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	2503	2MA	C1'-N9-C8	2.35	132.44	127.14
56	w	32	PSU	O2-C2-N1	-2.35	120.20	122.79
8	A	2069	G7M	C2'-C1'-N9	-2.35	106.57	113.22
34	a	1519	MA6	C4-N9-C1'	-2.34	121.03	126.59
34	a	1518	MA6	C5-C6-N1	2.32	123.72	118.60
55	v	55	PSU	O2-C2-N1	-2.32	120.24	122.79
56	w	55	PSU	C3'-C2'-C1'	2.30	104.32	101.64
8	A	746	PSU	O2-C2-N1	-2.29	120.27	122.79
34	a	966	2MG	C2-N1-C6	-2.29	121.85	124.48
34	a	1518	MA6	C5-N7-C8	2.28	106.75	103.51
8	A	2445	2MG	C1'-N9-C8	2.28	133.18	126.70
8	A	2503	2MA	C5-C6-N6	-2.27	118.48	123.43
34	a	1498	UR3	C3U-N3-C4	2.26	121.12	117.89
8	A	745	1MG	C2-N1-C6	2.25	122.77	120.95
34	a	967	5MC	C1'-N1-C6	-2.24	117.39	121.12
8	A	2445	2MG	N9-C4-N3	2.24	130.44	125.94
34	a	1516	2MG	C1'-N9-C8	2.24	133.06	126.70
8	A	2251	OMG	N1-C2-N3	-2.23	119.16	123.32
8	A	2030	6MZ	C5-N7-C8	2.23	106.67	103.51
56	w	8	4SU	O4'-C1'-N1	2.22	113.43	108.36
58	y	101	FME	C-CA-N	2.21	113.73	109.73
56	w	46	G7M	C4'-O4'-C1'	-2.21	104.60	109.47
8	A	1618	6MZ	C5-N7-C8	2.20	106.64	103.51
56	w	37	MIA	C16-C14-C15	-2.20	109.74	114.60
8	A	2604	PSU	C5-C6-N1	-2.20	118.81	122.11
8	A	2251	OMG	C2-N1-C6	-2.18	121.12	125.10
56	w	46	G7M	C1'-N9-C8	2.18	134.09	126.74
34	a	966	2MG	O6-C6-C5	-2.17	120.84	126.60
34	a	1402	4OC	CM2-O2'-C2'	-2.16	108.85	114.52
34	a	1519	MA6	C5-N7-C8	2.16	106.57	103.51
8	A	745	1MG	C6-C5-N7	2.15	134.22	129.35
34	a	1207	2MG	O3'-C3'-C2'	2.15	118.79	111.82
8	A	745	1MG	C5-C6-N1	2.15	119.06	114.91
34	a	1207	2MG	C4-C5-N7	-2.13	107.35	110.72
8	A	2030	6MZ	O3'-C3'-C4'	-2.13	104.90	111.05
34	a	527	G7M	N9-C8-N7	-2.12	106.96	112.21
8	A	1835	2MG	O6-C6-C5	-2.11	121.00	126.60
34	a	1402	4OC	C1'-N1-C6	-2.11	116.24	120.84
34	a	1207	2MG	C5-C6-N1	2.11	118.54	113.19
34	a	967	5MC	CM5-C5-C6	-2.08	120.07	122.85
34	a	1207	2MG	C5-C4-N9	2.08	109.40	105.63
8	A	2503	2MA	O3'-C3'-C4'	-2.05	105.12	111.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	2604	PSU	O2-C2-N3	-2.04	117.96	121.82
56	w	54	5MU	O2-C2-N1	-2.04	120.08	122.79
8	A	2503	2MA	C4-C5-N7	-2.04	108.14	110.62
56	w	37	MIA	N6-C6-N1	-2.02	115.92	118.50
8	A	2251	OMG	N9-C4-N3	2.01	129.98	125.94

There are no chirality outliers.

All (57) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
34	a	967	5MC	O4'-C4'-C5'-O5'
34	a	967	5MC	C3'-C4'-C5'-O5'
34	a	1498	UR3	O4'-C1'-N1-C6
34	a	1498	UR3	O4'-C1'-N1-C2
34	a	1519	MA6	C5-C6-N6-C9
34	a	1519	MA6	C5-C6-N6-C10
55	v	54	5MU	C3'-C4'-C5'-O5'
55	v	54	5MU	O4'-C4'-C5'-O5'
55	v	55	PSU	O4'-C1'-C5-C4
55	v	55	PSU	O4'-C1'-C5-C6
8	A	1618	6MZ	N1-C6-N6-C9
8	A	1915	3TD	O4'-C1'-C5-C4
8	A	1915	3TD	O4'-C1'-C5-C6
8	A	1939	5MU	O4'-C4'-C5'-O5'
8	A	2030	6MZ	C3'-C4'-C5'-O5'
8	A	2445	2MG	C3'-C4'-C5'-O5'
8	A	2498	OMC	C1'-C2'-O2'-CM2
8	A	2503	2MA	O4'-C4'-C5'-O5'
56	w	32	PSU	O4'-C1'-C5-C4
56	w	32	PSU	O4'-C1'-C5-C6
56	w	37	MIA	C5-C6-N6-C12
56	w	37	MIA	C12-C13-C14-C16
56	w	39	PSU	C2'-C1'-C5-C4
56	w	39	PSU	O4'-C1'-C5-C4
56	w	39	PSU	O4'-C1'-C5-C6
58	y	101	FME	O1-CN-N-CA
58	y	101	FME	CB-CA-N-CN
34	a	966	2MG	O4'-C4'-C5'-O5'
34	a	966	2MG	C3'-C4'-C5'-O5'
8	A	1835	2MG	C3'-C4'-C5'-O5'
8	A	1939	5MU	C3'-C4'-C5'-O5'
8	A	2030	6MZ	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
34	a	1519	MA6	N1-C6-N6-C10
8	A	1835	2MG	O4'-C4'-C5'-O5'
58	y	101	FME	N-CA-CB-CG
56	w	37	MIA	N1-C6-N6-C12
8	A	2445	2MG	O4'-C4'-C5'-O5'
8	A	2552	OMU	O4'-C1'-N1-C6
58	y	101	FME	CB-CG-SD-CE
8	A	2552	OMU	O4'-C1'-N1-C2
8	A	2030	6MZ	N1-C6-N6-C9
34	a	527	G7M	C3'-C4'-C5'-O5'
34	a	966	2MG	C4'-C5'-O5'-P
55	v	20	H2U	C4'-C5'-O5'-P
56	w	46	G7M	C4'-C5'-O5'-P
34	a	527	G7M	O4'-C4'-C5'-O5'
34	a	1519	MA6	C4'-C5'-O5'-P
8	A	747	5MC	C4'-C5'-O5'-P
8	A	2069	G7M	O4'-C4'-C5'-O5'
8	A	2503	2MA	C3'-C4'-C5'-O5'
8	A	2604	PSU	O4'-C4'-C5'-O5'
8	A	1618	6MZ	C5-C6-N6-C9
55	v	54	5MU	C2'-C1'-N1-C2
8	A	746	PSU	O4'-C1'-C5-C6
56	w	55	PSU	O4'-C1'-C5-C6
8	A	747	5MC	C2'-C1'-N1-C2
8	A	2498	OMC	O4'-C4'-C5'-O5'

There are no ring outliers.

