



Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 12:03 PM UTC

PDB ID : 6X6T / pdb_00006x6t
EMDB ID : EMD-22082
Title : Cryo-EM structure of an Escherichia coli coupled transcription-translational complex B1 (TTC-B1) containing an mRNA with a 24 nt long spacer, transcription factors NusA and NusG, and fMet-tRNAs at P-site and E-site
Authors : Molodtsov, V.; Ebright, R.H.; Wang, C.; Su, M.
Deposited on : 2020-05-29
Resolution : 3.20 Å(reported)

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:

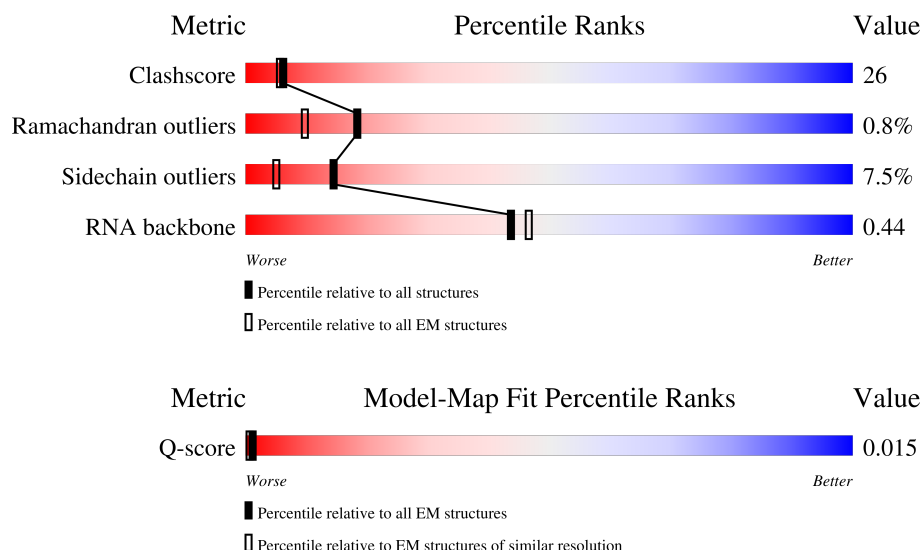
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.20 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	15020 (2.70 - 3.70)

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	103	68% 75% 25%
2	1	110	79% 70% 29% .
3	2	100	63% 76% 17% 6%

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Mol	Chain	Length	Quality of chain
4	3	104	
5	4	94	
6	5	36	
7	6	36	
8	7	41	
9	9	165	
10	A	76	
10	B	76	
11	AA	1342	
12	AB	181	
13	AC	329	
13	AD	329	
14	AE	1407	
15	AF	91	
16	AG	495	
17	C	75	
18	D	1542	
19	E	87	
20	F	71	
21	G	241	
22	H	557	
23	I	233	
24	J	206	
25	K	167	
26	L	135	

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Mol	Chain	Length	Quality of chain
27	M	179	
28	N	130	
29	O	130	
30	P	103	
31	Q	129	
32	R	124	
33	S	101	
34	T	89	
35	U	82	
36	V	84	
37	W	92	
38	X	118	
39	Y	142	
40	Z	121	
41	a	2904	
42	b	85	
43	c	78	
44	d	120	
45	e	63	
46	f	59	
47	g	70	
48	h	273	
49	i	57	
50	j	209	
51	k	55	

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Mol	Chain	Length	Quality of chain
52	l	201	69% 72% 25%
53	m	46	65% 65% 33%
54	n	179	68% 70% 26%
55	o	65	63% 74% 22%
56	p	177	76% 76% 21%
57	q	38	79% 79% 18%
58	r	149	72% 64% 32%
59	s	142	71% 70% 27%
60	t	123	67% 72% 27%
61	u	144	62% 78% 19%
62	v	136	72% 71% 29%
63	w	127	59% 60% 33% 6%
64	x	117	60% 74% 25%
65	y	115	62% 78% 18%
66	z	118	63% 73% 25%

2 Entry composition

There are 68 unique types of molecules in this entry. The entry contains 291628 atoms, of which 109913 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 L21.

Mol	Chain	Residues	Atoms						AltConf	Trace
1	0	103	Total	C	H	N	O	S	0	0
			1655	516	839	153	145	2		

- Molecule 2 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms						AltConf	Trace
2	1	110	Total	C	H	N	O	S	0	0
			1779	532	922	166	156	3		

- Molecule 3 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms						AltConf	Trace
3	2	94	Total	C	H	N	O	S	0	0
			1557	470	811	140	134	2		

- Molecule 4 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms						AltConf	Trace
4	3	103	Total	C	H	N	O		0	0
			1632	498	844	148	142			

- Molecule 5 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms						AltConf	Trace
5	4	94	Total	C	H	N	O	S	0	0
			1533	479	780	137	134	3		

- Molecule 6 is a DNA chain called NT DNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
6	5	23	Total	C	H	N	O	P	0	0
			732	225	260	87	137	23		

- Molecule 7 is a DNA chain called T DNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
7	6	27	Total	C	H	N	O	P	0	0
			847	259	305	89	167	27		

- Molecule 8 is a RNA chain called mRNA with 24 nt long spacer.

Mol	Chain	Residues	Atoms						AltConf	Trace
8	7	33	Total	C	H	N	O	P	0	0
			784	307	97	96	251	33		

- Molecule 9 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	9	148	Total	C	N	O	S	0	0
			1117	705	196	209	7		

- Molecule 10 is a RNA chain called E-site and P-site tRNA (fMet).

Mol	Chain	Residues	Atoms						AltConf	Trace
10	A	76	Total	C	H	N	O	P	0	0
			2446	723	826	295	527	75		
10	B	76	Total	C	H	N	O	P	0	0
			2433	723	813	295	527	75		

- Molecule 11 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AA	1340	Total	C	N	O	S	0	0
			10567	6631	1841	2052	43		

- Molecule 12 is a protein called Transcription termination/antitermination protein NusG.

Mol	Chain	Residues	Atoms						AltConf	Trace
12	AB	162	Total	C	H	N	O	S	0	0
			1283	816	1	222	237	7		

- Molecule 13 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AC	301	Total	C	N	O	S	0	0
			2094	1296	379	413	6		

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	AD	299	Total	C	N	O	S	0	0
			2078	1287	378	407	6		

- Molecule 14 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms						AltConf	Trace
14	AE	1335	Total	C	H	N	O	S	0	0
			21000	6526	10612	1854	1958	50		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AE	1384	VAL	MET	conflict	UNP A0A4S1NBU2

- Molecule 15 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AF	82	Total	C	N	O	S	0	0
			650	396	122	131	1		

- Molecule 16 is a protein called Transcription termination/antitermination protein NusA.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AG	495	Total	C	N	O	S	0	0
			3852	2396	669	774	13		

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms						AltConf	Trace
17	C	66	Total	C	H	N	O	S	0	0
			1103	344	559	102	97	1		

- Molecule 18 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
18	D	1524	Total	C	H	N	O	P	0	0
			49126	14585	16423	6003	10591	1524		

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms						AltConf	Trace
19	E	86	Total	C	H	N	O	S	0	0
			1388	414	719	138	114	3		

- Molecule 20 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms						AltConf	Trace
20	F	70	Total	C	H	N	O	S	0	0
			1218	366	629	125	97	1		

- Molecule 21 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms						AltConf	Trace
21	G	225	Total	C	H	N	O	S	0	0
			3545	1113	1785	316	323	8		

- Molecule 22 is a protein called 30S ribosomal protein S1.

Mol	Chain	Residues	Atoms						AltConf	Trace
22	H	259	Total	C	H	N	O	S	0	0
			3184	1073	1454	305	349	3		

- Molecule 23 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms						AltConf	Trace
23	I	208	Total	C	H	N	O	S	0	0
			3346	1036	1710	307	290	3		

- Molecule 24 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms						AltConf	Trace
24	J	205	Total	C	H	N	O	S	0	0
			3350	1026	1707	315	298	4		

- Molecule 25 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms						AltConf	Trace
25	K	156	Total	C	H	N	O	S	0	0
			2348	717	1196	217	212	6		

- Molecule 26 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms						AltConf	Trace
26	L	104	Total	C	H	N	O	S	0	0
			1694	536	846	153	152	7		

- Molecule 27 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms						AltConf	Trace
27	M	151	Total	C	H	N	O	S	0	0
			2416	735	1235	227	215	4		

- Molecule 28 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms						AltConf	Trace
28	N	129	Total	C	H	N	O	S	0	0
			2010	616	1031	173	184	6		

- Molecule 29 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms						AltConf	Trace
29	O	127	Total	C	H	N	O	S	0	0
			2092	634	1070	206	179	3		

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

Mol	Chain	Residues	Atoms						AltConf	Trace
30	P	99	Total	C	H	N	O	S	0	0
			1621	495	831	151	143	1		

- Molecule 31 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms						AltConf	Trace
31	Q	117	Total	C	H	N	O	S	0	0
			1764	540	887	174	160	3		

- Molecule 32 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms						AltConf	Trace
32	R	121	Total	C	H	N	O	S	0	0
			1940	580	1001	194	161	4		

- Molecule 33 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms						AltConf	Trace
33	S	100	Total	C	H	N	O	S	0	0
			1649	499	844	164	139	3		

- Molecule 34 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms						AltConf	Trace
34	T	88	Total	C	H	N	O	S	0	0
			1448	439	734	144	130	1		

- Molecule 35 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms						AltConf	Trace
35	U	82	Total	C	H	N	O	S	0	0
			1315	406	666	128	114	1		

- Molecule 36 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms						AltConf	Trace
36	V	80	Total	C	H	N	O	S	0	0
			1339	411	691	121	113	3		

- Molecule 37 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms						AltConf	Trace
37	W	83	Total	C	H	N	O	S	0	0
			1351	424	688	126	111	2		

- Molecule 38 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms						AltConf	Trace
38	X	116	Total	C	H	N	O	S	0	0
			1864	558	964	181	158	3		

- Molecule 39 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Y	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 40 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Z	30	Total	C	N	O	S	0	0
			227	144	33	47	3		

- Molecule 41 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
41	a	2880	Total	C	H	N	O	P	0	0
			92918	27587	31077	11398	19976	2880		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
a	887	A	U	conflict	GB 937521852

- Molecule 42 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms						AltConf	Trace
42	b	76	Total	C	H	N	O	S	0	0
			1181	360	599	117	104	1		

- Molecule 43 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms						AltConf	Trace
43	c	77	Total	C	H	N	O	S	0	0
			1277	388	652	129	106	2		

- Molecule 44 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
44	d	120	Total	C	H	N	O	P	0	0
			3870	1144	1301	468	837	120		

- Molecule 45 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms						AltConf	Trace
45	e	62	Total	C	H	N	O	S	0	0
			1032	308	531	98	94	1		

- Molecule 46 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms						AltConf	Trace
46	f	58	Total	C	H	N	O	S	0	0
			936	281	488	87	78	2		

- Molecule 47 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms						AltConf	Trace
47	g	66	Total	C	H	N	O	S	0	0
			1042	323	520	99	94	6		

- Molecule 48 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms						AltConf	Trace
48	h	271	Total	C	H	N	O	S	0	0
			4236	1288	2154	423	364	7		

- Molecule 49 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms						AltConf	Trace
49	i	56	Total	C	H	N	O	S	0	0
			903	269	459	94	80	1		

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

Mol	Chain	Residues	Atoms						AltConf	Trace
50	j	209	Total	C	H	N	O	S	0	0
			3182	979	1617	288	294	4		

- Molecule 51 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms						AltConf	Trace
51	k	52	Total	C	H	N	O		0	0
			890	275	464	78	73			

- Molecule 52 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms						AltConf	Trace
52	l	201	Total	C	H	N	O	S	0	0
			3171	974	1619	283	290	5		

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms						AltConf	Trace
53	m	46	Total	C	H	N	O	S	0	0
			795	228	418	90	57	2		

- Molecule 54 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms						AltConf	Trace
54	n	177	Total	C	H	N	O	S	0	0
			2853	899	1443	249	256	6		

- Molecule 55 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms						AltConf	Trace
55	o	64	Total	C	H	N	O	S	0	0
			1076	323	572	105	74	2		

- Molecule 56 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms						AltConf	Trace
56	p	175	Total	C	H	N	O	S	0	0
			2671	826	1358	241	244	2		

- Molecule 57 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms						AltConf	Trace
57	q	38	Total	C	H	N	O	S	0	0
			645	185	343	65	48	4		

- Molecule 58 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms						AltConf	Trace
58	r	149	Total	C	H	N	O	S	0	0
			2259	699	1148	197	214	1		

- Molecule 59 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms						AltConf	Trace
59	s	142	Total	C	H	N	O	S	0	0
			2291	714	1162	212	199	4		

- Molecule 60 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms						AltConf	Trace
60	t	123	Total	C	H	N	O	S	0	0
			1969	593	1023	181	166	6		

- Molecule 61 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms						AltConf	Trace
61	u	144	Total	C	H	N	O	S	0	0
			2182	654	1129	207	190	2		

- Molecule 62 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms						AltConf	Trace
62	v	136	Total	C	H	N	O	S	0	0
			2231	686	1157	205	177	6		

- Molecule 63 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms						AltConf	Trace
63	w	119	Total	C	H	N	O	S	0	0
			1945	588	994	195	163	5		

- Molecule 64 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms						AltConf	Trace
64	x	116	Total	C	H	N	O		0	0
			1815	552	923	178	162			

- Molecule 65 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms						AltConf	Trace
65	y	114	Total	C	H	N	O	S	0	0
			1879	574	962	179	163	1		

- Molecule 66 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms						AltConf	Trace
66	z	117	Total	C	H	N	O		0	0
			1967	604	1020	192	151			

- Molecule 67 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
67	7	1	Total 1	Mg 1	0

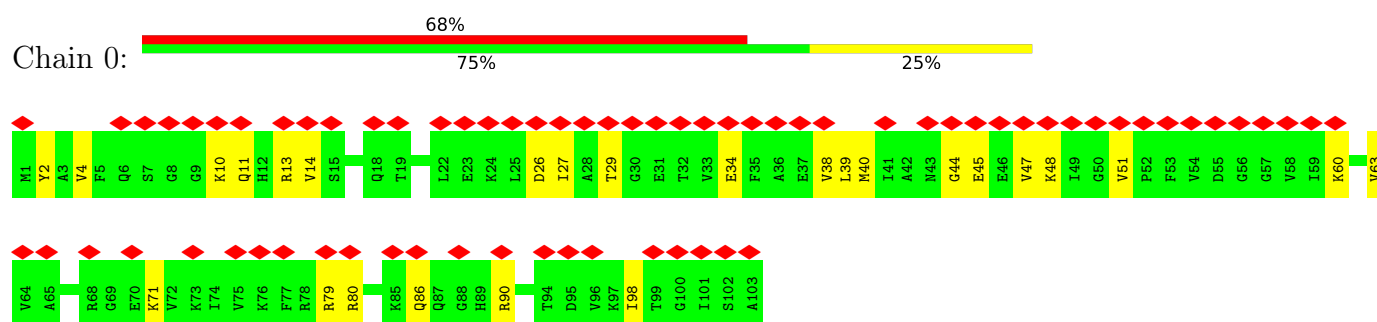
- Molecule 68 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
68	AA	2	Total 2	Zn 2	0

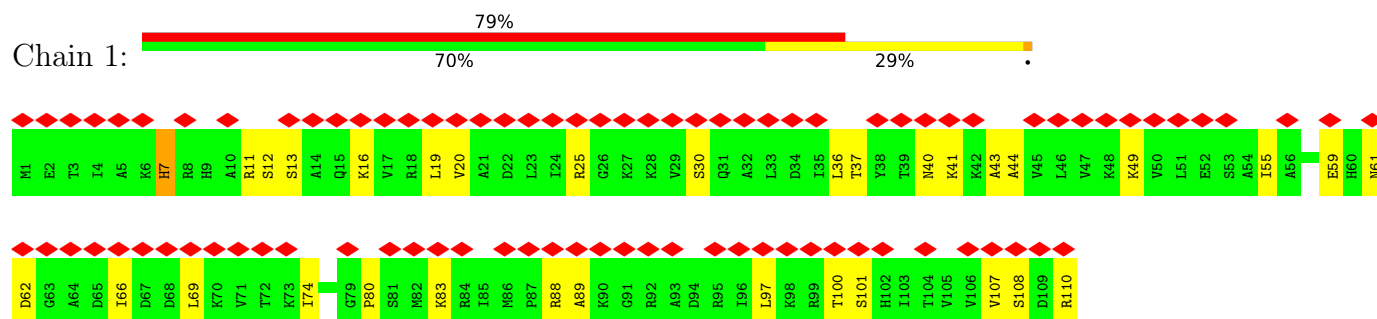
3 Residue-property plots [i](#)

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.

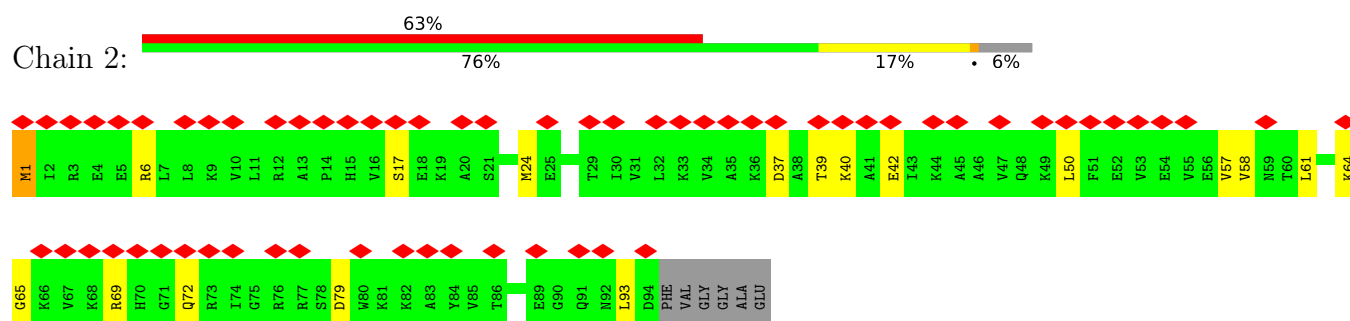
- Molecule 1: 50S ribosomal protein L21



- Molecule 2: 50S ribosomal protein L22

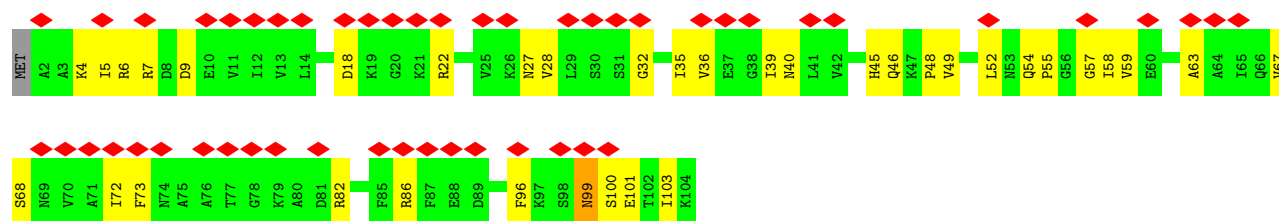


- Molecule 3: 50S ribosomal protein L23

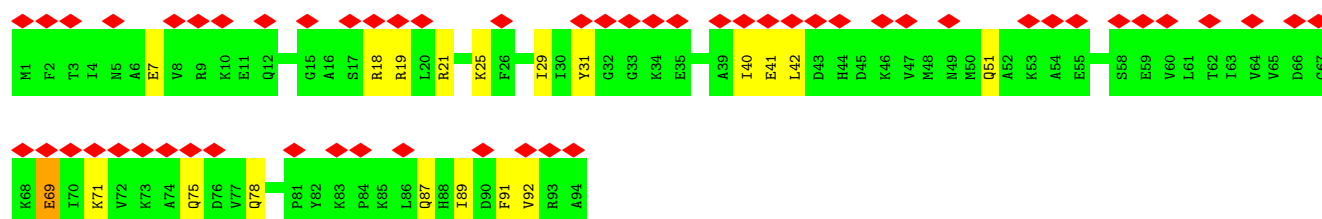
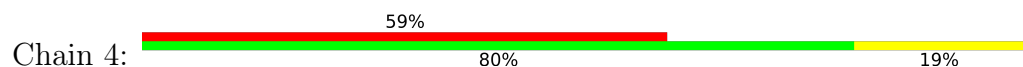


- Molecule 4: 50S ribosomal protein L24

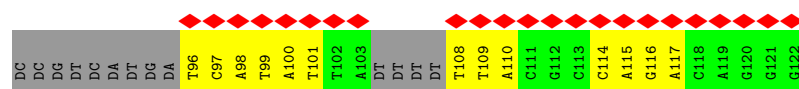




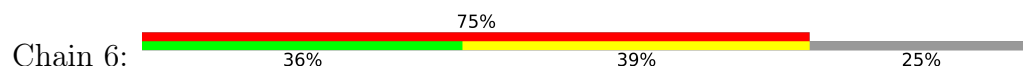
• Molecule 5: 50S ribosomal protein L25



• Molecule 6: NT DNA



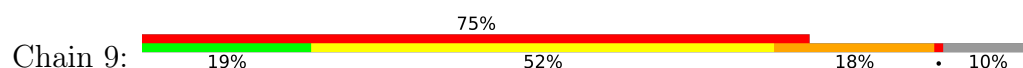
• Molecule 7: T DNA

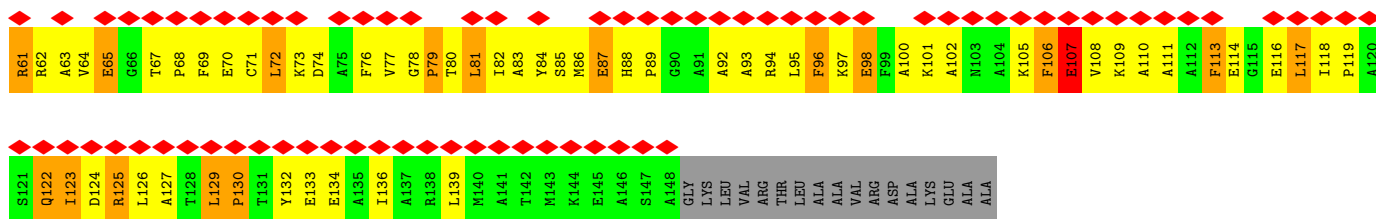


• Molecule 8: mRNA with 24 nt long spacer

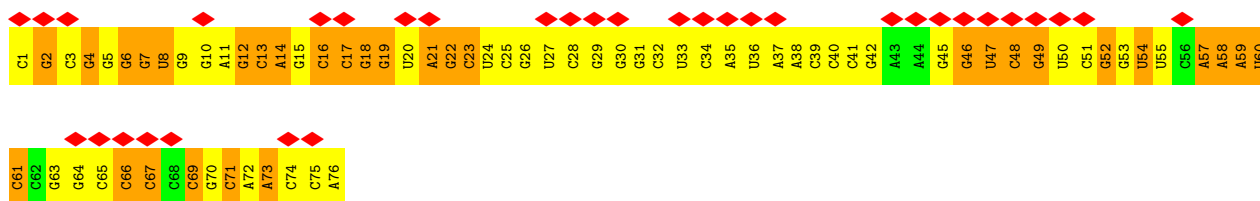


• Molecule 9: 50S ribosomal protein L10

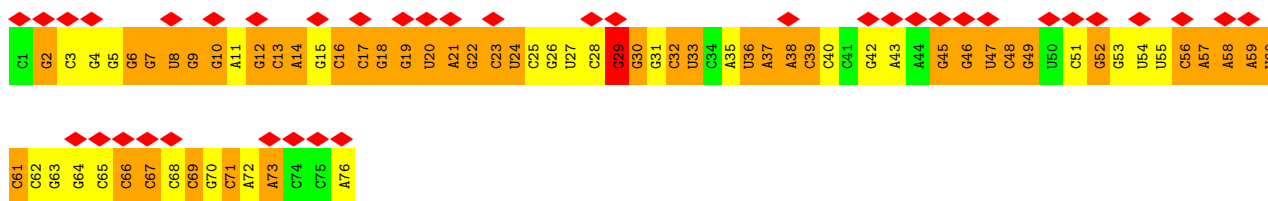




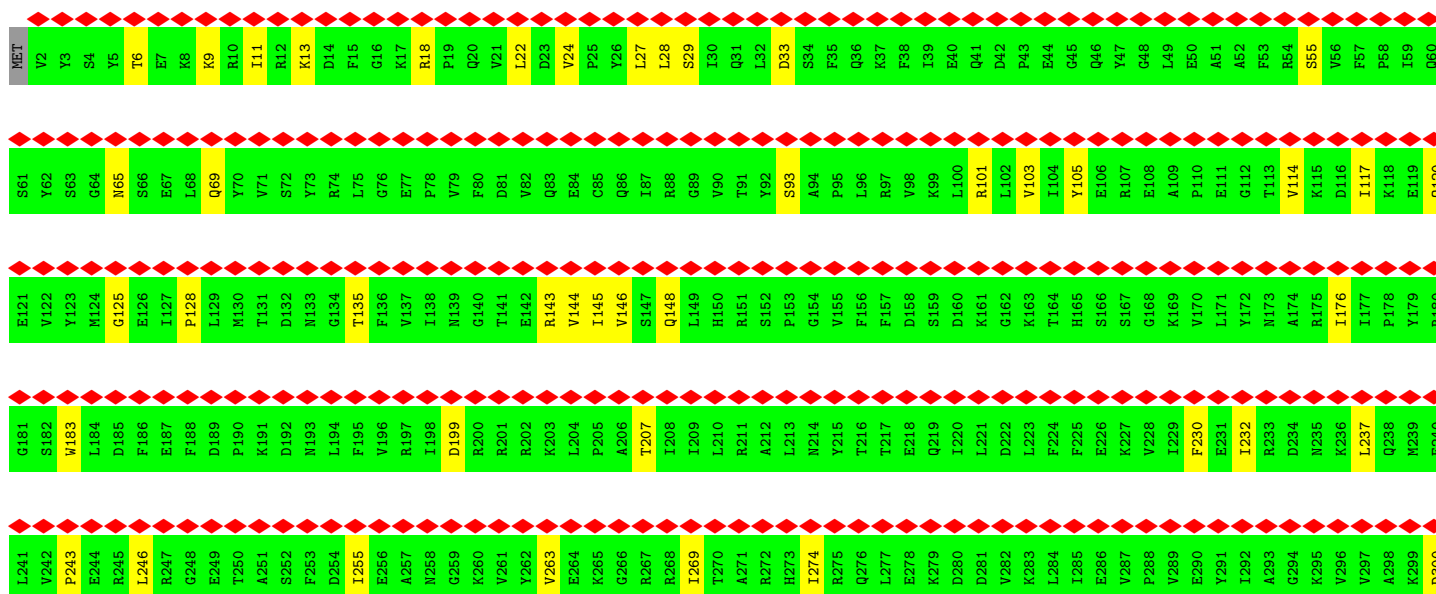
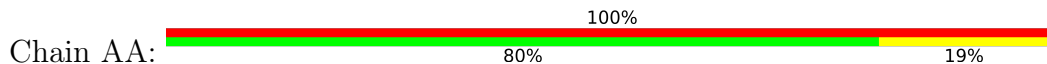
• Molecule 10: E-site and P-site tRNA (fMet)



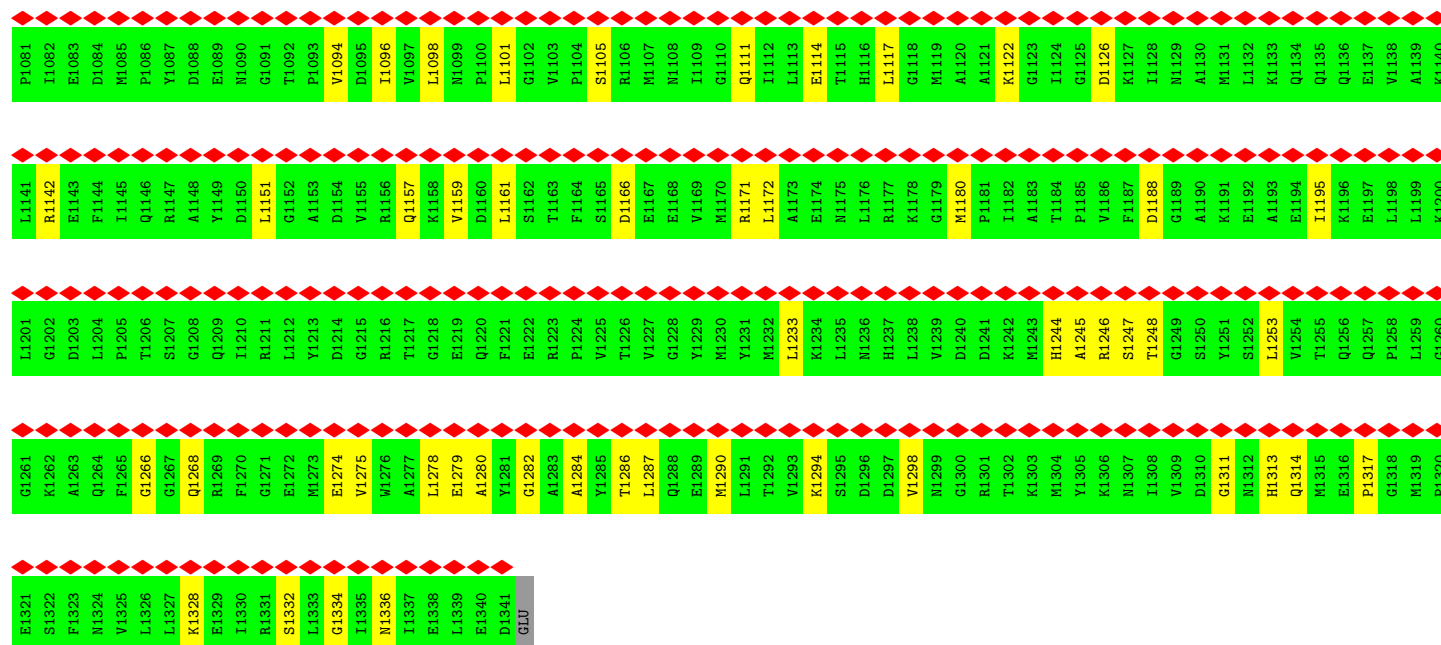
• Molecule 10: E-site and P-site tRNA (fMet)



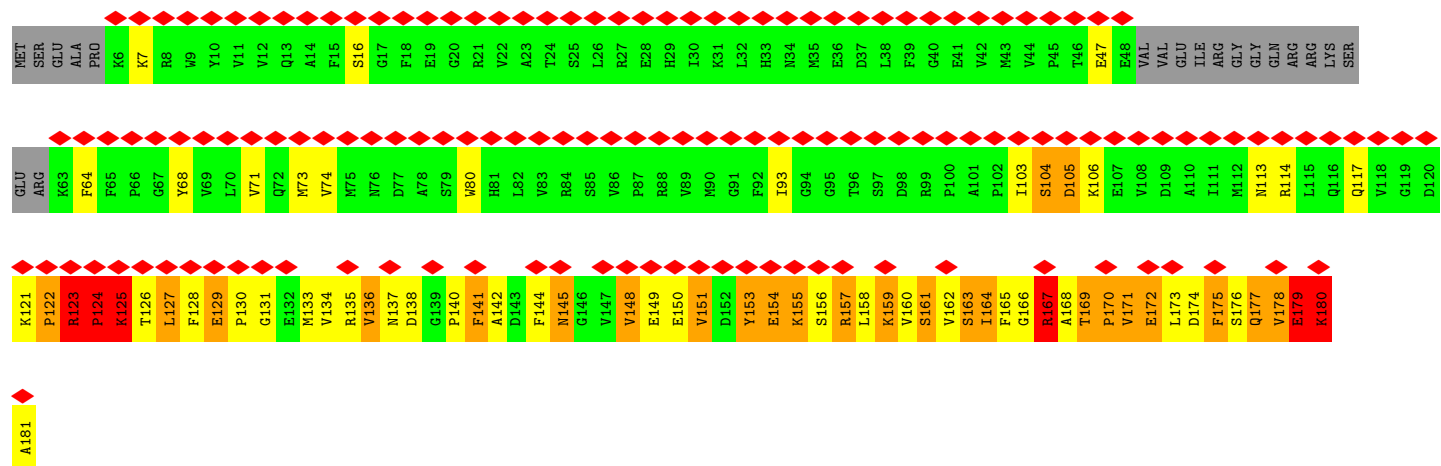
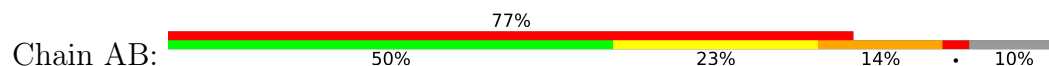
• Molecule 11: DNA-directed RNA polymerase subunit beta



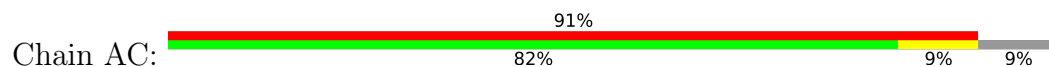
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H1023	E963	T843	R903	V723	V663	I603	A543	D483	D423	L363	D303
E1024	L964	K844	A904	V724	G664	H604	G544	L484	D424	V364	E304
F1025	Q965	L845	T905	V725	A665	Y605	F545	D485	I425	E365	S305
E1026	L966	G846	F906	V726	S666	L606	E546	T486	I426	I366	T306
K1027	L967	P847	G907	V727	L667	S607	V547	L487	D427	Y367	G307
K1028	E968	E848	E908	D728	T668	A608	R548	M488	V428	R368	E308
L1029	A969	E849	R909	A729	P669	I609	D549	P489	M429	M369	L309
E1030	G970	T850	A910	S730	F670	E610	V550	Q490	K430	M370	I310
A1031	L971	T851	S911	R731	L671	E611	H551	D491	K431	R371	C311
K1032	F972	A852	D912	I732	E672	G612	P552	M492	L432	P372	A312
R1033	S973	D853	V913	V733	H673	H613	T553	I493	I433	G373	A313
A1034	R974	T854	K914	I734	D674	Y614	H554	M494	D434	E374	N314
K1035	I975	P855	D915	K735	D675	V615	Y555	A495	I435	P375	M315
I1036	R976	N856	S916	V736	A676	I616	G556	K496	R436	P376	E316
T1037	A977	V857	G917	E737	N677	A617	R557	P497	I437	T377	L317
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G1039	L979	E859	R919	D739	A679	A619	C559	S499	K439	E379	L319
D1040	V980	A860	V920	E740	L680	N620	P560	A500	G440	A380	D320
L1041	A981	A861	P921	N741	M681	S621	I561	A501	E441	A381	L321
A1043	G983	S863	G923	V742	A683	N622	E562	V502	V442	E382	L322
P1044	V984	K864	V924	P743	G684	L623	T563	K503	D443	S383	A323
G1045	E985	L865	S925	G744	N684	D624	P564	E504	D444	L384	K324
V1046	G986	D866	G926	E745	M685	E625	E565	F505	I445	F385	L325
L1047	E987	E867	T927	A746	Q686	E626	G566	F506	D446	S326	S326
K1048	X988	S868	V928	G747	R687	G627	P567	G507	H447	N387	Q327
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V1050	D990	T870	R930	D749	A689	F629	I569	S509	G449	F389	G329
K1051	K991	H871	V931	V750	V690	V630	G570	Q510	N450	F390	H330
L1052	R992	Y872	Q932	V751	P691	E631	L571	L511	R451	S391	K331
F1053	P993	L873	E933	L753	L693	D632	I572	S512	R452	E392	R332
L1054	R994	G874	F934	T754	R694	L633	N573	Q513	I453	D393	I333
A1055	D995	A875	T935	K755	A695	V634	S574	R394	R454	R394	E334
V1056	R996	E876	R936	V756	D696	T635	L575	Y395	S455	Y395	T335
K1057	W997	E877	D937	V757	G697	C636	S576	D396	V456	D396	L336
L1058	L998	T878	G938	T757	K697	R637	V577	G457	G457	L397	F337
R1059	E999	G879	V939	S759	L699	S638	Y578	E458	M459	S398	N339
I1060	L1000	C880	E940	N760	V700	G640	Q580	N519	A460	V400	D340
Q1061	G1001	D881	K941	Q761	G701	E641	T581	L521	E461	G401	L341
P1062	L1002	T882	V942	N762	T702	S642	N582	S522	R462	R402	D342
G1063	T1003	L883	K943	T763	G703	S643	E583	E523	Q463	M403	H343
D1064	D1004	V884	Q944	C764	M704	L644	Y584	I524	F464	K404	G344
A1065	E1005	G885	A945	I765	E705	F645	G585	T525	R465	F405	P345
K1066	E1006	X886	L946	N766	R706	S646	F586	H526	V466	N406	Y346
A1067	K1007	V887	E947	Q767	A707	R647	L587	K527	G467	R407	I347
Q1068	Q1008	T888	I948	P768	V708	D648	E588	R528	L468	S408	S348
R1069	N1009	P889	E949	T769	A709	Q649	T589	R529	V469	L409	E349
H1070	E1010	K890	E950	C770	V710	V650	P590	I530	R470	L410	T350
G1071	L1011	H891	M951	V771	D711	D651	Y591	S531	V471	R411	L361
N1072	E1012	E892	Q952	S772	S712	Y652	R592	A532	E472	E412	R352
K1073	Q1013	T893	L953	L773	G713	M653	K593	L533	R473	E413	V353
G1074	L1014	D894	K954	G774	V714	D654	V594	G534	A474	I414	D354
V1075	A1015	L895	Q955	E775	T715	V655	T595	P535	V475	E415	P355
I1076	E1016	T896	A956	P776	A716	S656	D596	G536	K476	G416	T356
S1077	Q1017	P897	K957	V777	V717	T657	G597	G537	E477	S417	N357
K1078	L1018	E898	K958	E778	A718	Q658	V598	L538	R478	G418	D358
I1079	D1019	E899	D959	R779	K719	Q659	V599	T539	L479	I419	R359
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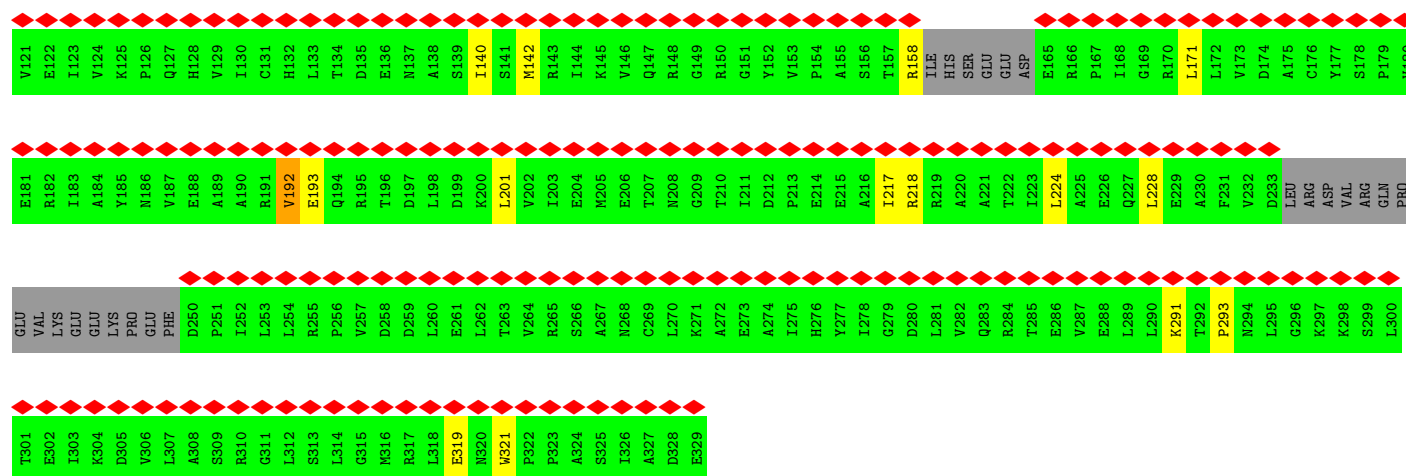


• Molecule 12: Transcription termination/antitermination protein NusG

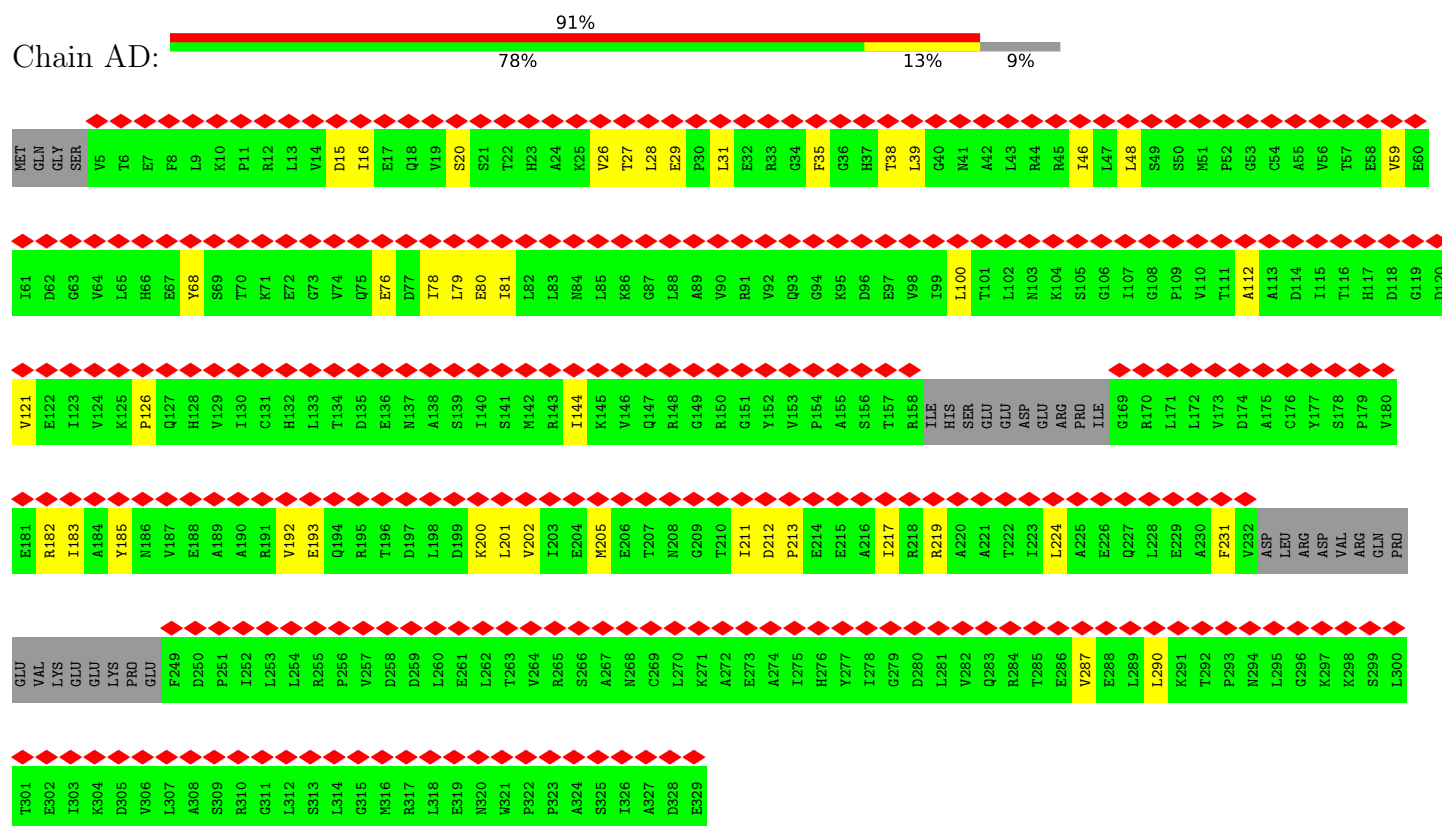


• Molecule 13: DNA-directed RNA polymerase subunit alpha

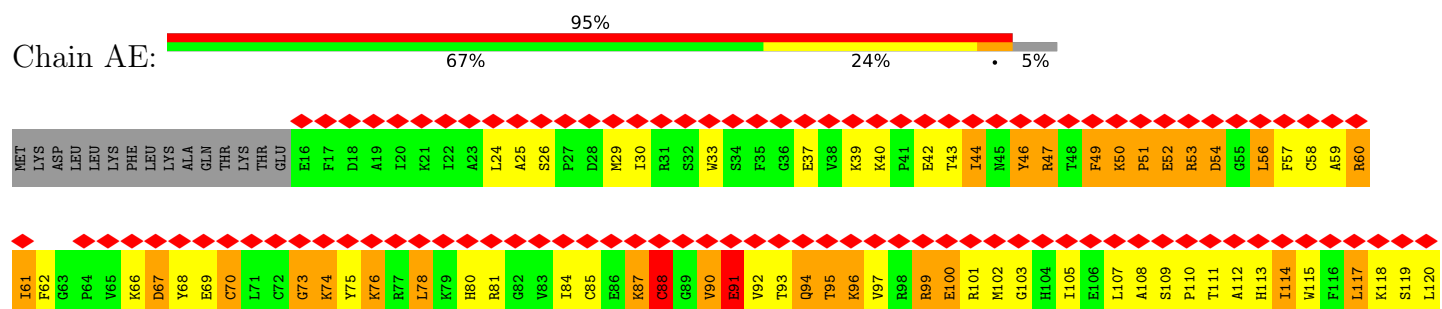




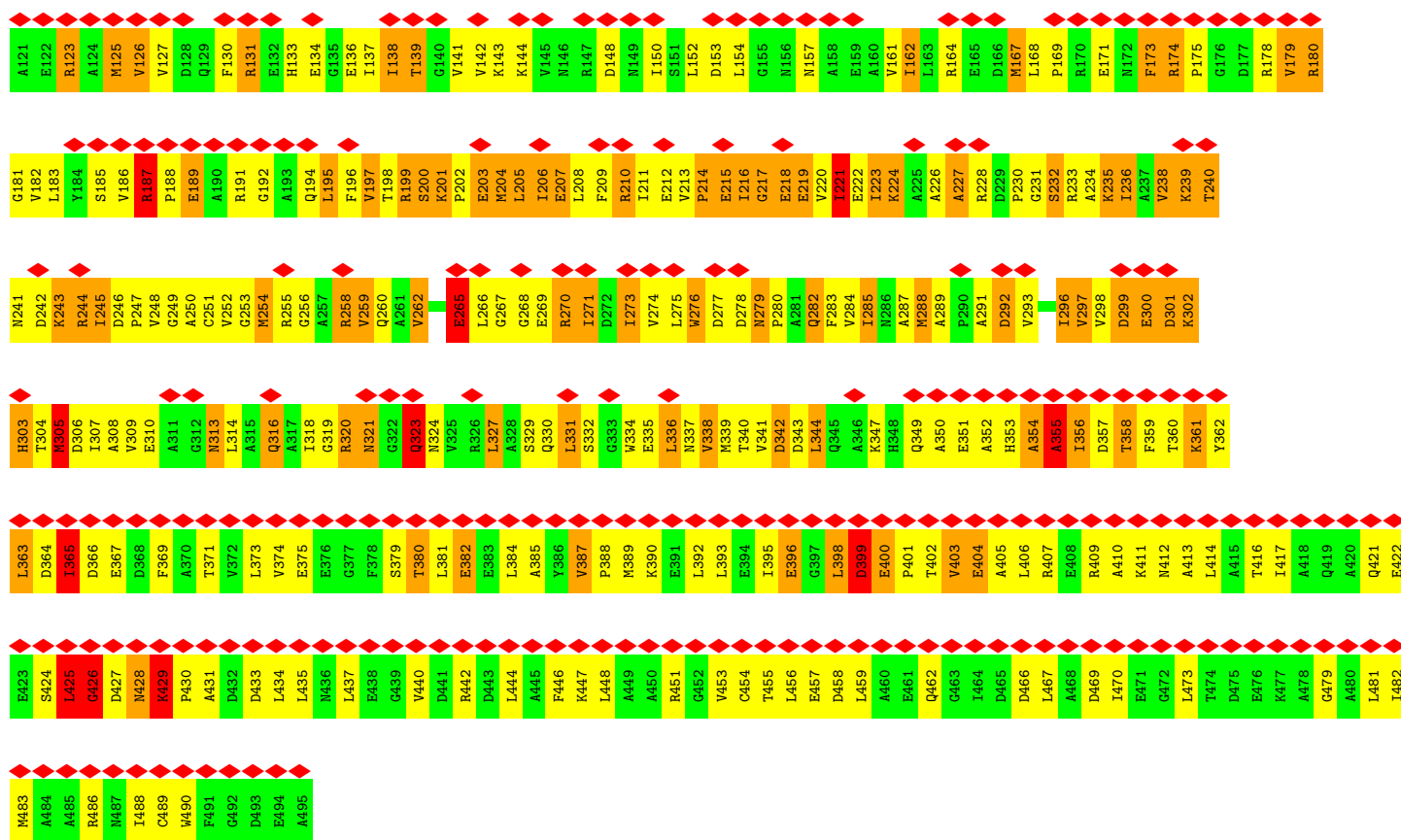
• Molecule 13: DNA-directed RNA polymerase subunit alpha



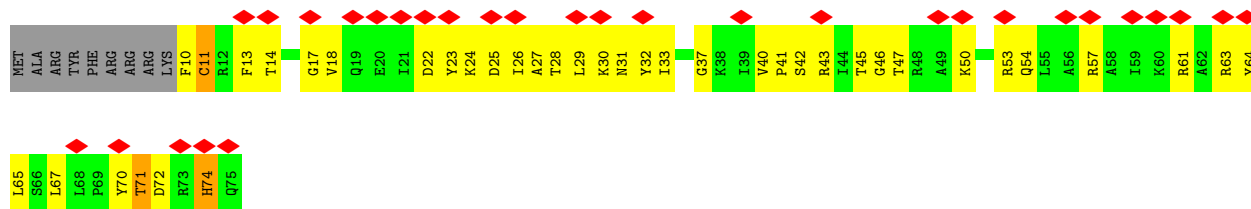
• Molecule 14: DNA-directed RNA polymerase subunit beta'



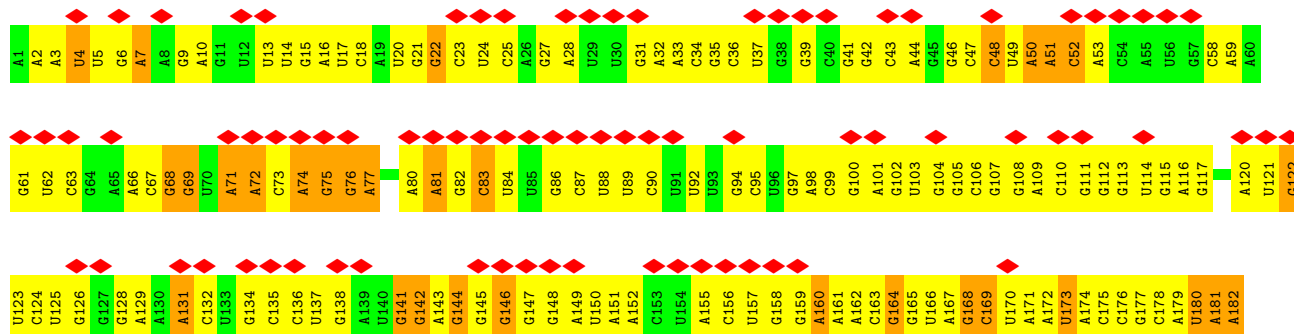
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R123	E183	P243	V303	L363	L423	L483	S543	R603	E663	Y723	L783	R843	L903
I124	A184	V244	D304	H364	M424	M484	L544	M604	T664	M724	A784	T844	A904
G125	I185	P245	A305	Q365	R425	M485	H545	L605	Q665	M725	T785	A845	R905
L126	Q186	L246	L306	C366	A426	S486	A546	L606	E666	A726	T786	R846	G906
L127	A187	P247	L307	G367	P427	T487	R547	T607	Q667	D727	A787	D847	H907
L128	L188	D248	D308	L368	T428	M488	V548	C608	F668	S728	L788	V848	I908
D129	N309	L249	N309	F369	L429	M489	K549	Y609	Q669	G729	K789	L849	I909
M130	K190	R250	G310	K370	H430	L490	V550	R610	S670	A730	T790	K850	N909
P131	S191	P251	R311	K371	R431	L491	R551	T611	G671	R731	A791	P851	K911
L132	M192	L252	R312	M372	L432	S492	L552	L612	L672	G732	H792	G852	G912
R133	D193	V253	G313	A373	Q433	P493	T553	S613	V673	S733	S793	T853	E913
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R138	C198	G258	G318	K378	E438	P498	D558	V618	R678	R738	V798	V858	I918
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F141	L201	A261	K321	I381	L441	V501	G561	A621	K681	A741	Y801	R861	Q921
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S143	E203	S263	F323	G383	E443	S503	L563	Q623	L683	M743	Y803	L863	I923
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V145	E205	L265	K325	E385	K445	D505	A565	M625	L685	G745	Q805	H865	E925
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Q157	L217	N277	R337	A397	Y457	C517	A577	A637	M697	T767	H817	V877	ILE
Q158	T218	R278	F338	K398	M458	V518	L578	S638	N698	V768	L818	D878	GLY
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L160	R220	K280	Q340	M400	D460	A520	V580	G640	N700	T769	I820	V880	ALA
T161	I221	R281	N341	V401	P461	K521	M581	L641	L701	A761	M821	K881	SER
E162	K222	L282	L342	E402	D462	G522	L582	D642	L702	N762	H822	R882	ALA
E163	L223	L283	L343	R403	G463	E523	V583	D643	T703	F763	T823	R883	ALA
Q164	L224	D284	G344	E404	D464	G524	P584	M644	E704	R764	P824	S884	GLU
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D167	P227	A287	V347	V407	A467	T527	L587	P647	N707	L767	E827	S887	I950
A168	V228	P288	D348	V408	V468	T528	P588	E648	N708	N768	R828	C888	Q951
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E170	S230	I290	S350	D410	V470	P530	S590	K650	D710	L770	D830	T890	K953
E171	G231	I291	G351	I411	P471	K531	L591	H651	G711	Q771	Y831	D891	N954
F172	N232	V292	R352	L412	L472	E532	V592	E652	Q712	Y772	K332	F892	K955
G173	K233	R293	S353	D413	T473	A533	N593	L653	E713	F773	E833	G893	G956
D174	P234	N294	V354	E414	L474	E534	Q594	T654	E714	I774	P834	V894	S957
E175	E235	E295	I355	V415	E475	R535	A595	S655	K715	S775	L835	C895	I958
F176	W236	K296	T356	I416	A476	L536	L596	E656	Q716	T776	R836	A896	K959
D177	M237	R297	V357	R417	Q477	Y537	G597	A657	V717	H777	D837	H897	L960
I238	I238	M238	A178	E418	L478	R538	K598	E658	S718	G778	C838	C898	
K179	L239	L299	P359	H419	E479	S539	K599	A659	F719	A779	Y839	Y899	
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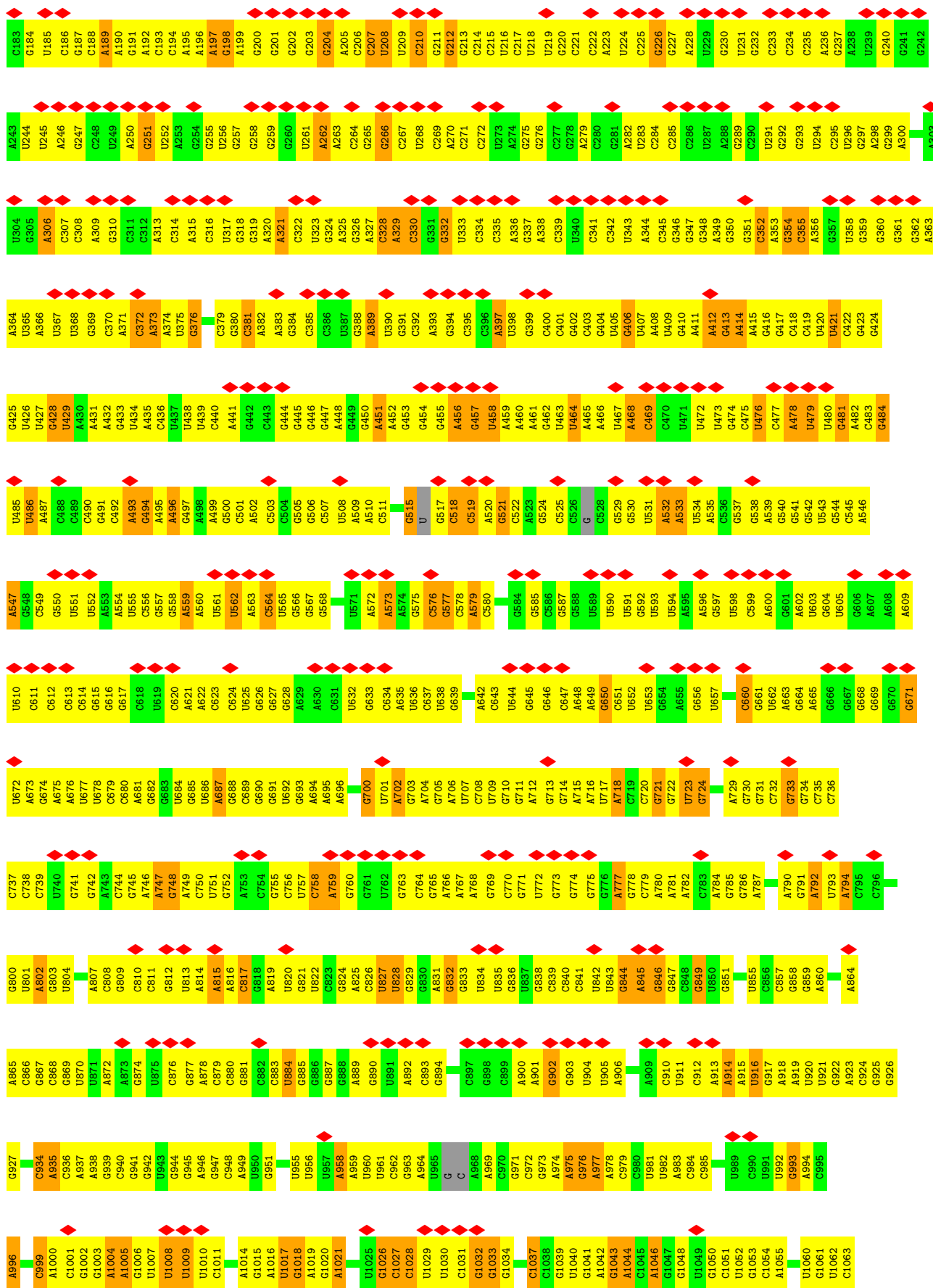


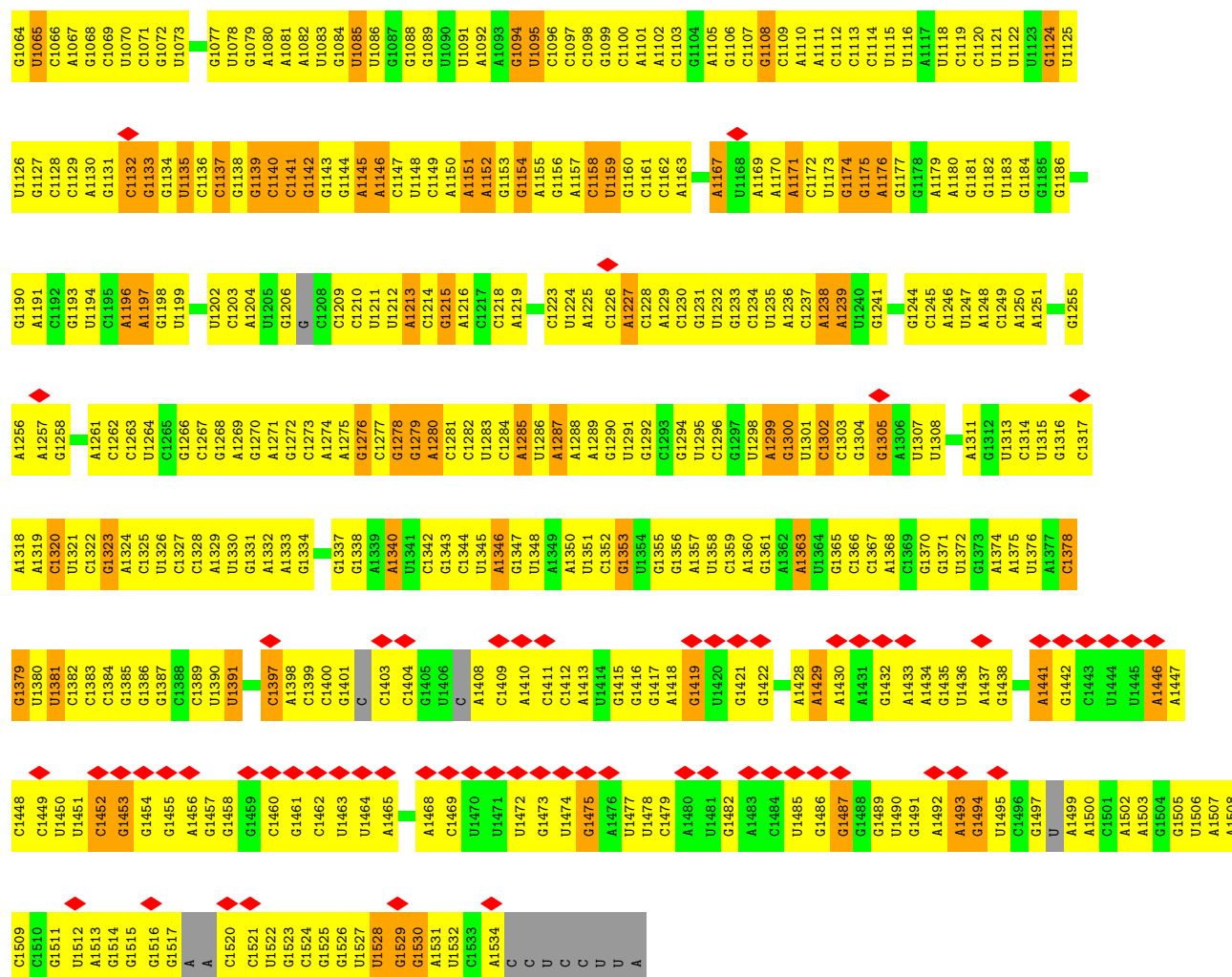
• Molecule 17: 30S ribosomal protein S18



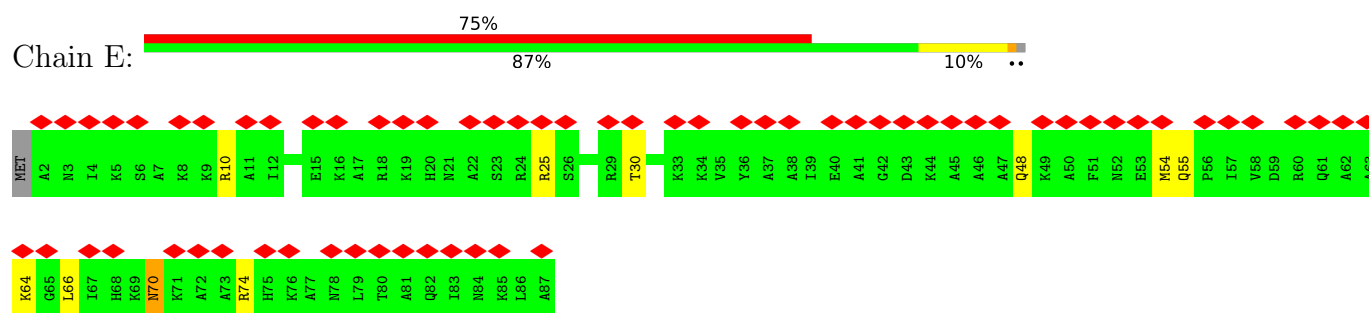
• Molecule 18: 16S rRNA



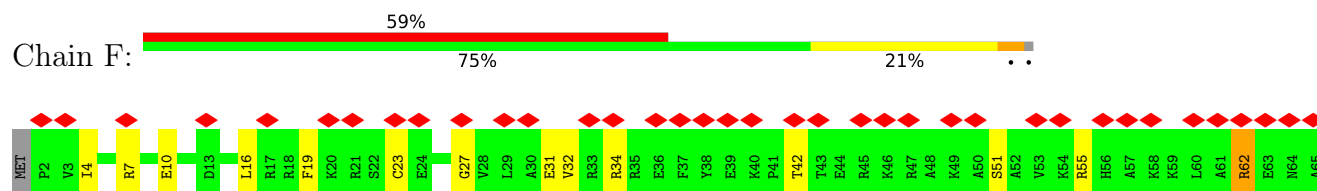


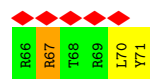


• Molecule 19: 30S ribosomal protein S20

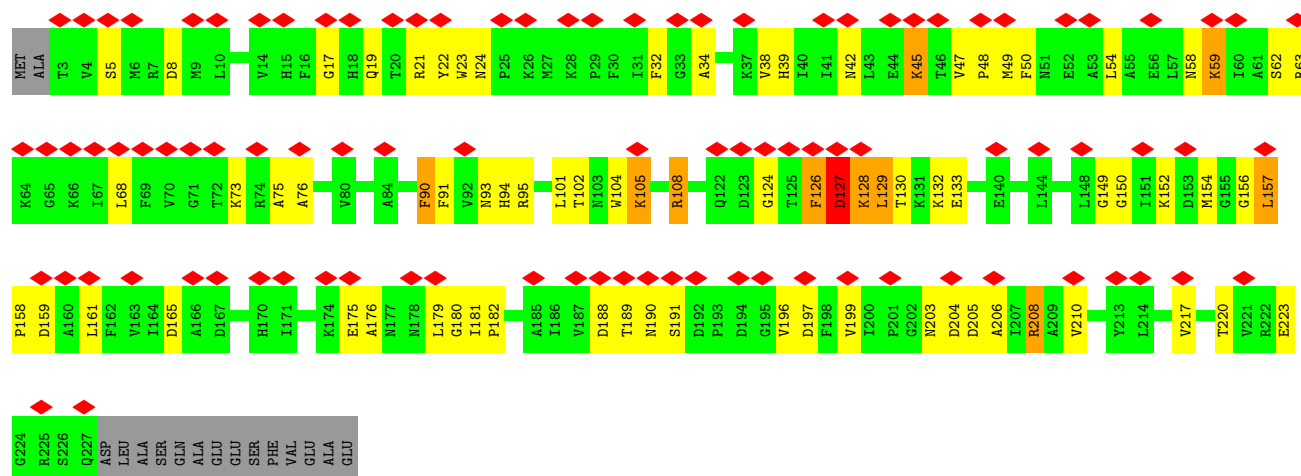


• Molecule 20: 30S ribosomal protein S21

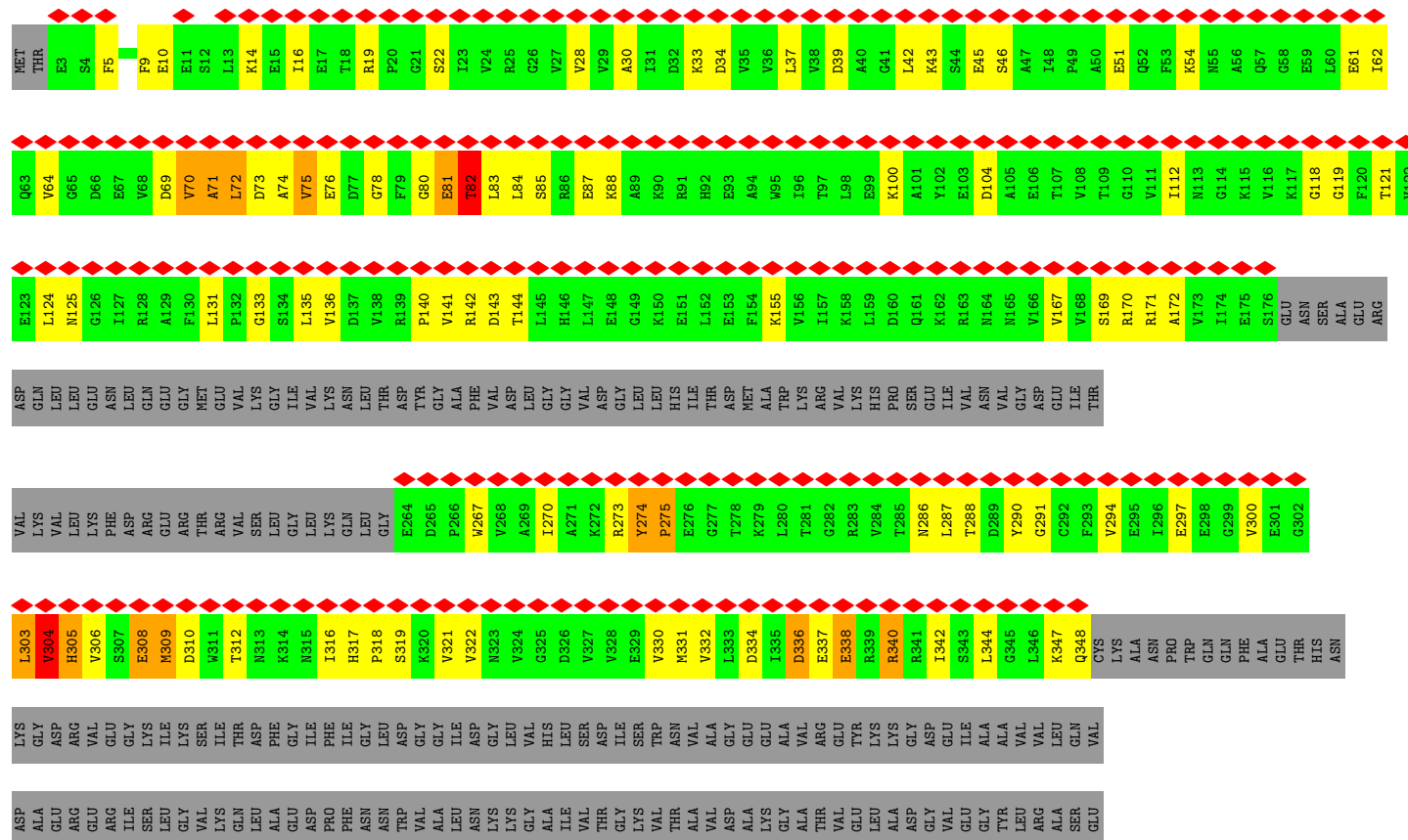
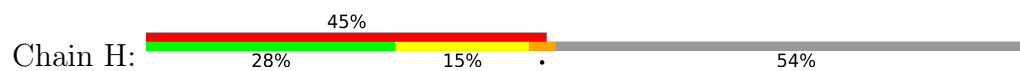




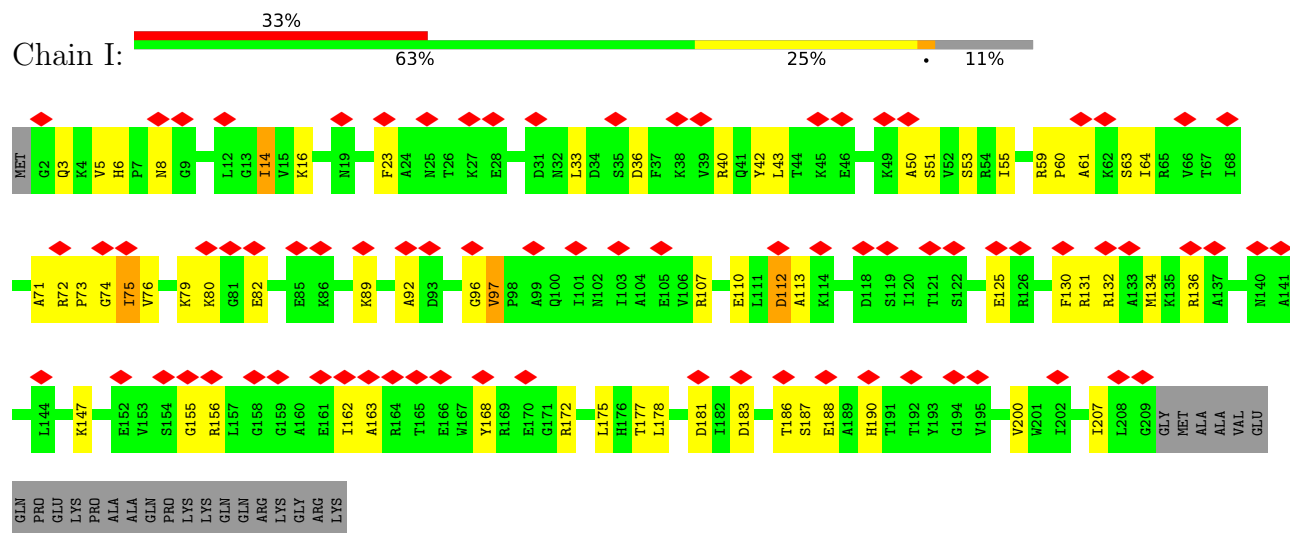
• Molecule 21: 30S ribosomal protein S2



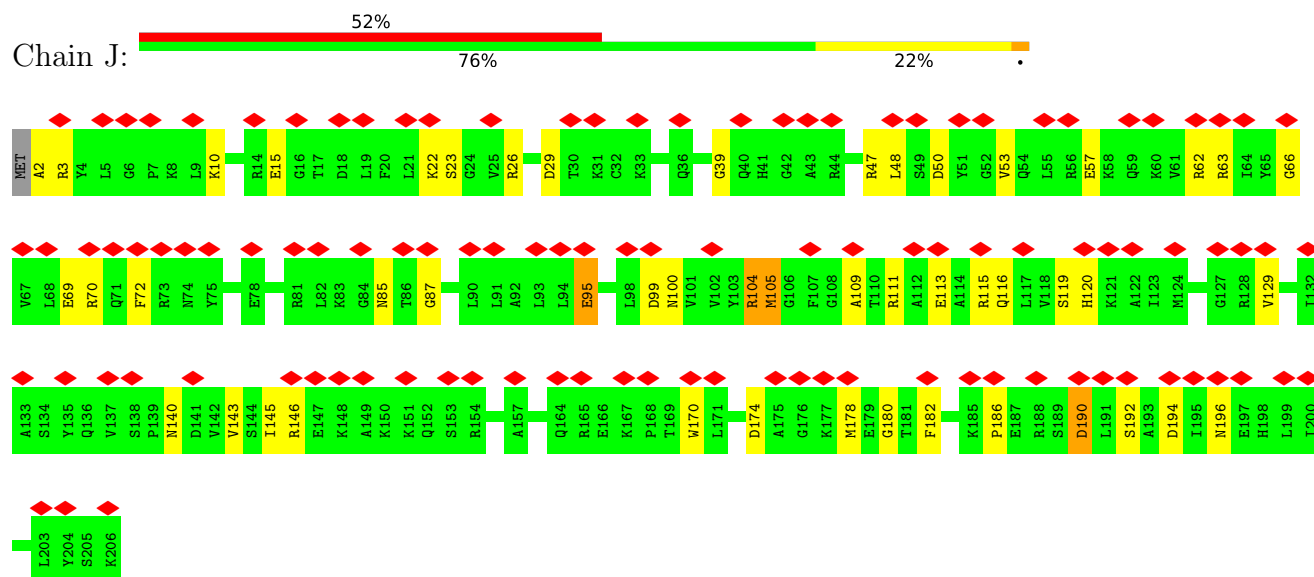
• Molecule 22: 30S ribosomal protein S1



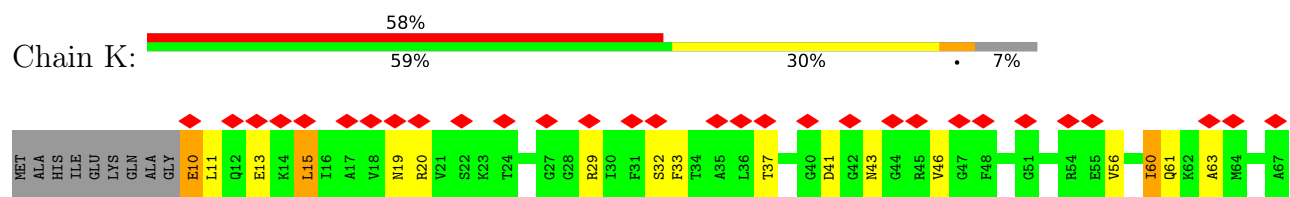
- Molecule 23: 30S ribosomal protein S3

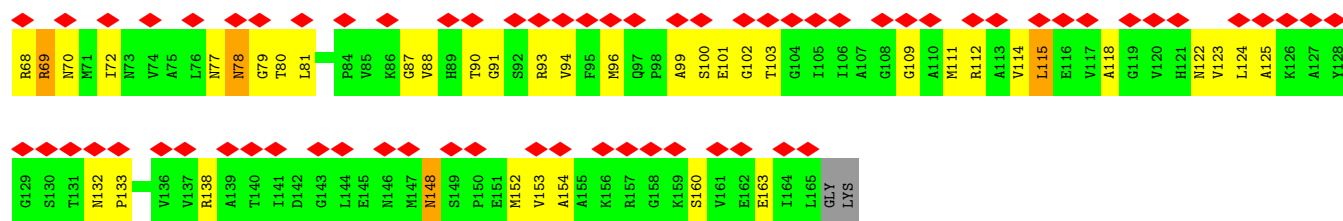


- Molecule 24: 30S ribosomal protein S4

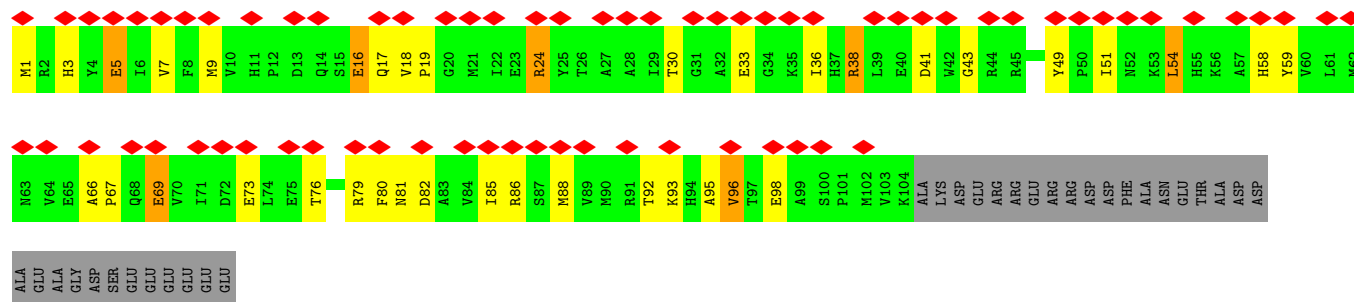


- Molecule 25: 30S ribosomal protein S5

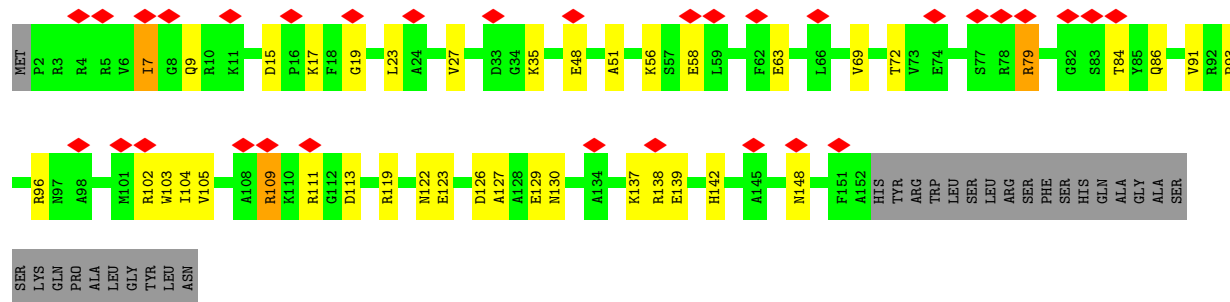




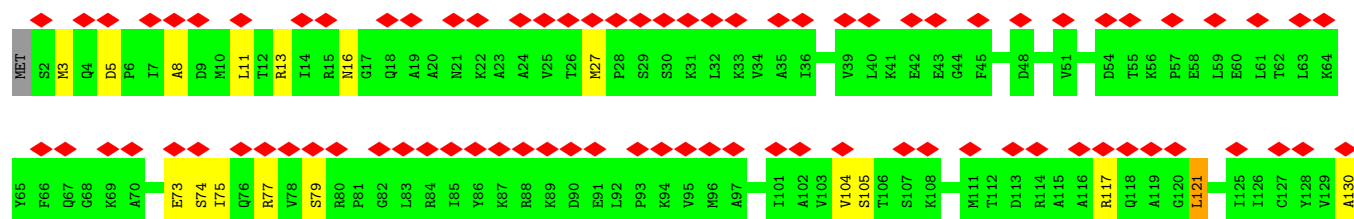
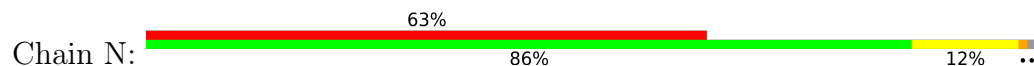
• Molecule 26: 30S ribosomal protein S6



• Molecule 27: 30S ribosomal protein S7

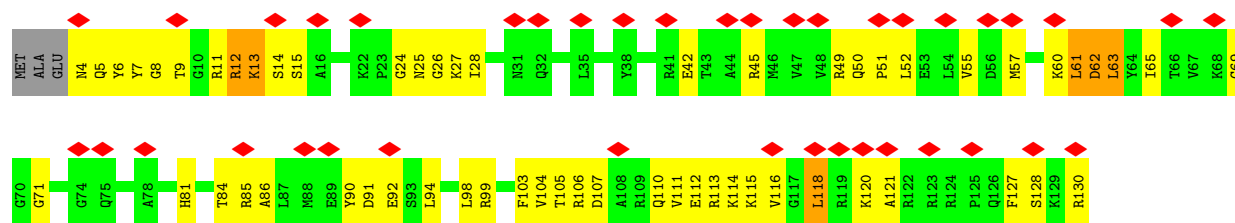


• Molecule 28: 30S ribosomal protein S8

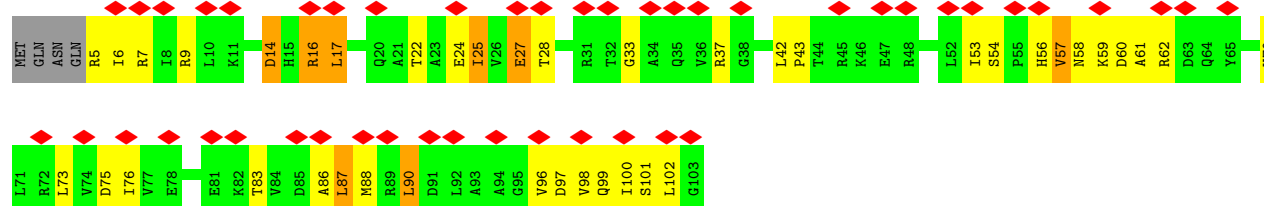


• Molecule 29: 30S ribosomal protein S9

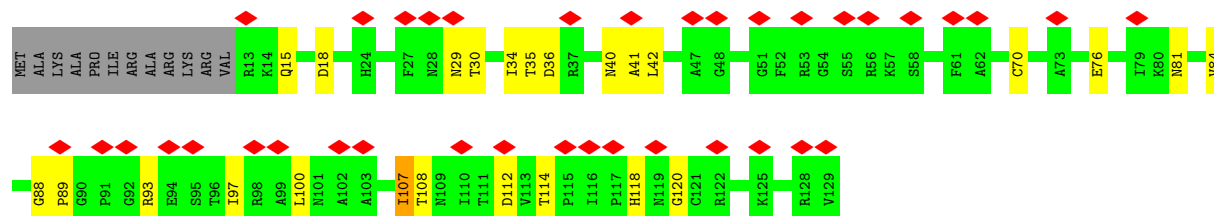




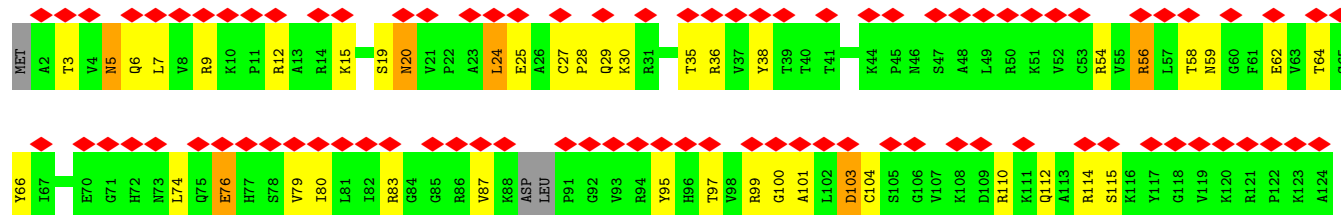
• Molecule 30: 30S ribosomal protein S10



• Molecule 31: 30S ribosomal protein S11

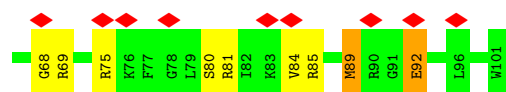


• Molecule 32: 30S ribosomal protein S12

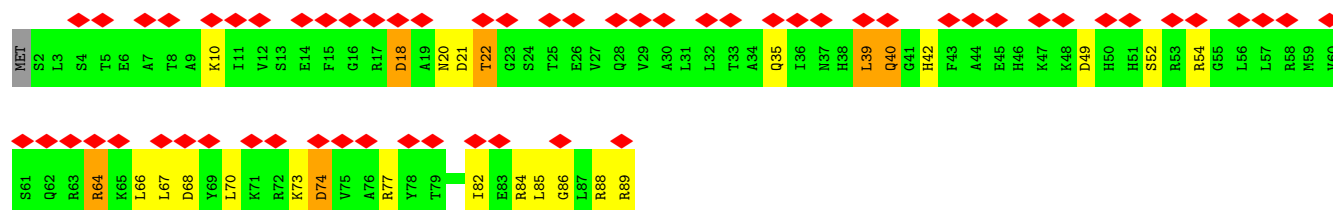


• Molecule 33: 30S ribosomal protein S14

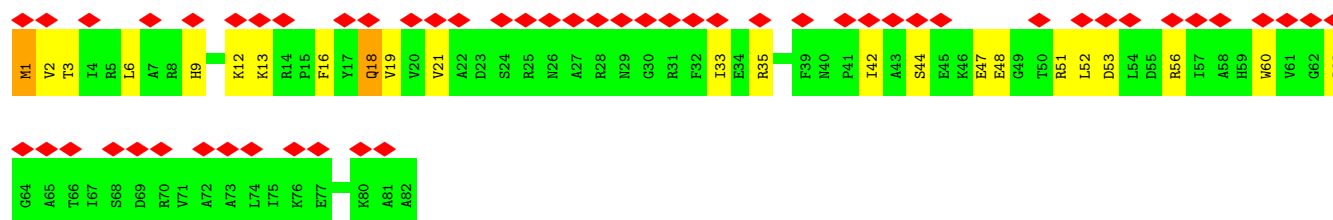




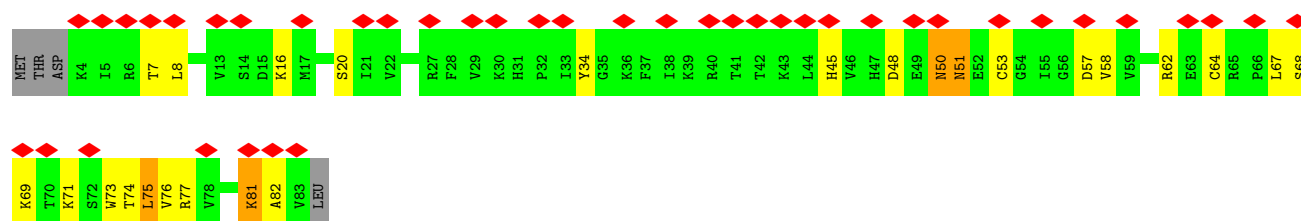
- Molecule 34: 30S ribosomal protein S15



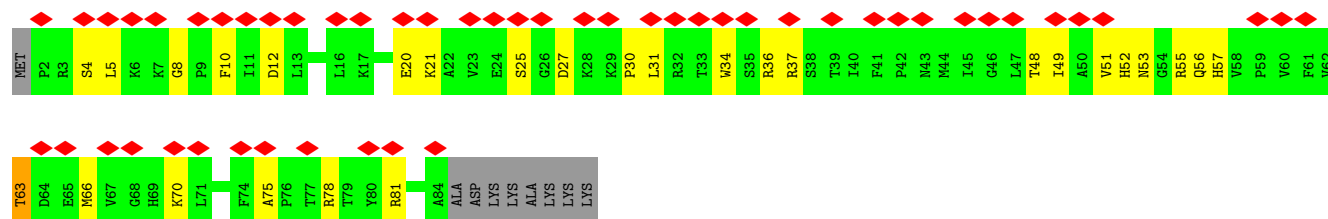
- Molecule 35: 30S ribosomal protein S16



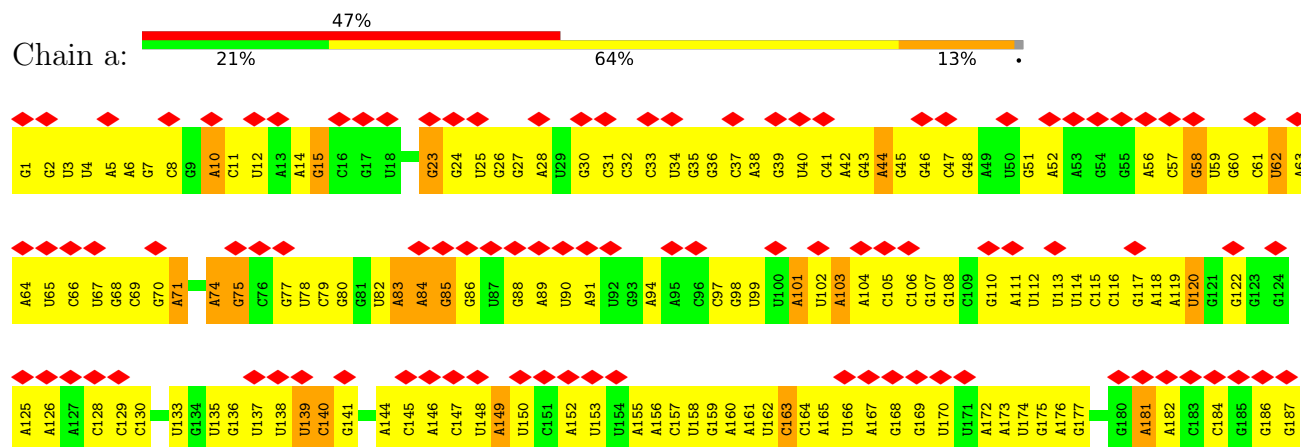
- Molecule 36: 30S ribosomal protein S17

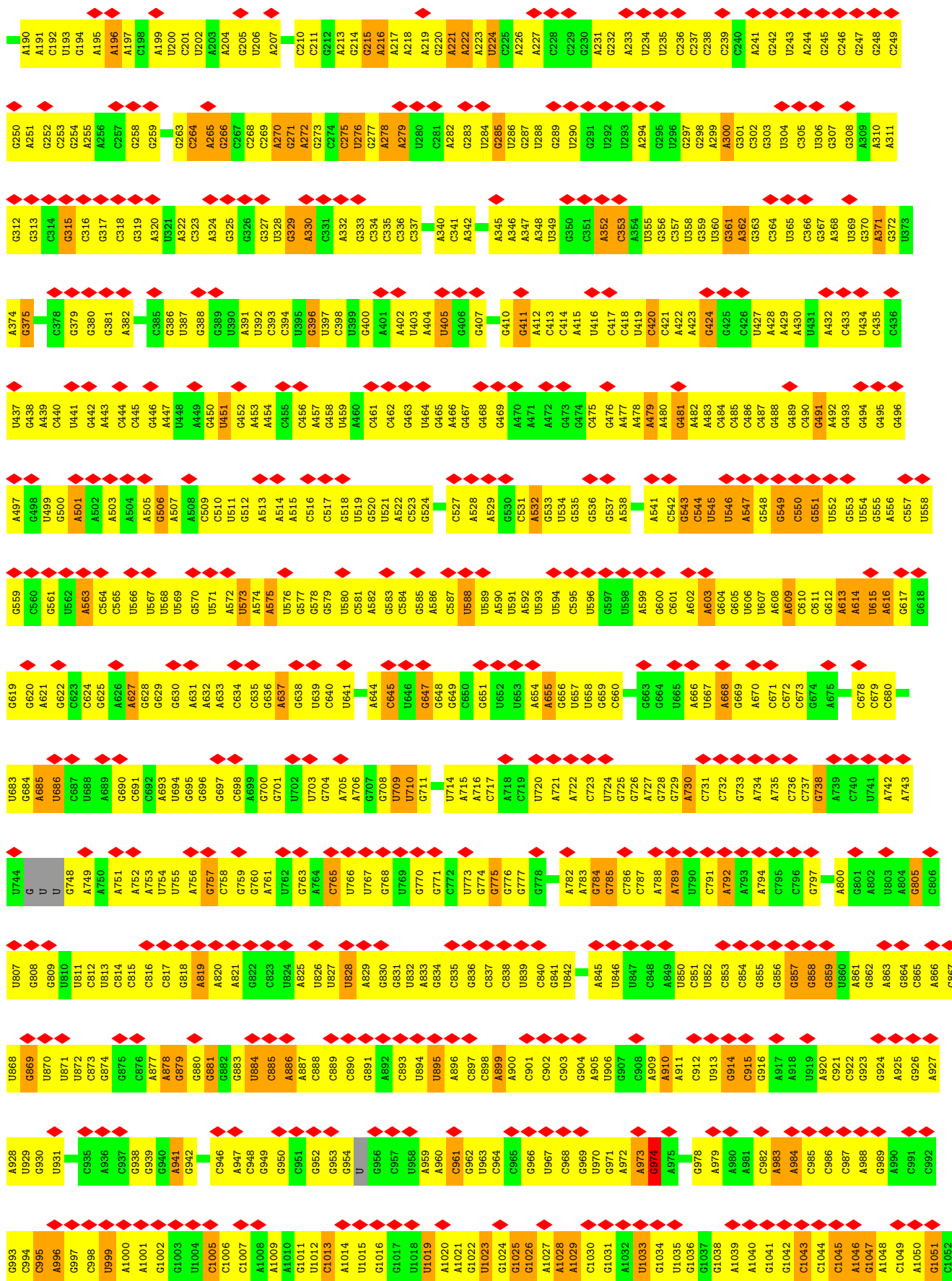


- Molecule 37: 30S ribosomal protein S19



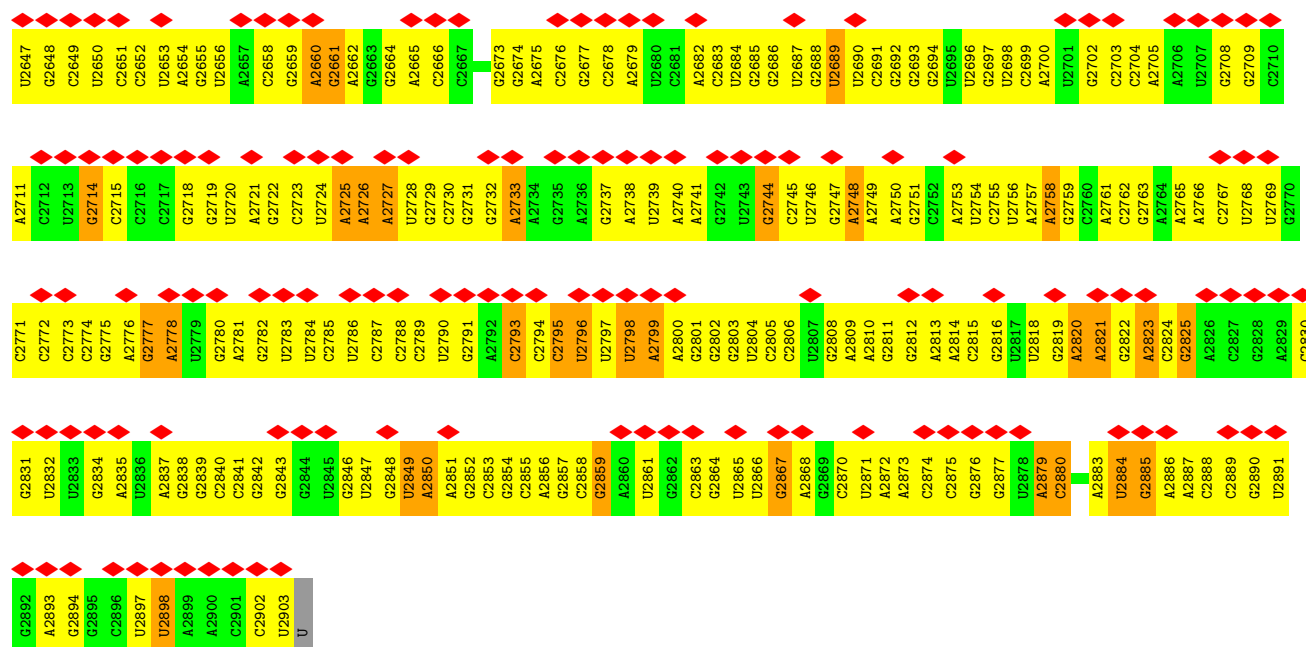
- Molecule 38: 30S ribosomal protein S13



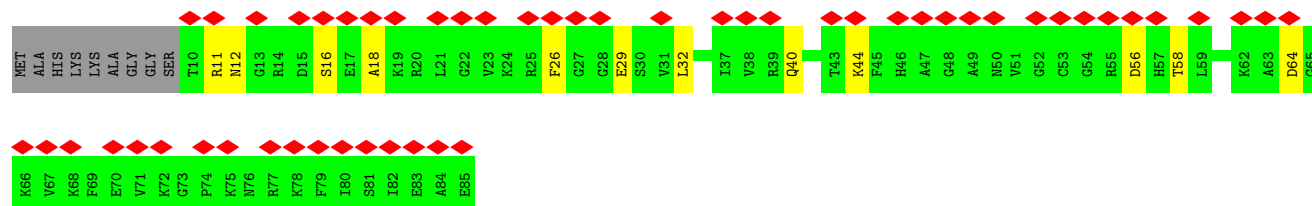
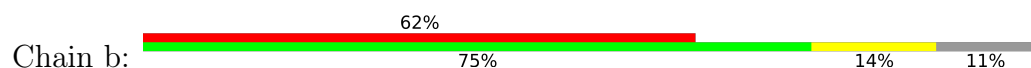


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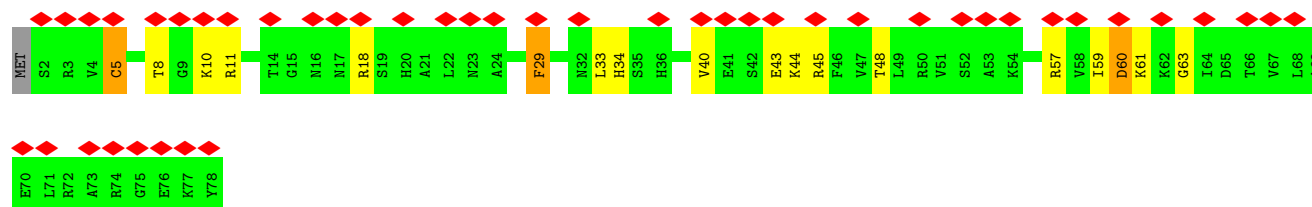
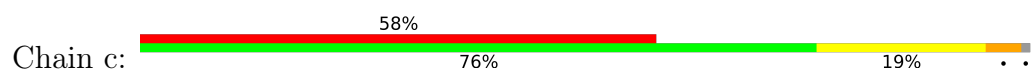
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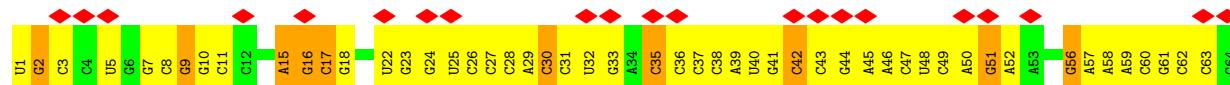
• Molecule 42: 50S ribosomal protein L27



• Molecule 43: 50S ribosomal protein L28

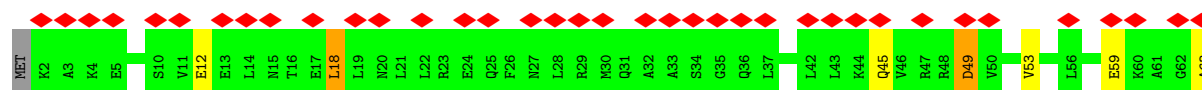
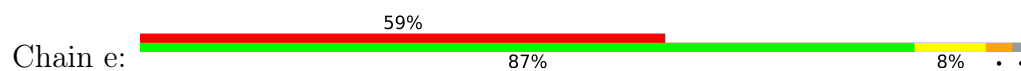


• Molecule 44: 5S rRNA

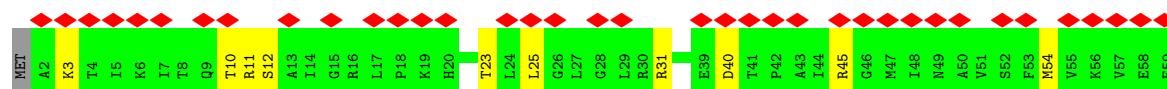
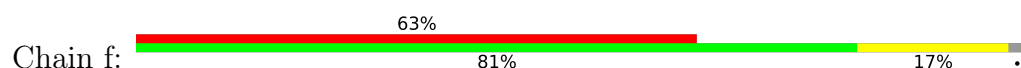




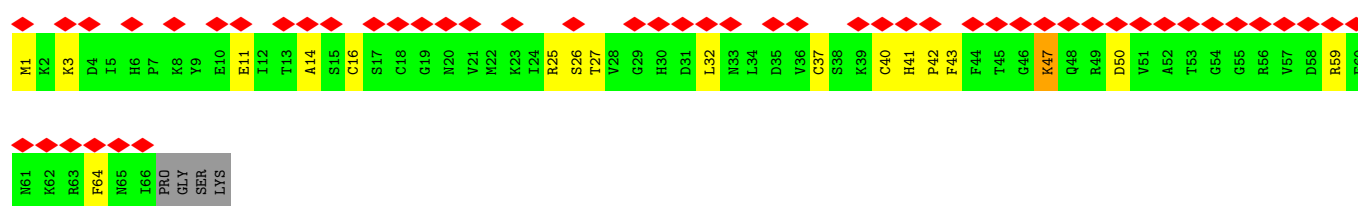
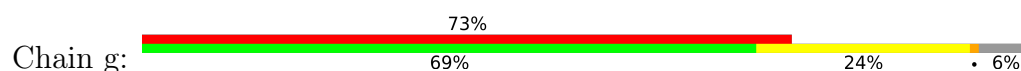
- Molecule 45: 50S ribosomal protein L29



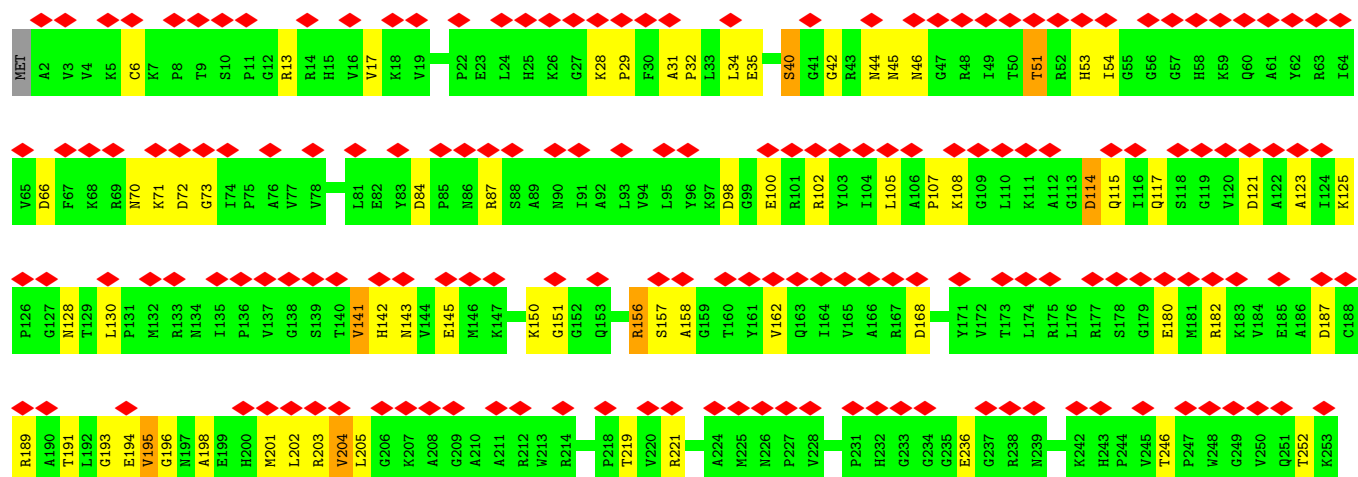
- Molecule 46: 50S ribosomal protein L30

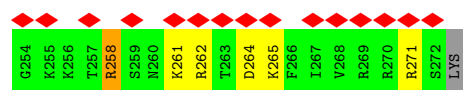


- Molecule 47: 50S ribosomal protein L31



- Molecule 48: 50S ribosomal protein L2

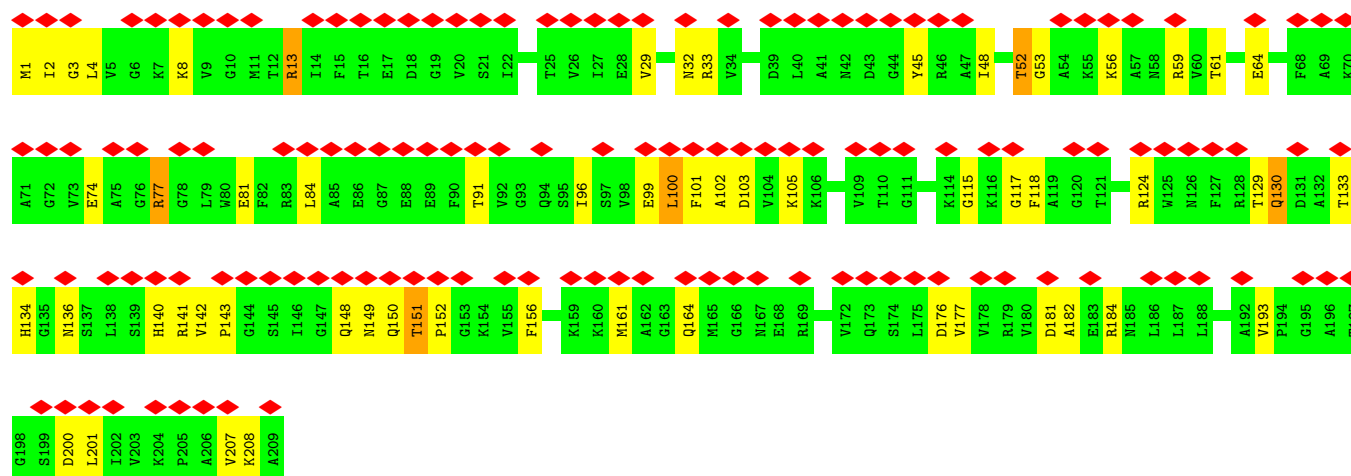




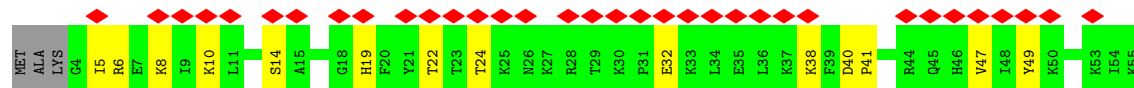
• Molecule 49: 50S ribosomal protein L32



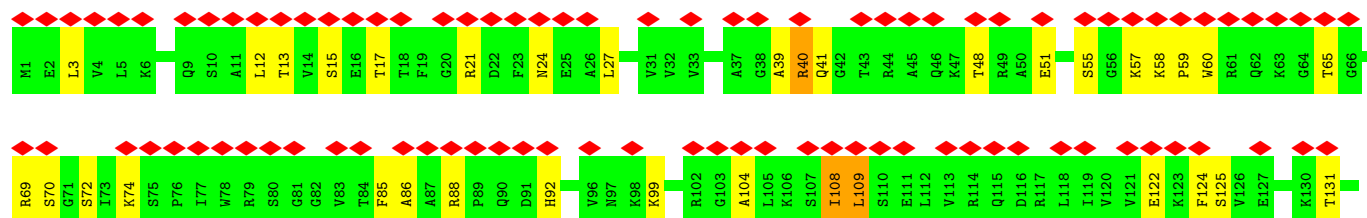
• Molecule 50: 50S ribosomal protein L3



• Molecule 51: 50S ribosomal protein L33



• Molecule 52: 50S ribosomal protein L4

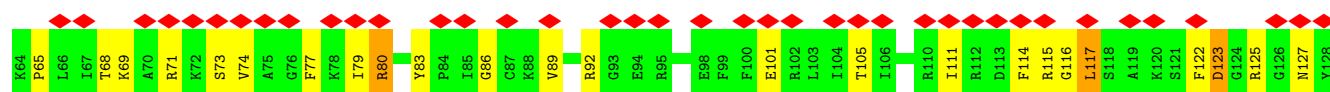
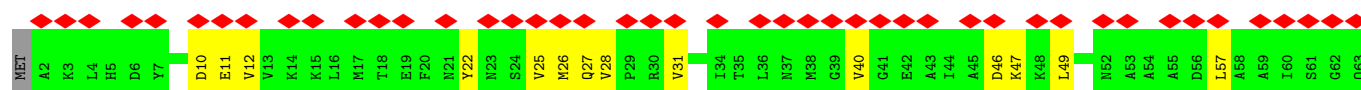




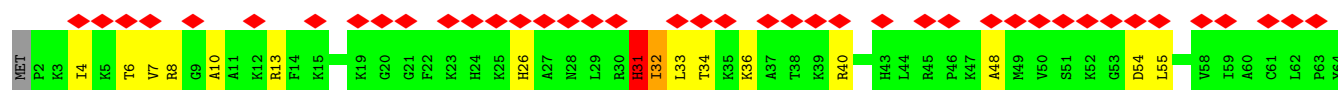
• Molecule 53: 50S ribosomal protein L34



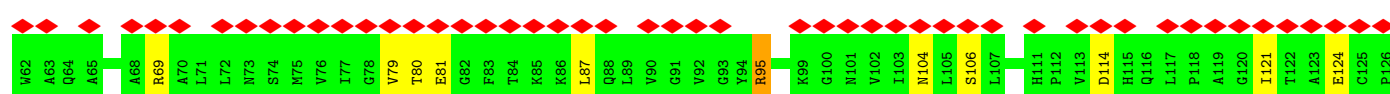
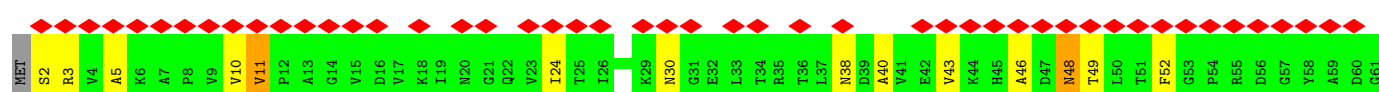
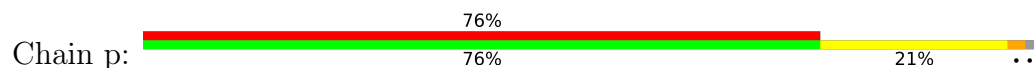
• Molecule 54: 50S ribosomal protein L5



• Molecule 55: 50S ribosomal protein L35

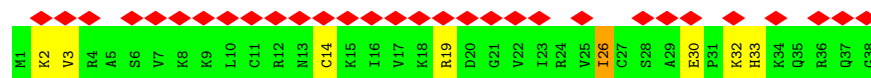
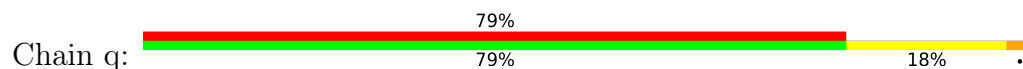


• Molecule 56: 50S ribosomal protein L6

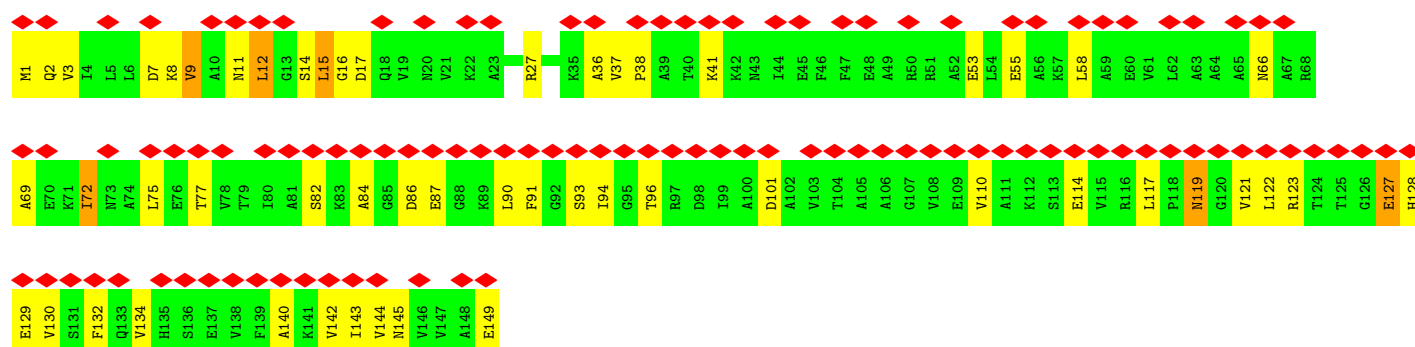




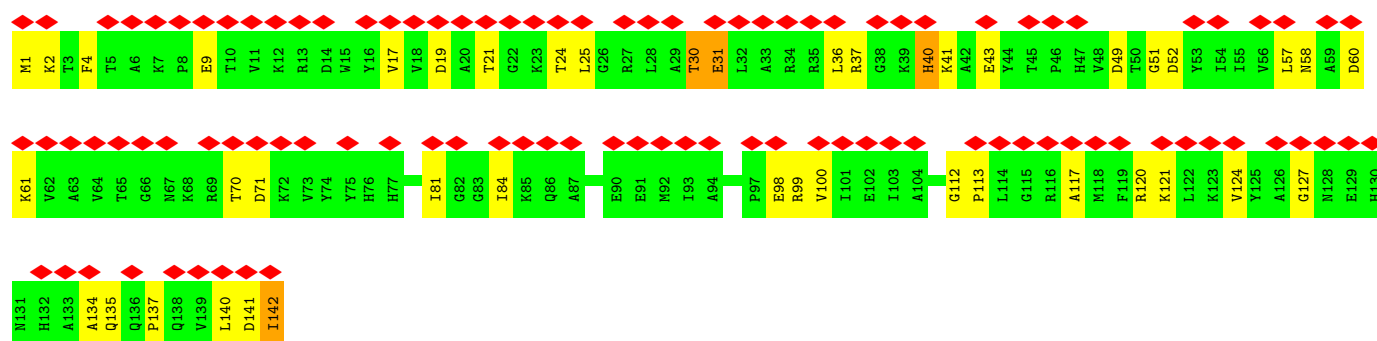
• Molecule 57: 50S ribosomal protein L36



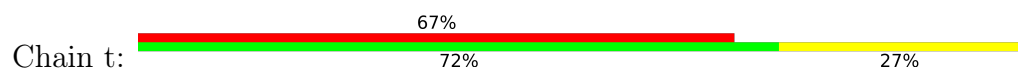
• Molecule 58: 50S ribosomal protein L9

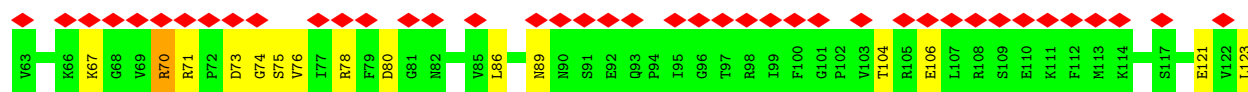


• Molecule 59: 50S ribosomal protein L13

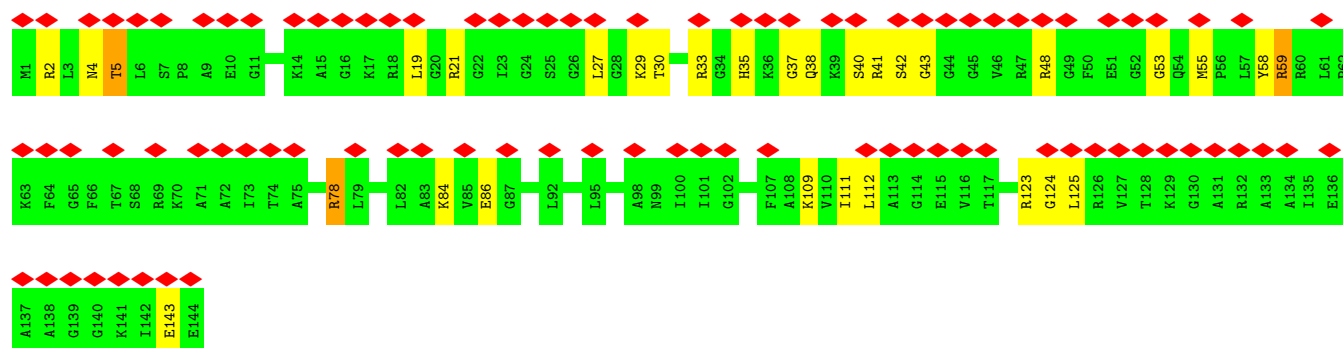
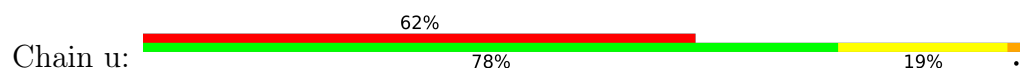


• Molecule 60: 50S ribosomal protein L14

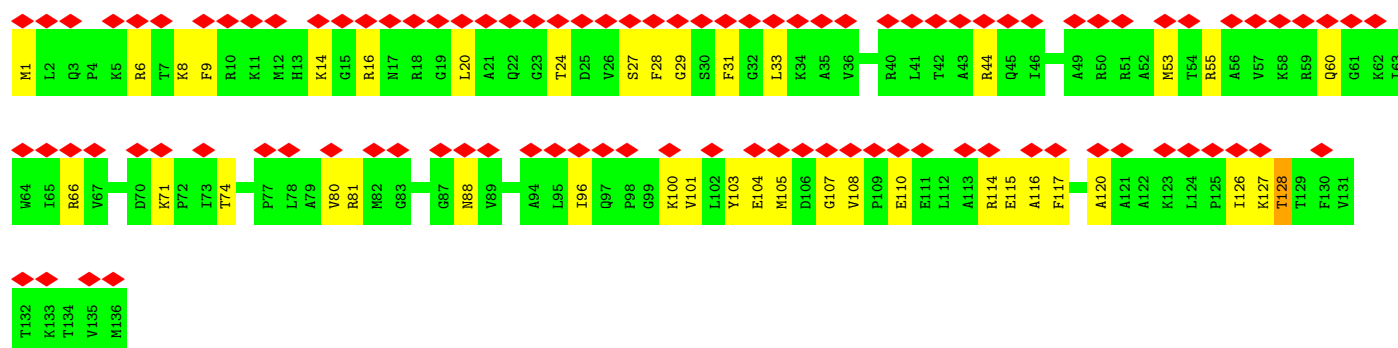




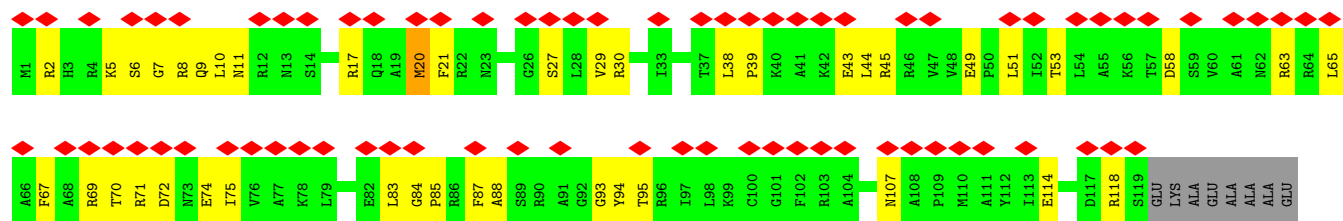
• Molecule 61: 50S ribosomal protein L15



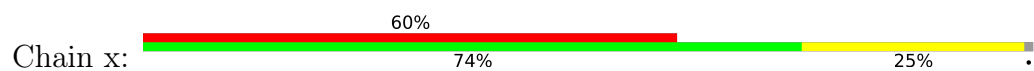
• Molecule 62: 50S ribosomal protein L16

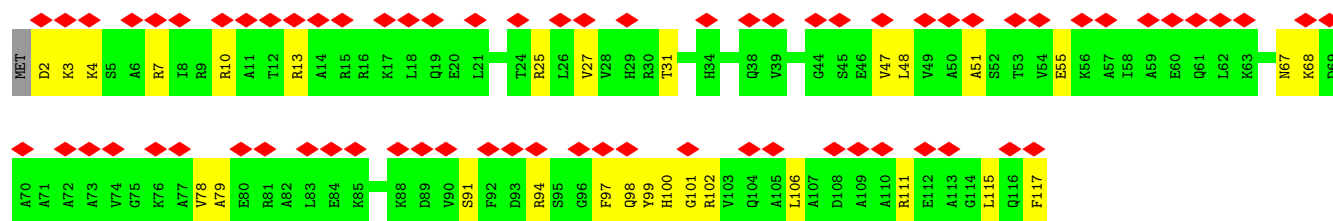


• Molecule 63: 50S ribosomal protein L17

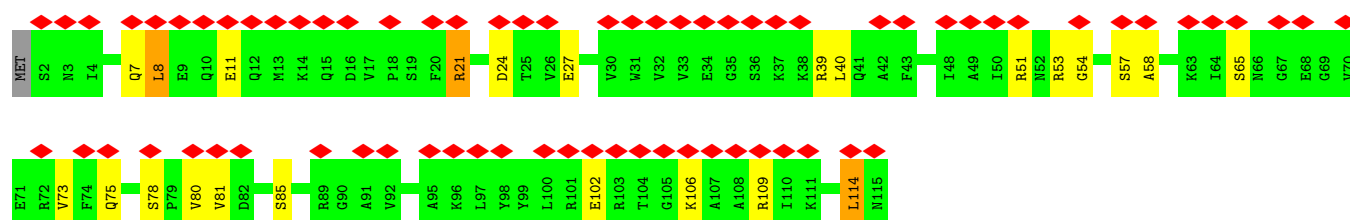
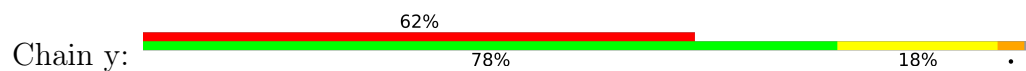


• Molecule 64: 50S ribosomal protein L18

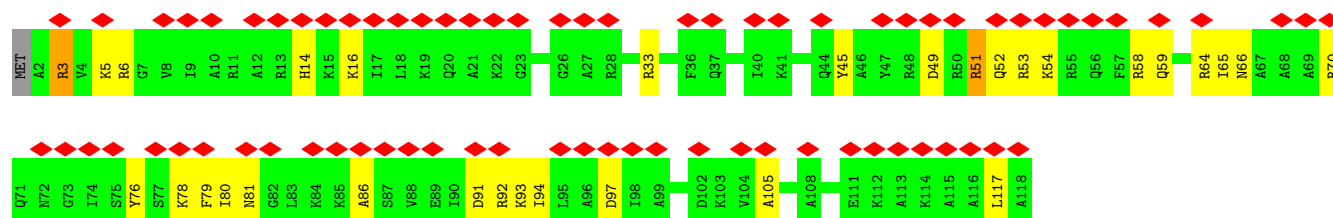
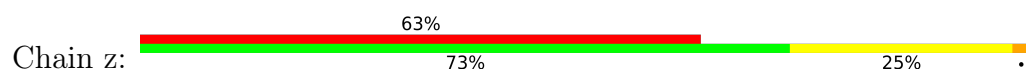




• Molecule 65: 50S ribosomal protein L19



• Molecule 66: 50S ribosomal protein L20



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	38957	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 ($e^-/\text{\AA}^2$)	45	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.065	Depositor
Minimum map value	-0.026	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.014	Depositor
Map size (Å)	532.48, 532.48, 532.48	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.04, 1.04, 1.04	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ZN

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	0.56	0/829	0.51	0/1107
2	1	0.62	0/864	0.54	0/1156
3	2	0.55	0/752	0.52	0/1005
4	3	0.49	0/796	0.50	0/1062
5	4	0.50	0/766	0.49	0/1025
6	5	0.63	1/528 (0.2%)	0.55	0/810
7	6	0.55	1/603 (0.2%)	0.56	0/926
8	7	0.51	1/761 (0.1%)	0.94	6/1178 (0.5%)
9	9	0.33	0/1131	0.74	0/1524
10	A	0.35	0/1810	0.57	0/2821
10	B	0.47	0/1810	0.72	2/2821 (0.1%)
11	AA	0.40	1/10736 (0.0%)	0.66	2/14487 (0.0%)
12	AB	0.87	2/1310 (0.2%)	1.08	4/1766 (0.2%)
13	AC	0.34	0/2113	0.60	0/2877
13	AD	0.30	0/2096	0.60	0/2854
14	AE	0.53	9/10545 (0.1%)	0.74	23/14236 (0.2%)
15	AF	0.29	0/652	0.61	0/879
16	AG	0.96	4/3897 (0.1%)	1.38	45/5273 (0.9%)
17	C	0.56	0/553	0.63	0/743
18	D	0.64	0/36610	0.47	9/57091 (0.0%)
19	E	0.51	0/675	0.48	0/895
20	F	0.47	0/597	0.49	0/792
21	G	0.69	1/1791 (0.1%)	0.69	3/2413 (0.1%)
22	H	0.28	0/1746	0.67	0/2382
23	I	0.52	0/1663	0.50	0/2241
24	J	0.51	0/1665	0.48	0/2227
25	K	0.61	0/1165	0.57	0/1568
26	L	0.50	0/867	0.48	0/1171
27	M	0.48	0/1195	0.56	0/1602
28	N	0.57	0/989	0.50	0/1326
29	O	0.48	0/1034	0.56	0/1375
30	P	0.45	0/800	0.56	0/1082

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
31	Q	0.53	0/893	0.50	0/1205
32	R	0.57	0/952	0.52	0/1274
33	S	0.53	0/817	0.52	0/1088
34	T	0.57	0/722	0.52	0/964
35	U	0.53	0/659	0.53	0/884
36	V	0.50	0/657	0.47	0/881
37	W	0.44	0/680	0.50	0/915
38	X	0.49	0/909	0.54	0/1215
39	Y	0.72	2/1046 (0.2%)	0.74	2/1410 (0.1%)
40	Z	0.14	0/227	0.41	0/304
41	a	0.68	0/69247	0.48	9/107985 (0.0%)
42	b	0.57	0/589	0.53	0/779
43	c	0.60	0/635	0.63	0/848
44	d	0.58	0/2872	0.41	0/4478
45	e	0.55	0/502	0.53	0/667
46	f	0.56	0/452	0.51	0/605
47	g	0.34	0/531	0.50	0/709
48	h	0.63	0/2121	0.51	0/2852
49	i	0.59	0/450	0.58	0/599
50	j	0.63	0/1586	0.50	0/2134
51	k	0.55	0/433	0.49	0/576
52	l	0.55	0/1571	0.49	0/2113
53	m	0.68	0/380	0.59	0/498
54	n	0.45	0/1434	0.50	0/1926
55	o	0.60	0/513	0.56	0/676
56	p	0.46	0/1333	0.47	0/1805
57	q	0.58	0/303	0.54	0/397
58	r	0.36	0/1122	0.47	0/1515
59	s	0.61	0/1152	0.52	0/1551
60	t	0.62	0/955	0.48	0/1279
61	u	0.57	0/1062	0.56	0/1413
62	v	0.58	0/1093	0.50	0/1460
63	w	0.63	0/964	0.54	0/1289
64	x	0.48	0/902	0.49	0/1209
65	y	0.59	0/929	0.49	0/1242
66	z	0.66	0/960	0.56	0/1278
All	All	0.61	22/195002 (0.0%)	0.56	105/286738 (0.0%)

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
9	9	0	3
13	AC	0	3
13	AD	0	1
14	AE	0	5
16	AG	0	7
21	G	0	2
22	H	0	5
29	O	0	1
54	n	0	1
55	o	0	1
All	All	0	29

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	Y	5	GLN	CA-C	17.51	1.70	1.52
12	AB	124	PRO	N-CA	17.39	1.69	1.47
21	G	157	LEU	C-N	17.12	1.54	1.33
16	AG	429	LYS	C-N	13.80	1.51	1.33
14	AE	93	THR	CA-C	12.21	1.69	1.52
14	AE	70	CYS	CA-CB	-8.73	1.41	1.53
8	7	19	G	C1'-N9	-7.44	1.36	1.48
11	AA	920	VAL	C-N	6.99	1.50	1.33
6	5	109	DT	O3'-P	6.94	1.71	1.61
16	AG	355	ALA	N-CA	6.19	1.54	1.46
16	AG	355	ALA	CA-C	5.96	1.60	1.52
14	AE	90	VAL	CA-C	5.71	1.60	1.52
39	Y	6	ALA	N-CA	5.66	1.53	1.46
16	AG	99	SER	N-CA	5.36	1.49	1.46
7	6	10	DG	C1'-N9	-5.34	1.35	1.46
14	AE	1350	ASN	CG-ND2	-5.27	1.22	1.33
14	AE	424	ASN	CG-ND2	-5.15	1.22	1.33
14	AE	777	HIS	ND1-CE1	5.14	1.37	1.32
14	AE	1108	GLN	CD-OE1	5.08	1.33	1.23
12	AB	123	ARG	C-N	5.07	1.45	1.33
14	AE	450	HIS	CD2-NE2	-5.04	1.32	1.37
14	AE	1268	ASN	CG-OD1	5.02	1.33	1.23

All (105) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AG	104	ARG	CA-C-N	17.91	154.21	121.97
16	AG	104	ARG	C-N-CA	17.91	154.21	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	AB	123	ARG	CA-C-N	17.03	141.12	119.84
12	AB	123	ARG	C-N-CA	17.03	141.12	119.84
11	AA	920	VAL	CA-C-N	15.70	139.47	119.84
11	AA	920	VAL	C-N-CA	15.70	139.47	119.84
16	AG	354	ALA	O-C-N	-13.69	107.30	122.09
8	7	0	U	OP2-P-O3'	-11.83	72.50	108.00
16	AG	429	LYS	CA-C-N	11.46	132.19	119.92
16	AG	429	LYS	C-N-CA	11.46	132.19	119.92
8	7	0	U	OP1-P-O3'	-11.15	74.54	108.00
12	AB	124	PRO	CA-N-CD	-11.05	96.53	112.00
16	AG	24	PHE	CA-CB-CG	-10.55	103.25	113.80
21	G	90	PHE	CB-CA-C	10.44	128.50	109.71
21	G	157	LEU	CA-C-N	10.25	131.00	120.14
21	G	157	LEU	C-N-CA	10.25	131.00	120.14
16	AG	105	ILE	CA-C-N	10.21	136.93	120.60
16	AG	105	ILE	C-N-CA	10.21	136.93	120.60
14	AE	90	VAL	N-CA-C	9.87	122.16	107.75
16	AG	103	ASP	CA-CB-CG	9.10	121.70	112.60
8	7	1	U	O5'-P-OP2	-8.60	82.21	108.00
16	AG	108	GLN	N-CA-CB	8.32	123.42	110.44
16	AG	292	ASP	O-C-N	-8.27	107.39	122.44
16	AG	35	THR	CA-CB-OG1	-8.24	97.24	109.60
16	AG	109	THR	CB-CA-C	8.18	124.76	110.85
18	D	37	U	N3-C4-O4	-7.73	96.22	119.40
18	D	884	U	N3-C4-O4	-7.69	96.33	119.40
14	AE	903	LEU	CA-C-N	7.63	136.12	121.54
14	AE	903	LEU	C-N-CA	7.63	136.12	121.54
16	AG	108	GLN	N-CA-C	-7.57	103.85	113.23
16	AG	102	PHE	CA-C-N	7.46	135.80	121.54
16	AG	102	PHE	C-N-CA	7.46	135.80	121.54
16	AG	33	THR	CA-C-N	7.46	135.78	121.54
16	AG	33	THR	C-N-CA	7.46	135.78	121.54
41	a	1141	U	N3-C4-O4	-7.42	97.15	119.40
18	D	1358	U	N3-C4-O4	-7.36	97.31	119.40
41	a	1019	U	N3-C4-O4	-7.30	97.50	119.40
16	AG	426	GLY	O-C-N	-7.25	113.28	122.70
41	a	2613	U	N3-C4-O4	-7.17	97.91	119.40
18	D	37	U	C5-C4-O4	7.14	147.31	125.90
18	D	827	U	N3-C4-O4	-7.04	98.28	119.40
8	7	1	U	O5'-P-OP1	-7.02	86.94	108.00
18	D	884	U	C5-C4-O4	7.02	146.95	125.90
41	a	1019	U	C5-C4-O4	6.93	146.68	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	7	1	U	OP1-P-OP2	6.89	140.26	119.60
18	D	827	U	C5-C4-O4	6.81	146.34	125.90
16	AG	102	PHE	N-CA-C	6.76	125.21	110.80
41	a	1141	U	C5-C4-O4	6.75	146.16	125.90
41	a	2613	U	C5-C4-O4	6.72	146.07	125.90
12	AB	122	PRO	N-CA-CB	6.71	110.29	103.25
41	a	1082	U	N3-C4-O4	-6.63	99.51	119.40
16	AG	104	ARG	O-C-N	6.61	131.37	122.59
18	D	1358	U	C5-C4-O4	6.56	145.58	125.90
16	AG	106	THR	OG1-CB-CG2	-6.47	96.36	109.30
14	AE	450	HIS	CB-CG-CD2	-6.43	122.84	131.20
16	AG	355	ALA	CB-CA-C	6.40	123.16	110.42
14	AE	93	THR	CA-C-N	6.38	133.05	121.06
14	AE	93	THR	C-N-CA	6.38	133.05	121.06
16	AG	103	ASP	CA-C-N	6.37	133.71	121.54
16	AG	103	ASP	C-N-CA	6.37	133.71	121.54
14	AE	61	ILE	CA-C-N	-6.33	114.04	121.64
14	AE	61	ILE	C-N-CA	-6.33	114.04	121.64
16	AG	109	THR	N-CA-C	-6.29	104.50	111.36
39	Y	5	GLN	O-C-N	6.29	129.83	122.09
14	AE	777	HIS	CB-CG-CD2	-6.27	123.04	131.20
8	7	11	U	C4'-C3'-O3'	6.24	118.76	109.40
16	AG	403	VAL	N-CA-C	-6.22	104.22	111.00
14	AE	70	CYS	CB-CA-C	6.12	120.33	110.29
16	AG	108	GLN	CB-CA-C	-6.09	97.19	109.55
41	a	1082	U	C5-C4-O4	6.09	144.17	125.90
10	B	29	G	C1'-C2'-O2'	6.07	117.51	108.40
16	AG	404	GLU	N-CA-C	-6.06	104.99	112.38
16	AG	33	THR	CA-CB-CG2	6.02	120.73	110.50
16	AG	71	PRO	N-CA-C	6.00	122.52	113.81
14	AE	90	VAL	CA-C-O	-5.99	114.16	120.39
16	AG	66	ASP	N-CA-C	-5.76	104.00	111.71
14	AE	91	GLU	N-CA-C	5.75	123.04	110.80
16	AG	101	THR	CA-CB-OG1	5.60	118.00	109.60
14	AE	450	HIS	CB-CG-ND1	5.58	131.06	122.70
10	B	29	G	C3'-C2'-O2'	5.53	118.99	110.70
16	AG	107	THR	CA-C-N	-5.49	112.00	121.66
16	AG	107	THR	C-N-CA	-5.49	112.00	121.66
16	AG	74	GLU	CB-CA-C	-5.47	101.72	110.14
16	AG	354	ALA	CA-C-N	-5.43	111.16	121.54
16	AG	354	ALA	C-N-CA	-5.43	111.16	121.54
14	AE	93	THR	CB-CA-C	5.42	121.21	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	AE	69	GLU	CA-C-N	-5.42	113.86	121.72
14	AE	69	GLU	C-N-CA	-5.42	113.86	121.72
16	AG	355	ALA	N-CA-CB	5.39	119.59	110.49
14	AE	777	HIS	CB-CG-ND1	5.36	130.74	122.70
14	AE	70	CYS	N-CA-C	-5.34	101.09	109.25
16	AG	105	ILE	N-CA-CB	-5.28	102.52	111.23
14	AE	73	GLY	N-CA-C	5.27	125.67	113.18
14	AE	90	VAL	O-C-N	-5.27	117.61	123.20
14	AE	88	CYS	N-CA-C	5.22	120.30	113.88
18	D	1340	A	C5'-C4'-C3'	5.22	123.83	116.00
16	AG	114	ILE	N-CA-C	-5.19	105.44	110.42
16	AG	217	GLY	N-CA-C	-5.16	106.72	115.34
39	Y	5	GLN	CA-C-O	-5.14	113.80	119.81
16	AG	65	VAL	CA-C-N	5.11	131.72	121.81
16	AG	65	VAL	C-N-CA	5.11	131.72	121.81
14	AE	61	ILE	CA-C-O	-5.10	115.65	120.95
16	AG	105	ILE	O-C-N	5.08	128.92	122.57
41	a	974	G	O4'-C1'-N9	5.06	115.79	108.20
14	AE	1184	ASP	N-CA-C	5.04	120.95	109.81

There are no chirality outliers.

All (29) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	9	107	GLU	Peptide
9	9	117	LEU	Peptide
9	9	49	GLY	Peptide
13	AC	192	VAL	Peptide
13	AC	319	GLU	Peptide
13	AC	321	TRP	Peptide
13	AD	20	SER	Peptide
14	AE	1184	ASP	Peptide
14	AE	1326	GLN	Peptide
14	AE	313	GLY	Peptide
14	AE	416	ILE	Peptide
14	AE	804	ALA	Peptide
16	AG	102	PHE	Peptide
16	AG	104	ARG	Peptide,Mainchain
16	AG	11	ALA	Peptide
16	AG	214	PRO	Mainchain
16	AG	292	ASP	Mainchain
16	AG	426	GLY	Mainchain

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Mol	Chain	Res	Type	Group
21	G	126	PHE	Peptide
21	G	127	ASP	Peptide
22	H	274	TYR	Peptide
22	H	303	LEU	Peptide
22	H	304	VAL	Peptide
22	H	81	GLU	Peptide
22	H	82	THR	Peptide
29	O	12	ARG	Peptide
54	n	176	PRO	Peptide
55	o	31	HIS	Peptide

5.2 Too-close contacts [i](#)

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	816	839	839	19	0
2	1	857	922	922	19	0
3	2	746	811	811	13	0
4	3	788	844	844	26	0
5	4	753	780	780	12	0
6	5	472	260	260	21	0
7	6	542	305	306	26	0
8	7	687	97	341	104	0
9	9	1117	0	1155	262	0
10	A	1620	826	827	128	0
10	B	1620	813	827	173	0
11	AA	10567	0	10584	277	0
12	AB	1282	1	1251	278	0
13	AC	2094	0	1894	25	0
13	AD	2078	0	1891	32	0
14	AE	10388	10612	10611	366	0
15	AF	650	0	658	10	0
16	AG	3852	0	3826	966	0
17	C	544	559	560	44	0
18	D	32703	16423	16456	1585	0
19	E	669	719	719	7	0
20	F	589	629	629	13	0
21	G	1760	1785	1787	199	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	H	1730	1454	1455	93	0
23	I	1636	1710	1710	53	0
24	J	1643	1707	1707	33	0
25	K	1152	1196	1196	43	0
26	L	848	846	846	27	0
27	M	1181	1235	1238	31	0
28	N	979	1031	1031	13	0
29	O	1022	1070	1070	50	0
30	P	790	831	830	86	0
31	Q	877	887	887	21	0
32	R	939	1001	1001	38	0
33	S	805	844	844	22	0
34	T	714	734	734	20	0
35	U	649	666	666	15	0
36	V	648	691	691	22	0
37	W	663	688	688	18	0
38	X	900	964	965	34	0
39	Y	1032	0	1088	187	0
40	Z	227	0	237	21	0
41	a	61841	31077	31119	2738	0
42	b	582	599	599	8	0
43	c	625	652	652	14	0
44	d	2569	1301	1301	99	0
45	e	501	531	531	5	0
46	f	448	488	488	8	0
47	g	522	520	520	12	0
48	h	2082	2154	2154	56	0
49	i	444	459	458	18	0
50	j	1565	1617	1616	54	0
51	k	426	464	464	9	0
52	l	1552	1619	1619	36	0
53	m	377	418	418	14	0
54	n	1410	1443	1444	34	0
55	o	504	572	572	19	0
56	p	1313	1358	1358	25	0
57	q	302	343	343	6	0
58	r	1111	1148	1148	39	0
59	s	1129	1162	1162	29	0
60	t	946	1023	1023	23	0
61	u	1053	1129	1129	25	0
62	v	1074	1157	1157	25	0
63	w	951	994	994	26	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
64	x	892	923	923	19	0
65	y	917	962	962	16	0
66	z	947	1020	1019	31	0
67	7	1	0	0	0	0
68	AA	2	0	0	0	0
All	All	181715	109913	132835	8055	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 26.