41 monomers are involved in 274 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	A	2552	OMU	13	0
8	A	2251	OMG	8	0
8	A	745	1MG	9	0
8	A	2503	2MA	5	0
8	A	2498	OMC	2	0
34	a	1498	UR3	10	0
8	A	747	5MC	3	0
34	a	1402	4OC	15	0
55	v	8	4SU	6	0
55	v	54	5MU	3	0
8	A	2030	6MZ	5	0
34	a	966	2MG	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	A	955	PSU	7	0
8	A	1962	5MC	7	0
34	a	1519	MA6	20	0
34	a	527	G7M	5	0
8	A	2457	PSU	3	0
56	w	39	PSU	12	0
34	a	967	5MC	6	0
8	A	1618	6MZ	5	0
8	A	2445	2MG	10	0
55	v	20	H2U	2	0
8	A	2504	PSU	1	0
34	a	1207	2MG	11	0
8	A	1915	3TD	1	0
8	A	2605	PSU	9	0
8	A	1939	5MU	2	0
34	a	516	PSU	9	0
56	w	37	MIA	12	0
8	A	1917	PSU	7	0
58	y	101	FME	5	0
34	a	1516	2MG	7	0
8	A	2604	PSU	9	0
8	A	2580	PSU	15	0
34	a	1518	MA6	13	0
34	a	1407	5MC	5	0
55	v	55	PSU	7	0
8	A	1835	2MG	7	0
8	A	746	PSU	3	0
8	A	1911	PSU	4	0
8	A	2069	G7M	7	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 3 ligands modelled in this entry, 1 is monoatomic - leaving 2 for Mogul analysis.

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
61	AM2	a	2001	-	40,40,40	0.24	0	53,60,60	0.60	2 (3%)
62	GDP	x	801	-	28,30,30	3.62	12 (42%)	44,47,47	1.78	14 (31%)

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
61	AM2	a	2001	-	-	4/12/84/84	0/4/4/4
62	GDP	x	801	-	-	7/16/32/32	0/3/3/3

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	x	801	GDP	C3'-C4'	-10.01	1.27	1.53
62	x	801	GDP	C2'-C1'	-8.16	1.27	1.53
62	x	801	GDP	O4'-C1'	5.66	1.55	1.42
62	x	801	GDP	C4-N3	5.53	1.47	1.34
62	x	801	GDP	C2-N2	4.96	1.46	1.34
62	x	801	GDP	O4'-C4'	4.81	1.55	1.45
62	x	801	GDP	C2'-C3'	4.65	1.66	1.53
62	x	801	GDP	C2-N3	4.09	1.43	1.33
62	x	801	GDP	C2-N1	3.48	1.46	1.37
62	x	801	GDP	C4-N9	-2.93	1.30	1.38
62	x	801	GDP	C5-N7	-2.36	1.34	1.39
62	x	801	GDP	C5-C6	2.02	1.51	1.44

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	x	801	GDP	N2-C2-N1	4.60	126.50	116.71
62	x	801	GDP	N2-C2-N3	-3.20	113.50	119.73
62	x	801	GDP	N9-C8-N7	-3.09	107.57	113.39
62	x	801	GDP	C2-N3-C4	3.08	117.79	112.30
62	x	801	GDP	C5-C4-N3	-2.73	124.03	128.46
62	x	801	GDP	C2'-C3'-C4'	2.63	107.75	102.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	x	801	GDP	PA-O3A-PB	-2.62	123.84	132.83
62	x	801	GDP	O6-C6-C5	-2.53	119.89	126.60
61	a	2001	AM2	CA1-OA4-CA5	2.47	117.04	113.06
62	x	801	GDP	C3'-C2'-C1'	2.31	105.81	101.43
62	x	801	GDP	C4'-O4'-C1'	-2.26	104.47	109.47
62	x	801	GDP	C2-N1-C6	-2.24	121.01	125.10
62	x	801	GDP	O3B-PB-O1B	2.08	118.84	110.68
62	x	801	GDP	O3B-PB-O3A	2.07	111.57	104.64
61	a	2001	AM2	OA4-CA1-CA2	2.07	114.86	110.25
62	x	801	GDP	C5-C6-N1	2.06	118.43	113.19

There are no chirality outliers.

All (11) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
61	a	2001	AM2	CA8-CA7-NA7-CA9
62	x	801	GDP	C5'-O5'-PA-O3A
61	a	2001	AM2	OB1-CB5-CB6-OB6
62	x	801	GDP	PA-O3A-PB-O3B
61	a	2001	AM2	OA4-CA1-OA1-CC1
62	x	801	GDP	C5'-O5'-PA-O1A
62	x	801	GDP	C5'-O5'-PA-O2A
61	a	2001	AM2	CA6-CA7-NA7-CA9
62	x	801	GDP	PA-O3A-PB-O2B
62	x	801	GDP	PB-O3A-PA-O1A
62	x	801	GDP	PB-O3A-PA-O2A

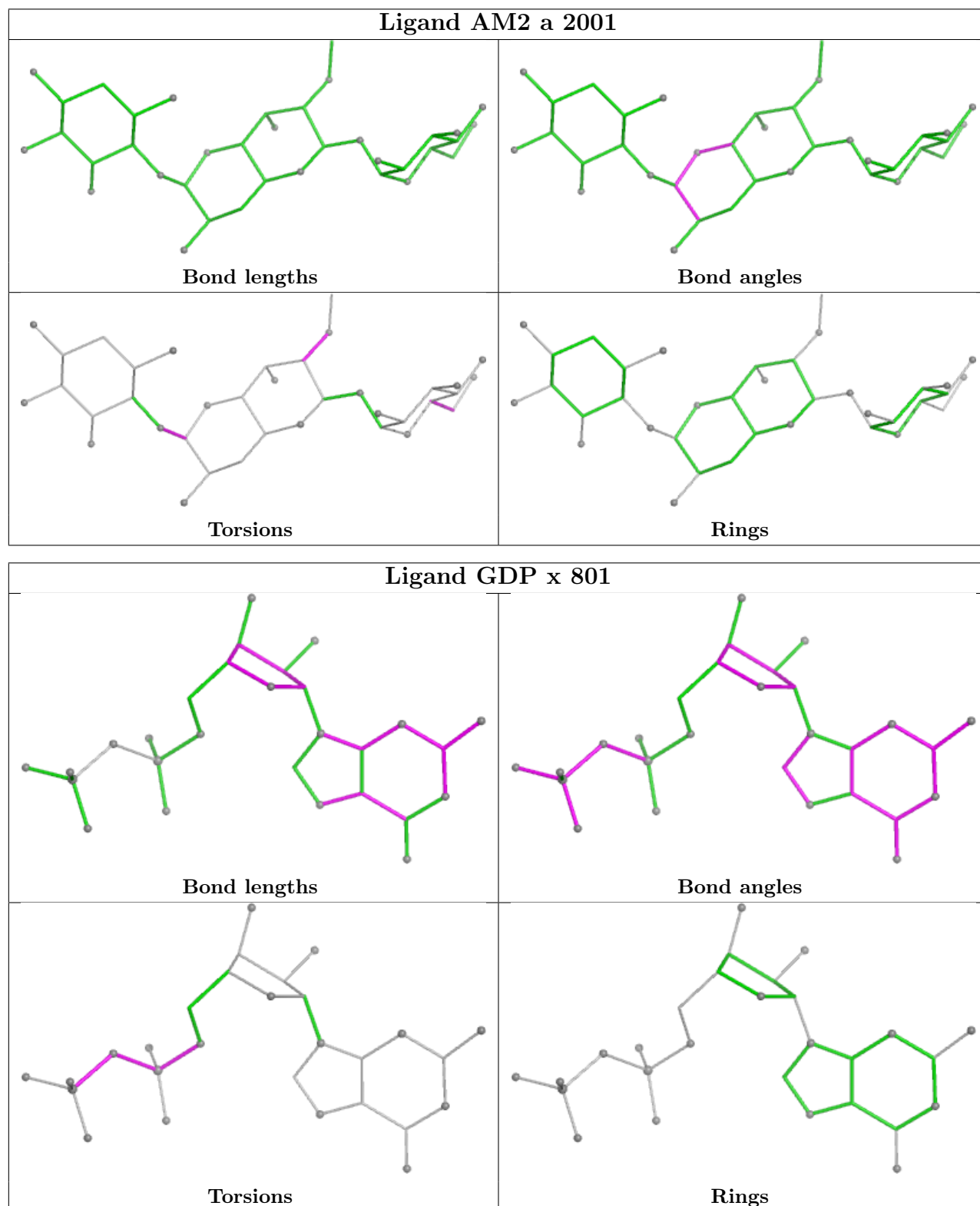
There are no ring outliers.