All (8055) 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)
12:AB:135:ARG:HB3	12:AB:181:ALA:CB	1.19	1.63
12:AB:128:PHE:CB	12:AB:175:PHE:CE1	1.81	1.61
16:AG:287:ALA:CA	16:AG:331:LEU:HD12	1.19	1.60
16:AG:210:ARG:HA	16:AG:216:ILE:CD1	1.28	1.57
16:AG:168:LEU:CD2	16:AG:231:GLY:HA3	1.34	1.57
12:AB:136:VAL:HG23	12:AB:177:GLN:CD	1.23	1.57
16:AG:425:LEU:CD2	16:AG:429:LYS:HE2	1.21	1.55
16:AG:393:LEU:CB	16:AG:398:LEU:CD2	1.83	1.54
12:AB:135:ARG:CB	12:AB:181:ALA:HB3	1.34	1.53
12:AB:140:PRO:HG2	30:P:102:LEU:CD2	1.37	1.53
12:AB:131:GLY:HA2	12:AB:148:VAL:CG1	1.09	1.52
16:AG:425:LEU:CA	16:AG:429:LYS:HE3	1.40	1.50
16:AG:287:ALA:HA	16:AG:331:LEU:CD1	1.38	1.50
16:AG:363:LEU:CD2	16:AG:410:ALA:H	1.24	1.49
12:AB:140:PRO:CG	30:P:102:LEU:HD23	1.42	1.48
16:AG:287:ALA:CB	16:AG:331:LEU:HD12	1.40	1.47
12:AB:131:GLY:CA	12:AB:148:VAL:CG1	1.87	1.47
16:AG:425:LEU:HD23	16:AG:429:LYS:CE	1.45	1.46
16:AG:219:GLU:CB	21:G:156:GLY:HA3	1.47	1.45
12:AB:167:ARG:CD	30:P:97:ASP:HA	1.49	1.43
16:AG:168:LEU:HD22	16:AG:231:GLY:CA	1.49	1.42
16:AG:363:LEU:CD2	16:AG:410:ALA:N	1.82	1.42
16:AG:216:ILE:CG2	16:AG:221:ILE:HB	1.46	1.41
16:AG:393:LEU:CD2	16:AG:398:LEU:CD2	1.99	1.41
16:AG:242:ASP:CB	21:G:180:GLY:O	1.68	1.40
16:AG:168:LEU:CD2	16:AG:231:GLY:CA	1.98	1.40
16:AG:220:VAL:HG13	21:G:157:LEU:CD1	1.53	1.39
11:AA:920:VAL:HG22	11:AA:921:PRO:CD	1.51	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:363:LEU:HD23	16:AG:410:ALA:N	1.38	1.37
11:AA:854:ILE:CG2	11:AA:917:SER:HB3	1.52	1.36
16:AG:187:ARG:HB3	16:AG:188:PRO:CD	1.44	1.36
16:AG:437:LEU:HD21	16:AG:456:LEU:CD1	1.54	1.35
12:AB:123:ARG:CG	12:AB:124:PRO:HD3	1.54	1.35
21:G:90:PHE:CD1	21:G:150:GLY:O	1.80	1.35
16:AG:385:ALA:CB	16:AG:411:LYS:HE3	1.56	1.34
16:AG:387:VAL:HG12	16:AG:388:PRO:CD	1.57	1.34
16:AG:243:LYS:CD	16:AG:245:ILE:HB	1.56	1.33
11:AA:857:VAL:CG1	11:AA:919:ARG:HH21	1.38	1.33
12:AB:124:PRO:N	12:AB:124:PRO:CA	1.69	1.33
16:AG:393:LEU:CD2	16:AG:398:LEU:HD21	1.57	1.32
16:AG:434:LEU:HD22	16:AG:459:LEU:CD1	1.58	1.31
13:AC:291:LYS:O	16:AG:483:MET:HE2	1.26	1.31
16:AG:393:LEU:CA	16:AG:398:LEU:CD2	2.05	1.31
12:AB:167:ARG:HD3	30:P:97:ASP:CA	1.59	1.30
16:AG:434:LEU:CD2	16:AG:456:LEU:HA	1.58	1.30
12:AB:141:PHE:CZ	30:P:102:LEU:HB3	1.67	1.29
16:AG:393:LEU:CA	16:AG:398:LEU:HD22	1.59	1.29
16:AG:448:LEU:HD21	16:AG:473:LEU:CD1	1.61	1.29
12:AB:165:PHE:CE1	30:P:98:VAL:CG2	2.15	1.29
12:AB:128:PHE:HB2	12:AB:175:PHE:CE1	1.49	1.28
16:AG:434:LEU:HA	16:AG:456:LEU:CD2	1.64	1.28
21:G:90:PHE:HB2	21:G:154:MET:SD	1.71	1.28
16:AG:362:TYR:O	16:AG:413:ALA:HB2	1.35	1.27
16:AG:393:LEU:CG	16:AG:398:LEU:HD21	1.63	1.26
12:AB:157:ARG:NH1	12:AB:174:ASP:HB3	1.51	1.26
16:AG:433:ASP:O	16:AG:456:LEU:HD11	1.35	1.26
16:AG:425:LEU:HA	16:AG:429:LYS:CE	1.64	1.25
12:AB:159:LYS:O	12:AB:170:PRO:HB3	1.15	1.25
12:AB:135:ARG:O	12:AB:179:GLU:CB	1.83	1.25
16:AG:353:HIS:C	16:AG:356:ILE:HG23	1.62	1.25
16:AG:353:HIS:O	16:AG:356:ILE:HG23	1.13	1.25
16:AG:355:ALA:HA	16:AG:382:GLU:OE2	1.37	1.24
16:AG:216:ILE:HG23	16:AG:221:ILE:CB	1.66	1.24
11:AA:901:LEU:HD21	16:AG:27:LEU:CD1	1.68	1.24
12:AB:134:VAL:C	12:AB:181:ALA:OXT	1.80	1.24
16:AG:123:ARG:HH12	16:AG:191:ARG:CA	1.36	1.24
16:AG:387:VAL:CG1	16:AG:388:PRO:HD2	1.67	1.24
12:AB:123:ARG:HG3	12:AB:124:PRO:CD	1.68	1.23
12:AB:123:ARG:CB	12:AB:124:PRO:HD3	1.67	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:393:LEU:HB3	16:AG:398:LEU:CD2	1.51	1.23
16:AG:241:ASN:HD22	21:G:159:ASP:N	1.37	1.23
16:AG:355:ALA:CB	16:AG:382:GLU:CD	2.10	1.23
16:AG:425:LEU:CG	16:AG:429:LYS:HE2	1.69	1.23
16:AG:220:VAL:CG1	21:G:157:LEU:HD12	1.69	1.23
16:AG:363:LEU:HD23	16:AG:409:ARG:C	1.63	1.22
11:AA:880:GLY:HA2	11:AA:921:PRO:O	1.37	1.22
16:AG:210:ARG:CA	16:AG:216:ILE:CD1	2.17	1.21
16:AG:355:ALA:HB2	16:AG:382:GLU:OE1	1.40	1.21
16:AG:393:LEU:HA	16:AG:398:LEU:CD2	1.69	1.21
16:AG:123:ARG:NH1	16:AG:191:ARG:C	1.98	1.21
16:AG:287:ALA:CB	16:AG:331:LEU:CD1	2.16	1.21
12:AB:141:PHE:HZ	30:P:102:LEU:N	1.40	1.20
12:AB:158:LEU:HD21	12:AB:174:ASP:C	1.66	1.20
16:AG:218:GLU:O	21:G:104:TRP:CD1	1.92	1.20
16:AG:442:ARG:O	16:AG:446:PHE:CD2	1.95	1.19
12:AB:157:ARG:HH12	12:AB:174:ASP:CB	1.56	1.19
12:AB:128:PHE:CG	12:AB:175:PHE:CE1	2.28	1.19
12:AB:141:PHE:CZ	30:P:102:LEU:CB	2.24	1.19
9:9:39:THR:HA	9:9:42:ARG:HD2	1.22	1.18
12:AB:141:PHE:O	12:AB:177:GLN:NE2	1.76	1.18
9:9:60:LEU:HD23	9:9:64:VAL:HG21	1.25	1.18
16:AG:393:LEU:HD22	16:AG:398:LEU:CD1	1.73	1.18
12:AB:136:VAL:CG2	12:AB:177:GLN:CD	2.17	1.17
13:AD:290:LEU:O	16:AG:82:TYR:CE2	1.97	1.17
16:AG:381:LEU:HA	16:AG:384:LEU:HD12	1.21	1.17
8:7:11:U:O2	11:AA:1253:LEU:HD12	1.44	1.17
12:AB:47:GLU:HG3	12:AB:64:PHE:CE1	1.80	1.16
21:G:90:PHE:HB2	21:G:154:MET:CG	1.74	1.16
12:AB:131:GLY:CA	12:AB:148:VAL:HG11	1.67	1.16
16:AG:437:LEU:CD2	16:AG:456:LEU:HD13	1.74	1.16
12:AB:165:PHE:HE1	30:P:98:VAL:HG23	1.10	1.16
12:AB:131:GLY:H	12:AB:148:VAL:CB	1.59	1.15
12:AB:140:PRO:CG	30:P:102:LEU:CD2	2.05	1.15
16:AG:353:HIS:O	16:AG:357:ASP:N	1.77	1.15
12:AB:135:ARG:O	12:AB:179:GLU:HB2	1.00	1.15
16:AG:123:ARG:NH1	16:AG:191:ARG:O	1.80	1.15
16:AG:355:ALA:HA	16:AG:382:GLU:CD	1.71	1.15
12:AB:131:GLY:CA	12:AB:148:VAL:CB	2.26	1.14
8:7:-18:G:H1'	8:7:-16:U:C4	1.80	1.14
16:AG:210:ARG:CG	16:AG:216:ILE:HD13	1.75	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:219:GLU:HB3	21:G:156:GLY:CA	1.78	1.14
16:AG:241:ASN:HD22	21:G:159:ASP:CA	1.60	1.14
16:AG:355:ALA:HB1	16:AG:382:GLU:CG	1.77	1.13
16:AG:219:GLU:CB	21:G:156:GLY:CA	2.25	1.13
16:AG:393:LEU:CD2	16:AG:398:LEU:CD1	2.27	1.13
16:AG:222:GLU:OE2	21:G:159:ASP:CG	1.91	1.13
16:AG:434:LEU:HD21	16:AG:456:LEU:HA	1.26	1.13
12:AB:136:VAL:HG23	12:AB:177:GLN:NE2	1.61	1.13
16:AG:210:ARG:HG3	16:AG:216:ILE:HD13	1.18	1.13
16:AG:241:ASN:ND2	21:G:158:PRO:C	2.07	1.12
16:AG:422:GLU:HA	16:AG:426:GLY:CA	1.79	1.12
11:AA:856:ASN:ND2	11:AA:915:ASP:O	1.82	1.12
16:AG:210:ARG:HG3	16:AG:216:ILE:CD1	1.79	1.12
16:AG:219:GLU:O	21:G:157:LEU:HB2	1.50	1.12
16:AG:254:MET:SD	25:K:68:ARG:NE	2.23	1.12
16:AG:424:SER:O	16:AG:429:LYS:HG2	1.48	1.12
16:AG:425:LEU:HA	16:AG:429:LYS:CG	1.80	1.12
21:G:90:PHE:CB	21:G:154:MET:SD	2.37	1.12
12:AB:135:ARG:CB	12:AB:181:ALA:CB	2.05	1.11
16:AG:187:ARG:HB3	16:AG:188:PRO:HD2	1.21	1.11
16:AG:430:PRO:HG2	16:AG:435:LEU:HD21	1.28	1.11
12:AB:128:PHE:HB3	12:AB:175:PHE:CE1	1.69	1.11
16:AG:123:ARG:HH12	16:AG:191:ARG:C	1.57	1.11
16:AG:241:ASN:O	21:G:181:ILE:HG12	1.50	1.11
39:Y:102:ARG:HB3	39:Y:141:ASP:HA	1.28	1.10
16:AG:434:LEU:HA	16:AG:456:LEU:HD21	1.25	1.10
13:AC:291:LYS:C	16:AG:483:MET:CE	2.24	1.10
16:AG:279:ASN:OD1	16:AG:280:PRO:HD3	1.50	1.10
16:AG:285:ILE:CG1	16:AG:293:VAL:HG11	1.80	1.10
16:AG:353:HIS:O	16:AG:356:ILE:CG2	1.99	1.10
12:AB:123:ARG:HG3	12:AB:124:PRO:HD3	1.15	1.10
16:AG:434:LEU:CD2	16:AG:459:LEU:HD12	1.81	1.10
21:G:68:LEU:HD13	21:G:154:MET:HE1	1.27	1.10
11:AA:857:VAL:HG12	11:AA:919:ARG:HH21	1.08	1.09
12:AB:131:GLY:N	12:AB:148:VAL:CB	2.15	1.09
16:AG:181:GLY:HA2	16:AG:204:MET:SD	1.92	1.09
16:AG:222:GLU:OE2	21:G:159:ASP:OD1	1.69	1.09
16:AG:285:ILE:HG23	16:AG:293:VAL:HG12	1.25	1.09
11:AA:920:VAL:CG2	11:AA:921:PRO:CD	2.30	1.09
12:AB:47:GLU:HG3	12:AB:64:PHE:HE1	1.01	1.09
11:AA:854:ILE:HG23	11:AA:917:SER:HB3	1.15	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:243:LYS:CE	16:AG:245:ILE:CG1	2.28	1.09
11:AA:920:VAL:CG2	11:AA:921:PRO:HD3	1.80	1.09
16:AG:393:LEU:HD22	16:AG:398:LEU:HD11	1.28	1.09
21:G:90:PHE:CB	21:G:154:MET:HB2	1.82	1.09
11:AA:854:ILE:CG2	11:AA:917:SER:CB	2.30	1.09
12:AB:131:GLY:H	12:AB:148:VAL:CG2	1.64	1.09
16:AG:287:ALA:CA	16:AG:331:LEU:CD1	2.02	1.09
16:AG:393:LEU:CB	16:AG:398:LEU:HD23	1.80	1.09
16:AG:434:LEU:HD23	16:AG:456:LEU:HD23	1.10	1.09
16:AG:422:GLU:HA	16:AG:426:GLY:HA3	1.33	1.08
16:AG:242:ASP:HB3	21:G:180:GLY:O	1.34	1.08
16:AG:393:LEU:HD22	16:AG:398:LEU:CD2	1.71	1.08
9:9:19:ALA:HA	9:9:70:GLU:HG2	1.31	1.08
16:AG:243:LYS:HD2	16:AG:245:ILE:HB	1.34	1.08
16:AG:393:LEU:CB	16:AG:398:LEU:HD21	1.58	1.08
9:9:35:VAL:HG11	39:Y:2:LYS:HA	1.24	1.08
12:AB:158:LEU:CD2	12:AB:174:ASP:C	2.27	1.07
16:AG:242:ASP:HB2	21:G:180:GLY:O	1.38	1.07
16:AG:451:ARG:HH12	16:AG:467:LEU:C	1.62	1.07
16:AG:241:ASN:ND2	21:G:159:ASP:OD1	1.86	1.07
16:AG:434:LEU:HD23	16:AG:456:LEU:HA	1.34	1.07
16:AG:365:ILE:HD13	16:AG:406:LEU:CD2	1.85	1.07
12:AB:165:PHE:HE1	30:P:98:VAL:CG2	1.61	1.07
9:9:18:VAL:HA	9:9:86:MET:HE2	1.25	1.07
12:AB:128:PHE:CG	12:AB:175:PHE:CD1	2.43	1.07
14:AE:24:LEU:HG	14:AE:232:ASN:HD21	1.17	1.07
16:AG:385:ALA:CB	16:AG:411:LYS:CE	2.33	1.06
16:AG:434:LEU:CD2	16:AG:456:LEU:CA	2.33	1.06
10:B:21:A:O2'	10:B:22:G:OP2	1.73	1.06
16:AG:285:ILE:HG13	16:AG:293:VAL:CG1	1.86	1.06
16:AG:425:LEU:HA	16:AG:429:LYS:HG3	1.33	1.06
39:Y:98:GLY:HA3	39:Y:137:LEU:HD22	1.35	1.06
16:AG:210:ARG:HA	16:AG:216:ILE:HD13	1.31	1.06
16:AG:210:ARG:CG	16:AG:216:ILE:CD1	2.33	1.06
16:AG:302:LYS:H	16:AG:302:LYS:HE3	1.16	1.06
16:AG:363:LEU:HD21	16:AG:410:ALA:H	0.94	1.06
16:AG:451:ARG:NH1	16:AG:467:LEU:HA	1.68	1.06
11:AA:920:VAL:HG13	11:AA:921:PRO:HD2	1.38	1.06
16:AG:243:LYS:HE3	16:AG:245:ILE:HD13	1.32	1.06
16:AG:393:LEU:HB3	16:AG:398:LEU:HD23	1.26	1.06
12:AB:158:LEU:CD2	12:AB:175:PHE:N	2.18	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:187:ARG:HB3	16:AG:188:PRO:HD3	1.32	1.05
16:AG:217:GLY:O	21:G:108:ARG:CZ	2.04	1.05
16:AG:285:ILE:HG23	16:AG:293:VAL:CG1	1.86	1.05
16:AG:385:ALA:HB1	16:AG:411:LYS:HE3	1.35	1.05
21:G:90:PHE:HB2	21:G:154:MET:CB	1.85	1.05
10:A:76:A:O2'	41:a:2394:C:N3	1.87	1.05
11:AA:857:VAL:CG1	11:AA:919:ARG:NH2	2.19	1.05
12:AB:131:GLY:HA2	12:AB:148:VAL:CB	1.87	1.05
12:AB:134:VAL:O	12:AB:145:ASN:ND2	1.89	1.05
12:AB:159:LYS:O	12:AB:170:PRO:CB	2.03	1.05
16:AG:243:LYS:HE2	16:AG:245:ILE:HG12	1.34	1.05
12:AB:131:GLY:CA	12:AB:148:VAL:HB	1.84	1.05
12:AB:158:LEU:HD23	12:AB:175:PHE:N	1.72	1.05
16:AG:437:LEU:CD2	16:AG:456:LEU:CD1	2.34	1.05
12:AB:165:PHE:CE1	30:P:98:VAL:HG23	1.87	1.04
39:Y:109:ALA:HB2	39:Y:128:ILE:HG13	1.36	1.04
16:AG:168:LEU:HD21	16:AG:231:GLY:CA	1.83	1.04
16:AG:210:ARG:CA	16:AG:216:ILE:HD13	1.85	1.04
16:AG:220:VAL:HG13	21:G:157:LEU:HD12	1.09	1.04
11:AA:854:ILE:HG21	11:AA:917:SER:CB	1.88	1.03
16:AG:243:LYS:HD3	16:AG:245:ILE:HB	1.39	1.03
8:7:-20:A:O2'	18:D:792:A:N6	1.90	1.03
16:AG:243:LYS:CE	16:AG:245:ILE:HD13	1.88	1.03
11:AA:880:GLY:CA	11:AA:921:PRO:O	2.07	1.03
16:AG:448:LEU:CD2	16:AG:473:LEU:CD1	2.36	1.03
12:AB:157:ARG:HH12	12:AB:174:ASP:HB3	0.92	1.03
16:AG:363:LEU:HG	16:AG:410:ALA:HB2	1.37	1.03
16:AG:393:LEU:HD22	16:AG:398:LEU:HD21	1.26	1.03
16:AG:361:LYS:HE2	16:AG:417:ILE:HG12	1.39	1.03
11:AA:857:VAL:HG13	11:AA:919:ARG:HH21	1.22	1.02
16:AG:425:LEU:CG	16:AG:429:LYS:CE	2.34	1.02
11:AA:901:LEU:HD21	16:AG:27:LEU:HD11	1.03	1.02
16:AG:187:ARG:CB	16:AG:188:PRO:CD	2.37	1.02
16:AG:210:ARG:CA	16:AG:216:ILE:HD11	1.84	1.02
16:AG:387:VAL:HG12	16:AG:388:PRO:HD2	1.06	1.02
16:AG:363:LEU:HD23	16:AG:409:ARG:CA	1.89	1.02
16:AG:168:LEU:HD22	16:AG:231:GLY:HA2	1.40	1.02
16:AG:361:LYS:CE	16:AG:417:ILE:HG12	1.90	1.02
16:AG:365:ILE:HD13	16:AG:406:LEU:HD22	1.37	1.02
16:AG:365:ILE:CG2	16:AG:409:ARG:NH1	2.23	1.02
16:AG:422:GLU:HA	16:AG:426:GLY:N	1.75	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:614:A:O2'	41:a:615:U:OP2	1.78	1.02
41:a:1927:A:O2'	41:a:1928:A:H5'	1.59	1.02
12:AB:140:PRO:CB	30:P:102:LEU:HD23	1.90	1.01
16:AG:393:LEU:CA	16:AG:398:LEU:HD23	1.87	1.01
41:a:1918:A:O2'	41:a:1920:C:N4	1.94	1.01
12:AB:165:PHE:CE1	30:P:98:VAL:HG21	1.91	1.01
11:AA:549:ASP:OD2	14:AE:750:PRO:HB3	1.60	1.01
12:AB:128:PHE:HB2	12:AB:175:PHE:CZ	1.96	1.01
12:AB:128:PHE:CD2	12:AB:175:PHE:CD1	2.48	1.01
16:AG:243:LYS:HB2	21:G:179:LEU:HB3	1.42	1.01
16:AG:425:LEU:C	16:AG:429:LYS:HE3	1.84	1.01
16:AG:434:LEU:HD21	16:AG:456:LEU:CA	1.89	1.01
11:AA:920:VAL:CG1	11:AA:921:PRO:HD2	1.90	1.01
14:AE:111:THR:HG23	14:AE:300:GLN:CD	1.86	1.01
16:AG:393:LEU:HD23	16:AG:398:LEU:HD22	1.43	1.01
16:AG:287:ALA:HA	16:AG:331:LEU:HD11	1.40	1.00
12:AB:131:GLY:N	12:AB:148:VAL:HG11	1.76	1.00
12:AB:141:PHE:HZ	30:P:102:LEU:CA	1.75	1.00
13:AC:291:LYS:C	16:AG:483:MET:HE1	1.87	1.00
16:AG:168:LEU:HD21	16:AG:231:GLY:N	1.76	1.00
39:Y:32:VAL:HG13	39:Y:60:VAL:HG21	1.41	1.00
11:AA:902:LEU:CD1	16:AG:107:THR:HB	1.90	1.00
16:AG:363:LEU:CD2	16:AG:409:ARG:HB2	1.91	1.00
12:AB:134:VAL:CA	12:AB:181:ALA:OXT	2.10	1.00
16:AG:240:THR:HG23	16:AG:247:PRO:HG3	1.44	1.00
16:AG:131:ARG:O	16:AG:134:GLU:HG3	1.61	0.99
12:AB:135:ARG:HG3	12:AB:179:GLU:HB3	1.43	0.99
16:AG:362:TYR:O	16:AG:413:ALA:CB	2.10	0.99
41:a:1169:A:N6	41:a:1180:U:O4	1.94	0.99
9:9:18:VAL:HG12	9:9:70:GLU:HB3	1.44	0.99
16:AG:243:LYS:CD	16:AG:245:ILE:CB	2.41	0.99
18:D:452:A:N6	18:D:480:U:O2	1.95	0.99
16:AG:220:VAL:CB	21:G:157:LEU:HD12	1.91	0.99
16:AG:425:LEU:CD2	16:AG:429:LYS:CE	2.14	0.99
11:AA:902:LEU:HD11	16:AG:107:THR:HB	1.44	0.99
16:AG:425:LEU:CA	16:AG:429:LYS:CE	2.30	0.99
12:AB:123:ARG:HB2	12:AB:124:PRO:HD3	1.44	0.99
16:AG:355:ALA:HB2	16:AG:382:GLU:CD	1.83	0.99
16:AG:434:LEU:HD23	16:AG:456:LEU:CD2	1.91	0.99
22:H:303:LEU:O	22:H:305:HIS:N	1.95	0.98
12:AB:131:GLY:N	12:AB:148:VAL:HB	1.76	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:434:LEU:CD2	16:AG:456:LEU:HD23	1.92	0.98
16:AG:241:ASN:HB3	21:G:159:ASP:HA	1.46	0.98
13:AC:291:LYS:O	16:AG:483:MET:CE	2.09	0.98
16:AG:123:ARG:NH1	16:AG:191:ARG:CA	2.11	0.98
16:AG:355:ALA:HB1	16:AG:382:GLU:HG3	1.41	0.98
10:B:6:G:O2'	10:B:7:G:O5'	1.80	0.98
41:a:2115:G:O2'	41:a:2117:A:N6	1.96	0.98
41:a:2635:A:O2'	50:j:81:GLU:OE1	1.81	0.98
16:AG:228:ARG:HA	16:AG:327:LEU:HD11	1.46	0.98
16:AG:241:ASN:O	21:G:181:ILE:CG1	2.11	0.98
4:3:82:ARG:NH1	41:a:301:G:OP2	1.97	0.98
11:AA:901:LEU:CD2	16:AG:27:LEU:HD11	1.93	0.98
16:AG:241:ASN:ND2	21:G:159:ASP:N	2.11	0.98
16:AG:287:ALA:HB2	16:AG:331:LEU:CD1	1.92	0.98
16:AG:336:LEU:HD12	16:AG:336:LEU:H	1.26	0.98
17:C:42:SER:OG	17:C:47:THR:O	1.80	0.98
12:AB:47:GLU:CG	12:AB:64:PHE:HE1	1.76	0.97
16:AG:393:LEU:HD22	16:AG:398:LEU:CG	1.93	0.97
11:AA:920:VAL:HG22	11:AA:921:PRO:HD3	1.00	0.97
11:AA:1268:GLN:NE2	14:AE:352:ARG:HD2	1.79	0.97
16:AG:168:LEU:HD21	16:AG:230:PRO:C	1.89	0.97
12:AB:166:GLY:HA3	23:I:61:ALA:HB2	1.44	0.97
11:AA:859:GLU:HG2	16:AG:37:LYS:HB3	1.45	0.97
16:AG:243:LYS:HE2	16:AG:245:ILE:CG1	1.91	0.97
41:a:1177:G:O2'	41:a:1178:C:O5'	1.80	0.97
41:a:2478:A:OP2	57:q:2:LYS:NZ	1.98	0.97
1:0:80:ARG:NH2	41:a:572:A:OP2	1.98	0.97
16:AG:424:SER:O	16:AG:429:LYS:CG	2.13	0.97
43:c:43:GLU:OE2	43:c:45:ARG:NH2	1.96	0.97
12:AB:128:PHE:CB	12:AB:175:PHE:CD1	2.47	0.96
32:R:76:GLU:N	32:R:76:GLU:OE2	1.98	0.96
16:AG:433:ASP:O	16:AG:456:LEU:CD1	2.13	0.96
16:AG:279:ASN:CG	16:AG:280:PRO:CD	2.38	0.96
16:AG:380:THR:O	16:AG:384:LEU:CD1	2.13	0.96
16:AG:243:LYS:CE	16:AG:245:ILE:CD1	2.43	0.96
16:AG:442:ARG:O	16:AG:446:PHE:HD2	1.34	0.96
21:G:90:PHE:HB2	21:G:154:MET:HB2	1.39	0.96
21:G:149:GLY:O	21:G:152:LYS:HG2	1.66	0.96
48:h:66:ASP:OD2	48:h:102:ARG:NH1	1.99	0.96
8:7:-11:U:H4'	8:7:-10:U:OP2	1.62	0.96
11:AA:855:PRO:HG3	11:AA:915:ASP:CG	1.89	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:243:LYS:HE3	16:AG:245:ILE:CD1	1.94	0.95
16:AG:393:LEU:CD2	16:AG:398:LEU:HD11	1.90	0.95
8:7:-20:A:H2'	8:7:-19:U:H5'	1.46	0.95
12:AB:127:LEU:HD22	12:AB:127:LEU:H	1.32	0.95
7:6:15:DC:N4	7:6:16:DC:N4	2.15	0.95
16:AG:258:ARG:HH11	16:AG:258:ARG:HG2	1.31	0.95
16:AG:365:ILE:CD1	16:AG:406:LEU:HD22	1.97	0.95
17:C:22:ASP:OD1	17:C:24:LYS:N	1.99	0.95
13:AD:290:LEU:O	16:AG:82:TYR:HE2	1.39	0.95
13:AC:291:LYS:C	16:AG:483:MET:HE2	1.88	0.95
10:B:28:C:O2'	10:B:29:G:H5'	1.67	0.95
41:a:1818:U:OP2	48:h:156:ARG:NH1	2.00	0.95
12:AB:128:PHE:HB3	12:AB:175:PHE:CD1	2.01	0.95
12:AB:171:VAL:CG2	30:P:100:ILE:O	2.15	0.95
9:9:35:VAL:HG11	39:Y:2:LYS:CA	1.96	0.94
16:AG:243:LYS:CG	21:G:179:LEU:HD22	1.96	0.94
11:AA:901:LEU:CD2	16:AG:27:LEU:CD1	2.43	0.94
12:AB:140:PRO:HG2	30:P:102:LEU:HD21	1.47	0.94
12:AB:135:ARG:CA	12:AB:181:ALA:HB3	1.97	0.94
16:AG:243:LYS:CE	16:AG:245:ILE:HG12	1.94	0.94
16:AG:440:VAL:CG2	16:AG:481:LEU:HD22	1.97	0.94
59:s:9:GLU:OE1	59:s:9:GLU:N	2.00	0.94
8:7:-17:U:H3'	8:7:-17:U:OP1	1.68	0.94
14:AE:68:TYR:O	14:AE:75:TYR:CE2	2.20	0.94
16:AG:393:LEU:HA	16:AG:398:LEU:HD22	0.95	0.94
10:B:76:A:O2'	41:a:2493:U:OP1	1.84	0.94
12:AB:131:GLY:H	12:AB:148:VAL:HG21	1.33	0.94
12:AB:131:GLY:N	12:AB:148:VAL:CG1	2.26	0.94
16:AG:123:ARG:HH12	16:AG:191:ARG:HA	1.32	0.94
16:AG:363:LEU:HG	16:AG:410:ALA:CB	1.97	0.94
41:a:534:U:O2'	66:z:49:ASP:OD2	1.83	0.94
63:w:58:ASP:OD1	63:w:63:ARG:NH2	2.00	0.94
11:AA:879:GLY:O	11:AA:922:ASN:HB3	1.67	0.93
11:AA:920:VAL:CG2	11:AA:921:PRO:HD2	1.97	0.93
21:G:5:SER:OG	21:G:8:ASP:OD1	1.87	0.93
16:AG:393:LEU:CG	16:AG:398:LEU:CD2	2.30	0.93
16:AG:448:LEU:HD21	16:AG:473:LEU:HD13	1.48	0.93
16:AG:241:ASN:CB	21:G:158:PRO:O	2.17	0.93
16:AG:387:VAL:HG12	16:AG:388:PRO:HD3	1.47	0.93
41:a:161:A:OP2	41:a:162:U:O2'	1.85	0.93
16:AG:448:LEU:HD21	16:AG:473:LEU:HD11	1.48	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:451:ARG:NH1	16:AG:467:LEU:CA	2.30	0.93
12:AB:135:ARG:HB3	12:AB:181:ALA:HB2	1.45	0.93
12:AB:157:ARG:NH1	12:AB:157:ARG:HA	1.83	0.93
11:AA:641:GLU:OE2	14:AE:749:LYS:NZ	2.00	0.92
41:a:1789:A:OP2	48:h:221:ARG:NH1	2.02	0.92
16:AG:279:ASN:CG	16:AG:280:PRO:HD3	1.93	0.92
11:AA:857:VAL:HG13	11:AA:919:ARG:NH2	1.79	0.92
16:AG:123:ARG:CZ	16:AG:191:ARG:O	2.17	0.92
16:AG:210:ARG:CB	16:AG:216:ILE:HD13	1.98	0.92
18:D:1515:G:O2'	18:D:1516:G:H5'	1.70	0.92
16:AG:434:LEU:HD22	16:AG:459:LEU:HD12	0.93	0.92
18:D:1360:A:OP2	33:S:75:ARG:NH2	2.02	0.92
16:AG:425:LEU:HA	16:AG:429:LYS:HE3	0.95	0.92
41:a:139:U:OP2	41:a:140:C:N4	2.03	0.92
41:a:627:A:OP1	61:u:78:ARG:NH2	2.02	0.92
41:a:517:C:OP2	49:i:10:ARG:NH2	2.02	0.92
41:a:2756:U:OP2	57:q:19:ARG:NE	2.03	0.92
16:AG:385:ALA:HB3	16:AG:411:LYS:CE	2.00	0.91
16:AG:363:LEU:CG	16:AG:410:ALA:HB2	1.99	0.91
9:9:23:LEU:O	9:9:87:GLU:HG3	1.70	0.91
12:AB:136:VAL:C	12:AB:179:GLU:OE1	2.13	0.91
16:AG:171:GLU:OE2	16:AG:267:GLY:HA3	1.68	0.91
12:AB:131:GLY:CA	12:AB:148:VAL:HG12	1.73	0.91
16:AG:243:LYS:HG3	21:G:179:LEU:HD22	1.53	0.91
16:AG:451:ARG:NH1	16:AG:466:ASP:O	2.02	0.91
21:G:90:PHE:HD1	21:G:150:GLY:O	1.33	0.91
39:Y:102:ARG:CB	39:Y:141:ASP:HA	2.01	0.91
16:AG:183:LEU:HG	16:AG:197:VAL:HG13	1.51	0.91
16:AG:363:LEU:HD23	16:AG:409:ARG:CB	2.00	0.91
16:AG:434:LEU:HD21	16:AG:455:THR:O	1.69	0.91
18:D:203:G:O2'	18:D:465:A:N1	2.03	0.91
21:G:90:PHE:CD2	21:G:154:MET:HA	2.05	0.91
12:AB:166:GLY:CA	23:I:61:ALA:HB2	2.01	0.91
18:D:811:C:O2'	18:D:901:A:N1	2.04	0.91
9:9:132:TYR:HE1	40:Z:19:VAL:HG13	1.34	0.91
16:AG:174:ARG:HB3	16:AG:175:PRO:HD2	1.51	0.90
16:AG:393:LEU:HB3	16:AG:398:LEU:HD21	1.25	0.90
16:AG:393:LEU:HD23	16:AG:398:LEU:CD2	1.93	0.90
16:AG:434:LEU:HD23	16:AG:456:LEU:CA	2.00	0.90
25:K:10:GLU:OE2	25:K:11:LEU:N	2.04	0.90
12:AB:174:ASP:C	12:AB:176:SER:H	1.80	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:363:LEU:HD22	16:AG:409:ARG:HB2	1.53	0.90
16:AG:453:VAL:HG13	16:AG:458:ASP:CB	2.00	0.90
14:AE:136:GLU:OE1	14:AE:312:ARG:NH1	2.04	0.90
16:AG:425:LEU:HA	16:AG:429:LYS:CD	2.00	0.90
16:AG:434:LEU:HD21	16:AG:455:THR:C	1.97	0.90
41:a:1170:C:N4	41:a:1179:G:O6	2.05	0.90
51:k:32:GLU:N	51:k:32:GLU:OE2	2.05	0.90
12:AB:174:ASP:O	12:AB:176:SER:N	2.04	0.90
18:D:1140:C:O2'	18:D:1141:C:O5'	1.88	0.90
54:n:73:SER:OG	54:n:79:ILE:O	1.90	0.90
16:AG:434:LEU:HA	16:AG:456:LEU:HD23	1.53	0.90
12:AB:141:PHE:CZ	30:P:102:LEU:N	2.24	0.90
16:AG:213:VAL:CG1	16:AG:250:ALA:O	2.20	0.90
16:AG:365:ILE:HG21	16:AG:409:ARG:NH1	1.87	0.90
12:AB:158:LEU:HD22	12:AB:178:VAL:HG21	1.52	0.90
16:AG:422:GLU:CA	16:AG:426:GLY:HA3	2.02	0.89
16:AG:242:ASP:OD2	21:G:182:PRO:HD3	1.72	0.89
16:AG:285:ILE:HG13	16:AG:293:VAL:HG11	1.45	0.89
10:B:22:G:O2'	10:B:23:C:OP1	1.91	0.89
23:I:36:ASP:OD1	23:I:59:ARG:NH1	2.05	0.89
41:a:68:G:N2	41:a:74:A:OP2	2.05	0.89
41:a:624:C:O2'	41:a:657:U:OP1	1.91	0.89
6:5:114:DC:H5''	14:AE:1148:ARG:NH2	1.87	0.89
11:AA:879:GLY:C	11:AA:922:ASN:HB3	1.96	0.89
13:AD:287:VAL:CB	16:AG:78:GLU:OE1	2.19	0.89
16:AG:200:SER:O	16:AG:230:PRO:HG2	1.71	0.89
9:9:35:VAL:CG1	39:Y:2:LYS:HA	2.02	0.89
16:AG:302:LYS:HE3	16:AG:302:LYS:N	1.87	0.89
14:AE:24:LEU:HB2	14:AE:232:ASN:OD1	1.72	0.89
16:AG:244:ARG:HG2	16:AG:244:ARG:HH21	1.35	0.89
16:AG:453:VAL:HG23	16:AG:462:GLN:NE2	1.86	0.89
10:B:28:C:C2'	10:B:29:G:H5'	2.03	0.89
14:AE:68:TYR:C	14:AE:75:TYR:HE2	1.80	0.89
41:a:1045:C:O2	41:a:1047:G:N1	2.06	0.89
16:AG:216:ILE:HG22	16:AG:221:ILE:HB	1.53	0.89
16:AG:239:LYS:CE	21:G:63:ARG:CZ	2.50	0.89
26:L:16:GLU:OE1	26:L:16:GLU:N	2.06	0.89
27:M:113:ASP:OD2	27:M:122:ASN:ND2	2.06	0.89
11:AA:920:VAL:CB	11:AA:921:PRO:HD2	2.03	0.89
16:AG:241:ASN:HD22	21:G:158:PRO:C	1.73	0.89
41:a:411:G:OP2	41:a:2406:A:O2'	1.90	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:425:LEU:CA	16:AG:429:LYS:HG3	2.02	0.88
16:AG:168:LEU:HD22	16:AG:231:GLY:HA3	1.00	0.88
16:AG:422:GLU:HA	16:AG:426:GLY:H	1.34	0.88
18:D:202:G:HO2'	18:D:468:A:H8	1.15	0.88
11:AA:906:PHE:CZ	16:AG:100:VAL:CG1	2.56	0.88
12:AB:135:ARG:HG3	12:AB:179:GLU:CB	2.03	0.88
16:AG:453:VAL:HG13	16:AG:458:ASP:HB2	1.55	0.88
18:D:1276:G:O2'	18:D:1277:C:H5'	1.73	0.88
14:AE:202:ARG:HG2	14:AE:202:ARG:HH11	1.35	0.88
9:9:31:ARG:HD2	41:a:1053:C:O2'	1.72	0.88
11:AA:920:VAL:HG22	11:AA:921:PRO:HD2	1.50	0.88
18:D:207:C:O2'	18:D:208:U:O5'	1.89	0.88
10:A:21:A:O2'	10:A:22:G:OP2	1.89	0.88
11:AA:855:PRO:HD3	16:AG:105:ILE:HG23	1.54	0.88
10:B:30:G:OP1	18:D:1229:A:O2'	1.90	0.88
16:AG:362:TYR:C	16:AG:413:ALA:HB2	1.99	0.88
16:AG:363:LEU:HG	16:AG:410:ALA:CA	2.04	0.88
18:D:652:U:O4	18:D:752:G:O2'	1.90	0.88
21:G:90:PHE:CA	21:G:154:MET:SD	2.61	0.88
41:a:807:U:OP2	61:u:41:ARG:NH1	2.06	0.88
12:AB:128:PHE:CB	12:AB:175:PHE:HE1	1.57	0.88
29:O:42:GLU:OE2	29:O:45:ARG:NH1	2.07	0.88
12:AB:163:SER:HA	12:AB:168:ALA:HB2	1.56	0.87
13:AD:290:LEU:O	16:AG:82:TYR:CZ	2.26	0.87
16:AG:171:GLU:CD	16:AG:267:GLY:HA3	1.99	0.87
16:AG:216:ILE:HG23	16:AG:221:ILE:HB	0.89	0.87
18:D:146:G:O2'	18:D:147:G:H5'	1.72	0.87
8:7:-13:U:H5'	18:D:1397:C:O2	1.74	0.87
16:AG:218:GLU:CG	21:G:105:LYS:HA	2.04	0.87
12:AB:180:LYS:HA	12:AB:180:LYS:CE	2.04	0.87
12:AB:123:ARG:CB	12:AB:124:PRO:CD	2.52	0.87
12:AB:169:THR:OG1	30:P:99:GLN:OE1	1.61	0.87
16:AG:486:ARG:O	16:AG:490:TRP:HD1	1.57	0.87
35:U:48:GLU:OE2	35:U:51:ARG:NH2	2.07	0.87
41:a:2867:G:O2'	41:a:2868:A:OP2	1.92	0.87
12:AB:93:ILE:HG22	14:AE:290:ILE:CG2	2.03	0.87
14:AE:24:LEU:HG	14:AE:232:ASN:ND2	1.90	0.87
16:AG:210:ARG:HA	16:AG:216:ILE:HD11	0.89	0.87
10:A:75:C:O2'	10:A:76:A:N7	2.05	0.87
13:AC:291:LYS:CA	16:AG:483:MET:HE1	2.05	0.87
16:AG:241:ASN:HD22	21:G:159:ASP:HA	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:248:VAL:HG13	16:AG:273:ILE:HB	1.56	0.87
16:AG:254:MET:HA	16:AG:254:MET:HE3	1.55	0.87
16:AG:430:PRO:HG2	16:AG:435:LEU:CD2	2.05	0.87
39:Y:116:MET:HB3	39:Y:124:MET:HG2	1.55	0.87
41:a:500:G:N1	41:a:503:A:OP2	2.08	0.87
9:9:24:SER:O	9:9:116:GLU:HB2	1.74	0.86
16:AG:187:ARG:CB	16:AG:188:PRO:HD2	2.03	0.86
8:7:-17:U:N3	18:D:1403:C:O2'	1.87	0.86
16:AG:362:TYR:C	16:AG:413:ALA:CB	2.48	0.86
8:7:-17:U:H1'	8:7:-16:U:P	2.15	0.86
12:AB:123:ARG:HG3	12:AB:124:PRO:HD2	1.57	0.86
16:AG:434:LEU:HD12	16:AG:454:CYS:O	1.75	0.86
41:a:2193:G:O2'	41:a:2194:U:OP1	1.93	0.86
14:AE:425:ARG:NH1	14:AE:458:ASN:O	2.08	0.86
21:G:90:PHE:CG	21:G:150:GLY:O	2.28	0.86
9:9:34:THR:HG22	9:9:38:MET:HE3	1.54	0.86
16:AG:61:ARG:HD3	16:AG:63:LEU:HD21	1.57	0.86
18:D:405:U:OP1	18:D:406:G:O2'	1.94	0.86
8:7:-19:U:O2'	8:7:-18:G:O4'	1.92	0.86
16:AG:287:ALA:HB2	16:AG:331:LEU:HD13	1.58	0.86
12:AB:167:ARG:HD2	30:P:98:VAL:H	1.41	0.85
39:Y:85:ILE:H	39:Y:85:ILE:HD12	1.40	0.85
16:AG:141:VAL:HG22	16:AG:178:ARG:HG2	1.57	0.85
16:AG:218:GLU:O	21:G:104:TRP:NE1	2.09	0.85
16:AG:243:LYS:O	16:AG:243:LYS:NZ	2.08	0.85
9:9:94:ARG:HB3	9:9:98:GLU:OE2	1.74	0.85
16:AG:222:GLU:OE2	21:G:159:ASP:OD2	1.95	0.85
16:AG:302:LYS:O	16:AG:302:LYS:NZ	2.08	0.85
18:D:537:G:OP1	32:R:110:ARG:NH2	2.10	0.85
13:AC:291:LYS:HA	16:AG:483:MET:HE1	1.57	0.85
14:AE:68:TYR:HB3	14:AE:75:TYR:OH	1.76	0.85
16:AG:285:ILE:CG2	16:AG:293:VAL:HG12	2.06	0.85
16:AG:355:ALA:CA	16:AG:382:GLU:CD	2.49	0.85
39:Y:14:ALA:HB2	39:Y:54:ILE:HD12	1.57	0.85
41:a:1056:G:O2'	41:a:1103:A:N6	2.09	0.85
10:B:29:G:H2'	10:B:30:G:C8	2.12	0.85
41:a:1715:G:O2'	41:a:1743:G:O6	1.93	0.85
41:a:1998:A:OP2	50:j:141:ARG:NH2	2.10	0.85
9:9:78:GLY:N	9:9:79:PRO:HD2	1.91	0.85
12:AB:137:ASN:N	12:AB:179:GLU:OE1	2.09	0.85
16:AG:387:VAL:CB	16:AG:388:PRO:HD2	2.06	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1493:A:O2'	18:D:1494:G:OP1	1.94	0.85
16:AG:387:VAL:CG1	16:AG:388:PRO:CD	2.41	0.85
39:Y:102:ARG:HB3	39:Y:141:ASP:CA	2.07	0.85
39:Y:32:VAL:HA	39:Y:60:VAL:HG11	1.57	0.85
11:AA:857:VAL:HG12	11:AA:919:ARG:NH2	1.82	0.84
22:H:321:VAL:HG13	22:H:322:VAL:HG23	1.59	0.84
39:Y:60:VAL:HG13	39:Y:66:PHE:HB3	1.58	0.84
41:a:2688:G:N1	41:a:2720:U:OP2	2.09	0.84
12:AB:144:PHE:CE1	12:AB:164:ILE:HG21	2.11	0.84
14:AE:26:SER:HB2	14:AE:236:TRP:CZ2	2.12	0.84
16:AG:218:GLU:HG3	21:G:105:LYS:HA	1.57	0.84
16:AG:385:ALA:HB1	16:AG:411:LYS:CE	2.04	0.84
41:a:561:G:HO2'	66:z:45:TYR:HH	1.19	0.84
11:AA:906:PHE:CD2	16:AG:31:LEU:HD22	2.12	0.84
16:AG:243:LYS:CE	16:AG:245:ILE:CB	2.54	0.84
31:Q:93:ARG:NH1	31:Q:112:ASP:OD2	2.10	0.84
41:a:2749:A:OP2	41:a:2750:A:O2'	1.95	0.84
9:9:17:GLU:HB3	9:9:86:MET:HB2	1.58	0.84
42:b:56:ASP:OD1	42:b:58:THR:OG1	1.96	0.84
16:AG:365:ILE:HG21	16:AG:409:ARG:HH12	1.42	0.84
10:B:31:G:O2'	18:D:1340:A:O2'	1.85	0.84
16:AG:425:LEU:HG	16:AG:429:LYS:CE	2.07	0.84
12:AB:128:PHE:CG	12:AB:175:PHE:CZ	2.66	0.84
39:Y:93:ASN:OD1	39:Y:96:LYS:NZ	2.09	0.84
9:9:3:LEU:HD13	9:9:5:LEU:HG	1.57	0.84
9:9:71:CYS:HB3	9:9:74:ASP:OD2	1.78	0.84
41:a:2144:G:N2	41:a:2146:C:O2	2.10	0.84
7:6:21:DA:N1	8:7:15:G:N2	2.26	0.84
11:AA:854:ILE:HG21	11:AA:917:SER:HB3	1.46	0.84
11:AA:902:LEU:CD1	16:AG:107:THR:O	2.26	0.84
16:AG:203:GLU:HA	16:AG:206:ILE:HG12	1.60	0.84
18:D:718:A:O2'	20:F:31:GLU:OE2	1.94	0.84
50:j:33:ARG:NH1	50:j:53:GLY:O	2.10	0.84
9:9:97:LYS:HD3	9:9:127:ALA:HA	1.60	0.83
11:AA:888:THR:H	11:AA:889:PRO:HD2	1.42	0.83
16:AG:433:ASP:C	16:AG:456:LEU:HG	2.03	0.83
9:9:61:ARG:HD3	41:a:1046:A:O5'	1.78	0.83
12:AB:136:VAL:HG23	12:AB:177:GLN:OE1	1.78	0.83
12:AB:158:LEU:HD21	12:AB:175:PHE:N	1.88	0.83
9:9:11:ILE:HG13	9:9:65:GLU:HB3	1.60	0.83
16:AG:239:LYS:NZ	21:G:63:ARG:CZ	2.41	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:90:PHE:CG	21:G:154:MET:HB2	2.13	0.83
16:AG:451:ARG:HH11	16:AG:467:LEU:HA	1.42	0.83
61:u:123:ARG:NH2	61:u:143:GLU:OE2	2.12	0.83
12:AB:167:ARG:HD3	30:P:97:ASP:HA	0.84	0.83
9:9:132:TYR:CE1	40:Z:19:VAL:HG13	2.14	0.83
12:AB:123:ARG:CG	12:AB:124:PRO:CD	2.39	0.83
11:AA:898:GLU:HB2	16:AG:115:VAL:HG22	1.61	0.83
12:AB:141:PHE:CE2	30:P:102:LEU:CB	2.62	0.83
41:a:1044:C:O2'	41:a:1111:A:N1	2.10	0.83
11:AA:808:ASN:H	14:AE:633:ALA:HB2	1.41	0.83
11:AA:888:THR:H	11:AA:889:PRO:CD	1.92	0.83
18:D:951:G:OP2	38:X:101:ARG:NH2	2.12	0.83
9:9:26:VAL:O	9:9:110:ALA:HB1	1.79	0.82
12:AB:167:ARG:NE	30:P:96:VAL:O	2.12	0.82
16:AG:127:VAL:CG2	16:AG:192:GLY:HA2	2.09	0.82
16:AG:243:LYS:HE3	16:AG:245:ILE:CG1	2.07	0.82
16:AG:226:ALA:HA	16:AG:236:ILE:HG13	1.61	0.82
33:S:6:MET:SD	33:S:9:ARG:NH2	2.52	0.82
41:a:1083:U:O2'	41:a:1085:A:OP2	1.97	0.82
60:t:71:ARG:NH2	60:t:123:LEU:O	2.12	0.82
9:9:77:VAL:HG12	9:9:82:ILE:HG21	1.58	0.82
16:AG:252:VAL:HA	16:AG:259:VAL:HG23	1.61	0.82
16:AG:354:ALA:HA	16:AG:357:ASP:HB3	1.60	0.82
38:X:100:GLN:N	38:X:100:GLN:OE1	2.13	0.82
9:9:7:ASP:O	9:9:11:ILE:HD13	1.79	0.82
16:AG:12:VAL:HB	16:AG:16:LYS:HG3	1.61	0.82
16:AG:362:TYR:HA	16:AG:413:ALA:CB	2.09	0.82
39:Y:55:PRO:O	39:Y:71:LYS:HB2	1.80	0.82
9:9:136:ILE:HD12	9:9:139:LEU:HD12	1.59	0.82
12:AB:136:VAL:HG23	12:AB:177:GLN:CG	2.09	0.82
12:AB:158:LEU:HD22	12:AB:178:VAL:CG2	2.09	0.82
16:AG:425:LEU:HG	16:AG:429:LYS:CD	2.10	0.82
41:a:2297:A:N1	41:a:2321:U:C4	2.47	0.82
9:9:33:VAL:HG12	9:9:34:THR:H	1.45	0.82
16:AG:279:ASN:CG	16:AG:280:PRO:HD2	2.04	0.82
52:l:58:LYS:NZ	52:l:70:SER:O	2.12	0.82
9:9:77:VAL:O	9:9:84:TYR:OH	1.97	0.82
12:AB:144:PHE:CE1	12:AB:164:ILE:CG2	2.63	0.82
16:AG:285:ILE:CG2	16:AG:293:VAL:CG1	2.57	0.82
18:D:1145:A:O2'	18:D:1146:A:O5'	1.96	0.82
12:AB:141:PHE:CE2	30:P:102:LEU:HB2	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:285:ILE:CB	16:AG:293:VAL:HG11	2.09	0.82
16:AG:448:LEU:CD2	16:AG:473:LEU:HD11	2.05	0.82
41:a:2197:U:O2'	41:a:2198:A:OP2	1.96	0.82
12:AB:171:VAL:HG21	30:P:100:ILE:O	1.80	0.82
41:a:1027:A:O2'	41:a:1028:A:O5'	1.98	0.82
9:9:27:VAL:HA	9:9:110:ALA:HA	1.60	0.82
16:AG:353:HIS:CA	16:AG:356:ILE:HG23	2.09	0.82
41:a:1869:G:N2	41:a:1871:A:O2'	2.13	0.82
9:9:31:ARG:NH1	41:a:1053:C:O2'	2.13	0.81
14:AE:68:TYR:O	14:AE:75:TYR:HE2	1.58	0.81
12:AB:128:PHE:CD2	12:AB:175:PHE:CG	2.67	0.81
12:AB:148:VAL:HA	12:AB:160:VAL:HG23	1.62	0.81
16:AG:240:THR:CG2	16:AG:247:PRO:HG3	2.09	0.81
16:AG:365:ILE:CD1	16:AG:406:LEU:CD2	2.57	0.81
41:a:1069:A:O2'	41:a:1073:A:N6	2.11	0.81
14:AE:141:PHE:CE2	14:AE:296:LYS:HB2	2.15	0.81
14:AE:1169:THR:OG1	14:AE:1192:LYS:NZ	2.13	0.81
16:AG:218:GLU:CD	21:G:105:LYS:HA	2.05	0.81
16:AG:243:LYS:HE2	16:AG:245:ILE:CD1	2.08	0.81
24:J:192:SER:OG	24:J:194:ASP:OD2	1.97	0.81
39:Y:98:GLY:HA3	39:Y:137:LEU:CD2	2.09	0.81
41:a:2348:U:O4	41:a:2382:G:N1	2.14	0.81
16:AG:239:LYS:HZ3	21:G:63:ARG:NH2	1.79	0.81
18:D:2:A:O2'	18:D:3:A:O4'	1.96	0.81
11:AA:906:PHE:HZ	16:AG:100:VAL:HG12	1.45	0.81
16:AG:361:LYS:CD	16:AG:417:ILE:HG12	2.10	0.81
39:Y:127:SER:HB2	41:a:1081:U:O2'	1.79	0.81
41:a:1757:A:O2'	41:a:1758:U:OP1	1.97	0.81
57:q:30:GLU:OE2	57:q:32:LYS:N	2.12	0.81
9:9:52:MET:SD	9:9:87:GLU:HG2	2.20	0.81
16:AG:133:HIS:ND1	16:AG:136:GLU:OE1	2.13	0.81
49:i:31:ASP:OD2	49:i:33:THR:N	2.14	0.81
11:AA:618:GLN:HG3	14:AE:770:LEU:HD13	1.61	0.81
16:AG:425:LEU:HD23	16:AG:429:LYS:HE2	0.81	0.81
16:AG:451:ARG:NE	16:AG:470:ILE:HG13	1.95	0.81
33:S:92:GLU:OE1	33:S:92:GLU:N	2.13	0.81
12:AB:141:PHE:HZ	30:P:102:LEU:CB	1.78	0.81
16:AG:239:LYS:HE2	21:G:63:ARG:CZ	2.11	0.81
16:AG:434:LEU:CG	16:AG:455:THR:C	2.54	0.81
41:a:884:U:O4	41:a:893:C:O2'	1.99	0.81
41:a:1964:G:O2'	41:a:1967:C:OP2	1.98	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6:21:DA:N1	8:7:15:G:C2	2.49	0.81
16:AG:220:VAL:CG1	21:G:157:LEU:CD1	2.40	0.81
10:B:9:G:N2	10:B:45:G:N7	2.28	0.81
16:AG:219:GLU:HB3	21:G:156:GLY:HA3	0.82	0.81
18:D:1229:A:OP2	38:X:113:ARG:NH1	2.13	0.81
41:a:1941:C:N4	41:a:1965:C:O4'	2.14	0.81
14:AE:37:GLU:O	14:AE:61:ILE:HD11	1.81	0.80
14:AE:144:TYR:HE1	14:AE:162:GLU:OE2	1.64	0.80
41:a:2134:A:O2'	41:a:2159:G:N3	2.13	0.80
8:7:-19:U:H2'	8:7:-18:G:C8	2.17	0.80
9:9:59:LEU:HB2	9:9:62:ARG:HB3	1.62	0.80
11:AA:906:PHE:HZ	16:AG:100:VAL:CG1	1.94	0.80
14:AE:141:PHE:HE2	14:AE:296:LYS:HB2	1.44	0.80
16:AG:168:LEU:HD23	16:AG:231:GLY:HA3	1.56	0.80
16:AG:362:TYR:HA	16:AG:413:ALA:HB1	1.62	0.80
16:AG:365:ILE:CG2	16:AG:409:ARG:HH12	1.91	0.80
18:D:187:G:N2	18:D:190:A:OP2	2.15	0.80
39:Y:14:ALA:HB3	39:Y:50:LYS:HA	1.63	0.80
41:a:1716:U:OP2	41:a:1743:G:N1	2.14	0.80
41:a:605:G:OP1	52:l:99:LYS:NZ	2.14	0.80
14:AE:87:LYS:HA	14:AE:87:LYS:HE3	1.64	0.80
12:AB:128:PHE:CD1	12:AB:175:PHE:CZ	2.68	0.80
12:AB:140:PRO:CG	30:P:102:LEU:HD21	2.05	0.80
16:AG:243:LYS:HD2	16:AG:245:ILE:CB	2.08	0.80
41:a:2885:G:N7	49:i:40:ARG:NH2	2.29	0.80
7:6:18:DC:H42	8:7:17:G:H1	1.27	0.80
41:a:2133:G:O2'	41:a:2157:G:N2	2.15	0.80
14:AE:111:THR:HG23	14:AE:300:GLN:OE1	1.81	0.80
16:AG:241:ASN:CB	21:G:159:ASP:HA	2.12	0.80
11:AA:920:VAL:CB	11:AA:921:PRO:CD	2.56	0.80
12:AB:135:ARG:CG	12:AB:181:ALA:CB	2.59	0.80
16:AG:241:ASN:CG	21:G:158:PRO:O	2.25	0.80
38:X:95:LEU:O	38:X:109:ARG:NH2	2.15	0.80
41:a:1250:G:OP2	61:u:21:ARG:NH2	2.13	0.80
12:AB:167:ARG:CD	30:P:97:ASP:CA	2.38	0.80
16:AG:353:HIS:C	16:AG:356:ILE:CG2	2.50	0.80
16:AG:451:ARG:HH12	16:AG:467:LEU:CA	1.92	0.80
8:7:-18:G:H1'	8:7:-16:U:C5	2.17	0.79
16:AG:219:GLU:HB2	21:G:156:GLY:CA	2.11	0.79
16:AG:235:LYS:HD3	16:AG:327:LEU:HG	1.65	0.79
8:7:-17:U:O5'	18:D:1500:A:N6	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:43:LYS:HE3	9:9:95:LEU:HD13	1.64	0.79
14:AE:90:VAL:HG13	14:AE:90:VAL:O	1.82	0.79
16:AG:189:GLU:HB3	16:AG:194:GLN:HG3	1.63	0.79
16:AG:379:SER:OG	16:AG:384:LEU:HD21	1.81	0.79
10:B:21:A:HO2'	10:B:22:G:P	2.04	0.79
29:O:25:ASN:N	29:O:62:ASP:OD1	2.16	0.79
41:a:250:G:OP2	55:o:13:ARG:NH1	2.15	0.79
62:v:110:GLU:OE2	62:v:114:ARG:NH2	2.15	0.79
12:AB:125:LYS:HE2	12:AB:129:GLU:HG2	1.64	0.79
39:Y:101:SER:HB3	39:Y:104:GLN:HB2	1.64	0.79
16:AG:133:HIS:HD1	16:AG:136:GLU:CD	1.90	0.79
16:AG:363:LEU:CG	16:AG:410:ALA:N	2.46	0.79
16:AG:380:THR:O	16:AG:384:LEU:HD11	1.80	0.79
16:AG:451:ARG:NH2	16:AG:470:ILE:HG13	1.97	0.79
18:D:439:U:O2	18:D:440:C:C6	2.36	0.79
22:H:308:GLU:O	22:H:310:ASP:N	2.14	0.79
41:a:265:A:O2'	41:a:428:A:N6	2.14	0.79
16:AG:425:LEU:CA	16:AG:429:LYS:CG	2.60	0.79
41:a:2576:G:O2'	41:a:2579:C:OP2	1.98	0.79
9:9:88:HIS:HB3	9:9:89:PRO:CD	2.12	0.79
16:AG:242:ASP:CB	21:G:180:GLY:C	2.56	0.79
12:AB:167:ARG:CD	30:P:96:VAL:O	2.31	0.79
16:AG:243:LYS:HE3	16:AG:245:ILE:CB	2.12	0.79
21:G:126:PHE:O	21:G:127:ASP:O	2.00	0.79
64:x:31:THR:O	64:x:102:ARG:NH1	2.15	0.79
64:x:2:ASP:OD1	64:x:3:LYS:N	2.16	0.79
12:AB:135:ARG:CG	12:AB:181:ALA:HB2	2.12	0.79
12:AB:158:LEU:HD21	12:AB:174:ASP:O	1.82	0.79
12:AB:171:VAL:HG23	30:P:100:ILE:O	1.82	0.79
16:AG:220:VAL:HA	21:G:157:LEU:HD12	1.62	0.79
16:AG:440:VAL:CG2	16:AG:481:LEU:CD2	2.59	0.79
62:v:27:SER:N	62:v:104:GLU:OE1	2.15	0.79
9:9:18:VAL:HG12	9:9:70:GLU:CB	2.13	0.79
9:9:93:ALA:HA	9:9:129:LEU:O	1.82	0.78
12:AB:131:GLY:C	12:AB:148:VAL:HB	2.08	0.78
41:a:1924:C:H2'	41:a:1925:C:C6	2.18	0.78
9:9:23:LEU:HA	9:9:118:ILE:HG13	1.64	0.78
34:T:21:ASP:OD1	34:T:22:THR:N	2.16	0.78
41:a:1047:G:O2'	41:a:1110:G:N1	2.16	0.78
41:a:1912:A:H5''	41:a:1913:A:OP1	1.82	0.78
60:t:34:GLY:N	60:t:37:ASP:OD2	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:19:ARG:NH1	44:d:95:U:OP2	2.17	0.78
16:AG:241:ASN:ND2	21:G:159:ASP:CA	2.42	0.78
16:AG:284:VAL:HG12	16:AG:296:ILE:HD13	1.66	0.78
16:AG:381:LEU:CA	16:AG:384:LEU:HD12	2.08	0.78
17:C:13:PHE:O	17:C:17:GLY:N	2.15	0.78
25:K:101:GLU:OE1	25:K:102:GLY:N	2.17	0.78
39:Y:109:ALA:CB	39:Y:128:ILE:HG13	2.12	0.78
16:AG:412:ASN:O	16:AG:416:THR:HG23	1.84	0.78
41:a:1212:G:HO2'	41:a:1213:A:P	2.07	0.78
16:AG:402:THR:O	16:AG:405:ALA:HB3	1.84	0.78
11:AA:902:LEU:HD13	16:AG:111:LYS:HG3	1.66	0.78
22:H:45:GLU:OE1	22:H:45:GLU:N	2.17	0.78
9:9:94:ARG:HB3	9:9:98:GLU:CD	2.09	0.78
13:AD:290:LEU:O	16:AG:82:TYR:OH	2.02	0.78
16:AG:233:ARG:HB2	16:AG:327:LEU:HD23	1.66	0.78
18:D:1284:C:OP2	18:D:1285:A:O2'	2.01	0.78
39:Y:77:VAL:HG13	39:Y:80:LYS:HD2	1.66	0.78
16:AG:242:ASP:HB2	21:G:180:GLY:C	2.07	0.77
16:AG:437:LEU:HD21	16:AG:456:LEU:HD13	0.81	0.77
16:AG:447:LYS:O	16:AG:470:ILE:CD1	2.31	0.77
8:7:-6:U:O5'	23:I:136:ARG:NH2	2.15	0.77
9:9:34:THR:HG22	9:9:38:MET:CE	2.14	0.77
12:AB:149:GLU:OE2	12:AB:170:PRO:HG2	1.83	0.77
16:AG:218:GLU:CG	21:G:105:LYS:CA	2.62	0.77
34:T:88:ARG:NH2	41:a:714:U:OP2	2.18	0.77
48:h:258:ARG:NH1	48:h:264:ASP:OD1	2.17	0.77
7:6:15:DC:C4	7:6:16:DC:N4	2.53	0.77
16:AG:219:GLU:O	21:G:157:LEU:N	2.16	0.77
18:D:405:U:O4	24:J:2:ALA:N	2.18	0.77
41:a:1466:U:HO2'	41:a:1546:G:HO2'	1.24	0.77
16:AG:434:LEU:CD2	16:AG:456:LEU:N	2.46	0.77
18:D:579:A:O2'	34:T:54:ARG:NH1	2.16	0.77
41:a:282:A:N6	41:a:359:G:O6	2.16	0.77
9:9:60:LEU:O	9:9:64:VAL:HB	1.85	0.77
16:AG:243:LYS:HG2	21:G:179:LEU:CD2	2.13	0.77
17:C:32:TYR:O	17:C:40:VAL:HG23	1.85	0.77
48:h:6:CYS:SG	48:h:13:ARG:NH1	2.57	0.77
16:AG:385:ALA:HB3	16:AG:411:LYS:HE3	1.57	0.77
41:a:1135:C:O2'	41:a:1136:G:OP1	2.01	0.77
41:a:2685:G:OP1	60:t:78:ARG:NH2	2.17	0.77
14:AE:186:GLN:HG3	14:AE:238:ILE:HG13	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:243:LYS:CB	21:G:179:LEU:HB3	2.15	0.77
16:AG:354:ALA:HA	16:AG:357:ASP:CB	2.14	0.77
16:AG:354:ALA:C	16:AG:356:ILE:H	1.93	0.77
60:t:106:GLU:OE1	60:t:106:GLU:N	2.17	0.77
8:7:-18:G:HI'	8:7:-16:U:O4	1.83	0.77
12:AB:135:ARG:O	12:AB:179:GLU:OE1	2.02	0.77
14:AE:123:ARG:HG3	14:AE:1337:VAL:HG11	1.67	0.77
41:a:859:G:O2'	41:a:916:G:O6	2.03	0.77
41:a:1068:G:O6	41:a:1069:A:N6	2.18	0.77
39:Y:79:LEU:HA	39:Y:83:ALA:CB	2.14	0.77
50:j:77:ARG:NH2	50:j:200:ASP:OD1	2.18	0.77
12:AB:140:PRO:HG2	30:P:102:LEU:HD23	0.78	0.77
16:AG:307:ILE:HB	16:AG:338:VAL:HA	1.66	0.77
16:AG:430:PRO:CG	16:AG:435:LEU:HD21	2.10	0.77
39:Y:59:THR:HB	39:Y:67:THR:OG1	1.85	0.77
63:w:114:GLU:OE2	63:w:118:ARG:NH2	2.18	0.76
9:9:17:GLU:HB3	9:9:86:MET:CB	2.15	0.76
9:9:23:LEU:CB	9:9:92:ALA:HB2	2.16	0.76
16:AG:210:ARG:CG	16:AG:216:ILE:HD12	2.14	0.76
18:D:297:G:N2	18:D:300:A:OP2	2.18	0.76
18:D:1141:C:O2'	18:D:1142:G:O5'	2.03	0.76
41:a:482:A:OP2	41:a:507:A:N6	2.18	0.76
41:a:1437:C:HO2'	41:a:1516:G:HO2'	1.28	0.76
16:AG:131:ARG:HA	16:AG:186:VAL:HG11	1.68	0.76
9:9:61:ARG:NH1	41:a:1047:G:N7	2.34	0.76
12:AB:180:LYS:HA	12:AB:180:LYS:HE3	1.68	0.76
14:AE:1075:ARG:NH2	14:AE:1168:GLU:OE2	2.17	0.76
41:a:545:U:O2'	41:a:546:U:O3'	2.03	0.76
41:a:1227:G:OP2	66:z:16:LYS:NZ	2.18	0.76
48:h:145:GLU:OE1	48:h:151:GLY:N	2.18	0.76
12:AB:166:GLY:CA	23:I:61:ALA:CB	2.63	0.76
12:AB:166:GLY:HA2	23:I:61:ALA:HB1	1.68	0.76
16:AG:354:ALA:O	16:AG:356:ILE:N	2.19	0.76
9:9:23:LEU:HA	9:9:118:ILE:CG1	2.16	0.76
12:AB:131:GLY:N	12:AB:148:VAL:HG21	2.00	0.76
16:AG:283:PHE:CZ	16:AG:331:LEU:O	2.39	0.76
21:G:68:LEU:HD13	21:G:154:MET:CE	2.11	0.76
22:H:331:MET:N	22:H:331:MET:SD	2.58	0.76
16:AG:451:ARG:HE	16:AG:470:ILE:HG13	1.51	0.76
18:D:152:A:N6	18:D:169:C:O2	2.18	0.76
12:AB:157:ARG:CZ	12:AB:174:ASP:HB3	2.16	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:213:VAL:HG12	16:AG:250:ALA:O	1.86	0.76
16:AG:354:ALA:C	16:AG:356:ILE:N	2.43	0.76
16:AG:425:LEU:HG	16:AG:429:LYS:HE2	1.65	0.76
16:AG:451:ARG:CZ	16:AG:470:ILE:HG13	2.16	0.76
10:B:24:U:O2'	10:B:25:C:O4'	2.04	0.76
41:a:1656:C:OP1	50:j:141:ARG:NH1	2.19	0.76
8:7:-20:A:C2'	8:7:-19:U:H5'	2.16	0.76
16:AG:248:VAL:HG22	16:AG:273:ILE:HG22	1.68	0.76
41:a:1927:A:H2'	41:a:1928:A:C8	2.21	0.76
41:a:1998:A:HO2'	41:a:2724:U:HO2'	1.30	0.76
41:a:2209:G:OP2	41:a:2210:U:O2'	2.00	0.76
9:9:19:ALA:CA	9:9:70:GLU:HG2	2.13	0.76
9:9:52:MET:HG3	9:9:95:LEU:HD11	1.67	0.76
12:AB:131:GLY:HA2	12:AB:148:VAL:HG12	0.77	0.76
18:D:329:A:O2'	18:D:332:G:N7	2.17	0.76
11:AA:901:LEU:CD2	16:AG:27:LEU:HD13	2.14	0.75
16:AG:220:VAL:CA	21:G:157:LEU:HD12	2.14	0.75
16:AG:381:LEU:HA	16:AG:384:LEU:CD1	2.09	0.75
16:AG:425:LEU:HD23	16:AG:429:LYS:NZ	1.99	0.75
16:AG:213:VAL:HG11	16:AG:250:ALA:O	1.84	0.75
16:AG:228:ARG:HD2	16:AG:236:ILE:HB	1.68	0.75
16:AG:313:ASN:N	16:AG:313:ASN:OD1	2.19	0.75
16:AG:425:LEU:CB	16:AG:429:LYS:HE3	2.16	0.75
16:AG:451:ARG:NH1	16:AG:467:LEU:C	2.40	0.75
18:D:815:A:O2'	18:D:816:A:OP1	2.04	0.75
27:M:15:ASP:OD1	27:M:19:GLY:N	2.19	0.75
41:a:2119:A:N6	41:a:2167:U:O2	2.18	0.75
62:v:29:GLY:N	62:v:104:GLU:OE2	2.19	0.75
9:9:32:GLY:O	41:a:1054:A:O2'	2.04	0.75
14:AE:202:ARG:HG2	14:AE:202:ARG:NH1	1.99	0.75
16:AG:218:GLU:HG2	21:G:105:LYS:HB3	1.68	0.75
16:AG:434:LEU:HD11	16:AG:455:THR:O	1.85	0.75
18:D:978:A:HO2'	18:D:1322:C:H5	1.35	0.75
9:9:18:VAL:HG22	9:9:86:MET:SD	2.26	0.75
12:AB:167:ARG:HD3	30:P:97:ASP:N	2.01	0.75
16:AG:62:TRP:HB3	16:AG:75:ILE:HD11	1.69	0.75
16:AG:365:ILE:HG23	16:AG:409:ARG:HH11	1.51	0.75
33:S:33:ASP:OD1	33:S:35:ASN:N	2.20	0.75
39:Y:107:GLU:O	39:Y:111:THR:HG23	1.86	0.75
41:a:1085:A:O2'	41:a:1086:A:O4'	2.03	0.75
41:a:2646:C:OP2	41:a:2732:G:O2'	2.03	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:243:LYS:HG2	21:G:179:LEU:HD22	1.66	0.75
18:D:1119:C:OP2	29:O:11:ARG:NH1	2.19	0.75
18:D:1152:A:OP1	30:P:70:HIS:ND1	2.20	0.75
41:a:1527:G:N1	41:a:1544:A:OP2	2.19	0.75
41:a:2848:G:O2'	41:a:2867:G:N2	2.19	0.75
12:AB:166:GLY:HA2	23:I:61:ALA:CB	2.17	0.75
16:AG:218:GLU:CD	21:G:105:LYS:CB	2.59	0.75
16:AG:258:ARG:HG2	16:AG:258:ARG:NH1	1.99	0.75
39:Y:40:ALA:HB1	39:Y:68:PHE:CE1	2.22	0.75
40:Z:2:ILE:HG22	40:Z:4:LYS:H	1.51	0.75
16:AG:371:THR:O	16:AG:375:GLU:HG3	1.86	0.75
16:AG:434:LEU:CD2	16:AG:455:THR:C	2.58	0.75
11:AA:902:LEU:HD13	16:AG:107:THR:O	1.85	0.75
11:AA:905:ILE:CD1	16:AG:5:ILE:HD11	2.17	0.75
39:Y:79:LEU:HD23	39:Y:83:ALA:HB2	1.68	0.75
14:AE:110:PRO:HG2	14:AE:183:GLU:HG3	1.68	0.74
16:AG:413:ALA:O	16:AG:416:THR:OG1	2.05	0.74
16:AG:434:LEU:CA	16:AG:456:LEU:CD2	2.58	0.74
10:B:36:U:H5	10:B:38:A:C8	2.05	0.74
10:A:60:U:P	10:A:61:C:H41	2.10	0.74
18:D:492:C:H2'	18:D:493:A:C8	2.22	0.74
44:d:89:U:O2'	44:d:90:C:O5'	2.04	0.74
8:7:-20:A:H1'	18:D:791:G:O6	1.87	0.74
16:AG:425:LEU:O	16:AG:429:LYS:HE3	1.87	0.74
41:a:1212:G:O2'	41:a:1213:A:OP2	2.05	0.74
9:9:59:LEU:HB2	9:9:62:ARG:CB	2.16	0.74
16:AG:201:LYS:HD2	16:AG:201:LYS:N	2.01	0.74
18:D:673:A:H2'	18:D:674:G:C8	2.21	0.74
41:a:2850:A:N7	41:a:2868:A:O2'	2.20	0.74
16:AG:354:ALA:O	16:AG:355:ALA:C	2.26	0.74
41:a:1799:G:O2'	48:h:180:GLU:OE2	2.02	0.74
8:7:14:U:H4'	14:AE:322:ARG:CD	2.18	0.74
14:AE:44:ILE:HD12	14:AE:252:LEU:CD2	2.18	0.74
16:AG:385:ALA:HB3	16:AG:411:LYS:HE2	1.68	0.74
9:9:18:VAL:HG13	9:9:71:CYS:SG	2.27	0.74
16:AG:198:THR:HB	16:AG:201:LYS:HD3	1.70	0.74
41:a:1728:C:O2	41:a:1731:G:N1	2.18	0.74
61:u:86:GLU:OE1	61:u:86:GLU:N	2.21	0.74
8:7:-17:U:H1'	8:7:-16:U:OP1	1.87	0.74
9:9:1:MET:HG3	41:a:1046:A:O2'	1.88	0.74
14:AE:211:GLU:HG2	14:AE:215:LYS:HE3	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:107:G:N7	19:E:10:ARG:NH2	2.36	0.74
41:a:1342:A:O2'	41:a:1344:U:OP2	2.05	0.74
16:AG:243:LYS:CE	16:AG:245:ILE:HB	2.17	0.74
16:AG:393:LEU:C	16:AG:398:LEU:HD23	2.12	0.74
18:D:974:A:OP1	33:S:69:ARG:NH1	2.20	0.74
41:a:1084:A:N6	41:a:1085:A:N1	2.35	0.74
41:a:1921:G:O2'	41:a:1922:G:H5'	1.87	0.74
16:AG:363:LEU:CD1	16:AG:410:ALA:HB2	2.17	0.73
16:AG:393:LEU:CD2	16:AG:398:LEU:CG	2.58	0.73
16:AG:434:LEU:CA	16:AG:456:LEU:HD21	2.12	0.73
27:M:111:ARG:NH2	27:M:126:ASP:OD2	2.21	0.73
27:M:138:ARG:NH2	27:M:139:GLU:OE2	2.20	0.73
39:Y:32:VAL:CG1	39:Y:60:VAL:HG21	2.17	0.73
39:Y:123:ALA:HA	39:Y:126:ARG:CZ	2.17	0.73
41:a:887:A:O2'	41:a:889:C:OP2	2.06	0.73
41:a:1240:U:O2'	41:a:1241:A:O5'	2.04	0.73
41:a:2146:C:O2'	41:a:2147:A:O5'	2.06	0.73
5:4:69:GLU:N	5:4:69:GLU:OE2	2.20	0.73
8:7:-1:U:H5'	23:I:80:LYS:HE2	1.70	0.73
14:AE:107:LEU:HD11	14:AE:242:LEU:HB2	1.70	0.73
14:AE:157:GLN:OE1	14:AE:157:GLN:HA	1.89	0.73
38:X:92:ARG:NH1	41:a:888:C:OP1	2.21	0.73
41:a:2788:C:O2'	41:a:2809:A:N3	2.21	0.73
20:F:31:GLU:OE1	20:F:34:ARG:NE	2.15	0.73
6:5:115:DA:OP1	14:AE:1148:ARG:NE	2.21	0.73
14:AE:105:ILE:HD12	14:AE:242:LEU:HD22	1.71	0.73
16:AG:434:LEU:CD2	16:AG:459:LEU:CD1	2.54	0.73
18:D:458:U:N3	18:D:474:G:O6	2.19	0.73
39:Y:116:MET:HE2	39:Y:116:MET:HA	1.69	0.73
54:n:10:ASP:OD1	54:n:11:GLU:N	2.22	0.73
7:6:18:DC:N3	8:7:17:G:N2	2.31	0.73
30:P:75:ASP:OD1	30:P:76:ILE:N	2.21	0.73
12:AB:177:GLN:HG3	12:AB:177:GLN:O	1.88	0.73
14:AE:68:TYR:C	14:AE:75:TYR:CE2	2.65	0.73
18:D:1279:G:O2'	18:D:1282:C:N4	2.21	0.73
39:Y:79:LEU:HD21	39:Y:105:LEU:HD22	1.71	0.73
49:i:31:ASP:OD2	49:i:34:SER:N	2.22	0.73
11:AA:902:LEU:HD12	16:AG:107:THR:HB	1.69	0.73
12:AB:113:ASN:O	12:AB:117:GLN:HG3	1.89	0.73
14:AE:1143:ASP:OD1	14:AE:1148:ARG:NH1	2.21	0.73
16:AG:287:ALA:HB1	16:AG:331:LEU:HD12	1.62	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:297:VAL:HG23	16:AG:306:ASP:HB2	1.71	0.73
16:AG:442:ARG:HB3	16:AG:446:PHE:HE2	1.53	0.73
29:O:128:SER:OG	29:O:130:ARG:OXT	2.02	0.73
12:AB:169:THR:CB	30:P:99:GLN:HB2	2.18	0.73
14:AE:210:SER:HB3	14:AE:213:LYS:HB2	1.71	0.73
16:AG:429:LYS:H	16:AG:429:LYS:HD2	1.53	0.73
39:Y:102:ARG:HD2	39:Y:103:ALA:N	2.03	0.73
63:w:30:ARG:NH1	63:w:74:GLU:OE1	2.22	0.73
48:h:71:LYS:NZ	48:h:98:ASP:OD2	2.20	0.73
8:7:-11:U:O2	8:7:-11:U:H2'	1.89	0.72
14:AE:120:LEU:O	14:AE:1330:ARG:NH1	2.21	0.72
41:a:1931:U:OP2	41:a:1968:G:N1	2.14	0.72
16:AG:216:ILE:CG2	16:AG:221:ILE:CB	2.40	0.72
16:AG:239:LYS:HE2	21:G:63:ARG:NH2	2.03	0.72
16:AG:241:ASN:ND2	21:G:159:ASP:HA	2.01	0.72
16:AG:434:LEU:HD21	16:AG:456:LEU:N	2.03	0.72
29:O:5:GLN:N	29:O:5:GLN:OE1	2.22	0.72
39:Y:9:LYS:O	39:Y:10:LEU:HD22	1.89	0.72
41:a:1023:U:OP2	41:a:1025:G:O2'	2.07	0.72
11:AA:879:GLY:C	11:AA:922:ASN:CB	2.62	0.72
23:I:16:LYS:NZ	23:I:181:ASP:OD1	2.22	0.72
24:J:15:GLU:OE2	24:J:63:ARG:NH1	2.23	0.72
30:P:14:ASP:OD1	30:P:16:ARG:N	2.22	0.72
16:AG:336:LEU:HD12	16:AG:336:LEU:N	2.01	0.72
34:T:64:ARG:NH1	34:T:68:ASP:OD1	2.22	0.72
39:Y:79:LEU:HA	39:Y:83:ALA:HB2	1.70	0.72
16:AG:127:VAL:HG22	16:AG:192:GLY:C	2.15	0.72
9:9:3:LEU:CD1	9:9:5:LEU:HG	2.19	0.72
16:AG:223:ILE:O	16:AG:223:ILE:HD13	1.89	0.72
16:AG:352:ALA:O	16:AG:356:ILE:HG22	1.90	0.72
10:B:24:U:H2'	10:B:25:C:C6	2.25	0.72
18:D:1052:U:O2'	18:D:1055:A:OP2	2.04	0.72
8:7:-4:U:H2'	8:7:-3:U:H5''	1.72	0.72
18:D:610:U:N3	18:D:611:C:C5	2.57	0.72
9:9:24:SER:HB2	9:9:116:GLU:CG	2.19	0.72
9:9:27:VAL:HG22	9:9:29:ASP:OD1	1.90	0.72
11:AA:898:GLU:CB	16:AG:115:VAL:HG22	2.19	0.72
11:AA:899:GLU:HA	16:AG:111:LYS:HG2	1.71	0.72
16:AG:279:ASN:CB	16:AG:280:PRO:CD	2.66	0.72
39:Y:98:GLY:CA	39:Y:137:LEU:HD22	2.18	0.72
41:a:2492:U:H2'	41:a:2493:U:H5'	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:j:33:ARG:NH2	50:j:74:GLU:O	2.22	0.72
16:AG:486:ARG:O	16:AG:490:TRP:CD1	2.41	0.72
18:D:28:A:O2'	18:D:296:U:OP1	2.07	0.72
39:Y:17:ALA:HB2	39:Y:41:PHE:CD2	2.24	0.72
8:7:-18:G:N3	8:7:-16:U:N3	2.37	0.72
16:AG:243:LYS:HE3	16:AG:245:ILE:CA	2.20	0.72
16:AG:403:VAL:HG22	16:AG:406:LEU:HD12	1.72	0.72
41:a:1418:G:N1	41:a:1579:A:OP2	2.20	0.72
41:a:1827:U:OP2	48:h:221:ARG:NE	2.23	0.72
44:d:45:A:O4'	54:n:92:ARG:NE	2.23	0.72
48:h:100:GLU:OE2	48:h:102:ARG:NE	2.21	0.72
12:AB:157:ARG:NH1	12:AB:173:LEU:O	2.23	0.71
7:6:21:DA:C6	8:7:15:G:N2	2.57	0.71
16:AG:365:ILE:HD13	16:AG:406:LEU:HD21	1.70	0.71
16:AG:216:ILE:HG23	16:AG:221:ILE:CG1	2.19	0.71
41:a:126:A:OP1	53:m:45:SER:OG	2.08	0.71
41:a:2469:A:N6	41:a:2481:G:O2'	2.21	0.71
12:AB:158:LEU:HG	12:AB:174:ASP:HA	1.72	0.71
12:AB:169:THR:HB	30:P:99:GLN:HB2	1.71	0.71
18:D:610:U:C4	18:D:611:C:C5	2.79	0.71
18:D:1301:U:O2'	18:D:1302:C:O5'	2.09	0.71
39:Y:37:PHE:HZ	39:Y:56:VAL:HG11	1.56	0.71
9:9:52:MET:SD	9:9:87:GLU:HA	2.30	0.71
12:AB:140:PRO:CB	30:P:102:LEU:CD2	2.60	0.71
16:AG:363:LEU:CD2	16:AG:409:ARG:CB	2.62	0.71
16:AG:365:ILE:HG23	16:AG:409:ARG:NH1	2.02	0.71
16:AG:393:LEU:HD23	16:AG:398:LEU:CD1	2.19	0.71
16:AG:434:LEU:HG	16:AG:455:THR:C	2.14	0.71
18:D:1190:G:OP1	23:I:5:VAL:N	2.24	0.71
26:L:38:ARG:NH2	26:L:98:GLU:O	2.23	0.71
41:a:2898:U:O2'	59:s:134:ALA:O	2.05	0.71
14:AE:142:GLU:HG3	14:AE:142:GLU:O	1.89	0.71
16:AG:218:GLU:CD	21:G:105:LYS:HB3	2.15	0.71
21:G:90:PHE:HB3	21:G:150:GLY:O	1.89	0.71
34:T:18:ASP:OD1	34:T:18:ASP:N	2.21	0.71
39:Y:100:ILE:HG13	39:Y:139:VAL:CB	2.21	0.71
9:9:24:SER:HB2	9:9:116:GLU:HG2	1.72	0.71
14:AE:44:ILE:HD12	14:AE:252:LEU:HD21	1.71	0.71
16:AG:241:ASN:HB3	21:G:158:PRO:O	1.89	0.71
9:9:11:ILE:O	9:9:15:VAL:HG23	1.90	0.71
14:AE:220:ARG:HG2	14:AE:220:ARG:HH11	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:219:GLU:O	21:G:157:LEU:CB	2.34	0.71
16:AG:433:ASP:C	16:AG:456:LEU:CG	2.64	0.71
9:9:73:LYS:HB3	9:9:117:LEU:HD11	1.71	0.71
12:AB:123:ARG:HB2	12:AB:124:PRO:CD	2.16	0.71
16:AG:167:MET:HE1	16:AG:199:ARG:HG3	1.72	0.71
48:h:145:GLU:OE1	48:h:150:LYS:N	2.24	0.71
16:AG:218:GLU:C	21:G:104:TRP:CD1	2.68	0.71
16:AG:242:ASP:O	21:G:179:LEU:C	2.22	0.71
16:AG:282:GLN:NE2	16:AG:282:GLN:HA	2.05	0.71
16:AG:302:LYS:H	16:AG:302:LYS:CE	2.00	0.71
41:a:2581:G:N2	41:a:2581:G:OP2	2.23	0.71
11:AA:906:PHE:CZ	16:AG:100:VAL:HG12	2.23	0.70
16:AG:220:VAL:HG13	21:G:157:LEU:HD13	1.70	0.70
39:Y:42:ASN:HA	39:Y:45:THR:HB	1.73	0.70
8:7:-13:U:H5'	18:D:1397:C:C2	2.27	0.70
8:7:14:U:H4'	14:AE:322:ARG:HD2	1.74	0.70
16:AG:217:GLY:O	21:G:108:ARG:NH1	2.24	0.70
18:D:522:C:OP2	32:R:66:TYR:OH	2.08	0.70
11:AA:65:ASN:HB3	11:AA:105:TYR:HB2	1.73	0.70
14:AE:54:ASP:OD1	14:AE:54:ASP:N	2.24	0.70
16:AG:362:TYR:CA	16:AG:413:ALA:CB	2.69	0.70
18:D:978:A:C4	18:D:1319:A:C2	2.79	0.70
35:U:44:SER:N	35:U:47:GLU:OE1	2.25	0.70
41:a:1213:A:OP2	41:a:1236:G:N2	2.24	0.70
62:v:28:PHE:N	62:v:104:GLU:OE2	2.24	0.70
16:AG:246:ASP:OD1	16:AG:249:GLY:HA3	1.91	0.70
34:T:21:ASP:O	34:T:22:THR:HG22	1.89	0.70
41:a:2223:G:O3'	48:h:265:LYS:NZ	2.17	0.70
16:AG:422:GLU:CB	16:AG:426:GLY:HA3	2.21	0.70
18:D:765:G:N2	18:D:813:U:OP2	2.24	0.70
44:d:40:U:N3	44:d:44:G:OP2	2.23	0.70
9:9:27:VAL:HG13	9:9:83:ALA:HB3	1.72	0.70
16:AG:262:VAL:HA	16:AG:265:GLU:HB2	1.72	0.70
10:A:71:C:H3'	10:A:72:A:C8	2.26	0.70
16:AG:279:ASN:CB	16:AG:280:PRO:HD2	2.22	0.70
16:AG:353:HIS:HA	16:AG:356:ILE:CG2	2.21	0.70
16:AG:355:ALA:CB	16:AG:382:GLU:CG	2.54	0.70
16:AG:389:MET:O	16:AG:404:GLU:OE2	2.09	0.70
18:D:713:G:H2'	18:D:714:G:C8	2.26	0.70
26:L:24:ARG:NH1	58:r:86:ASP:OD2	2.23	0.70
12:AB:128:PHE:CD1	12:AB:175:PHE:CE2	2.80	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:218:GLU:CG	21:G:105:LYS:HB3	2.22	0.70
22:H:71:ALA:C	22:H:72:LEU:HD12	2.16	0.70
41:a:912:C:O5'	62:v:8:LYS:NZ	2.23	0.70
41:a:2572:A:N7	50:j:150:GLN:NE2	2.39	0.70
9:9:63:ALA:HB1	9:9:84:TYR:CE2	2.27	0.70
12:AB:135:ARG:HG2	12:AB:181:ALA:HB2	1.73	0.70
18:D:246:A:C2	18:D:282:A:C5	2.79	0.70
37:W:36:ARG:NH2	37:W:75:ALA:O	2.25	0.70
14:AE:128:LEU:HD11	14:AE:189:LEU:HG	1.73	0.70
16:AG:254:MET:SD	25:K:68:ARG:CZ	2.79	0.70
18:D:859:G:OP2	18:D:869:G:N1	2.23	0.70
39:Y:130:GLY:HA3	41:a:1080:A:O2'	1.92	0.70
41:a:2191:A:H2'	41:a:2192:U:H6	1.57	0.70
9:9:27:VAL:CG1	9:9:83:ALA:HB3	2.22	0.69
11:AA:1268:GLN:HE22	14:AE:352:ARG:HD2	1.55	0.69
32:R:99:ARG:NE	32:R:104:CYS:SG	2.65	0.69
41:a:1028:A:O2'	41:a:1029:A:O5'	2.09	0.69
41:a:1508:A:O2'	41:a:1509:A:OP2	2.09	0.69
41:a:2297:A:C2	41:a:2321:U:C5	2.80	0.69
54:n:135:GLN:N	54:n:135:GLN:OE1	2.24	0.69
16:AG:239:LYS:NZ	21:G:63:ARG:NH2	2.40	0.69
39:Y:75:ALA:HA	39:Y:78:LEU:HG	1.74	0.69
41:a:2683:C:O2	60:t:70:ARG:NH2	2.25	0.69
9:9:55:VAL:HG12	9:9:56:ARG:H	1.58	0.69
11:AA:896:THR:HB	11:AA:897:PRO:HD2	1.74	0.69
12:AB:127:LEU:HD22	12:AB:127:LEU:N	2.02	0.69
16:AG:453:VAL:CG2	16:AG:462:GLN:NE2	2.56	0.69
24:J:99:ASP:OD1	24:J:100:ASN:N	2.25	0.69
41:a:797:G:OP1	52:l:55:SER:OG	2.11	0.69
41:a:2341:G:H2'	41:a:2342:C:C6	2.27	0.69
16:AG:241:ASN:HB2	21:G:181:ILE:HG12	1.73	0.69
34:T:82:ILE:O	34:T:86:GLY:N	2.24	0.69
11:AA:1332:SER:O	14:AE:243:PRO:HG2	1.93	0.69
17:C:28:THR:HA	17:C:31:ASN:OD1	1.92	0.69
11:AA:887:VAL:HG12	11:AA:917:SER:HA	1.75	0.69
12:AB:158:LEU:CD2	12:AB:178:VAL:CG2	2.70	0.69
16:AG:266:LEU:H	16:AG:266:LEU:CD2	2.06	0.69
16:AG:433:ASP:O	16:AG:437:LEU:HG	1.93	0.69
9:9:60:LEU:HA	9:9:64:VAL:HB	1.74	0.69
11:AA:906:PHE:CE1	16:AG:100:VAL:HG11	2.28	0.69
16:AG:60:ARG:HG3	16:AG:98:GLU:HG3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:393:LEU:CD2	16:AG:398:LEU:HD13	2.19	0.69
8:7:-17:U:OP1	8:7:-17:U:C3'	2.40	0.69
9:9:16:SER:HA	9:9:20:LYS:HE2	1.74	0.69
9:9:61:ARG:HA	9:9:65:GLU:OE1	1.91	0.69
11:AA:905:ILE:HD12	16:AG:5:ILE:HD11	1.75	0.69
12:AB:131:GLY:H	12:AB:148:VAL:HB	1.37	0.69
14:AE:39:LYS:O	14:AE:273:ILE:CG2	2.41	0.69
16:AG:107:THR:HA	16:AG:110:ALA:HB3	1.74	0.69
16:AG:285:ILE:HG13	16:AG:293:VAL:HG13	1.71	0.69
16:AG:434:LEU:HD11	16:AG:455:THR:C	2.17	0.69
39:Y:79:LEU:HD23	39:Y:83:ALA:CB	2.22	0.69
41:a:1233:C:N3	41:a:1234:U:C5	2.61	0.69
54:n:171:ALA:O	54:n:174:ASP:N	2.26	0.69
12:AB:135:ARG:O	12:AB:135:ARG:HG3	1.92	0.69
16:AG:218:GLU:HG3	21:G:105:LYS:CA	2.22	0.69
18:D:737:C:C2	18:D:738:C:C5	2.81	0.69
18:D:1270:G:HO2'	18:D:1313:U:HO2'	1.40	0.69
21:G:90:PHE:CD2	21:G:154:MET:CA	2.75	0.69
16:AG:241:ASN:ND2	21:G:158:PRO:O	2.26	0.69
16:AG:462:GLN:OE1	16:AG:467:LEU:HD21	1.93	0.69
8:7:-17:U:H3'	8:7:-17:U:P	2.33	0.68
29:O:12:ARG:O	29:O:15:SER:N	2.26	0.68
41:a:307:G:N1	41:a:310:A:OP2	2.26	0.68
7:6:21:DA:C2	8:7:15:G:N2	2.62	0.68
16:AG:228:ARG:HA	16:AG:327:LEU:CD1	2.22	0.68
16:AG:285:ILE:CD1	16:AG:293:VAL:HG11	2.22	0.68
41:a:636:G:OP2	61:u:109:LYS:NZ	2.22	0.68
4:3:36:VAL:HG11	4:3:39:ILE:HD12	1.73	0.68
9:9:3:LEU:CD1	9:9:4:ASN:H	2.04	0.68
9:9:38:MET:O	9:9:42:ARG:HG3	1.93	0.68
16:AG:429:LYS:CD	16:AG:429:LYS:H	2.05	0.68
21:G:188:ASP:OD1	21:G:189:THR:N	2.26	0.68
22:H:61:GLU:OE1	22:H:61:GLU:N	2.26	0.68
39:Y:72:THR:HG21	39:Y:115:ASP:OD2	1.94	0.68
10:A:47:U:O2'	10:A:50:U:OP1	2.12	0.68
14:AE:94:GLN:HB2	14:AE:97:VAL:HG23	1.76	0.68
14:AE:832:LYS:C	14:AE:1242:ARG:HH12	2.01	0.68
16:AG:287:ALA:HA	16:AG:331:LEU:HD12	0.87	0.68
17:C:61:ARG:NH2	18:D:736:C:OP1	2.26	0.68
41:a:404:A:H1'	41:a:405:U:OP2	1.94	0.68
41:a:1048:A:C2	41:a:1049:C:C5	2.82	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:60:LEU:CD2	9:9:64:VAL:HG21	2.15	0.68
16:AG:425:LEU:CB	16:AG:429:LYS:CE	2.71	0.68
21:G:204:ASP:OD1	21:G:205:ASP:N	2.26	0.68
41:a:2262:U:C2	41:a:2263:C:C5	2.81	0.68
44:d:40:U:O2'	44:d:43:C:OP2	2.03	0.68
7:6:8:DC:C2'	7:6:9:DT:H71	2.24	0.68
9:9:3:LEU:H	9:9:3:LEU:HD12	1.57	0.68
12:AB:135:ARG:CB	12:AB:181:ALA:HB2	2.07	0.68
16:AG:298:VAL:HA	16:AG:303:HIS:HD1	1.58	0.68
39:Y:98:GLY:C	39:Y:99:LYS:HD3	2.19	0.68
57:q:14:CYS:SG	57:q:33:HIS:ND1	2.65	0.68
10:A:6:G:O2'	10:A:7:G:O5'	2.07	0.68
12:AB:137:ASN:HA	12:AB:142:ALA:HA	1.76	0.68
13:AD:48:LEU:HB2	13:AD:183:ILE:HD11	1.75	0.68
14:AE:141:PHE:CD2	14:AE:293:ARG:O	2.47	0.68
18:D:1228:C:OP1	38:X:107:ARG:NH2	2.26	0.68
41:a:584:C:N4	41:a:585:G:O6	2.27	0.68
14:AE:117:LEU:HD12	14:AE:117:LEU:O	1.94	0.68
18:D:1157:A:C2	18:D:1181:G:C4	2.82	0.68
39:Y:105:LEU:HD23	39:Y:108:ILE:HD12	1.75	0.68
11:AA:896:THR:HB	11:AA:897:PRO:CD	2.23	0.68
16:AG:217:GLY:O	21:G:108:ARG:NH2	2.26	0.68
16:AG:355:ALA:C	16:AG:380:THR:HG21	2.18	0.68
32:R:25:GLU:OE2	32:R:59:ASN:ND2	2.26	0.68
11:AA:904:ALA:HB1	16:AG:4:GLU:OE1	1.94	0.68
16:AG:171:GLU:OE1	16:AG:267:GLY:HA3	1.92	0.68
18:D:977:A:O2'	18:D:979:C:OP2	2.09	0.68
41:a:1047:G:N2	41:a:1110:G:O2'	2.26	0.68
9:9:16:SER:CA	9:9:20:LYS:HE2	2.24	0.67
12:AB:130:PRO:HB2	12:AB:151:VAL:HG11	1.77	0.67
16:AG:207:GLU:HA	16:AG:210:ARG:HB2	1.76	0.67
41:a:1791:A:N6	41:a:1828:G:O2'	2.25	0.67
41:a:2062:A:HO2'	41:a:2063:C:H6	1.41	0.67
41:a:2293:G:O6	41:a:2340:A:N6	2.27	0.67
62:v:14:LYS:O	62:v:71:LYS:NZ	2.23	0.67
9:9:78:GLY:N	9:9:79:PRO:CD	2.57	0.67
14:AE:984:LEU:HB3	14:AE:993:GLU:HB2	1.77	0.67
16:AG:323:GLN:HA	16:AG:323:GLN:HE21	1.59	0.67
16:AG:393:LEU:CD2	16:AG:398:LEU:HD22	1.90	0.67
39:Y:79:LEU:HD21	39:Y:105:LEU:CD2	2.24	0.67
41:a:2061:G:N2	41:a:2063:C:C6	2.62	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:49:LYS:NZ	41:a:489:G:N7	2.42	0.67
9:9:67:THR:HG23	9:9:71:CYS:O	1.94	0.67
11:AA:902:LEU:HD23	11:AA:902:LEU:C	2.20	0.67
16:AG:241:ASN:O	21:G:181:ILE:HA	1.93	0.67
16:AG:254:MET:HA	16:AG:254:MET:CE	2.17	0.67
18:D:1004:A:H2'	18:D:1005:A:C8	2.29	0.67
18:D:1436:U:N3	18:D:1437:A:N7	2.42	0.67
41:a:839:U:C2	41:a:840:C:C5	2.83	0.67
12:AB:135:ARG:H	12:AB:181:ALA:H	1.42	0.67
12:AB:159:LYS:HG2	12:AB:170:PRO:HB2	1.76	0.67
16:AG:242:ASP:HB2	21:G:181:ILE:HA	1.75	0.67
16:AG:353:HIS:C	16:AG:357:ASP:H	2.01	0.67
18:D:1515:G:C2'	18:D:1516:G:H5'	2.24	0.67
41:a:575:A:C2	41:a:576:U:C5	2.83	0.67
41:a:1007:C:OP1	59:s:37:ARG:NH2	2.28	0.67
48:h:40:SER:OG	48:h:42:GLY:N	2.27	0.67
16:AG:284:VAL:CG1	16:AG:296:ILE:HD13	2.25	0.67
10:B:38:A:H3'	10:B:39:C:C5	2.29	0.67
18:D:868:C:H2'	18:D:869:G:O4'	1.94	0.67
18:D:975:A:OP1	30:P:59:LYS:NZ	2.27	0.67
41:a:1266:G:OP1	49:i:16:ARG:NE	2.22	0.67
9:9:92:ALA:CB	9:9:129:LEU:HD22	2.25	0.67
11:AA:920:VAL:HG13	11:AA:921:PRO:CD	2.19	0.67
18:D:652:U:C2	18:D:752:G:N2	2.63	0.67
22:H:100:LYS:O	22:H:104:ASP:N	2.27	0.67
33:S:89:MET:N	33:S:89:MET:SD	2.67	0.67
39:Y:57:VAL:HG23	39:Y:71:LYS:NZ	2.10	0.67
10:A:35:A:H2'	10:A:36:U:C6	2.30	0.67
14:AE:111:THR:CG2	14:AE:300:GLN:CD	2.66	0.67
14:AE:1355:ARG:NH1	14:AE:1369:ARG:HH12	1.93	0.67
16:AG:102:PHE:HB2	16:AG:106:THR:HG21	1.75	0.67
18:D:1137:C:O2	18:D:1138:G:N1	2.28	0.67
41:a:1065:U:O2'	41:a:1066:U:O5'	2.13	0.67
11:AA:904:ALA:HB1	16:AG:4:GLU:CD	2.20	0.67
50:j:124:ARG:NH1	50:j:161:MET:O	2.27	0.67
16:AG:168:LEU:HB2	16:AG:171:GLU:HB2	1.76	0.67
16:AG:210:ARG:CB	16:AG:216:ILE:CD1	2.67	0.67
16:AG:235:LYS:HZ2	16:AG:331:LEU:HG	1.59	0.67
18:D:1316:G:N1	18:D:1319:A:OP2	2.28	0.67
29:O:7:TYR:OH	29:O:9:THR:OG1	2.04	0.67
41:a:783:A:O2'	41:a:785:G:OP1	2.12	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:380:THR:O	16:AG:384:LEU:HD12	1.95	0.67
41:a:1721:G:O2'	41:a:1722:A:O5'	2.08	0.67
56:p:121:ILE:HD12	56:p:141:ILE:HG22	1.77	0.67
9:9:101:LYS:O	9:9:105:LYS:NZ	2.27	0.66
16:AG:171:GLU:OE2	16:AG:267:GLY:CA	2.41	0.66
41:a:730:A:OP1	41:a:1775:U:O2'	2.11	0.66
41:a:2494:G:C2	41:a:2495:G:C8	2.82	0.66
54:n:125:ARG:O	54:n:127:ASN:ND2	2.28	0.66
9:9:23:LEU:CA	9:9:118:ILE:HG13	2.25	0.66
9:9:129:LEU:N	9:9:130:PRO:HD3	2.10	0.66
12:AB:161:SER:OG	12:AB:168:ALA:O	2.10	0.66
16:AG:385:ALA:HB2	16:AG:411:LYS:HE3	1.70	0.66
39:Y:116:MET:HG3	39:Y:124:MET:HB3	1.76	0.66
39:Y:140:GLU:OE1	39:Y:140:GLU:N	2.28	0.66
9:9:28:ALA:H	9:9:110:ALA:HA	1.58	0.66
11:AA:906:PHE:CE2	16:AG:31:LEU:HD22	2.29	0.66
12:AB:136:VAL:CG2	12:AB:177:GLN:NE2	2.46	0.66
12:AB:174:ASP:OD2	12:AB:176:SER:CB	2.43	0.66
16:AG:393:LEU:O	16:AG:398:LEU:HD23	1.95	0.66
18:D:333:U:C2	18:D:334:C:C5	2.83	0.66
21:G:59:LYS:O	21:G:62:SER:OG	2.12	0.66
22:H:348:GLN:N	22:H:348:GLN:OE1	2.28	0.66
30:P:7:ARG:N	30:P:101:SER:O	2.24	0.66
36:V:68:SER:OG	36:V:69:LYS:N	2.28	0.66
41:a:2297:A:N1	41:a:2321:U:C5	2.63	0.66
41:a:2856:A:H2'	41:a:2857:G:O4'	1.96	0.66
11:AA:906:PHE:CE1	16:AG:102:PHE:O	2.49	0.66
14:AE:108:ALA:HB3	14:AE:279:LEU:HD22	1.77	0.66
14:AE:161:THR:HG22	14:AE:164:GLN:HB2	1.75	0.66
14:AE:193:ASP:HB3	14:AE:196:GLN:HB2	1.78	0.66
16:AG:308:ALA:HB2	16:AG:344:LEU:HD11	1.77	0.66
41:a:2184:A:H2'	41:a:2185:U:C6	2.30	0.66
9:9:37:LYS:O	9:9:41:LEU:HG	1.95	0.66
14:AE:108:ALA:CB	14:AE:279:LEU:HD22	2.25	0.66
16:AG:448:LEU:CD2	16:AG:473:LEU:HD12	2.24	0.66
8:7:-17:U:H3	18:D:1403:C:HO2'	0.70	0.66
9:9:1:MET:HE2	9:9:2:ALA:H	1.60	0.66
9:9:13:ALA:O	9:9:16:SER:OG	2.11	0.66
9:9:23:LEU:HB3	9:9:92:ALA:HB2	1.76	0.66
16:AG:447:LYS:O	16:AG:470:ILE:HD13	1.95	0.66
18:D:1381:U:C2	18:D:1382:C:C6	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:K:80:THR:OG1	25:K:81:LEU:N	2.29	0.66
41:a:1358:G:O2'	41:a:1359:A:O5'	2.13	0.66
9:9:73:LYS:HB2	9:9:117:LEU:HD21	1.78	0.66
11:AA:813:GLU:HB2	14:AE:461:PHE:HD2	1.61	0.66
12:AB:141:PHE:CZ	30:P:102:LEU:HB2	2.24	0.66
12:AB:174:ASP:C	12:AB:176:SER:N	2.48	0.66
14:AE:84:ILE:O	14:AE:84:ILE:HG13	1.96	0.66
16:AG:393:LEU:HD23	16:AG:398:LEU:HD13	1.78	0.66
39:Y:32:VAL:HG22	39:Y:60:VAL:CG2	2.25	0.66
41:a:667:U:H2'	41:a:668:A:O4'	1.96	0.66
41:a:704:G:O2'	41:a:705:A:OP2	2.12	0.66
41:a:1924:C:O2'	41:a:1925:C:H5'	1.95	0.66
12:AB:167:ARG:HD2	30:P:97:ASP:HA	1.69	0.66
8:7:-20:A:C2	18:D:790:A:N7	2.64	0.66
16:AG:440:VAL:HG23	16:AG:481:LEU:HD22	1.76	0.66
17:C:37:GLY:O	17:C:63:ARG:NH2	2.28	0.66
39:Y:95:ASP:O	39:Y:97:VAL:HG23	1.96	0.66
41:a:1924:C:C2'	41:a:1925:C:H5'	2.25	0.66
41:a:2192:U:H2'	41:a:2193:G:C8	2.30	0.66
64:x:99:TYR:OH	64:x:111:ARG:NH1	2.29	0.66
9:9:59:LEU:N	9:9:59:LEU:HD12	2.11	0.66
12:AB:135:ARG:N	12:AB:181:ALA:OXT	2.27	0.66
16:AG:235:LYS:NZ	16:AG:331:LEU:HG	2.10	0.66
28:N:3:MET:HA	28:N:3:MET:HE3	1.77	0.66
41:a:1800:C:OP1	48:h:258:ARG:NH2	2.28	0.66
65:y:53:ARG:N	65:y:57:SER:OG	2.29	0.66
9:9:33:VAL:HG12	9:9:34:THR:N	2.10	0.65
25:K:13:GLU:OE2	25:K:68:ARG:NH1	2.29	0.65
16:AG:242:ASP:O	21:G:179:LEU:O	1.81	0.65
39:Y:100:ILE:HG13	39:Y:139:VAL:CA	2.26	0.65
53:m:13:ASN:O	53:m:17:GLY:N	2.26	0.65
8:7:-17:U:C1'	8:7:-16:U:P	2.85	0.65
16:AG:227:ALA:HB3	16:AG:331:LEU:HA	1.78	0.65
41:a:216:A:C8	41:a:432:A:N6	2.64	0.65
10:A:31:G:H2'	10:A:32:C:C6	2.31	0.65
11:AA:905:ILE:HG12	16:AG:31:LEU:CD1	2.26	0.65
16:AG:220:VAL:HA	21:G:157:LEU:HB2	1.77	0.65
16:AG:353:HIS:HA	16:AG:356:ILE:HG23	1.78	0.65
10:B:36:U:C5	10:B:38:A:C8	2.85	0.65
18:D:1458:G:OP1	19:E:30:THR:OG1	2.07	0.65
12:AB:93:ILE:HG22	14:AE:290:ILE:HG22	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:1037:PHE:HB3	14:AE:1040:MET:HB2	1.78	0.65
16:AG:123:ARG:HG2	16:AG:191:ARG:O	1.96	0.65
39:Y:100:ILE:CD1	39:Y:139:VAL:HB	2.26	0.65
39:Y:139:VAL:HG13	39:Y:141:ASP:HB2	1.78	0.65
16:AG:183:LEU:HA	16:AG:197:VAL:HA	1.78	0.65
41:a:2885:G:O6	49:i:29:SER:OG	2.13	0.65
59:s:58:ASN:N	59:s:127:GLY:O	2.26	0.65
9:9:92:ALA:O	9:9:129:LEU:HD13	1.97	0.65
14:AE:141:PHE:HD2	14:AE:293:ARG:O	1.80	0.65
16:AG:64:VAL:HG22	16:AG:75:ILE:HD12	1.78	0.65
39:Y:96:LYS:HD2	39:Y:96:LYS:N	2.11	0.65
41:a:627:A:N6	41:a:637:A:O5'	2.29	0.65
44:d:16:G:N2	44:d:69:G:H1'	2.12	0.65
18:D:381:C:H2'	18:D:382:A:O4'	1.97	0.65
20:F:7:ARG:N	20:F:10:GLU:OE1	2.28	0.65
41:a:1075:C:H2'	41:a:1076:C:C6	2.32	0.65
41:a:1712:U:OP2	41:a:1713:A:O2'	2.04	0.65
9:9:22:ALA:HB3	9:9:87:GLU:HB3	1.78	0.65
12:AB:167:ARG:NH1	12:AB:167:ARG:HG3	2.12	0.65
16:AG:365:ILE:CG2	16:AG:409:ARG:HH11	2.01	0.65
41:a:1076:C:O2'	41:a:1077:A:O4'	2.12	0.65
41:a:1320:C:H2'	41:a:1329:U:OP1	1.97	0.65
16:AG:133:HIS:ND1	16:AG:136:GLU:CD	2.55	0.65
18:D:35:G:N3	32:R:115:SER:OG	2.30	0.65
18:D:496:A:N3	18:D:496:A:H2'	2.10	0.65
18:D:1272:G:H2'	18:D:1273:C:C6	2.32	0.65
33:S:47:LYS:O	33:S:50:THR:OG1	2.13	0.65
41:a:1296:G:OP1	41:a:2709:G:O2'	2.12	0.65
47:g:37:CYS:N	47:g:40:CYS:SG	2.63	0.65
16:AG:232:SER:HB2	16:AG:323:GLN:OE1	1.96	0.64
16:AG:425:LEU:O	16:AG:429:LYS:CE	2.45	0.64
39:Y:127:SER:HA	41:a:1081:U:H4'	1.79	0.64
41:a:760:G:H2'	41:a:761:A:O4'	1.97	0.64
41:a:1251:C:OP2	66:z:6:ARG:NH2	2.30	0.64
41:a:1721:G:HO2'	41:a:1722:A:P	2.20	0.64
52:l:171:ASP:OD1	52:l:172:ALA:N	2.30	0.64
7:6:16:DC:H1'	14:AE:426:ALA:HB1	1.77	0.64
9:9:7:ASP:OD1	9:9:7:ASP:N	2.25	0.64
12:AB:167:ARG:HD3	30:P:96:VAL:C	2.23	0.64
16:AG:210:ARG:HG2	16:AG:216:ILE:HD12	1.78	0.64
18:D:842:U:H3'	18:D:843:U:C5'	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1486:G:H2'	18:D:1487:G:O4'	1.97	0.64
24:J:95:GLU:OE2	24:J:104:ARG:NH1	2.30	0.64
39:Y:63:ASP:C	39:Y:65:SER:H	2.04	0.64
39:Y:102:ARG:HD2	39:Y:103:ALA:H	1.62	0.64
41:a:1997:C:OP2	50:j:129:THR:OG1	2.14	0.64
44:d:29:A:O2'	44:d:58:A:N1	2.30	0.64
12:AB:135:ARG:HG2	12:AB:181:ALA:CB	2.24	0.64
54:n:117:LEU:N	54:n:177:PHE:O	2.30	0.64
12:AB:165:PHE:HZ	30:P:100:ILE:HG13	1.62	0.64
14:AE:67:ASP:OD1	14:AE:95:THR:OG1	2.15	0.64
16:AG:437:LEU:CD2	16:AG:456:LEU:HD11	2.27	0.64
10:B:22:G:HO2'	10:B:23:C:P	2.19	0.64
18:D:306:A:C5	18:D:307:C:C5	2.85	0.64
39:Y:21:PRO:HD2	39:Y:22:PRO:HD3	1.78	0.64
39:Y:58:ILE:HG22	39:Y:60:VAL:HG22	1.79	0.64
39:Y:116:MET:CB	39:Y:124:MET:HG2	2.27	0.64
11:AA:314:ASN:HD21	11:AA:348:SER:HA	1.62	0.64
14:AE:68:TYR:HB3	14:AE:75:TYR:CE2	2.32	0.64
16:AG:218:GLU:CD	21:G:105:LYS:CA	2.70	0.64
16:AG:453:VAL:HG13	16:AG:458:ASP:HB3	1.77	0.64
22:H:291:GLY:HA2	22:H:305:HIS:HA	1.79	0.64
39:Y:19:PRO:HB2	39:Y:22:PRO:HD2	1.79	0.64
41:a:271:G:H4'	41:a:272:A:OP1	1.97	0.64
41:a:466:A:OP1	53:m:34:ARG:NH1	2.31	0.64
41:a:543:G:C6	41:a:551:G:C6	2.85	0.64
10:A:4:G:C6	10:A:70:G:C6	2.85	0.64
12:AB:128:PHE:HB2	12:AB:175:PHE:HE1	1.19	0.64
14:AE:162:GLU:OE1	14:AE:162:GLU:HA	1.97	0.64
14:AE:245:LEU:HG	14:AE:246:PRO:HD2	1.80	0.64
16:AG:131:ARG:HG2	16:AG:186:VAL:HG12	1.80	0.64
16:AG:353:HIS:CA	16:AG:356:ILE:CG2	2.76	0.64
10:B:46:G:OP1	10:B:46:G:C8	2.51	0.64
10:B:53:G:C2	10:B:54:U:C5	2.85	0.64
41:a:544:C:H2'	41:a:545:U:C2	2.32	0.64
41:a:1558:C:O4'	41:a:1560:G:C8	2.51	0.64
44:d:15:A:OP2	44:d:69:G:N1	2.24	0.64
6:5:98:DA:C2'	6:5:99:DT:H72	2.28	0.64
8:7:-18:G:N2	8:7:-16:U:O2	2.26	0.64
14:AE:978:ARG:HG2	14:AE:1197:ASN:HD21	1.60	0.64
10:B:27:U:C2	10:B:28:C:C5	2.86	0.64
18:D:334:C:C2	18:D:335:C:C5	2.86	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:545:U:O3'	41:a:546:U:H4'	1.97	0.64
41:a:1145:C:C2	41:a:1146:C:C5	2.86	0.64
41:a:1521:G:OP2	41:a:1522:A:O2'	2.08	0.64
41:a:1909:C:N3	41:a:1922:G:N1	2.45	0.64
63:w:49:GLU:OE1	63:w:94:TYR:N	2.30	0.64
9:9:3:LEU:HD13	9:9:4:ASN:H	1.60	0.64
14:AE:975:ILE:HG22	14:AE:977:SER:H	1.62	0.64
16:AG:422:GLU:CA	16:AG:426:GLY:CA	2.65	0.64
16:AG:425:LEU:HG	16:AG:429:LYS:HD3	1.78	0.64
16:AG:433:ASP:O	16:AG:456:LEU:CG	2.45	0.64
41:a:1613:G:O2'	53:m:3:ARG:NH2	2.31	0.64
41:a:1788:C:C2	41:a:1789:A:C8	2.86	0.64
6:5:101:DT:OP2	14:AE:275:ARG:NH2	2.31	0.64
9:9:77:VAL:O	9:9:82:ILE:HG13	1.98	0.64
11:AA:890:LYS:HA	11:AA:914:LYS:HG2	1.79	0.64
12:AB:130:PRO:HB2	12:AB:148:VAL:HG21	1.80	0.64
12:AB:135:ARG:HB3	12:AB:181:ALA:HB3	0.65	0.64
12:AB:144:PHE:CD1	12:AB:164:ILE:HG23	2.33	0.64
12:AB:158:LEU:HG	12:AB:174:ASP:CA	2.28	0.64
16:AG:233:ARG:CB	16:AG:327:LEU:HD23	2.28	0.64
16:AG:361:LYS:CD	16:AG:417:ILE:CG1	2.75	0.64
16:AG:379:SER:HG	16:AG:384:LEU:HD21	1.62	0.64
17:C:11:CYS:SG	17:C:14:THR:N	2.69	0.64
18:D:123:U:C2	18:D:124:C:C5	2.86	0.64
18:D:1209:C:C2	18:D:1210:C:C5	2.86	0.64
18:D:1276:G:C2'	18:D:1277:C:H5'	2.27	0.64
41:a:2466:C:C2	41:a:2467:C:C5	2.86	0.64
6:5:100:DA:H4'	12:AB:16:SER:OG	1.98	0.64
10:A:53:G:C2	10:A:54:U:C5	2.85	0.64
12:AB:157:ARG:HH12	12:AB:174:ASP:CA	2.10	0.64
16:AG:213:VAL:HG23	16:AG:216:ILE:CG1	2.28	0.64
16:AG:219:GLU:CG	21:G:156:GLY:HA3	2.23	0.64
16:AG:354:ALA:CA	16:AG:357:ASP:H	2.10	0.64
18:D:554:A:OP1	32:R:19:SER:OG	2.14	0.64
18:D:1175:G:N3	18:D:1176:A:C8	2.66	0.64
18:D:1314:C:H2'	18:D:1315:U:H6	1.63	0.64
41:a:1993:U:H4'	50:j:133:THR:HG22	1.80	0.64
9:9:6:GLN:OE1	9:9:9:GLN:HB3	1.99	0.63
10:A:76:A:O2'	41:a:2394:C:C4	2.51	0.63
11:AA:848:GLU:HG2	11:AA:888:THR:HG21	1.80	0.63
16:AG:349:GLN:C	16:AG:351:GLU:H	2.06	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:434:LEU:HD12	16:AG:454:CYS:C	2.22	0.63
18:D:1077:G:N2	18:D:1080:A:OP2	2.30	0.63
41:a:1068:G:N2	41:a:1095:A:O3'	2.31	0.63
41:a:2767:C:C2	41:a:2768:U:C5	2.86	0.63
41:a:2812:G:H2'	41:a:2813:A:O4'	1.98	0.63
11:AA:1280:ALA:HB1	14:AE:918:ILE:HG22	1.79	0.63
12:AB:174:ASP:OD2	12:AB:176:SER:HB3	1.99	0.63
16:AG:226:ALA:O	16:AG:228:ARG:HD3	1.97	0.63
28:N:5:ASP:OD2	28:N:77:ARG:NH1	2.25	0.63
39:Y:72:THR:OG1	39:Y:73:PRO:HD2	1.98	0.63
41:a:989:G:OP2	46:f:12:SER:OG	2.13	0.63
41:a:2262:U:N3	41:a:2263:C:C5	2.66	0.63
52:l:51:GLU:OE2	52:l:88:ARG:NH2	2.31	0.63
11:AA:898:GLU:OE1	11:AA:898:GLU:N	2.31	0.63
12:AB:157:ARG:HD2	12:AB:172:GLU:OE2	1.99	0.63
14:AE:44:ILE:CD1	14:AE:252:LEU:HD21	2.29	0.63
16:AG:239:LYS:CE	21:G:63:ARG:NH2	2.60	0.63
18:D:83:C:O2'	18:D:86:G:O6	2.16	0.63
41:a:1347:A:C5	41:a:1348:C:C6	2.87	0.63
41:a:2835:A:N6	41:a:2879:A:O5'	2.31	0.63
9:9:35:VAL:HG21	39:Y:2:LYS:HA	1.81	0.63
16:AG:287:ALA:HB1	16:AG:331:LEU:HB3	1.81	0.63
16:AG:355:ALA:CB	16:AG:382:GLU:OE1	2.18	0.63
18:D:1321:U:O2'	37:W:78:ARG:NH2	2.31	0.63
41:a:68:G:N2	41:a:74:A:N3	2.46	0.63
48:h:44:ASN:OD1	48:h:46:ASN:N	2.32	0.63
4:3:82:ARG:NH2	41:a:300:A:OP2	2.30	0.63
10:A:60:U:H3'	10:A:61:C:C5	2.34	0.63
16:AG:239:LYS:HZ1	21:G:63:ARG:NE	1.96	0.63
8:7:20:G:OP1	11:AA:1073:LYS:NZ	2.25	0.63
9:9:4:ASN:HA	9:9:7:ASP:OD2	1.98	0.63
11:AA:880:GLY:N	11:AA:921:PRO:O	2.32	0.63
11:AA:898:GLU:HB2	16:AG:115:VAL:CG2	2.28	0.63
11:AA:1287:LEU:HD13	14:AE:1357:ILE:HD11	1.81	0.63
14:AE:136:GLU:CD	14:AE:312:ARG:HH22	2.06	0.63
16:AG:242:ASP:CG	21:G:182:PRO:HD3	2.24	0.63
17:C:32:TYR:HD1	17:C:45:THR:HG21	1.63	0.63
21:G:90:PHE:CB	21:G:150:GLY:O	2.46	0.63
39:Y:37:PHE:CZ	39:Y:56:VAL:HG11	2.34	0.63
41:a:306:U:H2'	41:a:307:G:O4'	1.98	0.63
41:a:548:G:H3'	41:a:549:G:O4'	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:86:ARG:NH1	4:3:100:SER:O	2.31	0.63
9:9:35:VAL:HG11	39:Y:2:LYS:CB	2.28	0.63
11:AA:120:GLN:NE2	11:AA:490:GLN:OE1	2.32	0.63
11:AA:879:GLY:O	11:AA:922:ASN:CB	2.45	0.63
12:AB:167:ARG:CG	30:P:97:ASP:HA	2.26	0.63
41:a:927:A:H2'	41:a:928:A:C8	2.34	0.63
41:a:994:C:O2'	41:a:996:A:OP1	2.06	0.63
41:a:1506:U:H2'	41:a:1507:C:C6	2.34	0.63
56:p:137:ASP:OD1	56:p:139:GLN:N	2.32	0.63
11:AA:1282:GLY:HA3	15:AF:17:PHE:HE1	1.63	0.63
12:AB:140:PRO:HG3	30:P:102:LEU:CD2	2.25	0.63
12:AB:157:ARG:HA	12:AB:157:ARG:CZ	2.28	0.63
16:AG:223:ILE:HA	16:AG:238:VAL:HG12	1.81	0.63
16:AG:266:LEU:H	16:AG:266:LEU:HD23	1.64	0.63
21:G:149:GLY:HA2	21:G:152:LYS:HD3	1.81	0.63
41:a:985:C:C2	41:a:986:C:C5	2.86	0.63
41:a:1145:C:N3	41:a:1146:C:C5	2.66	0.63
54:n:46:ASP:OD2	54:n:49:LEU:HD13	1.99	0.63
16:AG:63:LEU:HD22	16:AG:92:TYR:HD1	1.63	0.63
16:AG:205:LEU:HA	16:AG:208:LEU:HB2	1.80	0.63
39:Y:78:LEU:HB3	39:Y:108:ILE:CG2	2.29	0.63
41:a:2231:U:O3'	43:c:29:PHE:HE1	1.82	0.63
7:6:15:DC:N4	7:6:16:DC:H41	1.96	0.62
9:9:124:ASP:O	9:9:126:LEU:HG	1.98	0.62
10:A:75:C:O3'	10:A:76:A:H8	1.81	0.62
16:AG:354:ALA:HA	16:AG:357:ASP:CA	2.29	0.62
27:M:9:GLN:N	27:M:9:GLN:OE1	2.32	0.62
39:Y:100:ILE:HD13	39:Y:132:ALA:HB1	1.79	0.62
41:a:1278:C:O2'	63:w:27:SER:OG	2.15	0.62
16:AG:422:GLU:HG2	16:AG:426:GLY:HA3	1.80	0.62
16:AG:433:ASP:C	16:AG:456:LEU:CD1	2.72	0.62
41:a:381:G:OP1	43:c:18:ARG:NH2	2.31	0.62
41:a:1107:G:C2	41:a:1108:U:C6	2.87	0.62
3:2:65:GLY:N	3:2:79:ASP:OD1	2.32	0.62
8:7:-18:G:N3	8:7:-16:U:C2	2.68	0.62
16:AG:174:ARG:HB3	16:AG:175:PRO:CD	2.25	0.62
16:AG:301:ASP:OD1	16:AG:301:ASP:N	2.32	0.62
39:Y:20:SER:HB3	39:Y:21:PRO:HD3	1.82	0.62
41:a:838:C:N3	41:a:839:U:C5	2.67	0.62
9:9:60:LEU:HA	9:9:64:VAL:CG2	2.29	0.62
9:9:88:HIS:HB3	9:9:89:PRO:HD2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:434:LEU:CD1	16:AG:454:CYS:C	2.72	0.62
22:H:310:ASP:OD2	22:H:312:THR:OG1	2.16	0.62
29:O:12:ARG:NH1	29:O:107:ASP:OD2	2.33	0.62
39:Y:60:VAL:HG22	39:Y:66:PHE:CB	2.29	0.62
39:Y:93:ASN:HA	39:Y:135:MET:HE3	1.80	0.62
41:a:1499:C:C2	41:a:1500:G:C8	2.87	0.62
41:a:2683:C:OP1	65:y:51:ARG:NH2	2.28	0.62
10:A:51:C:C4	10:A:52:G:N7	2.68	0.62
14:AE:111:THR:CG2	14:AE:300:GLN:NE2	2.63	0.62
16:AG:244:ARG:HG2	16:AG:244:ARG:NH2	2.09	0.62
16:AG:323:GLN:HE21	16:AG:323:GLN:CA	2.12	0.62
18:D:518:C:O2'	18:D:530:G:N2	2.32	0.62
39:Y:14:ALA:CB	39:Y:50:LYS:HA	2.30	0.62
41:a:2819:G:O2'	41:a:2820:A:H5''	1.99	0.62
12:AB:155:LYS:NZ	12:AB:155:LYS:HB3	2.13	0.62
14:AE:201:LEU:HB2	14:AE:221:ILE:HD13	1.80	0.62
16:AG:220:VAL:HG22	21:G:157:LEU:CD1	2.29	0.62
16:AG:239:LYS:NZ	21:G:63:ARG:HD2	2.14	0.62
16:AG:243:LYS:CD	16:AG:245:ILE:HG12	2.29	0.62
10:B:16:C:H3'	10:B:17:C:H5''	1.81	0.62
18:D:215:C:H2'	18:D:216:U:O4'	1.99	0.62
18:D:501:C:OP1	32:R:114:ARG:NH2	2.29	0.62
39:Y:32:VAL:HG22	39:Y:60:VAL:HG21	1.81	0.62
10:A:16:C:H3'	10:A:17:C:H5''	1.82	0.62
16:AG:162:ILE:HD11	16:AG:199:ARG:HD2	1.80	0.62
16:AG:285:ILE:HD13	16:AG:285:ILE:N	2.15	0.62
18:D:1382:C:N3	18:D:1383:C:C5	2.68	0.62
41:a:2259:U:N3	41:a:2260:C:C5	2.68	0.62
9:9:18:VAL:HG11	9:9:71:CYS:HB2	1.82	0.62
14:AE:1355:ARG:NH1	14:AE:1369:ARG:NH1	2.47	0.62
16:AG:424:SER:C	16:AG:429:LYS:CG	2.72	0.62
18:D:610:U:C2	18:D:611:C:C6	2.88	0.62
18:D:1311:A:OP1	47:g:59:ARG:NH1	2.33	0.62
9:9:73:LYS:CB	9:9:117:LEU:HD21	2.29	0.62
10:A:58:A:O2'	10:A:59:A:O5'	2.18	0.62
14:AE:395:LYS:NZ	14:AE:399:LYS:HD3	2.15	0.62
16:AG:288:MET:SD	16:AG:293:VAL:N	2.73	0.62
16:AG:422:GLU:CA	16:AG:426:GLY:H	2.09	0.62
16:AG:428:ASN:O	16:AG:428:ASN:ND2	2.32	0.62
16:AG:453:VAL:HG21	16:AG:462:GLN:CD	2.25	0.62
39:Y:100:ILE:HG13	39:Y:139:VAL:HB	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:121:ILE:HA	39:Y:124:MET:SD	2.39	0.62
41:a:630:G:N2	41:a:633:A:OP2	2.31	0.62
41:a:1172:C:O2'	41:a:1173:U:O4'	2.17	0.62
41:a:1509:A:N3	41:a:1510:G:C8	2.68	0.62
41:a:2447:G:C2'	41:a:2500:U:OP2	2.48	0.62
11:AA:902:LEU:HD22	16:AG:111:LYS:HE2	1.81	0.62
14:AE:90:VAL:O	14:AE:90:VAL:CG1	2.48	0.62
18:D:411:A:OP1	24:J:26:ARG:NH1	2.31	0.62
32:R:101:ALA:O	32:R:103:ASP:N	2.31	0.62
41:a:1105:U:H2'	41:a:1106:G:H8	1.65	0.62
41:a:1175:A:OP1	41:a:1177:G:H1'	2.00	0.62
11:AA:1328:LYS:HE2	14:AE:100:GLU:HA	1.82	0.61
16:AG:389:MET:HE3	16:AG:407:ARG:HD2	1.81	0.61
18:D:255:G:P	36:V:71:LYS:HZ1	2.22	0.61
22:H:304:VAL:O	22:H:304:VAL:HG12	1.99	0.61
25:K:160:SER:N	25:K:163:GLU:OE1	2.28	0.61
41:a:828:U:O2'	41:a:829:A:O5'	2.18	0.61
41:a:2625:G:H2'	41:a:2626:C:C6	2.35	0.61
9:9:60:LEU:CA	9:9:64:VAL:HB	2.30	0.61
9:9:92:ALA:HB1	9:9:129:LEU:HD22	1.82	0.61
14:AE:128:LEU:HA	14:AE:192:MET:HE1	1.81	0.61
16:AG:168:LEU:HD21	16:AG:230:PRO:O	2.00	0.61
39:Y:33:ASN:H	39:Y:66:PHE:HE1	1.48	0.61
41:a:1114:C:H2'	41:a:1115:G:C8	2.35	0.61
41:a:2405:G:O2'	41:a:2411:A:N6	2.31	0.61
41:a:2453:A:N6	41:a:2499:C:H42	1.98	0.61
9:9:48:ALA:HB3	9:9:51:TYR:CE2	2.35	0.61
14:AE:92:VAL:O	14:AE:92:VAL:HG12	1.99	0.61
16:AG:219:GLU:CG	21:G:156:GLY:CA	2.78	0.61
16:AG:387:VAL:CB	16:AG:388:PRO:CD	2.76	0.61
20:F:51:SER:OG	20:F:55:ARG:NH2	2.34	0.61
24:J:100:ASN:OD1	24:J:111:ARG:NH1	2.33	0.61
39:Y:80:LYS:HG3	39:Y:86:LYS:CA	2.30	0.61
41:a:442:G:C6	41:a:444:C:N4	2.68	0.61
58:r:7:ASP:OD2	58:r:8:LYS:N	2.33	0.61
11:AA:528:ARG:NH2	11:AA:576:SER:O	2.30	0.61
12:AB:141:PHE:CE2	30:P:102:LEU:HB3	2.25	0.61
12:AB:167:ARG:CG	12:AB:167:ARG:HH11	2.13	0.61
16:AG:421:GLN:O	16:AG:425:LEU:N	2.34	0.61
41:a:2070:A:C2	41:a:2442:C:C2	2.88	0.61
7:6:15:DC:C4	7:6:16:DC:C4	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:22:G:O2'	10:A:23:C:OP1	2.14	0.61
16:AG:380:THR:C	16:AG:384:LEU:HD11	2.24	0.61
16:AG:402:THR:O	16:AG:406:LEU:N	2.33	0.61
41:a:607:U:H5	41:a:620:G:C4	2.18	0.61
41:a:1067:A:O2'	41:a:1068:G:O4'	2.18	0.61
12:AB:134:VAL:HA	12:AB:181:ALA:C	2.26	0.61
13:AC:45:ARG:HD3	13:AD:38:THR:HB	1.83	0.61
16:AG:27:LEU:HD22	16:AG:114:ILE:HG23	1.82	0.61
16:AG:320:ARG:CG	16:AG:320:ARG:HH11	2.14	0.61
18:D:689:C:HO2'	18:D:705:G:HO2'	1.46	0.61
18:D:945:G:C2	18:D:946:A:C8	2.89	0.61
22:H:19:ARG:O	22:H:72:LEU:HB2	2.01	0.61
39:Y:80:LYS:HG3	39:Y:86:LYS:HB3	1.82	0.61
41:a:1383:A:H1'	41:a:1405:U:O2'	2.00	0.61
54:n:74:VAL:HG22	54:n:79:ILE:HD11	1.81	0.61
11:AA:906:PHE:CZ	16:AG:100:VAL:HG11	2.34	0.61
16:AG:213:VAL:HG11	16:AG:250:ALA:C	2.25	0.61
16:AG:221:ILE:HD13	16:AG:247:PRO:HA	1.81	0.61
18:D:664:G:H22	18:D:741:G:H1	1.49	0.61
30:P:33:GLY:N	30:P:83:THR:OG1	2.34	0.61
41:a:245:G:O6	55:o:8:ARG:NH1	2.34	0.61
41:a:581:C:H2'	41:a:582:A:H8	1.66	0.61
41:a:1708:C:C2	41:a:1709:U:C5	2.89	0.61
41:a:2149:U:H2'	41:a:2150:C:C6	2.36	0.61
13:AD:211:ILE:HG12	13:AD:219:ARG:HH12	1.65	0.61
16:AG:253:GLY:HA3	16:AG:258:ARG:HD2	1.82	0.61
16:AG:361:LYS:CE	16:AG:417:ILE:CG1	2.74	0.61
18:D:701:U:O2	18:D:703:G:N1	2.34	0.61
41:a:1141:U:H4'	41:a:1142:A:O4'	2.00	0.61
41:a:1581:G:C4	41:a:1582:C:C5	2.89	0.61
41:a:2328:A:H2'	41:a:2329:U:C6	2.35	0.61
9:9:17:GLU:OE2	9:9:53:ARG:NH1	2.33	0.61
9:9:67:THR:HG22	9:9:72:LEU:HA	1.83	0.61
12:AB:157:ARG:NH1	12:AB:174:ASP:CB	2.32	0.61
18:D:255:G:OP1	36:V:71:LYS:NZ	2.33	0.61
18:D:842:U:O2'	18:D:844:G:N2	2.29	0.61
18:D:1381:U:N3	18:D:1382:C:C5	2.69	0.61
41:a:357:C:H2'	41:a:358:U:C6	2.36	0.61
41:a:1405:U:C2	41:a:1406:U:C5	2.89	0.61
59:s:49:ASP:OD1	59:s:121:LYS:NZ	2.30	0.61
11:AA:55:SER:OG	11:AA:465:ARG:NH1	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:68:TYR:HB3	14:AE:75:TYR:CZ	2.35	0.61
16:AG:285:ILE:CG2	16:AG:293:VAL:HG11	2.28	0.61
16:AG:321:ASN:OD1	16:AG:321:ASN:N	2.25	0.61
18:D:1125:U:N3	18:D:1127:G:C8	2.69	0.61
29:O:86:ALA:O	29:O:90:TYR:N	2.28	0.61
41:a:283:G:N2	41:a:358:U:O2	2.33	0.61
41:a:728:G:C4	41:a:730:A:C8	2.89	0.61
41:a:1385:A:C4	41:a:1403:A:C2	2.88	0.61
41:a:1906:G:C8	41:a:1929:G:C5	2.89	0.61
9:9:63:ALA:HB1	9:9:84:TYR:HE2	1.65	0.60
13:AD:112:ALA:HB3	13:AD:126:PRO:HA	1.83	0.60
16:AG:197:VAL:HG11	16:AG:199:ARG:HH21	1.66	0.60
16:AG:363:LEU:CD2	16:AG:409:ARG:CA	2.71	0.60
16:AG:434:LEU:HG	16:AG:456:LEU:N	2.16	0.60
18:D:444:G:C6	18:D:491:G:C6	2.89	0.60
31:Q:35:THR:OG1	31:Q:40:ASN:O	2.17	0.60
39:Y:89:SER:OG	39:Y:135:MET:SD	2.59	0.60
41:a:135:U:N3	41:a:136:G:N7	2.48	0.60
41:a:2473:U:C4	41:a:2474:U:C5	2.88	0.60
59:s:70:THR:OG1	59:s:71:ASP:OD1	2.11	0.60
59:s:84:ILE:HG23	59:s:84:ILE:O	1.99	0.60
3:2:6:ARG:NH1	3:2:42:GLU:OE1	2.34	0.60
12:AB:163:SER:C	12:AB:164:ILE:HG13	2.26	0.60
14:AE:223:LEU:HG	14:AE:223:LEU:O	2.00	0.60
16:AG:10:GLU:HA	16:AG:12:VAL:HG22	1.83	0.60
16:AG:127:VAL:CG2	16:AG:192:GLY:CA	2.78	0.60
10:B:11:A:H2'	10:B:12:G:O4'	2.01	0.60
10:B:27:U:H2'	10:B:28:C:H6	1.65	0.60
18:D:565:U:OP2	18:D:566:G:O2'	2.15	0.60
18:D:1078:U:O2'	18:D:1079:G:H5'	2.01	0.60
18:D:1356:G:H2'	18:D:1357:A:C8	2.36	0.60
41:a:84:A:N1	41:a:98:G:O2'	2.33	0.60
41:a:476:G:N1	41:a:479:A:OP2	2.34	0.60
41:a:1246:A:O2'	41:a:1247:A:O5'	2.17	0.60
41:a:2000:C:OP1	63:w:5:LYS:NZ	2.31	0.60
10:A:58:A:O2'	10:A:60:U:OP2	2.19	0.60
11:AA:806:PRO:O	14:AE:633:ALA:HA	2.01	0.60
11:AA:888:THR:N	11:AA:889:PRO:CD	2.59	0.60
11:AA:1072:ASN:ND2	11:AA:1111:GLN:OE1	2.34	0.60
16:AG:279:ASN:HB3	16:AG:280:PRO:HD2	1.82	0.60
16:AG:451:ARG:CZ	16:AG:469:ASP:HB2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:22:G:OP2	10:B:22:G:H8	1.83	0.60
18:D:419:C:N3	18:D:425:G:N1	2.49	0.60
18:D:766:A:OP2	18:D:812:G:N2	2.33	0.60
18:D:1301:U:HO2'	18:D:1302:C:P	2.24	0.60
23:I:92:ALA:O	23:I:96:GLY:N	2.29	0.60
41:a:813:U:O2'	41:a:1225:G:H1'	2.01	0.60
41:a:818:G:N1	41:a:1188:U:OP2	2.22	0.60
41:a:1198:U:C2	41:a:1199:U:C5	2.89	0.60
7:6:18:DC:N4	8:7:17:G:H1	1.99	0.60
9:9:19:ALA:HB2	9:9:70:GLU:OE1	2.01	0.60
12:AB:137:ASN:HB3	12:AB:179:GLU:CD	2.26	0.60
16:AG:425:LEU:O	16:AG:429:LYS:NZ	2.33	0.60
18:D:324:G:N1	18:D:327:A:OP2	2.34	0.60
29:O:26:GLY:N	29:O:62:ASP:OD1	2.29	0.60
10:A:71:C:H3'	10:A:72:A:H8	1.65	0.60
11:AA:901:LEU:CG	16:AG:27:LEU:HD13	2.32	0.60
14:AE:67:ASP:OD1	14:AE:67:ASP:N	2.34	0.60
16:AG:218:GLU:HB3	16:AG:220:VAL:HG23	1.84	0.60
18:D:701:U:OP1	18:D:702:A:O2'	2.16	0.60
25:K:46:VAL:O	25:K:72:ILE:N	2.34	0.60
41:a:371:A:O2'	43:c:61:LYS:NZ	2.24	0.60
12:AB:165:PHE:CD1	30:P:98:VAL:CG2	2.83	0.60
14:AE:370:LYS:HG2	14:AE:441:LEU:HD23	1.84	0.60
16:AG:209:PHE:O	16:AG:213:VAL:HG22	2.01	0.60
16:AG:433:ASP:HB3	16:AG:456:LEU:HD12	1.83	0.60
18:D:13:U:O4	18:D:21:G:C2	2.53	0.60
18:D:320:A:H2'	18:D:321:A:C8	2.37	0.60
18:D:842:U:C2'	18:D:844:G:H21	2.13	0.60
31:Q:88:GLY:H	31:Q:114:THR:HG22	1.67	0.60
41:a:219:A:N3	41:a:234:U:O2'	2.31	0.60
10:A:22:G:HO2'	10:A:23:C:P	2.25	0.60
12:AB:167:ARG:HG3	12:AB:167:ARG:HH11	1.65	0.60
14:AE:154:LEU:HD21	14:AE:160:LEU:HD21	1.83	0.60
16:AG:216:ILE:HG22	16:AG:221:ILE:O	2.02	0.60
31:Q:29:ASN:OD1	31:Q:30:THR:N	2.34	0.60
41:a:324:A:OP2	41:a:1205:A:N6	2.35	0.60
41:a:1146:C:C2	41:a:1147:A:C8	2.90	0.60
41:a:1774:C:O2	41:a:1774:C:H2'	2.01	0.60
41:a:2191:A:H2'	41:a:2192:U:C6	2.36	0.60
41:a:2815:C:O2'	49:i:41:HIS:ND1	2.34	0.60
6:5:110:DA:N7	11:AA:183:TRP:CH2	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:125:ARG:CZ	9:9:125:ARG:HA	2.32	0.60
14:AE:342:LEU:HD23	14:AE:1352:ILE:HG23	1.83	0.60
14:AE:926:PRO:HG2	14:AE:1248:ILE:HD11	1.84	0.60
16:AG:139:THR:HG22	16:AG:180:ARG:HB3	1.83	0.60
16:AG:218:GLU:C	21:G:104:TRP:NE1	2.59	0.60
16:AG:241:ASN:HB3	21:G:159:ASP:CA	2.25	0.60
16:AG:424:SER:C	16:AG:429:LYS:HG3	2.26	0.60
10:B:49:G:C2	10:B:66:C:C2	2.89	0.60
18:D:1039:G:H2'	18:D:1040:U:C6	2.37	0.60
41:a:870:U:OP1	62:v:6:ARG:NH1	2.33	0.60
41:a:2052:A:O2'	50:j:148:GLN:O	2.17	0.60
41:a:2144:G:C2	41:a:2148:G:O6	2.54	0.60
41:a:2522:U:O2'	41:a:2647:U:OP1	2.16	0.60
14:AE:1161:GLY:HA3	14:AE:1179:PRO:HA	1.83	0.60
16:AG:202:PRO:O	16:AG:205:LEU:HD12	2.02	0.60
16:AG:434:LEU:CD1	16:AG:455:THR:C	2.74	0.60
18:D:438:U:C4	18:D:494:G:C5	2.90	0.60
22:H:305:HIS:CG	22:H:306:VAL:H	2.20	0.60
41:a:52:A:OP2	41:a:117:G:N1	2.35	0.60
41:a:200:U:C5	41:a:201:C:C5	2.90	0.60
41:a:2297:A:C6	41:a:2321:U:O4	2.55	0.60
9:9:52:MET:HE1	9:9:85:SER:HB2	1.83	0.60
10:A:48:C:C5	10:A:59:A:C8	2.89	0.60
12:AB:129:GLU:OE1	12:AB:129:GLU:HA	2.02	0.60
18:D:142:G:C2	18:D:222:C:C2	2.90	0.60
18:D:721:G:H4'	18:D:722:G:O4'	2.01	0.60
18:D:1005:A:H3'	18:D:1006:G:H8	1.66	0.60
36:V:7:THR:C	36:V:8:LEU:HD12	2.26	0.60
41:a:1906:G:C8	41:a:1929:G:C4	2.90	0.60
48:h:73:GLY:O	48:h:117:GLN:NE2	2.34	0.60
49:i:38:HIS:ND1	49:i:39:LEU:O	2.34	0.60
11:AA:918:LEU:O	11:AA:918:LEU:HD23	2.02	0.59
12:AB:159:LYS:CG	12:AB:170:PRO:HB2	2.32	0.59
12:AB:162:VAL:O	12:AB:164:ILE:HG13	2.02	0.59
12:AB:167:ARG:HD2	30:P:98:VAL:N	2.13	0.59
14:AE:67:ASP:CG	14:AE:95:THR:HG1	2.10	0.59
14:AE:412:LEU:HD22	14:AE:441:LEU:HD21	1.84	0.59
14:AE:416:ILE:HG13	14:AE:441:LEU:HD11	1.83	0.59
16:AG:213:VAL:HG11	16:AG:251:CYS:HA	1.83	0.59
16:AG:440:VAL:HG23	16:AG:481:LEU:CD2	2.29	0.59
18:D:323:U:H2'	18:D:324:G:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:493:A:O2'	18:D:494:G:O4'	2.19	0.59
39:Y:76:ALA:HB3	41:a:1060:U:OP1	2.02	0.59
39:Y:79:LEU:HA	39:Y:83:ALA:HB3	1.84	0.59
41:a:1233:C:C2	41:a:1234:U:C5	2.90	0.59
41:a:1925:C:H2'	41:a:1926:U:C6	2.37	0.59
63:w:67:PHE:O	63:w:71:ARG:N	2.35	0.59
8:7:-2:U:H5''	23:I:74:GLY:HA3	1.84	0.59
8:7:-2:U:H5'	23:I:74:GLY:N	2.17	0.59
11:AA:69:GLN:HE21	11:AA:101:ARG:HD2	1.67	0.59
12:AB:149:GLU:OE2	12:AB:170:PRO:CG	2.50	0.59
12:AB:158:LEU:CD2	12:AB:175:PHE:CA	2.80	0.59
16:AG:243:LYS:CD	16:AG:245:ILE:CG1	2.75	0.59
16:AG:303:HIS:HB3	16:AG:334:TRP:HZ3	1.66	0.59
22:H:51:GLU:OE1	22:H:51:GLU:N	2.35	0.59
41:a:26:G:H2'	41:a:27:G:O4'	2.03	0.59
41:a:2298:A:C4	41:a:2321:U:C5	2.91	0.59
41:a:2651:C:C2	41:a:2652:C:C5	2.90	0.59
42:b:26:PHE:N	42:b:29:GLU:OE1	2.28	0.59
8:7:-2:U:H5'	23:I:74:GLY:H	1.67	0.59
16:AG:63:LEU:HG	16:AG:73:LYS:HB3	1.82	0.59
16:AG:213:VAL:HG23	16:AG:216:ILE:HG13	1.84	0.59
16:AG:242:ASP:HB2	21:G:181:ILE:CA	2.32	0.59
16:AG:354:ALA:HA	16:AG:357:ASP:N	2.18	0.59
16:AG:434:LEU:N	16:AG:456:LEU:HG	2.17	0.59
18:D:476:U:C2	18:D:477:C:C5	2.90	0.59
18:D:1328:C:OP1	38:X:28:THR:OG1	2.11	0.59
24:J:62:ARG:NH1	24:J:69:GLU:OE1	2.35	0.59
40:Z:18:ASP:HB3	40:Z:22:LEU:HD11	1.84	0.59
41:a:90:U:OP2	41:a:91:A:O2'	2.19	0.59
41:a:379:G:C2'	41:a:380:G:O5'	2.51	0.59
41:a:1399:C:C2	41:a:1400:U:C5	2.90	0.59
41:a:1422:G:C6	41:a:1577:C:N3	2.70	0.59
41:a:2127:G:H2'	41:a:2128:G:H8	1.66	0.59
9:9:129:LEU:H	9:9:130:PRO:HD3	1.66	0.59
14:AE:118:LYS:HD2	14:AE:312:ARG:NH2	2.17	0.59
14:AE:951:GLN:NE2	14:AE:1014:GLY:O	2.35	0.59
10:B:11:A:O2'	41:a:1909:C:H4'	2.02	0.59
10:B:69:C:C2	10:B:70:G:C8	2.90	0.59
18:D:208:U:O2	18:D:212:G:C6	2.55	0.59
39:Y:21:PRO:CD	39:Y:22:PRO:HD3	2.32	0.59
41:a:1029:A:H2'	41:a:1030:C:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2127:G:H2'	41:a:2128:G:C8	2.37	0.59
41:a:2638:G:O2'	41:a:2775:G:N2	2.35	0.59
47:g:26:SER:OG	54:n:140:GLU:OE1	2.18	0.59
50:j:156:PHE:CE1	59:s:81:ILE:HD13	2.37	0.59
1:0:26:ASP:O	1:0:27:ILE:HD13	2.03	0.59
14:AE:99:ARG:HG3	14:AE:99:ARG:NH1	2.18	0.59
10:B:6:G:HO2'	10:B:7:G:C5'	2.08	0.59
10:B:29:G:C6	10:B:42:G:C6	2.91	0.59
18:D:610:U:N3	18:D:611:C:C6	2.70	0.59
18:D:1014:A:C2	37:W:34:TRP:CE2	2.91	0.59
24:J:190:ASP:N	24:J:190:ASP:OD1	2.34	0.59
26:L:54:LEU:H	26:L:54:LEU:HD13	1.67	0.59
30:P:57:VAL:HG13	30:P:57:VAL:O	2.02	0.59
41:a:1175:A:OP1	41:a:1177:G:N3	2.35	0.59
2:1:25:ARG:NH1	2:1:74:ILE:O	2.34	0.59
9:9:122:GLN:OE1	9:9:122:GLN:N	2.35	0.59
11:AA:906:PHE:HD2	16:AG:31:LEU:HD22	1.64	0.59
18:D:106:C:H2'	18:D:107:G:O4'	2.02	0.59
22:H:303:LEU:C	22:H:305:HIS:N	2.61	0.59
41:a:1076:C:H2'	41:a:1077:A:C8	2.38	0.59
41:a:1824:G:O2'	48:h:252:THR:HG21	2.03	0.59
41:a:2848:G:HO2'	41:a:2867:G:N2	2.01	0.59
12:AB:135:ARG:CG	12:AB:179:GLU:HB3	2.27	0.59
10:B:6:G:N1	10:B:68:C:N3	2.49	0.59
10:B:28:C:H2'	10:B:29:G:O4'	2.03	0.59
22:H:297:GLU:OE1	22:H:297:GLU:N	2.35	0.59
29:O:12:ARG:O	29:O:14:SER:N	2.36	0.59
40:Z:18:ASP:HB3	40:Z:22:LEU:CD1	2.32	0.59
41:a:1417:C:O2'	41:a:1587:G:O2'	2.19	0.59
41:a:1928:A:H2'	41:a:1929:G:O4'	2.03	0.59
41:a:2649:C:C2	41:a:2650:U:C5	2.90	0.59
11:AA:901:LEU:HG	16:AG:27:LEU:HD13	1.83	0.59
11:AA:1101:LEU:HD23	14:AE:725:MET:SD	2.42	0.59
12:AB:47:GLU:CG	12:AB:64:PHE:CE1	2.64	0.59
14:AE:97:VAL:HG11	14:AE:101:ARG:NH2	2.18	0.59
14:AE:201:LEU:HD11	14:AE:220:ARG:HH11	1.67	0.59
16:AG:137:ILE:O	16:AG:137:ILE:HG22	2.03	0.59
18:D:1314:C:C2	18:D:1315:U:C5	2.90	0.59
18:D:1343:G:H2'	18:D:1344:C:C6	2.38	0.59
23:I:187:SER:OG	23:I:188:GLU:N	2.35	0.59
41:a:1112:G:C6	41:a:1113:U:C4	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:p:121:ILE:HD12	56:p:141:ILE:CG2	2.33	0.59
3:2:61:LEU:C	3:2:61:LEU:HD12	2.27	0.59
11:AA:549:ASP:OD2	14:AE:750:PRO:CB	2.45	0.59
11:AA:1142:ARG:NH1	11:AA:1161:LEU:O	2.36	0.59
12:AB:163:SER:HA	12:AB:168:ALA:CB	2.31	0.59
14:AE:615:LYS:HG2	15:AF:5:THR:HG21	1.85	0.59
16:AG:31:LEU:HD23	16:AG:110:ALA:HB1	1.85	0.59
16:AG:212:GLU:HB3	16:AG:258:ARG:HB3	1.84	0.59
16:AG:453:VAL:CG2	16:AG:462:GLN:CD	2.76	0.59
10:B:37:A:H3'	10:B:38:A:O4'	2.03	0.59
10:B:54:U:H3	10:B:58:A:N6	2.00	0.59
18:D:672:U:H2'	18:D:673:A:H8	1.68	0.59
22:H:290:TYR:O	22:H:305:HIS:HB2	2.03	0.59
27:M:79:ARG:HB2	27:M:84:THR:HA	1.84	0.59
39:Y:14:ALA:HB2	39:Y:54:ILE:CD1	2.30	0.59
39:Y:60:VAL:CG1	39:Y:66:PHE:HB3	2.31	0.59
41:a:2328:A:H2'	41:a:2329:U:H6	1.68	0.59
41:a:2703:C:C2	41:a:2704:C:C5	2.91	0.59
14:AE:395:LYS:HZ2	14:AE:399:LYS:CD	2.16	0.59
16:AG:233:ARG:HG2	16:AG:270:ARG:HB2	1.84	0.59
16:AG:437:LEU:HD22	16:AG:488:ILE:CD1	2.33	0.59
10:B:49:G:N1	10:B:66:C:N3	2.51	0.59
18:D:936:C:C4	18:D:937:A:N7	2.71	0.59
41:a:62:U:O2	41:a:62:U:H2'	2.02	0.59
41:a:360:U:O3'	41:a:361:G:O4'	2.20	0.59
41:a:1074:G:C6	41:a:1075:C:N4	2.70	0.59
41:a:1142:A:C4	41:a:1144:A:N7	2.71	0.59
41:a:1197:G:C2	41:a:1198:U:C5	2.90	0.59
41:a:1295:C:C2	41:a:1296:G:C8	2.90	0.59
41:a:1433:A:H2'	41:a:1434:A:O4'	2.02	0.59
41:a:2262:U:O2	41:a:2263:C:C6	2.56	0.59
41:a:2822:G:OP1	50:j:117:GLY:N	2.36	0.59
56:p:87:LEU:N	56:p:87:LEU:HD12	2.18	0.59
9:9:26:VAL:HG23	9:9:110:ALA:O	2.03	0.58
9:9:106:PHE:CG	9:9:106:PHE:O	2.56	0.58
12:AB:93:ILE:HG22	14:AE:290:ILE:HG23	1.85	0.58
12:AB:157:ARG:CD	12:AB:172:GLU:OE2	2.51	0.58
16:AG:352:ALA:O	16:AG:356:ILE:CG2	2.51	0.58
16:AG:413:ALA:HA	16:AG:416:THR:OG1	2.03	0.58
18:D:677:U:H3	18:D:713:G:H22	1.51	0.58
18:D:820:U:H4'	18:D:821:G:OP2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H:70:VAL:HG12	22:H:83:LEU:O	2.03	0.58
39:Y:100:ILE:C	39:Y:139:VAL:HG23	2.28	0.58
41:a:947:A:H2'	41:a:948:C:C6	2.38	0.58
6:5:99:DT:H2''	6:5:100:DA:H5''	1.85	0.58
14:AE:144:TYR:CE1	14:AE:162:GLU:OE2	2.51	0.58
14:AE:275:ARG:NH1	14:AE:278:ARG:NH1	2.51	0.58
14:AE:438:GLU:HG3	14:AE:485:MET:HE1	1.84	0.58
16:AG:33:THR:HG23	16:AG:43:ILE:HD11	1.85	0.58
10:B:60:U:O2'	10:B:61:C:OP1	2.18	0.58
18:D:214:C:C2	18:D:215:C:C5	2.91	0.58
18:D:1026:G:N2	18:D:1027:C:C2	2.71	0.58
18:D:1040:U:H2'	18:D:1041:G:C8	2.39	0.58
18:D:1460:C:H2'	18:D:1461:G:O4'	2.03	0.58
41:a:832:U:H2'	41:a:833:A:H8	1.68	0.58
41:a:974:G:O4'	41:a:1186:G:N2	2.36	0.58
41:a:1028:A:N3	41:a:2486:C:O2'	2.29	0.58
41:a:1082:U:C5	41:a:1083:U:C5	2.90	0.58
41:a:1322:A:C5	41:a:1323:C:C5	2.91	0.58
41:a:1433:A:H2'	41:a:1434:A:C1'	2.33	0.58
41:a:2293:G:C6	41:a:2340:A:C6	2.91	0.58
66:z:66:ASN:OD1	66:z:70:ARG:NE	2.36	0.58
4:3:18:ASP:OD2	4:3:40:ASN:HA	2.02	0.58
8:7:-2:U:H2'	8:7:-1:U:O5'	2.03	0.58
22:H:135:LEU:CB	22:H:167:VAL:CB	2.81	0.58
39:Y:32:VAL:HG13	39:Y:60:VAL:CG2	2.27	0.58
39:Y:79:LEU:HD13	39:Y:132:ALA:HA	1.85	0.58
41:a:205:G:O2'	41:a:206:U:OP2	2.22	0.58
41:a:359:G:C6	41:a:360:U:C4	2.91	0.58
41:a:1385:A:O2'	41:a:1396:U:O2	2.21	0.58
41:a:1864:U:OP1	41:a:2410:G:O2'	2.18	0.58
41:a:1883:U:H2'	41:a:1884:G:O4'	2.03	0.58
41:a:2063:C:N3	41:a:2064:C:C5	2.71	0.58
41:a:2492:U:C2'	41:a:2493:U:H5'	2.33	0.58
41:a:2689:U:OP2	41:a:2719:G:N2	2.29	0.58
11:AA:618:GLN:CG	14:AE:770:LEU:HD13	2.30	0.58
12:AB:135:ARG:N	12:AB:181:ALA:HB3	2.17	0.58
16:AG:243:LYS:HE3	16:AG:245:ILE:HA	1.86	0.58
10:B:29:G:H2'	10:B:30:G:H8	1.68	0.58
18:D:842:U:O3'	18:D:844:G:N2	2.37	0.58
41:a:819:A:OP2	41:a:1187:G:N2	2.26	0.58
41:a:1590:A:H2'	41:a:1591:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:51:VAL:HG22	1:0:51:VAL:O	2.03	0.58
7:6:8:DC:H2'	7:6:9:DT:H71	1.86	0.58
8:7:-20:A:HO2'	18:D:792:A:N6	2.02	0.58
11:AA:707:ALA:O	11:AA:711:ASP:HB2	2.03	0.58
16:AG:25:GLU:HG3	16:AG:49:ILE:HD11	1.86	0.58
16:AG:218:GLU:OE2	21:G:105:LYS:HA	2.03	0.58
16:AG:453:VAL:HG11	16:AG:459:LEU:HG	1.84	0.58
18:D:257:G:O6	18:D:270:A:N6	2.36	0.58
18:D:1091:U:C2	18:D:1095:U:C4	2.91	0.58
41:a:570:G:O4'	41:a:983:A:N6	2.36	0.58
41:a:838:C:C2	41:a:839:U:C6	2.91	0.58
41:a:1266:G:O2'	41:a:1267:U:OP2	2.22	0.58
50:j:133:THR:OG1	50:j:134:HIS:N	2.37	0.58
2:1:88:ARG:NH1	41:a:748:G:OP2	2.37	0.58
12:AB:158:LEU:HD12	12:AB:158:LEU:O	2.02	0.58
18:D:1062:U:H2'	18:D:1063:C:C6	2.38	0.58
18:D:1148:U:H2'	18:D:1149:C:O4'	2.03	0.58
34:T:39:LEU:O	34:T:42:HIS:N	2.37	0.58
41:a:391:A:C5	41:a:392:U:C5	2.91	0.58
41:a:1561:C:C2	41:a:1562:U:C5	2.91	0.58
47:g:47:LYS:NZ	47:g:50:ASP:OD2	2.28	0.58
48:h:142:HIS:ND1	48:h:193:GLY:O	2.32	0.58
52:l:131:THR:HG22	52:l:160:ALA:O	2.02	0.58
8:7:17:G:OP2	11:AA:540:ARG:NH1	2.37	0.58
12:AB:131:GLY:N	12:AB:148:VAL:CG2	2.46	0.58
16:AG:287:ALA:CB	16:AG:331:LEU:HB3	2.33	0.58
16:AG:353:HIS:O	16:AG:356:ILE:C	2.43	0.58
18:D:361:G:H2'	18:D:362:G:O4'	2.04	0.58
18:D:1071:C:H2'	18:D:1072:G:H8	1.69	0.58
18:D:1113:C:C2	18:D:1114:C:C5	2.91	0.58
18:D:1460:C:C2	18:D:1461:G:C8	2.92	0.58
39:Y:59:THR:HG22	39:Y:61:TYR:HE1	1.68	0.58
41:a:1149:G:H2'	41:a:1150:C:C6	2.39	0.58
41:a:2849:U:O4	65:y:21:ARG:NH2	2.31	0.58
16:AG:61:ARG:HD2	16:AG:73:LYS:HD3	1.86	0.58
16:AG:440:VAL:HG22	16:AG:481:LEU:CD2	2.34	0.58
21:G:102:THR:N	21:G:175:GLU:OE1	2.29	0.58
41:a:450:G:N1	41:a:454:A:OP2	2.30	0.58
41:a:1154:G:OP2	66:z:58:ARG:NH1	2.36	0.58
41:a:1278:C:HO2'	63:w:27:SER:HG	1.46	0.58
41:a:2766:A:C2	41:a:2767:C:C6	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:g:16:CYS:SG	47:g:37:CYS:N	2.77	0.58
58:r:14:SER:N	58:r:17:ASP:OD2	2.36	0.58
9:9:59:LEU:O	9:9:63:ALA:N	2.37	0.58
16:AG:130:PHE:C	16:AG:186:VAL:HG11	2.28	0.58
16:AG:130:PHE:HB3	16:AG:186:VAL:HG22	1.86	0.58
41:a:639:U:H2'	41:a:640:C:C6	2.39	0.58
41:a:1069:A:C4	41:a:1073:A:N7	2.72	0.58
41:a:2104:C:H2'	41:a:2105:U:O4'	2.03	0.58
41:a:2183:A:O2'	41:a:2184:A:H5'	2.04	0.58
41:a:2461:A:H2'	41:a:2462:C:C6	2.38	0.58
41:a:2564:A:OP1	41:a:2648:G:O2'	2.20	0.58
9:9:125:ARG:HG3	9:9:125:ARG:O	2.03	0.58
11:AA:13:LYS:HB2	11:AA:1180:MET:HE2	1.86	0.58
14:AE:37:GLU:O	14:AE:61:ILE:CD1	2.52	0.58
14:AE:161:THR:HG23	14:AE:164:GLN:H	1.68	0.58
16:AG:354:ALA:CA	16:AG:357:ASP:HB3	2.32	0.58
18:D:216:U:H2'	18:D:217:C:C6	2.38	0.58
18:D:690:G:C6	18:D:691:G:C6	2.92	0.58
18:D:750:C:C2	18:D:751:U:C5	2.91	0.58
18:D:1308:U:OP1	38:X:97:VAL:N	2.26	0.58
41:a:243:U:OP1	55:o:6:THR:OG1	2.21	0.58
41:a:1707:G:C8	41:a:1756:G:C5	2.92	0.58
41:a:2148:G:C2	41:a:2149:U:C4	2.92	0.58
41:a:2176:A:H2'	41:a:2177:C:C6	2.39	0.58
41:a:2194:U:H2'	41:a:2195:U:H6	1.67	0.58
41:a:2650:U:H2'	41:a:2651:C:H6	1.69	0.58
11:AA:905:ILE:HD11	16:AG:5:ILE:HD11	1.86	0.57
14:AE:24:LEU:CG	14:AE:232:ASN:ND2	2.63	0.57
14:AE:491:LEU:HB2	14:AE:904:ALA:HA	1.86	0.57
16:AG:362:TYR:CA	16:AG:413:ALA:HB1	2.30	0.57
18:D:18:C:OP1	25:K:132:ASN:ND2	2.35	0.57
18:D:557:G:H2'	18:D:558:G:O4'	2.04	0.57
18:D:672:U:H2'	18:D:673:A:C8	2.39	0.57
18:D:1304:G:O3'	18:D:1305:G:O4'	2.21	0.57
36:V:51:ASN:OD1	36:V:51:ASN:N	2.34	0.57
41:a:728:G:H3'	41:a:729:G:H5'	1.85	0.57
41:a:1086:A:O2'	41:a:1103:A:N6	2.37	0.57
41:a:1495:A:H2'	41:a:1496:A:O4'	2.04	0.57
41:a:1588:G:C6	41:a:1589:U:O4	2.57	0.57
9:9:52:MET:CE	9:9:85:SER:HB2	2.34	0.57
12:AB:159:LYS:HG3	12:AB:170:PRO:O	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:233:ARG:O	16:AG:327:LEU:HD21	2.04	0.57
16:AG:239:LYS:NZ	21:G:63:ARG:NE	2.52	0.57
16:AG:266:LEU:HD23	16:AG:266:LEU:N	2.19	0.57
16:AG:433:ASP:C	16:AG:456:LEU:HD11	2.23	0.57
18:D:144:G:C6	18:D:179:A:C6	2.91	0.57
18:D:573:A:N3	18:D:883:C:O2'	2.35	0.57
18:D:944:G:N1	18:D:1338:G:OP2	2.36	0.57
20:F:32:VAL:HG11	31:Q:89:PRO:HG3	1.86	0.57
25:K:77:ASN:O	25:K:78:ASN:C	2.47	0.57
29:O:55:VAL:O	29:O:57:MET:N	2.38	0.57
39:Y:56:VAL:HG23	39:Y:69:VAL:O	2.04	0.57
39:Y:80:LYS:HG3	39:Y:86:LYS:CB	2.34	0.57
41:a:138:U:O2'	41:a:139:U:O2	2.11	0.57
41:a:1108:U:C4	41:a:1109:C:C4	2.91	0.57
41:a:1358:G:HO2'	41:a:1359:A:P	2.26	0.57
41:a:1782:U:O2	41:a:2608:G:O2'	2.19	0.57
41:a:2744:G:C6	41:a:2761:A:C6	2.91	0.57
9:9:55:VAL:HG12	9:9:56:ARG:N	2.19	0.57
10:A:72:A:H2'	10:A:73:A:O4'	2.04	0.57
16:AG:219:GLU:HB2	21:G:157:LEU:H	1.68	0.57
16:AG:254:MET:SD	25:K:68:ARG:NH1	2.77	0.57
18:D:946:A:C2	18:D:947:G:C5	2.92	0.57
18:D:1408:A:O2'	41:a:1916:A:N6	2.35	0.57
41:a:580:U:H2'	41:a:581:C:C6	2.40	0.57
41:a:2659:G:N2	41:a:2662:A:OP2	2.37	0.57
41:a:2723:C:H2'	41:a:2724:U:O4'	2.05	0.57
59:s:40:HIS:NE2	59:s:52:ASP:OD2	2.32	0.57
8:7:-20:A:H2	18:D:790:A:H62	1.52	0.57
9:9:27:VAL:HG23	9:9:109:LYS:O	2.03	0.57
11:AA:1122:LYS:NZ	11:AA:1126:ASP:OD1	2.38	0.57
11:AA:1284:ALA:HB3	14:AE:1361:THR:HB	1.85	0.57
12:AB:162:VAL:O	12:AB:164:ILE:CD1	2.52	0.57
16:AG:162:ILE:HD13	16:AG:167:MET:HE2	1.86	0.57
16:AG:434:LEU:HD11	16:AG:455:THR:N	2.19	0.57
18:D:632:U:H3'	18:D:632:U:O2	2.03	0.57
18:D:712:A:H2'	18:D:713:G:C8	2.39	0.57
18:D:1000:A:N1	18:D:1041:G:C6	2.72	0.57
37:W:5:LEU:O	37:W:8:GLY:N	2.35	0.57
39:Y:38:CYS:HA	39:Y:42:ASN:ND2	2.19	0.57
41:a:952:G:C6	41:a:966:G:C6	2.93	0.57
41:a:1365:A:O2'	43:c:11:ARG:NH1	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1843:C:C2	41:a:1844:C:C5	2.92	0.57
53:m:22:MET:O	53:m:28:ARG:NH1	2.37	0.57
6:5:115:DA:OP2	14:AE:1148:ARG:HG3	2.04	0.57
10:A:60:U:H4'	10:A:61:C:OP2	2.03	0.57
14:AE:514:THR:HG21	14:AE:596:LEU:HD12	1.84	0.57
14:AE:1046:ILE:HD12	14:AE:1059:LEU:HB3	1.86	0.57
16:AG:9:VAL:HA	16:AG:24:PHE:CZ	2.40	0.57
16:AG:49:ILE:HG22	16:AG:49:ILE:O	2.03	0.57
16:AG:422:GLU:CG	16:AG:426:GLY:HA3	2.35	0.57
10:B:60:U:H3'	10:B:61:C:H5	1.69	0.57
18:D:493:A:H2'	18:D:494:G:N9	2.20	0.57
18:D:1026:G:N1	18:D:1027:C:C4	2.73	0.57
21:G:19:GLN:HB2	22:H:76:GLU:HG2	1.86	0.57
22:H:338:GLU:OE1	22:H:338:GLU:N	2.38	0.57
25:K:41:ASP:OD1	25:K:43:ASN:N	2.32	0.57
41:a:67:U:N3	41:a:68:G:C5	2.72	0.57
41:a:1816:C:N4	48:h:35:GLU:OE2	2.26	0.57
12:AB:135:ARG:H	12:AB:181:ALA:N	2.01	0.57
14:AE:160:LEU:HD22	14:AE:164:GLN:HB3	1.86	0.57
14:AE:741:ALA:O	14:AE:762:ASN:ND2	2.38	0.57
16:AG:318:ILE:HG12	16:AG:338:VAL:HG11	1.85	0.57
16:AG:367:GLU:O	16:AG:371:THR:HG23	2.04	0.57
18:D:204:G:O6	18:D:215:C:H1'	2.04	0.57
18:D:673:A:H2'	18:D:674:G:H8	1.69	0.57
22:H:118:GLY:O	22:H:133:GLY:HA2	2.05	0.57
41:a:392:U:C2	41:a:393:C:C5	2.92	0.57
41:a:1841:U:C2	41:a:1842:G:C8	2.93	0.57
41:a:2189:U:P	41:a:2189:U:O4'	2.62	0.57
41:a:2301:C:H2'	41:a:2302:U:C6	2.39	0.57
41:a:2447:G:H2'	41:a:2500:U:OP2	2.05	0.57
41:a:2751:G:N3	41:a:2751:G:H2'	2.20	0.57
11:AA:818:VAL:HG22	11:AA:1096:ILE:HG12	1.87	0.57
12:AB:144:PHE:CE1	12:AB:164:ILE:HG23	2.38	0.57
14:AE:241:VAL:HG12	14:AE:241:VAL:O	2.04	0.57
16:AG:187:ARG:CB	16:AG:188:PRO:HD3	2.20	0.57
16:AG:392:LEU:CD2	16:AG:395:ILE:HD11	2.34	0.57
18:D:1124:G:O2'	18:D:1145:A:N6	2.38	0.57
18:D:1226:C:N4	38:X:103:LYS:HD2	2.19	0.57
18:D:1382:C:O2'	27:M:79:ARG:NH1	2.36	0.57
30:P:57:VAL:O	30:P:58:ASN:ND2	2.38	0.57
41:a:522:A:H2'	41:a:523:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:828:U:HO2'	41:a:829:A:C5'	2.17	0.57
41:a:1065:U:O2'	41:a:1066:U:P	2.63	0.57
41:a:1294:U:N3	41:a:1295:C:C5	2.73	0.57
41:a:1341:G:OP1	41:a:1397:U:N3	2.25	0.57
41:a:1405:U:H2'	41:a:1406:U:C6	2.39	0.57
41:a:2193:G:HO2'	41:a:2194:U:P	2.27	0.57
44:d:30:C:O2'	44:d:57:A:N1	2.35	0.57
16:AG:127:VAL:HG21	16:AG:192:GLY:HA2	1.84	0.57
16:AG:220:VAL:CG2	21:G:157:LEU:HD12	2.35	0.57
16:AG:354:ALA:HA	16:AG:357:ASP:H	1.70	0.57
18:D:266:G:H3'	36:V:69:LYS:HB2	1.87	0.57
18:D:1303:C:O2'	18:D:1304:G:H5'	2.04	0.57
18:D:1447:A:OP1	18:D:1448:C:N4	2.27	0.57
18:D:1516:G:N2	18:D:1520:C:O2	2.37	0.57
22:H:46:SER:CB	22:H:82:THR:HG1	2.15	0.57
41:a:730:A:C2	41:a:731:C:C5	2.93	0.57
41:a:1041:G:C2	41:a:1115:G:N1	2.73	0.57
41:a:1093:G:C2	41:a:1099:G:O6	2.58	0.57
41:a:1927:A:O2'	41:a:1928:A:C5'	2.46	0.57
41:a:2020:A:H5'	49:i:9:THR:HG23	1.87	0.57
41:a:2108:A:C2	41:a:2182:U:N3	2.73	0.57
41:a:2233:U:H2'	41:a:2234:G:H8	1.70	0.57
41:a:2357:G:N2	41:a:2360:G:OP2	2.37	0.57
9:9:24:SER:HB2	9:9:116:GLU:CD	2.30	0.57
9:9:57:ASN:HB3	9:9:62:ARG:CG	2.35	0.57
9:9:57:ASN:HB3	9:9:62:ARG:HG3	1.86	0.57
9:9:74:ASP:O	9:9:78:GLY:N	2.37	0.57
11:AA:516:ASP:OD1	11:AA:516:ASP:O	2.23	0.57
11:AA:839:VAL:HG12	11:AA:1049:ILE:HG12	1.87	0.57
14:AE:124:ILE:HG22	14:AE:124:ILE:O	2.04	0.57
14:AE:510:LEU:HD22	14:AE:601:ILE:HD12	1.86	0.57
16:AG:363:LEU:HG	16:AG:410:ALA:N	2.16	0.57
18:D:181:A:C4	18:D:194:C:N4	2.72	0.57
26:L:54:LEU:O	26:L:54:LEU:HD22	2.04	0.57
41:a:514:A:H1'	41:a:581:C:O2'	2.05	0.57
41:a:1021:A:O2'	41:a:1123:C:OP1	2.17	0.57
41:a:1799:G:N1	41:a:1819:A:OP2	2.36	0.57
41:a:1858:A:C2'	41:a:1859:U:O5'	2.52	0.57
48:h:196:GLY:O	48:h:198:ALA:N	2.38	0.57
1:0:40:MET:HE1	66:z:105:ALA:HB1	1.86	0.57
4:3:36:VAL:CG1	4:3:39:ILE:HD12	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:171:GLU:HA	14:AE:171:GLU:OE1	2.05	0.57
16:AG:173:PHE:N	16:AG:173:PHE:CD2	2.73	0.57
16:AG:233:ARG:HH12	16:AG:324:ASN:N	2.02	0.57
18:D:73:C:O2'	18:D:74:A:H5'	2.04	0.57
18:D:1020:G:N2	18:D:1021:A:H1'	2.19	0.57
18:D:1429:A:C2	18:D:1430:A:C8	2.93	0.57
18:D:1524:C:C2	18:D:1525:G:C8	2.93	0.57
41:a:297:G:H2'	41:a:298:G:O4'	2.04	0.57
41:a:1082:U:H3'	41:a:1083:U:H5''	1.85	0.57
41:a:2780:G:OP2	59:s:120:ARG:NE	2.34	0.57
9:9:136:ILE:CD1	9:9:139:LEU:HD12	2.31	0.56
12:AB:158:LEU:HD21	12:AB:178:VAL:HG23	1.86	0.56
14:AE:99:ARG:HH11	14:AE:99:ARG:CG	2.18	0.56
14:AE:802:ASP:OD1	14:AE:1348:LYS:NZ	2.31	0.56
16:AG:218:GLU:CB	21:G:104:TRP:HD1	2.18	0.56
16:AG:387:VAL:HB	16:AG:388:PRO:HD2	1.85	0.56
17:C:11:CYS:SG	17:C:13:PHE:N	2.78	0.56
17:C:72:ASP:OD1	17:C:72:ASP:N	2.37	0.56
18:D:112:G:N1	18:D:330:C:C5	2.73	0.56
18:D:842:U:H4'	18:D:846:G:C6	2.40	0.56
28:N:11:LEU:HD22	28:N:75:ILE:HD11	1.86	0.56
41:a:61:C:N4	41:a:62:U:O4	2.38	0.56
41:a:1779:U:OP2	41:a:1784:A:N6	2.37	0.56
41:a:2590:A:H2'	41:a:2591:C:H6	1.70	0.56
12:AB:135:ARG:O	12:AB:179:GLU:CG	2.51	0.56
14:AE:395:LYS:HZ2	14:AE:399:LYS:HD3	1.70	0.56
16:AG:218:GLU:CG	21:G:105:LYS:CB	2.82	0.56
16:AG:239:LYS:HE2	21:G:63:ARG:NH1	2.20	0.56
16:AG:434:LEU:HD23	16:AG:456:LEU:CG	2.35	0.56
18:D:13:U:N3	18:D:915:A:N6	2.53	0.56
18:D:68:G:H3'	18:D:69:G:H5''	1.87	0.56
18:D:765:G:C6	18:D:812:G:C4	2.93	0.56
41:a:2134:A:N6	41:a:2157:G:O2'	2.38	0.56
8:7:-4:U:C2'	8:7:-3:U:H5''	2.34	0.56
14:AE:247:PRO:HA	14:AE:250:ARG:HG3	1.87	0.56
14:AE:638:SER:OG	14:AE:639:VAL:N	2.36	0.56
16:AG:285:ILE:O	16:AG:288:MET:CE	2.54	0.56
16:AG:307:ILE:HD11	16:AG:336:LEU:HB2	1.87	0.56
16:AG:362:TYR:CZ	16:AG:382:GLU:HG2	2.40	0.56
16:AG:457:GLU:HG2	16:AG:489:CYS:SG	2.45	0.56
10:B:71:C:H3'	10:B:72:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:827:U:C4	18:D:870:U:C2	2.93	0.56
18:D:1276:G:HO2'	18:D:1277:C:H5'	1.68	0.56
18:D:1523:G:C4	18:D:1524:C:C5	2.93	0.56
21:G:68:LEU:HA	21:G:90:PHE:O	2.05	0.56
32:R:20:ASN:OD1	32:R:20:ASN:N	2.33	0.56
41:a:397:U:C2	41:a:398:C:C5	2.93	0.56
41:a:480:A:H3'	41:a:481:G:H5''	1.87	0.56
41:a:820:A:H4'	41:a:836:G:H22	1.69	0.56
41:a:825:A:H2'	41:a:826:U:O4'	2.05	0.56
41:a:1275:A:N1	41:a:1295:C:O2'	2.31	0.56
41:a:1294:U:C2	41:a:1295:C:C6	2.93	0.56
41:a:1425:G:H2'	41:a:1426:G:C8	2.40	0.56
41:a:1909:C:C2	41:a:1922:G:C2	2.93	0.56
41:a:1918:A:HO2'	41:a:1920:C:N4	2.02	0.56
41:a:2809:A:OP2	41:a:2890:G:N1	2.23	0.56
58:r:90:LEU:HB3	58:r:123:ARG:O	2.06	0.56
62:v:53:MET:HE1	62:v:103:TYR:CG	2.40	0.56
9:9:43:LYS:HD3	9:9:98:GLU:CB	2.36	0.56
16:AG:63:LEU:N	16:AG:63:LEU:HD23	2.21	0.56
16:AG:63:LEU:HD23	16:AG:63:LEU:H	1.69	0.56
16:AG:302:LYS:NZ	16:AG:302:LYS:HB2	2.20	0.56
17:C:32:TYR:CD1	17:C:45:THR:HG21	2.41	0.56
18:D:1203:C:C2	18:D:1204:A:C8	2.93	0.56
18:D:1493:A:O2'	18:D:1494:G:P	2.63	0.56
39:Y:14:ALA:HB3	39:Y:50:LYS:CA	2.35	0.56
41:a:645:C:O2	41:a:645:C:O2'	2.16	0.56
41:a:1941:C:C5	41:a:1965:C:C6	2.93	0.56
41:a:2466:C:N3	41:a:2467:C:C5	2.73	0.56
41:a:2813:A:C4	41:a:2814:A:C8	2.94	0.56
44:d:29:A:H2'	44:d:30:C:O4'	2.04	0.56
9:9:50:VAL:HG21	39:Y:119:ALA:HB3	1.88	0.56
9:9:132:TYR:CE1	40:Z:19:VAL:HG22	2.41	0.56
12:AB:153:TYR:N	12:AB:153:TYR:CD2	2.74	0.56
13:AC:82:LEU:HD11	13:AC:171:LEU:HD23	1.86	0.56
16:AG:243:LYS:HD2	16:AG:245:ILE:HG12	1.86	0.56
16:AG:363:LEU:CG	16:AG:410:ALA:CB	2.71	0.56
18:D:17:U:H2'	18:D:18:C:C6	2.41	0.56
18:D:333:U:H2'	18:D:334:C:H6	1.70	0.56
18:D:384:G:H2'	18:D:385:C:C6	2.41	0.56
18:D:564:C:OP1	32:R:12:ARG:HD2	2.05	0.56
18:D:678:U:C2	18:D:679:C:C6	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:689:C:O2'	18:D:705:G:O2'	2.21	0.56
20:F:70:LEU:N	20:F:70:LEU:HD12	2.20	0.56
41:a:1212:G:O2'	41:a:1236:G:N2	2.36	0.56
41:a:2133:G:O2'	41:a:2134:A:OP2	2.23	0.56
14:AE:74:LYS:HD2	14:AE:85:CYS:SG	2.45	0.56
14:AE:1175:LEU:HD22	14:AE:1190:ILE:HD11	1.88	0.56
16:AG:392:LEU:HD22	16:AG:395:ILE:HD11	1.87	0.56
18:D:1130:A:C8	18:D:1146:A:C2	2.94	0.56
30:P:56:HIS:ND1	30:P:57:VAL:HG12	2.20	0.56
31:Q:76:GLU:OE1	31:Q:76:GLU:N	2.26	0.56
32:R:80:ILE:HD12	32:R:97:THR:HG22	1.88	0.56
34:T:74:ASP:OD1	34:T:77:ARG:N	2.36	0.56
41:a:24:G:C6	41:a:25:U:C4	2.93	0.56
41:a:887:A:H5'	41:a:888:C:OP1	2.06	0.56
41:a:2656:U:OP2	41:a:2664:G:N1	2.30	0.56
41:a:2835:A:OP1	50:j:56:LYS:NZ	2.35	0.56
54:n:68:THR:N	54:n:86:GLY:O	2.38	0.56
9:9:18:VAL:CG1	9:9:71:CYS:HB2	2.36	0.56
14:AE:198:CYS:HA	14:AE:221:ILE:HD11	1.86	0.56
16:AG:283:PHE:CE2	16:AG:331:LEU:O	2.58	0.56
16:AG:425:LEU:N	16:AG:429:LYS:HG3	2.20	0.56
17:C:31:ASN:O	22:H:338:GLU:HA	2.06	0.56
18:D:1530:G:H2'	18:D:1531:A:C8	2.40	0.56
21:G:76:ALA:HB1	21:G:210:VAL:HG11	1.85	0.56
23:I:125:GLU:OE1	23:I:190:HIS:N	2.35	0.56
41:a:26:G:O2'	41:a:27:G:O4'	2.24	0.56
41:a:572:A:H3'	41:a:573:U:O4'	2.06	0.56
41:a:817:C:H2'	41:a:818:G:O4'	2.06	0.56
41:a:954:G:OP2	62:v:16:ARG:NH2	2.39	0.56
41:a:1253:A:OP1	66:z:33:ARG:NH1	2.39	0.56
41:a:1670:C:H2'	41:a:1671:U:O4'	2.06	0.56
41:a:2253:G:C5	41:a:2254:C:C5	2.94	0.56
48:h:72:ASP:OD2	48:h:189:ARG:NH2	2.39	0.56
9:9:113:PHE:O	9:9:123:ILE:HB	2.05	0.56
16:AG:243:LYS:HD2	16:AG:245:ILE:CG1	2.36	0.56
10:B:30:G:H2'	10:B:31:G:C8	2.40	0.56
18:D:611:C:N3	18:D:612:C:C5	2.73	0.56
18:D:689:C:C2	18:D:690:G:C8	2.94	0.56
18:D:1141:C:O2'	18:D:1142:G:P	2.64	0.56
18:D:1315:U:H2'	18:D:1316:G:O4'	2.06	0.56
22:H:290:TYR:O	22:H:306:VAL:HB	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:P:7:ARG:O	30:P:101:SER:N	2.39	0.56
41:a:328:U:C2'	41:a:329:G:OP1	2.54	0.56
41:a:1266:G:O2'	41:a:2012:G:O6	2.22	0.56
41:a:1294:U:C4	41:a:1295:C:C5	2.94	0.56
41:a:1735:A:C5	41:a:1736:U:C4	2.94	0.56
41:a:2757:A:C6	41:a:2758:A:N7	2.73	0.56
18:D:1328:C:H2'	18:D:1329:A:O4'	2.06	0.56
41:a:224:U:O4	41:a:419:U:O2'	2.24	0.56
41:a:1128:G:O4'	41:a:2516:A:O2'	2.24	0.56
41:a:1141:U:H4'	41:a:1142:A:O5'	2.05	0.56
41:a:2726:A:O2'	41:a:2727:A:O5'	2.21	0.56
48:h:45:ASN:OD1	48:h:46:ASN:N	2.38	0.56
52:l:149:ILE:HD11	52:l:188:MET:HE3	1.86	0.56
52:l:184:ASP:N	52:l:184:ASP:OD1	2.38	0.56
11:AA:985:GLU:HB3	11:AA:988:LYS:HB2	1.89	0.56
12:AB:141:PHE:N	12:AB:141:PHE:CD2	2.73	0.56
14:AE:130:MET:HE2	14:AE:135:ILE:HG12	1.87	0.56
14:AE:144:TYR:HE1	14:AE:162:GLU:CD	2.14	0.56
16:AG:241:ASN:O	21:G:181:ILE:CA	2.55	0.56
10:B:64:G:H2'	10:B:65:C:H6	1.71	0.56
18:D:147:G:H2'	18:D:148:G:C8	2.40	0.56
18:D:213:G:C4	18:D:214:C:C6	2.94	0.56
18:D:458:U:C4	18:D:474:G:O6	2.59	0.56
18:D:602:A:H2'	18:D:603:U:C6	2.41	0.56
18:D:836:G:C5	18:D:851:G:C6	2.94	0.56
18:D:1287:A:H2'	18:D:1288:A:C8	2.41	0.56
25:K:148:ASN:OD1	25:K:148:ASN:N	2.36	0.56
34:T:88:ARG:NH1	41:a:714:U:OP2	2.39	0.56
35:U:18:GLN:OE1	35:U:35:ARG:NE	2.38	0.56
41:a:1107:G:C6	41:a:1108:U:C5	2.94	0.56
41:a:1799:G:N2	41:a:1819:A:OP2	2.36	0.56
41:a:2259:U:C6	41:a:2427:C:C4	2.94	0.56
7:6:21:DA:N6	8:7:15:G:H1	2.04	0.55
12:AB:137:ASN:HB3	12:AB:179:GLU:OE2	2.05	0.55
14:AE:343:LEU:HD11	14:AE:1324:SER:HB3	1.87	0.55
39:Y:104:GLN:HG2	39:Y:108:ILE:HD11	1.88	0.55
41:a:884:U:O4	41:a:893:C:H1'	2.06	0.55
41:a:1114:C:O2'	41:a:1115:G:H5'	2.07	0.55
41:a:1218:G:N1	41:a:1232:G:N7	2.54	0.55
9:9:129:LEU:N	9:9:130:PRO:CD	2.69	0.55
18:D:750:C:O2	18:D:751:U:C6	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:208:ARG:NH2	22:H:39:ASP:OD2	2.39	0.55
32:R:100:GLY:N	32:R:104:CYS:O	2.31	0.55
39:Y:85:ILE:H	39:Y:85:ILE:CD1	2.14	0.55
40:Z:4:LYS:O	40:Z:4:LYS:HD2	2.07	0.55
41:a:3:U:H2'	41:a:4:U:C6	2.41	0.55
41:a:2177:C:H2'	41:a:2178:C:O4'	2.06	0.55
41:a:2399:G:O6	41:a:2418:A:N6	2.38	0.55
48:h:44:ASN:OD1	48:h:44:ASN:C	2.49	0.55
8:7:-19:U:C2'	8:7:-18:G:C8	2.89	0.55
9:9:60:LEU:HA	9:9:64:VAL:CB	2.35	0.55
12:AB:158:LEU:CD2	12:AB:178:VAL:HG23	2.36	0.55
16:AG:131:ARG:CA	16:AG:186:VAL:HG11	2.35	0.55
16:AG:305:MET:HG3	16:AG:336:LEU:HB3	1.89	0.55
16:AG:380:THR:C	16:AG:384:LEU:CD1	2.79	0.55
16:AG:393:LEU:CB	16:AG:398:LEU:HD22	1.90	0.55
18:D:1295:U:H2'	18:D:1296:C:C6	2.41	0.55
39:Y:14:ALA:HB1	39:Y:50:LYS:HB3	1.87	0.55
39:Y:60:VAL:HG22	39:Y:66:PHE:CG	2.42	0.55
41:a:285:G:C5	41:a:356:G:C6	2.94	0.55
12:AB:156:SER:O	12:AB:156:SER:OG	2.23	0.55
14:AE:102:MET:HG2	14:AE:246:PRO:HG3	1.87	0.55
16:AG:133:HIS:CE1	16:AG:136:GLU:OE1	2.59	0.55
18:D:122:G:C5	18:D:123:U:C5	2.95	0.55
18:D:1173:U:H2'	18:D:1174:G:O4'	2.05	0.55
18:D:1244:G:C6	18:D:1294:G:C6	2.95	0.55
29:O:61:LEU:O	29:O:61:LEU:HD12	2.06	0.55
39:Y:80:LYS:HG3	39:Y:86:LYS:HA	1.87	0.55
41:a:244:A:OP2	55:o:8:ARG:NH2	2.40	0.55
41:a:2615:U:C2	49:i:4:GLN:HA	2.41	0.55
41:a:2702:G:C5	41:a:2703:C:C5	2.95	0.55
47:g:11:GLU:HA	47:g:25:ARG:HA	1.89	0.55
50:j:181:ASP:OD1	50:j:184:ARG:N	2.23	0.55
10:A:35:A:H2'	10:A:36:U:N1	2.22	0.55
11:AA:143:ARG:NH2	11:AA:512:SER:O	2.40	0.55
11:AA:898:GLU:CB	16:AG:115:VAL:CG2	2.85	0.55
11:AA:917:SER:O	11:AA:919:ARG:HG3	2.07	0.55
14:AE:903:LEU:HD21	14:AE:1249:ASN:HD22	1.70	0.55
16:AG:46:ARG:HH11	16:AG:61:ARG:HB3	1.71	0.55
16:AG:285:ILE:HD12	16:AG:293:VAL:HG11	1.88	0.55
16:AG:287:ALA:HB1	16:AG:331:LEU:CB	2.36	0.55
10:B:9:G:O2'	10:B:10:G:OP1	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:261:U:OP2	19:E:74:ARG:NH2	2.38	0.55
18:D:999:C:H42	18:D:1042:A:N6	2.04	0.55
33:S:52:PRO:O	33:S:55:SER:OG	2.19	0.55
41:a:997:G:OP1	66:z:92:ARG:NE	2.39	0.55
41:a:1079:C:H2'	41:a:1080:A:C8	2.42	0.55
41:a:2393:U:H2'	41:a:2394:C:C6	2.41	0.55
46:f:25:LEU:C	46:f:25:LEU:HD13	2.30	0.55
62:v:33:LEU:HD11	62:v:128:THR:HB	1.88	0.55
11:AA:905:ILE:HD12	16:AG:5:ILE:CD1	2.37	0.55
12:AB:135:ARG:HG2	12:AB:181:ALA:N	2.22	0.55
13:AC:28:LEU:HD22	13:AC:201:LEU:HD23	1.88	0.55
14:AE:39:LYS:O	14:AE:273:ILE:HG21	2.06	0.55
16:AG:130:PHE:O	16:AG:186:VAL:HG11	2.07	0.55
16:AG:239:LYS:HZ1	21:G:63:ARG:CD	2.19	0.55
16:AG:334:TRP:N	16:AG:334:TRP:CD1	2.73	0.55
10:B:60:U:P	10:B:61:C:H41	2.30	0.55
18:D:910:C:C2	18:D:911:U:C5	2.94	0.55
22:H:19:ARG:O	22:H:72:LEU:HD13	2.07	0.55
32:R:110:ARG:NH1	32:R:112:GLN:O	2.40	0.55
35:U:51:ARG:C	35:U:52:LEU:HD12	2.31	0.55
38:X:104:THR:O	38:X:105:ASN:ND2	2.38	0.55
39:Y:100:ILE:HB	39:Y:105:LEU:HD11	1.87	0.55
41:a:235:U:N3	41:a:236:C:C5	2.75	0.55
41:a:721:A:H2'	41:a:722:A:H8	1.71	0.55
41:a:962:G:C6	41:a:963:U:C4	2.95	0.55
41:a:1019:U:OP1	41:a:1035:U:O2'	2.14	0.55
41:a:1383:A:O2'	41:a:1384:A:O5'	2.25	0.55
41:a:1605:C:H2'	41:a:1606:C:O4'	2.07	0.55
41:a:1987:A:C2	41:a:1988:G:C8	2.94	0.55
44:d:2:G:C6	44:d:119:A:C6	2.95	0.55
65:y:78:SER:OG	65:y:80:VAL:HG12	2.06	0.55
11:AA:633:LEU:HD13	11:AA:644:LEU:HD23	1.89	0.55
11:AA:1101:LEU:HD21	14:AE:508:LEU:HD22	1.88	0.55
12:AB:157:ARG:NH1	12:AB:174:ASP:CA	2.69	0.55
14:AE:1166:GLY:HA3	14:AE:1174:ARG:HB2	1.88	0.55
16:AG:363:LEU:HD21	16:AG:410:ALA:N	1.79	0.55
18:D:362:G:H5''	32:R:58:THR:HG21	1.88	0.55
18:D:963:G:C2	18:D:964:A:C8	2.94	0.55
18:D:1029:U:H1'	18:D:1033:G:N2	2.22	0.55
18:D:1175:G:O2'	18:D:1176:A:P	2.65	0.55
18:D:1527:U:H2'	18:D:1528:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:R:29:GLN:OE1	32:R:29:GLN:N	2.40	0.55
41:a:1179:G:H3'	41:a:1180:U:O4'	2.07	0.55
41:a:1197:G:C4	41:a:1198:U:C5	2.94	0.55
41:a:1790:C:C3'	41:a:1791:A:C8	2.90	0.55
41:a:2298:A:N3	41:a:2321:U:C5	2.75	0.55
41:a:2298:A:OP1	54:n:71:ARG:NH2	2.36	0.55
1:0:79:ARG:NH2	41:a:563:A:OP2	2.39	0.55
12:AB:136:VAL:CG2	12:AB:177:GLN:CG	2.80	0.55
16:AG:299:ASP:HB2	16:AG:303:HIS:HA	1.89	0.55
16:AG:447:LYS:O	16:AG:470:ILE:HD11	2.05	0.55
16:AG:448:LEU:HD22	16:AG:467:LEU:HD22	1.89	0.55
17:C:31:ASN:HA	22:H:338:GLU:OE1	2.07	0.55
18:D:350:G:H2'	18:D:351:G:C8	2.42	0.55
18:D:439:U:O2	18:D:439:U:C2'	2.53	0.55
18:D:507:C:OP2	18:D:508:U:O2'	2.11	0.55
18:D:978:A:C5	18:D:1319:A:C2	2.94	0.55
18:D:1461:G:C5	18:D:1462:C:C5	2.94	0.55
21:G:127:ASP:O	21:G:128:LYS:HB3	2.07	0.55
30:P:14:ASP:OD1	30:P:14:ASP:C	2.50	0.55
30:P:22:THR:O	30:P:25:ILE:HG22	2.07	0.55
41:a:704:G:HO2'	41:a:705:A:P	2.28	0.55
41:a:813:U:H2'	41:a:814:C:H6	1.71	0.55
41:a:1505:A:C5	41:a:1506:U:C4	2.95	0.55
10:A:19:G:O6	41:a:2112:G:O5'	2.25	0.55
11:AA:890:LYS:HA	11:AA:914:LYS:HE3	1.89	0.55
16:AG:434:LEU:HD22	16:AG:459:LEU:CG	2.31	0.55
18:D:21:G:C2	18:D:22:G:C5	2.94	0.55
18:D:275:G:C2	18:D:276:G:C8	2.95	0.55
18:D:363:A:N6	32:R:27:CYS:SG	2.79	0.55
18:D:380:G:N1	18:D:384:G:O6	2.40	0.55
18:D:609:A:C5	18:D:610:U:C6	2.94	0.55
18:D:613:C:H2'	18:D:614:C:C6	2.42	0.55
18:D:767:A:H2'	18:D:768:A:O4'	2.07	0.55
31:Q:107:ILE:HD13	31:Q:108:THR:N	2.22	0.55
39:Y:74:PRO:HG2	39:Y:77:VAL:HB	1.88	0.55
41:a:301:G:C6	41:a:317:G:C6	2.95	0.55
41:a:920:A:C5	41:a:921:C:C5	2.94	0.55
41:a:1234:U:C2	41:a:1235:G:C8	2.95	0.55
41:a:1263:U:H2'	41:a:1264:A:C8	2.42	0.55
41:a:1403:A:H2'	41:a:1404:C:O4'	2.06	0.55
7:6:22:DC:H4'	11:AA:508:SER:OG	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:7:G:N2	10:A:67:C:C2	2.75	0.55
14:AE:26:SER:HB2	14:AE:236:TRP:CE2	2.42	0.55
16:AG:219:GLU:HB2	21:G:157:LEU:N	2.22	0.55
16:AG:285:ILE:CG1	16:AG:293:VAL:CG1	2.54	0.55
16:AG:320:ARG:NH1	16:AG:320:ARG:HG2	2.22	0.55
16:AG:437:LEU:HD22	16:AG:488:ILE:HD12	1.88	0.55
10:B:65:C:C2'	10:B:66:C:H5'	2.36	0.55
17:C:30:LYS:O	22:H:338:GLU:HB3	2.07	0.55
18:D:160:A:H2'	18:D:161:A:O4'	2.07	0.55
18:D:376:G:C2	18:D:389:A:C2	2.95	0.55
41:a:742:A:H2'	41:a:743:A:C8	2.40	0.55
41:a:1079:C:C2	41:a:1080:A:C8	2.95	0.55
41:a:1342:A:HO2'	41:a:1344:U:P	2.29	0.55
41:a:2061:G:N3	41:a:2063:C:C5	2.75	0.55
41:a:2061:G:C2	41:a:2063:C:C5	2.95	0.55
41:a:2578:G:N2	50:j:130:GLN:OE1	2.39	0.55
54:n:135:GLN:N	54:n:150:ARG:O	2.36	0.55
14:AE:759:ILE:HG23	14:AE:771:GLN:HB3	1.89	0.54
16:AG:179:VAL:HB	16:AG:199:ARG:HH11	1.73	0.54
18:D:563:A:H2'	18:D:567:G:C8	2.42	0.54
18:D:642:A:N3	28:N:105:SER:OG	2.40	0.54
18:D:673:A:C6	18:D:734:G:C6	2.95	0.54
18:D:674:G:H2'	18:D:675:A:H8	1.71	0.54
18:D:1125:U:O2'	18:D:1126:U:O5'	2.25	0.54
18:D:1137:C:H1'	18:D:1138:G:N2	2.21	0.54
18:D:1155:A:H2'	18:D:1156:G:O4'	2.06	0.54
18:D:1176:A:H2'	18:D:1177:G:O4'	2.07	0.54
21:G:90:PHE:CB	21:G:154:MET:CB	2.58	0.54
40:Z:19:VAL:HG12	40:Z:20:VAL:HG23	1.89	0.54
41:a:451:U:C2	41:a:453:A:N7	2.75	0.54
41:a:580:U:H2'	41:a:581:C:H6	1.72	0.54
41:a:754:U:H2'	41:a:755:U:C6	2.41	0.54
41:a:1105:U:H2'	41:a:1106:G:C8	2.42	0.54
41:a:1535:A:OP2	41:a:1536:C:C5	2.60	0.54
41:a:1560:G:C5	41:a:1561:C:C5	2.95	0.54
41:a:1637:A:H2'	41:a:1638:C:C6	2.43	0.54
41:a:1791:A:C2	41:a:1829:A:H4'	2.42	0.54
41:a:2291:U:OP1	41:a:2380:C:O2'	2.25	0.54
41:a:2543:G:H21	41:a:2646:C:H5''	1.71	0.54
58:r:128:HIS:N	58:r:144:VAL:O	2.36	0.54
3:2:69:ARG:NH2	3:2:72:GLN:O	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:145:VAL:HG23	14:AE:159:ILE:HG22	1.89	0.54
16:AG:162:ILE:HG22	16:AG:162:ILE:O	2.06	0.54
16:AG:168:LEU:CD2	16:AG:230:PRO:O	2.55	0.54
16:AG:220:VAL:HG13	21:G:157:LEU:HD11	1.76	0.54
16:AG:288:MET:HE2	16:AG:293:VAL:HB	1.89	0.54
16:AG:327:LEU:HD12	16:AG:327:LEU:O	2.07	0.54
16:AG:399:ASP:OD2	16:AG:399:ASP:N	2.40	0.54
17:C:40:VAL:HG12	17:C:41:PRO:O	2.08	0.54
18:D:1015:G:H1'	18:D:1218:C:O2'	2.08	0.54
41:a:129:C:O2'	41:a:130:C:H5'	2.07	0.54
41:a:135:U:C4	41:a:136:G:N7	2.76	0.54
41:a:1170:C:O2	41:a:1170:C:H2'	2.07	0.54
41:a:1739:A:C4	41:a:1740:G:C8	2.95	0.54
41:a:2144:G:C2	41:a:2146:C:O2	2.59	0.54
41:a:2531:A:C4	41:a:2532:G:C8	2.95	0.54
9:9:39:THR:HA	9:9:42:ARG:HH11	1.72	0.54
11:AA:902:LEU:O	11:AA:902:LEU:HG	2.06	0.54
12:AB:159:LYS:C	12:AB:170:PRO:HB3	2.20	0.54
14:AE:58:CYS:SG	14:AE:59:ALA:N	2.80	0.54
16:AG:168:LEU:CD2	16:AG:230:PRO:C	2.74	0.54
10:B:33:U:C2	10:B:35:A:OP2	2.60	0.54
10:B:58:A:O2'	10:B:59:A:O5'	2.25	0.54
17:C:11:CYS:O	17:C:14:THR:OG1	2.26	0.54
18:D:75:G:H2'	18:D:76:G:O4'	2.08	0.54
18:D:532:A:H3'	18:D:533:A:C5'	2.38	0.54
41:a:364:C:O2'	41:a:365:U:H5'	2.07	0.54
41:a:1212:G:N2	41:a:1236:G:O2'	2.36	0.54
41:a:1900:A:O2'	41:a:1901:A:OP1	2.21	0.54
8:7:-1:U:H2'	8:7:0:U:O4'	2.06	0.54
11:AA:29:SER:O	11:AA:33:ASP:HB2	2.08	0.54
14:AE:833:GLU:HB2	14:AE:1242:ARG:NH1	2.22	0.54
14:AE:1155:ILE:HG13	14:AE:1210:ILE:HB	1.89	0.54
16:AG:219:GLU:C	21:G:157:LEU:HB2	2.31	0.54
18:D:316:C:C5	18:D:351:G:C5	2.95	0.54
18:D:685:G:O2'	18:D:686:U:H5'	2.07	0.54
18:D:1140:C:O2'	18:D:1141:C:P	2.66	0.54
41:a:1085:A:O2'	41:a:1086:A:C5'	2.56	0.54
41:a:1352:U:O2'	41:a:1353:A:H5'	2.07	0.54
41:a:1580:A:H5'	41:a:1581:G:OP2	2.06	0.54
41:a:1926:U:C2	41:a:1928:A:OP2	2.61	0.54
41:a:2289:G:O2'	41:a:2290:G:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2478:A:C8	41:a:2529:G:C5	2.95	0.54
65:y:21:ARG:N	65:y:24:ASP:OD2	2.31	0.54
4:3:46:GLN:N	4:3:57:GLY:O	2.41	0.54
7:6:2:DC:H2''	7:6:3:DC:C5	2.43	0.54
9:9:61:ARG:H	9:9:61:ARG:HE	1.55	0.54
10:A:64:G:H2'	10:A:65:C:H6	1.72	0.54
11:AA:1117:LEU:HD12	11:AA:1195:ILE:HG12	1.90	0.54
16:AG:320:ARG:HB2	16:AG:323:GLN:HB2	1.88	0.54
17:C:24:LYS:HZ1	26:L:5:GLU:CD	2.15	0.54
18:D:1241:G:OP1	27:M:35:LYS:NZ	2.41	0.54
18:D:1287:A:N3	18:D:1353:G:O2'	2.38	0.54
18:D:1381:U:C4	18:D:1382:C:C5	2.96	0.54
34:T:49:ASP:OD2	34:T:52:SER:OG	2.23	0.54
41:a:27:G:N2	41:a:513:A:OP2	2.40	0.54
41:a:205:G:O2'	41:a:206:U:P	2.66	0.54
41:a:393:C:C2	41:a:394:C:C5	2.95	0.54
41:a:754:U:N3	41:a:755:U:C4	2.75	0.54
41:a:994:C:OP2	66:z:54:LYS:NZ	2.37	0.54
41:a:1857:G:N2	41:a:1884:G:N3	2.54	0.54
41:a:2225:A:H4'	41:a:2226:C:O5'	2.07	0.54
41:a:2491:U:H5''	41:a:2570:G:H5''	1.89	0.54
6:5:110:DA:N7	11:AA:183:TRP:HH2	2.06	0.54
11:AA:103:VAL:HB	11:AA:114:VAL:HG11	1.89	0.54
11:AA:855:PRO:HG3	11:AA:915:ASP:OD1	2.06	0.54
13:AC:100:LEU:HD23	13:AC:115:ILE:HG21	1.89	0.54
14:AE:30:ILE:HG21	14:AE:241:VAL:O	2.08	0.54
17:C:71:THR:HG23	17:C:74:HIS:HB3	1.89	0.54
18:D:136:C:C2	18:D:137:U:C5	2.95	0.54
18:D:714:G:H2'	18:D:715:A:C8	2.43	0.54
30:P:60:ASP:OD1	30:P:60:ASP:N	2.37	0.54
41:a:599:A:C6	41:a:659:G:C6	2.95	0.54
41:a:834:G:O2'	41:a:835:C:H5'	2.07	0.54
41:a:1070:A:N7	41:a:1096:A:O2'	2.41	0.54
41:a:1907:G:C6	41:a:1908:C:C2	2.96	0.54
41:a:2127:G:N3	41:a:2162:G:N7	2.56	0.54
41:a:2766:A:C6	41:a:2767:C:C5	2.96	0.54
8:7:-2:U:C5'	23:I:74:GLY:HA3	2.38	0.54
9:9:11:ILE:HG12	9:9:65:GLU:HG2	1.90	0.54
12:AB:154:GLU:HG2	12:AB:155:LYS:HG2	1.90	0.54
14:AE:814:CYS:SG	14:AE:883:ARG:NH2	2.81	0.54
10:B:21:A:H4'	10:B:21:A:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:146:G:C2	18:D:177:G:N7	2.76	0.54
18:D:439:U:O2	18:D:439:U:H2'	2.06	0.54
18:D:738:C:C2	18:D:739:C:C5	2.95	0.54
18:D:1004:A:H2'	18:D:1005:A:H8	1.73	0.54
18:D:1131:G:C6	18:D:1132:C:C4	2.96	0.54
22:H:22:SER:N	22:H:69:ASP:OD2	2.40	0.54
26:L:95:ALA:O	26:L:96:VAL:C	2.49	0.54
41:a:889:C:H2'	41:a:890:C:C6	2.43	0.54
41:a:1049:C:N3	41:a:1050:A:N7	2.55	0.54
41:a:1206:G:C4	41:a:1207:C:C5	2.96	0.54
41:a:1490:A:O2'	41:a:1491:G:H5'	2.08	0.54
41:a:1649:G:O6	41:a:2009:A:N6	2.41	0.54
9:9:25:ALA:N	9:9:85:SER:OG	2.35	0.54
11:AA:811:ASN:HA	11:AA:815:SER:HB2	1.90	0.54
18:D:160:A:N6	18:D:346:G:C6	2.75	0.54
18:D:207:C:HO2'	18:D:208:U:P	2.26	0.54
18:D:903:G:C5	18:D:904:U:C4	2.95	0.54
18:D:925:G:C2	18:D:927:G:C8	2.96	0.54
18:D:1179:A:H2'	18:D:1180:A:O4'	2.07	0.54
21:G:90:PHE:C	21:G:154:MET:SD	2.91	0.54
21:G:190:ASN:OD1	21:G:191:SER:N	2.41	0.54
41:a:282:A:H2'	41:a:283:G:H8	1.73	0.54
41:a:575:A:C2	41:a:576:U:C6	2.96	0.54
41:a:828:U:O2'	41:a:829:A:O4'	2.26	0.54
41:a:1232:G:C5	41:a:1233:C:C5	2.96	0.54
41:a:1908:C:H2'	41:a:1909:C:C6	2.42	0.54
41:a:2547:A:H2'	41:a:2548:U:C6	2.43	0.54
8:7:-7:U:H5''	23:I:132:ARG:HH11	1.73	0.54
9:9:132:TYR:HE2	40:Z:23:ILE:HD11	1.72	0.54
18:D:598:U:C2	18:D:599:C:C5	2.96	0.54
18:D:736:C:H2'	18:D:737:C:H6	1.73	0.54
18:D:771:G:C6	18:D:809:G:C6	2.96	0.54
18:D:975:A:N1	30:P:62:ARG:NH2	2.56	0.54
41:a:120:U:C5	41:a:149:A:C2	2.96	0.54
41:a:1359:A:N6	41:a:1360:G:C2	2.76	0.54
41:a:2127:G:H21	41:a:2173:A:C1'	2.21	0.54
59:s:60:ASP:OD1	59:s:61:LYS:N	2.40	0.54
11:AA:360:LEU:HD13	11:AA:378:ARG:HH11	1.72	0.54
14:AE:205:LEU:HG	14:AE:217:LEU:HB3	1.90	0.54
14:AE:804:ALA:O	14:AE:806:ASP:N	2.41	0.54
16:AG:362:TYR:CE1	16:AG:414:LEU:HD21	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:21:G:H2'	18:D:22:G:H8	1.72	0.54
41:a:26:G:C2'	41:a:27:G:O4'	2.56	0.54
41:a:684:G:OP1	53:m:16:HIS:ND1	2.41	0.54
41:a:1426:G:H1'	41:a:1572:A:N6	2.23	0.54
41:a:1779:U:H5	41:a:1784:A:N7	2.06	0.54
41:a:1839:G:C2	41:a:1840:G:C8	2.96	0.54
41:a:1987:A:C2	41:a:1988:G:N7	2.76	0.54
41:a:2187:U:H2'	41:a:2188:U:C6	2.43	0.54
41:a:2223:G:O2'	48:h:265:LYS:NZ	2.41	0.54
41:a:2473:U:O2	41:a:2473:U:H2'	2.06	0.54
52:l:104:ALA:O	52:l:108:ILE:HG23	2.07	0.54
8:7:-12:U:C4	18:D:1196:A:C8	2.96	0.53
11:AA:855:PRO:CG	11:AA:915:ASP:CG	2.74	0.53
11:AA:1142:ARG:NH2	11:AA:1166:ASP:OD1	2.38	0.53
14:AE:746:LEU:HG	14:AE:758:PRO:HG3	1.90	0.53
16:AG:223:ILE:HD13	16:AG:223:ILE:C	2.32	0.53
10:B:29:G:C2	10:B:42:G:C2	2.96	0.53
18:D:141:G:O6	18:D:223:A:N6	2.41	0.53
18:D:184:G:C4	18:D:185:U:C5	2.96	0.53
22:H:303:LEU:C	22:H:305:HIS:H	2.15	0.53
39:Y:93:ASN:ND2	39:Y:135:MET:O	2.34	0.53
41:a:327:G:H2'	41:a:328:U:C6	2.43	0.53
41:a:1386:C:H1'	41:a:1470:A:H1'	1.90	0.53
48:h:141:VAL:O	48:h:162:VAL:N	2.40	0.53
51:k:8:LYS:HA	51:k:24:THR:HA	1.90	0.53
8:7:15:G:H2'	8:7:16:A:C8	2.43	0.53
9:9:56:ARG:NH1	9:9:81:LEU:HD21	2.23	0.53
11:AA:886:LYS:HB3	11:AA:918:LEU:HD22	1.89	0.53
12:AB:135:ARG:HG2	12:AB:181:ALA:H	1.73	0.53
14:AE:46:TYR:CD1	14:AE:46:TYR:C	2.85	0.53
14:AE:124:ILE:HG23	14:AE:128:LEU:HD12	1.89	0.53
16:AG:216:ILE:HG23	16:AG:221:ILE:HG13	1.90	0.53
16:AG:448:LEU:HD11	16:AG:481:LEU:HD13	1.89	0.53
10:B:6:G:HO2'	10:B:7:G:P	2.25	0.53
10:B:8:U:O4	10:B:14:A:N7	2.41	0.53
10:B:18:G:C5	10:B:57:A:N6	2.76	0.53
10:B:32:C:O2	10:B:32:C:H2'	2.08	0.53
18:D:146:G:C6	18:D:177:G:O6	2.61	0.53
18:D:475:C:H2'	18:D:476:U:H6	1.72	0.53
18:D:1174:G:H2'	18:D:1175:G:H5'	1.89	0.53
22:H:70:VAL:O	22:H:71:ALA:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Y:116:MET:HA	39:Y:116:MET:CE	2.38	0.53
41:a:545:U:C3'	41:a:546:U:H4'	2.38	0.53
41:a:1074:G:C2	41:a:1075:C:C4	2.96	0.53
41:a:1177:G:HO2'	41:a:1178:C:P	2.27	0.53
41:a:1198:U:H2'	41:a:1199:U:C6	2.43	0.53
41:a:1856:U:H2'	41:a:1857:G:O4'	2.08	0.53
41:a:2175:C:H2'	41:a:2176:A:C8	2.42	0.53
41:a:2233:U:H2'	41:a:2234:G:C8	2.42	0.53
41:a:2259:U:C2	41:a:2260:C:C5	2.96	0.53
41:a:2299:U:N3	41:a:2300:C:C5	2.76	0.53
41:a:2307:G:H4'	41:a:2308:G:O4'	2.08	0.53
41:a:2771:C:C2	41:a:2772:C:C5	2.97	0.53
48:h:53:HIS:CD2	48:h:219:THR:HG1	2.26	0.53
55:o:33:LEU:O	55:o:36:LYS:N	2.41	0.53
58:r:15:LEU:HD13	58:r:15:LEU:C	2.33	0.53
64:x:111:ARG:NH2	64:x:117:PHE:OXT	2.36	0.53
7:6:26:DT:H2''	7:6:27:DG:H5'	1.88	0.53
8:7:20:G:O2'	14:AE:425:ARG:NH2	2.40	0.53
9:9:100:ALA:HB2	9:9:125:ARG:NE	2.24	0.53
11:AA:628:HIS:HB3	11:AA:647:ARG:HH21	1.74	0.53
13:AD:100:LEU:HD21	13:AD:121:VAL:HG11	1.90	0.53
14:AE:111:THR:HG22	14:AE:300:GLN:NE2	2.23	0.53
16:AG:201:LYS:HB3	16:AG:201:LYS:HZ3	1.74	0.53
16:AG:235:LYS:HG2	16:AG:235:LYS:O	2.07	0.53
16:AG:422:GLU:CA	16:AG:426:GLY:N	2.62	0.53
18:D:585:G:O2'	32:R:5:ASN:OD1	2.21	0.53
21:G:203:ASN:OD1	21:G:205:ASP:N	2.40	0.53
22:H:305:HIS:CG	22:H:306:VAL:N	2.77	0.53
37:W:37:ARG:O	37:W:70:LYS:NZ	2.38	0.53
41:a:1347:A:C4	41:a:1348:C:C6	2.97	0.53
41:a:1570:A:H2'	41:a:1571:A:C8	2.44	0.53
44:d:39:A:H2'	44:d:40:U:C6	2.43	0.53
8:7:-12:U:O5'	18:D:1397:C:N4	2.41	0.53
14:AE:136:GLU:OE1	14:AE:312:ARG:CZ	2.55	0.53
16:AG:239:LYS:NZ	21:G:63:ARG:CD	2.71	0.53
18:D:142:G:C2	18:D:222:C:N3	2.76	0.53
18:D:149:A:C2	18:D:174:A:C2	2.97	0.53
18:D:744:C:H2'	18:D:745:G:H8	1.74	0.53
18:D:1063:C:OP2	18:D:1064:G:O2'	2.20	0.53
18:D:1410:A:H2'	18:D:1411:C:H6	1.73	0.53
18:D:1516:G:N2	18:D:1520:C:C2	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:X:107:ARG:O	38:X:111:GLY:N	2.41	0.53
41:a:190:A:N6	41:a:207:A:H1'	2.24	0.53
41:a:397:U:H2'	41:a:398:C:H6	1.74	0.53
41:a:582:A:C4	41:a:583:G:C8	2.96	0.53
41:a:1020:A:C2	41:a:1141:U:C2	2.97	0.53
41:a:1541:C:O2'	41:a:1542:U:H5'	2.09	0.53
8:7:-2:U:C2'	8:7:-1:U:O5'	2.57	0.53
9:9:97:LYS:HD3	9:9:127:ALA:CA	2.36	0.53
9:9:116:GLU:OE1	9:9:116:GLU:HA	2.08	0.53
11:AA:243:PRO:HB2	11:AA:274:ILE:HG23	1.90	0.53
12:AB:93:ILE:O	14:AE:290:ILE:HG21	2.09	0.53
14:AE:99:ARG:HG3	14:AE:99:ARG:HH11	1.74	0.53
16:AG:220:VAL:HA	21:G:157:LEU:CB	2.37	0.53
10:B:48:C:C5	10:B:59:A:C8	2.96	0.53
18:D:461:A:C2	18:D:462:G:C8	2.96	0.53
18:D:645:G:C2	18:D:646:G:C8	2.97	0.53
22:H:294:VAL:HG11	22:H:330:VAL:HG11	1.91	0.53
41:a:1426:G:H1'	41:a:1572:A:H61	1.72	0.53
41:a:1498:C:N3	41:a:1499:C:C5	2.76	0.53
41:a:2254:C:C2	41:a:2255:G:C8	2.96	0.53
41:a:2636:C:H2'	41:a:2637:U:H6	1.73	0.53
11:AA:900:LYS:O	11:AA:900:LYS:HD3	2.08	0.53
14:AE:39:LYS:O	14:AE:273:ILE:HG23	2.08	0.53
14:AE:785:ASP:O	14:AE:789:LYS:HB2	2.08	0.53
16:AG:218:GLU:CA	21:G:104:TRP:CD1	2.92	0.53
18:D:23:C:O2'	18:D:24:U:H5'	2.08	0.53
18:D:146:G:C2'	18:D:147:G:H5'	2.39	0.53
18:D:840:C:H1'	18:D:847:G:N2	2.24	0.53
18:D:993:G:O2'	18:D:994:A:N7	2.41	0.53
18:D:1014:A:N7	18:D:1015:G:C6	2.77	0.53
18:D:1118:U:O2'	18:D:1119:C:H5'	2.09	0.53
21:G:129:LEU:H	21:G:129:LEU:HD12	1.73	0.53
41:a:838:C:C4	41:a:839:U:C5	2.97	0.53
41:a:1282:U:H2'	41:a:1283:G:O4'	2.08	0.53
41:a:1425:G:O2'	41:a:1426:G:H5'	2.09	0.53
41:a:2261:C:C2	41:a:2262:U:C5	2.97	0.53
48:h:141:VAL:HG12	48:h:191:THR:O	2.08	0.53
9:9:60:LEU:C	9:9:64:VAL:HB	2.33	0.53
10:A:24:U:H2'	10:A:25:C:C6	2.43	0.53
11:AA:684:ASN:OD1	11:AA:687:ARG:NH2	2.41	0.53
12:AB:136:VAL:CA	12:AB:179:GLU:OE1	2.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AD:205:MET:HE3	13:AD:213:PRO:HB3	1.91	0.53
18:D:50:A:O2'	18:D:360:G:N2	2.42	0.53
18:D:66:A:N6	18:D:104:G:C2	2.77	0.53
18:D:144:G:O6	18:D:179:A:N6	2.41	0.53
18:D:223:A:H2'	18:D:224:U:C6	2.44	0.53
18:D:358:U:C2	18:D:359:G:C8	2.97	0.53
18:D:552:U:O2'	32:R:83:ARG:O	2.22	0.53
18:D:1095:U:OP1	18:D:1108:G:N2	2.40	0.53
18:D:1288:A:H1'	18:D:1352:C:O2'	2.09	0.53
23:I:75:ILE:O	23:I:75:ILE:HD13	2.09	0.53
39:Y:57:VAL:HG23	39:Y:71:LYS:HZ2	1.73	0.53
39:Y:93:ASN:HA	39:Y:135:MET:CE	2.38	0.53
41:a:1:G:O6	41:a:2903:U:O4	2.26	0.53
41:a:25:U:O2'	41:a:26:G:H5'	2.09	0.53
41:a:303:G:C6	41:a:315:G:C6	2.97	0.53
41:a:419:U:H2'	41:a:420:C:C6	2.43	0.53
41:a:632:A:O2'	41:a:633:A:C5'	2.57	0.53
41:a:974:G:C6	41:a:989:G:C5	2.97	0.53
41:a:1107:G:C5	41:a:1108:U:C5	2.97	0.53
41:a:1789:A:H2'	41:a:1790:C:O4'	2.08	0.53
41:a:1815:A:O4'	41:a:1817:G:C8	2.62	0.53
41:a:2299:U:C2	41:a:2300:C:C6	2.97	0.53
41:a:2447:G:O2'	41:a:2500:U:OP2	2.25	0.53
8:7:-20:A:C2'	8:7:-19:U:C5'	2.87	0.53
10:A:36:U:H2'	10:A:37:A:O4'	2.09	0.53
12:AB:141:PHE:HA	12:AB:144:PHE:HE2	1.74	0.53
10:B:25:C:C5	10:B:26:G:N7	2.77	0.53
10:B:29:G:C6	10:B:30:G:C6	2.97	0.53
18:D:160:A:O2'	18:D:161:A:H5'	2.09	0.53
18:D:328:C:O2	18:D:328:C:H2'	2.09	0.53
18:D:745:G:C2	18:D:746:A:C5	2.97	0.53
19:E:70:ASN:OD1	19:E:70:ASN:N	2.41	0.53
30:P:87:LEU:O	30:P:90:LEU:N	2.42	0.53
33:S:10:GLU:OE2	33:S:61:ARG:N	2.39	0.53
39:Y:139:VAL:CG1	39:Y:141:ASP:HB2	2.39	0.53
41:a:65:U:C2	41:a:66:C:C6	2.97	0.53
41:a:1355:G:C2	41:a:1356:G:C8	2.96	0.53
41:a:2318:G:H2'	41:a:2319:G:C8	2.43	0.53
41:a:2538:C:C2	41:a:2539:C:C5	2.97	0.53
41:a:2751:G:C8	56:p:3:ARG:HD3	2.43	0.53
41:a:2838:G:C4	41:a:2839:G:C8	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:u:2:ARG:N	61:u:5:THR:OG1	2.41	0.53
1:0:51:VAL:HG23	66:z:86:ALA:O	2.09	0.53
8:7:17:G:H2'	8:7:18:A:C8	2.44	0.53
9:9:107:GLU:OE1	9:9:107:GLU:N	2.42	0.53
16:AG:21:GLU:HB3	16:AG:49:ILE:HD12	1.91	0.53
16:AG:434:LEU:CG	16:AG:456:LEU:N	2.71	0.53
18:D:17:U:O2'	18:D:1079:G:H1'	2.08	0.53
18:D:602:A:H2'	18:D:603:U:H6	1.74	0.53
18:D:773:G:C6	18:D:807:A:N6	2.77	0.53
18:D:1172:C:C2	18:D:1173:U:C5	2.97	0.53
18:D:1282:C:O2'	18:D:1283:U:H5'	2.09	0.53
30:P:28:THR:HG21	30:P:87:LEU:HD12	1.90	0.53
39:Y:85:ILE:HD11	39:Y:99:LYS:NZ	2.23	0.53
41:a:414:C:H2'	41:a:415:A:H8	1.74	0.53
41:a:828:U:O2'	41:a:829:A:C5'	2.57	0.53
41:a:880:G:C2	41:a:881:G:C8	2.97	0.53
41:a:1042:G:C5	41:a:1043:C:C5	2.97	0.53
41:a:2572:A:H62	50:j:150:GLN:NE2	2.06	0.53
41:a:2824:C:H3'	41:a:2825:G:H21	1.73	0.53
14:AE:68:TYR:CA	14:AE:75:TYR:HE2	2.22	0.53
15:AF:3:ARG:NH1	15:AF:55:GLU:OE2	2.40	0.53
16:AG:233:ARG:C	16:AG:327:LEU:HD21	2.34	0.53
16:AG:442:ARG:C	16:AG:446:PHE:CD2	2.85	0.53
18:D:174:A:C5	18:D:175:C:C5	2.96	0.53
18:D:293:G:C4	18:D:294:U:C5	2.97	0.53
18:D:325:A:H2'	18:D:326:G:O4'	2.09	0.53
18:D:382:A:H2'	18:D:383:A:C8	2.44	0.53
18:D:597:G:C5	18:D:598:U:C6	2.97	0.53
18:D:792:A:H1'	18:D:794:A:N7	2.24	0.53
18:D:911:U:H2'	18:D:912:C:C6	2.44	0.53
18:D:1315:U:O2'	18:D:1360:A:N3	2.41	0.53
23:I:134:MET:HE2	23:I:168:TYR:HD2	1.73	0.53
41:a:3:U:H2'	41:a:4:U:H6	1.74	0.53
41:a:368:A:C5	41:a:369:U:C4	2.97	0.53
41:a:499:U:H2'	41:a:500:G:O4'	2.09	0.53
41:a:1011:G:C6	41:a:1151:A:C6	2.97	0.53
41:a:1045:C:O2	41:a:1047:G:C6	2.62	0.53
41:a:1348:C:O2	41:a:1348:C:H2'	2.08	0.53
41:a:1506:U:H2'	41:a:1507:C:C5	2.44	0.53
41:a:2696:U:O2'	41:a:2697:G:H5'	2.08	0.53
41:a:2846:G:H2'	41:a:2847:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2847:U:H2'	41:a:2848:G:O4'	2.08	0.53
44:d:15:A:O4'	44:d:109:A:C8	2.61	0.53
58:r:90:LEU:CD2	58:r:94:ILE:HD11	2.38	0.53
64:x:106:LEU:HD23	64:x:106:LEU:C	2.34	0.53
7:6:8:DC:H2''	7:6:9:DT:H71	1.91	0.52
10:A:17:C:O5'	10:A:18:G:OP2	2.28	0.52
10:A:69:C:C2	10:A:70:G:C8	2.96	0.52
12:AB:134:VAL:C	12:AB:145:ASN:ND2	2.66	0.52
13:AD:16:ILE:HG23	13:AD:26:VAL:HG22	1.91	0.52
14:AE:78:LEU:O	14:AE:78:LEU:HD13	2.08	0.52
14:AE:209:ASN:HA	14:AE:214:ARG:HH21	1.74	0.52
16:AG:9:VAL:HG22	16:AG:24:PHE:CE2	2.45	0.52
18:D:72:A:C5	18:D:73:C:C5	2.97	0.52
18:D:271:C:C2	18:D:272:C:C5	2.97	0.52
18:D:611:C:H2'	18:D:611:C:O2	2.08	0.52
18:D:844:G:N2	18:D:846:G:C4	2.77	0.52
18:D:1279:G:C2'	18:D:1282:C:N4	2.72	0.52
21:G:206:ALA:O	21:G:210:VAL:HG23	2.09	0.52
23:I:60:PRO:O	23:I:63:SER:OG	2.22	0.52
25:K:46:VAL:HG21	25:K:118:ALA:HB2	1.89	0.52
38:X:66:GLU:OE1	38:X:70:ARG:NH1	2.39	0.52
38:X:68:ASP:OD1	38:X:68:ASP:N	2.41	0.52
41:a:733:G:O6	41:a:761:A:C8	2.62	0.52
41:a:857:G:H2'	41:a:858:G:O4'	2.09	0.52
41:a:1055:G:C4	41:a:1056:G:C8	2.96	0.52
41:a:1560:G:C4	41:a:1561:C:C5	2.96	0.52
41:a:1591:A:C6	41:a:1592:C:C4	2.96	0.52
41:a:1649:G:C6	41:a:2009:A:N6	2.77	0.52
41:a:2108:A:N1	41:a:2182:U:C4	2.77	0.52
9:9:51:TYR:CD1	9:9:51:TYR:C	2.87	0.52
9:9:60:LEU:HD23	9:9:64:VAL:CG2	2.17	0.52
11:AA:786:GLY:N	11:AA:789:THR:OG1	2.41	0.52
16:AG:63:LEU:HA	16:AG:92:TYR:HA	1.91	0.52
18:D:124:C:H2'	18:D:125:U:H6	1.74	0.52
18:D:346:G:OP1	65:y:39:ARG:NH2	2.41	0.52
18:D:491:G:C6	18:D:492:C:N4	2.77	0.52
18:D:671:G:H2'	18:D:672:U:O4'	2.09	0.52
18:D:765:G:H1	18:D:812:G:HO2'	1.54	0.52
18:D:890:G:O2'	18:D:906:A:N6	2.43	0.52
18:D:1129:C:C2	18:D:1139:G:C6	2.97	0.52
18:D:1319:A:C8	18:D:1323:G:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:L:41:ASP:OD1	26:L:43:GLY:N	2.38	0.52
41:a:601:C:O2'	52:l:99:LYS:NZ	2.41	0.52
41:a:1048:A:C2	41:a:1049:C:C6	2.98	0.52
41:a:1106:G:C2	41:a:1107:G:C8	2.97	0.52
41:a:1204:A:O4'	41:a:1206:G:C8	2.62	0.52
41:a:1668:A:O2'	41:a:1674:G:N7	2.29	0.52
41:a:1882:U:O2'	41:a:1883:U:H5'	2.08	0.52
41:a:2063:C:O2	41:a:2063:C:H2'	2.08	0.52
41:a:2642:G:C2	41:a:2643:G:C8	2.96	0.52
54:n:101:GLU:O	54:n:105:THR:OG1	2.25	0.52
55:o:13:ARG:HD3	61:u:58:TYR:O	2.09	0.52
9:9:16:SER:HB2	9:9:20:LYS:NZ	2.24	0.52
12:AB:127:LEU:H	12:AB:127:LEU:CD2	2.05	0.52
10:B:5:G:H2'	10:B:6:G:H5'	1.90	0.52
18:D:686:U:O4	18:D:703:G:O2'	2.25	0.52
18:D:687:A:C2	18:D:704:A:C5	2.97	0.52
18:D:750:C:H1'	34:T:21:ASP:O	2.09	0.52
18:D:904:U:H2'	18:D:905:U:C6	2.44	0.52
18:D:958:A:H2'	18:D:959:A:C8	2.44	0.52
25:K:32:SER:OG	25:K:33:PHE:N	2.43	0.52
30:P:14:ASP:CG	30:P:17:LEU:H	2.16	0.52
41:a:181:A:H1'	41:a:435:C:O4'	2.08	0.52
41:a:286:U:O2'	41:a:287:G:H5'	2.09	0.52
41:a:305:C:H2'	41:a:306:U:C6	2.43	0.52
41:a:631:A:O2'	41:a:632:A:H5'	2.09	0.52
41:a:831:G:O2'	61:u:38:GLN:OE1	2.26	0.52
41:a:1113:U:H2'	41:a:1114:C:C6	2.44	0.52
41:a:1166:G:C2	41:a:1184:U:O2	2.63	0.52
41:a:1246:A:C2'	41:a:1247:A:O5'	2.57	0.52
41:a:1889:A:H2'	41:a:1890:A:O4'	2.09	0.52
41:a:2702:G:C4	41:a:2703:C:C5	2.97	0.52
58:r:53:GLU:N	58:r:53:GLU:OE2	2.42	0.52
59:s:71:ASP:OD1	59:s:71:ASP:N	2.42	0.52
9:9:16:SER:O	9:9:20:LYS:HB2	2.08	0.52
10:A:4:G:C6	10:A:70:G:N1	2.78	0.52
12:AB:158:LEU:HD23	12:AB:175:PHE:H	1.66	0.52
14:AE:56:LEU:CD1	14:AE:273:ILE:HD12	2.39	0.52
16:AG:285:ILE:HD12	16:AG:293:VAL:HG21	1.92	0.52
10:B:12:G:C2'	10:B:13:C:OP1	2.56	0.52
10:B:56:C:H2'	10:B:57:A:C5'	2.40	0.52
18:D:327:A:H1'	18:D:329:A:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:611:C:C4	18:D:612:C:C5	2.97	0.52
18:D:648:A:H2'	18:D:649:A:O4'	2.09	0.52
18:D:903:G:H2'	18:D:904:U:C6	2.45	0.52
18:D:977:A:N6	18:D:1224:U:O5'	2.43	0.52
18:D:1027:C:N4	18:D:1034:G:C6	2.77	0.52
18:D:1158:C:C5	18:D:1160:G:H1'	2.45	0.52
41:a:163:C:H2'	41:a:164:C:O4'	2.09	0.52
41:a:190:A:H61	41:a:207:A:H1'	1.74	0.52
41:a:362:A:C6	41:a:363:G:C5	2.97	0.52
41:a:516:C:O2'	41:a:517:C:H5'	2.10	0.52
41:a:672:C:H2'	41:a:673:C:H6	1.75	0.52
41:a:1075:C:C4	41:a:1076:C:N4	2.78	0.52
41:a:1133:A:H4'	41:a:1134:A:H5''	1.90	0.52
41:a:1827:U:H2'	41:a:1828:G:O4'	2.08	0.52
41:a:1996:C:H5	60:t:32:TYR:HH	1.55	0.52
41:a:2263:C:O2'	41:a:2264:C:H5'	2.10	0.52
41:a:2873:A:O2'	41:a:2874:C:H5'	2.09	0.52
44:d:7:G:OP1	64:x:4:LYS:NZ	2.33	0.52
44:d:89:U:O2'	44:d:90:C:P	2.68	0.52
61:u:124:GLY:O	61:u:125:LEU:HD12	2.09	0.52
13:AD:28:LEU:HD12	13:AD:201:LEU:HD23	1.91	0.52
16:AG:11:ALA:HB3	16:AG:12:VAL:HA	1.92	0.52
10:B:11:A:H8	10:B:11:A:O5'	1.92	0.52
10:B:38:A:H3'	10:B:39:C:H5	1.72	0.52
18:D:356:A:C2'	18:D:368:U:O2'	2.57	0.52
18:D:1248:A:N6	18:D:1290:G:C5	2.77	0.52
18:D:1277:C:O2'	18:D:1279:G:H8	1.92	0.52
18:D:1323:G:C2	18:D:1324:A:C4	2.97	0.52
18:D:1324:A:C5	18:D:1325:C:C5	2.97	0.52
18:D:1333:A:H2'	18:D:1334:G:O4'	2.09	0.52
22:H:291:GLY:CA	22:H:305:HIS:HA	2.39	0.52
41:a:364:C:H2'	41:a:365:U:C6	2.45	0.52
41:a:515:A:C8	41:a:516:C:C5	2.97	0.52
41:a:871:U:H2'	41:a:872:U:C6	2.43	0.52
41:a:1001:A:H2'	41:a:1002:G:O4'	2.10	0.52
41:a:1027:A:HO2'	41:a:1028:A:P	2.30	0.52
41:a:1050:A:C4	41:a:2751:G:C2	2.98	0.52
41:a:1233:C:C2	41:a:1234:U:C6	2.98	0.52
41:a:1473:G:C6	41:a:1519:G:C6	2.97	0.52
41:a:1584:U:O2	41:a:1584:U:P	2.67	0.52
41:a:1800:C:OP2	48:h:182:ARG:NH1	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1926:U:O2	41:a:1929:G:C2	2.62	0.52
41:a:2415:G:C6	41:a:2416:C:C4	2.97	0.52
41:a:2673:G:C2	41:a:2674:G:C8	2.98	0.52
60:t:76:VAL:HG12	65:y:73:VAL:HB	1.92	0.52
9:9:43:LYS:O	9:9:43:LYS:HD2	2.10	0.52
9:9:65:GLU:OE1	9:9:65:GLU:HA	2.07	0.52
13:AC:140:ILE:HD12	13:AC:142:MET:HE3	1.91	0.52
13:AC:291:LYS:HA	16:AG:483:MET:CE	2.36	0.52
14:AE:201:LEU:HD12	14:AE:224:LEU:HD12	1.91	0.52
16:AG:329:SER:HA	16:AG:336:LEU:HG	1.92	0.52
16:AG:365:ILE:HD11	16:AG:406:LEU:HD22	1.87	0.52
18:D:116:A:H61	18:D:313:A:H1'	1.75	0.52
18:D:207:C:C2'	18:D:208:U:O5'	2.57	0.52
18:D:283:U:C2	18:D:284:C:C6	2.98	0.52
18:D:306:A:C6	18:D:307:C:C5	2.97	0.52
18:D:458:U:O4	18:D:474:G:O6	2.28	0.52
18:D:476:U:N3	18:D:477:C:C5	2.78	0.52
18:D:749:A:C5	18:D:750:C:C5	2.98	0.52
18:D:1118:U:H2'	18:D:1119:C:H6	1.74	0.52
18:D:1157:A:C2	18:D:1181:G:C5	2.98	0.52
18:D:1160:G:C2	18:D:1161:C:C6	2.97	0.52
18:D:1181:G:H1'	18:D:1182:G:C5	2.43	0.52
18:D:1280:A:O2'	18:D:1281:C:H5'	2.10	0.52
31:Q:36:ASP:OD1	31:Q:40:ASN:N	2.42	0.52
39:Y:17:ALA:HB2	39:Y:41:PHE:CE2	2.44	0.52
39:Y:100:ILE:HG13	39:Y:139:VAL:HA	1.91	0.52
41:a:582:A:OP1	66:z:14:HIS:ND1	2.42	0.52
41:a:721:A:H2'	41:a:722:A:C8	2.44	0.52
54:n:65:PRO:HA	54:n:89:VAL:HG22	1.92	0.52
4:3:99:ASN:C	4:3:99:ASN:OD1	2.52	0.52
10:A:18:G:H21	10:A:57:A:H3'	1.74	0.52
10:A:21:A:O2'	10:A:22:G:P	2.67	0.52
10:A:21:A:HO2'	10:A:22:G:P	2.30	0.52
10:A:48:C:C2'	10:A:49:G:OP2	2.58	0.52
11:AA:125:GLY:HA2	11:AA:499:SER:HB2	1.92	0.52
12:AB:145:ASN:ND2	12:AB:181:ALA:OXT	2.39	0.52
16:AG:374:VAL:O	16:AG:374:VAL:HG12	2.08	0.52
18:D:13:U:O4	18:D:20:U:O4	2.28	0.52
18:D:31:G:O2'	18:D:48:C:N4	2.30	0.52
18:D:335:C:C2	18:D:336:A:C8	2.98	0.52
18:D:1127:G:C2	18:D:1128:C:C6	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H:297:GLU:O	22:H:300:VAL:HG13	2.08	0.52
39:Y:104:GLN:C	39:Y:105:LEU:HG	2.34	0.52
41:a:2:G:H2'	41:a:3:U:C6	2.45	0.52
41:a:77:G:C6	41:a:78:U:C4	2.98	0.52
41:a:581:C:C2	41:a:582:A:C8	2.98	0.52
41:a:1115:G:HO2'	41:a:1116:G:H8	1.58	0.52
41:a:1462:C:O2'	41:a:2702:G:O2'	2.25	0.52
41:a:1589:U:O2'	41:a:1590:A:O5'	2.26	0.52
41:a:1791:A:H61	41:a:1828:G:HO2'	1.55	0.52
41:a:1922:G:C2'	41:a:1923:U:H5'	2.40	0.52
41:a:2341:G:H2'	41:a:2342:C:H6	1.72	0.52
41:a:2341:G:O2'	41:a:2342:C:H5'	2.09	0.52
41:a:2393:U:H2'	41:a:2394:C:H6	1.74	0.52
41:a:2539:C:N3	41:a:2540:C:C5	2.77	0.52
11:AA:974:ARG:HD2	11:AA:1014:LEU:HD21	1.92	0.52
12:AB:134:VAL:CA	12:AB:181:ALA:C	2.80	0.52
12:AB:153:TYR:N	12:AB:153:TYR:HD2	2.08	0.52
14:AE:975:ILE:HD11	14:AE:1003:LEU:HD11	1.90	0.52
16:AG:233:ARG:NH1	16:AG:324:ASN:HB2	2.25	0.52
18:D:213:G:C5	18:D:214:C:C6	2.97	0.52
18:D:477:C:C2	18:D:478:A:C8	2.97	0.52
18:D:636:U:H2'	18:D:637:C:C6	2.44	0.52
18:D:826:C:O2	28:N:16:ASN:ND2	2.43	0.52
39:Y:73:PRO:O	39:Y:112:LYS:NZ	2.43	0.52
41:a:445:C:O2'	41:a:446:G:H5'	2.08	0.52
41:a:479:A:HO2'	41:a:481:G:H8	1.55	0.52
41:a:632:A:O2'	41:a:633:A:O5'	2.27	0.52
41:a:1042:G:O2'	41:a:1043:C:P	2.68	0.52
41:a:1169:A:H3'	41:a:1170:C:H6	1.74	0.52
41:a:1509:A:O2'	41:a:1510:G:P	2.68	0.52
41:a:2252:G:N2	41:a:2253:G:H1'	2.25	0.52
41:a:2636:C:O2'	50:j:45:TYR:OH	2.26	0.52
41:a:2744:G:C6	41:a:2761:A:N6	2.78	0.52
2:1:59:GLU:HG3	2:1:66:ILE:HD11	1.92	0.52
10:A:38:A:C5	10:A:39:C:C6	2.98	0.52
13:AC:43:LEU:HD13	13:AC:217:ILE:HD11	1.90	0.52
14:AE:112:ALA:HA	14:AE:238:ILE:HA	1.91	0.52
18:D:482:A:H2'	18:D:483:C:O4'	2.09	0.52
18:D:1157:A:N7	18:D:1180:A:N6	2.57	0.52
18:D:1326:U:H2'	18:D:1327:C:C6	2.45	0.52
21:G:68:LEU:HD12	21:G:90:PHE:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:K:81:LEU:HD13	25:K:123:VAL:HG12	1.90	0.52
36:V:57:ASP:OD1	36:V:58:VAL:N	2.43	0.52
41:a:201:C:O2'	41:a:202:U:H5'	2.10	0.52
41:a:429:A:O2'	41:a:430:A:O4'	2.27	0.52
41:a:985:C:O2	41:a:986:C:C5	2.62	0.52
41:a:1144:A:C4	41:a:1145:C:C5	2.97	0.52
41:a:1638:C:H1'	41:a:2698:U:O2'	2.09	0.52
41:a:1790:C:H2'	41:a:1791:A:N7	2.25	0.52
41:a:2271:G:OP1	42:b:18:ALA:HB1	2.10	0.52
41:a:2839:G:H2'	41:a:2840:C:H6	1.74	0.52
44:d:24:G:N7	44:d:56:G:H2'	2.23	0.52
48:h:123:ALA:O	48:h:128:ASN:ND2	2.43	0.52
58:r:114:GLU:OE2	58:r:134:VAL:HA	2.09	0.52
8:7:15:G:H2'	8:7:16:A:H8	1.74	0.52
11:AA:1245:ALA:O	14:AE:375:GLU:HG2	2.10	0.52
14:AE:832:LYS:HB3	14:AE:1242:ARG:NH1	2.24	0.52
14:AE:850:LYS:HB2	14:AE:857:LEU:HB2	1.91	0.52
16:AG:244:ARG:NH2	16:AG:244:ARG:CG	2.73	0.52
18:D:781:A:OP2	18:D:800:G:N1	2.32	0.52
18:D:1098:C:O2'	20:F:71:TYR:O	2.25	0.52
18:D:1130:A:C8	18:D:1146:A:N1	2.78	0.52
18:D:1461:G:C4	18:D:1462:C:C6	2.98	0.52
36:V:75:LEU:C	36:V:75:LEU:HD12	2.35	0.52
39:Y:63:ASP:O	39:Y:65:SER:N	2.40	0.52
41:a:61:C:C2'	41:a:62:U:H5'	2.40	0.52
41:a:553:G:C5	41:a:554:U:C5	2.98	0.52
41:a:1075:C:O2'	41:a:1076:C:H5'	2.10	0.52
41:a:2345:G:N3	41:a:2381:A:H2'	2.24	0.52
41:a:2395:C:H2'	41:a:2396:G:O4'	2.10	0.52
41:a:2867:G:O2'	41:a:2868:A:P	2.68	0.52
4:3:7:ARG:HB2	41:a:85:G:OP2	2.10	0.51
9:9:78:GLY:H	9:9:79:PRO:HD2	1.74	0.51
10:A:64:G:C4	10:A:65:C:C5	2.98	0.51
10:A:66:C:H2'	10:A:67:C:C6	2.45	0.51
10:A:74:C:H2'	10:A:75:C:O4'	2.10	0.51
11:AA:143:ARG:NH1	11:AA:507:GLY:O	2.32	0.51
12:AB:167:ARG:CD	30:P:96:VAL:C	2.82	0.51
16:AG:243:LYS:HG2	21:G:179:LEU:HD23	1.91	0.51
16:AG:285:ILE:CD1	16:AG:285:ILE:N	2.73	0.51
16:AG:440:VAL:HG21	16:AG:481:LEU:HD22	1.88	0.51
16:AG:442:ARG:C	16:AG:446:PHE:HD2	2.15	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:6:G:C4	25:K:124:LEU:HD11	2.44	0.51
18:D:230:G:H2'	18:D:231:U:O4'	2.10	0.51
18:D:246:A:C2	18:D:282:A:C6	2.98	0.51
18:D:299:G:O2'	18:D:300:A:H5'	2.09	0.51
18:D:476:U:C2	18:D:477:C:C6	2.98	0.51
18:D:679:C:C2	18:D:680:C:C5	2.97	0.51
18:D:1202:U:C5	18:D:1203:C:C5	2.97	0.51
39:Y:59:THR:HG22	39:Y:61:TYR:CE1	2.44	0.51
41:a:614:A:HO2'	41:a:615:U:P	2.27	0.51
41:a:1124:G:O2'	41:a:1125:G:H5'	2.10	0.51
41:a:1577:C:H2'	41:a:1578:U:C1'	2.39	0.51
41:a:2133:G:HO2'	41:a:2134:A:P	2.33	0.51
41:a:2286:G:OP2	51:k:6:ARG:NH2	2.39	0.51
41:a:2464:G:C4	41:a:2487:G:N2	2.78	0.51
41:a:2661:G:H2'	41:a:2662:A:O4'	2.09	0.51
44:d:8:C:O3'	64:x:25:ARG:NH1	2.43	0.51
48:h:70:ASN:O	48:h:72:ASP:N	2.43	0.51
60:t:58:LEU:N	60:t:58:LEU:HD23	2.24	0.51
8:7:-10:U:O2	8:7:-10:U:H2'	2.09	0.51
9:9:26:VAL:CG2	9:9:110:ALA:O	2.58	0.51
12:AB:128:PHE:CG	12:AB:175:PHE:CG	2.92	0.51
14:AE:99:ARG:HA	14:AE:248:ASP:HB2	1.92	0.51
16:AG:398:LEU:HG	16:AG:398:LEU:O	2.09	0.51
10:B:31:G:H8	10:B:31:G:O5'	1.94	0.51
18:D:362:G:OP1	32:R:58:THR:HG23	2.10	0.51
18:D:1026:G:N1	18:D:1027:C:N3	2.58	0.51
18:D:1446:A:O2'	18:D:1447:A:H5'	2.11	0.51
18:D:1507:A:C2	18:D:1530:G:C4	2.98	0.51
29:O:7:TYR:CG	29:O:8:GLY:N	2.78	0.51
38:X:102:THR:O	38:X:103:LYS:C	2.54	0.51
41:a:138:U:H6	41:a:141:G:H1	1.58	0.51
41:a:1087:G:H2'	41:a:1089:A:O4'	2.11	0.51
41:a:1326:U:N3	41:a:1648:U:O2'	2.43	0.51
41:a:1534:U:O2	41:a:1536:C:N3	2.43	0.51
41:a:1794:A:H2'	41:a:1795:C:C6	2.45	0.51
41:a:2162:G:C8	41:a:2173:A:C8	2.98	0.51
44:d:95:U:H2'	44:d:96:G:H8	1.75	0.51
45:e:59:GLU:O	45:e:63:ALA:HB3	2.11	0.51
63:w:9:GLN:O	63:w:17:ARG:NH2	2.42	0.51
2:1:12:SER:O	2:1:101:SER:OG	2.26	0.51
4:3:4:LYS:C	4:3:5:ILE:HD12	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:64:G:H2'	10:A:65:C:C6	2.45	0.51
11:AA:93:SER:HA	11:AA:128:PRO:HA	1.93	0.51
12:AB:93:ILE:CG2	14:AE:290:ILE:HG22	2.40	0.51
12:AB:137:ASN:N	12:AB:179:GLU:CD	2.69	0.51
16:AG:402:THR:HA	16:AG:405:ALA:HB3	1.91	0.51
16:AG:444:LEU:HD22	16:AG:473:LEU:HD21	1.92	0.51
16:AG:453:VAL:HG11	16:AG:459:LEU:CD2	2.41	0.51
10:B:24:U:C2'	10:B:25:C:O4'	2.58	0.51
10:B:64:G:C4	10:B:65:C:C5	2.98	0.51
18:D:89:U:C2	18:D:90:C:C5	2.98	0.51
18:D:958:A:OP1	37:W:55:ARG:NH1	2.42	0.51
18:D:978:A:O2'	18:D:1322:C:H5	1.92	0.51
21:G:149:GLY:O	21:G:152:LYS:CG	2.50	0.51
24:J:29:ASP:N	24:J:29:ASP:OD1	2.39	0.51
39:Y:19:PRO:O	39:Y:24:GLY:HA2	2.09	0.51
39:Y:100:ILE:CG1	39:Y:139:VAL:HB	2.40	0.51
41:a:30:G:H2'	41:a:31:C:H6	1.76	0.51
41:a:75:G:H22	41:a:111:A:H2	1.58	0.51
41:a:278:A:C6	41:a:362:A:C8	2.98	0.51
41:a:397:U:H2'	41:a:398:C:C6	2.45	0.51
41:a:1707:G:C5	41:a:1708:C:C5	2.99	0.51
41:a:2636:C:C2	41:a:2637:U:C5	2.98	0.51
44:d:43:C:H5''	47:g:1:MET:HG2	1.91	0.51
10:A:22:G:OP2	10:A:22:G:H8	1.94	0.51
10:A:76:A:N6	41:a:2421:G:H2'	2.26	0.51
11:AA:906:PHE:CE2	16:AG:31:LEU:HB3	2.46	0.51
14:AE:395:LYS:NZ	14:AE:399:LYS:CD	2.74	0.51
16:AG:355:ALA:HB1	16:AG:382:GLU:CB	2.36	0.51
10:B:37:A:C3'	10:B:38:A:O4'	2.59	0.51
18:D:13:U:C4	18:D:915:A:N6	2.79	0.51
18:D:258:G:C2	18:D:269:C:O2	2.64	0.51
18:D:828:U:O4	18:D:859:G:C8	2.64	0.51
41:a:2:G:N2	41:a:2902:C:O2	2.43	0.51
41:a:352:A:H3'	41:a:353:C:H6	1.75	0.51
41:a:358:U:C4	41:a:359:G:N7	2.78	0.51
41:a:768:G:H22	41:a:1379:U:H1'	1.75	0.51
41:a:1710:G:O2'	41:a:1711:A:H5'	2.11	0.51
41:a:1769:U:O2'	41:a:1958:C:OP1	2.26	0.51
41:a:2126:A:H2	41:a:2162:G:C4	2.29	0.51
41:a:2150:C:H2'	41:a:2151:U:C6	2.44	0.51
58:r:82:SER:O	58:r:149:GLU:N	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:y:51:ARG:N	65:y:58:ALA:O	2.39	0.51
9:9:59:LEU:N	9:9:59:LEU:CD1	2.74	0.51
9:9:64:VAL:O	9:9:64:VAL:HG12	2.10	0.51
9:9:105:LYS:HB2	9:9:107:GLU:OE2	2.10	0.51
10:A:12:G:H2'	10:A:13:C:OP1	2.11	0.51
11:AA:374:GLU:HB2	12:AB:80:TRP:HH2	1.76	0.51
14:AE:215:LYS:HA	14:AE:218:THR:HG22	1.91	0.51
14:AE:390:LEU:N	14:AE:390:LEU:CD1	2.73	0.51
18:D:113:G:C6	18:D:315:A:N6	2.78	0.51
18:D:122:G:C6	18:D:123:U:C4	2.99	0.51
18:D:1131:G:N1	18:D:1132:C:C4	2.79	0.51
18:D:1133:G:C6	18:D:1134:G:C6	2.98	0.51
18:D:1218:C:H2'	18:D:1219:A:C8	2.46	0.51
18:D:1250:A:OP1	29:O:69:GLY:N	2.44	0.51
18:D:1382:C:O2	18:D:1382:C:H2'	2.09	0.51
36:V:75:LEU:HD12	36:V:76:VAL:N	2.26	0.51
41:a:1021:A:H3'	41:a:1021:A:N3	2.26	0.51
41:a:1028:A:HO2'	41:a:1029:A:C5'	2.24	0.51
41:a:1043:C:C4	41:a:1044:C:C4	2.99	0.51
41:a:1355:G:N3	41:a:1356:G:C8	2.78	0.51
41:a:1591:A:C2	41:a:1592:C:C2	2.98	0.51
41:a:2190:G:N2	41:a:2191:A:H1'	2.26	0.51
41:a:2331:G:O2'	41:a:2336:A:N1	2.37	0.51
52:l:72:SER:OG	52:l:74:LYS:N	2.40	0.51
10:A:76:A:O2'	41:a:2394:C:C2	2.49	0.51
11:AA:411:ARG:NH2	11:AA:427:ASP:OD2	2.44	0.51
16:AG:139:THR:HA	16:AG:180:ARG:HA	1.92	0.51
16:AG:220:VAL:HA	21:G:157:LEU:CD1	2.36	0.51
16:AG:360:THR:HG22	16:AG:360:THR:O	2.10	0.51
16:AG:362:TYR:CE2	16:AG:382:GLU:HG2	2.45	0.51
18:D:141:G:C6	18:D:223:A:N6	2.79	0.51
18:D:334:C:O2	18:D:335:C:C6	2.64	0.51
18:D:879:C:O2'	18:D:880:C:H5'	2.11	0.51
18:D:1126:U:O4	30:P:9:ARG:NH1	2.43	0.51
18:D:1314:C:H2'	18:D:1315:U:C6	2.45	0.51
18:D:1389:C:H2'	18:D:1390:U:O4'	2.10	0.51
21:G:90:PHE:HD2	21:G:154:MET:HA	1.69	0.51
29:O:12:ARG:O	29:O:13:LYS:C	2.53	0.51
39:Y:122:GLU:HG2	39:Y:126:ARG:HH11	1.74	0.51
41:a:70:G:H4'	41:a:71:A:OP1	2.11	0.51
41:a:458:G:O2'	41:a:459:U:P	2.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:738:G:C6	41:a:759:G:O6	2.63	0.51
41:a:967:U:O2'	41:a:968:C:H5'	2.10	0.51
41:a:1433:A:H2'	41:a:1434:A:C8	2.46	0.51
41:a:2181:U:H2'	41:a:2182:U:C6	2.45	0.51
41:a:2776:A:C2	41:a:2778:A:C4	2.99	0.51
52:l:3:LEU:O	52:l:12:LEU:N	2.44	0.51
56:p:95:ARG:HB2	56:p:128:GLN:HB3	1.91	0.51
3:2:6:ARG:NH2	3:2:42:GLU:OE2	2.44	0.51
11:AA:246:LEU:HB3	11:AA:269:ILE:HD13	1.91	0.51
11:AA:255:ILE:HB	11:AA:263:VAL:HB	1.92	0.51
14:AE:144:TYR:CE1	14:AE:162:GLU:CD	2.88	0.51
10:B:49:G:N1	10:B:66:C:C4	2.79	0.51
10:B:63:G:C2	10:B:64:G:C8	2.98	0.51
18:D:68:G:H8	18:D:68:G:OP2	1.93	0.51
18:D:222:C:H2'	18:D:223:A:H8	1.76	0.51
18:D:450:G:OP1	18:D:452:A:OP1	2.27	0.51
18:D:457:G:H5'	18:D:458:U:OP2	2.10	0.51
22:H:303:LEU:O	22:H:305:HIS:CA	2.58	0.51
41:a:48:G:N1	41:a:177:G:OP2	2.43	0.51
41:a:226:A:H2'	41:a:227:A:O4'	2.10	0.51
41:a:1073:A:C4	41:a:1074:G:C8	2.99	0.51
41:a:1122:G:C2	41:a:1123:C:C6	2.99	0.51
41:a:1209:U:O2'	41:a:1237:A:N1	2.35	0.51
41:a:1317:G:C6	41:a:1336:A:C6	2.99	0.51
41:a:1411:U:O2	41:a:1591:A:N1	2.44	0.51
41:a:1432:G:H2'	41:a:1433:A:C8	2.45	0.51
41:a:1568:G:N7	48:h:28:LYS:NZ	2.58	0.51
41:a:2011:U:H2'	41:a:2012:G:O4'	2.11	0.51
41:a:2645:G:H3'	41:a:2646:C:H5'	1.93	0.51
41:a:2650:U:C2	41:a:2651:C:C5	2.98	0.51
41:a:2854:G:C6	41:a:2864:G:C6	2.99	0.51
43:c:5:CYS:SG	43:c:8:THR:N	2.77	0.51
44:d:48:U:H2'	44:d:49:C:C6	2.45	0.51
44:d:89:U:O5'	44:d:89:U:O2	2.28	0.51
8:7:16:A:H2'	8:7:17:G:C8	2.45	0.51
9:9:3:LEU:HD12	9:9:3:LEU:N	2.24	0.51
9:9:51:TYR:CD1	9:9:88:HIS:HB2	2.46	0.51
9:9:88:HIS:O	9:9:89:PRO:C	2.54	0.51
11:AA:400:VAL:HG21	11:AA:452:ARG:HE	1.76	0.51
12:AB:159:LYS:CB	12:AB:159:LYS:NZ	2.73	0.51
14:AE:88:CYS:HB3	14:AE:90:VAL:HG12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:123:ARG:NH1	16:AG:123:ARG:HG2	2.26	0.51
17:C:29:LEU:O	17:C:33:ILE:HG23	2.11	0.51
18:D:334:C:N3	18:D:335:C:C5	2.79	0.51
18:D:399:G:C6	18:D:400:C:N4	2.79	0.51
18:D:477:C:H3'	18:D:478:A:H8	1.76	0.51
18:D:1130:A:C2	18:D:1131:G:C8	2.98	0.51
22:H:28:VAL:O	22:H:64:VAL:HG23	2.09	0.51
39:Y:79:LEU:CD1	39:Y:132:ALA:HA	2.41	0.51
41:a:138:U:H2'	41:a:140:C:C4	2.46	0.51
41:a:285:G:C6	41:a:356:G:C6	2.98	0.51
41:a:363:G:C6	41:a:364:C:C4	2.99	0.51
41:a:645:C:H2'	41:a:647:G:C8	2.46	0.51
41:a:1022:G:C6	41:a:1140:C:C4	2.98	0.51
41:a:1501:G:C2	41:a:1502:A:C8	2.99	0.51
41:a:1906:G:N3	41:a:1907:G:C8	2.79	0.51
41:a:2810:A:H2'	41:a:2811:G:O4'	2.10	0.51
41:a:2831:G:O2'	41:a:2884:U:OP1	2.19	0.51
41:a:2866:U:O3'	41:a:2867:G:H4'	2.10	0.51
43:c:60:ASP:OD1	43:c:60:ASP:N	2.42	0.51
47:g:26:SER:OG	47:g:27:THR:N	2.43	0.51
56:p:124:GLU:N	56:p:132:VAL:O	2.44	0.51
9:9:39:THR:N	9:9:42:ARG:HH11	2.09	0.51
10:A:5:G:C2	10:A:69:C:C2	2.99	0.51
11:AA:524:ILE:HG21	11:AA:708:VAL:HG13	1.92	0.51
14:AE:275:ARG:HH12	14:AE:278:ARG:NH1	2.09	0.51
16:AG:219:GLU:HG3	21:G:156:GLY:CA	2.41	0.51
16:AG:239:LYS:CE	21:G:63:ARG:NH1	2.73	0.51
16:AG:358:THR:O	16:AG:358:THR:OG1	2.25	0.51
10:B:32:C:H5'	10:B:33:U:OP2	2.10	0.51
18:D:335:C:H2'	18:D:336:A:H8	1.76	0.51
18:D:415:A:C4	18:D:416:G:C8	2.98	0.51
18:D:440:C:C2	18:D:441:A:C8	2.98	0.51
18:D:475:C:H2'	18:D:476:U:C6	2.46	0.51
18:D:716:A:C2'	18:D:717:U:O5'	2.59	0.51
18:D:877:G:C2	18:D:878:A:C5	2.99	0.51
18:D:939:G:OP1	27:M:102:ARG:NH1	2.37	0.51
18:D:1386:G:H2'	18:D:1387:G:H8	1.76	0.51
39:Y:117:THR:OG1	41:a:1082:U:O2'	2.24	0.51
41:a:234:U:C4	41:a:235:U:C5	2.99	0.51
41:a:765:C:O2'	41:a:766:U:H5'	2.11	0.51
41:a:813:U:H2'	41:a:814:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:879:G:O6	41:a:899:A:C2	2.64	0.51
41:a:959:A:H2'	41:a:960:A:C8	2.46	0.51
41:a:1068:G:C6	41:a:1069:A:N6	2.79	0.51
41:a:1225:G:O2'	41:a:1226:A:O4'	2.26	0.51
41:a:1482:G:C6	41:a:1508:A:N6	2.79	0.51
41:a:1910:G:N1	41:a:1921:G:C6	2.79	0.51
41:a:2067:G:H4'	41:a:2068:U:OP2	2.11	0.51
41:a:2189:U:O2'	41:a:2190:G:O4'	2.29	0.51
41:a:2293:G:H2'	41:a:2294:G:O4'	2.10	0.51
41:a:2364:C:H2'	41:a:2365:G:O4'	2.11	0.51
41:a:2415:G:C4	41:a:2416:C:C5	2.99	0.51
41:a:2556:C:C4	41:a:2557:G:C5	2.99	0.51
41:a:2558:C:O2'	41:a:2559:C:H5'	2.11	0.51
44:d:46:A:C5	44:d:47:C:C5	2.98	0.51
44:d:69:G:C5	44:d:70:C:C6	2.99	0.51
48:h:158:ALA:O	48:h:195:VAL:HG13	2.10	0.51
6:5:101:DT:H72	14:AE:271:ARG:CZ	2.41	0.51
8:7:-4:U:H2'	8:7:-3:U:C5'	2.41	0.51
9:9:35:VAL:CG2	39:Y:2:LYS:HA	2.41	0.51
11:AA:812:PHE:HA	14:AE:505:ASP:OD2	2.11	0.51
12:AB:134:VAL:N	12:AB:181:ALA:OXT	2.45	0.51
14:AE:421:VAL:O	14:AE:436:ALA:HA	2.11	0.51
10:B:12:G:H2'	10:B:13:C:OP1	2.11	0.51
10:B:55:U:N3	10:B:58:A:N7	2.59	0.51
17:C:70:TYR:CE2	18:D:674:G:O4'	2.64	0.51
18:D:209:U:H3'	18:D:210:C:C5'	2.40	0.51
18:D:1234:C:O2'	18:D:1235:U:H5'	2.11	0.51
25:K:111:MET:HE2	25:K:125:ALA:HB1	1.92	0.51
41:a:44:A:H2'	41:a:45:G:O4'	2.11	0.51
41:a:644:A:H2'	41:a:645:C:O4'	2.10	0.51
41:a:941:A:H2'	41:a:942:G:O4'	2.11	0.51
41:a:967:U:H2'	41:a:968:C:C6	2.46	0.51
41:a:1413:A:H2'	41:a:1414:C:O4'	2.11	0.51
41:a:1770:G:C6	41:a:1983:G:C5	2.99	0.51
41:a:1790:C:O3'	41:a:1791:A:C8	2.64	0.51
41:a:1889:A:N3	41:a:2086:U:O2'	2.43	0.51
41:a:2291:U:H2'	41:a:2292:U:C6	2.46	0.51
41:a:2538:C:N3	41:a:2539:C:C5	2.79	0.51
41:a:2607:G:O2'	41:a:2608:G:H5'	2.12	0.51
41:a:2803:G:H2'	41:a:2804:U:C6	2.46	0.51
48:h:84:ASP:OD2	48:h:87:ARG:NE	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:n:69:LYS:HA	54:n:83:TYR:O	2.11	0.51
55:o:31:HIS:O	55:o:32:ILE:C	2.54	0.51
59:s:141:ASP:OD1	59:s:142:ILE:N	2.44	0.51
8:7:-2:U:H5'	23:I:74:GLY:CA	2.41	0.50
12:AB:155:LYS:NZ	12:AB:155:LYS:CB	2.73	0.50
12:AB:158:LEU:CD2	12:AB:178:VAL:HG21	2.32	0.50
14:AE:24:LEU:CG	14:AE:232:ASN:HD21	2.05	0.50
14:AE:437:PHE:HZ	14:AE:453:VAL:HG11	1.76	0.50
14:AE:749:LYS:HB3	14:AE:755:ILE:HD11	1.93	0.50
16:AG:5:ILE:HA	16:AG:8:VAL:HB	1.93	0.50
16:AG:12:VAL:HG23	16:AG:16:LYS:HE2	1.92	0.50
16:AG:171:GLU:OE2	16:AG:267:GLY:C	2.54	0.50
10:B:60:U:H4'	10:B:61:C:OP2	2.11	0.50
18:D:251:G:N1	18:D:266:G:C6	2.79	0.50
18:D:257:G:N1	18:D:270:A:C6	2.79	0.50
18:D:374:A:C6	18:D:375:U:C4	2.99	0.50
18:D:496:A:O2'	18:D:497:G:N7	2.31	0.50
18:D:720:C:H5	18:D:721:G:HO2'	1.56	0.50
18:D:1041:G:C2	18:D:1042:A:C5	2.99	0.50
18:D:1304:G:H2'	18:D:1305:G:H1'	1.93	0.50
30:P:57:VAL:O	30:P:58:ASN:CG	2.55	0.50
41:a:356:G:C6	41:a:357:C:C4	2.99	0.50
41:a:396:G:C6	41:a:397:U:C4	2.98	0.50
41:a:419:U:H2'	41:a:420:C:H6	1.77	0.50
41:a:594:U:H2'	41:a:595:C:C6	2.46	0.50
41:a:877:A:C2	41:a:899:A:C2	2.99	0.50
41:a:1930:G:O2'	41:a:1931:U:P	2.69	0.50
41:a:2253:G:C4	41:a:2254:C:C6	2.99	0.50
41:a:2677:G:C6	41:a:2731:G:C6	2.99	0.50
43:c:40:VAL:O	43:c:44:LYS:N	2.44	0.50
2:1:16:LYS:NZ	41:a:2011:U:OP2	2.41	0.50
18:D:73:C:C2'	18:D:74:A:H5'	2.41	0.50
18:D:425:G:C5	18:D:426:U:C4	3.00	0.50
18:D:741:G:H2'	18:D:742:G:O4'	2.11	0.50
18:D:918:A:C6	18:D:919:A:C6	2.98	0.50
18:D:919:A:O2'	18:D:920:U:H5'	2.11	0.50
18:D:936:C:N3	18:D:937:A:C8	2.80	0.50
18:D:1003:G:N2	18:D:1037:C:O2	2.38	0.50
18:D:1017:U:O2'	18:D:1018:G:O5'	2.25	0.50
18:D:1415:G:C6	18:D:1486:G:C5	2.99	0.50
21:G:45:LYS:O	21:G:49:MET:HG3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:U:21:VAL:HG21	35:U:60:TRP:CD1	2.46	0.50
37:W:31:LEU:HD12	37:W:31:LEU:N	2.26	0.50
41:a:362:A:C4	41:a:363:G:C8	2.99	0.50
41:a:577:G:O2'	41:a:1254:A:OP1	2.29	0.50
41:a:792:A:C8	41:a:2440:C:O2	2.65	0.50
41:a:1144:A:C5	41:a:1145:C:C5	3.00	0.50
41:a:1317:G:O6	41:a:1336:A:N6	2.44	0.50
41:a:1505:A:H2'	41:a:1506:U:C6	2.46	0.50
41:a:1737:G:O3'	41:a:1738:G:O4'	2.29	0.50
48:h:121:ASP:N	48:h:121:ASP:OD1	2.43	0.50
5:4:18:ARG:NH1	44:d:93:C:OP2	2.44	0.50
16:AG:448:LEU:CG	16:AG:473:LEU:HD11	2.42	0.50
18:D:465:A:H2'	18:D:466:A:C8	2.45	0.50
18:D:842:U:C2	18:D:844:G:H5'	2.47	0.50
18:D:1325:C:C2	18:D:1326:U:C5	2.99	0.50
41:a:160:A:N6	41:a:167:A:H1'	2.26	0.50
41:a:283:G:H2'	41:a:284:U:C6	2.46	0.50
41:a:1056:G:N1	41:a:1102:C:OP2	2.45	0.50
41:a:1907:G:C2	41:a:1908:C:C1'	2.95	0.50
41:a:2104:C:C4	41:a:2105:U:C4	3.00	0.50
5:4:89:ILE:HG21	5:4:91:PHE:CZ	2.47	0.50
9:9:48:ALA:HB3	9:9:51:TYR:CD2	2.46	0.50
10:A:12:G:C2'	10:A:13:C:OP1	2.59	0.50
11:AA:400:VAL:HG11	11:AA:452:ARG:HD2	1.94	0.50
11:AA:714:VAL:HB	11:AA:787:PRO:HD2	1.92	0.50
14:AE:1371:ARG:HE	14:AE:1372:ARG:NH1	2.10	0.50
18:D:224:U:H2'	18:D:225:C:C6	2.47	0.50
18:D:399:G:H2'	18:D:400:C:C6	2.46	0.50
18:D:460:A:N3	18:D:461:A:C8	2.79	0.50
18:D:472:U:O2'	18:D:473:U:H5'	2.11	0.50
25:K:100:SER:O	25:K:103:THR:HG22	2.12	0.50
35:U:21:VAL:O	35:U:33:ILE:N	2.45	0.50
41:a:283:G:N2	41:a:358:U:C2	2.79	0.50
41:a:283:G:C2	41:a:358:U:O2	2.64	0.50
41:a:883:G:H21	41:a:884:U:H5	1.58	0.50
41:a:1095:A:H2'	41:a:1096:A:C8	2.47	0.50
41:a:1196:C:C2	41:a:1197:G:C8	2.99	0.50
41:a:1197:G:H2'	41:a:1198:U:H6	1.77	0.50
41:a:1682:G:H2'	41:a:1683:U:C6	2.46	0.50
41:a:1993:U:H4'	50:j:133:THR:CG2	2.41	0.50
41:a:2616:C:N3	41:a:2617:U:C5	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2649:C:H2'	41:a:2650:U:H6	1.75	0.50
41:a:2841:C:C2	41:a:2877:G:N2	2.80	0.50
9:9:93:ALA:O	9:9:130:PRO:HA	2.11	0.50
12:AB:71:VAL:HG12	12:AB:73:MET:HB2	1.93	0.50
13:AD:287:VAL:C	16:AG:78:GLU:OE1	2.55	0.50
16:AG:285:ILE:HD13	16:AG:285:ILE:H	1.76	0.50
18:D:844:G:H3'	18:D:844:G:N3	2.27	0.50
24:J:170:TRP:CD2	24:J:186:PRO:HB3	2.47	0.50
41:a:282:A:O2'	41:a:283:G:H5'	2.11	0.50
41:a:856:G:H2'	41:a:857:G:C8	2.46	0.50
41:a:963:U:O2'	41:a:964:C:H5'	2.12	0.50
41:a:1551:A:H2'	41:a:1552:A:O4'	2.11	0.50
41:a:1794:A:H2'	41:a:1795:C:H6	1.76	0.50
41:a:1948:G:C6	41:a:1959:G:C6	3.00	0.50
41:a:2147:A:N7	41:a:2148:G:C8	2.79	0.50
41:a:2186:G:H2'	41:a:2187:U:C6	2.47	0.50
41:a:2262:U:H2'	41:a:2263:C:H6	1.76	0.50
41:a:2265:U:OP2	41:a:2266:A:O2'	2.12	0.50
41:a:2461:A:H2'	41:a:2462:C:H6	1.76	0.50
41:a:2588:G:O6	41:a:2607:G:C6	2.65	0.50
41:a:2703:C:N3	41:a:2704:C:C5	2.80	0.50
44:d:2:G:H2'	44:d:3:C:H6	1.77	0.50
52:l:85:PHE:O	52:l:86:ALA:C	2.55	0.50
2:1:89:ALA:HB1	41:a:748:G:C8	2.47	0.50
8:7:-11:U:C5	23:I:162:ILE:HG21	2.46	0.50
10:A:70:G:C6	10:A:71:C:C5	3.00	0.50
10:B:53:G:C2	10:B:54:U:C6	3.00	0.50
18:D:270:A:H2'	18:D:271:C:C6	2.46	0.50
18:D:705:G:C5	18:D:706:A:C8	3.00	0.50
18:D:976:G:N2	18:D:1363:A:N3	2.60	0.50
18:D:1450:U:C2	18:D:1452:C:N3	2.80	0.50
18:D:1453:G:C5	18:D:1454:G:H1'	2.46	0.50
21:G:23:TRP:HB3	21:G:39:HIS:CE1	2.47	0.50
31:Q:88:GLY:N	31:Q:114:THR:HG22	2.26	0.50
41:a:65:U:N3	41:a:66:C:C5	2.79	0.50
41:a:356:G:H2'	41:a:357:C:C6	2.46	0.50
41:a:484:C:C2	41:a:485:C:C5	2.99	0.50
41:a:783:A:N3	41:a:783:A:H2'	2.27	0.50
41:a:818:G:O2'	41:a:838:C:O2'	2.27	0.50
41:a:1042:G:C6	41:a:1043:C:C4	3.00	0.50
41:a:1069:A:C2'	41:a:1073:A:H62	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1090:A:N1	41:a:1102:C:C2	2.80	0.50
41:a:1444:G:C4	41:a:1445:G:C8	2.99	0.50
41:a:1638:C:O2	41:a:2698:U:O2'	2.29	0.50
41:a:1892:C:C2	41:a:1893:C:C6	3.00	0.50
41:a:2009:A:C2	41:a:2010:G:C8	3.00	0.50
41:a:2134:A:O2'	41:a:2159:G:C2	2.61	0.50
41:a:2172:U:OP2	41:a:2174:C:OP2	2.29	0.50
41:a:2465:C:C2	41:a:2466:C:C5	3.00	0.50
41:a:2535:G:C2	41:a:2536:G:C8	3.00	0.50
10:A:76:A:C2	41:a:2421:G:C6	2.99	0.50
11:AA:618:GLN:HG3	14:AE:770:LEU:CD1	2.37	0.50
12:AB:174:ASP:OD2	12:AB:176:SER:HB2	2.12	0.50
14:AE:683:ILE:HD12	14:AE:754:ILE:HG21	1.93	0.50
16:AG:243:LYS:CG	21:G:179:LEU:CD2	2.73	0.50
16:AG:384:LEU:O	16:AG:387:VAL:HG23	2.12	0.50
18:D:212:G:C4	18:D:213:G:C8	3.00	0.50
18:D:333:U:N3	18:D:334:C:C5	2.79	0.50
18:D:461:A:N3	18:D:462:G:C8	2.79	0.50
18:D:597:G:C2	18:D:644:U:O2	2.65	0.50
18:D:1084:G:OP1	18:D:1086:U:C6	2.65	0.50
18:D:1151:A:O2'	18:D:1152:A:O4'	2.30	0.50
18:D:1319:A:O2'	18:D:1323:G:N7	2.41	0.50
22:H:305:HIS:ND1	22:H:306:VAL:HG12	2.27	0.50
28:N:75:ILE:HG23	28:N:75:ILE:O	2.12	0.50
41:a:299:A:C6	41:a:322:A:C4	2.99	0.50
41:a:584:C:N4	41:a:585:G:C6	2.79	0.50
41:a:592:A:C2	55:o:4:ILE:HD11	2.46	0.50
41:a:613:A:O4'	41:a:614:A:C8	2.64	0.50
41:a:1056:G:C2	41:a:1104:C:N4	2.80	0.50
41:a:1175:A:H4'	41:a:1176:U:O4'	2.11	0.50
41:a:1406:U:C2	41:a:1407:G:C8	2.99	0.50
41:a:1560:G:C2	41:a:1561:C:C6	2.99	0.50
41:a:1996:C:OP1	60:t:31:ARG:NH2	2.45	0.50
41:a:2730:C:O2'	41:a:2731:G:H5'	2.12	0.50
41:a:2885:G:H2'	41:a:2886:A:O4'	2.12	0.50
46:f:10:THR:HG23	46:f:11:ARG:HG3	1.93	0.50
1:0:80:ARG:NH1	41:a:571:U:OP1	2.45	0.50
6:5:96:DT:H2''	6:5:97:DC:C5	2.46	0.50
9:9:33:VAL:CG1	9:9:34:THR:H	2.22	0.50
9:9:35:VAL:O	9:9:39:THR:HG23	2.12	0.50
9:9:92:ALA:HB3	9:9:129:LEU:HD22	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:146:VAL:HG21	11:AA:513:GLN:HE21	1.77	0.50
11:AA:906:PHE:CD1	16:AG:102:PHE:O	2.64	0.50
14:AE:1167:LYS:HZ2	14:AE:1170:LYS:HB2	1.77	0.50
16:AG:353:HIS:HA	16:AG:356:ILE:HG21	1.94	0.50
16:AG:369:PHE:O	16:AG:373:LEU:HG	2.12	0.50
17:C:13:PHE:HB3	17:C:18:VAL:HG12	1.93	0.50
18:D:207:C:H2'	18:D:208:U:C6	2.47	0.50
18:D:220:G:H2'	18:D:220:G:N3	2.27	0.50
41:a:367:G:C6	41:a:368:A:C5	2.99	0.50
41:a:631:A:N3	41:a:2415:G:O2'	2.36	0.50
41:a:1146:C:O2'	41:a:1147:A:H5'	2.12	0.50
41:a:1165:A:O2'	41:a:1166:G:H5'	2.12	0.50
41:a:1169:A:O4'	41:a:1169:A:N3	2.45	0.50
41:a:1530:G:C2	41:a:1542:U:O2	2.64	0.50
41:a:2309:A:H2'	41:a:2310:C:O4'	2.11	0.50
41:a:2538:C:H2'	41:a:2539:C:H6	1.77	0.50
41:a:2864:G:O2'	41:a:2865:U:H5'	2.11	0.50
54:n:176:PRO:O	54:n:178:ARG:N	2.45	0.50
9:9:27:VAL:HG13	9:9:27:VAL:O	2.11	0.50
9:9:39:THR:CA	9:9:42:ARG:HH11	2.24	0.50
16:AG:65:VAL:HG12	16:AG:66:ASP:H	1.76	0.50
16:AG:296:ILE:HD11	16:AG:307:ILE:HD13	1.93	0.50
16:AG:353:HIS:O	16:AG:356:ILE:CB	2.58	0.50
10:B:17:C:O5'	10:B:18:G:OP2	2.30	0.50
10:B:31:G:H2'	10:B:32:C:O4'	2.11	0.50
10:B:55:U:C2	10:B:58:A:N7	2.79	0.50
18:D:46:G:C2	18:D:366:A:C4	3.00	0.50
18:D:972:C:O2'	30:P:57:VAL:HG23	2.11	0.50
18:D:984:C:C2	18:D:985:C:C5	3.00	0.50
18:D:1127:G:C6	18:D:1128:C:C5	3.00	0.50
26:L:69:GLU:C	26:L:69:GLU:CD	2.79	0.50
38:X:102:THR:O	38:X:104:THR:N	2.44	0.50
41:a:10:A:C4	41:a:11:C:C6	3.00	0.50
41:a:223:A:N6	41:a:422:A:C2	2.80	0.50
41:a:697:G:H2'	41:a:698:C:C6	2.47	0.50
41:a:1524:G:C4	41:a:1525:A:C8	3.00	0.50
41:a:1689:A:OP2	41:a:1698:A:N6	2.29	0.50
41:a:1747:U:H2'	41:a:1748:C:C6	2.47	0.50
41:a:1820:U:O2	48:h:201:MET:N	2.45	0.50
41:a:1843:C:H2'	41:a:1844:C:H6	1.77	0.50
41:a:2547:A:O2'	41:a:2548:U:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:t:12:ASP:OD1	60:t:14:SER:N	2.28	0.50
11:AA:855:PRO:HD2	11:AA:887:VAL:HG11	1.92	0.49
11:AA:906:PHE:CE1	16:AG:100:VAL:CG1	2.89	0.49
16:AG:243:LYS:HG2	21:G:179:LEU:HA	1.93	0.49
18:D:465:A:H2'	18:D:466:A:O4'	2.12	0.49
18:D:493:A:H2'	18:D:494:G:C8	2.47	0.49
18:D:864:A:H2'	18:D:865:A:C8	2.48	0.49
18:D:1320:C:H2'	18:D:1321:U:C6	2.47	0.49
18:D:1477:U:H2'	18:D:1478:U:C6	2.47	0.49
22:H:309:MET:HE2	22:H:318:PRO:HB3	1.93	0.49
39:Y:79:LEU:CA	39:Y:83:ALA:HB3	2.42	0.49
41:a:191:A:O2'	41:a:192:C:H5'	2.13	0.49
41:a:298:G:O2'	41:a:340:A:N6	2.45	0.49
41:a:1069:A:H4'	41:a:1070:A:C8	2.46	0.49
41:a:1115:G:C4	41:a:1116:G:C8	3.00	0.49
41:a:1346:G:C6	41:a:1601:G:C6	3.00	0.49
41:a:1386:C:H2'	41:a:1387:A:C8	2.47	0.49
41:a:1407:G:C6	41:a:1596:A:N1	2.80	0.49
41:a:1791:A:C2	41:a:1829:A:C4'	2.95	0.49
43:c:33:LEU:O	43:c:34:HIS:CG	2.65	0.49
56:p:11:VAL:HG12	56:p:48:ASN:O	2.12	0.49
10:A:48:C:H2'	10:A:48:C:O2	2.10	0.49
11:AA:854:ILE:HG21	11:AA:917:SER:HB2	1.89	0.49
14:AE:102:MET:HG2	14:AE:246:PRO:HD3	1.95	0.49
16:AG:422:GLU:O	16:AG:427:ASP:N	2.45	0.49
16:AG:453:VAL:HG11	16:AG:459:LEU:CG	2.42	0.49
10:B:27:U:O2'	10:B:28:C:H5'	2.12	0.49
18:D:184:G:H2'	18:D:185:U:H6	1.77	0.49
18:D:270:A:H2'	18:D:271:C:H6	1.76	0.49
18:D:936:C:C2	18:D:937:A:C8	2.99	0.49
18:D:1071:C:O2'	18:D:1072:G:H5'	2.12	0.49
18:D:1250:A:H2'	18:D:1251:A:O4'	2.12	0.49
18:D:1397:C:OP1	18:D:1397:C:H2'	2.12	0.49
22:H:124:LEU:O	22:H:125:ASN:C	2.54	0.49
41:a:135:U:C2	41:a:136:G:C8	3.01	0.49
41:a:194:G:H2'	41:a:195:A:O4'	2.12	0.49
41:a:413:C:H2'	41:a:414:C:H6	1.77	0.49
41:a:447:A:OP1	66:z:5:LYS:NZ	2.28	0.49
41:a:814:C:C2	41:a:815:C:C5	3.00	0.49
41:a:888:C:O2'	41:a:889:C:H5'	2.13	0.49
41:a:1049:C:O2'	41:a:1050:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1435:G:O2'	41:a:1436:G:H5'	2.12	0.49
41:a:1536:C:O2	41:a:1537:G:N2	2.45	0.49
41:a:2287:A:N7	41:a:2289:G:C8	2.80	0.49
41:a:2531:A:C2	41:a:2532:G:C8	3.00	0.49
41:a:2572:A:H62	50:j:150:GLN:HE22	1.60	0.49
53:m:24:THR:OG1	53:m:25:LYS:N	2.44	0.49
10:A:52:G:N3	10:A:53:G:C8	2.80	0.49
11:AA:18:ARG:HE	11:AA:620:ASN:HA	1.77	0.49
11:AA:1282:GLY:O	14:AE:1361:THR:OG1	2.28	0.49
12:AB:158:LEU:HD21	12:AB:175:PHE:CA	2.42	0.49
16:AG:254:MET:CG	25:K:68:ARG:HH11	2.25	0.49
16:AG:323:GLN:CA	16:AG:323:GLN:NE2	2.75	0.49
16:AG:429:LYS:HD2	16:AG:429:LYS:N	2.24	0.49
18:D:159:G:C4	18:D:161:A:OP2	2.65	0.49
18:D:420:U:O2'	18:D:423:G:O6	2.21	0.49
18:D:736:C:H2'	18:D:737:C:C6	2.47	0.49
18:D:838:G:C6	18:D:849:G:C6	3.01	0.49
18:D:963:G:C4	18:D:964:A:C8	3.01	0.49
27:M:93:PRO:O	27:M:96:ARG:HG2	2.12	0.49
29:O:4:ASN:N	29:O:5:GLN:OE1	2.45	0.49
31:Q:112:ASP:C	31:Q:112:ASP:OD1	2.55	0.49
33:S:10:GLU:OE2	33:S:61:ARG:O	2.29	0.49
41:a:138:U:H2'	41:a:140:C:N3	2.27	0.49
41:a:276:U:O2'	41:a:277:G:C8	2.64	0.49
41:a:678:C:H2'	41:a:679:C:C6	2.48	0.49
41:a:973:A:O4'	41:a:1188:U:C6	2.65	0.49
41:a:1266:G:N2	41:a:2013:A:OP2	2.30	0.49
41:a:1510:G:H2'	41:a:1511:G:O4'	2.11	0.49
41:a:2325:G:O2'	41:a:2326:C:H5'	2.12	0.49
41:a:2543:G:H2'	41:a:2544:G:O4'	2.12	0.49
41:a:2814:A:C5	41:a:2815:C:C5	3.01	0.49
48:h:157:SER:O	48:h:195:VAL:HG11	2.12	0.49
9:9:77:VAL:CG1	9:9:82:ILE:HG21	2.35	0.49
11:AA:554:HIS:HD2	11:AA:558:VAL:HB	1.77	0.49
14:AE:972:LYS:HD2	14:AE:1004:ALA:HA	1.93	0.49
16:AG:130:PHE:C	16:AG:186:VAL:CG1	2.85	0.49
18:D:124:C:C2	18:D:125:U:C5	3.00	0.49
18:D:425:G:H2'	18:D:426:U:C6	2.48	0.49
18:D:1142:G:C8	18:D:1143:G:C8	3.01	0.49
18:D:1149:C:H2'	18:D:1150:A:H8	1.77	0.49
25:K:111:MET:CE	25:K:125:ALA:HB1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:O:112:GLU:OE2	29:O:115:LYS:NZ	2.45	0.49
39:Y:32:VAL:HG13	39:Y:58:ILE:HG21	1.95	0.49
41:a:12:U:O2	41:a:2626:C:H4'	2.13	0.49
41:a:322:A:C2	41:a:340:A:C6	3.00	0.49
41:a:340:A:H2'	41:a:341:C:O4'	2.10	0.49
41:a:356:G:C2	41:a:357:C:C2	3.00	0.49
41:a:465:G:H2'	41:a:466:A:C8	2.46	0.49
41:a:616:A:C4	41:a:617:G:C8	3.01	0.49
41:a:678:C:H2'	41:a:679:C:H6	1.77	0.49
41:a:949:G:C6	41:a:969:G:C6	3.01	0.49
41:a:1049:C:C2	41:a:1050:A:C8	3.01	0.49
41:a:1177:G:O2'	41:a:1178:C:H6	1.95	0.49
41:a:1427:A:H4'	41:a:1428:C:O4'	2.12	0.49
41:a:1437:C:O2'	41:a:1516:G:O2'	2.07	0.49
41:a:1919:A:H5''	41:a:1920:C:OP2	2.12	0.49
41:a:2014:A:O2'	41:a:2015:A:O4'	2.17	0.49
41:a:2349:G:O6	41:a:2369:A:N6	2.45	0.49
41:a:2520:C:O2'	41:a:2521:C:H5'	2.13	0.49
41:a:2557:G:H2'	41:a:2558:C:C6	2.47	0.49
9:9:100:ALA:HB2	9:9:113:PHE:CE2	2.48	0.49
10:A:38:A:C5	10:A:39:C:C5	3.00	0.49
14:AE:201:LEU:HD11	14:AE:220:ARG:HG2	1.95	0.49
10:B:60:U:H3'	10:B:61:C:C5	2.47	0.49
17:C:42:SER:O	17:C:46:GLY:N	2.43	0.49
18:D:299:G:H2'	18:D:300:A:C8	2.47	0.49
18:D:316:C:C2	18:D:317:U:C5	3.00	0.49
18:D:455:G:N1	18:D:456:A:C5	2.80	0.49
18:D:1007:U:H2'	18:D:1008:U:N1	2.27	0.49
20:F:4:ILE:CD1	20:F:19:PHE:HA	2.43	0.49
22:H:76:GLU:C	22:H:78:GLY:H	2.21	0.49
23:I:130:PHE:CG	23:I:131:ARG:N	2.80	0.49
24:J:129:VAL:HG13	24:J:129:VAL:O	2.13	0.49
33:S:80:SER:O	33:S:84:VAL:HG23	2.13	0.49
40:Z:17:MET:O	40:Z:21:GLU:HB2	2.13	0.49
41:a:64:A:H2'	41:a:65:U:H6	1.78	0.49
41:a:196:A:N7	41:a:805:G:C5	2.80	0.49
41:a:271:G:C4	41:a:272:A:C8	3.01	0.49
41:a:414:C:H2'	41:a:415:A:C8	2.48	0.49
41:a:604:G:O6	41:a:625:G:C6	2.66	0.49
41:a:659:G:C2	41:a:660:C:C2	3.00	0.49
41:a:672:C:C2	41:a:673:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:784:G:H5'	41:a:785:G:OP1	2.12	0.49
41:a:1378:A:O2'	41:a:1380:G:N7	2.43	0.49
41:a:1401:G:H2'	41:a:1402:U:C6	2.48	0.49
41:a:1866:A:C6	41:a:1876:A:N7	2.81	0.49
41:a:1876:A:C4	41:a:1877:A:C8	3.01	0.49
41:a:1922:G:H8	41:a:1922:G:O5'	1.95	0.49
41:a:2180:U:H2'	41:a:2181:U:O4'	2.11	0.49
41:a:2394:C:C2	41:a:2395:C:C5	3.01	0.49
41:a:2447:G:O4'	41:a:2501:C:H5	1.95	0.49
41:a:2727:A:O2'	41:a:2728:U:H5'	2.12	0.49
41:a:2732:G:H3'	41:a:2733:A:C5'	2.42	0.49
44:d:28:C:H2'	44:d:29:A:O4'	2.12	0.49
9:9:86:MET:SD	9:9:116:GLU:OE2	2.71	0.49
10:A:70:G:N2	10:A:71:C:H1'	2.27	0.49
11:AA:1268:GLN:HE21	14:AE:352:ARG:HD2	1.68	0.49
16:AG:248:VAL:HG21	16:AG:275:LEU:HG	1.94	0.49
16:AG:305:MET:HG2	16:AG:336:LEU:HA	1.94	0.49
16:AG:453:VAL:HG11	16:AG:459:LEU:HD23	1.95	0.49
18:D:332:G:C2	18:D:333:U:C6	3.00	0.49
18:D:383:A:H2'	18:D:384:G:O4'	2.13	0.49
18:D:555:U:H2'	18:D:556:C:C6	2.47	0.49
18:D:716:A:O2'	18:D:717:U:O5'	2.26	0.49
18:D:1284:C:O5'	18:D:1285:A:H2'	2.12	0.49
18:D:1522:U:H2'	18:D:1523:G:H8	1.77	0.49
41:a:210:C:O2'	41:a:211:C:H5'	2.12	0.49
41:a:289:G:H2'	41:a:290:U:C6	2.47	0.49
41:a:581:C:C2	41:a:582:A:N7	2.80	0.49
41:a:695:G:C6	41:a:768:G:C6	3.00	0.49
41:a:909:A:H2'	41:a:912:C:H5	1.78	0.49
41:a:947:A:C6	41:a:971:G:C6	3.01	0.49
41:a:971:G:H2'	41:a:972:A:O5'	2.13	0.49
41:a:1268:A:H1'	41:a:2013:A:N6	2.27	0.49
41:a:1354:A:H2'	41:a:1355:G:O4'	2.12	0.49
41:a:1658:C:OP1	50:j:140:HIS:NE2	2.44	0.49
41:a:1684:G:O6	41:a:1705:A:N6	2.45	0.49
41:a:1746:A:H2'	41:a:1747:U:C6	2.48	0.49
41:a:1798:U:C4	41:a:1819:A:C2	3.01	0.49
41:a:2029:G:N1	41:a:2033:A:OP2	2.42	0.49
41:a:2597:G:O2'	41:a:2598:A:H5'	2.13	0.49
41:a:2784:U:C2	41:a:2785:C:C5	3.00	0.49
41:a:2795:C:N3	41:a:2796:U:O4	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:o:26:HIS:CE1	55:o:48:ALA:HB2	2.47	0.49
10:A:58:A:O2'	10:A:59:A:H3'	2.13	0.49
13:AD:100:LEU:HB2	13:AD:144:ILE:HG23	1.94	0.49
14:AE:799:ARG:HG2	14:AE:1325:PHE:HZ	1.78	0.49
16:AG:183:LEU:HD23	16:AG:197:VAL:HG22	1.94	0.49
16:AG:239:LYS:HZ3	21:G:63:ARG:HD2	1.77	0.49
16:AG:241:ASN:CG	21:G:159:ASP:HA	2.38	0.49
16:AG:283:PHE:CE2	16:AG:332:SER:HA	2.47	0.49
16:AG:433:ASP:O	16:AG:456:LEU:HD21	2.12	0.49
18:D:181:A:C6	18:D:195:A:N7	2.81	0.49
18:D:235:C:H2'	18:D:236:A:H8	1.77	0.49
18:D:344:A:H4'	18:D:345:C:OP2	2.11	0.49
18:D:687:A:C8	18:D:701:U:C4	3.01	0.49
18:D:1120:C:H2'	18:D:1121:U:H6	1.78	0.49
18:D:1256:A:N6	18:D:1277:C:C2	2.80	0.49
18:D:1268:G:H2'	18:D:1269:A:C8	2.48	0.49
18:D:1282:C:H2'	18:D:1283:U:C6	2.47	0.49
18:D:1451:U:H3'	18:D:1452:C:C6	2.47	0.49
21:G:90:PHE:CG	21:G:154:MET:CB	2.90	0.49
22:H:338:GLU:OE1	22:H:338:GLU:CA	2.60	0.49
41:a:683:U:C2'	41:a:684:G:O5'	2.61	0.49
41:a:704:G:O2'	41:a:726:G:N2	2.44	0.49
41:a:948:C:OP1	41:a:962:G:OP1	2.31	0.49
41:a:1145:C:O2'	41:a:1146:C:H5'	2.12	0.49
41:a:1364:G:N2	41:a:1368:G:C4	2.80	0.49
41:a:1500:G:O2'	41:a:1501:G:H5'	2.12	0.49
41:a:1730:C:OP1	41:a:1730:C:O4'	2.31	0.49
41:a:1853:A:H2'	41:a:1854:A:C8	2.48	0.49
41:a:2061:G:C2	41:a:2063:C:C6	3.00	0.49
41:a:2287:A:C8	41:a:2289:G:C8	3.00	0.49
41:a:2294:G:OP1	64:x:94:ARG:NH1	2.45	0.49
41:a:2616:C:C2	41:a:2617:U:C6	3.01	0.49
41:a:2858:C:C2'	41:a:2859:G:O5'	2.61	0.49
4:3:40:ASN:O	4:3:63:ALA:N	2.44	0.49
8:7:11:U:C2	11:AA:1253:LEU:HD12	2.35	0.49
9:9:118:ILE:N	9:9:119:PRO:HD2	2.27	0.49
10:A:14:A:C2	10:A:15:G:O6	2.65	0.49
16:AG:434:LEU:CD2	16:AG:455:THR:O	2.50	0.49
16:AG:451:ARG:NH2	16:AG:470:ILE:CG1	2.67	0.49
18:D:179:A:C5	18:D:180:U:C5	3.01	0.49
18:D:181:A:C2	18:D:195:A:C6	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:189:A:H2'	18:D:190:A:C8	2.47	0.49
18:D:1007:U:H2'	18:D:1008:U:C6	2.48	0.49
18:D:1039:G:H2'	18:D:1040:U:H6	1.77	0.49
18:D:1238:A:H2'	18:D:1238:A:N3	2.27	0.49
18:D:1270:G:O2'	18:D:1313:U:O2'	2.14	0.49
18:D:1410:A:H2'	18:D:1411:C:C6	2.48	0.49
41:a:221:A:C4	41:a:266:G:N7	2.81	0.49
41:a:271:G:O6	41:a:367:G:C6	2.66	0.49
41:a:312:G:C2	41:a:313:G:C8	3.00	0.49
41:a:877:A:H5'	41:a:878:A:OP1	2.13	0.49
41:a:884:U:O2'	41:a:885:C:O4'	2.27	0.49
41:a:894:U:O2'	41:a:895:U:C6	2.63	0.49
41:a:1042:G:O2'	41:a:1043:C:H6	1.96	0.49
41:a:1172:C:H3'	41:a:1173:U:H5''	1.95	0.49
41:a:1755:A:H2'	41:a:1756:G:H5'	1.94	0.49
41:a:2139:U:O2	41:a:2152:G:O6	2.31	0.49
41:a:2147:A:C4	41:a:2148:G:H1'	2.47	0.49
41:a:2452:C:H2'	41:a:2453:A:O4'	2.13	0.49
41:a:2514:U:H2'	41:a:2515:C:C6	2.48	0.49
41:a:2597:G:O2'	41:a:2598:A:C5'	2.61	0.49
41:a:2731:G:H2'	41:a:2732:G:C8	2.48	0.49
43:c:59:ILE:O	43:c:63:GLY:N	2.39	0.49
44:d:78:A:C2	44:d:99:A:C4	3.01	0.49
62:v:115:GLU:OE1	62:v:116:ALA:N	2.45	0.49
11:AA:908:GLU:OE1	16:AG:104:ARG:HA	2.12	0.49
10:B:32:C:OP1	29:O:130:ARG:NH2	2.45	0.49
18:D:542:G:H5'	24:J:39:GLY:HA3	1.95	0.49
18:D:598:U:N3	18:D:599:C:C5	2.80	0.49
18:D:1002:G:C4	18:D:1003:G:C8	3.01	0.49
18:D:1016:A:OP2	18:D:1017:U:C5	2.65	0.49
18:D:1133:G:C2	18:D:1142:G:C2	3.00	0.49
22:H:304:VAL:O	22:H:304:VAL:CG1	2.60	0.49
39:Y:122:GLU:HG2	39:Y:126:ARG:NH1	2.28	0.49
41:a:144:A:H2'	41:a:145:C:C6	2.48	0.49
41:a:379:G:N1	41:a:396:G:C6	2.80	0.49
41:a:535:G:H2'	41:a:536:G:O4'	2.13	0.49
41:a:572:A:C2	41:a:2033:A:C2	3.01	0.49
41:a:910:A:H2'	41:a:911:A:C8	2.48	0.49
41:a:1040:A:H2'	41:a:1041:G:O4'	2.13	0.49
41:a:1142:A:C4	41:a:1144:A:C8	3.00	0.49
41:a:1790:C:H2'	41:a:1791:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1907:G:N1	41:a:1908:C:C2	2.81	0.49
41:a:1941:C:H2'	41:a:1942:C:C6	2.48	0.49
41:a:2297:A:C2	41:a:2320:U:O4'	2.65	0.49
41:a:2582:G:OP2	41:a:2583:G:OP2	2.31	0.49
41:a:2747:G:O6	41:a:2755:C:H5''	2.13	0.49
44:d:10:G:C8	44:d:11:C:C5	3.01	0.49
44:d:31:C:C2	44:d:32:U:C5	3.00	0.49
52:l:12:LEU:HD23	52:l:13:THR:N	2.27	0.49
9:9:4:ASN:HA	9:9:7:ASP:CG	2.38	0.49
9:9:50:VAL:CG2	39:Y:119:ALA:HB3	2.43	0.49
9:9:61:ARG:O	9:9:65:GLU:HB2	2.13	0.49
10:A:34:C:H42	10:A:35:A:N6	2.10	0.49
11:AA:9:LYS:HG2	11:AA:1171:ARG:HH12	1.77	0.49
11:AA:732:ILE:HD11	11:AA:769:PRO:HB3	1.95	0.49
11:AA:836:LEU:HD13	11:AA:1054:LEU:HD13	1.95	0.49
13:AD:15:ASP:OD1	13:AD:27:THR:OG1	2.30	0.49
14:AE:550:VAL:O	14:AE:569:LEU:HA	2.13	0.49
14:AE:800:LEU:HB3	14:AE:920:ALA:HB1	1.95	0.49
16:AG:440:VAL:CG2	16:AG:481:LEU:HD21	2.42	0.49
17:C:53:ARG:NH1	18:D:835:U:OP1	2.46	0.49
18:D:255:G:H2'	18:D:256:U:C6	2.47	0.49
18:D:517:G:H1	18:D:533:A:P	2.36	0.49
18:D:599:C:O2'	18:D:600:A:H5'	2.13	0.49
18:D:736:C:C2	18:D:737:C:C5	3.01	0.49
18:D:999:C:N4	18:D:1042:A:H61	2.10	0.49
18:D:1131:G:C2	18:D:1132:C:C6	3.01	0.49
18:D:1352:C:H2'	18:D:1353:G:C1'	2.42	0.49
18:D:1526:G:C2	18:D:1527:U:C4	3.00	0.49
30:P:86:ALA:O	30:P:90:LEU:HB2	2.13	0.49
41:a:5:A:H2'	41:a:6:A:C8	2.47	0.49
41:a:66:C:C4	41:a:67:U:C5	3.01	0.49
41:a:318:C:O2'	41:a:319:G:H5'	2.13	0.49
41:a:458:G:O2'	41:a:459:U:OP2	2.31	0.49
41:a:591:U:C2	41:a:592:A:C8	3.01	0.49
41:a:851:C:C2	41:a:852:U:C5	3.00	0.49
41:a:1365:A:N3	41:a:1365:A:H2'	2.28	0.49
41:a:1906:G:C2	41:a:1907:G:C8	3.01	0.49
41:a:1987:A:N3	41:a:1988:G:C8	2.81	0.49
41:a:2393:U:C2	41:a:2394:C:C5	3.01	0.49
41:a:2494:G:N3	41:a:2495:G:C8	2.81	0.49
41:a:2720:U:C2	41:a:2721:A:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2785:C:C2	41:a:2786:U:C6	3.00	0.49
41:a:2897:U:H2'	41:a:2898:U:C6	2.48	0.49
44:d:32:U:O2'	44:d:33:G:H5'	2.13	0.49
5:4:7:GLU:OE1	5:4:7:GLU:N	2.46	0.48
10:A:66:C:OP2	10:A:66:C:C6	2.66	0.48
11:AA:565:GLU:HA	11:AA:569:ILE:HG12	1.95	0.48
11:AA:1314:GLN:HB2	15:AF:28:ARG:HH12	1.78	0.48
14:AE:152:THR:HB	14:AE:172:PHE:CZ	2.48	0.48
14:AE:1027:VAL:HB	14:AE:1121:LEU:HB2	1.95	0.48
16:AG:131:ARG:HA	16:AG:186:VAL:CG1	2.38	0.48
16:AG:239:LYS:HZ3	21:G:63:ARG:HH21	1.57	0.48
16:AG:363:LEU:HD11	16:AG:410:ALA:HB2	1.92	0.48
16:AG:448:LEU:HD23	16:AG:473:LEU:HD12	1.95	0.48
18:D:21:G:C2	18:D:22:G:N7	2.81	0.48
18:D:149:A:H2'	18:D:150:U:O4'	2.12	0.48
18:D:257:G:C6	18:D:270:A:C6	3.01	0.48
18:D:393:A:C2	18:D:394:G:C8	3.00	0.48
18:D:397:A:N7	18:D:547:A:O2'	2.42	0.48
18:D:674:G:H21	31:Q:118:HIS:HB2	1.77	0.48
18:D:1130:A:N7	18:D:1146:A:C6	2.81	0.48
18:D:1319:A:C4	18:D:1323:G:C8	3.01	0.48
20:F:4:ILE:HD12	20:F:19:PHE:HA	1.95	0.48
21:G:101:LEU:N	21:G:175:GLU:OE1	2.46	0.48
41:a:273:G:N1	41:a:365:U:N3	2.61	0.48
41:a:319:G:H2'	41:a:320:A:O4'	2.12	0.48
41:a:619:G:OP2	41:a:620:G:N2	2.40	0.48
41:a:639:U:H2'	41:a:640:C:H6	1.77	0.48
41:a:1218:G:C2	41:a:1232:G:C5	3.00	0.48
41:a:1248:G:O2'	66:z:3:ARG:HA	2.14	0.48
41:a:1887:C:H2'	41:a:1888:G:O4'	2.13	0.48
41:a:2557:G:C6	41:a:2558:C:N4	2.81	0.48
1:0:11:GLN:OE1	66:z:91:ASP:N	2.31	0.48
3:2:57:VAL:HG22	3:2:58:VAL:N	2.28	0.48
8:7:-17:U:C4'	8:7:-16:U:OP2	2.61	0.48
9:9:94:ARG:HB3	9:9:98:GLU:OE1	2.13	0.48
9:9:118:ILE:H	9:9:119:PRO:HD2	1.77	0.48
10:A:39:C:N3	10:A:40:C:C5	2.81	0.48
11:AA:808:ASN:N	14:AE:633:ALA:HB2	2.19	0.48
12:AB:144:PHE:HE1	12:AB:164:ILE:CG2	2.22	0.48
16:AG:59:PHE:CD1	16:AG:97:ILE:HG23	2.48	0.48
16:AG:168:LEU:CD2	16:AG:231:GLY:HA2	2.09	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:467:LEU:HD12	16:AG:482:ILE:HD11	1.95	0.48
10:B:21:A:C2'	10:B:22:G:OP2	2.60	0.48
18:D:14:U:N3	18:D:17:U:OP2	2.41	0.48
18:D:27:G:C5	18:D:557:G:N2	2.81	0.48
18:D:58:C:O2	18:D:58:C:H2'	2.12	0.48
18:D:105:G:H22	18:D:379:C:H4'	1.77	0.48
18:D:257:G:C6	18:D:270:A:N6	2.81	0.48
18:D:394:G:C2	18:D:395:C:C6	3.01	0.48
18:D:620:C:H2'	18:D:621:A:O4'	2.13	0.48
18:D:769:G:H4'	18:D:1513:A:H4'	1.94	0.48
18:D:1141:C:C2	18:D:1142:G:C8	3.01	0.48
34:T:18:ASP:C	34:T:20:ASN:H	2.21	0.48
37:W:51:VAL:O	37:W:57:HIS:HA	2.13	0.48
41:a:835:C:C4	41:a:836:G:N7	2.81	0.48
41:a:1177:G:C4	41:a:1178:C:C5	3.01	0.48
41:a:1498:C:C2	41:a:1499:C:C6	3.01	0.48
41:a:1584:U:H4'	41:a:1585:C:H5''	1.94	0.48
41:a:2184:A:H2'	41:a:2185:U:N1	2.27	0.48
41:a:2404:U:H2'	41:a:2405:G:O4'	2.13	0.48
41:a:2655:G:O2'	41:a:2656:U:P	2.71	0.48
41:a:2744:G:C6	41:a:2745:C:N4	2.81	0.48
41:a:2864:G:H2'	41:a:2865:U:C6	2.47	0.48
42:b:40:GLN:OE1	42:b:44:LYS:N	2.46	0.48
6:5:98:DA:N9	6:5:99:DT:H72	2.27	0.48
12:AB:162:VAL:HG21	12:AB:171:VAL:HB	1.95	0.48
13:AD:182:ARG:O	13:AD:205:MET:HA	2.14	0.48
14:AE:145:VAL:HG12	14:AE:184:ALA:HB1	1.94	0.48
16:AG:277:ASP:HB2	16:AG:282:GLN:HG3	1.95	0.48
18:D:51:A:N1	18:D:314:C:O2'	2.41	0.48
18:D:181:A:C4	18:D:194:C:C4	3.01	0.48
18:D:251:G:C6	18:D:266:G:O6	2.66	0.48
18:D:438:U:C4	18:D:494:G:C6	3.01	0.48
18:D:563:A:O2'	18:D:566:G:O3'	2.32	0.48
18:D:1033:G:H2'	18:D:1034:G:O4'	2.13	0.48
18:D:1051:C:H2'	18:D:1052:U:C6	2.48	0.48
18:D:1227:A:C8	38:X:116:ILE:HG12	2.48	0.48
18:D:1410:A:C6	18:D:1491:G:C6	3.01	0.48
41:a:301:G:C6	41:a:317:G:C5	3.02	0.48
41:a:481:G:C4	41:a:507:A:C2	3.01	0.48
41:a:487:C:H2'	41:a:488:G:O4'	2.14	0.48
41:a:792:A:C4	41:a:2440:C:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1216:G:O2'	41:a:1217:U:H5'	2.12	0.48
41:a:1232:G:C2	41:a:1233:C:C6	3.01	0.48
41:a:1387:A:C4	41:a:1388:G:C8	3.01	0.48
41:a:1789:A:C2	41:a:1790:C:C2	3.00	0.48
41:a:2266:A:H4'	41:a:2267:A:N3	2.29	0.48
41:a:2300:C:N3	41:a:2301:C:C5	2.82	0.48
41:a:2349:G:H2'	41:a:2350:C:C5'	2.43	0.48
43:c:60:ASP:OD2	58:r:27:ARG:NH1	2.46	0.48
9:9:1:MET:HE2	9:9:2:ALA:N	2.27	0.48
9:9:86:MET:HA	9:9:86:MET:HE3	1.94	0.48
10:A:65:C:O2'	10:A:66:C:H5'	2.12	0.48
14:AE:103:GLY:H	14:AE:244:VAL:HG22	1.78	0.48
16:AG:35:THR:HG21	16:AG:106:THR:HG22	1.96	0.48
10:B:4:G:C2	10:B:5:G:C8	3.01	0.48
10:B:38:A:H3'	10:B:39:C:C6	2.48	0.48
17:C:24:LYS:O	17:C:26:ILE:N	2.45	0.48
18:D:604:G:H2'	18:D:605:U:O4'	2.13	0.48
18:D:1511:G:H2'	18:D:1512:U:O4'	2.13	0.48
25:K:15:LEU:O	25:K:15:LEU:HG	2.13	0.48
38:X:42:ASP:N	38:X:42:ASP:OD1	2.46	0.48
39:Y:58:ILE:HG22	39:Y:60:VAL:CG2	2.43	0.48
41:a:184:C:C2	41:a:213:A:N1	2.81	0.48
41:a:730:A:C2	41:a:731:C:C6	3.01	0.48
41:a:886:A:H2'	41:a:887:A:O4'	2.13	0.48
41:a:993:G:C6	41:a:1162:G:C6	3.01	0.48
41:a:1197:G:C2	41:a:1198:U:C6	3.01	0.48
41:a:1907:G:N2	41:a:1908:C:H1'	2.27	0.48
50:j:61:THR:OG1	50:j:64:GLU:OE1	2.26	0.48
4:3:45:HIS:HB3	41:a:483:A:O4'	2.13	0.48
9:9:51:TYR:HB2	9:9:88:HIS:CB	2.42	0.48
11:AA:232:ILE:HG12	11:AA:237:LEU:HG	1.93	0.48
14:AE:1261:LEU:HD12	14:AE:1304:ARG:HH21	1.78	0.48
16:AG:349:GLN:C	16:AG:351:GLU:N	2.71	0.48
16:AG:434:LEU:HD11	16:AG:454:CYS:C	2.39	0.48
17:C:23:TYR:OH	26:L:5:GLU:OE1	2.19	0.48
18:D:5:U:O2	18:D:5:U:O4'	2.31	0.48
18:D:215:C:C2	18:D:216:U:C6	3.01	0.48
18:D:282:A:C5	18:D:283:U:C5	3.02	0.48
18:D:371:A:H2'	18:D:372:C:O4'	2.13	0.48
18:D:427:U:OP2	18:D:428:G:O2'	2.21	0.48
18:D:678:U:N3	18:D:679:C:C5	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:678:U:H2'	18:D:679:C:H6	1.77	0.48
18:D:737:C:H2'	18:D:738:C:H6	1.78	0.48
18:D:1026:G:O6	18:D:1027:C:N4	2.47	0.48
18:D:1119:C:C2	18:D:1120:C:C5	3.01	0.48
18:D:1180:A:OP1	29:O:105:THR:OG1	2.09	0.48
18:D:1198:G:H2'	18:D:1199:U:C6	2.49	0.48
18:D:1429:A:N3	18:D:1430:A:C8	2.81	0.48
21:G:73:LYS:HE2	21:G:165:ASP:HB2	1.94	0.48
24:J:174:ASP:O	24:J:178:MET:N	2.46	0.48
41:a:186:G:N2	41:a:211:C:C2	2.82	0.48
41:a:452:G:C2	41:a:458:G:C4	3.01	0.48
41:a:582:A:N3	41:a:583:G:C8	2.81	0.48
41:a:607:U:C5	41:a:620:G:C8	3.01	0.48
41:a:814:C:H1'	41:a:1225:G:N2	2.29	0.48
41:a:1019:U:O4	41:a:1142:A:N1	2.47	0.48
41:a:1048:A:C8	41:a:1111:A:N1	2.82	0.48
41:a:1199:U:H2'	41:a:1200:C:H6	1.79	0.48
41:a:1232:G:C4	41:a:1233:C:C5	3.02	0.48
41:a:1298:C:C2	41:a:1643:G:N2	2.82	0.48
41:a:1387:A:C4'	41:a:1469:A:H1'	2.44	0.48
41:a:1544:A:H2'	41:a:1545:A:O4'	2.13	0.48
41:a:2098:U:H2'	41:a:2099:U:O4'	2.13	0.48
41:a:2352:A:N6	41:a:2365:G:O2'	2.44	0.48
41:a:2468:A:C2	41:a:2481:G:C2	3.01	0.48
41:a:2521:C:H2'	41:a:2522:U:C6	2.49	0.48
41:a:2815:C:C2	41:a:2816:G:C8	3.01	0.48
56:p:46:ALA:O	56:p:48:ASN:N	2.42	0.48
58:r:93:SER:OG	58:r:121:VAL:HG13	2.13	0.48
63:w:87:PHE:O	63:w:88:ALA:C	2.56	0.48
9:9:30:SER:O	9:9:31:ARG:HD3	2.14	0.48
11:AA:363:LEU:HB3	11:AA:381:ALA:HB1	1.96	0.48
11:AA:1286:THR:O	11:AA:1290:MET:HB2	2.14	0.48
14:AE:47:ARG:CZ	14:AE:47:ARG:HB2	2.44	0.48
16:AG:62:TRP:CD1	16:AG:95:ASP:HB2	2.49	0.48
10:B:28:C:C2	10:B:29:G:C8	3.01	0.48
18:D:131:A:H2'	18:D:132:C:C6	2.49	0.48
18:D:715:A:O2'	18:D:716:A:H5'	2.13	0.48
18:D:749:A:C2	18:D:750:C:C6	3.02	0.48
18:D:763:G:H2'	18:D:764:C:C6	2.49	0.48
18:D:910:C:N3	18:D:911:U:C5	2.82	0.48
18:D:1017:U:HO2'	18:D:1018:G:P	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1226:C:H4'	18:D:1227:A:OP1	2.14	0.48
18:D:1368:A:OP1	29:O:113:ARG:NH2	2.46	0.48
18:D:1382:C:O2	18:D:1383:C:C6	2.67	0.48
21:G:24:ASN:C	21:G:24:ASN:OD1	2.56	0.48
27:M:15:ASP:O	27:M:19:GLY:HA2	2.13	0.48
28:N:73:GLU:N	28:N:130:ALA:O	2.46	0.48
34:T:74:ASP:OD1	34:T:74:ASP:C	2.56	0.48
41:a:463:G:N2	41:a:466:A:OP2	2.38	0.48
41:a:839:U:N3	41:a:840:C:C5	2.81	0.48
41:a:1039:A:H2'	41:a:1040:A:O4'	2.13	0.48
41:a:1069:A:C8	41:a:1073:A:N6	2.81	0.48
41:a:1116:G:C2	41:a:1117:C:C6	3.01	0.48
41:a:1665:A:H2'	41:a:1666:G:O4'	2.14	0.48
41:a:1665:A:O2'	41:a:1666:G:H5'	2.12	0.48
41:a:1757:A:C2'	41:a:1758:U:OP1	2.61	0.48
41:a:1815:A:C1'	41:a:1817:G:C8	2.97	0.48
41:a:2096:C:H2'	41:a:2097:A:C8	2.49	0.48
41:a:2127:G:N3	41:a:2173:A:H1'	2.28	0.48
41:a:2241:A:O2'	41:a:2242:G:H5'	2.14	0.48
41:a:2789:C:N4	41:a:2893:A:C2	2.81	0.48
46:f:40:ASP:CG	46:f:45:ARG:HE	2.22	0.48
52:l:145:ASP:C	52:l:145:ASP:OD1	2.56	0.48
58:r:7:ASP:OD2	58:r:8:LYS:O	2.32	0.48
5:4:29:ILE:HD13	44:d:74:U:O2	2.14	0.48
7:6:21:DA:N6	8:7:15:G:N1	2.61	0.48
9:9:24:SER:HB2	9:9:116:GLU:OE2	2.13	0.48
9:9:26:VAL:HB	9:9:82:ILE:HG23	1.95	0.48
12:AB:141:PHE:HE2	30:P:102:LEU:HB2	1.72	0.48
14:AE:24:LEU:CB	14:AE:232:ASN:OD1	2.54	0.48
16:AG:64:VAL:HA	16:AG:75:ILE:HB	1.94	0.48
16:AG:148:ASP:HA	16:AG:164:ARG:CD	2.44	0.48
18:D:577:G:O2'	18:D:578:C:H5'	2.12	0.48
18:D:749:A:N3	18:D:750:C:C6	2.82	0.48
18:D:976:G:C2	18:D:1363:A:C2	3.01	0.48
18:D:1277:C:O2'	18:D:1279:G:C8	2.66	0.48
23:I:181:ASP:HB2	23:I:207:ILE:CD1	2.43	0.48
39:Y:93:ASN:ND2	39:Y:135:MET:HG3	2.28	0.48
41:a:444:C:O2'	41:a:445:C:H5'	2.13	0.48
41:a:593:U:H2'	41:a:594:U:C6	2.49	0.48
41:a:753:A:O2'	41:a:754:U:H5'	2.13	0.48
41:a:986:C:O2'	41:a:987:C:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1114:C:O2'	41:a:1115:G:O4'	2.31	0.48
41:a:1613:G:N1	41:a:1617:C:C2	2.82	0.48
41:a:1832:C:C4	41:a:1833:C:C5	3.01	0.48
41:a:2144:G:C2	41:a:2148:G:C6	3.01	0.48
41:a:2473:U:N3	41:a:2474:U:C5	2.82	0.48
41:a:2857:G:C5	41:a:2859:G:OP2	2.66	0.48
11:AA:529:ARG:HH11	11:AA:572:ILE:HG22	1.77	0.48
14:AE:141:PHE:HE2	14:AE:296:LYS:CB	2.22	0.48
14:AE:1036:ARG:HE	14:AE:1081:VAL:HG11	1.79	0.48
16:AG:299:ASP:CB	16:AG:303:HIS:HA	2.44	0.48
18:D:138:G:C4	18:D:226:G:C2	3.01	0.48
18:D:269:C:H2'	18:D:270:A:H8	1.79	0.48
18:D:441:A:H1'	18:D:497:G:N2	2.28	0.48
18:D:549:C:C2	18:D:550:G:C8	3.02	0.48
18:D:564:C:H2'	18:D:565:U:C6	2.49	0.48
18:D:652:U:C4	18:D:752:G:N3	2.81	0.48
18:D:750:C:N3	18:D:751:U:C5	2.82	0.48
18:D:826:C:C2'	18:D:827:U:O5'	2.62	0.48
18:D:1010:U:H2'	18:D:1011:C:C6	2.49	0.48
18:D:1095:U:H2'	18:D:1096:C:C6	2.49	0.48
18:D:1130:A:N3	18:D:1131:G:C8	2.81	0.48
18:D:1356:G:O2'	18:D:1357:A:H5'	2.14	0.48
18:D:1526:G:OP2	20:F:42:THR:HG23	2.14	0.48
22:H:5:PHE:O	22:H:9:PHE:HB2	2.14	0.48
24:J:62:ARG:O	24:J:66:GLY:N	2.44	0.48
26:L:81:ASN:OD1	26:L:82:ASP:N	2.47	0.48
39:Y:77:VAL:O	39:Y:77:VAL:HG12	2.13	0.48
39:Y:102:ARG:HG2	39:Y:140:GLU:O	2.13	0.48
41:a:359:G:C5	41:a:360:U:C4	3.02	0.48
41:a:443:A:OP1	52:l:41:GLN:N	2.39	0.48
41:a:465:G:O2'	41:a:466:A:C5'	2.62	0.48
41:a:479:A:H4'	41:a:480:A:OP1	2.13	0.48
41:a:563:A:C6	41:a:2018:G:C4	3.02	0.48
41:a:866:A:C6	41:a:867:C:C5	3.02	0.48
41:a:949:G:O2'	41:a:950:G:H5'	2.13	0.48
41:a:1360:G:N7	41:a:1361:G:C8	2.82	0.48
41:a:1366:A:H2'	41:a:1367:A:O4'	2.14	0.48
41:a:1579:A:H2'	41:a:1580:A:O4'	2.14	0.48
41:a:1739:A:C2	41:a:1740:G:H1'	2.48	0.48
41:a:1786:A:H1'	41:a:1938:A:N6	2.29	0.48
41:a:2297:A:N1	41:a:2321:U:O4	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2422:C:N4	41:a:2424:C:N4	2.61	0.48
41:a:2466:C:H2'	41:a:2467:C:H6	1.79	0.48
44:d:33:G:C2	44:d:50:A:C2	3.02	0.48
48:h:168:ASP:OD1	48:h:168:ASP:N	2.47	0.48
58:r:53:GLU:N	58:r:53:GLU:CD	2.71	0.48
64:x:51:ALA:HA	64:x:55:GLU:OE1	2.13	0.48
10:A:15:G:C5	10:A:15:G:OP2	2.67	0.48
10:A:65:C:C2	10:A:66:C:C5	3.02	0.48
10:A:75:C:O2'	10:A:76:A:C8	2.54	0.48
12:AB:135:ARG:O	12:AB:179:GLU:CD	2.56	0.48
14:AE:891:ASP:OD2	14:AE:1290:ARG:NH2	2.47	0.48
16:AG:288:MET:O	16:AG:288:MET:HG2	2.13	0.48
16:AG:342:ASP:N	16:AG:342:ASP:OD1	2.45	0.48
16:AG:389:MET:HA	16:AG:407:ARG:NH1	2.29	0.48
16:AG:444:LEU:HD22	16:AG:473:LEU:CD2	2.43	0.48
18:D:361:G:O2'	18:D:362:G:H5'	2.14	0.48
18:D:560:A:H4'	18:D:561:U:H5''	1.96	0.48
18:D:711:G:C2	18:D:712:A:C5	3.01	0.48
18:D:769:G:O2'	18:D:770:C:H5'	2.14	0.48
18:D:815:A:H4'	18:D:817:C:C5	2.49	0.48
18:D:834:U:H2'	18:D:835:U:C6	2.49	0.48
18:D:1120:C:H2'	18:D:1121:U:C6	2.48	0.48
18:D:1162:C:N4	18:D:1175:G:O6	2.47	0.48
18:D:1175:G:O2'	18:D:1176:A:OP2	2.25	0.48
18:D:1261:A:C5	18:D:1262:C:C6	3.01	0.48
18:D:1499:A:C2	18:D:1500:A:C8	3.01	0.48
18:D:1513:A:H2'	18:D:1514:G:H8	1.79	0.48
21:G:76:ALA:CB	21:G:210:VAL:HG11	2.44	0.48
22:H:308:GLU:HB3	22:H:347:LYS:HD2	1.95	0.48
39:Y:23:VAL:O	39:Y:26:ALA:HB3	2.13	0.48
41:a:74:A:C8	41:a:88:G:N7	2.81	0.48
41:a:82:U:H2'	41:a:83:A:O4'	2.14	0.48
41:a:107:G:O2'	41:a:108:G:H5'	2.13	0.48
41:a:244:A:C2	41:a:255:A:C4	3.02	0.48
41:a:588:U:H2'	41:a:589:U:C6	2.47	0.48
41:a:589:U:O2'	41:a:590:A:H5'	2.13	0.48
41:a:595:C:H2'	41:a:596:U:C6	2.49	0.48
41:a:1000:A:OP2	41:a:1154:G:N1	2.31	0.48
41:a:1048:A:P	41:a:1110:G:H22	2.36	0.48
41:a:1112:G:C5	41:a:1113:U:C5	3.02	0.48
41:a:1212:G:HO2'	41:a:1236:G:H22	1.57	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1251:C:OP2	66:z:6:ARG:HD2	2.14	0.48
41:a:1414:C:O2'	41:a:1415:U:H5'	2.14	0.48
41:a:1585:C:H2'	41:a:1586:A:O4'	2.13	0.48
41:a:1851:U:C4	41:a:1852:U:C4	3.01	0.48
41:a:2006:C:C2	41:a:2007:U:C5	3.02	0.48
41:a:2495:G:C6	41:a:2496:C:N4	2.82	0.48
41:a:2840:C:H5''	63:w:53:THR:OG1	2.13	0.48
52:l:125:SER:O	52:l:137:LYS:NZ	2.43	0.48
63:w:20:MET:HG3	63:w:21:PHE:N	2.28	0.48
2:1:55:ILE:HG23	2:1:66:ILE:HD12	1.95	0.48
9:9:87:GLU:OE2	9:9:95:LEU:HD23	2.13	0.48
11:AA:1070:HIS:NE2	11:AA:1114:GLU:OE1	2.36	0.48
14:AE:833:GLU:N	14:AE:1242:ARG:HH12	2.12	0.48
16:AG:61:ARG:HD2	16:AG:73:LYS:CD	2.44	0.48
16:AG:207:GLU:HG3	16:AG:210:ARG:HB3	1.96	0.48
16:AG:209:PHE:CE1	16:AG:262:VAL:HG21	2.49	0.48
16:AG:440:VAL:HG22	16:AG:481:LEU:HD21	1.95	0.48
18:D:116:A:H2'	18:D:117:G:O4'	2.14	0.48
18:D:262:A:H3'	18:D:263:A:H8	1.78	0.48
18:D:348:G:C2	18:D:349:A:C8	3.01	0.48
18:D:503:C:O2'	18:D:510:A:N1	2.45	0.48
18:D:846:G:C6	18:D:847:G:C5	3.02	0.48
18:D:1048:G:C2	18:D:1050:G:N7	2.81	0.48
18:D:1244:G:H2'	18:D:1245:C:C6	2.49	0.48
18:D:1500:A:OP2	18:D:1505:G:OP2	2.32	0.48
39:Y:74:PRO:O	39:Y:78:LEU:HG	2.13	0.48
41:a:10:A:C5	41:a:11:C:C5	3.02	0.48
41:a:161:A:OP2	41:a:162:U:C2'	2.62	0.48
41:a:169:G:O2'	41:a:170:U:H5'	2.14	0.48
41:a:272:A:H2'	41:a:273:G:H8	1.79	0.48
41:a:355:U:H2'	41:a:356:G:H8	1.79	0.48
41:a:545:U:O2	41:a:545:U:P	2.72	0.48
41:a:1028:A:C2'	41:a:1029:A:O5'	2.61	0.48
41:a:1055:G:C6	41:a:1056:G:C5	3.01	0.48
41:a:1179:G:O4'	41:a:1179:G:N3	2.47	0.48
41:a:1349:C:C2	41:a:1350:C:C5	3.02	0.48
41:a:1734:G:N1	41:a:1735:A:C5	2.81	0.48
41:a:2260:C:O2'	41:a:2261:C:H5'	2.14	0.48
41:a:2447:G:O4'	41:a:2501:C:C5	2.67	0.48
52:l:15:SER:N	52:l:197:GLU:OE2	2.47	0.48
10:A:39:C:O2'	10:A:40:C:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:400:VAL:HG22	11:AA:584:TYR:HB3	1.96	0.47
11:AA:1311:GLY:O	15:AF:31:GLN:NE2	2.47	0.47
14:AE:1146:GLU:OE2	14:AE:1310:THR:HG22	2.14	0.47
16:AG:26:ALA:HB1	16:AG:117:LYS:HG2	1.96	0.47
10:B:65:C:H2'	10:B:66:C:H5'	1.96	0.47
10:B:76:A:C4	41:a:2493:U:H5''	2.48	0.47
18:D:181:A:C6	18:D:195:A:C5	3.01	0.47
18:D:208:U:OP2	18:D:208:U:H6	1.97	0.47
18:D:259:G:C2	18:D:268:U:O2	2.66	0.47
18:D:384:G:C4	18:D:385:C:C5	3.02	0.47
18:D:456:A:C6	18:D:457:G:C5	3.01	0.47
18:D:461:A:N1	18:D:462:G:C5	2.81	0.47
18:D:691:G:H2'	18:D:692:U:C6	2.49	0.47
18:D:784:A:H2'	18:D:785:G:O4'	2.14	0.47
18:D:878:A:O2'	18:D:879:C:H5'	2.13	0.47
18:D:912:C:O2'	18:D:913:A:H5'	2.14	0.47
18:D:1209:C:O2	18:D:1210:C:C5	2.67	0.47
18:D:1508:A:H2'	18:D:1509:C:H6	1.79	0.47
28:N:121:LEU:HD12	28:N:121:LEU:O	2.14	0.47
38:X:59:GLU:N	38:X:59:GLU:OE1	2.46	0.47
39:Y:75:ALA:HB2	39:Y:112:LYS:HE2	1.96	0.47
41:a:14:A:N6	41:a:15:G:C2	2.82	0.47
41:a:485:C:C2	41:a:486:C:C5	3.02	0.47
41:a:499:U:C4	41:a:500:G:C5	3.02	0.47
41:a:552:U:C2	41:a:553:G:C8	3.02	0.47
41:a:588:U:O2'	41:a:589:U:H5'	2.14	0.47
41:a:627:A:C6	41:a:637:A:C8	3.02	0.47
41:a:1232:G:N3	41:a:1233:C:C6	2.82	0.47
41:a:1348:C:C4	41:a:1349:C:C5	3.02	0.47
41:a:1411:U:C2	41:a:1591:A:N1	2.82	0.47
41:a:1906:G:C4	41:a:1907:G:C8	3.02	0.47
41:a:1994:C:O2'	41:a:1995:U:H5'	2.14	0.47
41:a:2016:U:H2'	41:a:2017:U:C6	2.49	0.47
41:a:2195:U:C2	41:a:2196:C:C6	3.02	0.47
41:a:2308:G:O6	41:a:2311:A:N7	2.47	0.47
41:a:2720:U:C6	41:a:2872:A:N6	2.81	0.47
41:a:2848:G:HO2'	41:a:2867:G:H1	1.62	0.47
44:d:110:C:O2'	44:d:111:U:H5'	2.14	0.47
54:n:80:ARG:NH1	54:n:80:ARG:HB2	2.29	0.47
60:t:123:LEU:HD12	60:t:123:LEU:N	2.29	0.47
6:5:108:DT:H73	11:AA:199:ASP:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:27:VAL:HA	9:9:110:ALA:CA	2.38	0.47
9:9:111:ALA:O	9:9:114:GLU:HG2	2.13	0.47
9:9:132:TYR:HE1	40:Z:19:VAL:CG1	2.16	0.47
16:AG:18:LEU:HB3	16:AG:19:PRO:HD2	1.95	0.47
16:AG:218:GLU:HG3	21:G:104:TRP:CD1	2.49	0.47
16:AG:218:GLU:OE1	21:G:105:LYS:HB3	2.13	0.47
10:B:9:G:OP1	10:B:11:A:OP2	2.32	0.47
18:D:27:G:C6	18:D:557:G:C2	3.03	0.47
18:D:102:G:H2'	18:D:103:U:H6	1.78	0.47
18:D:179:A:C4	18:D:180:U:C6	3.02	0.47
18:D:186:C:H2'	18:D:187:G:O4'	2.14	0.47
18:D:214:C:N3	18:D:215:C:C5	2.82	0.47
18:D:464:U:O2'	18:D:466:A:N7	2.36	0.47
18:D:734:G:C6	18:D:735:C:C4	3.02	0.47
18:D:844:G:C2	18:D:846:G:H1'	2.49	0.47
18:D:1250:A:N7	18:D:1287:A:N7	2.62	0.47
18:D:1315:U:O2	18:D:1360:A:H2	1.97	0.47
18:D:1464:U:O2'	18:D:1465:A:H5'	2.14	0.47
21:G:90:PHE:HD1	21:G:150:GLY:C	2.17	0.47
39:Y:123:ALA:HA	39:Y:126:ARG:NH2	2.29	0.47
41:a:360:U:H3'	41:a:361:G:C8	2.49	0.47
41:a:770:G:C2	41:a:771:G:C8	3.01	0.47
41:a:850:U:O2'	46:f:23:THR:HA	2.14	0.47
41:a:920:A:C6	41:a:921:C:C4	3.02	0.47
41:a:974:G:C6	41:a:989:G:C4	3.02	0.47
41:a:1099:G:N1	41:a:1100:C:C4	2.82	0.47
41:a:1657:U:N3	41:a:1658:C:C5	2.82	0.47
41:a:1908:C:O2	41:a:1922:G:N2	2.47	0.47
41:a:2077:A:OP1	41:a:2238:G:N2	2.40	0.47
41:a:2261:C:O2'	41:a:2262:U:H5'	2.14	0.47
41:a:2399:G:C6	41:a:2418:A:C6	3.01	0.47
41:a:2409:G:H2'	41:a:2410:G:O4'	2.14	0.47
41:a:2484:G:C2	41:a:2485:G:C8	3.02	0.47
41:a:2566:A:N1	60:t:28:SER:OG	2.37	0.47
41:a:2748:A:C2	41:a:2757:A:C5	3.01	0.47
41:a:2839:G:C4	41:a:2840:C:C5	3.02	0.47
48:h:236:GLU:OE1	48:h:236:GLU:HA	2.14	0.47
66:z:76:TYR:CZ	66:z:80:ILE:HG13	2.49	0.47
9:9:27:VAL:O	9:9:83:ALA:HB3	2.15	0.47
9:9:47:GLU:HG3	9:9:95:LEU:HD21	1.96	0.47
14:AE:809:VAL:HG21	14:AE:909:ILE:HG12	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:233:ARG:O	16:AG:327:LEU:CD2	2.62	0.47
16:AG:314:LEU:HB3	16:AG:318:ILE:HD12	1.97	0.47
16:AG:361:LYS:HD2	16:AG:417:ILE:HG12	1.92	0.47
10:B:17:C:H3'	10:B:18:G:C5'	2.44	0.47
17:C:22:ASP:OD1	17:C:22:ASP:C	2.54	0.47
18:D:192:A:O2'	18:D:193:C:H5'	2.13	0.47
18:D:421:U:O2	18:D:421:U:O4'	2.30	0.47
18:D:509:A:O2'	18:D:510:A:O4'	2.24	0.47
18:D:612:C:O2'	18:D:613:C:H5'	2.13	0.47
18:D:923:A:H2'	18:D:924:C:O4'	2.14	0.47
18:D:1086:U:H3	18:D:1099:G:H22	1.62	0.47
22:H:169:SER:O	22:H:171:ARG:N	2.47	0.47
22:H:310:ASP:HB2	22:H:316:ILE:HD12	1.95	0.47
28:N:5:ASP:OD1	28:N:8:ALA:N	2.33	0.47
35:U:18:GLN:OE1	35:U:35:ARG:NH2	2.47	0.47
38:X:17:ILE:O	38:X:20:THR:OG1	2.25	0.47
41:a:656:G:O2'	41:a:657:U:H5'	2.14	0.47
41:a:978:G:N1	41:a:986:C:C4	2.81	0.47
41:a:1031:G:C6	41:a:1124:G:C6	3.02	0.47
41:a:1055:G:H1	41:a:1104:C:N4	2.12	0.47
41:a:1945:G:C4	41:a:1946:U:C5	3.02	0.47
41:a:2048:G:C4	41:a:2049:G:C8	3.03	0.47
41:a:2263:C:C2	41:a:2264:C:C5	3.02	0.47
41:a:2305:U:H2'	41:a:2306:C:C6	2.50	0.47
41:a:2412:A:H2'	41:a:2413:G:O4'	2.13	0.47
44:d:57:A:OP2	44:d:58:A:OP2	2.32	0.47
48:h:108:LYS:N	48:h:194:GLU:O	2.44	0.47
52:l:138:LEU:O	52:l:142:ALA:N	2.47	0.47
1:0:29:THR:O	1:0:63:VAL:O	2.32	0.47
8:7:-17:U:O4	18:D:1403:C:H1'	2.13	0.47
9:9:60:LEU:HB2	9:9:61:ARG:HH21	1.80	0.47
9:9:61:ARG:HD2	41:a:1046:A:H4'	1.96	0.47
11:AA:906:PHE:CD2	16:AG:107:THR:HG22	2.50	0.47
11:AA:1336:ASN:ND2	14:AE:29:MET:HG2	2.29	0.47
14:AE:128:LEU:HD21	14:AE:188:LEU:HB3	1.97	0.47
16:AG:33:THR:CG2	16:AG:43:ILE:HD11	2.44	0.47
16:AG:36:LYS:HE3	16:AG:43:ILE:HG12	1.95	0.47
16:AG:218:GLU:HG3	21:G:104:TRP:HD1	1.78	0.47
18:D:219:U:H2'	18:D:220:G:H8	1.80	0.47
18:D:264:C:H2'	18:D:265:G:O4'	2.15	0.47
18:D:309:A:H2'	18:D:310:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:380:G:C2	18:D:384:G:C6	3.02	0.47
18:D:410:G:N2	18:D:431:A:N7	2.63	0.47
18:D:632:U:H5''	18:D:633:G:C8	2.49	0.47
18:D:634:C:C2	18:D:635:A:C8	3.03	0.47
18:D:723:U:H5'	18:D:724:G:OP1	2.13	0.47
18:D:977:A:H1'	18:D:982:U:O4	2.14	0.47
18:D:1060:U:H2'	18:D:1061:G:H8	1.79	0.47
18:D:1146:A:C5	18:D:1147:C:C5	3.02	0.47
18:D:1343:G:O2'	18:D:1344:C:H5'	2.13	0.47
18:D:1411:C:H2'	18:D:1412:C:C6	2.50	0.47
18:D:1415:G:C6	18:D:1486:G:C6	3.02	0.47
22:H:112:ILE:HA	22:H:121:THR:O	2.14	0.47
27:M:127:ALA:O	27:M:130:ASN:N	2.46	0.47
41:a:37:C:O2'	41:a:38:A:H5'	2.14	0.47
41:a:51:G:O2'	41:a:119:A:N1	2.41	0.47
41:a:128:C:O2'	41:a:129:C:H5'	2.14	0.47
41:a:362:A:C5	41:a:363:G:N7	2.83	0.47
41:a:439:A:H2'	41:a:440:C:C6	2.50	0.47
41:a:475:C:N3	41:a:479:A:N7	2.63	0.47
41:a:528:A:C2'	41:a:529:A:O5'	2.63	0.47
41:a:593:U:H2'	41:a:594:U:H6	1.80	0.47
41:a:693:A:O2'	41:a:694:U:H5'	2.14	0.47
41:a:720:U:H2'	41:a:721:A:C8	2.49	0.47
41:a:766:U:O2'	41:a:767:U:H5'	2.14	0.47
41:a:1690:A:H2'	41:a:1691:C:O4'	2.15	0.47
41:a:1789:A:C6	41:a:1790:C:C4	3.02	0.47
41:a:1809:A:O2'	41:a:1810:A:C5'	2.61	0.47
41:a:1907:G:C5	41:a:1908:C:C5	3.03	0.47
41:a:1926:U:N3	41:a:1928:A:OP2	2.48	0.47
41:a:2236:U:H2'	41:a:2237:G:O4'	2.15	0.47
41:a:2414:G:C4	41:a:2415:G:C8	3.03	0.47
41:a:2419:U:H3'	55:o:33:LEU:HD12	1.95	0.47
41:a:2544:G:O2'	41:a:2545:G:H5'	2.15	0.47
44:d:46:A:C6	44:d:47:C:C4	3.02	0.47
44:d:105:G:C2	44:d:106:G:C8	3.02	0.47
45:e:18:LEU:HB2	45:e:53:VAL:HG11	1.96	0.47
51:k:38:LYS:HB2	51:k:49:TYR:CD1	2.49	0.47
10:A:24:U:H2'	10:A:25:C:O4'	2.14	0.47
11:AA:898:GLU:N	11:AA:898:GLU:CD	2.73	0.47
14:AE:105:ILE:HD12	14:AE:242:LEU:CD2	2.44	0.47
10:B:54:U:C2	10:B:58:A:N6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:100:G:C6	18:D:101:A:C5	3.01	0.47
18:D:205:A:N1	18:D:206:C:N4	2.62	0.47
18:D:343:U:O2'	18:D:344:A:H2'	2.14	0.47
18:D:481:G:O2'	18:D:483:C:N4	2.48	0.47
18:D:646:G:C6	18:D:647:C:C4	3.02	0.47
18:D:662:U:OP2	26:L:93:LYS:NZ	2.47	0.47
18:D:842:U:H3'	18:D:843:U:H5''	1.94	0.47
18:D:922:G:C2	18:D:923:A:C4	3.03	0.47
18:D:1015:G:C6	18:D:1016:A:C6	3.03	0.47
21:G:176:ALA:O	21:G:180:GLY:N	2.47	0.47
29:O:111:VAL:O	29:O:111:VAL:HG23	2.15	0.47
31:Q:34:ILE:HG12	31:Q:70:CYS:SG	2.54	0.47
32:R:101:ALA:C	32:R:103:ASP:H	2.20	0.47
39:Y:32:VAL:CG1	39:Y:58:ILE:HG21	2.45	0.47
41:a:80:G:C6	41:a:107:G:C6	3.02	0.47
41:a:140:C:C5'	41:a:140:C:O2	2.62	0.47
41:a:282:A:H2'	41:a:283:G:C8	2.48	0.47
41:a:328:U:O2'	41:a:329:G:P	2.71	0.47
41:a:553:G:C4	41:a:554:U:C6	3.02	0.47
41:a:611:C:H2'	41:a:612:G:O4'	2.13	0.47
41:a:635:C:O2'	41:a:639:U:OP1	2.30	0.47
41:a:889:C:O2'	41:a:890:C:O4'	2.21	0.47
41:a:960:A:C8	41:a:962:G:C8	3.03	0.47
41:a:1020:A:N1	41:a:1141:U:H1'	2.29	0.47
41:a:1297:C:C2	41:a:1298:C:C5	3.03	0.47
41:a:1319:C:N4	41:a:1334:G:O6	2.47	0.47
41:a:1519:G:H2'	41:a:1520:U:O4'	2.13	0.47
41:a:2014:A:H2'	41:a:2015:A:C8	2.49	0.47
41:a:2489:U:H2'	41:a:2490:G:O4'	2.14	0.47
41:a:2803:G:C2	41:a:2804:U:C4	3.03	0.47
44:d:85:G:O2'	44:d:86:G:H5'	2.14	0.47
50:j:207:VAL:HG13	50:j:208:LYS:N	2.28	0.47
62:v:96:ILE:HG21	62:v:126:ILE:HD12	1.97	0.47
63:w:45:ARG:HG2	63:w:95:THR:HG21	1.97	0.47
66:z:91:ASP:OD2	66:z:93:LYS:N	2.46	0.47
4:3:5:ILE:HD12	4:3:5:ILE:N	2.29	0.47
12:AB:165:PHE:CD1	30:P:98:VAL:HG21	2.45	0.47
13:AC:102:LEU:HD12	13:AC:115:ILE:HG12	1.96	0.47
14:AE:115:TRP:O	14:AE:1333:THR:HG21	2.13	0.47
16:AG:27:LEU:HD22	16:AG:114:ILE:HG12	1.96	0.47
16:AG:61:ARG:HA	16:AG:94:GLU:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:216:ILE:C	16:AG:218:GLU:H	2.20	0.47
16:AG:285:ILE:O	16:AG:288:MET:HE3	2.14	0.47
16:AG:437:LEU:CG	16:AG:456:LEU:CD1	2.92	0.47
10:B:48:C:O2	10:B:48:C:H2'	2.15	0.47
18:D:88:U:C5	18:D:89:U:C5	3.03	0.47
18:D:356:A:O2'	18:D:368:U:O2'	2.28	0.47
18:D:412:A:C2	18:D:414:A:H1'	2.50	0.47
18:D:473:U:C2	18:D:474:G:C8	3.03	0.47
18:D:493:A:C2'	18:D:494:G:O4'	2.63	0.47
18:D:688:G:C5	18:D:700:G:C2	3.02	0.47
18:D:768:A:N3	18:D:1512:U:O2'	2.48	0.47
18:D:1026:G:C6	18:D:1027:C:N4	2.82	0.47
18:D:1125:U:C2	18:D:1127:G:C8	3.03	0.47
18:D:1352:C:N3	18:D:1371:G:C6	2.82	0.47
18:D:1436:U:C2	18:D:1437:A:C8	3.03	0.47
35:U:42:ILE:O	35:U:42:ILE:HG22	2.14	0.47
41:a:138:U:O5'	41:a:138:U:O2	2.31	0.47
41:a:213:A:H2'	41:a:214:G:C8	2.50	0.47
41:a:289:G:C6	41:a:352:A:C6	3.03	0.47
41:a:515:A:C8	41:a:516:C:C6	3.02	0.47
41:a:1095:A:O2'	41:a:1096:A:O4'	2.33	0.47
41:a:1193:G:O2'	41:a:1194:A:H5'	2.14	0.47
41:a:1406:U:H2'	41:a:1407:G:H8	1.80	0.47
41:a:1407:G:C2	41:a:1408:G:C8	3.03	0.47
41:a:1601:G:O2'	41:a:1602:U:H5'	2.15	0.47
41:a:1607:C:N4	41:a:1622:G:OP2	2.37	0.47
41:a:1709:U:O2'	41:a:1710:G:H5'	2.14	0.47
41:a:1879:C:H2'	41:a:1880:U:O4'	2.14	0.47
41:a:1967:C:H2'	41:a:1968:G:O4'	2.15	0.47
41:a:2194:U:C2	41:a:2195:U:C6	3.02	0.47
41:a:2298:A:C6	41:a:2299:U:C2	3.02	0.47
42:b:56:ASP:OD1	42:b:56:ASP:C	2.56	0.47
44:d:9:G:C4	44:d:10:G:C8	3.02	0.47
50:j:156:PHE:CD1	59:s:81:ILE:HD13	2.50	0.47
1:0:13:ARG:NE	66:z:97:ASP:OD2	2.47	0.47
2:1:59:GLU:CG	2:1:66:ILE:HD11	2.45	0.47
8:7:16:A:H2'	8:7:17:G:H8	1.79	0.47
9:9:19:ALA:HA	9:9:70:GLU:CG	2.22	0.47
9:9:24:SER:OG	9:9:86:MET:HE3	2.15	0.47
10:A:13:C:OP1	10:A:13:C:O4'	2.31	0.47
11:AA:1279:GLU:HG2	14:AE:1357:ILE:HD13	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:43:THR:HG22	14:AE:57:PHE:HE1	1.80	0.47
14:AE:114:ILE:HG12	14:AE:311:ARG:HD2	1.95	0.47
14:AE:319:SER:HA	14:AE:320:ASN:HA	1.64	0.47
14:AE:395:LYS:NZ	14:AE:399:LYS:CE	2.77	0.47
14:AE:968:ASN:HA	14:AE:1117:SER:HB2	1.96	0.47
14:AE:1150:PRO:HG3	14:AE:1214:PRO:HB2	1.96	0.47
14:AE:1221:LEU:HD22	14:AE:1306:LEU:HB2	1.97	0.47
16:AG:210:ARG:NE	16:AG:216:ILE:O	2.47	0.47
16:AG:219:GLU:CD	16:AG:219:GLU:N	2.73	0.47
16:AG:266:LEU:CD2	16:AG:266:LEU:N	2.73	0.47
16:AG:320:ARG:HH11	16:AG:320:ARG:HG2	1.79	0.47
16:AG:400:GLU:H	16:AG:400:GLU:HG2	1.40	0.47
10:B:23:C:C2'	10:B:24:U:O5'	2.63	0.47
18:D:33:A:H2'	18:D:34:C:C6	2.49	0.47
18:D:97:G:H2'	18:D:98:A:O4'	2.15	0.47
18:D:104:G:C2	18:D:105:G:C8	3.02	0.47
18:D:155:A:N6	18:D:167:A:N6	2.62	0.47
18:D:203:G:C2	18:D:215:C:C2	3.03	0.47
18:D:347:G:C2	18:D:348:G:C8	3.03	0.47
18:D:599:C:C2	18:D:600:A:C8	3.02	0.47
18:D:704:A:C4	18:D:705:G:C8	3.02	0.47
18:D:911:U:C2	18:D:912:C:C5	3.03	0.47
18:D:920:U:O2'	18:D:921:U:H5'	2.15	0.47
18:D:1134:G:N2	18:D:1141:C:C2	2.82	0.47
18:D:1137:C:O2	18:D:1138:G:N2	2.47	0.47
18:D:1226:C:O2'	38:X:110:LYS:NZ	2.41	0.47
18:D:1246:A:C6	18:D:1292:G:C6	3.03	0.47
18:D:1301:U:C5	18:D:1303:C:C5	3.03	0.47
18:D:1352:C:H2'	18:D:1353:G:O4'	2.14	0.47
30:P:87:LEU:O	30:P:88:MET:C	2.57	0.47
36:V:64:CYS:SG	36:V:67:LEU:HD21	2.54	0.47
39:Y:32:VAL:CG2	39:Y:60:VAL:HG21	2.44	0.47
39:Y:78:LEU:HB3	39:Y:108:ILE:HG21	1.96	0.47
41:a:145:C:H2'	41:a:146:A:H8	1.80	0.47
41:a:163:C:O2'	41:a:164:C:H5'	2.15	0.47
41:a:332:A:C5	41:a:335:C:C4	3.03	0.47
41:a:494:G:C2	41:a:495:G:C8	3.02	0.47
41:a:607:U:C5	41:a:620:G:C4	3.02	0.47
41:a:632:A:H2'	41:a:633:A:C8	2.49	0.47
41:a:756:A:H2'	41:a:757:G:O4'	2.15	0.47
41:a:1108:U:C2	41:a:1109:C:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1187:G:H8	41:a:1187:G:O5'	1.98	0.47
41:a:1197:G:N3	41:a:1198:U:C6	2.82	0.47
41:a:1296:G:H2'	41:a:1297:C:H6	1.79	0.47
41:a:1359:A:N6	41:a:1360:G:N3	2.62	0.47
41:a:1394:U:H4'	41:a:1603:A:H4'	1.96	0.47
41:a:1582:C:N4	41:a:1583:A:H62	2.12	0.47
41:a:1590:A:C2	41:a:1591:A:C5	3.03	0.47
41:a:1637:A:H5'	41:a:1760:C:O2'	2.13	0.47
41:a:2025:C:H2'	41:a:2026:U:C6	2.50	0.47
41:a:2055:C:OP1	49:i:5:GLN:NE2	2.40	0.47
41:a:2140:G:H2'	41:a:2141:G:O4'	2.13	0.47
41:a:2297:A:C4	41:a:2320:U:C2	3.03	0.47
41:a:2536:G:C6	41:a:2537:U:C4	3.02	0.47
41:a:2619:C:O2'	41:a:2620:C:H5'	2.14	0.47
41:a:2643:G:C6	41:a:2644:G:C5	3.02	0.47
41:a:2796:U:C5	41:a:2798:U:C4	3.03	0.47
45:e:49:ASP:N	45:e:49:ASP:OD1	2.43	0.47
50:j:164:GLN:HA	50:j:164:GLN:OE1	2.15	0.47
11:AA:1268:GLN:NE2	14:AE:352:ARG:HB2	2.30	0.47
14:AE:198:CYS:HA	14:AE:221:ILE:CD1	2.45	0.47
14:AE:1347:LEU:HG	14:AE:1357:ILE:HG23	1.96	0.47
16:AG:362:TYR:HA	16:AG:413:ALA:HB3	1.94	0.47
10:B:5:G:C2	10:B:69:C:C2	3.03	0.47
18:D:479:U:O2	18:D:479:U:H2'	2.15	0.47
18:D:491:G:C2	18:D:492:C:C4	3.03	0.47
18:D:505:G:H4'	18:D:534:U:N3	2.30	0.47
18:D:1294:G:H2'	18:D:1295:U:C6	2.50	0.47
21:G:90:PHE:CD2	21:G:154:MET:CB	2.98	0.47
23:I:155:GLY:HA2	23:I:163:ALA:HB1	1.96	0.47
39:Y:28:GLY:O	39:Y:34:ILE:HD11	2.14	0.47
41:a:216:A:C4	41:a:217:A:C8	3.02	0.47
41:a:360:U:H2'	41:a:361:G:N9	2.29	0.47
41:a:511:U:C5	41:a:512:G:C5	3.03	0.47
41:a:885:C:H2'	41:a:886:A:C8	2.50	0.47
41:a:1176:U:H4'	41:a:1177:G:O4'	2.15	0.47
41:a:1346:G:C6	41:a:1601:G:O6	2.67	0.47
41:a:1684:G:C6	41:a:1705:A:C6	3.03	0.47
41:a:1925:C:O2'	41:a:1926:U:H5'	2.15	0.47
41:a:2370:G:C6	41:a:2371:G:C6	3.03	0.47
44:d:99:A:C4	44:d:100:G:C8	3.03	0.47
58:r:2:GLN:OE1	58:r:2:GLN:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:88:HIS:CB	9:9:89:PRO:CD	2.88	0.47
11:AA:689:ALA:HB2	11:AA:1233:LEU:HD23	1.97	0.47
12:AB:171:VAL:HG21	30:P:100:ILE:C	2.39	0.47
14:AE:117:LEU:HG	14:AE:118:LYS:HG3	1.96	0.47
17:C:54:GLN:HA	17:C:57:ARG:NH1	2.30	0.47
18:D:179:A:C2'	18:D:180:U:H5'	2.45	0.47
18:D:244:U:C4	18:D:894:G:N1	2.83	0.47
18:D:749:A:C4	18:D:750:C:C6	3.03	0.47
18:D:839:C:O2'	18:D:840:C:H5'	2.15	0.47
18:D:1131:G:C6	18:D:1132:C:C5	3.03	0.47
18:D:1239:A:H62	18:D:1299:A:H62	1.63	0.47
22:H:303:LEU:O	22:H:303:LEU:HG	2.15	0.47
23:I:14:ILE:HD13	23:I:14:ILE:N	2.30	0.47
38:X:20:THR:HA	38:X:25:VAL:HG23	1.97	0.47
39:Y:12:VAL:HG22	39:Y:54:ILE:O	2.15	0.47
41:a:30:G:H2'	41:a:31:C:C6	2.50	0.47
41:a:104:A:C5	41:a:105:C:C5	3.03	0.47
41:a:219:A:H2'	41:a:220:G:C8	2.50	0.47
41:a:268:C:O2'	41:a:269:C:H5'	2.15	0.47
41:a:310:A:C2	41:a:330:A:C4	3.03	0.47
41:a:370:G:O6	41:a:424:G:C5	2.68	0.47
41:a:579:G:C4	41:a:580:U:C5	3.03	0.47
41:a:607:U:O2	41:a:607:U:H2'	2.14	0.47
41:a:679:C:O2'	41:a:680:C:H5'	2.15	0.47
41:a:1125:G:OP2	41:a:1126:A:O2'	2.18	0.47
41:a:1873:G:H2'	41:a:1874:C:H6	1.80	0.47
41:a:1913:A:H1'	41:a:1914:C:OP1	2.14	0.47
41:a:2090:A:O2'	41:a:2091:C:H5'	2.14	0.47
41:a:2138:G:C6	41:a:2154:A:C6	3.03	0.47
41:a:2328:A:O2'	41:a:2329:U:H5'	2.15	0.47
41:a:2539:C:C2	41:a:2540:C:C6	3.03	0.47
41:a:2590:A:C2	41:a:2591:C:C5	3.03	0.47
41:a:2804:U:H2'	41:a:2805:C:H6	1.80	0.47
44:d:45:A:O4'	54:n:92:ARG:CZ	2.63	0.47
44:d:65:U:N3	44:d:108:A:C2	2.83	0.47
54:n:114:PHE:HE1	54:n:117:LEU:HD13	1.80	0.47
60:t:121:GLU:OE1	65:y:65:SER:OG	2.19	0.47
8:7:-14:U:H5	8:7:-13:U:C5	2.33	0.47
9:9:76:PHE:C	9:9:79:PRO:HD2	2.40	0.47
10:A:71:C:C3'	10:A:72:A:C8	2.97	0.47
16:AG:1:MET:SD	16:AG:53:SER:HA	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:220:VAL:CG2	21:G:157:LEU:CD1	2.92	0.47
16:AG:353:HIS:O	16:AG:356:ILE:CA	2.63	0.47
18:D:6:G:O2'	18:D:7:A:O5'	2.28	0.47
18:D:62:U:H2'	18:D:63:C:C6	2.49	0.47
18:D:115:G:C2	18:D:313:A:C2	3.03	0.47
18:D:373:A:C2	18:D:482:A:C6	3.02	0.47
18:D:425:G:O2'	18:D:426:U:H5'	2.15	0.47
18:D:940:C:O2'	18:D:941:G:H5'	2.15	0.47
18:D:1001:C:H2'	18:D:1002:G:H8	1.80	0.47
18:D:1289:A:N1	18:D:1371:G:O2'	2.44	0.47
18:D:1289:A:H2'	18:D:1290:G:H5'	1.97	0.47
18:D:1464:U:H2'	18:D:1465:A:H8	1.80	0.47
34:T:88:ARG:CZ	41:a:714:U:OP2	2.63	0.47
37:W:63:THR:OG1	37:W:66:MET:HE3	2.14	0.47
41:a:112:U:H2'	41:a:113:U:O4'	2.14	0.47
41:a:140:C:O2	41:a:140:C:H5''	2.15	0.47
41:a:277:G:H4'	41:a:278:A:C8	2.49	0.47
41:a:638:G:C5	41:a:651:G:C2	3.03	0.47
41:a:751:A:C6	41:a:789:A:C5	3.03	0.47
41:a:997:G:C2	41:a:1159:U:C2	3.03	0.47
41:a:1164:C:C2	41:a:1165:A:C8	3.03	0.47
41:a:1234:U:C4	41:a:1235:G:C5	3.03	0.47
41:a:1383:A:O2'	41:a:1384:A:C5'	2.63	0.47
41:a:1604:C:H2'	41:a:1605:C:C6	2.50	0.47
41:a:1687:G:O2'	41:a:1688:U:H5'	2.14	0.47
41:a:2007:U:O2'	41:a:2008:C:H5'	2.15	0.47
41:a:2062:A:O2'	41:a:2063:C:H6	1.98	0.47
41:a:2187:U:H2'	41:a:2188:U:O4'	2.14	0.47
41:a:2297:A:C2	41:a:2320:U:C1'	2.98	0.47
41:a:2537:U:H2'	41:a:2538:C:H6	1.80	0.47
41:a:2677:G:O2'	41:a:2678:C:H5'	2.15	0.47
41:a:2830:C:OP2	50:j:59:ARG:HD3	2.15	0.47
58:r:129:GLU:HA	58:r:143:ILE:HA	1.95	0.47
8:7:-17:U:C4	18:D:1403:C:O2'	2.55	0.46
9:9:73:LYS:HB2	9:9:117:LEU:CD2	2.44	0.46
10:A:65:C:H2'	10:A:66:C:C6	2.50	0.46
11:AA:207:THR:OG1	11:AA:354:ASP:OD2	2.32	0.46
12:AB:130:PRO:CB	12:AB:148:VAL:HG21	2.45	0.46
16:AG:138:ILE:HD12	16:AG:183:LEU:CD1	2.45	0.46
16:AG:479:GLY:O	16:AG:483:MET:HG2	2.15	0.46
10:B:5:G:H2'	10:B:6:G:C5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:22:G:C6	18:D:23:C:C4	3.03	0.46
18:D:71:A:C2	18:D:72:A:C8	3.03	0.46
18:D:124:C:H2'	18:D:125:U:C6	2.50	0.46
18:D:203:G:N1	18:D:215:C:C4	2.83	0.46
18:D:506:G:H2'	18:D:507:C:O4'	2.15	0.46
18:D:1004:A:H2'	18:D:1005:A:O4'	2.14	0.46
18:D:1040:U:C2	18:D:1041:G:N7	2.83	0.46
18:D:1119:C:H2'	18:D:1120:C:H6	1.80	0.46
18:D:1151:A:O2'	18:D:1152:A:O5'	2.33	0.46
18:D:1415:G:C5	18:D:1486:G:C6	3.02	0.46
21:G:130:THR:HB	21:G:133:GLU:HB2	1.97	0.46
23:I:73:PRO:O	23:I:76:VAL:N	2.48	0.46
29:O:24:GLY:N	29:O:61:LEU:HA	2.31	0.46
35:U:63:GLN:OE1	35:U:63:GLN:HA	2.14	0.46
39:Y:38:CYS:HA	39:Y:42:ASN:HD21	1.79	0.46
41:a:31:C:O2'	41:a:1238:G:OP1	2.33	0.46
41:a:429:A:H2'	41:a:430:A:C8	2.50	0.46
41:a:496:G:C4	41:a:497:A:C8	3.03	0.46
41:a:631:A:H2'	41:a:632:A:O5'	2.14	0.46
41:a:639:U:H3	41:a:649:G:H1	1.63	0.46
41:a:868:U:C4	41:a:869:G:N7	2.83	0.46
41:a:912:C:P	62:v:8:LYS:HZ3	2.34	0.46
41:a:993:G:O2'	41:a:994:C:H5'	2.15	0.46
41:a:1073:A:C6	41:a:1074:G:C5	3.03	0.46
41:a:1328:A:O2'	41:a:1329:U:P	2.72	0.46
41:a:1344:U:H4'	41:a:1345:C:OP2	2.14	0.46
41:a:1383:A:C2'	41:a:1384:A:O5'	2.63	0.46
41:a:1677:A:C4	41:a:1678:A:C8	3.02	0.46
41:a:1726:C:C2	41:a:1735:A:C2	3.03	0.46
41:a:2013:A:O2'	41:a:2014:A:H5'	2.15	0.46
41:a:2259:U:C2	41:a:2260:C:C6	3.03	0.46
41:a:2259:U:C5	41:a:2427:C:N4	2.83	0.46
41:a:2349:G:C6	41:a:2369:A:C6	3.02	0.46
44:d:51:G:H2'	44:d:52:A:C8	2.50	0.46
8:7:-17:U:C3'	8:7:-17:U:P	3.02	0.46
11:AA:890:LYS:HB3	11:AA:890:LYS:HE3	1.39	0.46
11:AA:1245:ALA:HB3	14:AE:375:GLU:HB3	1.97	0.46
13:AD:35:PHE:HA	13:AD:38:THR:HG22	1.97	0.46
14:AE:526:VAL:HG12	14:AE:549:LYS:HB2	1.96	0.46
16:AG:434:LEU:HD22	16:AG:459:LEU:HD11	1.80	0.46
18:D:101:A:C4	18:D:102:G:C8	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:109:A:N1	18:D:326:G:C6	2.83	0.46
18:D:158:G:C6	18:D:159:G:C5	3.02	0.46
18:D:166:U:H2'	18:D:167:A:H8	1.80	0.46
18:D:444:G:C6	18:D:491:G:O6	2.69	0.46
18:D:611:C:C2	18:D:612:C:C6	3.04	0.46
18:D:622:A:C8	18:D:623:C:C6	3.03	0.46
18:D:650:G:C6	18:D:651:C:C4	3.03	0.46
18:D:1288:A:H2'	18:D:1289:A:O4'	2.15	0.46
18:D:1324:A:C4	18:D:1325:C:C6	3.03	0.46
18:D:1342:C:O2'	18:D:1343:G:H5'	2.15	0.46
18:D:1385:G:O2'	18:D:1386:G:H5'	2.14	0.46
20:F:67:ARG:HD3	20:F:67:ARG:N	2.30	0.46
35:U:53:ASP:CG	35:U:56:ARG:HG2	2.40	0.46
39:Y:21:PRO:CB	39:Y:22:PRO:HD3	2.45	0.46
40:Z:19:VAL:HG12	40:Z:20:VAL:CG2	2.44	0.46
41:a:147:C:O2'	41:a:148:U:H5'	2.15	0.46
41:a:217:A:C4	41:a:218:A:C8	3.03	0.46
41:a:282:A:C6	41:a:359:G:C6	3.03	0.46
41:a:985:C:O2	41:a:985:C:H2'	2.15	0.46
41:a:1232:G:C6	41:a:1233:C:C4	3.04	0.46
41:a:1240:U:HO2'	41:a:1241:A:P	2.38	0.46
41:a:1260:A:O2'	41:a:1261:C:H5'	2.15	0.46
41:a:1334:G:O2'	41:a:1335:C:H5'	2.14	0.46
41:a:1450:G:O2'	41:a:1451:C:H5'	2.16	0.46
41:a:1548:A:H2'	41:a:1549:A:C8	2.51	0.46
41:a:1548:A:H2'	41:a:1549:A:H8	1.80	0.46
41:a:1653:G:O6	63:w:11:ASN:ND2	2.48	0.46
41:a:2071:A:H2'	41:a:2072:C:C6	2.50	0.46
41:a:2340:A:C2	41:a:2341:G:C5	3.03	0.46
41:a:2462:C:C2	41:a:2463:C:C5	3.03	0.46
41:a:2495:G:C6	41:a:2496:C:C4	3.02	0.46
41:a:2682:A:O2'	41:a:2683:C:H5'	2.15	0.46
41:a:2902:C:N4	41:a:2903:U:O4	2.48	0.46
52:l:108:ILE:HG13	52:l:109:LEU:N	2.30	0.46
56:p:166:ASP:OD1	56:p:167:GLU:N	2.48	0.46
61:u:35:HIS:O	61:u:37:GLY:N	2.48	0.46
64:x:78:VAL:HG13	64:x:79:ALA:N	2.31	0.46
3:2:1:MET:HE3	41:a:139:U:C4	2.51	0.46
9:9:23:LEU:HB2	9:9:92:ALA:HB2	1.95	0.46
11:AA:561:ILE:HG21	14:AE:772:TYR:HE2	1.80	0.46
12:AB:133:MET:HE3	12:AB:145:ASN:OD1	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:842:ARG:HH22	14:AE:1250:ASP:HB2	1.80	0.46
16:AG:221:ILE:HG23	16:AG:247:PRO:HB3	1.97	0.46
16:AG:365:ILE:CD1	16:AG:406:LEU:HD21	2.38	0.46
10:B:10:G:H2'	10:B:11:A:C8	2.50	0.46
10:B:22:G:OP2	10:B:22:G:C8	2.67	0.46
18:D:66:A:H8	18:D:66:A:O5'	1.97	0.46
18:D:136:C:N3	18:D:137:U:C5	2.83	0.46
18:D:180:U:O2'	18:D:181:A:H5'	2.15	0.46
18:D:213:G:C8	18:D:214:C:C5	3.04	0.46
18:D:352:C:OP1	18:D:352:C:O4'	2.34	0.46
18:D:440:C:O2'	18:D:441:A:H5'	2.15	0.46
18:D:575:G:H4'	18:D:576:C:OP1	2.15	0.46
18:D:592:G:H2'	18:D:593:U:H6	1.81	0.46
18:D:958:A:H1'	18:D:985:C:O2'	2.15	0.46
18:D:1100:C:OP2	21:G:95:ARG:HD3	2.16	0.46
18:D:1120:C:C2	18:D:1121:U:C5	3.04	0.46
18:D:1446:A:C2'	18:D:1447:A:H5'	2.45	0.46
21:G:93:ASN:OD1	21:G:94:HIS:ND1	2.44	0.46
22:H:16:ILE:O	22:H:16:ILE:HG22	2.16	0.46
22:H:119:GLY:HA3	22:H:131:LEU:O	2.15	0.46
25:K:56:VAL:O	25:K:60:ILE:HG23	2.16	0.46
25:K:69:ARG:O	25:K:70:ASN:ND2	2.48	0.46
26:L:54:LEU:HD13	26:L:54:LEU:N	2.30	0.46
27:M:93:PRO:HA	27:M:96:ARG:CD	2.45	0.46
29:O:49:ARG:O	29:O:50:GLN:C	2.58	0.46
39:Y:27:LEU:C	39:Y:27:LEU:HD12	2.41	0.46
39:Y:60:VAL:CA	39:Y:66:PHE:HB3	2.46	0.46
41:a:2:G:H2'	41:a:3:U:H6	1.80	0.46
41:a:271:G:C4	41:a:272:A:N7	2.84	0.46
41:a:465:G:O2'	41:a:466:A:H5'	2.15	0.46
41:a:547:A:N7	41:a:548:G:N3	2.64	0.46
41:a:599:A:N6	41:a:659:G:O6	2.47	0.46
41:a:669:G:N2	41:a:670:A:C2	2.82	0.46
41:a:721:A:C2	41:a:722:A:C5	3.03	0.46
41:a:1500:G:C4	41:a:1501:G:C8	3.03	0.46
41:a:1560:G:N3	41:a:1561:C:C6	2.84	0.46
41:a:1608:A:C5	41:a:1611:C:C4	3.03	0.46
41:a:1809:A:C2'	41:a:1810:A:O5'	2.64	0.46
41:a:1838:C:N3	41:a:1899:A:C2	2.82	0.46
41:a:2537:U:C2	41:a:2538:C:C5	3.03	0.46
41:a:2630:G:C5	41:a:2894:G:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2691:C:C4	41:a:2719:G:N2	2.84	0.46
41:a:2766:A:C5	41:a:2767:C:C5	3.03	0.46
41:a:2837:A:C4	41:a:2838:G:C8	3.03	0.46
46:f:10:THR:HG22	46:f:54:MET:C	2.41	0.46
58:r:110:VAL:CG2	58:r:114:GLU:HB3	2.45	0.46
6:5:108:DT:O4	11:AA:199:ASP:OD2	2.33	0.46
9:9:80:THR:OG1	9:9:81:LEU:N	2.48	0.46
9:9:93:ALA:HB1	9:9:94:ARG:CZ	2.45	0.46
9:9:132:TYR:CD1	40:Z:19:VAL:HG22	2.50	0.46
10:A:39:C:C2	10:A:40:C:C5	3.03	0.46
12:AB:136:VAL:CB	12:AB:177:GLN:CD	2.87	0.46
12:AB:157:ARG:HD3	12:AB:173:LEU:O	2.15	0.46
16:AG:87:LEU:HD22	16:AG:93:VAL:HG21	1.96	0.46
10:B:62:C:H2'	10:B:63:G:C8	2.49	0.46
18:D:174:A:C4	18:D:175:C:C6	3.03	0.46
18:D:502:A:H2'	18:D:503:C:O4'	2.16	0.46
18:D:648:A:H2'	18:D:649:A:C8	2.50	0.46
18:D:1018:G:N1	18:D:1019:A:C5	2.83	0.46
18:D:1120:C:O2'	18:D:1121:U:H5'	2.15	0.46
18:D:1305:G:C5	18:D:1331:G:C2	3.04	0.46
19:E:54:MET:O	19:E:55:GLN:C	2.59	0.46
22:H:43:LYS:NZ	22:H:76:GLU:OE2	2.49	0.46
22:H:131:LEU:CB	22:H:167:VAL:HA	2.45	0.46
22:H:308:GLU:C	22:H:310:ASP:H	2.22	0.46
41:a:40:U:H2'	41:a:41:C:C6	2.50	0.46
41:a:167:A:C2	41:a:168:G:H1'	2.51	0.46
41:a:263:G:H2'	41:a:264:C:O4'	2.15	0.46
41:a:807:U:H2'	41:a:808:G:H8	1.79	0.46
41:a:966:G:H1'	41:a:2267:A:H62	1.78	0.46
41:a:972:A:OP2	41:a:973:A:O2'	2.34	0.46
41:a:988:A:P	46:f:12:SER:HB3	2.55	0.46
41:a:1107:G:C6	41:a:1108:U:C4	3.03	0.46
41:a:1155:A:C5	41:a:1157:G:C8	3.03	0.46
41:a:1195:G:C2	41:a:1196:C:C5	3.03	0.46
41:a:1550:C:OP1	41:a:1720:U:O2'	2.31	0.46
41:a:2028:U:H2'	41:a:2029:G:C8	2.49	0.46
41:a:2038:G:H2'	41:a:2039:U:C6	2.50	0.46
41:a:2114:A:N6	41:a:2119:A:N7	2.63	0.46
41:a:2196:C:O2'	41:a:2197:U:H5'	2.16	0.46
41:a:2285:C:OP2	51:k:6:ARG:NE	2.32	0.46
41:a:2748:A:N7	41:a:2753:A:N6	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:d:30:C:O2	44:d:30:C:H2'	2.15	0.46
44:d:50:A:OP1	64:x:68:LYS:N	2.42	0.46
49:i:31:ASP:OD1	49:i:51:GLY:N	2.45	0.46
9:9:23:LEU:HD13	9:9:92:ALA:CB	2.45	0.46
9:9:40:GLU:OE2	9:9:54:VAL:HG11	2.16	0.46
9:9:77:VAL:C	9:9:79:PRO:HD2	2.40	0.46
11:AA:103:VAL:HG12	11:AA:117:ILE:HG22	1.97	0.46
11:AA:855:PRO:CG	11:AA:915:ASP:HB3	2.46	0.46
11:AA:1314:GLN:HA	15:AF:28:ARG:HH22	1.80	0.46
16:AG:183:LEU:CD2	16:AG:197:VAL:HG22	2.45	0.46
16:AG:362:TYR:HE1	16:AG:414:LEU:HD21	1.80	0.46
10:B:18:G:C6	10:B:58:A:N6	2.84	0.46
10:B:69:C:C4	10:B:70:G:N7	2.83	0.46
18:D:142:G:C2	18:D:143:A:C4	3.04	0.46
18:D:294:U:C2	18:D:295:C:C5	3.03	0.46
18:D:344:A:OP2	18:D:345:C:N4	2.31	0.46
18:D:711:G:O2'	18:D:712:A:H5'	2.16	0.46
18:D:878:A:H2'	18:D:879:C:C6	2.51	0.46
18:D:1158:C:C5	18:D:1160:G:C1'	2.99	0.46
18:D:1158:C:C4	18:D:1160:G:C8	3.04	0.46
18:D:1159:U:H4'	18:D:1160:G:OP1	2.15	0.46
18:D:1279:G:H5''	18:D:1280:A:OP2	2.16	0.46
27:M:103:TRP:NE1	27:M:137:LYS:HE2	2.31	0.46
41:a:120:U:H5''	41:a:122:G:OP2	2.16	0.46
41:a:172:A:H2'	41:a:173:A:C8	2.51	0.46
41:a:535:G:C6	41:a:559:G:C6	3.04	0.46
41:a:570:G:O2'	41:a:571:U:H5'	2.15	0.46
41:a:840:C:O2'	41:a:841:G:H5'	2.15	0.46
41:a:1044:C:O4'	41:a:1048:A:H1'	2.16	0.46
41:a:1146:C:N3	41:a:1147:A:N7	2.64	0.46
41:a:1211:C:H3'	41:a:1212:G:H5'	1.97	0.46
41:a:1271:G:OP2	41:a:1648:U:OP1	2.33	0.46
41:a:1297:C:H2'	41:a:1298:C:H6	1.80	0.46
41:a:1351:C:O2'	41:a:1571:A:H1'	2.15	0.46
41:a:1656:C:H2'	41:a:1657:U:H6	1.80	0.46
41:a:1878:G:C6	41:a:1879:C:C4	3.04	0.46
41:a:2126:A:C2	41:a:2162:G:C4	3.02	0.46
41:a:2260:C:C2	41:a:2261:C:C5	3.03	0.46
41:a:2286:G:H4'	41:a:2287:A:O4'	2.15	0.46
41:a:2295:C:C2'	41:a:2296:U:O5'	2.62	0.46
41:a:2653:U:OP2	41:a:2654:A:O2'	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2655:G:O2'	41:a:2664:G:O6	2.21	0.46
41:a:2756:U:O4'	41:a:2757:A:H8	1.98	0.46
44:d:22:U:H2'	44:d:23:G:C8	2.51	0.46
44:d:79:G:H2'	44:d:80:U:O4'	2.16	0.46
55:o:31:HIS:CG	55:o:32:ILE:H	2.33	0.46
58:r:127:GLU:HA	58:r:145:ASN:HA	1.97	0.46
60:t:24:VAL:HG13	60:t:33:ALA:HB2	1.97	0.46
63:w:6:SER:OG	63:w:7:GLY:N	2.48	0.46
64:x:67:ASN:OD1	64:x:67:ASN:C	2.59	0.46
9:9:31:ARG:O	9:9:32:GLY:C	2.58	0.46
10:A:4:G:O6	10:A:70:G:C6	2.68	0.46
10:A:31:G:H2'	10:A:32:C:O4'	2.16	0.46
13:AC:64:VAL:HG11	13:AC:78:ILE:HG21	1.97	0.46
14:AE:123:ARG:HA	14:AE:123:ARG:HD3	1.48	0.46
14:AE:847:ASP:OD1	14:AE:847:ASP:N	2.49	0.46
14:AE:902:ASP:OD2	14:AE:905:ARG:HB2	2.15	0.46
10:B:9:G:O2'	10:B:45:G:H2'	2.14	0.46
10:B:52:G:C2	10:B:63:G:C6	3.04	0.46
18:D:291:U:O2'	18:D:292:G:H5'	2.14	0.46
18:D:509:A:O2'	18:D:510:A:H5'	2.16	0.46
18:D:509:A:N3	18:D:543:U:O2'	2.40	0.46
18:D:770:C:O2'	18:D:771:G:H5'	2.16	0.46
18:D:778:G:O2'	18:D:779:C:H5'	2.15	0.46
18:D:845:A:OP2	18:D:846:G:C8	2.69	0.46
18:D:918:A:H2'	18:D:919:A:O4'	2.16	0.46
22:H:342:ILE:HG22	22:H:344:LEU:HD12	1.98	0.46
27:M:63:GLU:CD	27:M:63:GLU:C	2.84	0.46
39:Y:9:LYS:HE2	39:Y:9:LYS:HB3	1.62	0.46
39:Y:63:ASP:C	39:Y:65:SER:N	2.70	0.46
41:a:335:C:C2	41:a:336:C:C5	3.03	0.46
41:a:543:G:C6	41:a:544:C:C4	3.03	0.46
41:a:820:A:H2'	41:a:821:A:O4'	2.15	0.46
41:a:836:G:C4	41:a:837:C:C5	3.04	0.46
41:a:838:C:C2	41:a:839:U:C5	3.04	0.46
41:a:1115:G:O2'	41:a:1116:G:H8	1.99	0.46
41:a:1348:C:C4	41:a:1349:C:C6	3.04	0.46
41:a:1358:G:O2'	41:a:1359:A:C5'	2.64	0.46
41:a:1972:G:C2	41:a:1973:G:N7	2.84	0.46
41:a:2205:A:H2'	41:a:2206:C:C6	2.50	0.46
44:d:2:G:C4	44:d:3:C:C5	3.02	0.46
44:d:39:A:C2	44:d:44:G:N3	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:i:55:ILE:HG23	49:i:55:ILE:O	2.16	0.46
9:9:16:SER:HB2	9:9:20:LYS:CE	2.45	0.46
12:AB:165:PHE:CE1	30:P:98:VAL:HG22	2.37	0.46
14:AE:50:LYS:HA	14:AE:50:LYS:HD3	1.71	0.46
14:AE:1219:ASP:O	14:AE:1223:LEU:HB2	2.15	0.46
18:D:46:G:O2'	18:D:365:U:H1'	2.16	0.46
18:D:74:A:C4	18:D:75:G:C8	3.04	0.46
18:D:181:A:N1	18:D:195:A:C5	2.83	0.46
18:D:283:U:C4	18:D:284:C:C4	3.04	0.46
18:D:297:G:C4	18:D:299:G:OP2	2.68	0.46
18:D:335:C:O2'	18:D:1433:A:O2'	2.25	0.46
18:D:383:A:H3'	18:D:384:G:H8	1.79	0.46
18:D:721:G:C6	18:D:733:G:C2	3.03	0.46
18:D:1041:G:H2'	18:D:1042:A:H8	1.81	0.46
18:D:1109:C:C5'	18:D:1109:C:C3'	2.94	0.46
18:D:1236:A:H2'	18:D:1237:C:C6	2.51	0.46
18:D:1416:G:C2	18:D:1485:U:O2	2.68	0.46
18:D:1513:A:O2'	18:D:1514:G:H5'	2.16	0.46
21:G:182:PRO:HA	21:G:197:ASP:OD2	2.16	0.46
33:S:63:ARG:HB3	33:S:68:GLY:HA2	1.96	0.46
39:Y:74:PRO:HB2	41:a:1060:U:OP2	2.16	0.46
41:a:283:G:H2'	41:a:284:U:H6	1.81	0.46
41:a:461:C:N3	41:a:462:C:C5	2.83	0.46
41:a:520:G:H2'	41:a:521:U:C6	2.50	0.46
41:a:666:A:H4'	61:u:48:ARG:HD2	1.98	0.46
41:a:826:U:O2'	61:u:53:GLY:HA3	2.15	0.46
41:a:841:G:O2'	41:a:842:U:H5'	2.16	0.46
41:a:1015:U:C2	41:a:1016:G:C8	3.03	0.46
41:a:1709:U:O2'	41:a:2859:G:H1'	2.16	0.46
41:a:1774:C:O2	41:a:1774:C:C2'	2.63	0.46
41:a:1831:G:C4	41:a:1832:C:C5	3.04	0.46
41:a:1907:G:C6	41:a:1908:C:C4	3.04	0.46
41:a:2040:G:H2'	41:a:2041:U:O4'	2.15	0.46
41:a:2226:C:C6	41:a:2226:C:OP2	2.69	0.46
41:a:2402:U:O2'	41:a:2403:C:H5''	2.15	0.46
41:a:2731:G:O2'	41:a:2732:G:H5'	2.15	0.46
41:a:2754:U:O2'	41:a:2756:U:OP1	2.29	0.46
41:a:2761:A:O2'	41:a:2762:C:H5'	2.15	0.46
41:a:2783:U:C2	41:a:2784:U:C5	3.04	0.46
54:n:12:VAL:HG13	54:n:172:ALA:CB	2.45	0.46
60:t:17:ARG:N	60:t:45:GLU:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:162:VAL:O	12:AB:164:ILE:HD11	2.16	0.46
13:AD:59:VAL:HG22	13:AD:144:ILE:HA	1.97	0.46
14:AE:209:ASN:HA	14:AE:214:ARG:NH2	2.31	0.46
14:AE:923:ILE:O	14:AE:1241:TYR:OH	2.31	0.46
14:AE:1060:VAL:HG13	14:AE:1106:ILE:HG12	1.96	0.46
16:AG:316:GLN:HE21	16:AG:316:GLN:HB2	1.49	0.46
18:D:49:U:O2'	18:D:50:A:H2'	2.16	0.46
18:D:76:G:N3	18:D:76:G:H2'	2.31	0.46
18:D:268:U:H2'	18:D:269:C:C6	2.50	0.46
18:D:359:G:C4	18:D:360:G:C8	3.03	0.46
18:D:460:A:H2'	18:D:461:A:H8	1.81	0.46
18:D:591:U:H2'	18:D:592:G:H8	1.81	0.46
18:D:663:A:H2'	18:D:664:G:O4'	2.15	0.46
18:D:892:A:C6	18:D:893:C:C4	3.04	0.46
18:D:948:C:C5	38:X:105:ASN:OD1	2.69	0.46
18:D:1005:A:C8	18:D:1006:G:C8	3.04	0.46
18:D:1316:G:N2	18:D:1318:A:H3'	2.31	0.46
18:D:1412:C:H2'	18:D:1413:A:H8	1.80	0.46
27:M:79:ARG:O	27:M:79:ARG:HG3	2.15	0.46
33:S:38:ASP:OD1	33:S:38:ASP:N	2.48	0.46
34:T:64:ARG:NH2	34:T:89:ARG:O	2.49	0.46
39:Y:60:VAL:CB	39:Y:66:PHE:HB3	2.45	0.46
39:Y:76:ALA:HB3	41:a:1060:U:P	2.56	0.46
39:Y:110:GLN:HA	39:Y:113:ALA:HB2	1.97	0.46
41:a:400:G:N7	43:c:57:ARG:NH1	2.56	0.46
41:a:484:C:N3	41:a:485:C:C5	2.84	0.46
41:a:485:C:N3	41:a:486:C:C5	2.84	0.46
41:a:493:G:H2'	41:a:494:G:O4'	2.16	0.46
41:a:734:A:C5	41:a:735:A:C8	3.04	0.46
41:a:1071:G:N2	41:a:1089:A:O2'	2.48	0.46
41:a:1174:U:O2	41:a:1174:U:P	2.74	0.46
41:a:1630:A:C6	41:a:1637:A:N6	2.84	0.46
41:a:1923:U:C2	41:a:1924:C:C4	3.04	0.46
41:a:2113:U:N3	41:a:2114:A:C8	2.83	0.46
41:a:2240:U:O2'	41:a:2241:A:H5'	2.16	0.46
41:a:2422:C:C4	41:a:2424:C:C4	3.04	0.46
41:a:2465:C:N3	41:a:2466:C:C5	2.83	0.46
41:a:2571:U:O2'	50:j:151:THR:O	2.33	0.46
50:j:3:GLY:C	50:j:4:LEU:HD12	2.41	0.46
54:n:73:SER:OG	54:n:80:ARG:HA	2.16	0.46
54:n:123:ASP:OD1	54:n:123:ASP:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:51:C:N4	10:A:52:G:O6	2.49	0.46
11:AA:905:ILE:HG12	16:AG:31:LEU:HD13	1.97	0.46
16:AG:36:LYS:HB2	16:AG:101:THR:HG21	1.97	0.46
16:AG:305:MET:HE3	16:AG:305:MET:HB3	1.77	0.46
10:B:28:C:N3	10:B:43:A:C2	2.84	0.46
18:D:460:A:C2	18:D:461:A:C5	3.04	0.46
18:D:996:A:N7	18:D:1046:A:O2'	2.49	0.46
18:D:1018:G:C2	18:D:1019:A:C8	3.04	0.46
18:D:1082:A:C6	18:D:1083:U:C4	3.03	0.46
18:D:1169:A:C2'	18:D:1170:A:O5'	2.64	0.46
18:D:1248:A:O2'	18:D:1249:C:H5'	2.16	0.46
18:D:1327:C:O2'	18:D:1328:C:H5'	2.16	0.46
24:J:50:ASP:O	24:J:53:VAL:HG22	2.16	0.46
30:P:6:ILE:HA	30:P:102:LEU:HA	1.98	0.46
39:Y:76:ALA:CB	41:a:1060:U:OP1	2.64	0.46
39:Y:79:LEU:C	39:Y:83:ALA:HB3	2.41	0.46
41:a:235:U:C2	41:a:236:C:C6	3.04	0.46
41:a:297:G:C6	41:a:342:A:C6	3.04	0.46
41:a:332:A:C2	41:a:335:C:C5	3.04	0.46
41:a:379:G:H2'	41:a:380:G:O5'	2.16	0.46
41:a:608:A:C2	41:a:609:A:C4	3.03	0.46
41:a:666:A:H2'	41:a:667:U:C6	2.50	0.46
41:a:926:G:H2'	41:a:927:A:H8	1.81	0.46
41:a:1394:U:H2'	41:a:1395:A:O4'	2.15	0.46
41:a:1407:G:C6	41:a:1596:A:C6	3.04	0.46
41:a:1477:A:N6	41:a:1514:G:O2'	2.45	0.46
41:a:1499:C:N3	41:a:1500:G:N7	2.64	0.46
41:a:1524:G:N2	41:a:1525:A:H1'	2.31	0.46
41:a:1766:G:C6	41:a:1987:A:C6	3.03	0.46
41:a:1795:C:H2'	41:a:1796:U:O4'	2.16	0.46
41:a:1798:U:OP2	48:h:271:ARG:NH2	2.48	0.46
41:a:2218:G:H2'	41:a:2219:U:C6	2.51	0.46
41:a:2293:G:C4	41:a:2294:G:C8	3.03	0.46
41:a:2400:G:N2	41:a:2417:C:C2	2.84	0.46
41:a:2790:U:C4	41:a:2893:A:C2	3.03	0.46
41:a:2852:G:H2'	41:a:2853:C:C6	2.51	0.46
41:a:2875:C:O2'	41:a:2876:G:H5'	2.15	0.46
50:j:48:ILE:HG23	50:j:84:LEU:HD11	1.97	0.46
59:s:117:ALA:HA	59:s:120:ARG:HH21	1.81	0.46
61:u:37:GLY:N	61:u:40:SER:OG	2.48	0.46
64:x:7:ARG:HD2	64:x:97:PHE:CZ	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:z:91:ASP:OD2	66:z:91:ASP:C	2.58	0.46
5:4:21:ARG:HA	5:4:25:LYS:O	2.16	0.46
11:AA:148:GLN:NE2	11:AA:535:PRO:O	2.40	0.46
13:AC:293:PRO:N	16:AG:483:MET:SD	2.89	0.46
13:AD:212:ASP:OD1	13:AD:212:ASP:N	2.48	0.46
16:AG:80:ALA:HB1	16:AG:87:LEU:HB2	1.98	0.46
10:B:22:G:N2	10:B:23:C:C2	2.84	0.46
18:D:213:G:H2'	18:D:213:G:N3	2.31	0.46
18:D:384:G:C2	18:D:385:C:C4	3.04	0.46
18:D:453:G:N2	18:D:454:G:H1'	2.30	0.46
18:D:597:G:N7	18:D:598:U:C5	2.84	0.46
18:D:939:G:O2'	18:D:940:C:H5'	2.15	0.46
18:D:1060:U:OP1	33:S:85:ARG:NH1	2.48	0.46
18:D:1095:U:OP1	18:D:1108:G:N1	2.46	0.46
18:D:1096:C:H2'	18:D:1097:C:C6	2.50	0.46
18:D:1186:G:O3'	29:O:115:LYS:NZ	2.39	0.46
18:D:1226:C:H41	38:X:103:LYS:HD2	1.81	0.46
18:D:1255:G:O2'	18:D:1258:G:N3	2.44	0.46
18:D:1371:G:O3'	29:O:71:GLY:HA3	2.15	0.46
25:K:81:LEU:N	25:K:81:LEU:HD12	2.30	0.46
27:M:130:ASN:O	27:M:130:ASN:ND2	2.49	0.46
39:Y:12:VAL:O	39:Y:53:PRO:HA	2.16	0.46
39:Y:48:ILE:O	39:Y:49:GLU:HB2	2.15	0.46
41:a:24:G:O2'	41:a:25:U:H5'	2.16	0.46
41:a:27:G:O2'	41:a:28:A:OP2	2.32	0.46
41:a:478:A:N6	41:a:480:A:C6	2.83	0.46
41:a:511:U:O4	41:a:512:G:N1	2.49	0.46
41:a:631:A:C2'	41:a:632:A:O5'	2.63	0.46
41:a:722:A:C5	41:a:723:C:C5	3.04	0.46
41:a:1054:A:C4	41:a:1055:G:C8	3.04	0.46
41:a:1148:U:O2'	41:a:1149:G:H5'	2.15	0.46
41:a:1177:G:O2'	41:a:1178:C:O4'	2.34	0.46
41:a:1430:G:C6	41:a:1431:A:C5	3.04	0.46
41:a:1564:C:O2'	41:a:1565:C:H5'	2.16	0.46
41:a:1586:A:C2	41:a:1587:G:H1'	2.51	0.46
41:a:1724:G:O6	41:a:1737:G:N2	2.49	0.46
41:a:1790:C:C2'	41:a:1791:A:C8	2.99	0.46
41:a:2194:U:C2	41:a:2195:U:C5	3.04	0.46
41:a:2295:C:P	64:x:10:ARG:HE	2.39	0.46
41:a:2784:U:H2'	41:a:2785:C:H6	1.80	0.46
54:n:25:VAL:O	54:n:28:VAL:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:n:31:VAL:HG23	54:n:31:VAL:O	2.15	0.46
9:9:73:LYS:CB	9:9:117:LEU:HD11	2.42	0.45
10:A:22:G:N2	10:A:23:C:C2	2.84	0.45
11:AA:694:ARG:HH22	13:AC:80:GLU:HG3	1.81	0.45
12:AB:158:LEU:CD2	12:AB:175:PHE:HA	2.46	0.45
12:AB:162:VAL:O	12:AB:164:ILE:CG1	2.64	0.45
13:AD:185:TYR:HA	13:AD:202:VAL:O	2.16	0.45
14:AE:420:PRO:HA	14:AE:437:PHE:O	2.15	0.45
14:AE:1167:LYS:NZ	14:AE:1170:LYS:HB2	2.30	0.45
16:AG:314:LEU:HD22	16:AG:318:ILE:HD11	1.98	0.45
16:AG:434:LEU:HD11	16:AG:455:THR:CA	2.46	0.45
10:B:6:G:O6	10:B:68:C:N4	2.48	0.45
10:B:70:G:N2	10:B:71:C:H1'	2.31	0.45
18:D:61:G:C6	18:D:62:U:C4	3.04	0.45
18:D:545:C:O2'	18:D:549:C:H5''	2.16	0.45
18:D:564:C:P	32:R:12:ARG:HH11	2.39	0.45
18:D:779:C:O2'	18:D:780:A:H5'	2.16	0.45
18:D:1322:C:O4'	18:D:1322:C:O2	2.29	0.45
18:D:1326:U:H2'	18:D:1327:C:H6	1.81	0.45
18:D:1531:A:O2'	18:D:1532:U:H5'	2.16	0.45
30:P:27:GLU:OE1	30:P:27:GLU:CA	2.65	0.45
31:Q:35:THR:HA	31:Q:42:LEU:HG	1.98	0.45
32:R:7:LEU:HB3	36:V:34:TYR:CZ	2.50	0.45
41:a:2:G:C2	41:a:2902:C:O2	2.69	0.45
41:a:5:A:H2'	41:a:6:A:H8	1.80	0.45
41:a:24:G:C5	41:a:25:U:C5	3.05	0.45
41:a:271:G:C6	41:a:367:G:C6	3.04	0.45
41:a:552:U:N3	41:a:553:G:N7	2.63	0.45
41:a:566:U:O2'	41:a:567:U:H5'	2.16	0.45
41:a:724:U:O2'	41:a:725:G:H5'	2.16	0.45
41:a:830:G:O4'	41:a:2448:A:C2	2.69	0.45
41:a:888:C:H2'	41:a:889:C:C6	2.51	0.45
41:a:914:G:H5'	41:a:915:C:OP2	2.16	0.45
41:a:926:G:C2	41:a:927:A:C5	3.04	0.45
41:a:1029:A:N1	41:a:2465:C:O2'	2.47	0.45
41:a:1347:A:H2'	41:a:1348:C:H5'	1.97	0.45
41:a:1877:A:C4	41:a:1878:G:C8	3.04	0.45
41:a:2178:C:O2'	41:a:2179:C:H5'	2.16	0.45
41:a:2197:U:C2	41:a:2224:G:N2	2.84	0.45
41:a:2461:A:H1'	41:a:2492:U:N3	2.31	0.45
41:a:2510:C:C4	41:a:2511:U:C4	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2590:A:C4	41:a:2591:C:C5	3.04	0.45
41:a:2684:U:C4	41:a:2685:G:N7	2.84	0.45
41:a:2740:A:OP2	41:a:2763:G:N1	2.34	0.45
41:a:2799:A:C2	41:a:2801:G:H1'	2.51	0.45
41:a:2838:G:C6	41:a:2839:G:C5	3.04	0.45
6:5:110:DA:N1	11:AA:536:GLY:O	2.50	0.45
7:6:15:DC:N3	7:6:16:DC:C4	2.84	0.45
11:AA:1278:LEU:HD21	14:AE:484:MET:CE	2.47	0.45
12:AB:140:PRO:HG3	30:P:102:LEU:HD21	1.90	0.45
16:AG:102:PHE:HB3	16:AG:103:ASP:CG	2.41	0.45
16:AG:123:ARG:HG2	16:AG:123:ARG:HH11	1.81	0.45
10:B:16:C:H3'	10:B:17:C:C5'	2.45	0.45
10:B:56:C:H2'	10:B:57:A:H5''	1.98	0.45
18:D:207:C:HO2'	18:D:208:U:C5'	2.16	0.45
18:D:225:C:H2'	18:D:226:G:O4'	2.16	0.45
18:D:456:A:C4	18:D:457:G:C8	3.04	0.45
18:D:884:U:H4'	18:D:885:G:H5''	1.98	0.45
18:D:1415:G:O2'	18:D:1416:G:H5'	2.16	0.45
30:P:5:ARG:HE	30:P:7:ARG:NH1	2.14	0.45
37:W:30:PRO:HA	37:W:48:THR:O	2.16	0.45
39:Y:11:GLN:HB3	39:Y:53:PRO:HB3	1.98	0.45
41:a:32:C:O2'	41:a:33:C:H5'	2.16	0.45
41:a:70:G:O2'	41:a:113:U:O2'	2.10	0.45
41:a:217:A:C6	41:a:218:A:C5	3.04	0.45
41:a:371:A:N6	41:a:402:A:OP2	2.47	0.45
41:a:464:U:C2'	41:a:465:G:O5'	2.63	0.45
41:a:792:A:C5	41:a:2440:C:C2	3.04	0.45
41:a:835:C:C2	41:a:836:G:C8	3.05	0.45
41:a:874:G:C6	41:a:904:G:C6	3.04	0.45
41:a:966:G:C1'	41:a:2267:A:H62	2.29	0.45
41:a:1042:G:C4	41:a:1043:C:C5	3.04	0.45
41:a:1066:U:N3	41:a:1069:A:OP2	2.31	0.45
41:a:1115:G:N3	41:a:1116:G:C8	2.84	0.45
41:a:1501:G:N3	41:a:1502:A:C8	2.84	0.45
41:a:1841:U:N3	41:a:1842:G:C8	2.84	0.45
41:a:1853:A:N6	41:a:1889:A:C5	2.84	0.45
41:a:2262:U:OP2	42:b:16:SER:OG	2.25	0.45
41:a:2283:C:C5	41:a:2389:G:C4	3.04	0.45
41:a:2376:A:H2'	41:a:2377:A:O4'	2.16	0.45
44:d:39:A:O2'	44:d:40:U:C5'	2.64	0.45
56:p:38:ASN:OD1	56:p:40:ALA:N	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:36:LEU:O	2:1:37:THR:C	2.58	0.45
8:7:-8:U:OP2	8:7:-8:U:C6	2.69	0.45
9:9:105:LYS:O	9:9:106:PHE:HB3	2.16	0.45
10:A:34:C:N4	10:A:35:A:N6	2.64	0.45
10:A:50:U:H2'	10:A:51:C:C6	2.51	0.45
11:AA:28:LEU:HD21	11:AA:524:ILE:HG13	1.98	0.45
11:AA:230:PHE:HB2	11:AA:333:ILE:HB	1.97	0.45
11:AA:735:LYS:HA	11:AA:748:ILE:HG22	1.98	0.45
11:AA:1268:GLN:NE2	14:AE:352:ARG:CD	2.67	0.45
11:AA:1334:GLY:O	14:AE:25:ALA:HB3	2.16	0.45
12:AB:161:SER:HA	12:AB:170:PRO:HA	1.97	0.45
12:AB:169:THR:O	12:AB:169:THR:HG22	2.16	0.45
14:AE:109:SER:HB2	14:AE:296:LYS:HG2	1.98	0.45
14:AE:201:LEU:CD1	14:AE:224:LEU:HD12	2.46	0.45
10:B:42:G:H2'	10:B:43:A:O4'	2.17	0.45
17:C:10:PHE:N	18:D:845:A:HO2'	2.14	0.45
18:D:142:G:H3'	18:D:143:A:H8	1.81	0.45
18:D:474:G:C2'	18:D:475:C:H5'	2.47	0.45
18:D:616:G:O2'	18:D:617:G:H5'	2.15	0.45
18:D:716:A:N3	31:Q:120:GLY:HA2	2.32	0.45
18:D:729:A:C4	18:D:730:G:C8	3.04	0.45
18:D:857:C:H2'	18:D:858:G:O4'	2.16	0.45
18:D:1167:A:C2	18:D:1169:A:C2	3.04	0.45
18:D:1271:A:H2'	18:D:1272:G:H8	1.82	0.45
18:D:1474:U:C2	18:D:1475:G:C8	3.04	0.45
22:H:274:TYR:O	22:H:275:PRO:C	2.59	0.45
22:H:332:VAL:HG12	22:H:334:ASP:H	1.80	0.45
29:O:63:LEU:HD12	29:O:63:LEU:O	2.17	0.45
41:a:607:U:O4	41:a:620:G:O4'	2.33	0.45
41:a:1042:G:C4	41:a:1043:C:C6	3.04	0.45
41:a:1218:G:N1	41:a:1232:G:C5	2.84	0.45
41:a:1398:C:C2	41:a:1399:C:C5	3.03	0.45
41:a:1501:G:C4	41:a:1502:A:C8	3.04	0.45
41:a:1942:C:OP2	41:a:1943:U:O2'	2.27	0.45
41:a:2038:G:H2'	41:a:2039:U:O4'	2.17	0.45
41:a:2147:A:C8	41:a:2148:G:C8	3.04	0.45
58:r:15:LEU:HD22	58:r:16:GLY:N	2.32	0.45
58:r:90:LEU:CB	58:r:123:ARG:O	2.63	0.45
61:u:111:ILE:HD12	61:u:111:ILE:N	2.31	0.45
65:y:81:VAL:HG23	65:y:81:VAL:O	2.17	0.45
4:3:46:GLN:HG3	4:3:59:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:26:VAL:O	9:9:110:ALA:CB	2.59	0.45
11:AA:899:GLU:HB3	16:AG:111:LYS:HD3	1.98	0.45
12:AB:136:VAL:CB	12:AB:177:GLN:CG	2.95	0.45
12:AB:140:PRO:HB2	30:P:102:LEU:HD23	1.89	0.45
13:AC:218:ARG:NH1	13:AD:231:PHE:O	2.49	0.45
14:AE:75:TYR:CD2	14:AE:75:TYR:O	2.70	0.45
14:AE:141:PHE:CE2	14:AE:296:LYS:CB	2.94	0.45
14:AE:201:LEU:CB	14:AE:221:ILE:HD13	2.47	0.45
14:AE:213:LYS:HA	14:AE:213:LYS:HE3	1.99	0.45
16:AG:3:LYS:HB3	16:AG:6:LEU:HD12	1.99	0.45
16:AG:219:GLU:CG	21:G:156:GLY:HA2	2.46	0.45
10:B:14:A:C2	10:B:15:G:O6	2.69	0.45
18:D:104:G:C6	18:D:105:G:N7	2.84	0.45
18:D:141:G:C6	18:D:223:A:C6	3.04	0.45
18:D:142:G:N1	18:D:222:C:N3	2.65	0.45
18:D:151:A:C5	18:D:152:A:C8	3.04	0.45
18:D:152:A:N6	18:D:169:C:C2	2.85	0.45
18:D:376:G:N3	18:D:389:A:C2	2.84	0.45
18:D:384:G:C6	18:D:385:C:N4	2.84	0.45
18:D:687:A:C2	18:D:704:A:C6	3.05	0.45
18:D:910:C:C2	18:D:911:U:C6	3.03	0.45
18:D:1005:A:C8	18:D:1006:G:N7	2.85	0.45
18:D:1048:G:C2	18:D:1050:G:C5	3.04	0.45
18:D:1378:C:C5	18:D:1379:G:C8	3.04	0.45
18:D:1454:G:C2	18:D:1455:G:C8	3.05	0.45
25:K:87:GLY:O	25:K:94:VAL:N	2.45	0.45
25:K:109:GLY:O	25:K:112:ARG:HB3	2.17	0.45
30:P:73:LEU:HD13	30:P:73:LEU:C	2.41	0.45
41:a:831:G:O2'	41:a:832:U:H5'	2.17	0.45
41:a:968:C:O2'	41:a:969:G:H5'	2.16	0.45
41:a:1087:G:C6	41:a:1089:A:C2	3.04	0.45
41:a:1145:C:O2	41:a:1146:C:C6	2.69	0.45
41:a:1407:G:H2'	41:a:1408:G:O4'	2.15	0.45
41:a:2194:U:N3	41:a:2195:U:C5	2.85	0.45
41:a:2311:A:C2	54:n:77:PHE:HB3	2.51	0.45
41:a:2660:A:H2'	41:a:2661:G:C8	2.52	0.45
41:a:2839:G:H2'	41:a:2840:C:C6	2.51	0.45
41:a:2884:U:O2	41:a:2884:U:O5'	2.35	0.45
44:d:109:A:C6	44:d:110:C:C4	3.04	0.45
1:0:80:ARG:N	41:a:565:C:OP2	2.47	0.45
9:9:73:LYS:CG	9:9:117:LEU:HD21	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:75:C:O5'	10:A:76:A:OP1	2.35	0.45
11:AA:902:LEU:CD2	16:AG:111:LYS:HE2	2.46	0.45
11:AA:1247:SER:HB3	14:AE:375:GLU:O	2.16	0.45
16:AG:339:MET:HE2	16:AG:343:ASP:HB3	1.99	0.45
10:B:24:U:H2'	10:B:25:C:O4'	2.16	0.45
17:C:25:ASP:CG	17:C:28:THR:OG1	2.59	0.45
18:D:124:C:O2'	18:D:125:U:H5'	2.17	0.45
18:D:172:A:C5	18:D:174:A:C8	3.04	0.45
18:D:173:U:O4'	18:D:197:A:C5	2.70	0.45
18:D:197:A:N3	18:D:198:G:H1'	2.31	0.45
18:D:1096:C:H2'	18:D:1097:C:H6	1.82	0.45
18:D:1325:C:N3	18:D:1326:U:C5	2.85	0.45
22:H:30:ALA:HB3	22:H:37:LEU:HD11	1.98	0.45
23:I:6:HIS:CE1	23:I:8:ASN:HB3	2.51	0.45
31:Q:107:ILE:O	31:Q:107:ILE:HG23	2.17	0.45
36:V:53:CYS:SG	36:V:75:LEU:HD22	2.56	0.45
41:a:78:U:H2'	41:a:79:C:C6	2.52	0.45
41:a:156:A:H2'	41:a:157:C:C6	2.51	0.45
41:a:201:C:O2	41:a:251:A:H2	1.99	0.45
41:a:433:C:O2'	41:a:434:U:C5'	2.65	0.45
41:a:567:U:C2'	41:a:568:U:O5'	2.65	0.45
41:a:671:C:H2'	41:a:672:C:C6	2.51	0.45
41:a:705:A:OP2	41:a:726:G:N2	2.49	0.45
41:a:856:G:C3'	41:a:857:G:C8	2.99	0.45
41:a:858:G:C4	41:a:2268:A:C2	3.04	0.45
41:a:1000:A:C2	41:a:1001:A:C4	3.04	0.45
41:a:1178:C:H2'	41:a:1179:G:N3	2.31	0.45
41:a:1510:G:C2	41:a:1511:G:C4	3.05	0.45
41:a:1561:C:H2'	41:a:1562:U:H6	1.81	0.45
41:a:2093:G:H1'	41:a:2198:A:C2	2.51	0.45
41:a:2294:G:C2	41:a:2339:C:C2	3.04	0.45
41:a:2410:G:C2	41:a:2411:A:H1'	2.52	0.45
8:7:17:G:H2'	8:7:18:A:H8	1.80	0.45
9:9:1:MET:CE	9:9:7:ASP:OD1	2.64	0.45
9:9:48:ALA:HB3	9:9:51:TYR:HE2	1.79	0.45
9:9:50:VAL:HG22	39:Y:119:ALA:CB	2.47	0.45
14:AE:51:PRO:HB2	14:AE:52:GLU:H	1.65	0.45
14:AE:53:ARG:HA	14:AE:54:ASP:HA	1.56	0.45
14:AE:161:THR:H	14:AE:164:GLN:HB2	1.82	0.45
16:AG:197:VAL:HG11	16:AG:199:ARG:NH2	2.30	0.45
16:AG:228:ARG:HB3	16:AG:234:ALA:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:36:U:H5	10:B:38:A:N7	2.14	0.45
10:B:49:G:C2	10:B:66:C:N3	2.85	0.45
18:D:122:G:C2	18:D:123:U:C6	3.05	0.45
18:D:374:A:C4	18:D:375:U:C5	3.05	0.45
18:D:757:U:O2'	18:D:758:C:H5'	2.17	0.45
18:D:876:C:H2'	18:D:877:G:H8	1.82	0.45
18:D:1113:C:N3	18:D:1114:C:C5	2.85	0.45
18:D:1134:G:H2'	18:D:1135:U:C1'	2.46	0.45
18:D:1145:A:HO2'	18:D:1146:A:P	2.40	0.45
18:D:1159:U:C4	18:D:1182:G:C4	3.04	0.45
18:D:1261:A:N1	18:D:1274:A:N3	2.64	0.45
18:D:1277:C:O2'	18:D:1279:G:H1'	2.17	0.45
21:G:19:GLN:CD	22:H:76:GLU:HB3	2.41	0.45
27:M:126:ASP:N	27:M:126:ASP:OD1	2.48	0.45
41:a:61:C:H2'	41:a:62:U:H5'	1.98	0.45
41:a:563:A:C4	41:a:2018:G:C2	3.04	0.45
41:a:620:G:H4'	41:a:621:A:O5'	2.17	0.45
41:a:1419:A:C8	41:a:1579:A:N6	2.84	0.45
41:a:1608:A:C2	41:a:1611:C:C5	3.04	0.45
41:a:1639:C:O2'	41:a:1640:A:H5'	2.17	0.45
41:a:1873:G:H2'	41:a:1874:C:C6	2.51	0.45
41:a:1920:C:H2'	41:a:1921:G:C8	2.52	0.45
41:a:2140:G:C5	41:a:2152:G:C6	3.05	0.45
41:a:2256:G:C6	41:a:2257:U:C4	3.04	0.45
41:a:2262:U:C2	41:a:2263:C:C6	3.05	0.45
41:a:2547:A:H2'	41:a:2548:U:H6	1.81	0.45
41:a:2591:C:C2	41:a:2592:G:N7	2.85	0.45
41:a:2870:C:H2'	41:a:2871:U:O4'	2.17	0.45
41:a:2874:C:O2'	41:a:2875:C:H5'	2.16	0.45
44:d:74:U:H2'	44:d:75:G:O4'	2.17	0.45
44:d:114:C:H2'	44:d:115:A:H8	1.81	0.45
52:l:140:ASP:N	52:l:140:ASP:OD1	2.50	0.45
54:n:176:PRO:O	54:n:177:PHE:C	2.59	0.45
5:4:51:GLN:CD	5:4:51:GLN:C	2.85	0.45
10:A:46:G:H1'	10:A:47:U:C5	2.52	0.45
10:A:48:C:O2'	10:A:49:G:OP2	2.30	0.45
11:AA:856:ASN:C	11:AA:919:ARG:HH22	2.25	0.45
11:AA:1002:LEU:HD21	11:AA:1007:LYS:HB2	1.98	0.45
12:AB:47:GLU:HG3	12:AB:64:PHE:CD1	2.44	0.45
12:AB:159:LYS:CG	12:AB:170:PRO:O	2.65	0.45
14:AE:115:TRP:HB3	14:AE:1333:THR:CG2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:515:ARG:NH2	14:AE:718:SER:O	2.48	0.45
15:AF:25:ARG:NH1	15:AF:61:ASN:OD1	2.49	0.45
16:AG:104:ARG:N	16:AG:105:ILE:HG12	2.32	0.45
16:AG:219:GLU:CB	21:G:157:LEU:H	2.29	0.45
16:AG:233:ARG:HB2	16:AG:327:LEU:CD2	2.42	0.45
10:B:30:G:H5''	18:D:1230:C:C5'	2.47	0.45
18:D:62:U:H1'	18:D:379:C:H1'	1.98	0.45
18:D:216:U:C2	18:D:217:C:C5	3.05	0.45
18:D:425:G:C6	18:D:426:U:C4	3.03	0.45
18:D:532:A:H3'	18:D:533:A:H5'	1.98	0.45
18:D:939:G:H2'	18:D:940:C:C6	2.51	0.45
18:D:1137:C:O2	18:D:1138:G:C2	2.70	0.45
18:D:1271:A:C2	18:D:1272:G:C5	3.05	0.45
21:G:17:GLY:O	22:H:43:LYS:CD	2.64	0.45
22:H:118:GLY:O	22:H:133:GLY:CA	2.63	0.45
39:Y:140:GLU:N	39:Y:140:GLU:CD	2.74	0.45
41:a:323:C:C4	41:a:333:G:C8	3.04	0.45
41:a:391:A:C4	41:a:392:U:C6	3.04	0.45
41:a:589:U:H2'	41:a:590:A:H8	1.81	0.45
41:a:630:G:N2	41:a:634:C:C4	2.85	0.45
41:a:632:A:C2'	41:a:633:A:O5'	2.64	0.45
41:a:708:G:C6	41:a:709:U:C4	3.04	0.45
41:a:814:C:O2'	41:a:815:C:H5'	2.15	0.45
41:a:969:G:H2'	41:a:970:U:C6	2.51	0.45
41:a:1050:A:C6	41:a:1051:G:C6	3.04	0.45
41:a:1243:C:H1'	61:u:4:ASN:O	2.16	0.45
41:a:1442:U:H2'	41:a:1443:U:C6	2.52	0.45
41:a:1734:G:C2	41:a:1735:A:C5	3.05	0.45
41:a:2090:A:N6	41:a:2230:G:O6	2.50	0.45
41:a:2617:U:C4	41:a:2618:G:N7	2.85	0.45
41:a:2627:G:H2'	41:a:2628:C:C6	2.51	0.45
41:a:2646:C:O5'	41:a:2646:C:H6	2.00	0.45
41:a:2751:G:O4'	56:p:3:ARG:HD2	2.16	0.45
41:a:2767:C:N3	41:a:2768:U:C5	2.85	0.45
41:a:2773:C:H2'	41:a:2774:C:H6	1.82	0.45
41:a:2819:G:H2'	41:a:2821:A:N7	2.32	0.45
44:d:85:G:C2	44:d:92:C:C2	3.04	0.45
55:o:7:VAL:O	55:o:10:ALA:N	2.50	0.45
56:p:80:THR:HG23	56:p:81:GLU:N	2.31	0.45
66:z:65:ILE:CD1	66:z:92:ARG:HB2	2.46	0.45
8:7:-2:U:H2'	8:7:-2:U:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:28:C:H2'	10:A:29:G:H8	1.82	0.45
10:A:50:U:H2'	10:A:51:C:O4'	2.16	0.45
11:AA:557:ARG:NH2	11:AA:607:SER:O	2.49	0.45
11:AA:562:GLU:OE1	11:AA:662:SER:OG	2.28	0.45
11:AA:857:VAL:HG12	11:AA:919:ARG:CZ	2.41	0.45
14:AE:213:LYS:HE3	14:AE:213:LYS:CA	2.47	0.45
16:AG:226:ALA:HB1	16:AG:228:ARG:HH11	1.81	0.45
16:AG:254:MET:CG	25:K:68:ARG:NH1	2.79	0.45
16:AG:316:GLN:H	16:AG:316:GLN:HG3	1.54	0.45
16:AG:429:LYS:HB2	16:AG:430:PRO:HD2	1.99	0.45
18:D:187:G:C2	18:D:191:G:O6	2.70	0.45
18:D:397:A:H3'	18:D:397:A:N3	2.32	0.45
18:D:439:U:O5'	18:D:440:C:OP2	2.35	0.45
18:D:651:C:O2'	18:D:652:U:H5'	2.16	0.45
18:D:838:G:H2'	18:D:839:C:C6	2.51	0.45
18:D:872:A:C4	18:D:874:G:N7	2.85	0.45
18:D:1114:C:C2	18:D:1115:U:C6	3.04	0.45
18:D:1248:A:H2'	18:D:1249:C:C6	2.52	0.45
18:D:1486:G:C6	18:D:1487:G:C6	3.05	0.45
21:G:38:VAL:CG2	22:H:75:VAL:HG21	2.47	0.45
21:G:73:LYS:C	21:G:75:ALA:H	2.24	0.45
21:G:126:PHE:C	21:G:127:ASP:O	2.59	0.45
22:H:39:ASP:C	22:H:39:ASP:OD1	2.60	0.45
39:Y:14:ALA:CB	39:Y:50:LYS:HB3	2.47	0.45
39:Y:60:VAL:HG13	39:Y:66:PHE:HD1	1.82	0.45
40:Z:16:VAL:O	40:Z:19:VAL:HB	2.17	0.45
40:Z:30:PHE:HD1	40:Z:30:PHE:HA	1.66	0.45
41:a:57:C:H2'	41:a:58:G:O4'	2.15	0.45
41:a:75:G:N3	41:a:75:G:H2'	2.31	0.45
41:a:191:A:H2'	41:a:192:C:C6	2.51	0.45
41:a:447:A:C2	41:a:454:A:C8	3.05	0.45
41:a:705:A:H2'	41:a:706:A:O4'	2.17	0.45
41:a:1030:C:O5'	41:a:1030:C:H6	2.00	0.45
41:a:1199:U:H2'	41:a:1200:C:C6	2.51	0.45
41:a:1355:G:O2'	41:a:1356:G:H5'	2.16	0.45
41:a:1528:A:N6	41:a:1529:G:C2	2.85	0.45
41:a:1685:C:H2'	41:a:1686:C:H6	1.82	0.45
41:a:2262:U:O2'	41:a:2263:C:H5'	2.16	0.45
41:a:2317:A:C4	41:a:2318:G:C8	3.04	0.45
41:a:2473:U:N3	41:a:2474:U:C6	2.84	0.45
41:a:2494:G:C6	41:a:2495:G:N7	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2505:G:C2	41:a:2576:G:N7	2.84	0.45
41:a:2612:C:H5'	41:a:2613:U:OP1	2.16	0.45
41:a:2636:C:O2	41:a:2637:U:C6	2.70	0.45
41:a:2697:G:H2'	41:a:2698:U:O4'	2.16	0.45
41:a:2702:G:N3	41:a:2703:C:C6	2.84	0.45
41:a:2748:A:O2'	41:a:2749:A:H5'	2.17	0.45
41:a:2856:A:C6	41:a:2857:G:C5	3.05	0.45
50:j:103:ASP:OD1	50:j:103:ASP:N	2.49	0.45
53:m:44:VAL:O	53:m:45:SER:C	2.59	0.45
1:0:80:ARG:NH2	41:a:571:U:H3'	2.32	0.45
4:3:48:PRO:HB3	4:3:55:PRO:O	2.17	0.45
8:7:14:U:H2'	8:7:15:G:C8	2.51	0.45
11:AA:176:ILE:HD11	11:AA:428:VAL:HG21	1.98	0.45
11:AA:674:ASP:OD2	11:AA:1070:HIS:ND1	2.50	0.45
11:AA:902:LEU:C	11:AA:902:LEU:CD2	2.86	0.45
12:AB:130:PRO:HG3	12:AB:151:VAL:HG21	1.98	0.45
14:AE:190:LYS:HB2	14:AE:190:LYS:HE3	1.41	0.45
14:AE:388:ARG:HG2	14:AE:388:ARG:NH1	2.32	0.45
16:AG:233:ARG:HG2	16:AG:270:ARG:CB	2.45	0.45
10:B:46:G:C2'	10:B:47:U:OP2	2.65	0.45
18:D:67:C:H2'	18:D:68:G:C8	2.51	0.45
18:D:156:C:H2'	18:D:157:U:O4'	2.17	0.45
18:D:166:U:N3	18:D:167:A:N7	2.65	0.45
18:D:189:A:C6	18:D:190:A:C6	3.05	0.45
18:D:202:G:O2'	18:D:468:A:C8	2.64	0.45
18:D:388:G:O2'	18:D:389:A:OP1	2.35	0.45
18:D:685:G:N2	18:D:704:A:OP2	2.45	0.45
18:D:746:A:H2'	18:D:747:A:C8	2.52	0.45
18:D:916:U:H2'	18:D:917:G:H8	1.81	0.45
18:D:935:A:H2'	18:D:936:C:O4'	2.17	0.45
18:D:971:G:H1'	18:D:1365:G:O2'	2.17	0.45
18:D:999:C:N4	18:D:1000:A:N6	2.65	0.45
18:D:1169:A:O2'	18:D:1170:A:H5'	2.17	0.45
18:D:1266:G:C5	18:D:1268:G:OP2	2.70	0.45
18:D:1268:G:O2'	18:D:1269:A:C5'	2.65	0.45
26:L:73:GLU:O	26:L:76:THR:OG1	2.31	0.45
38:X:46:SER:O	38:X:47:GLU:CD	2.60	0.45
41:a:115:C:C2	41:a:116:C:C5	3.05	0.45
41:a:548:G:OP1	41:a:549:G:C6	2.69	0.45
41:a:757:G:H2'	41:a:758:C:H5'	1.99	0.45
41:a:947:A:N1	41:a:971:G:C6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1022:G:C5	41:a:1140:C:C4	3.04	0.45
41:a:1041:G:H2'	41:a:1042:G:O5'	2.17	0.45
41:a:1048:A:C8	41:a:1111:A:C6	3.05	0.45
41:a:1075:C:C4	41:a:1076:C:C4	3.04	0.45
41:a:1086:A:H5''	41:a:1087:G:OP1	2.17	0.45
41:a:1355:G:C4	41:a:1356:G:C8	3.05	0.45
41:a:2024:G:OP2	41:a:2034:U:H4'	2.17	0.45
41:a:2033:A:H1'	41:a:2035:G:OP2	2.17	0.45
44:d:83:G:O6	44:d:94:A:N6	2.49	0.45
49:i:17:ARG:O	49:i:18:SER:C	2.58	0.45
51:k:14:SER:OG	51:k:47:VAL:HG12	2.17	0.45
54:n:74:VAL:HG21	54:n:77:PHE:CD2	2.52	0.45
55:o:54:ASP:OD1	55:o:54:ASP:N	2.50	0.45
8:7:-12:U:C5'	18:D:1397:C:N4	2.80	0.45
9:9:31:ARG:HD3	9:9:31:ARG:HA	1.44	0.45
10:A:22:G:O2'	10:A:23:C:P	2.73	0.45
10:A:30:G:C2	10:A:31:G:C8	3.05	0.45
10:A:69:C:C4	10:A:70:G:N7	2.85	0.45
14:AE:128:LEU:CD2	14:AE:188:LEU:HB3	2.47	0.45
16:AG:219:GLU:CB	21:G:156:GLY:HA2	2.37	0.45
18:D:105:G:C6	18:D:106:C:C4	3.05	0.45
18:D:185:U:H2'	18:D:186:C:C6	2.52	0.45
18:D:413:G:N2	18:D:428:G:H1'	2.32	0.45
18:D:477:C:C2	18:D:478:A:N7	2.85	0.45
18:D:613:C:O2'	18:D:614:C:H5'	2.16	0.45
18:D:914:A:C6	18:D:915:A:C4	3.05	0.45
18:D:1082:A:C5	18:D:1083:U:C5	3.05	0.45
18:D:1455:G:C4	18:D:1456:A:C8	3.05	0.45
18:D:1457:G:N2	18:D:1458:G:H1'	2.32	0.45
22:H:142:ARG:O	22:H:144:THR:N	2.50	0.45
22:H:267:TRP:CD1	22:H:340:ARG:CZ	3.00	0.45
39:Y:60:VAL:HA	39:Y:66:PHE:HB3	1.98	0.45
41:a:157:C:H2'	41:a:158:U:O4'	2.17	0.45
41:a:278:A:O5'	41:a:279:A:P	2.75	0.45
41:a:545:U:O2	41:a:545:U:OP2	2.35	0.45
41:a:685:A:C8	41:a:773:U:C4	3.05	0.45
41:a:722:A:C6	41:a:723:C:C4	3.05	0.45
41:a:811:U:H2'	61:u:21:ARG:HA	1.99	0.45
41:a:856:G:C3'	41:a:857:G:H8	2.29	0.45
41:a:909:A:C4	41:a:912:C:C5	3.05	0.45
41:a:971:G:C2'	41:a:972:A:O5'	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1262:A:C6	41:a:1263:U:C4	3.05	0.45
41:a:2083:G:C6	41:a:2084:C:C4	3.05	0.45
41:a:2147:A:H2'	41:a:2148:G:O4'	2.16	0.45
41:a:2193:G:O2'	41:a:2194:U:P	2.74	0.45
41:a:2193:G:C4	41:a:2194:U:C5	3.05	0.45
41:a:2299:U:C4	41:a:2300:C:C5	3.05	0.45
41:a:2556:C:C5	41:a:2557:G:N7	2.85	0.45
41:a:2651:C:H2'	41:a:2652:C:H6	1.82	0.45
41:a:2686:G:H2'	41:a:2687:U:O4'	2.17	0.45
44:d:60:C:C2	44:d:61:G:C8	3.04	0.45
44:d:61:G:C6	44:d:62:C:C4	3.05	0.45
48:h:114:ASP:N	48:h:114:ASP:OD1	2.48	0.45
48:h:115:GLN:O	48:h:125:LYS:NZ	2.45	0.45
54:n:46:ASP:OD1	54:n:49:LEU:HD22	2.17	0.45
59:s:98:GLU:HB3	59:s:124:VAL:CG2	2.47	0.45
6:5:114:DC:H5''	14:AE:1148:ARG:CZ	2.46	0.44
8:7:-19:U:HO2'	8:7:-18:G:C1'	2.25	0.44
8:7:-15:U:O2	8:7:-15:U:O2'	2.29	0.44
9:9:71:CYS:C	9:9:73:LYS:H	2.26	0.44
11:AA:618:GLN:CD	14:AE:770:LEU:HD13	2.42	0.44
12:AB:127:LEU:N	12:AB:127:LEU:HD13	2.32	0.44
12:AB:141:PHE:CZ	30:P:102:LEU:CA	2.64	0.44
13:AC:291:LYS:CA	16:AG:483:MET:CE	2.79	0.44
14:AE:506:VAL:HG23	14:AE:628:GLY:HA3	1.99	0.44
16:AG:403:VAL:C	16:AG:405:ALA:N	2.73	0.44
17:C:50:LYS:HA	17:C:53:ARG:NH1	2.32	0.44
18:D:42:G:O2'	18:D:43:C:H5'	2.17	0.44
18:D:284:C:C2	18:D:285:C:C5	3.04	0.44
18:D:307:C:C4	18:D:308:C:C4	3.05	0.44
18:D:362:G:N2	18:D:365:U:OP2	2.50	0.44
18:D:402:G:H2'	18:D:403:C:H6	1.82	0.44
18:D:542:G:OP1	24:J:10:LYS:CE	2.65	0.44
18:D:557:G:C2'	18:D:558:G:O4'	2.65	0.44
18:D:637:C:O2'	18:D:638:U:H5'	2.17	0.44
18:D:707:U:C2	18:D:708:C:C5	3.04	0.44
18:D:714:G:O2'	18:D:715:A:H5'	2.17	0.44
18:D:750:C:C2	18:D:751:U:H5	2.35	0.44
18:D:1063:C:C4	18:D:1064:G:C5	3.05	0.44
18:D:1066:C:N4	18:D:1067:A:N6	2.65	0.44
18:D:1111:A:N1	23:I:177:THR:HA	2.32	0.44
22:H:155:LYS:O	22:H:169:SER:N	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H:308:GLU:C	22:H:310:ASP:N	2.75	0.44
41:a:149:A:C5	41:a:150:U:C5	3.05	0.44
41:a:193:U:O2'	41:a:194:G:H5'	2.17	0.44
41:a:348:A:H2'	41:a:349:U:O4'	2.16	0.44
41:a:978:G:C5	41:a:979:A:N7	2.85	0.44
41:a:1048:A:N7	41:a:1111:A:C6	2.85	0.44
41:a:1163:G:C2	41:a:1164:C:C5	3.06	0.44
41:a:1230:A:O2'	41:a:1231:U:H5'	2.17	0.44
41:a:1584:U:O2	41:a:1584:U:O5'	2.35	0.44
41:a:1589:U:O2'	41:a:1590:A:P	2.75	0.44
41:a:1598:A:C5	41:a:1599:U:C5	3.05	0.44
41:a:1841:U:C4	41:a:1842:G:N7	2.85	0.44