2 monomers are involved in 17 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	a	2001	AM2	4	0
62	x	801	GDP	13	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the

average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

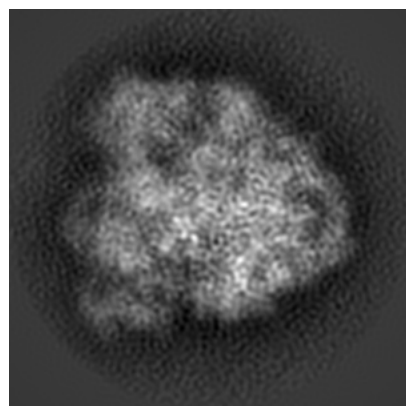
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13465. These allow visual inspection of the internal detail of the map and identification of artifacts.

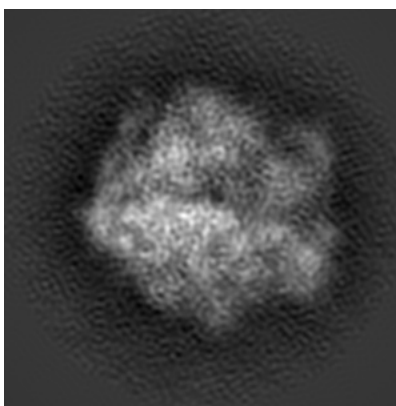
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

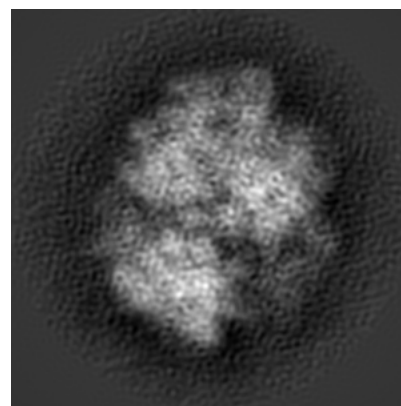
6.1.1 Primary map



X

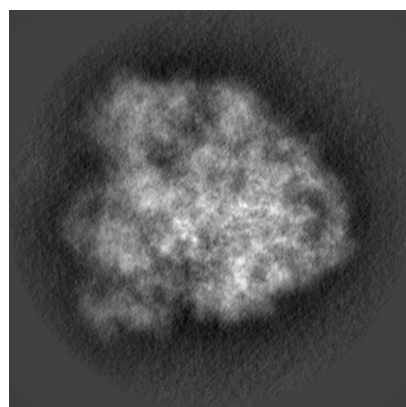


Y

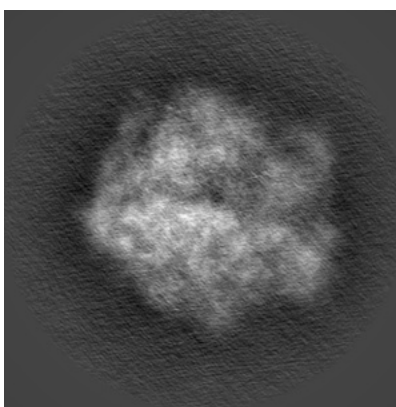


Z

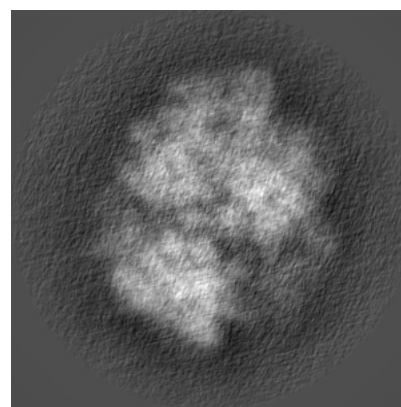
6.1.2 Raw map



X



Y

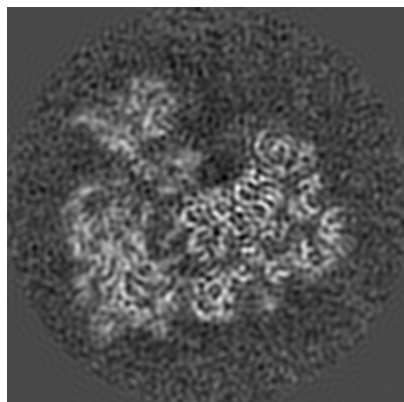


Z

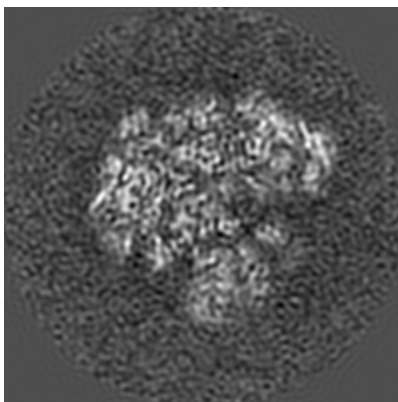
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

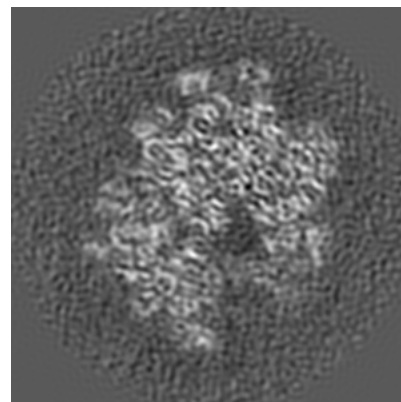
6.2.1 Primary map



X Index: 144

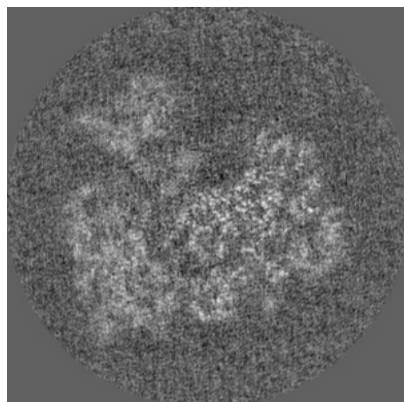


Y Index: 144

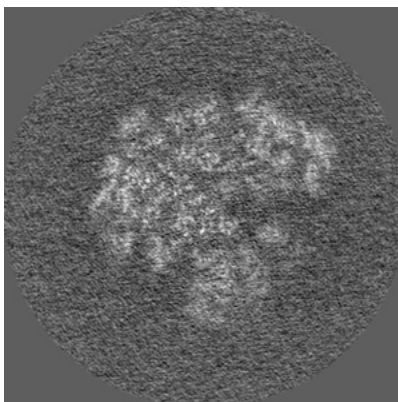


Z Index: 144

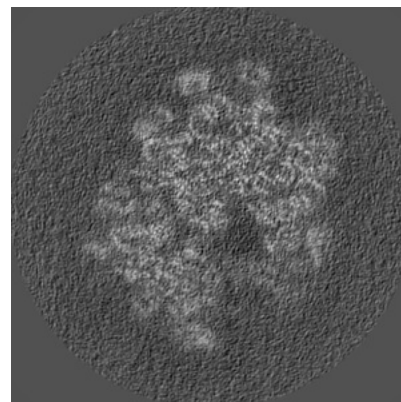
6.2.2 Raw map



X Index: 144



Y Index: 144

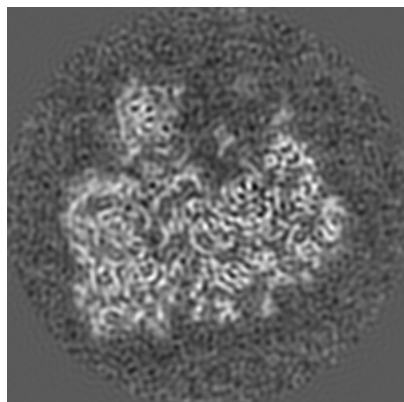


Z Index: 144

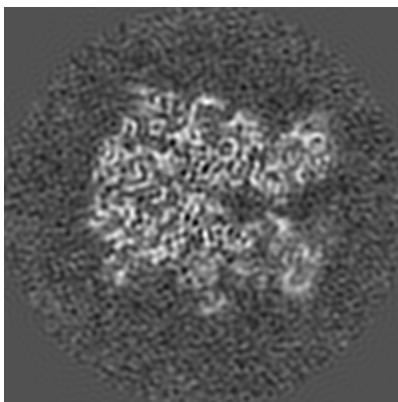
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