41:a:1936:A:C8	41:a:1945:G:N7	2.85	0.44
41:a:2015:A:C6	49:i:3:VAL:HG23	2.53	0.44
41:a:2254:C:C4	41:a:2255:G:N7	2.85	0.44
41:a:2306:C:OP2	41:a:2307:G:O2'	2.31	0.44
41:a:2495:G:C4	41:a:2496:C:C5	3.05	0.44
41:a:2509:G:C6	41:a:2510:C:C5	3.05	0.44
41:a:2636:C:N3	41:a:2637:U:C5	2.85	0.44
41:a:2776:A:C8	41:a:2782:G:C5	3.05	0.44
43:c:40:VAL:HG12	43:c:43:GLU:H	1.82	0.44
44:d:26:C:C4	44:d:27:C:C5	3.05	0.44
44:d:61:G:H2'	44:d:62:C:H6	1.81	0.44
48:h:51:THR:HG23	48:h:54:ILE:HD12	1.98	0.44
62:v:20:LEU:HD22	62:v:20:LEU:N	2.32	0.44
4:3:36:VAL:HG11	4:3:39:ILE:CD1	2.42	0.44
9:9:72:LEU:O	9:9:72:LEU:HD22	2.16	0.44
9:9:77:VAL:C	9:9:84:TYR:HH	2.10	0.44
10:A:60:U:H3'	10:A:61:C:H5	1.78	0.44
11:AA:905:ILE:CD1	16:AG:5:ILE:CD1	2.94	0.44
11:AA:1246:ARG:HH11	11:AA:1266:GLY:HA2	1.82	0.44
14:AE:62:PHE:CD1	14:AE:62:PHE:N	2.86	0.44
14:AE:211:GLU:CG	14:AE:215:LYS:HE3	2.44	0.44
14:AE:224:LEU:HD23	14:AE:224:LEU:HA	1.89	0.44
14:AE:395:LYS:NZ	14:AE:399:LYS:HE2	2.32	0.44
14:AE:1357:ILE:HG22	14:AE:1359:ALA:H	1.83	0.44
16:AG:19:PRO:HG2	16:AG:19:PRO:O	2.17	0.44
16:AG:220:VAL:HG22	21:G:157:LEU:HD12	1.98	0.44
10:B:4:G:C6	10:B:70:G:C6	3.05	0.44
10:B:18:G:C4	10:B:58:A:N1	2.86	0.44
10:B:76:A:N3	41:a:2493:U:H5''	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:123:U:O2'	18:D:124:C:H5'	2.16	0.44
18:D:147:G:H2'	18:D:148:G:O4'	2.18	0.44
18:D:171:A:H2'	18:D:172:A:C8	2.52	0.44
18:D:195:A:C5	18:D:196:A:C6	3.05	0.44
18:D:220:G:C2	18:D:221:C:C6	3.05	0.44
18:D:246:A:C2	18:D:282:A:C4	3.05	0.44
18:D:373:A:C2	18:D:374:A:C8	3.05	0.44
18:D:401:C:O2'	18:D:402:G:H5'	2.18	0.44
18:D:439:U:H1'	24:J:119:SER:OG	2.17	0.44
18:D:561:U:O2	32:R:15:LYS:NZ	2.50	0.44
18:D:627:G:H2'	18:D:628:G:O4'	2.18	0.44
18:D:677:U:O2	18:D:777:A:O2'	2.35	0.44
18:D:704:A:C5	18:D:705:G:C8	3.05	0.44
18:D:748:G:N3	18:D:749:A:C8	2.86	0.44
18:D:1270:G:C2	18:D:1271:A:C8	3.05	0.44
18:D:1408:A:N6	18:D:1494:G:O6	2.50	0.44
21:G:32:PHE:HB2	21:G:42:ASN:HA	1.98	0.44
21:G:196:VAL:HG11	21:G:199:VAL:HA	1.98	0.44
25:K:88:VAL:HG12	25:K:93:ARG:CB	2.47	0.44
27:M:48:GLU:C	27:M:48:GLU:CD	2.85	0.44
41:a:39:G:H2'	41:a:40:U:C6	2.52	0.44
41:a:192:C:H2'	41:a:193:U:H5'	1.99	0.44
41:a:194:G:N1	41:a:202:U:C2	2.85	0.44
41:a:252:G:C2	41:a:253:C:C6	3.05	0.44
41:a:283:G:C5	41:a:284:U:C4	3.05	0.44
41:a:445:C:H2'	41:a:446:G:O4'	2.17	0.44
41:a:463:G:C2	41:a:467:G:C6	3.05	0.44
41:a:464:U:O2'	41:a:465:G:H5'	2.18	0.44
41:a:483:A:C8	41:a:484:C:C5	3.05	0.44
41:a:574:A:N6	41:a:2034:U:OP1	2.49	0.44
41:a:697:G:C2	41:a:766:U:O2	2.70	0.44
41:a:1036:G:C6	41:a:1120:G:C5	3.06	0.44
41:a:1153:C:H2'	41:a:1154:G:O4'	2.16	0.44
41:a:1310:G:N2	41:a:1313:U:C4	2.85	0.44
41:a:1436:G:H2'	41:a:1437:C:O4'	2.17	0.44
41:a:1733:G:N3	41:a:1734:G:C8	2.85	0.44
41:a:1848:A:OP2	41:a:1849:G:OP2	2.35	0.44
41:a:2135:A:C2	41:a:2136:G:H1'	2.52	0.44
41:a:2139:U:C2	41:a:2152:G:O6	2.70	0.44
41:a:2583:G:H2'	41:a:2584:U:O4'	2.18	0.44
41:a:2714:G:O2'	41:a:2715:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2772:C:H2'	41:a:2773:C:H6	1.82	0.44
56:p:2:SER:O	56:p:5:ALA:N	2.50	0.44
58:r:55:GLU:O	58:r:58:LEU:N	2.50	0.44
58:r:130:VAL:N	58:r:142:VAL:O	2.38	0.44
2:1:13:SER:HB2	41:a:1266:G:O6	2.17	0.44
8:7:11:U:C4	8:7:11:U:OP2	2.70	0.44
9:9:25:ALA:H	9:9:85:SER:HG	1.58	0.44
9:9:27:VAL:HG12	9:9:83:ALA:HB3	1.97	0.44
9:9:43:LYS:CG	9:9:98:GLU:HB3	2.48	0.44
9:9:61:ARG:CD	41:a:1046:A:H4'	2.47	0.44
16:AG:143:LYS:HG3	16:AG:153:ASP:HB2	1.99	0.44
18:D:180:U:C2'	18:D:181:A:H5'	2.47	0.44
18:D:275:G:H5'	36:V:16:LYS:HD2	2.00	0.44
18:D:334:C:O2'	18:D:335:C:H5'	2.17	0.44
18:D:370:C:H6	18:D:370:C:O5'	2.00	0.44
18:D:403:C:O2'	18:D:404:G:H5'	2.17	0.44
18:D:417:G:H2'	18:D:418:C:H6	1.81	0.44
18:D:431:A:H2'	18:D:432:A:O4'	2.18	0.44
18:D:495:A:C6	18:D:496:A:N6	2.85	0.44
18:D:554:A:H2'	18:D:555:U:C6	2.52	0.44
18:D:900:A:O2'	18:D:901:A:H5'	2.18	0.44
18:D:981:U:H2'	18:D:982:U:C5	2.52	0.44
18:D:1070:U:H2'	18:D:1071:C:C6	2.52	0.44
18:D:1268:G:O2'	18:D:1269:A:H5'	2.18	0.44
18:D:1276:G:C2'	18:D:1277:C:C5'	2.96	0.44
18:D:1527:U:C2'	18:D:1528:U:O5'	2.66	0.44
23:I:131:ARG:HG3	23:I:168:TYR:OH	2.18	0.44
26:L:66:ALA:HB1	26:L:67:PRO:HD2	1.99	0.44
40:Z:20:VAL:O	40:Z:20:VAL:HG12	2.17	0.44
41:a:116:C:H2'	41:a:117:G:O4'	2.17	0.44
41:a:370:G:O2'	41:a:423:A:C8	2.70	0.44
41:a:586:A:C2	41:a:1254:A:C2	3.05	0.44
41:a:605:G:H2'	41:a:606:U:O4'	2.18	0.44
41:a:854:C:O2'	41:a:855:G:H5'	2.17	0.44
41:a:855:G:C6	41:a:923:G:N1	2.85	0.44
41:a:869:G:H2'	41:a:870:U:O4'	2.18	0.44
41:a:994:C:OP1	66:z:53:ARG:NH1	2.51	0.44
41:a:1510:G:C4	41:a:1511:G:C8	3.06	0.44
41:a:1636:U:H2'	41:a:1637:A:H8	1.81	0.44
41:a:1680:U:O2'	41:a:1681:G:H5'	2.18	0.44
41:a:1753:G:C5	41:a:1755:A:OP2	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1843:C:H2'	41:a:1844:C:C6	2.52	0.44
41:a:1858:A:H2'	41:a:1859:U:O5'	2.17	0.44
41:a:1858:A:N6	41:a:1884:G:H1'	2.32	0.44
41:a:1881:C:H2'	41:a:1882:U:O4'	2.17	0.44
41:a:1909:C:N3	41:a:1922:G:C6	2.86	0.44
41:a:1936:A:N7	41:a:1945:G:C8	2.86	0.44
41:a:2063:C:C2	41:a:2064:C:C5	3.06	0.44
41:a:2488:G:C6	41:a:2489:U:C4	3.05	0.44
41:a:2586:U:H2'	41:a:2587:A:O4'	2.17	0.44
41:a:2645:G:C3'	41:a:2646:C:H5'	2.47	0.44
41:a:2650:U:H2'	41:a:2651:C:C6	2.49	0.44
41:a:2678:C:H2'	41:a:2679:A:O4'	2.17	0.44
44:d:9:G:C2	44:d:10:G:C8	3.05	0.44
44:d:26:C:C2	44:d:27:C:C6	3.05	0.44
44:d:73:A:H2'	44:d:73:A:N3	2.32	0.44
44:d:82:U:N3	44:d:83:G:N7	2.65	0.44
50:j:4:LEU:HD23	50:j:29:VAL:HG11	1.99	0.44
65:y:106:LYS:HA	65:y:109:ARG:HD3	1.99	0.44
3:2:6:ARG:NH1	3:2:37:ASP:OD2	2.51	0.44
4:3:6:ARG:N	4:3:9:ASP:OD2	2.43	0.44
8:7:-10:U:H2'	8:7:-9:U:H5'	2.00	0.44
8:7:0:U:O2	8:7:0:U:H2'	2.16	0.44
8:7:11:U:OP2	8:7:11:U:C5	2.71	0.44
10:A:52:G:C2	10:A:53:G:C8	3.05	0.44
10:A:70:G:H2'	10:A:71:C:O4'	2.17	0.44
11:AA:24:VAL:HG11	11:AA:704:MET:HE1	1.99	0.44
14:AE:385:LEU:HD23	14:AE:390:LEU:HB2	1.98	0.44
14:AE:478:LEU:HD21	15:AF:47:THR:HG23	1.99	0.44
14:AE:1033:GLY:HA3	14:AE:1081:VAL:O	2.18	0.44
14:AE:1158:GLU:HA	14:AE:1223:LEU:HD21	1.99	0.44
10:B:6:G:C6	10:B:68:C:N3	2.85	0.44
10:B:52:G:C4	10:B:53:G:C8	3.05	0.44
18:D:100:G:C4	18:D:101:A:C8	3.05	0.44
18:D:338:A:H2'	18:D:339:C:O4'	2.17	0.44
18:D:363:A:C6	32:R:28:PRO:HD2	2.52	0.44
18:D:384:G:H2'	18:D:385:C:H6	1.79	0.44
18:D:411:A:C5	18:D:429:U:C5	3.05	0.44
18:D:623:C:O2'	18:D:624:C:H5'	2.18	0.44
18:D:668:G:O2'	18:D:669:G:H5'	2.16	0.44
18:D:715:A:C2'	18:D:716:A:O5'	2.65	0.44
18:D:828:U:OP1	18:D:828:U:H4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:833:G:C6	18:D:834:U:C4	3.06	0.44
18:D:923:A:H2'	18:D:924:C:C6	2.52	0.44
18:D:955:U:C4	18:D:956:U:C4	3.05	0.44
18:D:1169:A:H2'	18:D:1170:A:C8	2.52	0.44
18:D:1409:C:O2'	18:D:1410:A:H5'	2.17	0.44
22:H:80:GLY:O	22:H:81:GLU:HG2	2.17	0.44
24:J:145:ILE:HG22	24:J:146:ARG:O	2.17	0.44
41:a:98:G:O4'	41:a:103:A:H1'	2.18	0.44
41:a:235:U:C2	41:a:236:C:C5	3.06	0.44
41:a:410:G:C2	41:a:2407:A:C5	3.05	0.44
41:a:553:G:C6	41:a:554:U:C4	3.05	0.44
41:a:879:G:C6	41:a:899:A:C2	3.06	0.44
41:a:1071:G:N2	41:a:1089:A:HO2'	2.14	0.44
41:a:1192:G:O2'	41:a:1193:G:H5'	2.18	0.44
41:a:1346:G:N1	41:a:1601:G:C6	2.85	0.44
41:a:1405:U:N3	41:a:1406:U:C4	2.86	0.44
41:a:1432:G:H2'	41:a:1433:A:H8	1.82	0.44
41:a:1682:G:C2	41:a:1757:A:O4'	2.70	0.44
41:a:1734:G:N3	41:a:1735:A:C8	2.86	0.44
41:a:1845:G:C6	41:a:1896:G:C6	3.06	0.44
41:a:1869:G:N1	41:a:1873:G:C6	2.86	0.44
41:a:2000:C:O2'	41:a:2001:C:H5'	2.17	0.44
41:a:2083:G:C5	41:a:2084:C:C5	3.05	0.44
41:a:2190:G:C4	41:a:2191:A:C8	3.05	0.44
41:a:2376:A:O2'	41:a:2377:A:H5'	2.18	0.44
41:a:2377:A:O2'	41:a:2378:A:H5'	2.17	0.44
41:a:2467:C:H2'	41:a:2468:A:O4'	2.17	0.44
41:a:2469:A:H4'	62:v:55:ARG:HD2	2.00	0.44
41:a:2602:A:H4'	41:a:2603:G:H5'	1.99	0.44
41:a:2616:C:C2'	41:a:2617:U:H5'	2.48	0.44
41:a:2643:G:C5	41:a:2644:G:N7	2.85	0.44
50:j:52:THR:OG1	50:j:53:GLY:N	2.50	0.44
51:k:10:LYS:HA	51:k:22:THR:HA	1.99	0.44
57:q:26:ILE:O	57:q:26:ILE:HD13	2.17	0.44
58:r:3:VAL:HG22	58:r:36:ALA:HB1	1.98	0.44
58:r:128:HIS:O	58:r:144:VAL:N	2.48	0.44
2:1:80:PRO:O	2:1:100:THR:OG1	2.28	0.44
7:6:15:DC:C4	7:6:16:DC:C5	3.05	0.44
7:6:21:DA:C6	8:7:15:G:C2	3.03	0.44
8:7:-2:U:C5'	23:I:74:GLY:CA	2.96	0.44
10:A:15:G:C8	10:A:15:G:O5'	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A:52:G:N1	10:A:63:G:C6	2.85	0.44
11:AA:998:LEU:HG	11:AA:1011:LEU:HB3	1.99	0.44
14:AE:26:SER:HB2	14:AE:236:TRP:CH2	2.51	0.44
14:AE:111:THR:HG21	14:AE:303:VAL:HB	2.00	0.44
14:AE:926:PRO:HB2	14:AE:1241:TYR:HE1	1.82	0.44
16:AG:288:MET:HE2	16:AG:288:MET:HB3	1.75	0.44
16:AG:288:MET:HE3	16:AG:289:ALA:N	2.31	0.44
16:AG:440:VAL:HG13	16:AG:444:LEU:HB2	2.00	0.44
10:B:25:C:O2'	10:B:26:G:H5'	2.17	0.44
10:B:39:C:C5	10:B:39:C:OP2	2.71	0.44
10:B:61:C:C2	10:B:62:C:C6	3.05	0.44
18:D:104:G:C4	18:D:105:G:C8	3.05	0.44
18:D:136:C:C2	18:D:137:U:C6	3.05	0.44
18:D:293:G:C6	18:D:294:U:C4	3.06	0.44
18:D:322:C:H2'	18:D:323:U:C6	2.53	0.44
18:D:592:G:H2'	18:D:593:U:C6	2.52	0.44
18:D:781:A:C8	18:D:802:A:C6	3.06	0.44
18:D:858:G:O6	18:D:869:G:H3'	2.17	0.44
18:D:872:A:C2	18:D:874:G:C6	3.05	0.44
18:D:892:A:C4	18:D:893:C:C5	3.06	0.44
18:D:1239:A:C8	18:D:1298:U:C5	3.05	0.44
18:D:1379:G:C2	18:D:1380:U:C4	3.05	0.44
18:D:1411:C:C2	18:D:1412:C:C5	3.06	0.44
23:I:79:LYS:O	23:I:82:GLU:N	2.45	0.44
24:J:57:GLU:OE2	24:J:196:ASN:N	2.47	0.44
38:X:47:GLU:OE2	38:X:47:GLU:O	2.35	0.44
39:Y:78:LEU:HD11	39:Y:112:LYS:HD2	1.99	0.44
41:a:64:A:H2'	41:a:65:U:C6	2.53	0.44
41:a:89:A:O2'	41:a:90:U:H5'	2.17	0.44
41:a:305:C:O5'	41:a:305:C:H6	2.00	0.44
41:a:589:U:H6	41:a:589:U:O5'	2.00	0.44
41:a:730:A:OP2	41:a:731:C:OP2	2.36	0.44
41:a:993:G:OP2	66:z:51:ARG:NH2	2.44	0.44
41:a:1025:G:H3'	41:a:1026:G:C5'	2.48	0.44
41:a:1223:G:N1	41:a:1227:G:C5	2.86	0.44
41:a:1657:U:C2	41:a:1658:C:C6	3.06	0.44
41:a:1715:G:O2'	41:a:1716:U:P	2.75	0.44
41:a:1857:G:C2	41:a:1884:G:N3	2.85	0.44
41:a:1878:G:C2	41:a:1879:C:C2	3.05	0.44
41:a:2189:U:O2'	41:a:2190:G:C5'	2.65	0.44
41:a:2626:C:O2'	41:a:2627:G:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2813:A:C6	41:a:2814:A:C5	3.05	0.44
52:l:40:ARG:NE	52:l:92:HIS:CD2	2.85	0.44
52:l:59:PRO:HB2	52:l:60:TRP:CE3	2.53	0.44
55:o:33:LEU:O	55:o:34:THR:C	2.61	0.44
9:9:132:TYR:OH	40:Z:19:VAL:O	2.20	0.44
10:A:27:U:H2'	10:A:28:C:C6	2.52	0.44
10:A:30:G:N1	10:A:31:G:C5	2.85	0.44
11:AA:886:LYS:HE3	11:AA:918:LEU:HD13	1.99	0.44
14:AE:220:ARG:HG2	14:AE:220:ARG:NH1	2.26	0.44
14:AE:245:LEU:CG	14:AE:246:PRO:HD2	2.47	0.44
14:AE:978:ARG:HD3	14:AE:999:TYR:H	1.82	0.44
14:AE:1024:THR:HG23	14:AE:1123:ARG:HA	2.00	0.44
15:AF:58:LEU:HD12	15:AF:59:ILE:HG12	2.00	0.44
16:AG:314:LEU:HD23	16:AG:314:LEU:HA	1.85	0.44
10:B:7:G:C2	10:B:67:C:C2	3.06	0.44
10:B:9:G:N2	10:B:45:G:C5	2.85	0.44
10:B:22:G:O2'	10:B:23:C:P	2.74	0.44
10:B:46:G:H1'	10:B:47:U:C5	2.52	0.44
18:D:71:A:O5'	18:D:72:A:OP2	2.36	0.44
18:D:213:G:C5	18:D:214:C:C5	3.06	0.44
18:D:262:A:H5''	18:D:263:A:OP2	2.17	0.44
18:D:335:C:O2'	18:D:1433:A:C2'	2.66	0.44
18:D:681:A:H2'	18:D:682:G:O4'	2.18	0.44
18:D:722:G:C6	18:D:724:G:C5	3.05	0.44
18:D:867:G:C6	18:D:868:C:N4	2.86	0.44
18:D:978:A:C5	18:D:1319:A:N1	2.86	0.44
18:D:1088:G:H2'	18:D:1089:G:O4'	2.18	0.44
18:D:1493:A:C2'	18:D:1494:G:OP1	2.66	0.44
27:M:113:ASP:HB2	27:M:119:ARG:CG	2.48	0.44
41:a:67:U:C2	41:a:68:G:C8	3.06	0.44
41:a:146:A:H2'	41:a:147:C:C6	2.53	0.44
41:a:365:U:H2'	41:a:366:C:C6	2.53	0.44
41:a:775:G:C5	41:a:794:A:C8	3.06	0.44
41:a:858:G:O2'	41:a:2268:A:C2'	2.66	0.44
41:a:878:A:H5'	41:a:879:G:OP2	2.17	0.44
41:a:962:G:C5	41:a:963:U:C5	3.06	0.44
41:a:1095:A:O2'	41:a:1096:A:C8	2.61	0.44
41:a:1560:G:C6	41:a:1561:C:C4	3.05	0.44
41:a:1562:U:C2	41:a:1563:U:C6	3.05	0.44
41:a:1613:G:C2	41:a:1619:G:C5	3.06	0.44
41:a:1663:G:C6	41:a:1998:A:N6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1782:U:C4	41:a:2587:A:C2	3.06	0.44
41:a:2063:C:C2	41:a:2064:C:C6	3.05	0.44
41:a:2134:A:N3	41:a:2159:G:H1'	2.33	0.44
41:a:2201:G:H2'	41:a:2202:U:O4'	2.17	0.44
41:a:2316:G:C2	41:a:2317:A:C8	3.05	0.44
41:a:2367:G:O2'	41:a:2368:C:H5'	2.17	0.44
41:a:2464:G:C6	41:a:2465:C:C4	3.05	0.44
41:a:2702:G:C2	41:a:2703:C:C6	3.05	0.44
41:a:2737:G:O2'	41:a:2738:A:H5'	2.18	0.44
41:a:2756:U:C4	41:a:2759:G:O6	2.70	0.44
41:a:2858:C:O2'	41:a:2859:G:H5'	2.17	0.44
47:g:43:PHE:CE2	54:n:116:GLY:HA2	2.52	0.44
50:j:142:VAL:HB	50:j:143:PRO:HD2	2.00	0.44
50:j:176:ASP:OD1	50:j:177:VAL:N	2.51	0.44
52:l:149:ILE:CD1	52:l:188:MET:HE3	2.48	0.44
2:1:7:HIS:C	2:1:7:HIS:ND1	2.75	0.44
10:A:29:G:C4	10:A:30:G:C8	3.06	0.44
11:AA:11:ILE:HG22	11:AA:1172:LEU:HD11	1.99	0.44
11:AA:1294:LYS:HG2	14:AE:472:LEU:CD1	2.47	0.44
13:AD:78:ILE:HA	13:AD:81:ILE:HG22	2.00	0.44
14:AE:108:ALA:HB1	14:AE:279:LEU:HD22	1.96	0.44
14:AE:111:THR:CG2	14:AE:300:GLN:HA	2.48	0.44
14:AE:126:LEU:HD12	14:AE:223:LEU:HD22	1.99	0.44
16:AG:215:GLU:O	16:AG:220:VAL:HG23	2.17	0.44
16:AG:215:GLU:HB2	16:AG:221:ILE:HG12	2.00	0.44
10:B:26:G:N3	10:B:26:G:H2'	2.33	0.44
18:D:115:G:C6	18:D:313:A:N1	2.86	0.44
18:D:123:U:H2'	18:D:124:C:H6	1.83	0.44
18:D:155:A:H2'	18:D:156:C:C6	2.53	0.44
18:D:218:U:H2'	18:D:219:U:O4'	2.18	0.44
18:D:461:A:C4	18:D:462:G:C8	3.05	0.44
18:D:477:C:H2'	18:D:478:A:C1'	2.48	0.44
18:D:685:G:N1	18:D:704:A:OP2	2.50	0.44
18:D:750:C:O2	18:D:751:U:C5	2.69	0.44
18:D:999:C:N4	18:D:1042:A:N6	2.66	0.44
18:D:1007:U:O3'	18:D:1008:U:O4'	2.36	0.44
18:D:1092:A:C4	18:D:1183:U:C4	3.06	0.44
18:D:1107:C:C4	18:D:1108:G:C8	3.05	0.44
18:D:1256:A:C4	18:D:1258:G:C6	3.05	0.44
23:I:50:ALA:HB2	23:I:75:ILE:HD12	2.00	0.44
29:O:52:LEU:O	29:O:55:VAL:O	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:P:6:ILE:HG23	30:P:100:ILE:HG23	2.00	0.44
35:U:1:MET:SD	35:U:1:MET:N	2.90	0.44
41:a:101:A:H2'	41:a:101:A:N3	2.33	0.44
41:a:175:G:C2	41:a:176:A:C4	3.05	0.44
41:a:289:G:H2'	41:a:290:U:O4'	2.18	0.44
41:a:535:G:O2'	41:a:536:G:H5'	2.18	0.44
41:a:585:G:H2'	41:a:1251:C:H42	1.82	0.44
41:a:637:A:P	61:u:112:LEU:HB3	2.58	0.44
41:a:879:G:C6	41:a:880:G:C5	3.06	0.44
41:a:962:G:OP1	41:a:963:U:OP2	2.36	0.44
41:a:984:A:N3	41:a:984:A:H2'	2.33	0.44
41:a:1028:A:H2'	41:a:1029:A:C8	2.53	0.44
41:a:1167:C:C2	41:a:1168:G:C8	3.05	0.44
41:a:1359:A:C5	41:a:1373:A:C2	3.06	0.44
41:a:1530:G:C2'	41:a:1531:C:H5'	2.48	0.44
41:a:1627:G:O2'	41:a:1628:G:H5'	2.18	0.44
41:a:1733:G:H2'	41:a:1734:G:H8	1.83	0.44
41:a:1786:A:C4	41:a:1938:A:C6	3.06	0.44
41:a:1817:G:C2	41:a:1818:U:C6	3.06	0.44
41:a:1820:U:H4'	41:a:1821:A:OP2	2.17	0.44
41:a:1848:A:C4	41:a:1849:G:C8	3.05	0.44
41:a:1959:G:C2'	41:a:1960:A:O5'	2.66	0.44
41:a:2078:C:O2'	41:a:2079:U:H5'	2.18	0.44
41:a:2451:A:N7	41:a:2452:C:C5	2.86	0.44
42:b:32:LEU:HA	42:b:64:ASP:OD2	2.18	0.44
44:d:39:A:O2'	44:d:40:U:H5'	2.17	0.44
52:l:161:ALA:O	52:l:162:ARG:C	2.59	0.44
58:r:3:VAL:HG23	58:r:37:VAL:O	2.18	0.44
58:r:96:THR:HG22	58:r:117:LEU:CD1	2.46	0.44
59:s:4:PHE:O	66:z:64:ARG:NH2	2.42	0.44
59:s:19:ASP:CG	59:s:21:THR:HG1	2.26	0.44
7:6:12:DC:O5'	7:6:12:DC:H6	2.01	0.44
7:6:18:DC:C2	8:7:17:G:N2	2.78	0.44
9:9:93:ALA:O	9:9:129:LEU:O	2.36	0.44
10:A:26:G:H2'	10:A:26:G:N3	2.32	0.44
10:A:50:U:N3	10:A:51:C:C4	2.86	0.44
11:AA:1245:ALA:CB	14:AE:375:GLU:HB3	2.48	0.44
11:AA:1274:GLU:HG3	14:AE:434:ILE:HD11	2.00	0.44
14:AE:68:TYR:HB3	14:AE:75:TYR:HE2	1.81	0.44
14:AE:1026:PRO:HB2	14:AE:1028:ILE:HG23	2.00	0.44
16:AG:271:ILE:H	16:AG:271:ILE:HG12	1.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:633:G:C4	18:D:634:C:C5	3.06	0.44
18:D:635:A:H2'	18:D:636:U:C6	2.53	0.44
18:D:651:C:H2'	18:D:652:U:C6	2.52	0.44
18:D:681:A:C6	18:D:710:G:C6	3.05	0.44
18:D:737:C:N3	18:D:738:C:C5	2.86	0.44
18:D:771:G:H2'	18:D:772:U:C6	2.53	0.44
18:D:927:G:C2	18:D:1391:U:O2	2.71	0.44
18:D:1270:G:N1	18:D:1271:A:C5	2.86	0.44
18:D:1383:C:C2	18:D:1384:C:C5	3.06	0.44
18:D:1492:A:O2'	18:D:1493:A:H5''	2.18	0.44
21:G:127:ASP:O	21:G:128:LYS:CB	2.65	0.44
22:H:70:VAL:O	22:H:71:ALA:CB	2.66	0.44
22:H:84:LEU:HD22	22:H:84:LEU:N	2.32	0.44
27:M:7:ILE:HD13	27:M:7:ILE:N	2.33	0.44
33:S:52:PRO:C	33:S:55:SER:HG	2.20	0.44
38:X:66:GLU:O	38:X:70:ARG:NH2	2.50	0.44
39:Y:78:LEU:N	39:Y:78:LEU:HD23	2.33	0.44
39:Y:130:GLY:O	39:Y:133:ARG:HB3	2.18	0.44
40:Z:2:ILE:HD12	40:Z:5:ASP:HB3	2.00	0.44
41:a:172:A:H2'	41:a:173:A:H8	1.83	0.44
41:a:273:G:C2	41:a:365:U:C2	3.06	0.44
41:a:275:C:C5	41:a:276:U:C5	3.06	0.44
41:a:278:A:N1	41:a:362:A:C8	2.86	0.44
41:a:317:G:C4	41:a:318:C:C5	3.06	0.44
41:a:328:U:O2'	41:a:329:G:OP1	2.33	0.44
41:a:464:U:C4	41:a:788:A:C5	3.06	0.44
41:a:479:A:C2	41:a:480:A:C5	3.06	0.44
41:a:627:A:H4'	41:a:628:G:OP1	2.18	0.44
41:a:723:C:O2'	41:a:724:U:H5'	2.18	0.44
41:a:763:G:C6	41:a:765:C:C4	3.05	0.44
41:a:911:A:C8	62:v:9:PHE:CE2	3.06	0.44
41:a:1174:U:O2	41:a:1174:U:O5'	2.36	0.44
41:a:1196:C:H2'	41:a:1197:G:O4'	2.17	0.44
41:a:1360:G:C8	41:a:1361:G:C8	3.06	0.44
41:a:1721:G:H1'	41:a:1739:A:N6	2.33	0.44
41:a:1794:A:O2'	41:a:1795:C:H5'	2.17	0.44
41:a:1809:A:O2'	41:a:1810:A:O5'	2.35	0.44
41:a:1829:A:C8	41:a:1830:C:C5	3.05	0.44
41:a:1987:A:C2	41:a:1988:G:C5	3.06	0.44
41:a:2108:A:C2	41:a:2182:U:C2	3.06	0.44
41:a:2197:U:N3	41:a:2224:G:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2232:C:O2'	41:a:2233:U:H5'	2.18	0.44
41:a:2290:G:H2'	41:a:2291:U:C6	2.53	0.44
41:a:2345:G:C5	41:a:2347:C:C5	3.06	0.44
41:a:2493:U:H2'	41:a:2494:G:O5'	2.18	0.44
41:a:2699:C:H2'	41:a:2700:A:H8	1.82	0.44
41:a:2702:G:C4	41:a:2703:C:C6	3.06	0.44
41:a:2768:U:C2'	41:a:2769:U:O5'	2.65	0.44
41:a:2811:G:H2'	41:a:2812:G:O4'	2.18	0.44
41:a:2880:C:O2	63:w:93:GLY:HA3	2.18	0.44
48:h:84:ASP:OD1	48:h:84:ASP:C	2.60	0.44
50:j:152:PRO:HG3	50:j:156:PHE:CZ	2.52	0.44
6:5:116:DG:C6	6:5:117:DA:C6	3.06	0.44
9:9:28:ALA:N	9:9:110:ALA:HA	2.27	0.44
9:9:36:ASP:OD2	9:9:107:GLU:HA	2.18	0.44
11:AA:811:ASN:ND2	11:AA:1098:LEU:O	2.51	0.44
11:AA:1336:ASN:OD1	14:AE:33:TRP:HZ2	2.00	0.44
12:AB:136:VAL:HB	12:AB:177:GLN:CG	2.48	0.44
14:AE:201:LEU:HD11	14:AE:220:ARG:NH1	2.31	0.44
14:AE:850:LYS:HB3	14:AE:855:ASP:HB2	2.00	0.44
16:AG:126:VAL:HG13	16:AG:130:PHE:CE2	2.53	0.44
16:AG:142:VAL:HB	16:AG:175:PRO:HA	1.99	0.44
16:AG:227:ALA:HB2	16:AG:330:GLN:O	2.18	0.44
16:AG:243:LYS:HD3	16:AG:243:LYS:C	2.43	0.44
16:AG:320:ARG:HB2	16:AG:323:GLN:CB	2.48	0.44
16:AG:320:ARG:HA	16:AG:320:ARG:HD3	1.83	0.44
16:AG:365:ILE:HB	16:AG:366:ASP:H	1.73	0.44
16:AG:402:THR:C	16:AG:405:ALA:H	2.26	0.44
10:B:7:G:C2	10:B:67:C:O2	2.70	0.44
18:D:182:A:C4	18:D:184:G:C8	3.05	0.44
18:D:227:G:H2'	18:D:228:A:O4'	2.18	0.44
18:D:355:C:O4'	18:D:388:G:O2'	2.36	0.44
18:D:360:G:C6	18:D:361:G:C6	3.06	0.44
18:D:400:C:O2'	18:D:401:C:H5'	2.18	0.44
18:D:519:C:H2'	18:D:520:A:C8	2.53	0.44
18:D:771:G:O2'	18:D:772:U:H5'	2.18	0.44
18:D:784:A:C2	18:D:785:G:C4	3.06	0.44
18:D:941:G:N1	18:D:1343:G:C6	2.86	0.44
18:D:1086:U:O2	18:D:1086:U:H2'	2.17	0.44
18:D:1096:C:O2'	18:D:1097:C:H5'	2.18	0.44
18:D:1141:C:O2	18:D:1142:G:C8	2.71	0.44
18:D:1294:G:C6	18:D:1295:U:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1315:U:H2'	18:D:1316:G:C8	2.53	0.44
18:D:1367:C:C2	18:D:1368:A:C8	3.06	0.44
18:D:1452:C:O2	18:D:1453:G:N2	2.51	0.44
18:D:1515:G:C2'	18:D:1516:G:C5'	2.94	0.44
21:G:21:ARG:HD2	21:G:22:TYR:CZ	2.53	0.44
22:H:10:GLU:O	22:H:14:LYS:HG2	2.17	0.44
22:H:267:TRP:HZ3	22:H:342:ILE:HD11	1.83	0.44
22:H:336:ASP:OD1	22:H:336:ASP:N	2.50	0.44
36:V:20:SER:OG	36:V:71:LYS:NZ	2.27	0.44
39:Y:21:PRO:HB2	39:Y:22:PRO:HD3	1.99	0.44
39:Y:125:THR:O	39:Y:129:GLU:HG3	2.18	0.44
41:a:83:A:N6	41:a:101:A:C4	2.86	0.44
41:a:86:G:C2	41:a:97:C:C2	3.06	0.44
41:a:347:A:C2	41:a:348:A:C5	3.06	0.44
41:a:1082:U:O4	41:a:1086:A:N1	2.51	0.44
41:a:1232:G:C4	41:a:1233:C:C6	3.06	0.44
41:a:1319:C:C2'	41:a:1320:C:O5'	2.65	0.44
41:a:1731:G:C6	41:a:1733:G:C5	3.06	0.44
41:a:1805:A:C6	41:a:1813:G:C6	3.06	0.44
41:a:1868:C:H2'	41:a:1869:G:C8	2.52	0.44
41:a:2037:A:H2'	41:a:2038:G:C8	2.52	0.44
41:a:2056:G:C6	41:a:2577:A:C4	3.06	0.44
41:a:2329:U:H2'	41:a:2330:G:H8	1.82	0.44
41:a:2487:G:H2'	41:a:2488:G:H8	1.82	0.44
41:a:2616:C:O2'	41:a:2617:U:H5'	2.18	0.44
41:a:2656:U:O2	41:a:2656:U:H2'	2.18	0.44
41:a:2714:G:C6	41:a:2715:C:C4	3.06	0.44
41:a:2822:G:OP2	50:j:115:GLY:O	2.36	0.44
44:d:44:G:N2	44:d:48:U:C2	2.86	0.44
48:h:73:GLY:C	48:h:117:GLN:HE21	2.26	0.44
65:y:8:LEU:HA	65:y:11:GLU:OE1	2.18	0.44
9:9:59:LEU:HD12	9:9:59:LEU:H	1.83	0.43
10:A:37:A:C5	10:A:38:A:C8	3.06	0.43
10:A:49:G:H8	10:A:49:G:O5'	2.01	0.43
10:A:69:C:N3	10:A:70:G:N7	2.66	0.43
14:AE:824:PRO:HD3	14:AE:835:LEU:HD12	2.00	0.43
16:AG:227:ALA:CB	16:AG:330:GLN:C	2.91	0.43
10:B:18:G:C2	10:B:58:A:C6	3.06	0.43
18:D:147:G:N2	18:D:176:C:C2	2.86	0.43
18:D:161:A:H2'	18:D:162:A:O4'	2.18	0.43
18:D:306:A:C2	18:D:307:C:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:414:A:C4	18:D:415:A:C8	3.06	0.43
18:D:499:A:C6	18:D:547:A:C8	3.06	0.43
18:D:632:U:H2'	18:D:633:G:OP1	2.18	0.43
18:D:678:U:C2	18:D:679:C:C5	3.06	0.43
18:D:732:C:H2'	18:D:733:G:H5'	2.00	0.43
18:D:749:A:C6	18:D:750:C:C5	3.06	0.43
18:D:1246:A:H2'	18:D:1247:U:C6	2.53	0.43
18:D:1412:C:H2'	18:D:1413:A:C8	2.52	0.43
29:O:106:ARG:NH1	29:O:107:ASP:O	2.48	0.43
38:X:17:ILE:HD12	38:X:17:ILE:N	2.34	0.43
39:Y:34:ILE:O	39:Y:34:ILE:HG22	2.18	0.43
39:Y:77:VAL:HA	39:Y:80:LYS:HB3	2.00	0.43
41:a:4:U:C2	41:a:5:A:C8	3.06	0.43
41:a:10:A:C8	41:a:2800:A:N6	2.85	0.43
41:a:152:A:H2'	41:a:153:U:C6	2.53	0.43
41:a:303:G:C6	41:a:315:G:N1	2.86	0.43
41:a:577:G:H2'	41:a:578:G:C8	2.53	0.43
41:a:703:U:H2'	41:a:704:G:O4'	2.18	0.43
41:a:723:C:C2	41:a:724:U:C6	3.06	0.43
41:a:737:C:C2	41:a:760:G:N2	2.86	0.43
41:a:767:U:O2'	41:a:768:G:H5'	2.18	0.43
41:a:912:C:H2'	41:a:913:U:C6	2.53	0.43
41:a:1281:G:H2'	41:a:1282:U:C6	2.53	0.43
41:a:1470:A:N6	41:a:1521:G:H1'	2.33	0.43
41:a:1589:U:HO2'	41:a:1590:A:P	2.41	0.43
41:a:1607:C:H4'	41:a:1608:A:O5'	2.18	0.43
41:a:1849:G:C2	41:a:1850:G:C8	3.06	0.43
41:a:1863:G:C2'	41:a:1864:U:O5'	2.65	0.43
41:a:1983:G:C2	41:a:1984:G:C8	3.05	0.43
41:a:2241:A:H2'	41:a:2242:G:H8	1.82	0.43
41:a:2269:G:C2	41:a:2270:A:C8	3.05	0.43
41:a:2349:G:H2'	41:a:2350:C:O4'	2.18	0.43
41:a:2394:C:O2'	41:a:2395:C:H5'	2.18	0.43
41:a:2415:G:C5	41:a:2416:C:C4	3.05	0.43
41:a:2418:A:H2'	41:a:2419:U:O4'	2.18	0.43
41:a:2539:C:O2'	41:a:2540:C:H5'	2.18	0.43
41:a:2693:G:O2'	41:a:2694:G:H5'	2.18	0.43
41:a:2766:A:H2'	41:a:2766:A:N3	2.33	0.43
44:d:96:G:C5	44:d:97:C:C5	3.06	0.43
4:3:27:ASN:OD1	4:3:35:ILE:HD12	2.18	0.43
6:5:115:DA:P	14:AE:1148:ARG:HG3	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:96:PHE:HD1	9:9:96:PHE:HA	1.70	0.43
11:AA:444:ASP:N	11:AA:444:ASP:OD1	2.51	0.43
11:AA:857:VAL:HG12	11:AA:919:ARG:HE	1.83	0.43
12:AB:157:ARG:NH1	12:AB:174:ASP:HA	2.33	0.43
13:AD:192:VAL:HG12	13:AD:193:GLU:H	1.83	0.43
16:AG:167:MET:HE3	16:AG:173:PHE:CZ	2.53	0.43
16:AG:287:ALA:HB1	16:AG:331:LEU:CD1	2.32	0.43
16:AG:363:LEU:HG	16:AG:410:ALA:HA	1.94	0.43
16:AG:425:LEU:HD23	16:AG:429:LYS:HZ3	1.82	0.43
16:AG:429:LYS:CB	16:AG:430:PRO:HD2	2.47	0.43
10:B:22:G:C2	10:B:23:C:C4	3.06	0.43
10:B:63:G:C2	10:B:64:G:N7	2.86	0.43
10:B:64:G:N3	10:B:65:C:C6	2.86	0.43
10:B:69:C:N3	10:B:70:G:N7	2.66	0.43
18:D:10:A:C2	18:D:25:C:C2	3.06	0.43
18:D:168:G:N1	18:D:169:C:C4	2.86	0.43
18:D:169:C:O2'	18:D:170:U:H5'	2.17	0.43
18:D:524:G:C2	18:D:525:C:C4	3.06	0.43
18:D:598:U:C2	18:D:599:C:C6	3.07	0.43
18:D:603:U:C2	18:D:604:G:C8	3.06	0.43
18:D:643:C:O2'	18:D:644:U:H5'	2.18	0.43
18:D:660:C:C4	18:D:661:G:N7	2.85	0.43
18:D:758:C:O2'	18:D:759:A:O5'	2.33	0.43
18:D:1347:G:O2'	18:D:1348:U:P	2.76	0.43
23:I:155:GLY:O	23:I:156:ARG:C	2.61	0.43
23:I:186:THR:HG22	23:I:187:SER:N	2.33	0.43
24:J:105:MET:HE2	24:J:180:GLY:HA3	2.00	0.43
26:L:30:THR:O	26:L:33:GLU:N	2.49	0.43
30:P:42:LEU:HB3	30:P:43:PRO:CD	2.48	0.43
32:R:66:TYR:HB2	32:R:87:VAL:HG21	2.00	0.43
39:Y:14:ALA:HA	39:Y:41:PHE:HZ	1.81	0.43
41:a:145:C:H2'	41:a:146:A:C8	2.54	0.43
41:a:303:G:C6	41:a:304:U:C4	3.06	0.43
41:a:433:C:O2'	41:a:434:U:H5'	2.18	0.43
41:a:558:U:H2'	41:a:559:G:H8	1.82	0.43
41:a:566:U:H4'	41:a:809:G:OP2	2.18	0.43
41:a:690:G:H2'	41:a:691:C:H6	1.83	0.43
41:a:905:A:O2'	41:a:906:U:H5'	2.19	0.43
41:a:909:A:C8	41:a:912:C:N4	2.86	0.43
41:a:947:A:C6	41:a:971:G:N1	2.86	0.43
41:a:995:C:H42	59:s:2:LYS:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1039:A:H2	41:a:1116:G:H22	1.66	0.43
41:a:1059:G:C6	41:a:1080:A:C6	3.06	0.43
41:a:1135:C:C2'	41:a:1136:G:OP1	2.65	0.43
41:a:1151:A:H4'	66:z:81:ASN:OD1	2.18	0.43
41:a:1322:A:C6	41:a:1323:C:C4	3.06	0.43
41:a:1332:G:N7	41:a:1609:A:O2'	2.40	0.43
41:a:1770:G:C5	41:a:1983:G:C6	3.07	0.43
41:a:2011:U:C4	41:a:2012:G:C5	3.06	0.43
41:a:2564:A:O2'	41:a:2565:A:H5'	2.17	0.43
41:a:2651:C:H2'	41:a:2652:C:C6	2.53	0.43
41:a:2756:U:O4'	41:a:2757:A:C8	2.71	0.43
41:a:2785:C:H2'	41:a:2786:U:H6	1.83	0.43
41:a:2823:A:OP1	50:j:118:PHE:HB2	2.18	0.43
48:h:29:PRO:HG2	48:h:34:LEU:HD11	1.99	0.43
50:j:13:ARG:NH1	65:y:75:GLN:OE1	2.51	0.43
60:t:73:ASP:OD1	60:t:75:SER:N	2.30	0.43
62:v:80:VAL:HG12	62:v:81:ARG:O	2.18	0.43
6:5:116:DG:OP1	14:AE:1311:LYS:NZ	2.46	0.43
9:9:3:LEU:HD13	9:9:5:LEU:H	1.81	0.43
9:9:62:ARG:CZ	9:9:62:ARG:HB2	2.47	0.43
10:A:11:A:H3'	10:A:12:G:H8	1.84	0.43
11:AA:1105:SER:HB2	14:AE:731:ARG:HB3	2.00	0.43
12:AB:159:LYS:CB	12:AB:159:LYS:HZ2	2.31	0.43
14:AE:395:LYS:HB3	14:AE:395:LYS:HE3	1.45	0.43
14:AE:1227:HIS:HA	14:AE:1230:THR:HG22	1.99	0.43
16:AG:15:GLU:HA	16:AG:18:LEU:HB2	2.00	0.43
16:AG:226:ALA:HB1	16:AG:228:ARG:NH1	2.34	0.43
16:AG:343:ASP:HB3	16:AG:347:LYS:HE3	2.01	0.43
10:B:39:C:O5'	10:B:40:C:OP2	2.36	0.43
10:B:55:U:C2	10:B:57:A:OP2	2.71	0.43
10:B:65:C:O2'	10:B:66:C:H5'	2.18	0.43
18:D:41:G:O2'	18:D:42:G:H5'	2.18	0.43
18:D:159:G:C2	18:D:161:A:OP2	2.71	0.43
18:D:165:G:H2'	18:D:166:U:C6	2.53	0.43
18:D:321:A:H2'	18:D:322:C:C6	2.54	0.43
18:D:406:G:C8	18:D:495:A:C2	3.05	0.43
18:D:490:C:H2'	18:D:491:G:H8	1.83	0.43
18:D:685:G:O2'	18:D:686:U:C5'	2.66	0.43
18:D:778:G:H2'	18:D:779:C:O4'	2.18	0.43
18:D:1000:A:H2'	18:D:1001:C:O4'	2.18	0.43
18:D:1008:U:H2'	18:D:1009:U:C2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1147:C:N3	18:D:1148:U:C5	2.86	0.43
18:D:1162:C:N3	18:D:1175:G:C6	2.86	0.43
18:D:1193:G:C2	18:D:1194:U:C6	3.06	0.43
18:D:1210:C:H2'	18:D:1211:U:C6	2.53	0.43
18:D:1215:G:C2	18:D:1216:A:C8	3.07	0.43
18:D:1489:G:C6	18:D:1490:U:C4	3.06	0.43
21:G:94:HIS:O	21:G:95:ARG:C	2.61	0.43
22:H:135:LEU:O	22:H:136:VAL:C	2.60	0.43
25:K:60:ILE:HG13	25:K:61:GLN:N	2.32	0.43
29:O:5:GLN:N	29:O:5:GLN:CD	2.76	0.43
39:Y:93:ASN:O	41:a:1077:A:H4'	2.19	0.43
41:a:3:U:O2'	41:a:4:U:H5'	2.17	0.43
41:a:221:A:C8	41:a:266:G:O6	2.71	0.43
41:a:221:A:C1'	41:a:233:A:H1'	2.48	0.43
41:a:258:G:C2	41:a:259:G:C8	3.06	0.43
41:a:550:C:C3'	41:a:551:G:H5''	2.48	0.43
41:a:633:A:N3	41:a:2403:C:H4'	2.33	0.43
41:a:686:U:H2'	41:a:788:A:N1	2.33	0.43
41:a:715:A:H2'	41:a:716:A:O4'	2.18	0.43
41:a:832:U:H2'	41:a:833:A:C8	2.51	0.43
41:a:885:C:H3'	41:a:886:A:C8	2.53	0.43
41:a:1178:C:C2	41:a:1179:G:C2	3.07	0.43
41:a:1248:G:H3'	41:a:1249:U:C5'	2.49	0.43
41:a:1416:G:HO2'	41:a:1417:C:H6	1.62	0.43
41:a:1582:C:H42	41:a:1583:A:N6	2.16	0.43
41:a:1707:G:H1'	41:a:1756:G:N3	2.34	0.43
41:a:1723:G:H2'	41:a:1723:G:N3	2.34	0.43
41:a:1741:C:O2'	41:a:1742:U:H5'	2.18	0.43
41:a:2065:C:H2'	41:a:2066:C:H6	1.82	0.43
41:a:2205:A:H2'	41:a:2206:C:H6	1.82	0.43
41:a:2537:U:N3	41:a:2538:C:C5	2.86	0.43
41:a:2632:A:O2'	41:a:2633:G:H5'	2.17	0.43
41:a:2708:G:H2'	41:a:2709:G:H8	1.83	0.43
41:a:2758:A:C2	41:a:2759:G:N9	2.86	0.43
41:a:2772:C:O2'	41:a:2773:C:H5'	2.18	0.43
41:a:2854:G:C6	41:a:2855:C:C4	3.07	0.43
44:d:2:G:H2'	44:d:3:C:C6	2.52	0.43
44:d:9:G:C6	44:d:112:G:C6	3.06	0.43
44:d:62:C:H2'	44:d:63:C:C6	2.53	0.43
6:5:98:DA:C2'	6:5:99:DT:C7	2.96	0.43
9:9:124:ASP:HB3	9:9:126:LEU:HG	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:300:ASP:OD1	11:AA:313:ALA:N	2.51	0.43
10:B:6:G:C2	10:B:68:C:C2	3.06	0.43
18:D:66:A:C6	18:D:104:G:C2	3.06	0.43
18:D:104:G:N3	18:D:105:G:C8	2.86	0.43
18:D:142:G:C6	18:D:143:A:C6	3.06	0.43
18:D:146:G:N1	18:D:177:G:O6	2.52	0.43
18:D:212:G:C2	18:D:213:G:C8	3.06	0.43
18:D:256:U:C2	18:D:257:G:C8	3.07	0.43
18:D:439:U:H6	24:J:120:HIS:CD2	2.35	0.43
18:D:501:C:H2'	18:D:502:A:H8	1.82	0.43
18:D:610:U:C2	18:D:611:C:H6	2.37	0.43
18:D:615:G:C6	18:D:626:G:C6	3.07	0.43
18:D:737:C:H2'	18:D:738:C:C6	2.52	0.43
18:D:786:G:C2	18:D:787:A:H1'	2.54	0.43
18:D:1040:U:H2'	18:D:1041:G:H8	1.80	0.43
18:D:1054:C:OP2	18:D:1197:A:P	2.76	0.43
18:D:1144:G:H5''	18:D:1145:A:OP2	2.18	0.43
18:D:1167:A:O2'	18:D:1169:A:N7	2.44	0.43
18:D:1209:C:N3	18:D:1210:C:C5	2.86	0.43
18:D:1324:A:C6	18:D:1325:C:C4	3.06	0.43
18:D:1410:A:C5	18:D:1411:C:C5	3.07	0.43
18:D:1428:A:H2'	18:D:1429:A:O4'	2.18	0.43
22:H:76:GLU:OE2	22:H:76:GLU:HA	2.18	0.43
25:K:101:GLU:HA	25:K:122:ASN:ND2	2.33	0.43
29:O:84:THR:HG21	29:O:103:PHE:HB3	2.00	0.43
36:V:81:LYS:HE2	36:V:82:ALA:HA	2.00	0.43
39:Y:28:GLY:HA3	39:Y:32:VAL:HB	2.01	0.43
41:a:254:G:O2'	41:a:255:A:O4'	2.31	0.43
41:a:341:C:O2'	41:a:342:A:H5'	2.18	0.43
41:a:345:A:N3	41:a:346:A:N6	2.65	0.43
41:a:532:A:N7	41:a:2021:C:O2'	2.42	0.43
41:a:685:A:N1	41:a:787:C:H1'	2.32	0.43
41:a:788:A:OP1	41:a:791:C:N4	2.42	0.43
41:a:2148:G:N2	41:a:2149:U:C2	2.85	0.43
41:a:2577:A:H2	49:i:2:ALA:N	2.16	0.43
41:a:2643:G:C4	41:a:2644:G:C8	3.06	0.43
41:a:2651:C:O2'	41:a:2652:C:H5'	2.17	0.43
41:a:2692:G:C6	41:a:2718:G:C6	3.06	0.43
41:a:2840:C:O2'	41:a:2841:C:H5'	2.18	0.43
44:d:110:C:H2'	44:d:111:U:O4'	2.18	0.43
50:j:2:ILE:HG21	50:j:48:ILE:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:n:111:ILE:HB	54:n:114:PHE:HB2	2.00	0.43
9:9:23:LEU:HD22	9:9:92:ALA:HB1	1.99	0.43
9:9:67:THR:HB	9:9:68:PRO:HD3	2.01	0.43
10:A:4:G:C2	10:A:5:G:C8	3.05	0.43
11:AA:557:ARG:HB3	11:AA:587:LEU:HD13	2.00	0.43
11:AA:829:THR:HG23	11:AA:1059:ARG:HG2	1.99	0.43
13:AD:29:GLU:HB3	13:AD:200:LYS:HG3	1.99	0.43
14:AE:120:LEU:HA	14:AE:121:PRO:HA	1.84	0.43
14:AE:894:VAL:HG22	14:AE:1258:ARG:HH11	1.83	0.43
16:AG:131:ARG:O	16:AG:134:GLU:CG	2.47	0.43
16:AG:183:LEU:HD22	16:AG:195:LEU:HD13	2.00	0.43
10:B:71:C:H3'	10:B:72:A:H8	1.82	0.43
10:B:71:C:H2'	10:B:72:A:C8	2.53	0.43
17:C:27:ALA:O	17:C:31:ASN:OD1	2.36	0.43
18:D:7:A:O4'	18:D:298:A:C8	2.72	0.43
18:D:146:G:N1	18:D:177:G:C6	2.86	0.43
18:D:414:A:C2	18:D:415:A:N9	2.87	0.43
18:D:417:G:H2'	18:D:418:C:C6	2.53	0.43
18:D:539:A:H2'	18:D:540:G:C8	2.53	0.43
18:D:712:A:O2'	18:D:713:G:H5'	2.17	0.43
18:D:773:G:O6	18:D:807:A:N6	2.52	0.43
18:D:940:C:H2'	18:D:941:G:O4'	2.19	0.43
18:D:945:G:C6	18:D:1337:G:C5	3.06	0.43
18:D:1131:G:N2	18:D:1132:C:C2	2.85	0.43
18:D:1233:G:H2'	18:D:1234:C:C6	2.53	0.43
18:D:1290:G:C5	18:D:1291:U:C5	3.07	0.43
18:D:1304:G:H5''	18:D:1305:G:OP1	2.19	0.43
18:D:1318:A:H4'	37:W:10:PHE:CE1	2.53	0.43
18:D:1489:G:O2'	18:D:1490:U:H5'	2.18	0.43
18:D:1523:G:H2'	18:D:1524:C:H6	1.83	0.43
24:J:69:GLU:O	24:J:72:PHE:N	2.52	0.43
25:K:19:ASN:OD1	25:K:20:ARG:N	2.52	0.43
29:O:6:TYR:CD2	29:O:90:TYR:HA	2.54	0.43
30:P:33:GLY:CA	30:P:83:THR:OG1	2.66	0.43
32:R:36:ARG:CZ	32:R:38:TYR:CD1	3.02	0.43
36:V:50:ASN:N	36:V:50:ASN:OD1	2.51	0.43
41:a:1:G:H2'	41:a:2:G:C8	2.53	0.43
41:a:77:G:C5	41:a:110:G:C2	3.06	0.43
41:a:912:C:O2'	41:a:913:U:H5'	2.19	0.43
41:a:923:G:C4	41:a:924:G:C8	3.06	0.43
41:a:966:G:C6	41:a:967:U:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:966:G:C5	41:a:967:U:C4	3.06	0.43
41:a:1038:G:H2'	41:a:1039:A:C8	2.54	0.43
41:a:1113:U:C2	41:a:1114:C:C5	3.06	0.43
41:a:1130:U:C4	50:j:152:PRO:HA	2.54	0.43
41:a:1413:A:C5	41:a:1414:C:C5	3.06	0.43
41:a:1446:C:H2'	41:a:1447:C:C6	2.53	0.43
41:a:1473:G:H2'	41:a:1474:U:C6	2.53	0.43
41:a:1558:C:C2	41:a:1560:G:C5	3.07	0.43
41:a:1710:G:H2'	41:a:1711:A:C8	2.53	0.43
41:a:1796:U:H2'	41:a:1797:G:H8	1.83	0.43
41:a:1850:G:C5	41:a:1851:U:C5	3.06	0.43
41:a:2127:G:C2	41:a:2162:G:N7	2.86	0.43
41:a:2177:C:C2'	41:a:2178:C:O4'	2.66	0.43
41:a:2255:G:C6	41:a:2256:G:C5	3.06	0.43
41:a:2342:C:C2'	41:a:2343:U:O5'	2.66	0.43
41:a:2425:A:H5''	41:a:2427:C:O4'	2.19	0.43
41:a:2548:U:C2'	41:a:2549:G:O5'	2.66	0.43
41:a:2560:A:O2'	41:a:2561:U:H5'	2.18	0.43
52:l:48:THR:O	52:l:51:GLU:N	2.51	0.43
59:s:99:ARG:O	59:s:100:VAL:C	2.61	0.43
60:t:70:ARG:NH1	60:t:74:GLY:O	2.50	0.43
11:AA:1275:VAL:HG13	11:AA:1287:LEU:HD11	2.01	0.43
12:AB:163:SER:CA	12:AB:168:ALA:HB2	2.39	0.43
13:AD:68:TYR:HE1	13:AD:79:LEU:HD13	1.82	0.43
14:AE:76:LYS:HB3	14:AE:76:LYS:NZ	2.32	0.43
14:AE:515:ARG:HH12	14:AE:724:MET:HG2	1.83	0.43
16:AG:38:LYS:HB3	16:AG:39:TYR:H	1.55	0.43
16:AG:353:HIS:C	16:AG:357:ASP:HB2	2.43	0.43
10:B:70:G:C6	10:B:71:C:C5	3.07	0.43
18:D:15:G:O2'	25:K:29:ARG:HD3	2.18	0.43
18:D:71:A:N1	18:D:100:G:C8	2.86	0.43
18:D:76:G:C6	18:D:77:A:C5	3.07	0.43
18:D:206:C:N4	18:D:213:G:H22	2.16	0.43
18:D:295:C:H2'	18:D:296:U:O4'	2.19	0.43
18:D:524:G:H2'	18:D:525:C:C6	2.54	0.43
18:D:912:C:H2'	18:D:913:A:C8	2.54	0.43
18:D:938:A:C2'	18:D:939:G:O5'	2.67	0.43
18:D:1072:G:H2'	18:D:1073:U:C6	2.54	0.43
18:D:1352:C:C4	18:D:1371:G:O6	2.72	0.43
18:D:1385:G:C2	18:D:1386:G:C4	3.06	0.43
24:J:69:GLU:O	24:J:70:ARG:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:K:99:ALA:CB	25:K:103:THR:HG21	2.49	0.43
32:R:56:ARG:HH11	32:R:56:ARG:HB2	1.84	0.43
32:R:66:TYR:CG	32:R:87:VAL:HG21	2.52	0.43
38:X:95:LEU:HB3	38:X:96:PRO:HD2	2.00	0.43
41:a:74:A:N7	41:a:88:G:C6	2.86	0.43
41:a:155:A:H2'	41:a:156:A:H8	1.84	0.43
41:a:175:G:O2'	41:a:176:A:H5'	2.18	0.43
41:a:186:G:C2	41:a:211:C:C2	3.07	0.43
41:a:283:G:O2'	41:a:284:U:H5'	2.18	0.43
41:a:387:U:H4'	41:a:388:G:O4'	2.18	0.43
41:a:393:C:O2'	41:a:394:C:H5'	2.19	0.43
41:a:572:A:C3'	41:a:573:U:O4'	2.65	0.43
41:a:607:U:O2'	41:a:608:A:H5'	2.17	0.43
41:a:615:U:O4	52:l:39:ALA:HB2	2.19	0.43
41:a:696:G:O2'	41:a:697:G:H5'	2.18	0.43
41:a:807:U:O2'	41:a:808:G:H5'	2.18	0.43
41:a:966:G:C2	41:a:967:U:C2	3.06	0.43
41:a:1069:A:C2	41:a:1096:A:H5''	2.53	0.43
41:a:1084:A:C6	41:a:1085:A:N1	2.86	0.43
41:a:1220:G:C6	41:a:1221:C:C4	3.07	0.43
41:a:1279:G:O2'	41:a:1280:G:H5'	2.19	0.43
41:a:1428:C:O2'	41:a:1569:A:OP2	2.29	0.43
41:a:1663:G:O2'	41:a:1664:A:O5'	2.35	0.43
41:a:1893:C:C5	41:a:1894:C:C5	3.07	0.43
41:a:2135:A:H4'	41:a:2160:C:O4'	2.19	0.43
41:a:2163:A:N7	41:a:2164:C:O2	2.51	0.43
41:a:2194:U:H2'	41:a:2195:U:C6	2.51	0.43
41:a:2217:G:N1	41:a:2218:G:C5	2.87	0.43
41:a:2234:G:N2	41:a:2235:G:H1'	2.33	0.43
41:a:2520:C:C6	41:a:2567:G:H1'	2.54	0.43
44:d:113:C:H6	44:d:113:C:O5'	2.02	0.43
48:h:17:VAL:HB	48:h:204:VAL:HG12	2.00	0.43
51:k:40:ASP:OD1	51:k:40:ASP:C	2.62	0.43
56:p:30:ASN:HB3	56:p:79:VAL:O	2.19	0.43
62:v:66:ARG:HB2	62:v:101:VAL:O	2.17	0.43
10:A:8:U:O2'	10:A:47:U:O4	2.37	0.43
10:A:46:G:OP1	10:A:46:G:C8	2.72	0.43
11:AA:896:THR:CB	11:AA:897:PRO:CD	2.93	0.43
12:AB:7:LYS:HG2	12:AB:74:VAL:HG13	2.01	0.43
14:AE:107:LEU:HA	14:AE:276:ASN:ND2	2.33	0.43
14:AE:1046:ILE:HG22	14:AE:1061:VAL:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:21:GLU:HB3	16:AG:49:ILE:CD1	2.49	0.43
16:AG:214:PRO:HD2	16:AG:215:GLU:CD	2.43	0.43
16:AG:252:VAL:HG13	16:AG:256:GLY:HA2	1.99	0.43
16:AG:433:ASP:HB3	16:AG:456:LEU:CD1	2.47	0.43
10:B:63:G:N3	10:B:64:G:C8	2.86	0.43
10:B:72:A:H2'	10:B:73:A:O4'	2.17	0.43
18:D:131:A:N1	18:D:232:G:C5	2.87	0.43
18:D:181:A:O2'	18:D:194:C:N4	2.51	0.43
18:D:215:C:C4	18:D:216:U:C5	3.06	0.43
18:D:217:C:H2'	18:D:218:U:H6	1.83	0.43
18:D:495:A:C2	18:D:496:A:C6	3.06	0.43
18:D:936:C:O2	18:D:936:C:H2'	2.18	0.43
18:D:1077:G:N1	18:D:1081:A:C6	2.87	0.43
18:D:1145:A:O2'	18:D:1146:A:C5'	2.66	0.43
18:D:1157:A:N6	18:D:1177:G:N2	2.67	0.43
18:D:1374:A:C2	18:D:1375:A:C8	3.06	0.43
18:D:1375:A:C5	18:D:1376:U:C5	3.07	0.43
18:D:1410:A:N6	18:D:1491:G:O6	2.52	0.43
18:D:1456:A:H2'	18:D:1457:G:O4'	2.19	0.43
30:P:5:ARG:HB2	30:P:76:ILE:O	2.19	0.43
39:Y:14:ALA:CB	39:Y:54:ILE:HD12	2.37	0.43
41:a:68:G:H2'	41:a:69:C:O4'	2.19	0.43
41:a:106:C:O2'	41:a:294:A:O2'	2.31	0.43
41:a:237:C:O2'	41:a:238:C:H5'	2.18	0.43
41:a:359:G:C4	41:a:360:U:C5	3.07	0.43
41:a:488:G:C2	41:a:493:G:O6	2.72	0.43
41:a:538:A:N1	41:a:556:A:C8	2.86	0.43
41:a:614:A:O2'	41:a:615:U:P	2.75	0.43
41:a:639:U:C2	41:a:640:C:C5	3.06	0.43
41:a:685:A:O2'	41:a:773:U:O4	2.32	0.43
41:a:889:C:O2'	41:a:890:C:C5'	2.67	0.43
41:a:922:C:O2'	41:a:923:G:H5'	2.19	0.43
41:a:1000:A:C6	41:a:1001:A:C6	3.06	0.43
41:a:1090:A:C6	41:a:1102:C:C2	3.06	0.43
41:a:1091:G:C6	41:a:1101:U:N3	2.86	0.43
41:a:1093:G:C2	41:a:1099:G:C6	3.07	0.43
41:a:1195:G:O2'	41:a:1196:C:H5'	2.19	0.43
41:a:1280:G:O2'	41:a:1281:G:H5'	2.18	0.43
41:a:1296:G:C4	41:a:1297:C:C5	3.06	0.43
41:a:1343:G:C2	41:a:1344:U:C4	3.06	0.43
41:a:1555:G:C4	41:a:1556:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1604:C:H2'	41:a:1605:C:H6	1.83	0.43
41:a:1788:C:H2'	41:a:1789:A:H8	1.83	0.43
41:a:1790:C:H2'	41:a:1791:A:C5	2.53	0.43
41:a:1838:C:C2	41:a:1898:U:C4	3.07	0.43
41:a:1877:A:H2'	41:a:1878:G:O4'	2.18	0.43
41:a:1923:U:H1'	41:a:1924:C:C6	2.52	0.43
41:a:1996:C:OP1	60:t:31:ARG:CZ	2.66	0.43
41:a:1999:C:O2'	41:a:2000:C:H5'	2.17	0.43
41:a:2309:A:OP2	41:a:2310:C:OP2	2.36	0.43
41:a:2367:G:C2	41:a:2368:C:C5	3.07	0.43
41:a:2489:U:O2'	41:a:2490:G:H5'	2.18	0.43
44:d:74:U:C2	44:d:75:G:C8	3.07	0.43
48:h:246:THR:HG22	48:h:252:THR:HG22	2.01	0.43
62:v:107:GLY:O	62:v:108:VAL:HG13	2.19	0.43
9:9:59:LEU:CD1	9:9:59:LEU:H	2.32	0.43
10:A:16:C:H3'	10:A:17:C:C5'	2.47	0.43
10:A:18:G:C5	10:A:57:A:N6	2.87	0.43
12:AB:175:PHE:HA	12:AB:178:VAL:CG2	2.49	0.43
14:AE:58:CYS:SG	14:AE:60:ARG:HG2	2.59	0.43
14:AE:271:ARG:HE	14:AE:271:ARG:HB2	1.58	0.43
14:AE:950:ILE:HB	14:AE:1018:ALA:HB3	2.01	0.43
14:AE:1079:LYS:HD3	14:AE:1098:GLN:HB3	1.99	0.43
16:AG:226:ALA:O	16:AG:228:ARG:N	2.52	0.43
16:AG:241:ASN:CG	21:G:158:PRO:C	2.73	0.43
18:D:113:G:C2	18:D:114:U:C2	3.06	0.43
18:D:138:G:C4	18:D:226:G:N2	2.86	0.43
18:D:145:G:C2	18:D:178:C:N3	2.85	0.43
18:D:168:G:C6	18:D:169:C:N4	2.87	0.43
18:D:184:G:H2'	18:D:185:U:C6	2.54	0.43
18:D:232:G:C5	18:D:233:C:C5	3.07	0.43
18:D:236:A:H2'	18:D:237:G:O4'	2.19	0.43
18:D:521:G:O6	18:D:529:G:C2	2.72	0.43
18:D:773:G:N1	18:D:807:A:C6	2.87	0.43
18:D:901:A:N7	18:D:902:G:H1'	2.34	0.43
18:D:963:G:C6	18:D:964:A:N7	2.87	0.43
18:D:1307:U:H2'	18:D:1308:U:C6	2.54	0.43
18:D:1432:G:O2'	18:D:1433:A:OP2	2.35	0.43
24:J:109:ALA:N	24:J:113:GLU:OE2	2.29	0.43
29:O:28:ILE:HD12	29:O:28:ILE:N	2.34	0.43
37:W:53:ASN:OD1	37:W:56:GLN:N	2.42	0.43
40:Z:28:GLU:H	40:Z:28:GLU:HG3	1.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:7:G:H2'	41:a:8:C:O4'	2.18	0.43
41:a:35:G:H1'	41:a:454:A:C4	2.53	0.43
41:a:271:G:N3	41:a:272:A:C8	2.87	0.43
41:a:554:U:O2'	41:a:555:G:H5'	2.19	0.43
41:a:573:U:O2'	41:a:574:A:H3'	2.19	0.43
41:a:833:A:H2'	41:a:834:G:C8	2.53	0.43
41:a:866:A:C8	41:a:914:G:C6	3.07	0.43
41:a:898:C:C4	41:a:899:A:C5	3.07	0.43
41:a:996:A:N6	41:a:1160:G:C6	2.87	0.43
41:a:1073:A:C6	41:a:1074:G:C6	3.06	0.43
41:a:1207:C:O2'	41:a:1208:C:H5'	2.18	0.43
41:a:1387:A:C6	41:a:1388:G:C5	3.07	0.43
41:a:1424:G:O2'	41:a:1425:G:H5'	2.18	0.43
41:a:1707:G:C4	41:a:1708:C:C6	3.06	0.43
41:a:1733:G:C2	41:a:1734:G:C8	3.07	0.43
41:a:1842:G:C4	41:a:1843:C:C5	3.06	0.43
41:a:2024:G:H2'	41:a:2025:C:O4'	2.19	0.43
41:a:2035:G:H4'	41:a:2036:C:OP2	2.19	0.43
41:a:2357:G:C2	41:a:2361:G:C5	3.07	0.43
41:a:2362:C:OP1	55:o:40:ARG:NE	2.52	0.43
41:a:2529:G:OP1	56:p:172:LYS:NZ	2.45	0.43
41:a:2698:U:H2'	41:a:2699:C:C6	2.53	0.43
41:a:2747:G:C2	41:a:2756:U:C5	3.06	0.43
41:a:2851:A:N6	41:a:2852:G:C6	2.86	0.43
1:0:34:GLU:HG2	1:0:60:LYS:HG2	2.01	0.43
9:9:102:ALA:O	9:9:107:GLU:HB2	2.19	0.43
9:9:118:ILE:N	9:9:119:PRO:CD	2.81	0.43
11:AA:22:LEU:HB3	11:AA:655:VAL:HG11	2.01	0.43
11:AA:1313:HIS:CD2	15:AF:31:GLN:HE22	2.37	0.43
13:AD:31:LEU:HD21	13:AD:39:LEU:HD12	2.00	0.43
14:AE:102:MET:HG2	14:AE:246:PRO:CG	2.49	0.43
14:AE:126:LEU:CD1	14:AE:223:LEU:HD22	2.49	0.43
14:AE:202:ARG:NH1	14:AE:202:ARG:CG	2.73	0.43
14:AE:586:GLY:HA3	14:AE:612:LEU:HD11	2.01	0.43
14:AE:797:THR:HG22	14:AE:924:GLY:HA3	2.01	0.43
14:AE:1108:GLN:HG3	14:AE:1109:LEU:HD12	1.99	0.43
16:AG:241:ASN:O	21:G:181:ILE:HG13	2.10	0.43
16:AG:277:ASP:HB2	16:AG:282:GLN:CB	2.49	0.43
16:AG:363:LEU:CD2	16:AG:409:ARG:N	2.81	0.43
10:B:48:C:C2'	10:B:49:G:OP2	2.66	0.43
18:D:156:C:C2	18:D:157:U:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:382:A:C6	18:D:383:A:C6	3.07	0.43
18:D:645:G:N2	18:D:646:G:H1'	2.34	0.43
18:D:687:A:H2	18:D:704:A:C2	2.37	0.43
18:D:915:A:C5	18:D:916:U:C5	3.07	0.43
18:D:961:U:O2'	18:D:962:C:H5'	2.18	0.43
18:D:1054:C:OP2	18:D:1197:A:OP2	2.36	0.43
18:D:1411:C:H2'	18:D:1412:C:H6	1.84	0.43
18:D:1449:C:C4	18:D:1450:U:C5	3.07	0.43
18:D:1494:G:C2	18:D:1495:U:C5	3.07	0.43
18:D:1515:G:C2	18:D:1521:C:N3	2.87	0.43
18:D:1521:C:O2'	18:D:1522:U:H5'	2.18	0.43
23:I:40:ARG:NH1	23:I:55:ILE:O	2.52	0.43
25:K:37:THR:OG1	25:K:63:ALA:HB1	2.18	0.43
27:M:79:ARG:O	27:M:79:ARG:CG	2.67	0.43
29:O:50:GLN:N	29:O:51:PRO:HD2	2.34	0.43
29:O:91:ASP:O	29:O:92:GLU:HB3	2.19	0.43
37:W:31:LEU:HB2	37:W:49:ILE:HG22	2.00	0.43
39:Y:99:LYS:HD3	39:Y:99:LYS:N	2.32	0.43
39:Y:112:LYS:HZ2	39:Y:112:LYS:CB	2.32	0.43
41:a:36:G:C6	41:a:445:C:N4	2.87	0.43
41:a:214:G:H2'	41:a:215:G:C8	2.54	0.43
41:a:392:U:N3	41:a:393:C:C5	2.87	0.43
41:a:582:A:C2	41:a:583:G:C5	3.06	0.43
41:a:696:G:C2	41:a:767:U:O2	2.72	0.43
41:a:720:U:H2'	41:a:721:A:H8	1.83	0.43
41:a:857:G:C6	41:a:858:G:C6	3.06	0.43
41:a:867:C:C4	41:a:868:U:C4	3.07	0.43
41:a:903:C:H2'	41:a:904:G:H8	1.84	0.43
41:a:1021:A:N1	41:a:1141:U:O4	2.51	0.43
41:a:1041:G:C2'	41:a:1042:G:O5'	2.66	0.43
41:a:1112:G:C2	41:a:1113:U:C2	3.06	0.43
41:a:1131:G:OP1	59:s:81:ILE:O	2.36	0.43
41:a:1225:G:O2'	41:a:1226:A:H5'	2.19	0.43
41:a:1227:G:C4	41:a:1228:G:C8	3.07	0.43
41:a:1562:U:H2'	41:a:1563:U:O4'	2.19	0.43
41:a:1650:A:C4	41:a:1651:G:C8	3.06	0.43
41:a:1814:G:OP2	41:a:1815:A:C2'	2.66	0.43
41:a:1934:C:O2'	41:a:1935:G:H5'	2.18	0.43
41:a:1973:G:C6	41:a:1974:C:C4	3.06	0.43
41:a:2010:G:O2'	41:a:2011:U:H5'	2.18	0.43
41:a:2199:A:C8	41:a:2225:A:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2215:C:H2'	41:a:2216:G:H8	1.84	0.43
41:a:2674:G:C6	41:a:2675:A:C6	3.06	0.43
41:a:2852:G:O2'	41:a:2853:C:H5'	2.19	0.43
44:d:5:U:OP1	44:d:61:G:O2'	2.32	0.43
50:j:101:PHE:O	50:j:102:ALA:C	2.62	0.43
52:l:60:TRP:CD1	52:l:65:THR:HG21	2.53	0.43
61:u:29:LYS:HG3	61:u:30:THR:N	2.34	0.43
8:7:-17:U:P	18:D:1500:A:N6	2.92	0.43
9:9:22:ALA:HB3	9:9:87:GLU:CB	2.47	0.43
10:A:19:G:N3	10:A:57:A:H1'	2.34	0.43
12:AB:157:ARG:HD3	12:AB:172:GLU:OE2	2.19	0.43
14:AE:513:MET:HG3	14:AE:544:LEU:HD11	2.01	0.43
14:AE:568:SER:HB3	14:AE:570:LYS:NZ	2.34	0.43
14:AE:609:TYR:HD2	14:AE:610:ARG:NH1	2.17	0.43
16:AG:200:SER:C	16:AG:230:PRO:HG2	2.38	0.43
16:AG:224:LYS:HB2	16:AG:276:TRP:CH2	2.54	0.43
10:B:19:G:N3	10:B:57:A:N3	2.67	0.43
10:B:24:U:C5	10:B:25:C:C4	3.07	0.43
10:B:53:G:N1	10:B:54:U:C5	2.87	0.43
17:C:67:LEU:HD21	26:L:59:TYR:CE2	2.54	0.43
18:D:3:A:H5''	18:D:4:U:O4'	2.19	0.43
18:D:24:U:O2'	18:D:25:C:H5'	2.19	0.43
18:D:41:G:C6	18:D:402:G:C6	3.07	0.43
18:D:122:G:C4	18:D:123:U:C5	3.06	0.43
18:D:131:A:O2'	18:D:262:A:H2'	2.18	0.43
18:D:155:A:C6	18:D:156:C:C4	3.06	0.43
18:D:408:A:H2'	18:D:409:U:H6	1.83	0.43
18:D:435:A:H2'	18:D:436:C:O5'	2.19	0.43
18:D:460:A:C4	18:D:461:A:C8	3.07	0.43
18:D:1115:U:H2'	18:D:1116:U:C6	2.53	0.43
18:D:1152:A:O2'	18:D:1153:G:H5'	2.19	0.43
18:D:1381:U:N3	18:D:1382:C:C6	2.86	0.43
18:D:1524:C:H2'	18:D:1525:G:H8	1.84	0.43
20:F:62:ARG:HD2	20:F:62:ARG:C	2.44	0.43
39:Y:5:GLN:CD	39:Y:61:TYR:HB3	2.44	0.43
39:Y:27:LEU:HD12	39:Y:27:LEU:O	2.19	0.43
39:Y:40:ALA:HB1	39:Y:68:PHE:HE1	1.82	0.43
41:a:74:A:N3	41:a:74:A:O4'	2.52	0.43
41:a:125:A:OP2	53:m:19:ARG:NH2	2.46	0.43
41:a:160:A:H2'	41:a:161:A:C8	2.54	0.43
41:a:242:G:O2'	41:a:243:U:P	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:250:G:P	55:o:13:ARG:NH1	2.92	0.43
41:a:563:A:C6	41:a:2018:G:C5	3.06	0.43
41:a:592:A:C6	41:a:666:A:C6	3.07	0.43
41:a:901:C:C4	41:a:902:C:C4	3.07	0.43
41:a:949:G:C6	41:a:969:G:N1	2.87	0.43
41:a:1144:A:H2'	41:a:1145:C:H6	1.84	0.43
41:a:1262:A:C4	41:a:1263:U:C5	3.07	0.43
41:a:1280:G:C2	41:a:1291:C:C2	3.07	0.43
41:a:1318:U:H2'	41:a:1319:C:C6	2.54	0.43
41:a:1539:U:N3	41:a:1540:G:N7	2.67	0.43
41:a:1589:U:C2	41:a:1590:A:C8	3.06	0.43
41:a:1722:A:C4	41:a:1723:G:C8	3.07	0.43
41:a:1801:A:C5	48:h:262:ARG:NH2	2.86	0.43
41:a:2183:A:H2'	41:a:2184:A:C8	2.53	0.43
41:a:2186:G:H2'	41:a:2187:U:O4'	2.19	0.43
41:a:2247:A:H2'	41:a:2248:C:H6	1.84	0.43
41:a:2314:A:H2'	41:a:2315:G:C8	2.53	0.43
41:a:2371:G:C2'	41:a:2372:U:O5'	2.67	0.43
41:a:2555:U:C5	41:a:2556:C:C6	3.07	0.43
41:a:2739:U:O2	41:a:2740:A:C8	2.71	0.43
41:a:2745:C:H2'	41:a:2746:U:O4'	2.19	0.43
41:a:2814:A:C4	41:a:2815:C:C5	3.07	0.43
41:a:2814:A:C6	41:a:2815:C:C4	3.07	0.43
44:d:40:U:H4'	44:d:41:G:OP2	2.18	0.43
50:j:8:LYS:HB2	50:j:201:LEU:HD11	2.01	0.43
58:r:119:ASN:OD1	58:r:119:ASN:N	2.49	0.43
12:AB:128:PHE:HB3	12:AB:175:PHE:HE1	1.34	0.42
14:AE:24:LEU:CD1	14:AE:232:ASN:ND2	2.82	0.42
14:AE:220:ARG:HH11	14:AE:220:ARG:CG	2.26	0.42
17:C:25:ASP:OD1	17:C:28:THR:OG1	2.37	0.42
18:D:142:G:N2	18:D:222:C:C2	2.87	0.42
18:D:188:C:C4	18:D:189:A:C5	3.07	0.42
18:D:203:G:H5''	18:D:204:G:OP1	2.19	0.42
18:D:263:A:H2'	18:D:264:C:C6	2.54	0.42
18:D:390:U:H2'	18:D:391:G:H8	1.84	0.42
18:D:433:G:C6	18:D:434:U:C4	3.07	0.42
18:D:447:G:H8	18:D:447:G:O5'	2.01	0.42
18:D:632:U:H5''	18:D:633:G:H8	1.84	0.42
18:D:633:G:C5	18:D:634:C:C5	3.07	0.42
18:D:636:U:O2'	18:D:637:C:H5'	2.19	0.42
18:D:695:A:C2	18:D:696:A:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:750:C:O2'	18:D:751:U:H5'	2.19	0.42
18:D:751:U:C4	18:D:752:G:C5	3.07	0.42
18:D:773:G:C6	18:D:807:A:C6	3.06	0.42
18:D:833:G:O2'	18:D:834:U:H5'	2.19	0.42
18:D:1231:G:C6	18:D:1232:U:C4	3.07	0.42
18:D:1267:C:O2'	18:D:1268:G:H5'	2.19	0.42
21:G:165:ASP:OD1	21:G:165:ASP:C	2.62	0.42
22:H:87:GLU:O	22:H:88:LYS:C	2.61	0.42
22:H:317:HIS:O	22:H:319:SER:N	2.52	0.42
23:I:147:LYS:HE2	23:I:147:LYS:HA	2.00	0.42
24:J:22:LYS:O	24:J:23:SER:C	2.62	0.42
25:K:94:VAL:CG1	25:K:111:MET:HE1	2.49	0.42
29:O:127:PHE:CG	29:O:128:SER:N	2.87	0.42
39:Y:32:VAL:CB	39:Y:60:VAL:HG21	2.48	0.42
41:a:30:G:C6	41:a:511:U:O2	2.72	0.42
41:a:226:A:C6	41:a:227:A:C6	3.07	0.42
41:a:443:A:H1'	41:a:1201:U:O4'	2.18	0.42
41:a:572:A:H5''	41:a:573:U:OP2	2.19	0.42
41:a:580:U:C2	41:a:581:C:C5	3.06	0.42
41:a:729:G:H5''	41:a:730:A:H5''	2.01	0.42
41:a:730:A:N3	41:a:731:C:C6	2.87	0.42
41:a:785:G:C6	41:a:786:C:C4	3.07	0.42
41:a:868:U:H2'	41:a:869:G:O4'	2.19	0.42
41:a:924:G:C2	41:a:925:A:C5	3.07	0.42
41:a:985:C:O2	41:a:986:C:C6	2.72	0.42
41:a:1023:U:H2'	41:a:1024:G:H5'	1.99	0.42
41:a:1096:A:C2'	41:a:1097:U:O5'	2.67	0.42
41:a:1361:G:H2'	41:a:1362:C:C6	2.53	0.42
41:a:1437:C:H2'	41:a:1438:U:C6	2.54	0.42
41:a:1569:A:C2	41:a:1570:A:C4	3.07	0.42
41:a:1722:A:C6	41:a:1739:A:C8	3.07	0.42
41:a:1740:G:C6	41:a:1741:C:C4	3.07	0.42
41:a:1783:A:C2	41:a:2587:A:C5	3.07	0.42
41:a:1858:A:H2'	41:a:1859:U:C6	2.54	0.42
41:a:1858:A:O2'	41:a:1859:U:O5'	2.36	0.42
41:a:1866:A:N1	41:a:1876:A:C8	2.87	0.42
41:a:1907:G:O6	41:a:1908:C:N3	2.52	0.42
41:a:1935:G:N2	41:a:1964:G:C8	2.87	0.42
41:a:2065:C:H2'	41:a:2066:C:C6	2.54	0.42
41:a:2107:G:C5	41:a:2183:A:N1	2.87	0.42
41:a:2229:U:H2'	41:a:2230:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2289:G:OP1	41:a:2385:C:OP1	2.37	0.42
41:a:2295:C:H2'	41:a:2296:U:O5'	2.19	0.42
41:a:2325:G:C2'	41:a:2326:C:O5'	2.67	0.42
41:a:2793:C:N3	41:a:2794:C:C5	2.87	0.42
41:a:2808:G:O2'	41:a:2890:G:O6	2.32	0.42
41:a:2840:C:C2	41:a:2841:C:C5	3.07	0.42
41:a:2842:G:C6	41:a:2876:G:C6	3.07	0.42
41:a:2849:U:N3	41:a:2867:G:N3	2.66	0.42
59:s:4:PHE:O	66:z:64:ARG:NH1	2.51	0.42
9:9:51:TYR:HB2	9:9:88:HIS:HB3	2.01	0.42
9:9:61:ARG:C	9:9:65:GLU:HB2	2.44	0.42
9:9:88:HIS:HB3	9:9:89:PRO:HD3	1.95	0.42
10:A:7:G:C2	10:A:67:C:O2	2.72	0.42
10:A:52:G:C4	10:A:53:G:C8	3.07	0.42
10:A:70:G:H2'	10:A:71:C:H5''	2.00	0.42
11:AA:855:PRO:CD	16:AG:105:ILE:HG23	2.37	0.42
11:AA:861:ALA:HB1	11:AA:882:ILE:HD13	2.01	0.42
10:B:33:U:C5	29:O:130:ARG:NH1	2.87	0.42
18:D:17:U:H2'	18:D:18:C:H6	1.82	0.42
18:D:129:A:H2	18:D:232:G:H22	1.67	0.42
18:D:200:G:C2	18:D:218:U:C2	3.07	0.42
18:D:341:C:C2	18:D:342:C:C5	3.07	0.42
18:D:368:U:O2	18:D:368:U:H2'	2.19	0.42
18:D:418:C:H2'	18:D:419:C:C6	2.54	0.42
18:D:423:G:N2	18:D:424:G:C8	2.88	0.42
18:D:459:A:H2'	18:D:460:A:H8	1.84	0.42
18:D:561:U:O2'	18:D:562:U:P	2.77	0.42
18:D:590:U:H2'	18:D:591:U:C6	2.53	0.42
18:D:673:A:O2'	18:D:674:G:H5'	2.19	0.42
18:D:903:G:C2	18:D:904:U:C2	3.08	0.42
18:D:946:A:N1	18:D:947:G:C6	2.87	0.42
18:D:983:A:H5'	18:D:984:C:OP2	2.19	0.42
18:D:1016:A:H1'	18:D:1218:C:H1'	2.01	0.42
18:D:1169:A:O2'	18:D:1170:A:C5'	2.68	0.42
18:D:1244:G:O6	18:D:1294:G:O6	2.36	0.42
18:D:1256:A:O2'	18:D:1278:G:O6	2.27	0.42
18:D:1386:G:N3	18:D:1387:G:C8	2.87	0.42
22:H:42:LEU:HD23	22:H:81:GLU:HB3	2.00	0.42
22:H:286:ASN:OD1	22:H:286:ASN:N	2.52	0.42
29:O:115:LYS:HB2	29:O:118:LEU:HD22	2.02	0.42
38:X:92:ARG:HD2	41:a:888:C:C5	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:42:A:C6	41:a:438:G:C6	3.07	0.42
41:a:114:U:C2	41:a:115:C:C5	3.07	0.42
41:a:567:U:H2'	41:a:568:U:O4'	2.19	0.42
41:a:589:U:H2'	41:a:590:A:C8	2.54	0.42
41:a:704:G:C2	41:a:726:G:C4	3.06	0.42
41:a:709:U:H2'	41:a:710:U:C6	2.54	0.42
41:a:832:U:P	61:u:38:GLN:H	2.42	0.42
41:a:1071:G:C6	41:a:1089:A:C2	3.06	0.42
41:a:1115:G:O2'	41:a:1116:G:H5''	2.18	0.42
41:a:1116:G:C5	41:a:1117:C:C5	3.06	0.42
41:a:1116:G:C6	41:a:1117:C:C5	3.07	0.42
41:a:1122:G:N3	41:a:1122:G:H2'	2.34	0.42
41:a:1188:U:O2'	41:a:1189:A:H5'	2.17	0.42
41:a:1449:G:C6	41:a:1450:G:N7	2.87	0.42
41:a:1467:U:C4	41:a:1546:G:C2	3.07	0.42
41:a:1766:G:O2'	41:a:1767:G:H5'	2.18	0.42
41:a:1778:U:C4	41:a:1784:A:C4	3.07	0.42
41:a:2302:U:O2'	41:a:2303:G:H5'	2.19	0.42
41:a:2375:G:N2	41:a:2378:A:OP2	2.39	0.42
41:a:2545:G:O2'	41:a:2546:U:H5'	2.20	0.42
41:a:2665:A:C2	41:a:2666:C:C6	3.06	0.42
41:a:2749:A:OP2	41:a:2750:A:C2'	2.67	0.42
41:a:2786:U:C2	41:a:2787:C:C5	3.08	0.42
44:d:37:C:C5	44:d:38:C:C5	3.07	0.42
44:d:113:C:H2'	44:d:114:C:C6	2.54	0.42
50:j:136:ASN:OD1	50:j:140:HIS:ND1	2.52	0.42
52:l:148:ILE:O	52:l:169:VAL:HA	2.19	0.42
56:p:95:ARG:HD3	56:p:106:SER:HB3	2.01	0.42
58:r:84:ALA:HA	58:r:91:PHE:H	1.85	0.42
60:t:3:GLN:O	60:t:4:GLU:C	2.61	0.42
3:2:64:LYS:HA	3:2:79:ASP:OD1	2.19	0.42
5:4:75:GLN:HB2	5:4:92:VAL:HG23	2.01	0.42
5:4:78:GLN:O	5:4:87:GLN:N	2.50	0.42
8:7:13:G:H5''	8:7:13:G:H8	1.84	0.42
10:A:16:C:N3	41:a:2181:U:H5''	2.35	0.42
11:AA:125:GLY:H	11:AA:495:ALA:HB1	1.84	0.42
14:AE:279:LEU:HD13	14:AE:299:LEU:HD13	2.02	0.42
14:AE:385:LEU:CD2	14:AE:390:LEU:HB2	2.50	0.42
16:AG:296:ILE:CD1	16:AG:307:ILE:HA	2.49	0.42
17:C:70:TYR:CE2	18:D:674:G:C4'	3.02	0.42
18:D:362:G:H5''	32:R:58:THR:CG2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:417:G:C5	18:D:418:C:C5	3.07	0.42
18:D:738:C:H2'	18:D:739:C:C6	2.54	0.42
18:D:1422:G:C6	18:D:1479:C:N3	2.87	0.42
22:H:273:ARG:H	22:H:273:ARG:HD2	1.84	0.42
39:Y:60:VAL:HG22	39:Y:66:PHE:HB3	1.99	0.42
41:a:68:G:C6	41:a:69:C:N3	2.87	0.42
41:a:133:U:O5'	41:a:133:U:H6	2.02	0.42
41:a:181:A:C2	41:a:182:A:C4	3.08	0.42
41:a:265:A:H4'	41:a:266:G:OP1	2.19	0.42
41:a:287:G:H2'	41:a:288:U:C6	2.54	0.42
41:a:552:U:H2'	41:a:553:G:H8	1.84	0.42
41:a:684:G:C6	41:a:774:G:C4	3.08	0.42
41:a:997:G:OP1	66:z:92:ARG:HG2	2.19	0.42
41:a:1190:G:H2'	41:a:1191:G:H8	1.84	0.42
41:a:1362:C:C4	41:a:1363:C:C5	3.07	0.42
41:a:1403:A:O2'	41:a:1471:G:O2'	2.20	0.42
41:a:1532:A:C6	41:a:1540:G:C6	3.07	0.42
41:a:1632:A:H2'	41:a:1633:G:O4'	2.19	0.42
41:a:2102:G:C6	41:a:2188:U:O2	2.73	0.42
41:a:2115:G:C4	41:a:2117:A:N7	2.88	0.42
41:a:2134:A:O2'	41:a:2159:G:N2	2.53	0.42
41:a:2216:G:N1	41:a:2217:G:C5	2.87	0.42
41:a:2266:A:H4'	41:a:2267:A:O5'	2.20	0.42
41:a:2297:A:H8	41:a:2297:A:OP2	2.02	0.42
41:a:2373:G:H2'	41:a:2374:C:C6	2.55	0.42
41:a:2590:A:H2'	41:a:2591:C:C6	2.51	0.42
41:a:2621:G:C2'	41:a:2622:U:H5'	2.50	0.42
44:d:39:A:N1	44:d:44:G:C4	2.88	0.42
62:v:1:MET:HE1	62:v:44:ARG:NH1	2.35	0.42
62:v:117:PHE:O	62:v:120:ALA:N	2.53	0.42
6:5:98:DA:H2'	6:5:99:DT:H72	2.01	0.42
8:7:-17:U:OP1	8:7:-17:U:C2'	2.67	0.42
11:AA:27:LEU:O	11:AA:528:ARG:NH1	2.43	0.42
11:AA:712:SER:OG	11:AA:713:GLY:N	2.49	0.42
11:AA:1157:GLN:HG3	11:AA:1159:VAL:HG13	2.00	0.42
11:AA:1274:GLU:CG	14:AE:434:ILE:HD11	2.49	0.42
12:AB:68:TYR:OH	14:AE:294:ASN:ND2	2.51	0.42
12:AB:128:PHE:CE2	12:AB:175:PHE:CG	3.08	0.42
14:AE:141:PHE:CD2	14:AE:297:ARG:HB2	2.54	0.42
14:AE:616:PRO:HA	14:AE:619:ILE:HG22	2.02	0.42
16:AG:402:THR:C	16:AG:405:ALA:HB3	2.41	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:434:LEU:CD1	16:AG:455:THR:O	2.62	0.42
10:B:6:G:C2'	10:B:7:G:O5'	2.64	0.42
10:B:7:G:N2	10:B:67:C:O2	2.52	0.42
10:B:29:G:C4	10:B:42:G:N2	2.88	0.42
18:D:27:G:C5	18:D:557:G:C2	3.08	0.42
18:D:134:G:H2'	18:D:135:C:C6	2.54	0.42
18:D:188:C:N4	18:D:189:A:C6	2.88	0.42
18:D:419:C:N3	18:D:425:G:C6	2.87	0.42
18:D:444:G:O6	18:D:491:G:O6	2.37	0.42
18:D:448:A:C8	18:D:487:A:C6	3.07	0.42
18:D:687:A:C2	18:D:704:A:C4	3.06	0.42
18:D:782:A:C6	18:D:801:U:C2	3.07	0.42
18:D:1077:G:C5	18:D:1079:G:OP2	2.72	0.42
18:D:1083:U:O2'	18:D:1102:A:OP2	2.38	0.42
18:D:1105:A:O2'	18:D:1106:G:H5'	2.19	0.42
18:D:1209:C:C2	18:D:1210:C:H5	2.35	0.42
27:M:105:VAL:HG12	27:M:109:ARG:HH11	1.84	0.42
37:W:52:HIS:HB2	37:W:57:HIS:CE1	2.55	0.42
38:X:40:ALA:O	38:X:43:VAL:HG22	2.19	0.42
39:Y:79:LEU:HD22	39:Y:100:ILE:CG2	2.50	0.42
39:Y:122:GLU:O	39:Y:126:ARG:HG3	2.19	0.42
41:a:4:U:O2'	41:a:5:A:H5'	2.18	0.42
41:a:52:A:OP2	41:a:119:A:N6	2.49	0.42
41:a:77:G:C2	41:a:78:U:C2	3.08	0.42
41:a:285:G:C6	41:a:356:G:C5	3.07	0.42
41:a:417:C:C2	41:a:418:C:C5	3.07	0.42
41:a:475:C:C4	41:a:481:G:O6	2.73	0.42
41:a:482:A:C6	41:a:506:G:C8	3.08	0.42
41:a:557:C:H2'	41:a:558:U:C6	2.55	0.42
41:a:579:G:C6	41:a:580:U:C4	3.08	0.42
41:a:593:U:C2	41:a:594:U:C5	3.08	0.42
41:a:603:A:C8	41:a:655:A:C6	3.07	0.42
41:a:607:U:O2	41:a:608:A:C8	2.72	0.42
41:a:722:A:C4	41:a:723:C:C5	3.08	0.42
41:a:819:A:N6	41:a:1189:A:H1'	2.34	0.42
41:a:1078:U:H4'	41:a:1079:C:O5'	2.20	0.42
41:a:1117:C:H2'	41:a:1118:C:H6	1.84	0.42
41:a:1165:A:H2'	41:a:1166:G:H8	1.85	0.42
41:a:1197:G:N1	41:a:1198:U:C4	2.87	0.42
41:a:1361:G:H2'	41:a:1362:C:H6	1.84	0.42
41:a:2027:G:O2'	41:a:2028:U:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2187:U:O2'	41:a:2188:U:H5'	2.19	0.42
41:a:2195:U:N3	41:a:2196:C:C5	2.87	0.42
41:a:2224:G:P	48:h:265:LYS:HZ2	2.39	0.42
41:a:2258:C:O2'	41:a:2426:A:H4'	2.19	0.42
41:a:2259:U:H1'	41:a:2427:C:C2	2.55	0.42
41:a:2464:G:C4	41:a:2487:G:C2	3.08	0.42
41:a:2704:C:H2'	41:a:2705:A:O4'	2.19	0.42
41:a:2783:U:H2'	41:a:2784:U:H6	1.85	0.42
41:a:2889:C:H2'	41:a:2890:G:O4'	2.19	0.42
58:r:132:PHE:N	58:r:140:ALA:O	2.52	0.42
63:w:10:LEU:O	63:w:11:ASN:C	2.62	0.42
66:z:52:GLN:O	66:z:53:ARG:C	2.62	0.42
4:3:58:ILE:HG13	41:a:483:A:H1'	2.02	0.42
9:9:30:SER:HA	9:9:81:LEU:HD13	2.02	0.42
9:9:35:VAL:HG22	39:Y:1:ALA:O	2.19	0.42
11:AA:478:ARG:HD2	11:AA:492:MET:HA	2.02	0.42
14:AE:137:ARG:HA	14:AE:142:GLU:HG2	2.02	0.42
14:AE:242:LEU:C	14:AE:242:LEU:HD23	2.44	0.42
14:AE:839:VAL:HG12	14:AE:864:LEU:HD12	2.02	0.42
16:AG:162:ILE:HD13	16:AG:167:MET:CE	2.49	0.42
18:D:53:A:C6	18:D:359:G:C6	3.07	0.42
18:D:71:A:C6	18:D:72:A:C8	3.08	0.42
18:D:81:A:N6	18:D:88:U:O4	2.49	0.42
18:D:110:C:H2'	18:D:111:G:O4'	2.19	0.42
18:D:201:G:C6	18:D:202:G:C5	3.07	0.42
18:D:264:C:C4	18:D:265:G:C5	3.08	0.42
18:D:415:A:C6	18:D:416:G:C5	3.06	0.42
18:D:720:C:H2'	18:D:721:G:C8	2.55	0.42
18:D:840:C:C2	18:D:847:G:C2	3.08	0.42
18:D:1068:G:O2'	18:D:1069:C:H5'	2.19	0.42
18:D:1326:U:C2	18:D:1327:C:C5	3.07	0.42
18:D:1515:G:N2	18:D:1521:C:C2	2.87	0.42
23:I:64:ILE:HG23	23:I:64:ILE:O	2.20	0.42
27:M:72:THR:OG1	27:M:142:HIS:NE2	2.40	0.42
28:N:13:ARG:HD2	28:N:27:MET:HB3	2.01	0.42
28:N:77:ARG:NE	28:N:79:SER:O	2.52	0.42
29:O:110:GLN:OE1	29:O:110:GLN:HA	2.20	0.42
29:O:114:LYS:HG2	29:O:115:LYS:N	2.35	0.42
41:a:43:G:N1	41:a:437:U:C4	2.88	0.42
41:a:156:A:H2'	41:a:157:C:H6	1.84	0.42
41:a:222:A:N7	41:a:224:U:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:301:G:C4	41:a:302:C:C5	3.08	0.42
41:a:391:A:H1'	41:a:411:G:O4'	2.19	0.42
41:a:396:G:OP2	43:c:10:LYS:NZ	2.48	0.42
41:a:511:U:O4	41:a:512:G:C2	2.72	0.42
41:a:523:C:O2'	41:a:524:G:H5'	2.19	0.42
41:a:775:G:N3	41:a:777:G:C6	2.88	0.42
41:a:864:G:H2'	41:a:865:C:C6	2.54	0.42
41:a:1155:A:C4	41:a:1157:G:C8	3.07	0.42
41:a:1163:G:C2	41:a:1164:C:C6	3.07	0.42
41:a:1220:G:H2'	41:a:1221:C:H6	1.85	0.42
41:a:1317:G:H2'	41:a:1318:U:O4'	2.18	0.42
41:a:1346:G:H2'	41:a:1347:A:O4'	2.20	0.42
41:a:1502:A:C4	41:a:1503:A:C8	3.08	0.42
41:a:1724:G:O6	41:a:1737:G:C2	2.72	0.42
41:a:1734:G:C4	41:a:1735:A:C8	3.07	0.42
41:a:1792:G:H5'	48:h:204:VAL:HG23	2.02	0.42
41:a:1805:A:O2'	41:a:1806:C:H5'	2.19	0.42
41:a:1936:A:C8	41:a:1945:G:C8	3.06	0.42
41:a:2086:U:C4	41:a:2234:G:O6	2.71	0.42
41:a:2089:C:N4	41:a:2090:A:H62	2.18	0.42
41:a:2227:A:C2'	41:a:2228:G:H5'	2.49	0.42
41:a:2280:G:C2	41:a:2281:A:C8	3.08	0.42
41:a:2414:G:C2	41:a:2415:G:C8	3.07	0.42
41:a:2515:C:H2'	41:a:2516:A:H8	1.84	0.42
41:a:2627:G:O2'	41:a:2781:A:N1	2.51	0.42
41:a:2804:U:O5'	41:a:2804:U:H6	2.02	0.42
41:a:2867:G:HO2'	41:a:2868:A:P	2.37	0.42
44:d:73:A:C5	44:d:74:U:C5	3.08	0.42
53:m:22:MET:SD	53:m:31:LEU:HD12	2.59	0.42
53:m:25:LYS:C	53:m:25:LYS:HD2	2.44	0.42
63:w:38:LEU:N	63:w:39:PRO:CD	2.82	0.42
1:0:39:LEU:HD12	1:0:39:LEU:N	2.34	0.42
2:1:83:LYS:NZ	41:a:1261:C:OP2	2.53	0.42
4:3:22:ARG:NH2	4:3:73:PHE:CZ	2.88	0.42
9:9:43:LYS:CE	9:9:95:LEU:HD13	2.43	0.42
10:A:32:C:O2'	10:A:33:U:H5'	2.19	0.42
10:A:50:U:N3	10:A:51:C:C5	2.88	0.42
14:AE:559:ALA:HB3	14:AE:562:GLU:HB3	2.01	0.42
14:AE:1272:SER:OG	14:AE:1273:ASP:N	2.53	0.42
16:AG:10:GLU:C	16:AG:12:VAL:HG22	2.44	0.42
16:AG:339:MET:SD	16:AG:347:LYS:CD	2.94	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:398:LEU:C	16:AG:398:LEU:HD12	2.44	0.42
17:C:18:VAL:HG13	17:C:18:VAL:O	2.19	0.42
18:D:50:A:N3	18:D:52:C:C2	2.88	0.42
18:D:73:C:O2	18:D:73:C:H2'	2.18	0.42
18:D:106:C:O2'	18:D:107:G:H5'	2.20	0.42
18:D:214:C:O2	18:D:215:C:C6	2.72	0.42
18:D:263:A:H2'	18:D:264:C:C5	2.55	0.42
18:D:337:G:C2	18:D:338:A:C5	3.07	0.42
18:D:684:U:O2'	31:Q:41:ALA:O	2.36	0.42
18:D:738:C:H2'	18:D:739:C:H6	1.83	0.42
18:D:831:A:C6	18:D:832:G:N7	2.88	0.42
18:D:859:G:C2	18:D:860:A:C4	3.07	0.42
18:D:918:A:C2	18:D:919:A:C4	3.08	0.42
18:D:1082:A:C5	18:D:1083:U:C4	3.08	0.42
18:D:1113:C:O2	18:D:1114:C:C6	2.73	0.42
18:D:1118:U:C2	18:D:1119:C:C6	3.07	0.42
18:D:1129:C:O2	18:D:1139:G:O6	2.37	0.42
18:D:1138:G:C2	18:D:1140:C:C5	3.07	0.42
18:D:1153:G:C6	18:D:1154:G:C5	3.08	0.42
18:D:1239:A:C2	18:D:1241:G:N1	2.88	0.42
18:D:1282:C:H2'	18:D:1283:U:H6	1.85	0.42
18:D:1313:U:O5'	18:D:1313:U:H6	2.02	0.42
20:F:23:CYS:O	20:F:27:GLY:N	2.53	0.42
22:H:287:LEU:HD12	22:H:287:LEU:N	2.34	0.42
23:I:23:PHE:CD2	23:I:23:PHE:C	2.97	0.42
23:I:110:GLU:OE2	23:I:110:GLU:N	2.51	0.42
25:K:90:THR:O	25:K:90:THR:HG22	2.20	0.42
25:K:153:VAL:HG23	25:K:154:ALA:N	2.33	0.42
29:O:9:THR:O	29:O:85:ARG:HD2	2.20	0.42
32:R:79:VAL:O	32:R:103:ASP:HB2	2.20	0.42
38:X:88:GLY:O	38:X:92:ARG:HG2	2.19	0.42
41:a:166:U:H2'	41:a:167:A:O4'	2.19	0.42
41:a:358:U:H2'	41:a:359:G:H8	1.84	0.42
41:a:359:G:C5	41:a:360:U:C5	3.08	0.42
41:a:370:G:C6	41:a:424:G:C8	3.08	0.42
41:a:538:A:C2	41:a:556:A:C4	3.07	0.42
41:a:543:G:O6	41:a:551:G:O6	2.36	0.42
41:a:582:A:H2'	41:a:583:G:H8	1.84	0.42
41:a:602:A:C2	41:a:656:G:C6	3.07	0.42
41:a:634:C:O5'	41:a:634:C:H6	2.02	0.42
41:a:722:A:H2'	41:a:723:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:752:A:C2	41:a:1781:U:C2	3.07	0.42
41:a:974:G:C4	41:a:989:G:C2	3.07	0.42
41:a:986:C:C2	41:a:987:C:C5	3.08	0.42
41:a:998:C:H2'	41:a:999:U:O4'	2.20	0.42
41:a:1087:G:C2'	41:a:1089:A:O4'	2.68	0.42
41:a:1186:G:H2'	41:a:1187:G:O4'	2.20	0.42
41:a:1264:A:OP1	49:i:16:ARG:NH1	2.39	0.42
41:a:1280:G:N2	41:a:1291:C:C2	2.87	0.42
41:a:1293:C:C2	41:a:1294:U:C6	3.07	0.42
41:a:1584:U:O2	41:a:1584:U:OP2	2.37	0.42
41:a:1599:U:H2'	41:a:1600:C:C6	2.55	0.42
41:a:1684:G:H2'	41:a:1685:C:H6	1.85	0.42
41:a:1737:G:H2'	41:a:1738:G:C1'	2.50	0.42
41:a:2189:U:O4'	41:a:2189:U:OP1	2.37	0.42
41:a:2249:U:H3'	41:a:2250:G:C5'	2.50	0.42
41:a:2277:G:C6	41:a:2278:A:N7	2.88	0.42
41:a:2329:U:H2'	41:a:2330:G:C8	2.55	0.42
41:a:2380:C:C2	41:a:2381:A:C8	3.08	0.42
41:a:2857:G:C4	41:a:2859:G:OP2	2.72	0.42
44:d:9:G:C6	44:d:10:G:N7	2.88	0.42
47:g:41:HIS:CG	47:g:42:PRO:HD2	2.55	0.42
56:p:150:ALA:O	56:p:151:TYR:C	2.61	0.42
59:s:30:THR:HG22	59:s:31:GLU:N	2.35	0.42
64:x:25:ARG:HG3	64:x:27:VAL:HG23	2.01	0.42
1:0:44:GLY:O	1:0:45:GLU:HB3	2.20	0.42
4:3:32:GLY:C	4:3:67:VAL:HG23	2.45	0.42
8:7:-12:U:O4	18:D:1196:A:C8	2.73	0.42
9:9:28:ALA:HB2	9:9:111:ALA:HB2	2.02	0.42
10:A:5:G:H2'	10:A:6:G:C5'	2.49	0.42
14:AE:144:TYR:CE1	14:AE:162:GLU:OE1	2.73	0.42
14:AE:244:VAL:HA	14:AE:269:TYR:OH	2.19	0.42
16:AG:87:LEU:CD2	16:AG:93:VAL:HG21	2.50	0.42
16:AG:318:ILE:CG1	16:AG:338:VAL:HG11	2.48	0.42
10:B:7:G:N2	10:B:67:C:C2	2.87	0.42
18:D:16:A:C2'	18:D:17:U:H5'	2.49	0.42
18:D:336:A:C4	18:D:337:G:C8	3.08	0.42
18:D:338:A:O2'	18:D:339:C:H5'	2.19	0.42
18:D:575:G:C5	18:D:881:G:C2	3.08	0.42
18:D:650:G:C2	18:D:651:C:C6	3.07	0.42
18:D:747:A:H5'	18:D:748:G:OP2	2.19	0.42
18:D:846:G:C6	18:D:847:G:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1028:C:C2	18:D:1034:G:N2	2.87	0.42
18:D:1106:G:H2'	18:D:1107:C:C6	2.55	0.42
18:D:1494:G:C2	18:D:1495:U:C6	3.08	0.42
26:L:9:MET:O	26:L:85:ILE:N	2.45	0.42
27:M:129:GLU:OE1	27:M:129:GLU:O	2.38	0.42
30:P:90:LEU:HD22	30:P:90:LEU:HA	1.92	0.42
31:Q:84:VAL:HG11	31:Q:97:ILE:HG22	2.02	0.42
35:U:9:HIS:O	35:U:16:PHE:HB3	2.19	0.42
36:V:48:ASP:O	36:V:48:ASP:CG	2.63	0.42
40:Z:26:MET:HE2	40:Z:26:MET:HB2	1.90	0.42
41:a:176:A:O2'	41:a:177:G:H5'	2.19	0.42
41:a:324:A:H2'	41:a:325:G:C5'	2.49	0.42
41:a:366:C:H2'	41:a:367:G:O4'	2.19	0.42
41:a:407:G:C2	41:a:421:C:C2	3.08	0.42
41:a:440:C:O2'	41:a:441:U:H5'	2.19	0.42
41:a:583:G:C4	41:a:584:C:C5	3.08	0.42
41:a:599:A:C2'	41:a:600:G:O5'	2.67	0.42
41:a:852:U:C2	41:a:853:C:C5	3.08	0.42
41:a:861:A:N3	44:d:79:G:O2'	2.52	0.42
41:a:1144:A:C6	41:a:1145:C:C4	3.07	0.42
41:a:1149:G:O2'	41:a:1150:C:H5'	2.19	0.42
41:a:1319:C:C4	41:a:1334:G:O6	2.72	0.42
41:a:1931:U:H2'	41:a:1932:A:C8	2.54	0.42
41:a:2241:A:H2'	41:a:2242:G:C8	2.55	0.42
41:a:2488:G:C4	41:a:2489:U:C5	3.08	0.42
41:a:2848:G:N2	41:a:2867:G:C4	2.87	0.42
56:p:52:PHE:CE1	56:p:69:ARG:HA	2.55	0.42
62:v:24:THR:O	62:v:24:THR:HG22	2.20	0.42
62:v:74:THR:HA	62:v:88:ASN:O	2.19	0.42
3:2:39:THR:HG23	3:2:42:GLU:H	1.84	0.42
8:7:-18:G:C1'	8:7:-16:U:O4	2.61	0.42
9:9:43:LYS:HD2	9:9:43:LYS:C	2.44	0.42
10:A:59:A:H2'	10:A:60:U:H5'	2.02	0.42
11:AA:318:SER:OG	11:AA:320:ASP:OD1	2.31	0.42
11:AA:1244:HIS:NE2	11:AA:1266:GLY:O	2.44	0.42
12:AB:130:PRO:CB	12:AB:151:VAL:HG11	2.48	0.42
12:AB:157:ARG:NH2	12:AB:174:ASP:HB3	2.34	0.42
12:AB:180:LYS:HA	12:AB:180:LYS:HE2	1.96	0.42
14:AE:222:LYS:HD2	14:AE:222:LYS:HA	1.32	0.42
14:AE:390:LEU:N	14:AE:390:LEU:HD13	2.35	0.42
16:AG:354:ALA:O	16:AG:358:THR:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:37:A:C2'	10:B:38:A:O4'	2.68	0.42
17:C:64:TYR:CD2	17:C:65:LEU:HD23	2.55	0.42
18:D:2:A:H1'	18:D:613:C:O2'	2.19	0.42
18:D:44:A:C6	18:D:399:G:C6	3.08	0.42
18:D:80:A:C2	18:D:81:A:C4	3.07	0.42
18:D:142:G:H2'	18:D:143:A:O4'	2.20	0.42
18:D:358:U:N3	18:D:359:G:N7	2.68	0.42
18:D:502:A:C6	18:D:544:G:C6	3.07	0.42
18:D:533:A:O2'	18:D:535:A:OP2	2.22	0.42
18:D:592:G:C6	18:D:648:A:C6	3.08	0.42
18:D:785:G:O2'	18:D:786:G:H5'	2.20	0.42
18:D:920:U:H2'	18:D:921:U:C6	2.54	0.42
18:D:949:A:C6	18:D:1233:G:C6	3.08	0.42
18:D:1008:U:H2'	18:D:1009:U:O2	2.19	0.42
18:D:1096:C:C2'	18:D:1097:C:O5'	2.67	0.42
18:D:1112:C:N3	23:I:178:LEU:HD23	2.34	0.42
18:D:1127:G:C5	18:D:1128:C:C5	3.07	0.42
18:D:1181:G:O2'	18:D:1182:G:N7	2.50	0.42
18:D:1225:A:N3	18:D:1225:A:O2'	2.51	0.42
22:H:267:TRP:CZ3	22:H:342:ILE:HD11	2.54	0.42
32:R:76:GLU:OE2	32:R:76:GLU:CA	2.63	0.42
33:S:33:ASP:OD1	33:S:33:ASP:C	2.63	0.42
34:T:88:ARG:HD3	41:a:716:A:OP1	2.20	0.42
40:Z:23:ILE:HD12	40:Z:23:ILE:HA	1.82	0.42
41:a:28:A:C2	41:a:513:A:C8	3.08	0.42
41:a:56:A:H2'	41:a:57:C:C6	2.55	0.42
41:a:173:A:H2'	41:a:174:U:C6	2.54	0.42
41:a:239:C:HO2'	41:a:622:G:HO2'	1.66	0.42
41:a:246:C:C2'	41:a:247:G:H5'	2.49	0.42
41:a:317:G:C6	41:a:318:C:C4	3.07	0.42
41:a:352:A:H2'	41:a:353:C:C6	2.54	0.42
41:a:458:G:O2'	41:a:469:G:O6	2.38	0.42
41:a:467:G:OP2	53:m:34:ARG:NH1	2.49	0.42
41:a:672:C:O2'	41:a:673:C:H5'	2.20	0.42
41:a:704:G:H1'	41:a:727:A:N6	2.35	0.42
41:a:841:G:H2'	41:a:842:U:C6	2.55	0.42
41:a:877:A:H5'	41:a:878:A:P	2.60	0.42
41:a:1013:C:O2'	41:a:1014:A:H5'	2.20	0.42
41:a:1572:A:C4	41:a:1573:G:C8	3.08	0.42
41:a:1637:A:C6	41:a:1638:C:N4	2.88	0.42
41:a:1676:A:C2	41:a:1677:A:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2189:U:OP1	41:a:2189:U:C6	2.73	0.42
41:a:2483:C:N4	41:a:2484:G:C5	2.87	0.42
41:a:2543:G:C6	41:a:2765:A:C5	3.07	0.42
41:a:2745:C:H2'	41:a:2746:U:C6	2.55	0.42
44:d:39:A:C6	44:d:44:G:C6	3.07	0.42
44:d:61:G:C4	44:d:62:C:C5	3.08	0.42
50:j:99:GLU:HG3	50:j:182:ALA:HB2	2.02	0.42
54:n:77:PHE:CD1	54:n:77:PHE:N	2.86	0.42
59:s:36:LEU:O	59:s:51:GLY:HA3	2.20	0.42
59:s:40:HIS:CE1	59:s:41:LYS:HG3	2.54	0.42
64:x:100:HIS:CG	64:x:101:GLY:N	2.87	0.42
64:x:115:LEU:HD23	64:x:115:LEU:HA	1.92	0.42
3:2:40:LYS:N	41:a:1599:U:OP1	2.51	0.42
9:9:17:GLU:HB3	9:9:86:MET:HB3	2.01	0.42
9:9:74:ASP:C	9:9:77:VAL:H	2.27	0.42
9:9:117:LEU:HD12	9:9:117:LEU:N	2.35	0.42
10:A:18:G:N2	10:A:55:U:O2	2.53	0.42
10:A:32:C:O2'	27:M:86:GLN:NE2	2.52	0.42
16:AG:218:GLU:CG	21:G:104:TRP:HD1	2.33	0.42
16:AG:227:ALA:CB	16:AG:331:LEU:HA	2.46	0.42
16:AG:431:ALA:O	16:AG:435:LEU:HG	2.19	0.42
10:B:71:C:C3'	10:B:72:A:C8	3.03	0.42
17:C:24:LYS:HE3	26:L:5:GLU:OE1	2.19	0.42
18:D:160:A:N1	18:D:343:U:H1'	2.35	0.42
18:D:199:A:O2'	18:D:200:G:H5'	2.20	0.42
18:D:355:C:C4	18:D:356:A:N7	2.88	0.42
18:D:375:U:O5'	18:D:375:U:H6	2.03	0.42
18:D:432:A:C5	18:D:433:G:C8	3.08	0.42
18:D:598:U:H2'	18:D:599:C:H6	1.85	0.42
18:D:656:G:C6	18:D:657:U:C4	3.07	0.42
18:D:751:U:H2'	18:D:752:G:O4'	2.20	0.42
18:D:1287:A:C6	18:D:1288:A:C6	3.07	0.42
18:D:1437:A:C2	18:D:1438:G:C8	3.08	0.42
18:D:1457:G:H2'	18:D:1458:G:O4'	2.20	0.42
26:L:3:HIS:O	26:L:92:THR:N	2.53	0.42
26:L:79:ARG:HG3	26:L:80:PHE:N	2.34	0.42
28:N:73:GLU:HB3	28:N:130:ALA:O	2.20	0.42
41:a:10:A:C8	41:a:2800:A:C6	3.08	0.42
41:a:61:C:C2	41:a:94:A:C2	3.07	0.42
41:a:128:C:H2'	41:a:129:C:C6	2.55	0.42
41:a:537:G:N1	41:a:555:G:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:634:C:H2'	41:a:635:C:H6	1.85	0.42
41:a:638:G:O6	41:a:651:G:C6	2.73	0.42
41:a:784:G:O2'	41:a:785:G:H5''	2.20	0.42
41:a:792:A:C4	41:a:2440:C:N3	2.88	0.42
41:a:1104:C:C5	41:a:1105:U:C5	3.08	0.42
41:a:1184:U:O2'	41:a:1185:G:H5'	2.20	0.42
41:a:1471:G:C6	41:a:1472:C:C4	3.08	0.42
41:a:1506:U:O2'	41:a:1507:C:H5'	2.19	0.42
41:a:1582:C:C2	41:a:1583:A:C8	3.08	0.42
41:a:1880:U:H2'	41:a:1881:C:C6	2.55	0.42
41:a:2108:A:C6	41:a:2109:U:C4	3.07	0.42
41:a:2245:U:O2'	41:a:2436:G:OP2	2.30	0.42
41:a:2246:G:H2'	41:a:2247:A:C8	2.54	0.42
41:a:2460:U:C2	41:a:2461:A:C8	3.08	0.42
41:a:2840:C:H2'	41:a:2841:C:H6	1.83	0.42
44:d:61:G:H2'	44:d:62:C:C6	2.54	0.42
58:r:37:VAL:HG13	58:r:38:PRO:HD2	2.01	0.42
61:u:55:MET:SD	61:u:59:ARG:NH1	2.93	0.42
62:v:110:GLU:OE1	62:v:110:GLU:C	2.62	0.42
4:3:49:VAL:CG2	4:3:54:GLN:HB2	2.50	0.42
8:7:13:G:H8	8:7:13:G:C5'	2.33	0.42
9:9:25:ALA:HB3	9:9:85:SER:OG	2.20	0.42
9:9:59:LEU:CB	9:9:62:ARG:HB3	2.43	0.42
9:9:95:LEU:HD13	9:9:95:LEU:HA	1.84	0.42
11:AA:1298:VAL:HG11	14:AE:96:LYS:NZ	2.34	0.42
12:AB:103:ILE:HG13	12:AB:104:SER:H	1.85	0.42
16:AG:206:ILE:HD11	16:AG:226:ALA:HB2	2.02	0.42
16:AG:282:GLN:HA	16:AG:282:GLN:HE21	1.82	0.42
10:B:29:G:C6	10:B:42:G:N1	2.88	0.42
18:D:104:G:O2'	18:D:105:G:H5'	2.20	0.42
18:D:226:G:C5	18:D:227:G:C8	3.08	0.42
18:D:324:G:N2	18:D:327:A:OP2	2.53	0.42
18:D:365:U:H5''	18:D:366:A:OP1	2.20	0.42
18:D:674:G:C2'	18:D:675:A:O5'	2.68	0.42
18:D:684:U:O2	31:Q:41:ALA:HB3	2.20	0.42
18:D:748:G:C2	18:D:749:A:C8	3.07	0.42
18:D:826:C:H2'	18:D:827:U:O5'	2.20	0.42
18:D:865:A:O2'	18:D:866:C:H5'	2.19	0.42
18:D:934:C:N4	18:D:1345:U:C4	2.88	0.42
18:D:942:G:C2	18:D:1342:C:C2	3.07	0.42
18:D:1421:G:C2'	18:D:1422:G:O5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:1450:U:O2'	18:D:1451:U:H2'	2.20	0.42
18:D:1472:U:C2	18:D:1473:G:C8	3.07	0.42
22:H:33:LYS:HA	22:H:34:ASP:HA	1.77	0.42
24:J:145:ILE:HD12	24:J:145:ILE:N	2.35	0.42
26:L:1:MET:SD	26:L:1:MET:N	2.69	0.42
38:X:4:ILE:C	38:X:6:GLY:H	2.26	0.42
41:a:204:A:O4'	41:a:206:U:C6	2.73	0.42
41:a:234:U:C2	41:a:235:U:C6	3.08	0.42
41:a:379:G:O2'	41:a:380:G:O5'	2.34	0.42
41:a:518:G:H2'	41:a:519:U:C6	2.54	0.42
41:a:551:G:C6	41:a:552:U:C4	3.08	0.42
41:a:584:C:N3	41:a:585:G:C5	2.88	0.42
41:a:637:A:N1	41:a:651:G:O2'	2.48	0.42
41:a:851:C:H2'	41:a:852:U:C6	2.55	0.42
41:a:925:A:C2	41:a:926:G:C5	3.08	0.42
41:a:1160:G:H2'	41:a:1161:C:C6	2.55	0.42
41:a:1301:A:H2'	41:a:1301:A:N3	2.34	0.42
41:a:1400:U:H2'	41:a:1401:G:C8	2.55	0.42
41:a:1751:U:H2'	41:a:1752:C:C6	2.55	0.42
41:a:1873:G:O2'	41:a:1874:C:H5'	2.20	0.42
41:a:1933:G:C5	41:a:1934:C:C5	3.08	0.42
41:a:2003:A:N1	41:a:2004:G:C5	2.88	0.42
41:a:2026:U:C4	41:a:2027:G:N7	2.88	0.42
41:a:2102:G:C6	41:a:2188:U:C2	3.08	0.42
41:a:2190:G:H2'	41:a:2191:A:O4'	2.19	0.42
41:a:2407:A:H2'	41:a:2408:U:C6	2.55	0.42
41:a:2572:A:C8	50:j:149:ASN:OD1	2.73	0.42
41:a:2675:A:H2'	41:a:2676:C:O4'	2.20	0.42
44:d:1:U:H2'	44:d:2:G:C8	2.55	0.42
46:f:40:ASP:OD1	46:f:45:ARG:NE	2.48	0.42
47:g:43:PHE:CD1	47:g:43:PHE:C	2.98	0.42
56:p:137:ASP:OD1	56:p:137:ASP:C	2.63	0.42
1:0:4:VAL:HG11	66:z:94:ILE:HG21	2.02	0.41
2:1:11:ARG:HB3	2:1:11:ARG:NH1	2.35	0.41
2:1:20:VAL:HG21	2:1:43:ALA:HB3	2.02	0.41
7:6:27:DG:H1'	7:6:28:DA:C5	2.55	0.41
9:9:11:ILE:HG13	9:9:65:GLU:CB	2.38	0.41
11:AA:699:LEU:HG	11:AA:799:ASN:HD22	1.85	0.41
11:AA:845:LEU:HG	16:AG:104:ARG:HH12	1.85	0.41
14:AE:136:GLU:OE1	14:AE:312:ARG:NH2	2.53	0.41
14:AE:1321:SER:OG	14:AE:1349:GLU:OE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AG:218:GLU:HG3	21:G:105:LYS:N	2.35	0.41
16:AG:288:MET:HE3	16:AG:288:MET:C	2.45	0.41
16:AG:434:LEU:HG	16:AG:455:THR:CA	2.50	0.41
16:AG:437:LEU:CD2	16:AG:488:ILE:CD1	2.98	0.41
16:AG:442:ARG:O	16:AG:446:PHE:CE2	2.63	0.41
10:B:29:G:N3	10:B:42:G:C2	2.88	0.41
17:C:30:LYS:O	22:H:338:GLU:CG	2.68	0.41
18:D:101:A:C6	18:D:102:G:N7	2.88	0.41
18:D:128:G:C2	18:D:234:C:C2	3.08	0.41
18:D:165:G:H2'	18:D:166:U:H6	1.85	0.41
18:D:182:A:C5	18:D:184:G:C5	3.08	0.41
18:D:195:A:O2'	18:D:196:A:O4'	2.19	0.41
18:D:230:G:C2	18:D:231:U:C2	3.08	0.41
18:D:250:A:H4'	18:D:251:G:OP1	2.18	0.41
18:D:451:A:O4'	18:D:452:A:C8	2.72	0.41
18:D:491:G:O2'	18:D:492:C:H5'	2.20	0.41
18:D:610:U:C4	18:D:611:C:H5	2.34	0.41
18:D:786:G:N2	18:D:787:A:H1'	2.35	0.41
18:D:815:A:C2	18:D:1529:G:C4	3.08	0.41
18:D:961:U:OP2	18:D:1223:C:H1'	2.20	0.41
18:D:1103:C:OP1	21:G:95:ARG:NH2	2.54	0.41
18:D:1157:A:N7	18:D:1180:A:C6	2.88	0.41
18:D:1170:A:C8	18:D:1171:A:C8	3.08	0.41
18:D:1432:G:HO2'	18:D:1433:A:P	2.42	0.41
18:D:1436:U:C2	18:D:1437:A:N7	2.88	0.41
18:D:1436:U:O4	18:D:1437:A:N6	2.51	0.41
21:G:58:ASN:ND2	21:G:223:GLU:OE1	2.53	0.41
23:I:51:SER:HB2	23:I:71:ALA:HB3	2.01	0.41
28:N:5:ASP:OD1	28:N:5:ASP:C	2.63	0.41
29:O:99:ARG:CD	29:O:104:VAL:HG21	2.50	0.41
30:P:6:ILE:O	30:P:75:ASP:HA	2.20	0.41
39:Y:10:LEU:HD13	39:Y:10:LEU:HA	1.64	0.41
41:a:297:G:C6	41:a:342:A:N1	2.88	0.41
41:a:363:G:C6	41:a:364:C:N4	2.88	0.41
41:a:491:G:N2	41:a:492:A:H1'	2.35	0.41
41:a:513:A:O2'	41:a:1217:U:OP1	2.35	0.41
41:a:738:G:C6	41:a:759:G:C6	3.08	0.41
41:a:786:C:O2'	41:a:787:C:H5'	2.20	0.41
41:a:851:C:H2'	41:a:852:U:H6	1.85	0.41
41:a:1160:G:C6	41:a:1161:C:N4	2.88	0.41
41:a:1483:G:C6	41:a:1484:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1553:A:C5	41:a:1555:G:C5	3.08	0.41
41:a:1668:A:H4'	41:a:1669:A:O5'	2.20	0.41
41:a:1882:U:H2'	41:a:1883:U:H6	1.85	0.41
41:a:2135:A:H61	41:a:2156:G:H1'	1.85	0.41
41:a:2254:C:N3	41:a:2255:G:C8	2.88	0.41
41:a:2393:U:H2'	41:a:2393:U:O2	2.20	0.41
41:a:2630:G:C8	41:a:2894:G:C5	3.08	0.41
44:d:82:U:C4	44:d:83:G:N7	2.88	0.41
56:p:153:ARG:HG3	56:p:154:PRO:HD2	2.02	0.41
59:s:17:VAL:HG23	59:s:137:PRO:HB2	2.00	0.41
63:w:72:ASP:OD1	63:w:72:ASP:C	2.62	0.41
2:1:40:ASN:HB3	63:w:107:ASN:OD1	2.20	0.41
8:7:-8:U:OP2	8:7:-8:U:H6	2.03	0.41
9:9:1:MET:HE3	9:9:7:ASP:OD1	2.20	0.41
9:9:4:ASN:O	9:9:8:LYS:HG3	2.19	0.41
9:9:59:LEU:HB2	9:9:62:ARG:HB2	2.00	0.41
10:A:26:G:C6	10:A:27:U:C4	3.08	0.41
10:A:27:U:O2'	10:A:28:C:H5'	2.20	0.41
10:A:36:U:H2'	10:A:37:A:C8	2.54	0.41
10:A:63:G:C4	10:A:64:G:C8	3.09	0.41
10:A:69:C:H2'	10:A:70:G:H8	1.85	0.41
11:AA:1278:LEU:HD23	11:AA:1278:LEU:HA	1.86	0.41
13:AC:48:LEU:HD23	13:AC:48:LEU:HA	1.86	0.41
16:AG:185:SER:O	16:AG:185:SER:OG	2.37	0.41
16:AG:434:LEU:CD1	16:AG:455:THR:CA	2.98	0.41
10:B:22:G:N1	10:B:23:C:C4	2.88	0.41
10:B:54:U:N3	10:B:58:A:N6	2.67	0.41
18:D:179:A:C5	18:D:180:U:C4	3.08	0.41
18:D:180:U:O2	18:D:196:A:N6	2.53	0.41
18:D:204:G:H2'	18:D:205:A:C8	2.55	0.41
18:D:256:U:N3	18:D:257:G:N7	2.68	0.41
18:D:264:C:N4	18:D:265:G:C6	2.88	0.41
18:D:271:C:O2'	18:D:272:C:H5'	2.20	0.41
18:D:275:G:N3	18:D:276:G:C8	2.88	0.41
18:D:363:A:O2'	18:D:364:A:H5'	2.21	0.41
18:D:373:A:O2'	18:D:374:A:H5'	2.20	0.41
18:D:407:U:C2	18:D:408:A:C8	3.08	0.41
18:D:484:G:C5	18:D:486:U:H1'	2.55	0.41
18:D:587:G:C2	18:D:755:G:C5	3.09	0.41
18:D:749:A:H2'	18:D:750:C:H6	1.84	0.41
18:D:773:G:C6	18:D:774:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:832:G:C6	18:D:855:U:C4	3.07	0.41
18:D:935:A:C5	18:D:936:C:C5	3.07	0.41
18:D:1018:G:N3	18:D:1019:A:C8	2.87	0.41
18:D:1179:A:O2'	18:D:1180:A:H5'	2.20	0.41
18:D:1190:G:OP1	23:I:5:VAL:HG12	2.20	0.41
18:D:1238:A:H2	18:D:1241:G:N3	2.19	0.41
18:D:1507:A:H2'	18:D:1508:A:C8	2.54	0.41
21:G:50:PHE:CE1	21:G:54:LEU:HD11	2.55	0.41
25:K:148:ASN:HA	25:K:152:MET:HE1	2.01	0.41
27:M:113:ASP:HB2	27:M:119:ARG:HG2	2.02	0.41
29:O:120:LYS:O	29:O:121:ALA:C	2.62	0.41
33:S:80:SER:O	33:S:81:ARG:C	2.62	0.41
39:Y:48:ILE:HG13	39:Y:49:GLU:H	1.84	0.41
39:Y:133:ARG:HE	39:Y:133:ARG:HB2	1.31	0.41
41:a:220:G:C5	41:a:427:U:C4	3.07	0.41
41:a:579:G:C5	41:a:1262:A:N6	2.88	0.41
41:a:686:U:O4	53:m:12:ARG:HB2	2.20	0.41
41:a:727:A:O2'	41:a:728:G:H5'	2.20	0.41
41:a:832:U:O2'	41:a:833:A:H5'	2.20	0.41
41:a:894:U:C4'	41:a:895:U:OP1	2.68	0.41
41:a:952:G:O6	41:a:966:G:O6	2.38	0.41
41:a:1055:G:N3	41:a:1055:G:H2'	2.35	0.41
41:a:1354:A:H61	41:a:1377:G:C2'	2.33	0.41
41:a:1428:C:C5	41:a:1569:A:H5''	2.55	0.41
41:a:1596:A:O2'	41:a:1597:A:H5'	2.19	0.41
41:a:1635:A:C6	41:a:1636:U:C2	3.07	0.41
41:a:1726:C:N3	41:a:1735:A:N1	2.68	0.41
41:a:1985:C:O2'	41:a:1986:C:H5'	2.21	0.41
41:a:2231:U:O2'	41:a:2232:C:H5'	2.19	0.41
41:a:2371:G:O2'	41:a:2372:U:O5'	2.39	0.41
41:a:2420:C:OP2	55:o:33:LEU:N	2.53	0.41
41:a:2556:C:N4	41:a:2557:G:C5	2.88	0.41
41:a:2599:G:C2	41:a:2600:A:C4	3.08	0.41
41:a:2658:C:H2'	41:a:2659:G:O4'	2.20	0.41
44:d:9:G:N2	44:d:10:G:H1'	2.35	0.41
4:3:39:ILE:HG22	4:3:40:ASN:N	2.35	0.41
9:9:23:LEU:CB	9:9:118:ILE:HG13	2.50	0.41
10:A:37:A:H2'	10:A:38:A:O4'	2.20	0.41
11:AA:590:PRO:HB2	11:AA:655:VAL:HG21	2.01	0.41
11:AA:890:LYS:HA	11:AA:914:LYS:CG	2.49	0.41
14:AE:394:ILE:O	14:AE:394:ILE:HG13	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AE:1350:ASN:HA	14:AE:1353:VAL:HG12	2.01	0.41
16:AG:56:PHE:CD1	16:AG:56:PHE:N	2.88	0.41
16:AG:161:VAL:HB	16:AG:196:PHE:CE1	2.54	0.41
16:AG:277:ASP:HB2	16:AG:282:GLN:CG	2.50	0.41
16:AG:296:ILE:HD11	16:AG:307:ILE:CD1	2.50	0.41
16:AG:430:PRO:CG	16:AG:435:LEU:CD2	2.85	0.41
10:B:5:G:C6	10:B:69:C:N3	2.88	0.41
10:B:65:C:C2	10:B:66:C:C5	3.08	0.41
18:D:113:G:O6	18:D:315:A:N6	2.52	0.41
18:D:293:G:C2	18:D:294:U:C6	3.08	0.41
18:D:336:A:O2'	18:D:337:G:H5'	2.20	0.41
18:D:542:G:OP1	24:J:10:LYS:NZ	2.52	0.41
18:D:610:U:O2	18:D:610:U:H2'	2.20	0.41
18:D:624:C:H2'	18:D:625:U:O4'	2.20	0.41
18:D:1002:G:C6	18:D:1039:G:C6	3.08	0.41
18:D:1055:A:C2	18:D:1206:G:C4	3.08	0.41
18:D:1095:U:P	18:D:1108:G:H1	2.43	0.41
18:D:1330:U:O4	18:D:1331:G:C6	2.72	0.41
18:D:1515:G:N1	18:D:1521:C:N3	2.68	0.41
21:G:17:GLY:O	22:H:43:LYS:HD2	2.20	0.41
22:H:74:ALA:HB3	22:H:83:LEU:CD2	2.51	0.41
24:J:85:ASN:OD1	24:J:87:GLY:N	2.54	0.41
34:T:39:LEU:O	34:T:40:GLN:C	2.63	0.41
34:T:49:ASP:OD1	34:T:49:ASP:C	2.62	0.41
36:V:62:ARG:C	36:V:73:TRP:CE3	2.98	0.41
41:a:2:G:O2'	41:a:3:U:H5'	2.20	0.41
41:a:65:U:H2'	41:a:66:C:H6	1.84	0.41
41:a:74:A:H4'	41:a:75:G:O4'	2.19	0.41
41:a:391:A:H2'	41:a:391:A:N3	2.35	0.41
41:a:464:U:H2'	41:a:465:G:O5'	2.20	0.41
41:a:584:C:C2	41:a:585:G:C8	3.08	0.41
41:a:670:A:H3'	61:u:43:GLY:HA2	2.01	0.41
41:a:731:C:C2	41:a:732:C:C5	3.08	0.41
41:a:754:U:C2	41:a:755:U:C4	3.08	0.41
41:a:1027:A:C6	41:a:1126:A:C4	3.09	0.41
41:a:1470:A:C5	41:a:1471:G:C8	3.08	0.41
41:a:1581:G:C6	41:a:1582:C:N4	2.88	0.41
41:a:1651:G:C4	41:a:1652:A:C8	3.09	0.41
41:a:1737:G:H2'	41:a:1738:G:H1'	2.01	0.41
41:a:1883:U:O2'	41:a:1884:G:H5'	2.21	0.41
41:a:1885:A:C5	41:a:1886:U:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2261:C:N3	41:a:2262:U:C5	2.89	0.41
41:a:2316:G:C4	41:a:2317:A:C8	3.08	0.41
41:a:2534:A:C6	41:a:2535:G:C8	3.08	0.41
41:a:2708:G:O2'	41:a:2709:G:H5'	2.19	0.41
44:d:17:C:N3	44:d:18:G:C8	2.89	0.41
50:j:105:LYS:O	50:j:177:VAL:HG12	2.20	0.41
56:p:10:VAL:HA	56:p:49:THR:HG22	2.02	0.41
58:r:90:LEU:HD22	58:r:94:ILE:HD11	2.01	0.41
62:v:31:PHE:O	62:v:105:MET:N	2.49	0.41
8:7:20:G:H21	14:AE:427:PRO:HD3	1.86	0.41
9:9:57:ASN:HB3	9:9:62:ARG:HG2	2.02	0.41
11:AA:22:LEU:HD22	11:AA:603:ILE:HG21	2.02	0.41
11:AA:879:GLY:CA	11:AA:922:ASN:HA	2.50	0.41
12:AB:134:VAL:HG23	12:AB:180:LYS:HA	2.01	0.41
14:AE:647:PRO:HG3	14:AE:697:MET:HB3	2.01	0.41
14:AE:1289:ASN:O	14:AE:1293:GLU:HB2	2.20	0.41
16:AG:284:VAL:HG22	16:AG:305:MET:CE	2.51	0.41
16:AG:434:LEU:HD23	16:AG:456:LEU:CB	2.49	0.41
10:B:18:G:C2	10:B:57:A:N7	2.89	0.41
18:D:33:A:H2'	18:D:34:C:H6	1.85	0.41
18:D:181:A:N6	18:D:195:A:N7	2.68	0.41
18:D:191:G:C2	18:D:192:A:C5	3.08	0.41
18:D:201:G:HO2'	18:D:469:C:HO2'	1.67	0.41
18:D:460:A:N1	18:D:461:A:C5	2.88	0.41
18:D:499:A:O4'	18:D:547:A:N6	2.53	0.41
18:D:675:A:O2'	18:D:676:A:H5'	2.20	0.41
18:D:690:G:H21	18:D:696:A:N6	2.18	0.41
18:D:1085:U:O4'	18:D:1094:G:C6	2.74	0.41
18:D:1263:C:C2	18:D:1264:U:C5	3.09	0.41
18:D:1300:G:C4	18:D:1334:G:C6	3.08	0.41
18:D:1350:A:H2'	18:D:1351:U:C6	2.53	0.41
26:L:18:VAL:HB	26:L:19:PRO:HD3	2.02	0.41
32:R:35:THR:N	32:R:54:ARG:O	2.53	0.41
33:S:31:ILE:HD11	33:S:45:VAL:HA	2.02	0.41
41:a:265:A:C5	41:a:428:A:C5	3.09	0.41
41:a:415:A:H2'	41:a:416:U:C6	2.55	0.41
41:a:476:G:N2	41:a:478:A:H3'	2.36	0.41
41:a:541:A:C6	41:a:542:C:C4	3.09	0.41
41:a:579:G:H2'	41:a:580:U:H6	1.85	0.41
41:a:599:A:H2'	41:a:600:G:O5'	2.20	0.41
41:a:609:A:H3'	41:a:610:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1042:G:HO2'	41:a:1043:C:P	2.44	0.41
41:a:1202:G:O6	41:a:1244:A:C6	2.73	0.41
41:a:1207:C:C2	41:a:1208:C:C5	3.09	0.41
41:a:1322:A:C4	41:a:1323:C:C6	3.09	0.41
41:a:1336:A:O2'	41:a:1337:G:H5'	2.21	0.41
41:a:1444:G:C6	41:a:1445:G:C5	3.09	0.41
41:a:1579:A:H2'	41:a:1580:A:C8	2.55	0.41
41:a:1672:A:O2'	41:a:1673:G:H5'	2.20	0.41
41:a:1678:A:C4	41:a:1679:A:C8	3.08	0.41
41:a:1791:A:C2	41:a:1829:A:O4'	2.74	0.41
41:a:1849:G:C2	41:a:1850:G:C5	3.08	0.41
41:a:1930:G:N2	41:a:1968:G:H2'	2.36	0.41
41:a:1993:U:O2'	41:a:1994:C:H5'	2.19	0.41
41:a:2100:G:H2'	41:a:2101:A:H5'	2.00	0.41
41:a:2120:G:C6	41:a:2179:C:C5	3.08	0.41
41:a:2179:C:O2	41:a:2179:C:H2'	2.21	0.41
41:a:2216:G:C4	41:a:2217:G:C8	3.08	0.41
41:a:2257:U:C2'	41:a:2258:C:O5'	2.68	0.41
41:a:2361:G:C6	41:a:2362:C:C4	3.09	0.41
41:a:2488:G:O2'	41:a:2489:U:H5'	2.20	0.41
41:a:2685:G:H2'	41:a:2686:G:H8	1.84	0.41
41:a:2805:C:H2'	41:a:2806:C:C6	2.56	0.41
44:d:25:U:C4	44:d:26:C:C5	3.08	0.41
44:d:35:C:C2'	44:d:36:C:H5'	2.50	0.41
50:j:32:ASN:O	50:j:96:ILE:N	2.36	0.41
56:p:104:ASN:ND2	56:p:114:ASP:OD2	2.54	0.41
59:s:24:THR:O	59:s:25:LEU:C	2.63	0.41
2:1:61:ASN:C	2:1:62:ASP:OD1	2.63	0.41
3:2:1:MET:CE	41:a:139:U:C4	3.03	0.41
10:A:18:G:C4	10:A:58:A:C6	3.08	0.41
11:AA:144:VAL:HG23	11:AA:515:MET:HB2	2.02	0.41
11:AA:484:LEU:HA	11:AA:485:ASP:HA	1.85	0.41
11:AA:1332:SER:C	14:AE:243:PRO:HG2	2.44	0.41
14:AE:26:SER:CB	14:AE:236:TRP:CZ2	2.95	0.41
16:AG:36:LYS:HB3	16:AG:36:LYS:HE2	1.87	0.41
16:AG:105:ILE:HD13	16:AG:105:ILE:H	1.85	0.41
16:AG:234:ALA:HB3	16:AG:271:ILE:HD13	2.01	0.41
16:AG:241:ASN:HB2	21:G:158:PRO:O	2.14	0.41
16:AG:307:ILE:HG13	16:AG:338:VAL:HG23	2.02	0.41
16:AG:323:GLN:HE21	16:AG:323:GLN:C	2.28	0.41
16:AG:433:ASP:O	16:AG:456:LEU:CD2	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:18:G:H21	10:B:57:A:H3'	1.86	0.41
10:B:29:G:C4	10:B:42:G:C2	3.08	0.41
18:D:156:C:C4	18:D:157:U:C5	3.08	0.41
18:D:382:A:H2'	18:D:383:A:O4'	2.20	0.41
18:D:456:A:C5	18:D:457:G:N7	2.88	0.41
18:D:540:G:C6	18:D:541:G:C5	3.08	0.41
18:D:686:U:O4	18:D:703:G:H1'	2.21	0.41
18:D:718:A:C5	31:Q:118:HIS:CE1	3.07	0.41
18:D:749:A:C4	18:D:750:C:C5	3.08	0.41
18:D:865:A:H2'	18:D:866:C:C6	2.56	0.41
18:D:867:G:H2'	18:D:868:C:C6	2.55	0.41
18:D:869:G:O2'	18:D:872:A:N7	2.47	0.41
18:D:915:A:C5	18:D:916:U:C6	3.09	0.41
18:D:1007:U:H3'	18:D:1008:U:C6	2.55	0.41
18:D:1095:U:O2'	18:D:1096:C:H5'	2.20	0.41
18:D:1172:C:H2'	18:D:1173:U:H6	1.86	0.41
18:D:1409:C:O5'	18:D:1409:C:H6	2.03	0.41
18:D:1468:A:H2'	18:D:1469:C:O4'	2.20	0.41
29:O:84:THR:HG21	29:O:103:PHE:CB	2.51	0.41
29:O:98:LEU:HB3	29:O:104:VAL:HG13	2.02	0.41
41:a:24:G:H2'	41:a:25:U:O4'	2.20	0.41
41:a:59:U:O2'	41:a:74:A:OP1	2.37	0.41
41:a:308:G:C4	41:a:501:A:C8	3.08	0.41
41:a:336:C:O2'	41:a:337:C:H5'	2.20	0.41
41:a:418:C:O2'	41:a:419:U:H5'	2.20	0.41
41:a:452:G:N2	41:a:458:G:C4	2.89	0.41
41:a:461:C:C2	41:a:462:C:C5	3.08	0.41
41:a:465:G:N2	41:a:684:G:H1'	2.35	0.41
41:a:482:A:N6	41:a:506:G:O2'	2.54	0.41
41:a:549:G:C2'	41:a:550:C:O5'	2.68	0.41
41:a:628:G:C6	41:a:636:G:C2	3.09	0.41
41:a:729:G:N3	41:a:1775:U:H1'	2.35	0.41
41:a:1011:G:O6	41:a:1151:A:N6	2.53	0.41
41:a:1033:U:C4	41:a:2750:A:C2	3.09	0.41
41:a:1073:A:C5	41:a:1074:G:N7	2.88	0.41
41:a:1109:C:H2'	41:a:1110:G:C8	2.55	0.41
41:a:1177:G:N3	41:a:1178:C:C6	2.89	0.41
41:a:1244:A:C6	41:a:1245:G:C5	3.08	0.41
41:a:1498:C:C2	41:a:1499:C:C5	3.08	0.41
41:a:1500:G:C2	41:a:1501:G:C8	3.09	0.41
41:a:1815:A:C5	41:a:1817:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1927:A:C2'	41:a:1928:A:H5'	2.46	0.41
41:a:1979:U:O2'	41:a:1980:G:H5'	2.19	0.41
41:a:2093:G:N7	41:a:2225:A:H2'	2.35	0.41
41:a:2104:C:O2'	41:a:2105:U:H5'	2.20	0.41
41:a:2234:G:C2	41:a:2235:G:C8	3.09	0.41
41:a:2296:U:H4'	41:a:2297:A:OP1	2.20	0.41
41:a:2322:A:O2'	41:a:2323:G:H5'	2.20	0.41
41:a:2392:A:C2	61:u:55:MET:HE3	2.56	0.41
41:a:2419:U:OP2	55:o:33:LEU:HD13	2.20	0.41
41:a:2677:G:N1	41:a:2731:G:C6	2.88	0.41
41:a:2711:A:C8	41:a:2714:G:O4'	2.74	0.41
41:a:2757:A:C5	41:a:2758:A:N7	2.88	0.41
41:a:2863:C:O2'	41:a:2864:G:H5'	2.21	0.41
44:d:28:C:O2'	44:d:29:A:H5'	2.20	0.41
44:d:39:A:N6	44:d:44:G:C6	2.88	0.41
44:d:93:C:H2'	44:d:94:A:H8	1.85	0.41
45:e:45:GLN:O	45:e:49:ASP:OD1	2.38	0.41
50:j:184:ARG:CZ	65:y:7:GLN:OE1	2.69	0.41
59:s:112:GLY:O	59:s:113:PRO:C	2.64	0.41
65:y:114:LEU:CD1	65:y:114:LEU:C	2.94	0.41
12:AB:136:VAL:CG2	12:AB:177:GLN:OE1	2.44	0.41
14:AE:388:ARG:HG2	14:AE:388:ARG:HH11	1.84	0.41
14:AE:930:LEU:HA	14:AE:1244:GLN:HG3	2.02	0.41
16:AG:26:ALA:CA	16:AG:117:LYS:HG2	2.51	0.41
10:B:76:A:C5	41:a:2493:U:H4'	2.55	0.41
17:C:24:LYS:NZ	26:L:5:GLU:OE2	2.50	0.41
18:D:59:A:C6	18:D:354:G:C5	3.09	0.41
18:D:105:G:C5	18:D:106:C:C5	3.09	0.41
18:D:112:G:C2	18:D:330:C:C4	3.08	0.41
18:D:213:G:N7	18:D:214:C:C5	2.88	0.41
18:D:250:A:O4'	18:D:252:U:C6	2.74	0.41
18:D:602:A:O2'	18:D:603:U:H5'	2.21	0.41
18:D:663:A:O2'	18:D:664:G:H5'	2.19	0.41
18:D:687:A:H2	18:D:704:A:C4	2.39	0.41
18:D:774:G:C4	18:D:775:G:C8	3.08	0.41
18:D:937:A:C6	18:D:938:A:C5	3.09	0.41
18:D:1119:C:O2'	18:D:1120:C:H5'	2.21	0.41
18:D:1121:U:C2	18:D:1122:U:C6	3.09	0.41
18:D:1147:C:C2	18:D:1148:U:C5	3.09	0.41
18:D:1491:G:O2'	18:D:1492:A:H8	2.04	0.41
18:D:1523:G:H2'	18:D:1524:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:G:91:PHE:CE1	21:G:150:GLY:HA2	2.55	0.41
22:H:140:PRO:O	22:H:141:VAL:C	2.63	0.41
23:I:53:SER:HB2	23:I:112:ASP:OD2	2.20	0.41
25:K:96:MET:CE	25:K:115:LEU:HD11	2.51	0.41
27:M:69:VAL:HG21	27:M:104:ILE:HD11	2.01	0.41
29:O:63:LEU:HD13	29:O:65:ILE:HD11	2.03	0.41
39:Y:47:SER:O	39:Y:47:SER:OG	2.38	0.41
41:a:23:G:C6	41:a:518:G:C6	3.08	0.41
41:a:35:G:C1'	41:a:454:A:N3	2.84	0.41
41:a:231:A:O2'	41:a:232:G:H5'	2.21	0.41
41:a:301:G:C5	41:a:317:G:C6	3.08	0.41
41:a:443:A:N7	52:l:40:ARG:HG3	2.35	0.41
41:a:563:A:C5	41:a:564:C:C5	3.09	0.41
41:a:634:C:C2	41:a:635:C:C5	3.08	0.41
41:a:645:C:H2'	41:a:647:G:N7	2.36	0.41
41:a:900:A:C5	41:a:901:C:C5	3.09	0.41
41:a:920:A:C4	41:a:921:C:C6	3.09	0.41
41:a:923:G:C6	41:a:924:G:N7	2.88	0.41
41:a:1353:A:C8	41:a:1378:A:N6	2.88	0.41
41:a:1355:G:C2	41:a:1356:G:N7	2.89	0.41
41:a:1356:G:C6	41:a:1376:C:N3	2.89	0.41
41:a:1361:G:C4	41:a:1362:C:C5	3.09	0.41
41:a:1401:G:H2'	41:a:1402:U:O4'	2.21	0.41
41:a:1414:C:C2'	41:a:1415:U:O5'	2.68	0.41
41:a:1593:A:H2'	41:a:1594:U:C6	2.55	0.41
41:a:1796:U:H2'	41:a:1797:G:C8	2.56	0.41
41:a:1867:G:O2'	41:a:1868:C:H5'	2.21	0.41
41:a:1876:A:C6	41:a:1877:A:C5	3.09	0.41
41:a:1890:A:C2	41:a:1891:G:H1'	2.56	0.41
41:a:1990:C:H2'	41:a:1991:U:C1'	2.51	0.41
41:a:2363:G:N1	41:a:2364:C:C4	2.89	0.41
41:a:2698:U:N3	41:a:2699:C:N4	2.68	0.41
41:a:2805:C:H2'	41:a:2806:C:O4'	2.20	0.41
44:d:42:C:C2	44:d:43:C:C6	3.08	0.41
58:r:84:ALA:HA	58:r:91:PHE:HB3	2.03	0.41
58:r:94:ILE:HD12	58:r:122:LEU:O	2.20	0.41
60:t:58:LEU:N	60:t:58:LEU:CD2	2.83	0.41
63:w:29:VAL:HG11	63:w:75:ILE:HG23	2.03	0.41
63:w:84:GLY:N	63:w:85:PRO:HD2	2.35	0.41
8:7:-9:U:C2'	8:7:-8:U:OP2	2.69	0.41
11:AA:469:VAL:HA	11:AA:472:GLU:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:616:ILE:HG13	11:AA:652:TYR:HB2	2.01	0.41
11:AA:800:MET:HB2	11:AA:800:MET:HE3	1.69	0.41
11:AA:856:ASN:O	11:AA:919:ARG:NH2	2.53	0.41
11:AA:998:LEU:HD21	11:AA:1015:ALA:HB2	2.02	0.41
11:AA:1294:LYS:HG2	14:AE:472:LEU:HD11	2.02	0.41
12:AB:161:SER:HA	12:AB:170:PRO:CA	2.51	0.41
14:AE:390:LEU:HD13	14:AE:390:LEU:H	1.86	0.41
14:AE:515:ARG:HG2	14:AE:516:ASP:H	1.85	0.41
16:AG:204:MET:SD	16:AG:204:MET:O	2.79	0.41
16:AG:207:GLU:HG3	16:AG:210:ARG:CB	2.50	0.41
16:AG:374:VAL:O	16:AG:374:VAL:CG1	2.68	0.41
18:D:155:A:C6	18:D:167:A:C6	3.08	0.41
18:D:168:G:C4	18:D:169:C:C5	3.08	0.41
18:D:179:A:C4	18:D:180:U:C5	3.09	0.41
18:D:275:G:N3	18:D:275:G:H2'	2.35	0.41
18:D:335:C:O2'	18:D:336:A:H5'	2.21	0.41
18:D:410:G:H5''	18:D:411:A:OP1	2.21	0.41
18:D:419:C:N4	18:D:425:G:O6	2.53	0.41
18:D:747:A:C6	18:D:748:G:C6	3.09	0.41
18:D:923:A:O2'	18:D:1399:C:OP2	2.23	0.41
18:D:1160:G:C6	18:D:1161:C:C5	3.09	0.41
18:D:1346:A:O3'	18:D:1347:G:H4'	2.21	0.41
18:D:1463:U:H2'	18:D:1464:U:C6	2.55	0.41
27:M:79:ARG:O	27:M:79:ARG:NH2	2.50	0.41
29:O:81:HIS:O	29:O:84:THR:OG1	2.33	0.41
36:V:64:CYS:SG	36:V:74:THR:OG1	2.70	0.41
37:W:25:SER:OG	37:W:27:ASP:OD1	2.38	0.41
39:Y:70:THR:OG1	39:Y:71:LYS:N	2.53	0.41
41:a:68:G:C2	41:a:74:A:N3	2.89	0.41
41:a:299:A:H2'	41:a:300:A:C8	2.55	0.41
41:a:608:A:C6	41:a:609:A:C5	3.09	0.41
41:a:635:C:H1'	41:a:639:U:H5''	2.03	0.41
41:a:1198:U:O2	41:a:1199:U:C5	2.74	0.41
41:a:1258:U:H2'	41:a:1259:G:H8	1.84	0.41
41:a:1321:A:N3	41:a:1321:A:H2'	2.36	0.41
41:a:1342:A:C6	41:a:1397:U:C5	3.09	0.41
41:a:1434:A:C2	41:a:1435:G:C5	3.09	0.41
41:a:1466:U:O2'	41:a:1546:G:O2'	2.05	0.41
41:a:1709:U:H2'	41:a:1710:G:H8	1.85	0.41
41:a:1721:G:HO2'	41:a:1722:A:H8	1.67	0.41
41:a:1733:G:O2'	41:a:1734:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1891:G:C5	41:a:1892:C:C5	3.09	0.41
41:a:1916:A:H2'	41:a:1916:A:N3	2.36	0.41
41:a:2055:C:O5'	41:a:2056:G:H5''	2.21	0.41
41:a:2072:C:C2	41:a:2073:C:C5	3.08	0.41
41:a:2218:G:H2'	41:a:2219:U:H6	1.86	0.41
41:a:2264:C:O2'	41:a:2265:U:H5'	2.21	0.41
41:a:2281:A:C2	41:a:2282:G:C5	3.08	0.41
41:a:2283:C:C6	41:a:2389:G:C4	3.08	0.41
41:a:2300:C:C2	41:a:2301:C:C5	3.08	0.41
41:a:2648:G:C5	41:a:2649:C:C5	3.08	0.41
41:a:2740:A:C6	41:a:2741:A:C6	3.09	0.41
41:a:2782:G:C2	41:a:2783:U:C6	3.09	0.41
41:a:2802:G:C4	41:a:2803:G:C8	3.08	0.41
50:j:1:MET:HE2	50:j:100:LEU:HD21	2.02	0.41
50:j:2:ILE:CD1	50:j:96:ILE:HD13	2.51	0.41
52:l:153:LEU:HG	52:l:158:PHE:HE2	1.85	0.41
60:t:41:ILE:HD11	60:t:86:LEU:HD22	2.02	0.41
1:0:2:TYR:CD1	1:0:2:TYR:C	2.99	0.41
1:0:71:LYS:HA	1:0:90:ARG:HG2	2.02	0.41
2:1:20:VAL:HG11	2:1:44:ALA:HA	2.02	0.41
8:7:-17:U:H4'	8:7:-16:U:OP2	2.20	0.41
8:7:-3:U:OP2	23:I:72:ARG:HD3	2.20	0.41
9:9:23:LEU:HB3	9:9:92:ALA:CB	2.49	0.41
10:A:66:C:OP2	10:A:66:C:H6	2.03	0.41
11:AA:135:THR:HG22	11:AA:144:VAL:HG22	2.03	0.41
11:AA:310:ILE:HG21	11:AA:325:LEU:HB3	2.03	0.41
11:AA:524:ILE:HD12	11:AA:712:SER:HB2	2.02	0.41
11:AA:936:ARG:HB2	11:AA:1042:LEU:HD12	2.03	0.41
12:AB:135:ARG:C	12:AB:179:GLU:OE1	2.61	0.41
14:AE:848:VAL:HB	14:AE:858:VAL:HG22	2.02	0.41
16:AG:131:ARG:HG2	16:AG:186:VAL:CG1	2.48	0.41
16:AG:210:ARG:HG3	16:AG:216:ILE:HB	2.02	0.41
16:AG:219:GLU:O	21:G:157:LEU:CA	2.69	0.41
16:AG:434:LEU:CD1	16:AG:454:CYS:O	2.58	0.41
10:B:70:G:H2'	10:B:71:C:O4'	2.20	0.41
17:C:42:SER:HA	17:C:45:THR:OG1	2.21	0.41
18:D:67:C:O5'	18:D:67:C:H6	2.04	0.41
18:D:270:A:C6	18:D:271:C:C4	3.08	0.41
18:D:324:G:C2	18:D:327:A:OP2	2.73	0.41
18:D:373:A:C2	18:D:482:A:N1	2.89	0.41
18:D:496:A:O2'	18:D:497:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:538:G:C4	18:D:539:A:C8	3.09	0.41
18:D:567:G:O6	32:R:12:ARG:NH2	2.52	0.41
18:D:597:G:C2	18:D:644:U:C2	3.08	0.41
18:D:599:C:H2'	18:D:600:A:H8	1.84	0.41
18:D:803:G:H2'	18:D:804:U:O4'	2.21	0.41
18:D:832:G:C2	18:D:833:G:C8	3.09	0.41
18:D:946:A:H2'	18:D:947:G:C8	2.56	0.41
18:D:1053:G:H4'	18:D:1054:C:H3'	2.02	0.41
18:D:1109:C:C3'	18:D:1109:C:O5'	2.68	0.41
18:D:1114:C:N3	18:D:1115:U:C5	2.89	0.41
18:D:1119:C:OP1	29:O:85:ARG:NH1	2.52	0.41
18:D:1138:G:N1	18:D:1140:C:C4	2.89	0.41
18:D:1161:C:C2	18:D:1162:C:C5	3.09	0.41
18:D:1191:A:OP1	23:I:3:GLN:HB3	2.21	0.41
18:D:1213:A:C5	18:D:1215:G:C4	3.09	0.41
18:D:1499:A:O2'	18:D:1500:A:H5'	2.20	0.41
18:D:1500:A:OP1	18:D:1505:G:OP1	2.38	0.41
21:G:34:ALA:HA	21:G:38:VAL:O	2.21	0.41
22:H:81:GLU:O	22:H:82:THR:OG1	2.39	0.41
23:I:73:PRO:O	23:I:74:GLY:C	2.64	0.41
39:Y:14:ALA:C	39:Y:50:LYS:HB2	2.46	0.41
41:a:68:G:N1	41:a:69:C:C2	2.88	0.41
41:a:77:G:C6	41:a:110:G:C6	3.08	0.41
41:a:333:G:C4	41:a:334:C:C5	3.09	0.41
41:a:381:G:C2'	41:a:382:A:H5'	2.51	0.41
41:a:391:A:C5	41:a:392:U:C6	3.09	0.41
41:a:495:G:N2	41:a:496:G:H1'	2.35	0.41
41:a:711:G:C6	41:a:721:A:C6	3.08	0.41
41:a:785:G:C2	41:a:786:C:C2	3.09	0.41
41:a:856:G:H3'	41:a:857:G:C8	2.56	0.41
41:a:938:G:C2	41:a:939:G:N7	2.89	0.41
41:a:964:C:O2'	41:a:2273:A:H1'	2.21	0.41
41:a:979:A:H2'	41:a:982:C:H42	1.85	0.41
41:a:1043:C:N4	41:a:1044:C:N4	2.69	0.41
41:a:1117:C:H2'	41:a:1118:C:C6	2.56	0.41
41:a:1353:A:H2'	41:a:1354:A:H8	1.85	0.41
41:a:1487:U:N3	41:a:1488:C:C5	2.89	0.41
41:a:1509:A:HO2'	41:a:1510:G:P	2.42	0.41
41:a:1680:U:H2'	41:a:1681:G:O4'	2.20	0.41
41:a:1850:G:C6	41:a:1851:U:C4	3.09	0.41
41:a:1866:A:H2'	41:a:1867:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:2093:G:O2'	41:a:2094:A:H5'	2.20	0.41
41:a:2098:U:H2'	41:a:2099:U:C6	2.55	0.41
41:a:2218:G:O2'	41:a:2219:U:H5'	2.20	0.41
41:a:2493:U:C4	41:a:2494:G:C8	3.08	0.41
41:a:2529:G:O6	57:q:32:LYS:NZ	2.54	0.41
41:a:2618:G:C6	41:a:2619:C:C4	3.09	0.41
41:a:2649:C:N3	41:a:2650:U:C5	2.89	0.41
41:a:2788:C:H2'	41:a:2789:C:C6	2.56	0.41
48:h:105:LEU:O	48:h:107:PRO:HD3	2.21	0.41
50:j:52:THR:O	50:j:77:ARG:N	2.47	0.41
56:p:30:ASN:CB	56:p:79:VAL:O	2.69	0.41
58:r:9:VAL:HG11	58:r:12:LEU:HD21	2.02	0.41
60:t:86:LEU:N	60:t:86:LEU:HD23	2.36	0.41
1:0:14:VAL:HG21	1:0:98:ILE:HG13	2.02	0.41
4:3:46:GLN:HB2	4:3:57:GLY:O	2.21	0.41
8:7:-12:U:OP2	8:7:-12:U:N1	2.53	0.41
9:9:20:LYS:HB2	9:9:20:LYS:HE3	1.82	0.41
9:9:93:ALA:CB	9:9:94:ARG:NH2	2.84	0.41
10:A:71:C:H2'	10:A:72:A:C8	2.56	0.41
11:AA:657:THR:HG21	11:AA:1188:ASP:HB2	2.03	0.41
11:AA:803:ALA:HB2	11:AA:1094:VAL:HG21	2.03	0.41
11:AA:855:PRO:HG3	11:AA:915:ASP:CB	2.49	0.41
11:AA:855:PRO:CG	11:AA:915:ASP:OD1	2.69	0.41
12:AB:165:PHE:O	12:AB:167:ARG:NH1	2.54	0.41
13:AC:57:THR:HG23	13:AC:158:ARG:HH21	1.86	0.41
13:AC:228:LEU:HD21	13:AD:224:LEU:HD23	2.03	0.41
13:AD:46:ILE:HD11	13:AD:224:LEU:HD13	2.02	0.41
14:AE:47:ARG:HA	14:AE:47:ARG:NE	2.35	0.41
14:AE:68:TYR:O	14:AE:75:TYR:CD2	2.70	0.41
14:AE:144:TYR:N	14:AE:144:TYR:CD1	2.88	0.41
16:AG:148:ASP:HA	16:AG:164:ARG:HD2	2.03	0.41
16:AG:218:GLU:C	21:G:104:TRP:HE1	2.26	0.41
16:AG:304:THR:O	16:AG:304:THR:OG1	2.34	0.41
10:B:45:G:C8	10:B:45:G:OP2	2.73	0.41
10:B:56:C:N3	10:B:57:A:C8	2.89	0.41
10:B:60:U:OP2	10:B:61:C:N4	2.43	0.41
10:B:62:C:H2'	10:B:62:C:O2	2.21	0.41
10:B:63:G:C2	10:B:64:G:C5	3.08	0.41
10:B:64:G:H2'	10:B:65:C:C6	2.51	0.41
17:C:41:PRO:HG2	17:C:43:ARG:HH21	1.85	0.41
18:D:68:G:C5'	18:D:69:G:OP2	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:99:C:O2'	18:D:100:G:H8	2.04	0.41
18:D:109:A:OP2	18:D:110:C:H5	2.04	0.41
18:D:126:G:H5'	18:D:633:G:N2	2.36	0.41
18:D:145:G:N2	18:D:146:G:C4	2.89	0.41
18:D:159:G:N3	18:D:161:A:OP2	2.54	0.41
18:D:167:A:N3	18:D:168:G:C8	2.89	0.41
18:D:201:G:C2	18:D:202:G:C4	3.09	0.41
18:D:318:G:C6	18:D:319:G:N7	2.89	0.41
18:D:348:G:C2	18:D:349:A:N7	2.89	0.41
18:D:375:U:C2'	18:D:376:G:O5'	2.68	0.41
18:D:401:C:H2'	18:D:402:G:H8	1.84	0.41
18:D:419:C:C2	18:D:425:G:C2	3.08	0.41
18:D:459:A:H2'	18:D:460:A:C8	2.56	0.41
18:D:478:A:C6	18:D:479:U:C5	3.09	0.41
18:D:559:A:H4'	18:D:560:A:H3'	2.03	0.41
18:D:644:U:C4	18:D:645:G:N7	2.88	0.41
18:D:751:U:C4	18:D:752:G:C6	3.08	0.41
18:D:755:G:C2	18:D:756:C:C6	3.08	0.41
18:D:810:C:H2'	18:D:811:C:O4'	2.21	0.41
18:D:825:A:O2'	18:D:826:C:H5'	2.21	0.41
18:D:911:U:O2'	18:D:912:C:H5'	2.20	0.41
18:D:916:U:O2	18:D:917:G:C8	2.73	0.41
18:D:1000:A:H2'	18:D:1001:C:C1'	2.50	0.41
18:D:1032:G:H3'	18:D:1032:G:N3	2.36	0.41
18:D:1142:G:H5''	18:D:1143:G:OP2	2.21	0.41
18:D:1162:C:H2'	18:D:1163:A:H8	1.86	0.41
18:D:1215:G:C6	18:D:1216:A:N7	2.88	0.41
18:D:1246:A:N6	18:D:1292:G:O6	2.54	0.41
18:D:1250:A:H2'	18:D:1251:A:C8	2.55	0.41
18:D:1273:C:H2'	18:D:1274:A:O4'	2.21	0.41
18:D:1288:A:H2'	18:D:1289:A:C8	2.56	0.41
18:D:1365:G:C5	18:D:1366:C:C5	3.09	0.41
18:D:1371:G:C6	18:D:1372:U:C4	3.09	0.41
18:D:1386:G:C2	18:D:1387:G:C8	3.09	0.41
18:D:1400:C:H4'	18:D:1401:G:OP2	2.21	0.41
18:D:1493:A:C8	18:D:1493:A:OP1	2.74	0.41
19:E:25:ARG:HA	19:E:66:LEU:HD21	2.03	0.41
23:I:96:GLY:O	23:I:97:VAL:HG13	2.20	0.41
23:I:130:PHE:CD1	23:I:131:ARG:N	2.89	0.41
24:J:85:ASN:OD1	24:J:85:ASN:C	2.64	0.41
25:K:77:ASN:O	25:K:79:GLY:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:K:132:ASN:O	25:K:133:PRO:C	2.62	0.41
39:Y:60:VAL:HG13	39:Y:66:PHE:CD1	2.55	0.41
39:Y:71:LYS:HB3	39:Y:72:THR:H	1.77	0.41
41:a:233:A:H8	41:a:233:A:O5'	2.02	0.41
41:a:335:C:N3	41:a:336:C:C5	2.89	0.41
41:a:363:G:C4	41:a:364:C:C5	3.09	0.41
41:a:411:G:P	41:a:2407:A:OP2	2.78	0.41
41:a:418:C:H2'	41:a:419:U:O4'	2.21	0.41
41:a:463:G:N1	41:a:467:G:C6	2.89	0.41
41:a:579:G:H2'	41:a:580:U:C6	2.55	0.41
41:a:630:G:C5	41:a:632:A:OP2	2.74	0.41
41:a:647:G:C6	41:a:648:G:C5	3.09	0.41
41:a:671:C:H2'	41:a:672:C:H6	1.86	0.41
41:a:1073:A:H2'	41:a:1074:G:C1'	2.51	0.41
41:a:1124:G:C2'	41:a:1125:G:O5'	2.69	0.41
41:a:1199:U:H2'	41:a:1200:C:O4'	2.21	0.41
41:a:1290:C:O2'	41:a:1291:C:H5'	2.21	0.41
41:a:1347:A:N7	41:a:1348:C:C5	2.89	0.41
41:a:1411:U:O2	41:a:1591:A:C2	2.74	0.41
41:a:1411:U:H3'	41:a:1412:U:C6	2.56	0.41
41:a:1507:C:H6	41:a:1507:C:O5'	2.04	0.41
41:a:1752:C:O2'	41:a:1753:G:H5'	2.20	0.41
41:a:1882:U:H2'	41:a:1883:U:C6	2.56	0.41
41:a:1957:C:O2'	41:a:1958:C:H5'	2.20	0.41
41:a:1972:G:H2'	41:a:1973:G:H8	1.85	0.41
41:a:2021:C:OP1	49:i:9:THR:OG1	2.31	0.41
41:a:2114:A:C2	41:a:2115:G:O4'	2.74	0.41
41:a:2193:G:C2	41:a:2194:U:C5	3.09	0.41
41:a:2217:G:C2	41:a:2218:G:C8	3.09	0.41
41:a:2235:G:O2'	41:a:2236:U:H5'	2.20	0.41
41:a:2318:G:C5	41:a:2319:G:C6	3.08	0.41
41:a:2348:U:O4	41:a:2382:G:C6	2.74	0.41
41:a:2427:C:OP1	41:a:2428:G:OP1	2.38	0.41
41:a:2509:G:C5	41:a:2510:C:C5	3.08	0.41
41:a:2537:U:H2'	41:a:2538:C:C6	2.56	0.41
41:a:2591:C:H2'	41:a:2592:G:H8	1.86	0.41
41:a:2661:G:C6	41:a:2662:A:C2	3.08	0.41
41:a:2748:A:C2	41:a:2757:A:C4	3.09	0.41
41:a:2887:A:C5	41:a:2888:C:C5	3.08	0.41
44:d:45:A:C4	44:d:46:A:C8	3.09	0.41
44:d:73:A:C4	44:d:74:U:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:j:133:THR:O	50:j:134:HIS:HB2	2.21	0.41
51:k:19:HIS:CD2	51:k:41:PRO:CG	3.04	0.41
58:r:75:LEU:HD12	58:r:77:THR:H	1.85	0.41
65:y:53:ARG:O	65:y:54:GLY:C	2.62	0.41
4:3:82:ARG:HH11	41:a:301:G:P	2.43	0.41
5:4:41:GLU:O	5:4:42:LEU:HD23	2.21	0.41
9:9:61:ARG:HA	9:9:65:GLU:CD	2.45	0.41
10:A:22:G:C6	10:A:23:C:N4	2.89	0.41
10:A:50:U:C4	10:A:51:C:C5	3.09	0.41
11:AA:550:VAL:HG13	14:AE:777:HIS:CD2	2.56	0.41
14:AE:68:TYR:CB	14:AE:75:TYR:HE2	2.34	0.41
14:AE:438:GLU:OE2	14:AE:481:ARG:NH1	2.42	0.41
16:AG:63:LEU:HD22	16:AG:92:TYR:CD1	2.48	0.41
16:AG:205:LEU:HD12	16:AG:205:LEU:H	1.86	0.41
16:AG:244:ARG:NE	16:AG:244:ARG:N	2.69	0.41
16:AG:285:ILE:CA	16:AG:293:VAL:HG11	2.51	0.41
16:AG:302:LYS:HE3	16:AG:302:LYS:CA	2.51	0.41
16:AG:323:GLN:NE2	16:AG:323:GLN:C	2.79	0.41
18:D:147:G:H8	18:D:147:G:O5'	2.04	0.41
18:D:160:A:H8	18:D:160:A:O5'	2.04	0.41
18:D:222:C:C2	18:D:223:A:C8	3.09	0.41
18:D:427:U:C4	18:D:428:G:C6	3.09	0.41
18:D:477:C:H2'	18:D:478:A:C8	2.56	0.41
18:D:915:A:N6	18:D:916:U:C4	2.89	0.41
18:D:948:C:O2'	18:D:949:A:H5'	2.21	0.41
18:D:1276:G:H8	18:D:1276:G:O5'	2.04	0.41
18:D:1355:G:O2'	18:D:1356:G:H5'	2.20	0.41
18:D:1359:C:OP2	33:S:75:ARG:NE	2.54	0.41
18:D:1360:A:C4	18:D:1361:G:C8	3.09	0.41
18:D:1417:G:C6	18:D:1482:G:C6	3.09	0.41
18:D:1437:A:N3	18:D:1438:G:C8	2.89	0.41
18:D:1524:C:N3	18:D:1525:G:N7	2.68	0.41
26:L:17:GLN:CG	58:r:87:GLU:HG3	2.50	0.41
29:O:91:ASP:CG	29:O:94:LEU:HG	2.46	0.41
32:R:24:LEU:HD13	32:R:95:TYR:CE1	2.55	0.41
36:V:8:LEU:HD12	36:V:8:LEU:N	2.36	0.41
39:Y:102:ARG:H	39:Y:102:ARG:HG3	1.59	0.41
41:a:553:G:H2'	41:a:554:U:O4'	2.21	0.41
41:a:627:A:N1	41:a:636:G:O2'	2.51	0.41
41:a:628:G:O2'	41:a:629:G:H5'	2.21	0.41
41:a:683:U:O5'	41:a:683:U:H6	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:730:A:O2'	41:a:731:C:H5'	2.21	0.41
41:a:872:U:H2'	41:a:873:C:H6	1.85	0.41
41:a:1120:G:C6	41:a:1121:C:C4	3.09	0.41
41:a:1208:C:O2'	41:a:1209:U:H5'	2.21	0.41
41:a:1307:A:C6	41:a:1622:G:C6	3.09	0.41
41:a:1317:G:H2'	41:a:1318:U:C6	2.56	0.41
41:a:1425:G:N2	41:a:1574:C:C4	2.89	0.41
41:a:1452:G:H2'	41:a:1457:U:O4	2.20	0.41
41:a:1528:A:N3	41:a:1544:A:C6	2.88	0.41
41:a:1582:C:C2	41:a:1583:A:N7	2.89	0.41
41:a:1824:G:OP2	48:h:53:HIS:CD2	2.73	0.41
41:a:1857:G:N2	41:a:1884:G:C4	2.88	0.41
41:a:1904:G:O2'	41:a:1905:C:H5'	2.21	0.41
41:a:2263:C:N3	41:a:2264:C:C5	2.89	0.41
41:a:2537:U:C2	41:a:2538:C:C6	3.09	0.41
41:a:2609:U:O2'	41:a:2610:C:H5'	2.21	0.41
41:a:2753:A:C4	41:a:2754:U:C6	3.08	0.41
48:h:143:ASN:O	48:h:143:ASN:ND2	2.54	0.41
52:l:124:PHE:CE1	52:l:148:ILE:HD13	2.56	0.41
52:l:170:ARG:NH1	52:l:179:SER:OG	2.54	0.41
54:n:139:PRO:HG2	54:n:140:GLU:OE2	2.21	0.41
63:w:8:ARG:HD2	63:w:43:GLU:HG2	2.03	0.41
9:9:23:LEU:HA	9:9:118:ILE:HG12	2.00	0.40
9:9:60:LEU:HA	9:9:64:VAL:HG23	1.99	0.40
9:9:127:ALA:O	9:9:130:PRO:HD3	2.21	0.40
11:AA:741:MET:HE3	11:AA:974:ARG:HH12	1.85	0.40
14:AE:161:THR:CG2	14:AE:164:GLN:HB2	2.49	0.40
16:AG:152:LEU:HD11	16:AG:162:ILE:HD12	2.01	0.40
16:AG:203:GLU:H	16:AG:203:GLU:HG3	1.55	0.40
16:AG:241:ASN:CB	21:G:181:ILE:HG12	2.45	0.40
16:AG:285:ILE:O	16:AG:288:MET:HE2	2.19	0.40
16:AG:363:LEU:HD21	16:AG:407:ARG:C	2.45	0.40
10:B:49:G:N2	10:B:66:C:C2	2.89	0.40
17:C:31:ASN:C	22:H:338:GLU:HA	2.45	0.40
18:D:68:G:H3'	18:D:69:G:C5'	2.51	0.40
18:D:109:A:C2	18:D:326:G:N1	2.89	0.40
18:D:145:G:C2	18:D:146:G:C5	3.09	0.40
18:D:155:A:H2'	18:D:156:C:H6	1.87	0.40
18:D:185:U:H2'	18:D:186:C:H6	1.86	0.40
18:D:198:G:C6	18:D:220:G:C4	3.09	0.40
18:D:390:U:H2'	18:D:391:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:473:U:H2'	18:D:474:G:O4'	2.21	0.40
18:D:500:G:C6	18:D:546:A:C2	3.09	0.40
18:D:551:U:H2'	18:D:552:U:C6	2.56	0.40
18:D:579:A:H2'	18:D:580:C:C6	2.56	0.40
18:D:593:U:H2'	18:D:594:U:H6	1.86	0.40
18:D:693:G:O2'	18:D:694:A:H5'	2.20	0.40
18:D:910:C:H2'	18:D:911:U:H6	1.86	0.40
18:D:974:A:H5'	18:D:976:G:OP1	2.21	0.40
18:D:983:A:C2	18:D:984:C:C6	3.08	0.40
18:D:1051:C:O2'	18:D:1052:U:H5'	2.21	0.40
18:D:1225:A:H2'	18:D:1226:C:C5	2.55	0.40
18:D:1418:A:O5'	18:D:1419:G:OP2	2.38	0.40
18:D:1508:A:H2'	18:D:1509:C:C6	2.56	0.40
18:D:1521:C:H2'	18:D:1522:U:C6	2.56	0.40
21:G:47:VAL:N	21:G:48:PRO:HD2	2.36	0.40
25:K:109:GLY:O	25:K:112:ARG:N	2.51	0.40
26:L:43:GLY:HA2	26:L:58:HIS:CE1	2.55	0.40
35:U:44:SER:HB3	35:U:47:GLU:OE1	2.21	0.40
36:V:45:HIS:CD2	36:V:45:HIS:N	2.89	0.40
37:W:20:GLU:HA	37:W:20:GLU:OE2	2.20	0.40
41:a:90:U:OP2	41:a:91:A:C2'	2.69	0.40
41:a:98:G:H2'	41:a:99:U:C6	2.56	0.40
41:a:158:U:H2'	41:a:159:G:O5'	2.20	0.40
41:a:186:G:O2'	41:a:187:G:H5'	2.21	0.40
41:a:197:A:H62	41:a:2430:A:H2'	1.86	0.40
41:a:270:A:C5'	41:a:271:G:H5''	2.51	0.40
41:a:304:U:H2'	41:a:305:C:C6	2.55	0.40
41:a:348:A:H2'	41:a:349:U:C6	2.56	0.40
41:a:374:A:H2'	41:a:375:G:O5'	2.20	0.40
41:a:527:C:H4'	41:a:528:A:O5'	2.20	0.40
41:a:612:G:H5''	41:a:613:A:OP2	2.21	0.40
41:a:657:U:O2'	41:a:658:U:H5'	2.21	0.40
41:a:723:C:H2'	41:a:724:U:O4'	2.20	0.40
41:a:929:U:O2'	41:a:930:G:H5'	2.21	0.40
41:a:985:C:N3	41:a:986:C:C5	2.88	0.40
41:a:1259:G:O2'	41:a:1260:A:H5'	2.21	0.40
41:a:1270:C:H5''	41:a:1271:G:H5'	2.03	0.40
41:a:1414:C:O2'	41:a:1415:U:C5'	2.69	0.40
41:a:1434:A:H2'	41:a:1435:G:C8	2.56	0.40
41:a:1522:A:O4'	41:a:1524:G:C4	2.74	0.40
41:a:1582:C:N4	41:a:1583:A:N6	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1601:G:H2'	41:a:1602:U:C6	2.57	0.40
41:a:1739:A:C5	41:a:1740:G:C8	3.09	0.40
41:a:1946:U:O2'	41:a:1947:C:H5'	2.21	0.40
41:a:2189:U:C2	41:a:2190:G:C8	3.09	0.40
41:a:2199:A:H3'	41:a:2200:C:H6	1.86	0.40
41:a:2234:G:C4	41:a:2235:G:C8	3.09	0.40
41:a:2438:U:O2'	41:a:2439:A:H5''	2.22	0.40
41:a:2474:U:C2'	41:a:2475:C:H5'	2.51	0.40
41:a:2620:C:C4	41:a:2621:G:N7	2.89	0.40
41:a:2692:G:H1'	41:a:2847:U:O2'	2.20	0.40
41:a:2773:C:C2	41:a:2774:C:C5	3.08	0.40
41:a:2776:A:H4'	41:a:2777:G:H5''	2.03	0.40
41:a:2783:U:H2'	41:a:2784:U:C6	2.56	0.40
41:a:2831:G:OP2	50:j:59:ARG:NE	2.47	0.40
44:d:58:A:H2'	44:d:59:A:O4'	2.21	0.40
44:d:112:G:N2	44:d:113:C:C2	2.89	0.40
52:l:176:ASP:OD1	52:l:176:ASP:N	2.54	0.40
55:o:7:VAL:O	55:o:8:ARG:C	2.64	0.40
66:z:78:LYS:O	66:z:79:PHE:C	2.64	0.40
5:4:31:TYR:O	5:4:92:VAL:HA	2.22	0.40
8:7:-9:U:H2'	8:7:-8:U:OP2	2.21	0.40
9:9:18:VAL:HG23	9:9:86:MET:HG3	2.03	0.40
13:AD:76:GLU:HB3	13:AD:80:GLU:HB3	2.01	0.40
13:AD:211:ILE:HD12	13:AD:211:ILE:HA	1.92	0.40
14:AE:108:ALA:HB2	14:AE:276:ASN:OD1	2.22	0.40
10:B:2:G:N1	10:B:3:C:C4	2.89	0.40
10:B:15:G:N3	10:B:15:G:H3'	2.36	0.40
10:B:45:G:OP2	10:B:45:G:H8	2.04	0.40
10:B:76:A:C4	41:a:2493:U:C5'	3.04	0.40
18:D:49:U:C4	18:D:364:A:C6	3.09	0.40
18:D:284:C:H2'	18:D:285:C:H6	1.86	0.40
18:D:306:A:C4	18:D:307:C:C6	3.09	0.40
18:D:515:G:N1	18:D:537:G:C6	2.89	0.40
18:D:518:C:C2	18:D:530:G:C2	3.08	0.40
18:D:745:G:N2	18:D:746:A:C4	2.89	0.40
18:D:780:A:N6	18:D:801:U:OP2	2.49	0.40
18:D:814:A:C8	18:D:816:A:C8	3.09	0.40
18:D:1110:A:C4	18:D:1111:A:C8	3.10	0.40
18:D:1428:A:C4	18:D:1429:A:C8	3.09	0.40
18:D:1434:A:C2'	18:D:1435:G:H5'	2.52	0.40
22:H:142:ARG:C	22:H:144:THR:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:I:6:HIS:CG	33:S:89:MET:HB3	2.56	0.40
24:J:3:ARG:HD2	24:J:115:ARG:NE	2.36	0.40
24:J:140:ASN:N	24:J:182:PHE:O	2.45	0.40
26:L:49:TYR:CE2	26:L:51:ILE:HG22	2.57	0.40
27:M:148:ASN:HD22	27:M:148:ASN:N	2.19	0.40
31:Q:107:ILE:HD13	31:Q:107:ILE:C	2.46	0.40
32:R:6:GLN:HA	32:R:9:ARG:NH2	2.36	0.40
33:S:49:GLN:OE1	37:W:12:ASP:HA	2.21	0.40
38:X:92:ARG:HG2	38:X:92:ARG:H	1.70	0.40
39:Y:45:THR:O	39:Y:45:THR:HG22	2.21	0.40
41:a:47:C:C4	41:a:48:G:N7	2.89	0.40
41:a:74:A:OP2	41:a:74:A:N3	2.54	0.40
41:a:333:G:C6	41:a:334:C:C4	3.09	0.40
41:a:402:A:H2'	41:a:403:U:O4'	2.21	0.40
41:a:433:C:O2'	41:a:434:U:O5'	2.39	0.40
41:a:468:G:N7	53:m:39:ARG:NH2	2.58	0.40
41:a:587:C:O2	61:u:33:ARG:NH2	2.54	0.40
41:a:640:C:H2'	41:a:641:U:C6	2.56	0.40
41:a:853:C:O2'	41:a:854:C:H5'	2.22	0.40
41:a:925:A:H2'	41:a:926:G:H8	1.86	0.40
41:a:1076:C:H2'	41:a:1077:A:H8	1.82	0.40
41:a:1197:G:C5	41:a:1198:U:C5	3.10	0.40
41:a:1319:C:N3	41:a:1334:G:C6	2.89	0.40
41:a:1372:U:O2'	41:a:1373:A:H5'	2.21	0.40
41:a:1433:A:C2'	41:a:1434:A:O4'	2.68	0.40
41:a:1443:U:H2'	41:a:1444:G:H8	1.86	0.40
41:a:2216:G:N3	41:a:2217:G:C8	2.89	0.40
41:a:2294:G:C2	41:a:2295:C:C6	3.09	0.40
41:a:2305:U:O2'	41:a:2306:C:H5'	2.22	0.40
41:a:2519:U:C5	41:a:2541:A:C6	3.10	0.40
41:a:2549:G:C6	41:a:2560:A:N6	2.89	0.40
41:a:2649:C:H2'	41:a:2650:U:C6	2.53	0.40
41:a:2725:A:C4	41:a:2727:A:N7	2.90	0.40
44:d:51:G:OP2	64:x:67:ASN:HB3	2.22	0.40
45:e:12:GLU:OE1	45:e:12:GLU:HA	2.20	0.40
48:h:31:ALA:N	48:h:32:PRO:CD	2.85	0.40
48:h:66:ASP:OD1	48:h:66:ASP:C	2.64	0.40
58:r:14:SER:OG	58:r:15:LEU:N	2.53	0.40
59:s:135:GLN:N	59:s:135:GLN:OE1	2.54	0.40
63:w:83:LEU:O	63:w:84:GLY:C	2.65	0.40
4:3:96:PHE:CE2	4:3:103:ILE:HG12	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:-20:A:H2'	8:7:-19:U:C5'	2.31	0.40
8:7:11:U:H6	8:7:11:U:H2'	1.68	0.40
9:9:31:ARG:HH12	41:a:1053:C:H4'	1.86	0.40
10:A:2:G:C2	10:A:3:C:C6	3.09	0.40
10:A:41:C:O2'	10:A:42:G:H5'	2.21	0.40
11:AA:6:THR:OG1	11:AA:781:ASP:OD1	2.33	0.40
12:AB:136:VAL:HG13	12:AB:144:PHE:HB2	2.02	0.40
13:AC:42:ALA:HB1	13:AC:224:LEU:HD11	2.03	0.40
13:AC:51:MET:HA	13:AC:52:PRO:HD3	1.96	0.40
13:AD:205:MET:HE1	13:AD:217:ILE:HG13	2.03	0.40
16:AG:125:MET:O	16:AG:125:MET:SD	2.79	0.40
16:AG:216:ILE:HD12	16:AG:217:GLY:N	2.37	0.40
16:AG:300:GLU:HB3	16:AG:301:ASP:H	1.70	0.40
16:AG:437:LEU:CD2	16:AG:488:ILE:HD13	2.51	0.40
18:D:35:G:H2'	18:D:36:C:H6	1.86	0.40
18:D:135:C:C5	18:D:136:C:H5	2.39	0.40
18:D:136:C:N3	18:D:137:U:C4	2.89	0.40
18:D:149:A:O2'	18:D:150:U:H5'	2.22	0.40
18:D:158:G:C6	18:D:164:G:C5	3.10	0.40
18:D:517:G:P	18:D:517:G:H8	2.44	0.40
18:D:577:G:C4	18:D:816:A:C2	3.10	0.40
18:D:711:G:H2'	18:D:712:A:H8	1.86	0.40
18:D:778:G:C5	18:D:779:C:C4	3.09	0.40
18:D:827:U:C2'	18:D:828:U:H5''	2.51	0.40
18:D:844:G:N2	18:D:846:G:N3	2.68	0.40
18:D:1026:G:N2	18:D:1027:C:O2	2.54	0.40
18:D:1078:U:C2'	18:D:1079:G:H5'	2.52	0.40
18:D:1079:G:H2'	18:D:1080:A:C8	2.57	0.40
18:D:1172:C:H2'	18:D:1173:U:C6	2.56	0.40
18:D:1181:G:C2	18:D:1182:G:C2	3.10	0.40
18:D:1438:G:C6	18:D:1464:U:N3	2.89	0.40
18:D:1527:U:O2'	18:D:1528:U:O5'	2.39	0.40
19:E:54:MET:C	19:E:54:MET:SD	3.04	0.40
21:G:124:GLY:C	21:G:126:PHE:N	2.74	0.40
22:H:70:VAL:HA	22:H:85:SER:HA	2.03	0.40
23:I:42:TYR:HD2	23:I:43:LEU:HD12	1.86	0.40
32:R:3:THR:O	32:R:6:GLN:N	2.55	0.40
33:S:64:CYS:HB3	33:S:69:ARG:H	1.87	0.40
34:T:35:GLN:NE2	34:T:39:LEU:HD13	2.35	0.40
41:a:30:G:C5	41:a:31:C:C5	3.09	0.40
41:a:58:G:C6	41:a:70:G:C6	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:174:U:H2'	41:a:175:G:H8	1.86	0.40
41:a:186:G:C2	41:a:211:C:N3	2.90	0.40
41:a:310:A:C2	41:a:330:A:C5	3.08	0.40
41:a:353:C:O2	41:a:353:C:H2'	2.21	0.40
41:a:489:G:C4	41:a:1284:A:C6	3.10	0.40
41:a:565:C:O2'	41:a:566:U:H5'	2.21	0.40
41:a:735:A:C8	41:a:736:C:C5	3.09	0.40
41:a:815:C:O2'	41:a:816:C:H5'	2.21	0.40
41:a:866:A:C2	41:a:867:C:C6	3.08	0.40
41:a:924:G:N3	41:a:925:A:C8	2.89	0.40
41:a:961:C:C4	41:a:2031:A:C5	3.09	0.40
41:a:1005:C:C2'	41:a:1006:C:O5'	2.69	0.40
41:a:1117:C:C2	41:a:1118:C:C6	3.09	0.40
41:a:1230:A:H2'	41:a:1231:U:C6	2.56	0.40
41:a:1340:U:O5'	41:a:1340:U:O2	2.39	0.40
41:a:1405:U:H2'	41:a:1406:U:H6	1.86	0.40
41:a:1432:G:C2	41:a:1433:A:C5	3.10	0.40
41:a:1553:A:C8	41:a:1555:G:C6	3.09	0.40
41:a:1642:G:O2'	41:a:1643:G:H5'	2.21	0.40
41:a:1663:G:O6	41:a:1998:A:N6	2.54	0.40
41:a:2048:G:O6	41:a:2621:G:C6	2.73	0.40
41:a:2107:G:C2	41:a:2108:A:H1'	2.55	0.40
41:a:2298:A:C6	41:a:2321:U:O4	2.74	0.40
41:a:2329:U:C2	41:a:2330:G:C8	3.08	0.40
41:a:2589:A:H2'	41:a:2590:A:H8	1.86	0.40
41:a:2686:G:C5	41:a:2687:U:C4	3.09	0.40
41:a:2722:G:O2'	41:a:2723:C:H5'	2.21	0.40
41:a:2803:G:N2	41:a:2804:U:C2	2.90	0.40
52:l:24:ASN:CG	52:l:27:LEU:HB3	2.47	0.40
52:l:141:MET:O	52:l:142:ALA:HB3	2.22	0.40
61:u:19:LEU:N	61:u:19:LEU:HD12	2.36	0.40
3:2:50:LEU:N	3:2:50:LEU:CD1	2.84	0.40
8:7:-12:U:OP1	18:D:1397:C:C4	2.74	0.40
9:9:4:ASN:HB3	41:a:1046:A:N7	2.37	0.40
9:9:35:VAL:HG21	39:Y:2:LYS:CA	2.49	0.40
11:AA:870:ILE:HB	11:AA:944:ARG:HD3	2.03	0.40
11:AA:1247:SER:OG	11:AA:1248:THR:N	2.55	0.40
14:AE:113:HIS:ND1	14:AE:115:TRP:HB2	2.37	0.40
14:AE:117:LEU:HD22	14:AE:139:LEU:CD1	2.52	0.40
14:AE:245:LEU:HG	14:AE:246:PRO:CD	2.51	0.40
16:AG:291:ALA:HA	16:AG:316:GLN:HE22	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:20:U:H3'	10:B:21:A:H5''	2.03	0.40
10:B:32:C:P	29:O:130:ARG:NH2	2.94	0.40
18:D:144:G:O6	18:D:179:A:C6	2.73	0.40
18:D:208:U:C6	18:D:208:U:OP2	2.74	0.40
18:D:219:U:H2'	18:D:220:G:O4'	2.21	0.40
18:D:251:G:C2	18:D:266:G:C6	3.09	0.40
18:D:271:C:H2'	18:D:272:C:H6	1.87	0.40
18:D:362:G:N1	18:D:365:U:OP2	2.54	0.40
18:D:445:G:H2'	18:D:446:G:H8	1.86	0.40
18:D:456:A:H3'	18:D:457:G:H8	1.86	0.40
18:D:709:U:H2'	18:D:710:G:H8	1.87	0.40
18:D:824:G:O6	18:D:877:G:O6	2.39	0.40
18:D:825:A:H2'	18:D:826:C:H6	1.86	0.40
18:D:963:G:H1'	18:D:973:G:N2	2.36	0.40
18:D:1231:G:C2	18:D:1232:U:C2	3.10	0.40
18:D:1314:C:OP2	37:W:4:SER:OG	2.21	0.40
18:D:1434:A:H2'	18:D:1435:G:O4'	2.21	0.40
18:D:1441:A:H2'	18:D:1442:G:H5'	2.03	0.40
18:D:1499:A:C2'	18:D:1500:A:H5'	2.52	0.40
21:G:217:VAL:O	21:G:220:THR:HG22	2.22	0.40
27:M:51:ALA:HB2	27:M:58:GLU:HG3	2.03	0.40
30:P:53:ILE:CG1	30:P:61:ALA:HB1	2.52	0.40
35:U:12:LYS:HG2	35:U:13:LYS:HG2	2.02	0.40
38:X:92:ARG:HD2	41:a:888:C:C6	2.57	0.40
41:a:36:G:C6	41:a:37:C:C4	3.10	0.40
41:a:88:G:N1	41:a:89:A:C5	2.90	0.40
41:a:305:C:H2'	41:a:306:U:H6	1.86	0.40
41:a:404:A:C1'	41:a:405:U:OP2	2.68	0.40
41:a:599:A:O2'	41:a:600:G:H5'	2.21	0.40
41:a:749:A:N3	41:a:749:A:H2'	2.37	0.40
41:a:783:A:HO2'	41:a:785:G:P	2.39	0.40
41:a:813:U:HO2'	41:a:1225:G:H1'	1.87	0.40
41:a:858:G:N3	41:a:2268:A:N3	2.69	0.40
41:a:1044:C:O2'	41:a:1111:A:C6	2.72	0.40
41:a:1180:U:C2'	41:a:1181:U:H5'	2.52	0.40
41:a:1227:G:C6	41:a:1228:G:C5	3.09	0.40
41:a:1313:U:H5''	41:a:1314:C:OP2	2.21	0.40
41:a:1392:A:H2'	41:a:1393:A:C8	2.56	0.40
41:a:1400:U:C2	41:a:1401:G:C8	3.09	0.40
41:a:1527:G:C2	41:a:1544:A:OP2	2.75	0.40
41:a:1741:C:H2'	41:a:1742:U:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1855:U:C4	41:a:1856:U:C4	3.10	0.40
41:a:1919:A:C5'	41:a:1920:C:OP2	2.69	0.40
41:a:1948:G:O2'	41:a:1949:G:H5'	2.22	0.40
41:a:2009:A:N3	41:a:2010:G:C8	2.90	0.40
41:a:2135:A:C5	41:a:2136:G:C8	3.09	0.40
41:a:2448:A:OP2	41:a:2499:C:OP2	2.40	0.40
41:a:2595:G:N1	41:a:2599:G:C6	2.90	0.40
41:a:2648:G:C6	41:a:2673:G:C5	3.09	0.40
41:a:2682:A:H2'	41:a:2683:C:O4'	2.21	0.40
41:a:2728:U:O2'	41:a:2729:G:H8	2.05	0.40
41:a:2842:G:O2'	41:a:2843:G:H5'	2.21	0.40
42:b:11:ARG:C	42:b:12:ASN:OD1	2.64	0.40
44:d:59:A:C5	44:d:60:C:C4	3.09	0.40
47:g:14:ALA:HA	47:g:32:LEU:O	2.22	0.40
56:p:24:ILE:HD11	56:p:43:VAL:HG11	2.04	0.40
63:w:43:GLU:O	63:w:44:LEU:C	2.62	0.40
9:9:4:ASN:HA	9:9:7:ASP:OD1	2.22	0.40
9:9:51:TYR:CE1	9:9:52:MET:HG2	2.56	0.40
10:A:64:G:C6	10:A:65:C:C4	3.10	0.40
10:A:65:C:C2'	10:A:66:C:H5'	2.51	0.40
11:AA:905:ILE:HG12	16:AG:31:LEU:HD11	2.03	0.40
12:AB:165:PHE:CE2	30:P:100:ILE:CD1	3.05	0.40
14:AE:47:ARG:NE	14:AE:47:ARG:CA	2.83	0.40
14:AE:210:SER:HB3	14:AE:213:LYS:CB	2.48	0.40
14:AE:244:VAL:HA	14:AE:269:TYR:CZ	2.57	0.40
14:AE:820:ILE:HG12	14:AE:884:SER:HB2	2.02	0.40
16:AG:123:ARG:HH11	16:AG:123:ARG:CG	2.35	0.40
16:AG:127:VAL:HG22	16:AG:192:GLY:CA	2.46	0.40
16:AG:230:PRO:HA	16:AG:269:GLU:CD	2.46	0.40
10:B:51:C:C4	10:B:52:G:N7	2.90	0.40
17:C:42:SER:OG	17:C:47:THR:C	2.61	0.40
18:D:59:A:C5	18:D:354:G:C6	3.09	0.40
18:D:167:A:C2	18:D:168:G:C5	3.09	0.40
18:D:197:A:N3	18:D:198:G:C1'	2.85	0.40
18:D:270:A:C4	18:D:271:C:C5	3.09	0.40
18:D:270:A:C5	18:D:271:C:C5	3.10	0.40
18:D:292:G:N1	18:D:309:A:C6	2.89	0.40
18:D:300:A:H2	18:D:566:G:O6	2.05	0.40
18:D:342:C:N4	18:D:348:G:C6	2.89	0.40
18:D:369:G:C2	18:D:370:C:C4	3.10	0.40
18:D:411:A:P	24:J:26:ARG:HH12	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:D:420:U:C2	18:D:424:G:N1	2.89	0.40
18:D:633:G:C6	18:D:634:C:C4	3.10	0.40
18:D:691:G:O2'	18:D:692:U:H5'	2.21	0.40
18:D:757:U:OP1	18:D:822:U:O2'	2.37	0.40
18:D:768:A:H4'	18:D:1523:G:N2	2.37	0.40
18:D:807:A:O2'	18:D:808:C:H5'	2.20	0.40
18:D:838:G:H2'	18:D:839:C:H6	1.87	0.40
18:D:900:A:H2'	18:D:901:A:O4'	2.21	0.40
18:D:918:A:H2'	18:D:919:A:C8	2.56	0.40
18:D:1043:G:C3'	18:D:1044:A:H5''	2.52	0.40
18:D:1050:G:C6	18:D:1051:C:N4	2.89	0.40
18:D:1065:U:C5	18:D:1190:G:C8	3.09	0.40
18:D:1125:U:C4	18:D:1127:G:C8	3.09	0.40
18:D:1174:G:N1	18:D:1175:G:C5	2.89	0.40
18:D:1385:G:H2'	18:D:1386:G:O4'	2.21	0.40
18:D:1449:C:C2	18:D:1450:U:C6	3.10	0.40
18:D:1523:G:C6	18:D:1524:C:N4	2.89	0.40
18:D:1524:C:C2	18:D:1525:G:N7	2.89	0.40
23:I:113:ALA:N	23:I:183:ASP:OD2	2.31	0.40
31:Q:18:ASP:HA	31:Q:81:ASN:O	2.22	0.40
32:R:114:ARG:O	32:R:115:SER:C	2.64	0.40
35:U:53:ASP:C	35:U:53:ASP:OD1	2.64	0.40
36:V:75:LEU:HD12	36:V:77:ARG:N	2.36	0.40
41:a:35:G:C4	41:a:454:A:C2	3.09	0.40
41:a:115:C:N3	41:a:116:C:C5	2.90	0.40
41:a:315:G:H3'	41:a:316:C:C6	2.56	0.40
41:a:356:G:C6	41:a:357:C:N4	2.90	0.40
41:a:363:G:N1	41:a:364:C:C4	2.90	0.40
41:a:591:U:N3	41:a:592:A:N7	2.70	0.40
41:a:592:A:N6	41:a:666:A:N6	2.69	0.40
41:a:595:C:H2'	41:a:596:U:H6	1.84	0.40
41:a:700:G:O2'	41:a:701:G:H5'	2.22	0.40
41:a:836:G:C5	41:a:837:C:C5	3.10	0.40
41:a:862:G:H2'	41:a:863:A:O4'	2.21	0.40
41:a:871:U:H2'	41:a:872:U:C5	2.57	0.40
41:a:893:C:C4	41:a:894:U:O4	2.74	0.40
41:a:923:G:C5	41:a:924:G:N7	2.89	0.40
41:a:1009:A:O4'	66:z:59:GLN:HG2	2.21	0.40
41:a:1055:G:C6	41:a:1056:G:C4	3.09	0.40
41:a:1073:A:H5''	41:a:1074:G:OP2	2.21	0.40
41:a:1099:G:C6	41:a:1100:C:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:a:1151:A:C6	41:a:1152:C:C4	3.10	0.40
41:a:1259:G:C2	41:a:1260:A:C4	3.09	0.40
41:a:1261:C:C2'	41:a:1262:A:O5'	2.69	0.40
41:a:1286:A:N6	41:a:1329:U:C2	2.89	0.40
41:a:1369:G:O2'	41:a:1370:C:H5'	2.21	0.40
41:a:1488:C:O2'	41:a:1489:C:H5'	2.22	0.40
41:a:1511:G:C4	41:a:1512:C:C5	3.09	0.40
41:a:1549:A:H2'	41:a:1550:C:O4'	2.21	0.40
41:a:1622:G:O2'	41:a:1623:G:H5'	2.22	0.40
41:a:1734:G:C2	41:a:1735:A:C8	3.09	0.40
41:a:1904:G:C2'	41:a:1905:C:H5'	2.51	0.40
41:a:1919:A:N3	41:a:1919:A:H2'	2.36	0.40
41:a:2127:G:C4	41:a:2162:G:N7	2.89	0.40
41:a:2217:G:O2'	41:a:2218:G:H5'	2.22	0.40
41:a:2253:G:N2	41:a:2254:C:H1'	2.36	0.40
41:a:2311:A:O2'	41:a:2312:U:O4'	2.34	0.40
41:a:2469:A:C6	41:a:2482:A:C8	3.10	0.40
41:a:2621:G:O2'	41:a:2622:U:H5'	2.21	0.40
41:a:2660:A:H2'	41:a:2661:G:O4'	2.21	0.40
41:a:2703:C:O2	41:a:2704:C:C6	2.75	0.40
41:a:2802:G:O2'	41:a:2803:G:H5'	2.21	0.40
41:a:2820:A:C2'	41:a:2821:A:OP1	2.69	0.40
41:a:2832:U:C4	41:a:2834:G:N2	2.90	0.40
41:a:2838:G:C5	41:a:2839:G:N7	2.89	0.40
41:a:2840:C:H2'	41:a:2841:C:C6	2.56	0.40
44:d:30:C:O2	44:d:30:C:C2'	2.66	0.40
54:n:22:TYR:HB3	54:n:27:GLN:OE1	2.21	0.40
58:r:9:VAL:HB	58:r:12:LEU:HG	2.02	0.40
58:r:69:ALA:O	58:r:72:ILE:CD1	2.70	0.40
60:t:123:LEU:N	60:t:123:LEU:CD1	2.84	0.40
63:w:70:THR:O	63:w:71:ARG:HB2	2.21	0.40
64:x:7:ARG:HA	64:x:10:ARG:NH2	2.36	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	101/103 (98%)	92 (91%)	9 (9%)	0	100	100
2	1	108/110 (98%)	104 (96%)	4 (4%)	0	100	100
3	2	92/100 (92%)	89 (97%)	3 (3%)	0	100	100
4	3	101/104 (97%)	97 (96%)	4 (4%)	0	100	100
5	4	92/94 (98%)	89 (97%)	3 (3%)	0	100	100
9	9	146/165 (88%)	107 (73%)	37 (25%)	2 (1%)	9	39
11	AA	1338/1342 (100%)	1206 (90%)	126 (9%)	6 (0%)	30	62
12	AB	158/181 (87%)	119 (75%)	26 (16%)	13 (8%)	0	4
13	AC	295/329 (90%)	274 (93%)	19 (6%)	2 (1%)	18	52
13	AD	293/329 (89%)	269 (92%)	24 (8%)	0	100	100
14	AE	1329/1407 (94%)	1199 (90%)	121 (9%)	9 (1%)	18	52
15	AF	80/91 (88%)	77 (96%)	3 (4%)	0	100	100
16	AG	493/495 (100%)	377 (76%)	85 (17%)	31 (6%)	1	8
17	C	64/75 (85%)	61 (95%)	3 (5%)	0	100	100
19	E	84/87 (97%)	82 (98%)	2 (2%)	0	100	100
20	F	68/71 (96%)	67 (98%)	1 (2%)	0	100	100
21	G	223/241 (92%)	209 (94%)	13 (6%)	1 (0%)	30	62
22	H	255/557 (46%)	201 (79%)	45 (18%)	9 (4%)	3	20
23	I	206/233 (88%)	200 (97%)	6 (3%)	0	100	100
24	J	203/206 (98%)	199 (98%)	4 (2%)	0	100	100
25	K	154/167 (92%)	146 (95%)	6 (4%)	2 (1%)	9	40
26	L	102/135 (76%)	97 (95%)	4 (4%)	1 (1%)	12	45
27	M	149/179 (83%)	139 (93%)	9 (6%)	1 (1%)	18	52
28	N	127/130 (98%)	124 (98%)	3 (2%)	0	100	100
29	O	125/130 (96%)	118 (94%)	6 (5%)	1 (1%)	16	50
30	P	97/103 (94%)	88 (91%)	8 (8%)	1 (1%)	12	45
31	Q	115/129 (89%)	105 (91%)	10 (9%)	0	100	100
32	R	117/124 (94%)	112 (96%)	4 (3%)	1 (1%)	14	47
33	S	98/101 (97%)	96 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	T	86/89 (97%)	83 (96%)	3 (4%)	0	100	100
35	U	80/82 (98%)	77 (96%)	3 (4%)	0	100	100
36	V	78/84 (93%)	74 (95%)	4 (5%)	0	100	100
37	W	81/92 (88%)	78 (96%)	3 (4%)	0	100	100
38	X	114/118 (97%)	104 (91%)	8 (7%)	2 (2%)	6	34
39	Y	139/142 (98%)	113 (81%)	25 (18%)	1 (1%)	18	52
40	Z	28/121 (23%)	24 (86%)	4 (14%)	0	100	100
42	b	74/85 (87%)	70 (95%)	4 (5%)	0	100	100
43	c	75/78 (96%)	72 (96%)	3 (4%)	0	100	100
45	e	60/63 (95%)	59 (98%)	1 (2%)	0	100	100
46	f	56/59 (95%)	53 (95%)	3 (5%)	0	100	100
47	g	64/70 (91%)	62 (97%)	2 (3%)	0	100	100
48	h	269/273 (98%)	254 (94%)	15 (6%)	0	100	100
49	i	54/57 (95%)	48 (89%)	6 (11%)	0	100	100
50	j	207/209 (99%)	198 (96%)	9 (4%)	0	100	100
51	k	50/55 (91%)	49 (98%)	1 (2%)	0	100	100
52	l	199/201 (99%)	192 (96%)	7 (4%)	0	100	100
53	m	44/46 (96%)	42 (96%)	2 (4%)	0	100	100
54	n	175/179 (98%)	168 (96%)	6 (3%)	1 (1%)	21	56
55	o	62/65 (95%)	56 (90%)	5 (8%)	1 (2%)	7	36
56	p	173/177 (98%)	165 (95%)	7 (4%)	1 (1%)	21	56
57	q	36/38 (95%)	36 (100%)	0	0	100	100
58	r	147/149 (99%)	137 (93%)	10 (7%)	0	100	100
59	s	140/142 (99%)	137 (98%)	3 (2%)	0	100	100
60	t	121/123 (98%)	114 (94%)	7 (6%)	0	100	100
61	u	142/144 (99%)	133 (94%)	9 (6%)	0	100	100
62	v	134/136 (98%)	126 (94%)	8 (6%)	0	100	100
63	w	117/127 (92%)	111 (95%)	6 (5%)	0	100	100
64	x	114/117 (97%)	113 (99%)	1 (1%)	0	100	100
65	y	112/115 (97%)	109 (97%)	3 (3%)	0	100	100
66	z	115/118 (98%)	110 (96%)	5 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
All	All	10159/11072 (92%)	9310 (92%)	763 (8%)	86 (1%)	18	50

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
9	9	79	PRO
11	AA	888	THR
12	AB	121	LYS
12	AB	122	PRO
12	AB	123	ARG
12	AB	175	PHE
16	AG	34	ALA
16	AG	105	ILE
16	AG	187	ARG
16	AG	221	ILE
16	AG	227	ALA
21	G	127	ASP
22	H	170	ARG
22	H	304	VAL
22	H	305	HIS
22	H	309	MET
11	AA	905	ILE
11	AA	913	VAL
11	AA	918	LEU
12	AB	125	LYS
12	AB	126	THR
14	AE	175	GLU
16	AG	63	LEU
16	AG	104	ARG
16	AG	268	GLY
16	AG	279	ASN
16	AG	350	ALA
16	AG	365	ILE
22	H	71	ALA
22	H	172	ALA
27	M	56	LYS
12	AB	124	PRO
14	AE	51	PRO
14	AE	805	GLN
16	AG	33	THR
16	AG	102	PHE
16	AG	200	SER

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Mol	Chain	Res	Type
16	AG	305	MET
16	AG	319	GLY
16	AG	355	ALA
16	AG	396	GLU
16	AG	425	LEU
22	H	143	ASP
25	K	91	GLY
29	O	13	LYS
54	n	177	PHE
56	p	48	ASN
11	AA	921	PRO
12	AB	105	ASP
12	AB	180	LYS
13	AC	193	GLU
14	AE	174	ASP
14	AE	193	ASP
16	AG	48	GLN
16	AG	265	GLU
16	AG	363	LEU
16	AG	401	PRO
22	H	340	ARG
25	K	78	ASN
38	X	6	GLY
55	o	32	ILE
12	AB	167	ARG
12	AB	178	VAL
12	AB	179	GLU
14	AE	91	GLU
16	AG	224	LYS
16	AG	399	ASP
32	R	103	ASP
13	AC	192	VAL
14	AE	49	PHE
14	AE	73	GLY
14	AE	904	ALA
16	AG	43	ILE
16	AG	70	GLN
16	AG	169	PRO
16	AG	323	GLN
16	AG	364	ASP
16	AG	382	GLU
12	AB	170	PRO