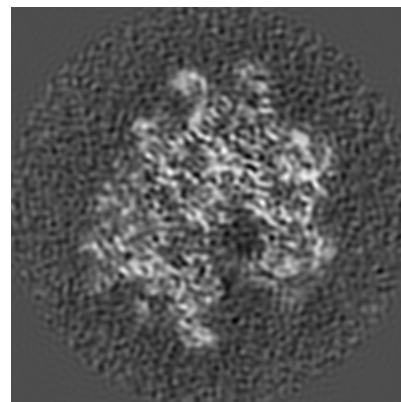
6.3.1 Primary map



X Index: 138

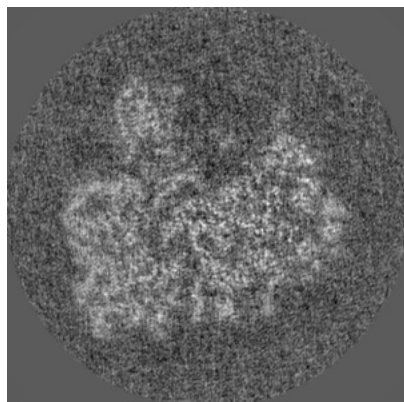


Y Index: 159

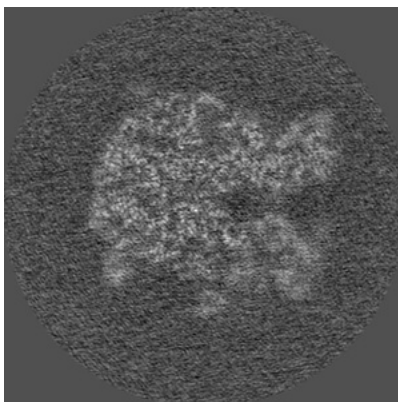


Z Index: 147

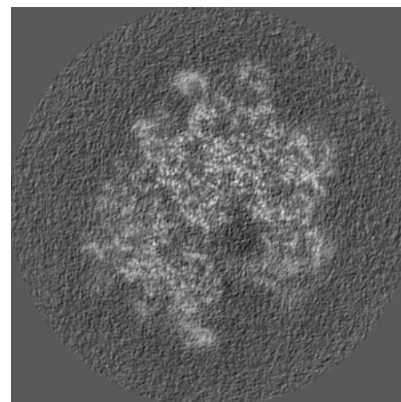
6.3.2 Raw map



X Index: 139



Y Index: 157

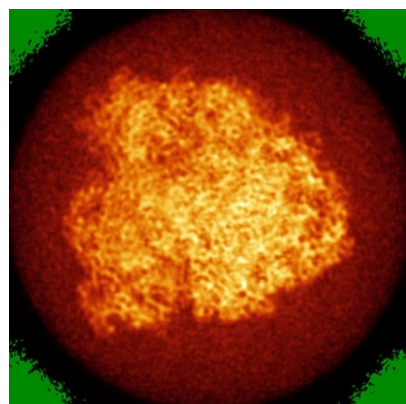


Z Index: 146

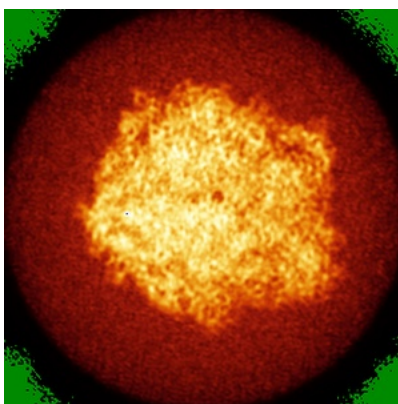
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