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Mol	Chain	Res	Type
22	H	275	PRO
30	P	57	VAL
38	X	65	VAL
9	9	130	PRO
11	AA	1317	PRO
39	Y	21	PRO
26	L	96	VAL

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	84/84 (100%)	79 (94%)	5 (6%)	17	50
2	1	93/93 (100%)	84 (90%)	9 (10%)	8	32
3	2	81/84 (96%)	77 (95%)	4 (5%)	22	55
4	3	84/85 (99%)	78 (93%)	6 (7%)	13	44
5	4	78/78 (100%)	75 (96%)	3 (4%)	29	62
9	9	112/123 (91%)	80 (71%)	32 (29%)	0	2
11	AA	1155/1157 (100%)	1136 (98%)	19 (2%)	55	75
12	AB	138/158 (87%)	108 (78%)	30 (22%)	1	6
13	AC	186/286 (65%)	186 (100%)	0	100	100
13	AD	185/286 (65%)	185 (100%)	0	100	100
14	AE	1120/1168 (96%)	1046 (93%)	74 (7%)	15	47
15	AF	70/75 (93%)	69 (99%)	1 (1%)	59	77
16	AG	409/409 (100%)	288 (70%)	121 (30%)	0	1
17	C	57/65 (88%)	54 (95%)	3 (5%)	20	53
19	E	65/66 (98%)	62 (95%)	3 (5%)	24	58
20	F	60/61 (98%)	57 (95%)	3 (5%)	22	55
21	G	187/199 (94%)	177 (95%)	10 (5%)	20	53
22	H	137/461 (30%)	124 (90%)	13 (10%)	8	32