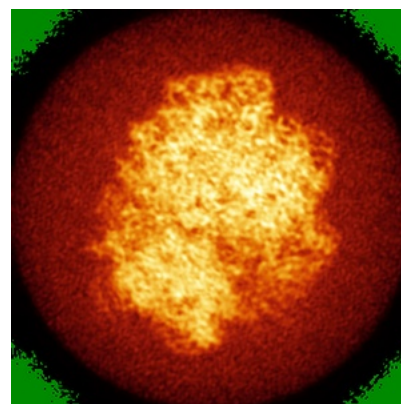
6.4.1 Primary map



X

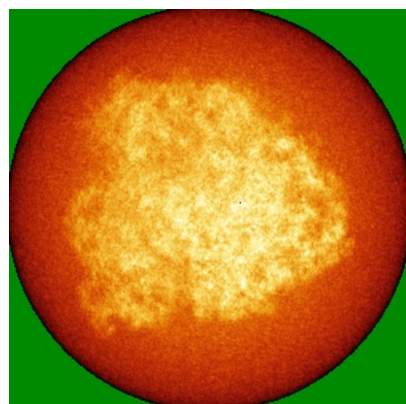


Y

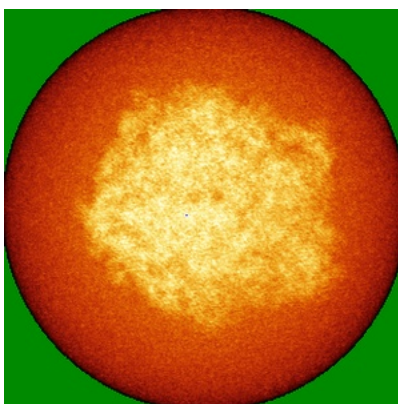


Z

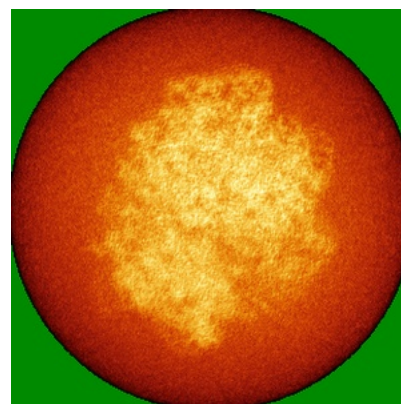
6.4.2 Raw map



X



Y

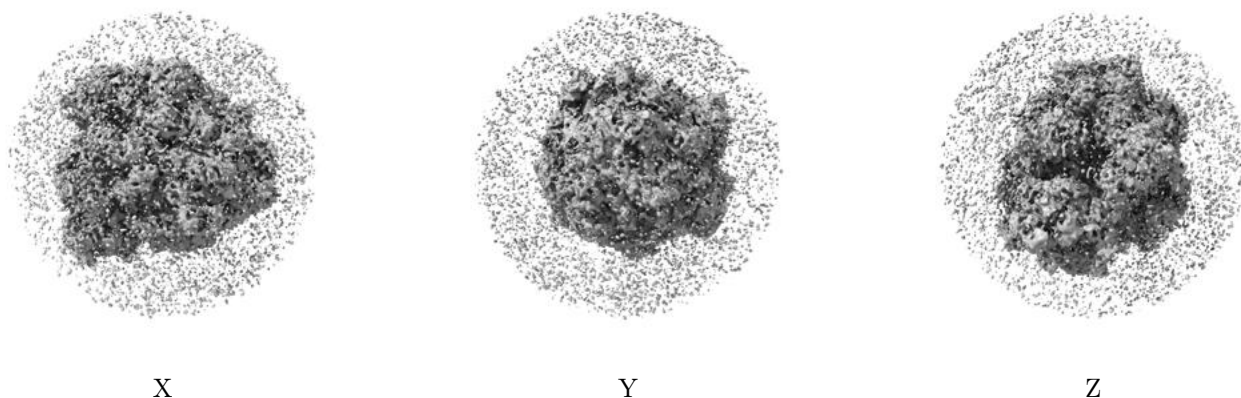


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

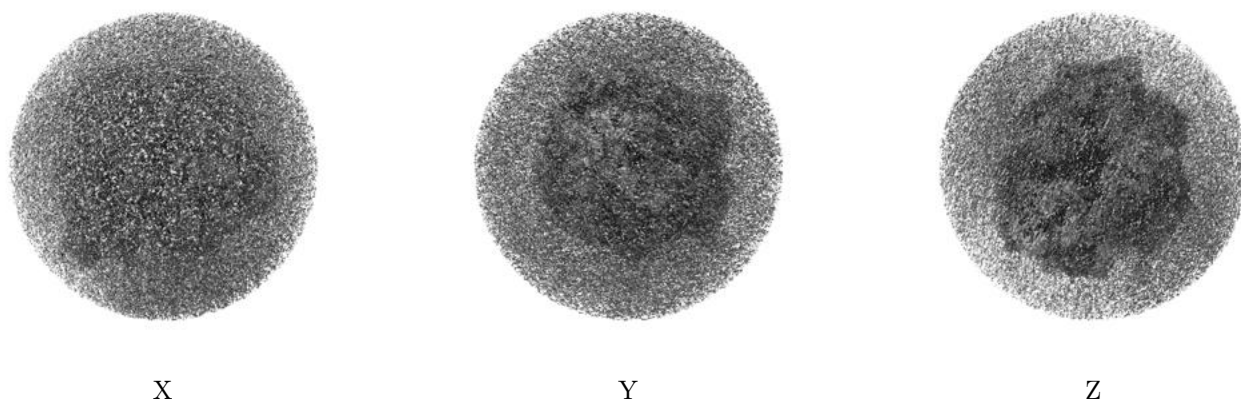
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 1.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

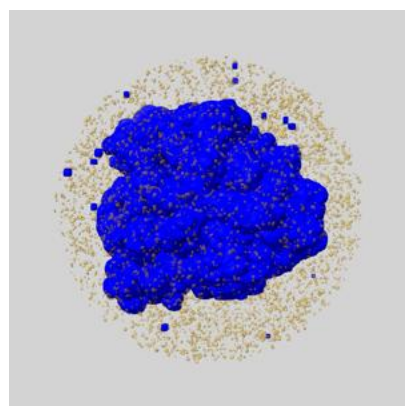
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

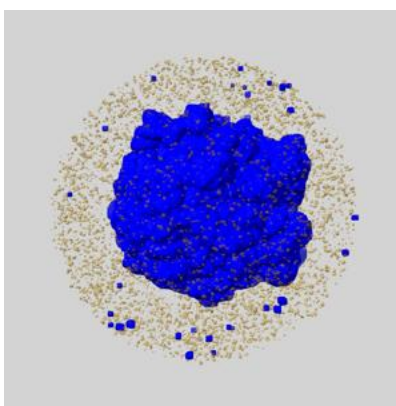
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

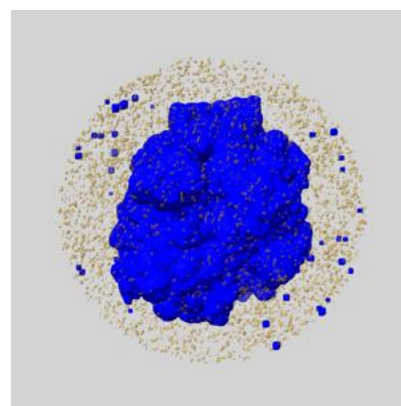
6.6.1 emd_13465_msk_1.map [i](#)



X



Y

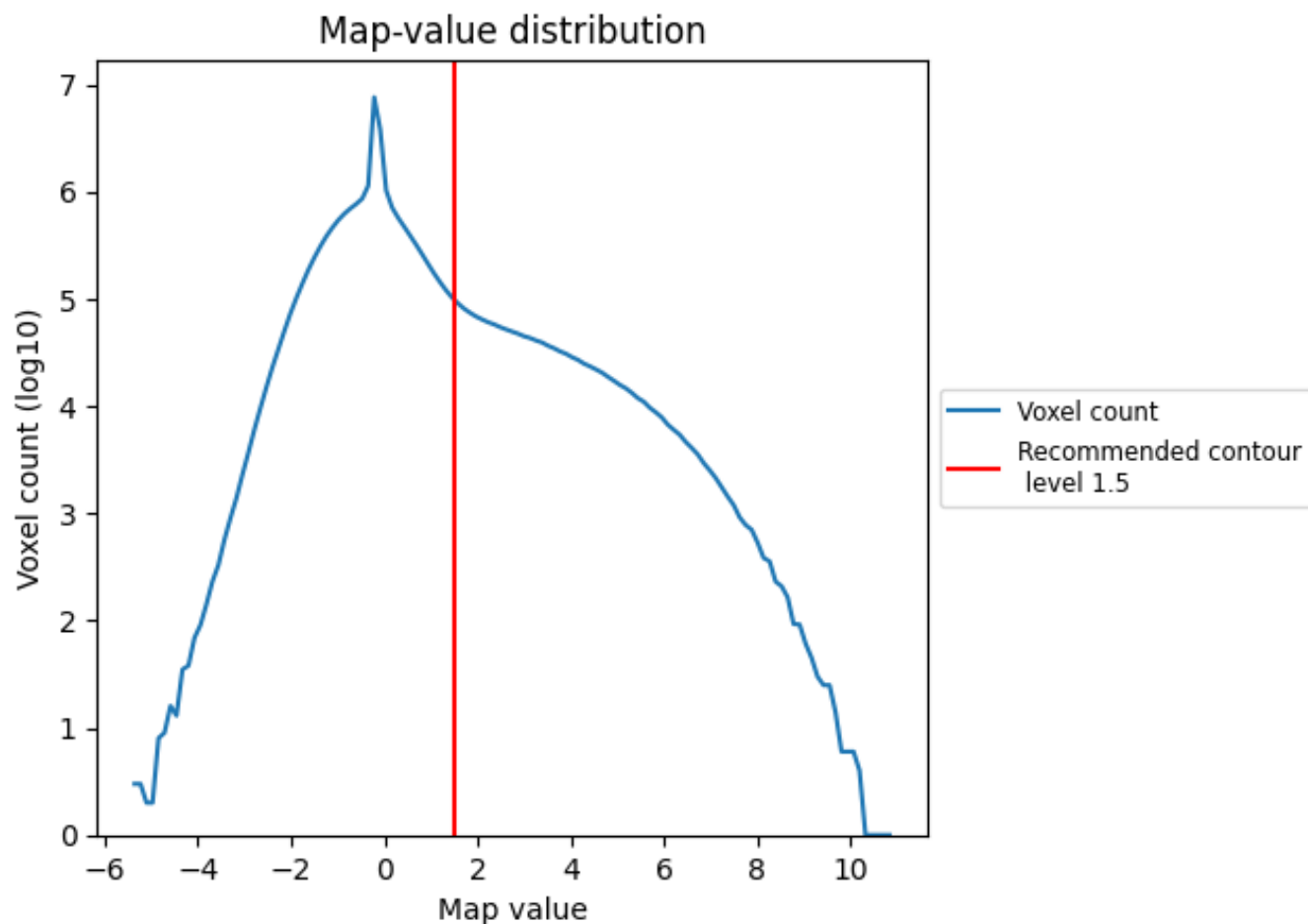


Z

7 Map analysis [i](#)

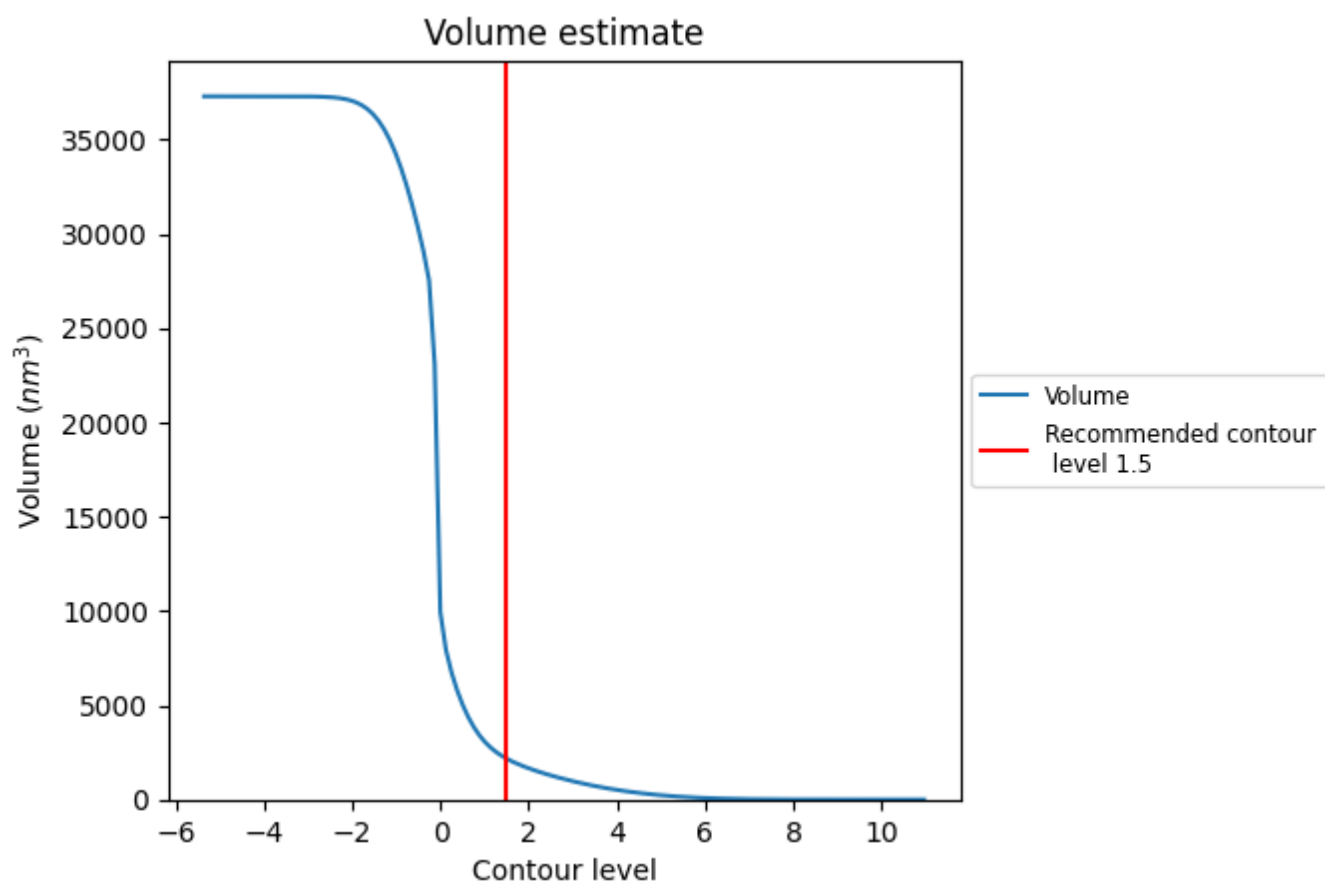
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

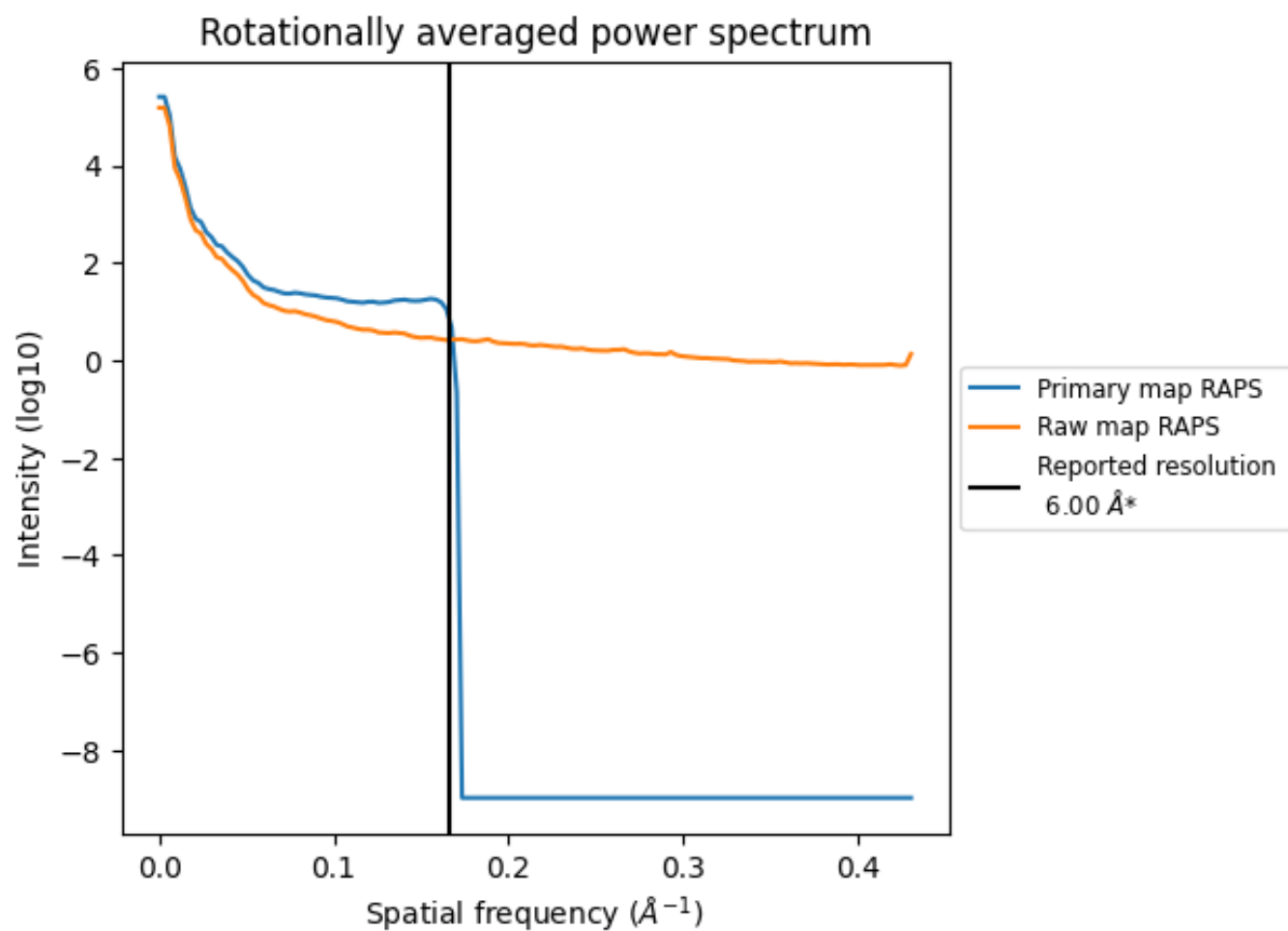
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2172 nm³; this corresponds to an approximate mass of 1962 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

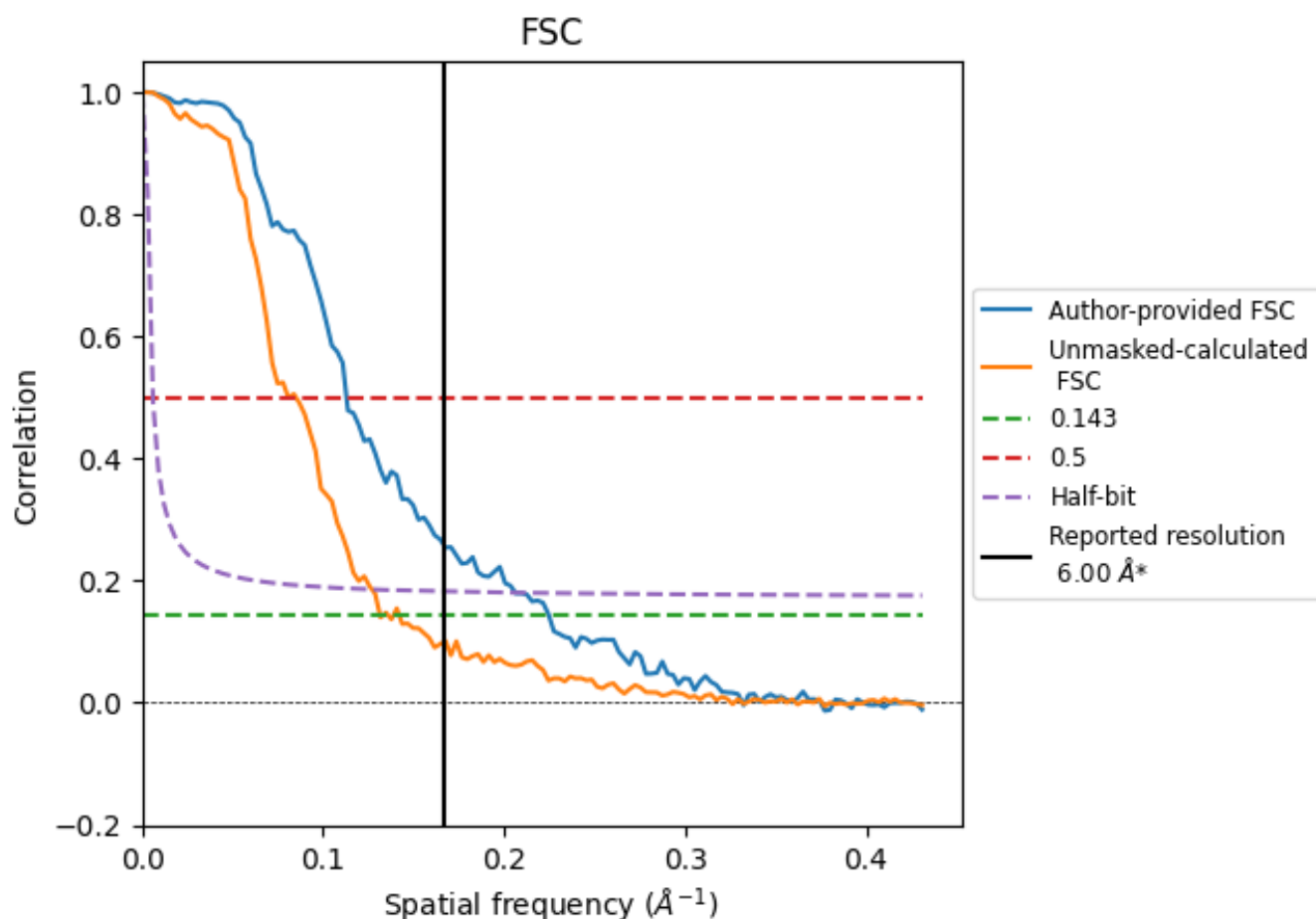


*Reported resolution corresponds to spatial frequency of 0.167 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.167 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	6.00	-	-
Author-provided FSC curve	4.45	8.86	4.85
Unmasked-calculated*	7.61	12.39	7.87

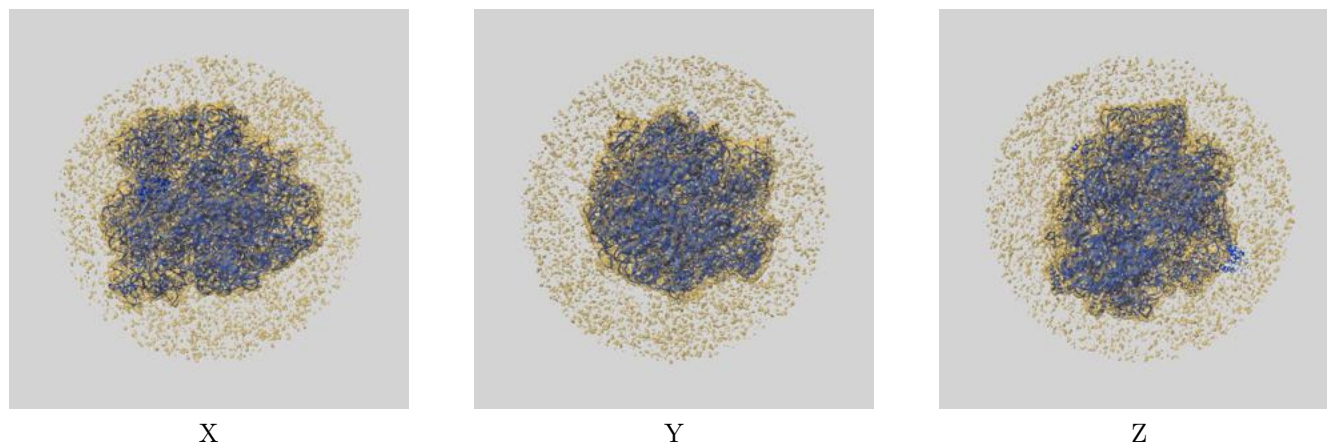
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from author-provided FSC intersecting FSC 0.143 CUT-OFF 4.45 differs from the reported value 6.0 by more than 10 %

The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 7.61 differs from the reported value 6.0 by more than 10 %

9 Map-model fit [i](#)

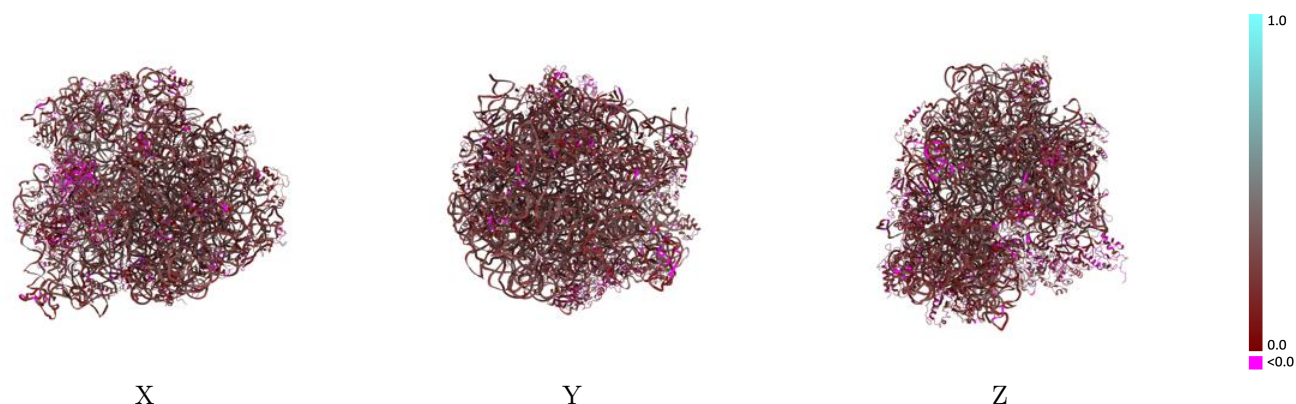
This section contains information regarding the fit between EMDB map EMD-13465 and PDB model 7PJZ. Per-residue inclusion information can be found in section [3](#) on page [16](#).

9.1 Map-model overlay [i](#)



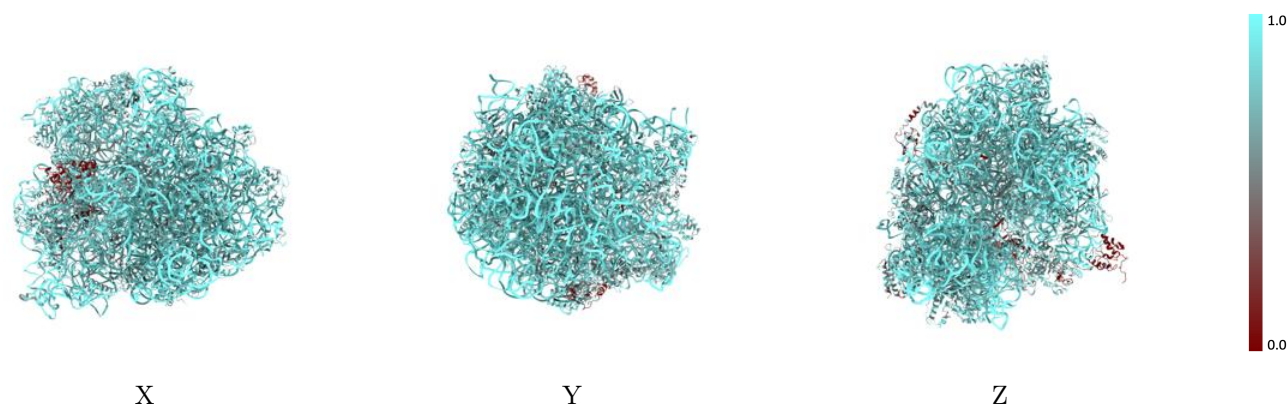
The images above show the 3D surface view of the map at the recommended contour level 1.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



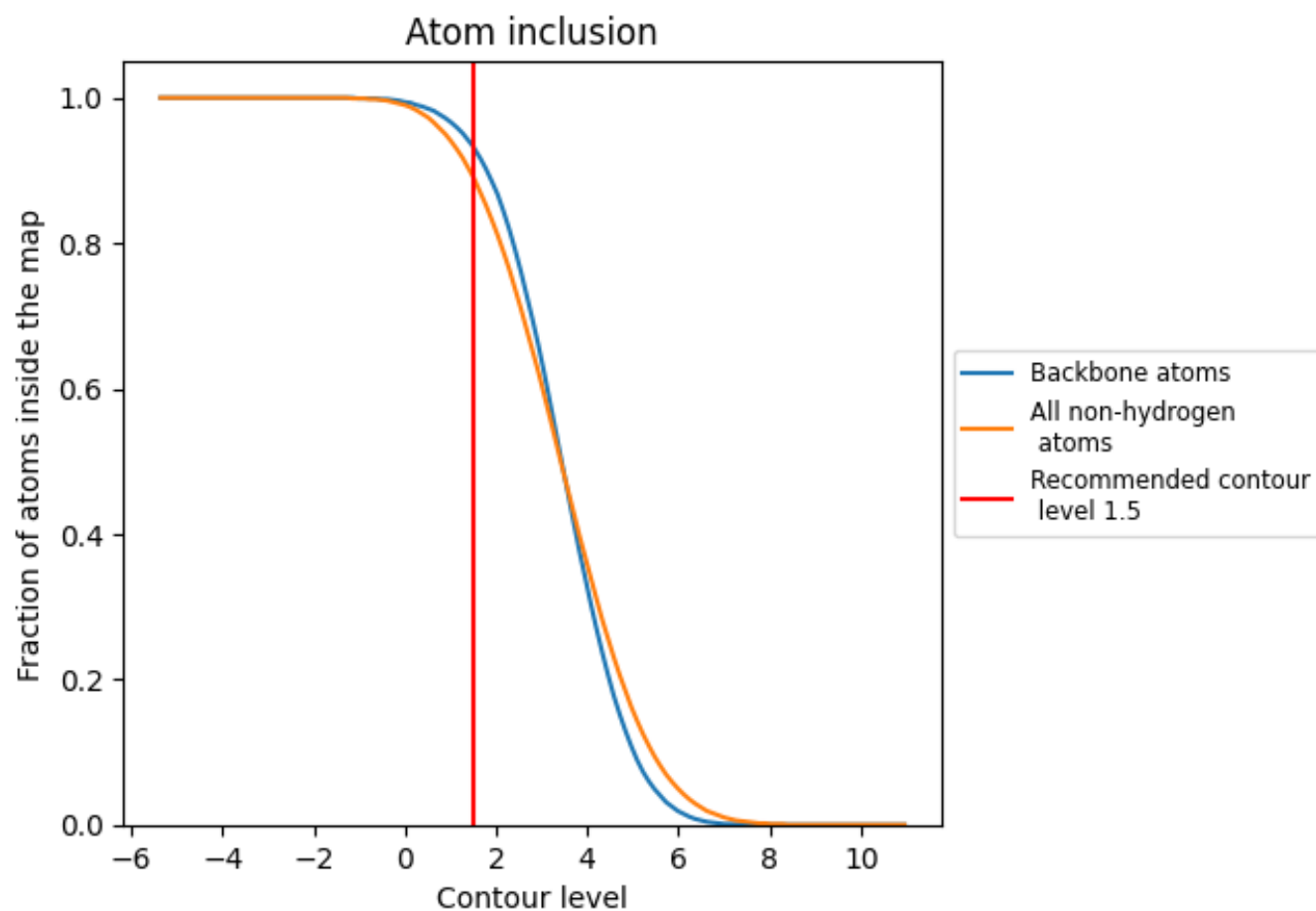
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (1.5).

9.4 Atom inclusion [i](#)



At the recommended contour level, 93% of all backbone atoms, 89% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (1.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8910	 0.2290
0	 0.8200	 0.2180
1	 0.8030	 0.1790
2	 0.8170	 0.2260
3	 0.7900	 0.1990
4	 0.7910	 0.1960
5	 0.2040	 0.0550
6	 0.7750	 0.1830
A	 0.9630	 0.2580
B	 0.9830	 0.2580
C	 0.7770	 0.2080
D	 0.7790	 0.1960
E	 0.8000	 0.2120
F	 0.8140	 0.1870
G	 0.8280	 0.2000
H	 0.4640	 0.1680
I	 0.5470	 0.0990
J	 0.7740	 0.1970
K	 0.7310	 0.2030
L	 0.7960	 0.2050
M	 0.7970	 0.2110
N	 0.8210	 0.1900
O	 0.8780	 0.1880
P	 0.7810	 0.1970
Q	 0.8120	 0.1760
R	 0.8190	 0.1980
S	 0.7420	 0.1830
T	 0.8350	 0.2030
U	 0.8540	 0.1950
V	 0.8390	 0.1850
W	 0.8530	 0.1850
X	 0.8090	 0.2120
Y	 0.8290	 0.1740
Z	 0.8420	 0.2060
a	 0.9620	 0.2400



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Chain	Atom inclusion	Q-score
b	 0.5880	 0.1850
c	 0.7970	 0.1980
d	 0.8110	 0.1770
e	 0.7740	 0.1860
f	 0.7760	 0.1750
g	 0.6770	 0.1790
h	 0.7950	 0.1910
i	 0.8110	 0.1880
j	 0.7780	 0.1740
k	 0.7740	 0.1880
l	 0.7760	 0.2030
m	 0.7630	 0.1710
n	 0.8400	 0.1760
o	 0.7830	 0.1800
p	 0.8180	 0.1890
q	 0.7960	 0.1760
r	 0.7900	 0.1640
s	 0.8080	 0.1830
t	 0.8050	 0.1780
u	 0.7460	 0.1970
v	 0.9020	 0.2410
w	 0.7110	 0.2060
x	 0.6490	 0.1570
y	 0.9050	 0.3130
z	 0.8650	 0.2590