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	I	171/190 (90%)	161 (94%)	10 (6%)	18	51
24	J	172/173 (99%)	164 (95%)	8 (5%)	23	57
25	K	119/126 (94%)	111 (93%)	8 (7%)	15	47
26	L	91/116 (78%)	81 (89%)	10 (11%)	6	26
27	M	124/147 (84%)	116 (94%)	8 (6%)	15	47
28	N	104/105 (99%)	100 (96%)	4 (4%)	29	62
29	O	105/107 (98%)	98 (93%)	7 (7%)	15	47
30	P	86/90 (96%)	76 (88%)	10 (12%)	5	24
31	Q	90/99 (91%)	87 (97%)	3 (3%)	33	65
32	R	101/104 (97%)	92 (91%)	9 (9%)	9	34
33	S	83/84 (99%)	76 (92%)	7 (8%)	10	38
34	T	76/77 (99%)	63 (83%)	13 (17%)	2	11
35	U	65/65 (100%)	59 (91%)	6 (9%)	8	33
36	V	74/78 (95%)	70 (95%)	4 (5%)	20	53
37	W	72/79 (91%)	69 (96%)	3 (4%)	26	60
38	X	94/96 (98%)	84 (89%)	10 (11%)	6	27
39	Y	109/110 (99%)	85 (78%)	24 (22%)	1	6
40	Z	26/85 (31%)	16 (62%)	10 (38%)	0	0
42	b	58/63 (92%)	58 (100%)	0	100	100
43	c	67/68 (98%)	63 (94%)	4 (6%)	17	50
45	e	54/55 (98%)	52 (96%)	2 (4%)	30	63
46	f	48/49 (98%)	46 (96%)	2 (4%)	26	60
47	g	59/62 (95%)	56 (95%)	3 (5%)	21	54
48	h	216/218 (99%)	202 (94%)	14 (6%)	15	47
49	i	47/48 (98%)	41 (87%)	6 (13%)	4	20
50	j	164/164 (100%)	156 (95%)	8 (5%)	22	55
51	k	47/49 (96%)	46 (98%)	1 (2%)	47	71
52	l	165/165 (100%)	153 (93%)	12 (7%)	13	43
53	m	38/38 (100%)	36 (95%)	2 (5%)	20	53
54	n	148/150 (99%)	134 (90%)	14 (10%)	8	32
55	o	51/52 (98%)	49 (96%)	2 (4%)	28	62

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
56	p	136/138 (99%)	131 (96%)	5 (4%)	30	63
57	q	34/34 (100%)	32 (94%)	2 (6%)	18	50
58	r	114/114 (100%)	103 (90%)	11 (10%)	8	32
59	s	116/116 (100%)	108 (93%)	8 (7%)	14	45
60	t	104/104 (100%)	95 (91%)	9 (9%)	9	36
61	u	103/103 (100%)	97 (94%)	6 (6%)	18	51
62	v	109/109 (100%)	105 (96%)	4 (4%)	30	63
63	w	99/103 (96%)	94 (95%)	5 (5%)	21	54
64	x	86/87 (99%)	81 (94%)	5 (6%)	18	51
65	y	99/100 (99%)	92 (93%)	7 (7%)	13	44
66	z	89/90 (99%)	86 (97%)	3 (3%)	32	64
All	All	8314/9148 (91%)	7689 (92%)	625 (8%)	14	42

All (625) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	10	LYS
1	0	38	VAL
1	0	47	VAL
1	0	48	LYS
1	0	86	GLN
2	1	7	HIS
2	1	19	LEU
2	1	30	SER
2	1	41	LYS
2	1	69	LEU
2	1	97	LEU
2	1	107	VAL
2	1	108	SER
2	1	110	ARG
3	2	1	MET
3	2	17	SER
3	2	24	MET
3	2	93	LEU
4	3	28	VAL
4	3	52	LEU
4	3	68	SER
4	3	72	ILE

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Mol	Chain	Res	Type
4	3	99	ASN
4	3	101	GLU
5	4	40	ILE
5	4	69	GLU
5	4	71	LYS
9	9	1	MET
9	9	3	LEU
9	9	4	ASN
9	9	5	LEU
9	9	6	GLN
9	9	7	ASP
9	9	35	VAL
9	9	42	ARG
9	9	43	LYS
9	9	46	ARG
9	9	50	VAL
9	9	53	ARG
9	9	56	ARG
9	9	59	LEU
9	9	61	ARG
9	9	65	GLU
9	9	69	PHE
9	9	72	LEU
9	9	81	LEU
9	9	87	GLU
9	9	96	PHE
9	9	98	GLU
9	9	106	PHE
9	9	107	GLU
9	9	108	VAL
9	9	113	PHE
9	9	122	GLN
9	9	123	ILE
9	9	125	ARG
9	9	129	LEU
9	9	133	GLU
9	9	134	GLU
11	AA	145	ILE
11	AA	615	VAL
11	AA	888	THR
11	AA	890	LYS
11	AA	892	GLU

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Mol	Chain	Res	Type
11	AA	893	THR
11	AA	894	GLN
11	AA	895	LEU
11	AA	896	THR
11	AA	902	LEU
11	AA	903	ARG
11	AA	905	ILE
11	AA	906	PHE
11	AA	914	LYS
11	AA	915	ASP
11	AA	918	LEU
11	AA	920	VAL
11	AA	1076	ILE
11	AA	1151	LEU
12	AB	104	SER
12	AB	105	ASP
12	AB	106	LYS
12	AB	114	ARG
12	AB	123	ARG
12	AB	125	LYS
12	AB	127	LEU
12	AB	129	GLU
12	AB	136	VAL
12	AB	138	ASP
12	AB	141	PHE
12	AB	145	ASN
12	AB	148	VAL
12	AB	150	GLU
12	AB	151	VAL
12	AB	153	TYR
12	AB	154	GLU
12	AB	155	LYS
12	AB	157	ARG
12	AB	159	LYS
12	AB	161	SER
12	AB	163	SER
12	AB	164	ILE
12	AB	167	ARG
12	AB	169	THR
12	AB	171	VAL
12	AB	172	GLU
12	AB	177	GLN

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Mol	Chain	Res	Type
12	AB	179	GLU
12	AB	180	LYS
14	AE	40	LYS
14	AE	42	GLU
14	AE	44	ILE
14	AE	46	TYR
14	AE	47	ARG
14	AE	49	PHE
14	AE	50	LYS
14	AE	52	GLU
14	AE	53	ARG
14	AE	54	ASP
14	AE	56	LEU
14	AE	60	ARG
14	AE	66	LYS
14	AE	67	ASP
14	AE	70	CYS
14	AE	74	LYS
14	AE	76	LYS
14	AE	78	LEU
14	AE	80	HIS
14	AE	81	ARG
14	AE	87	LYS
14	AE	88	CYS
14	AE	91	GLU
14	AE	94	GLN
14	AE	95	THR
14	AE	96	LYS
14	AE	99	ARG
14	AE	100	GLU
14	AE	114	ILE
14	AE	117	LEU
14	AE	119	SER
14	AE	123	ARG
14	AE	132	LEU
14	AE	135	ILE
14	AE	142	GLU
14	AE	144	TYR
14	AE	145	VAL
14	AE	146	VAL
14	AE	147	ILE
14	AE	152	THR

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Mol	Chain	Res	Type
14	AE	154	LEU
14	AE	157	GLN
14	AE	159	ILE
14	AE	175	GLU
14	AE	180	MET
14	AE	190	LYS
14	AE	193	ASP
14	AE	196	GLN
14	AE	210	SER
14	AE	212	THR
14	AE	216	LYS
14	AE	222	LYS
14	AE	223	LEU
14	AE	227	PHE
14	AE	233	LYS
14	AE	237	MET
14	AE	238	ILE
14	AE	239	LEU
14	AE	240	THR
14	AE	244	VAL
14	AE	271	ARG
14	AE	324	LEU
14	AE	385	LEU
14	AE	386	GLU
14	AE	387	LEU
14	AE	390	LEU
14	AE	393	THR
14	AE	394	ILE
14	AE	395	LYS
14	AE	506	VAL
14	AE	514	THR
14	AE	839	VAL
14	AE	1172	LYS
14	AE	1233	ILE
15	AF	63	ILE
16	AG	5	ILE
16	AG	12	VAL
16	AG	16	LYS
16	AG	36	LYS
16	AG	37	LYS
16	AG	40	GLU
16	AG	43	ILE

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Mol	Chain	Res	Type
16	AG	47	VAL
16	AG	49	ILE
16	AG	50	ASP
16	AG	56	PHE
16	AG	57	ASP
16	AG	61	ARG
16	AG	63	LEU
16	AG	75	ILE
16	AG	97	ILE
16	AG	103	ASP
16	AG	104	ARG
16	AG	114	ILE
16	AG	117	LYS
16	AG	123	ARG
16	AG	125	MET
16	AG	126	VAL
16	AG	131	ARG
16	AG	138	ILE
16	AG	139	THR
16	AG	144	LYS
16	AG	150	ILE
16	AG	154	LEU
16	AG	157	ASN
16	AG	162	ILE
16	AG	167	MET
16	AG	173	PHE
16	AG	174	ARG
16	AG	179	VAL
16	AG	180	ARG
16	AG	182	VAL
16	AG	187	ARG
16	AG	189	GLU
16	AG	195	LEU
16	AG	197	VAL
16	AG	199	ARG
16	AG	201	LYS
16	AG	203	GLU
16	AG	204	MET
16	AG	205	LEU
16	AG	206	ILE
16	AG	207	GLU
16	AG	210	ARG

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Mol	Chain	Res	Type
16	AG	211	ILE
16	AG	215	GLU
16	AG	216	ILE
16	AG	218	GLU
16	AG	219	GLU
16	AG	221	ILE
16	AG	223	ILE
16	AG	232	SER
16	AG	235	LYS
16	AG	236	ILE
16	AG	238	VAL
16	AG	239	LYS
16	AG	240	THR
16	AG	243	LYS
16	AG	244	ARG
16	AG	245	ILE
16	AG	254	MET
16	AG	255	ARG
16	AG	258	ARG
16	AG	259	VAL
16	AG	260	GLN
16	AG	262	VAL
16	AG	265	GLU
16	AG	270	ARG
16	AG	271	ILE
16	AG	273	ILE
16	AG	274	VAL
16	AG	276	TRP
16	AG	278	ASP
16	AG	282	GLN
16	AG	285	ILE
16	AG	288	MET
16	AG	296	ILE
16	AG	297	VAL
16	AG	299	ASP
16	AG	300	GLU
16	AG	301	ASP
16	AG	302	LYS
16	AG	303	HIS
16	AG	305	MET
16	AG	309	VAL
16	AG	310	GLU

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Mol	Chain	Res	Type
16	AG	313	ASN
16	AG	316	GLN
16	AG	320	ARG
16	AG	321	ASN
16	AG	323	GLN
16	AG	327	LEU
16	AG	331	LEU
16	AG	335	GLU
16	AG	336	LEU
16	AG	337	ASN
16	AG	338	VAL
16	AG	340	THR
16	AG	341	VAL
16	AG	342	ASP
16	AG	344	LEU
16	AG	356	ILE
16	AG	358	THR
16	AG	359	PHE
16	AG	361	LYS
16	AG	365	ILE
16	AG	380	THR
16	AG	387	VAL
16	AG	390	LYS
16	AG	396	GLU
16	AG	398	LEU
16	AG	399	ASP
16	AG	400	GLU
16	AG	425	LEU
16	AG	428	ASN
16	AG	429	LYS
17	C	11	CYS
17	C	71	THR
17	C	74	HIS
19	E	48	GLN
19	E	64	LYS
19	E	70	ASN
20	F	16	LEU
20	F	62	ARG
20	F	67	ARG
21	G	45	LYS
21	G	59	LYS
21	G	105	LYS

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Mol	Chain	Res	Type
21	G	108	ARG
21	G	127	ASP
21	G	128	LYS
21	G	129	LEU
21	G	132	LYS
21	G	161	LEU
21	G	208	ARG
22	H	54	LYS
22	H	62	ILE
22	H	70	VAL
22	H	72	LEU
22	H	73	ASP
22	H	75	VAL
22	H	82	THR
22	H	270	ILE
22	H	288	THR
22	H	308	GLU
22	H	336	ASP
22	H	337	GLU
22	H	338	GLU
23	I	14	ILE
23	I	33	LEU
23	I	75	ILE
23	I	89	LYS
23	I	97	VAL
23	I	107	ARG
23	I	112	ASP
23	I	172	ARG
23	I	175	LEU
23	I	200	VAL
24	J	47	ARG
24	J	48	LEU
24	J	95	GLU
24	J	104	ARG
24	J	105	MET
24	J	116	GLN
24	J	143	VAL
24	J	190	ASP
25	K	10	GLU
25	K	15	LEU
25	K	60	ILE
25	K	69	ARG

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Mol	Chain	Res	Type
25	K	114	VAL
25	K	115	LEU
25	K	138	ARG
25	K	148	ASN
26	L	5	GLU
26	L	7	VAL
26	L	16	GLU
26	L	24	ARG
26	L	36	ILE
26	L	38	ARG
26	L	54	LEU
26	L	69	GLU
26	L	86	ARG
26	L	88	MET
27	M	7	ILE
27	M	17	LYS
27	M	23	LEU
27	M	27	VAL
27	M	79	ARG
27	M	91	VAL
27	M	109	ARG
27	M	123	GLU
28	N	74	SER
28	N	104	VAL
28	N	117	ARG
28	N	121	LEU
29	O	27	LYS
29	O	60	LYS
29	O	61	LEU
29	O	62	ASP
29	O	63	LEU
29	O	116	VAL
29	O	118	LEU
30	P	14	ASP
30	P	16	ARG
30	P	17	LEU
30	P	24	GLU
30	P	25	ILE
30	P	27	GLU
30	P	37	ARG
30	P	54	SER
30	P	87	LEU

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Mol	Chain	Res	Type
30	P	90	LEU
31	Q	15	GLN
31	Q	100	LEU
31	Q	107	ILE
32	R	5	ASN
32	R	20	ASN
32	R	24	LEU
32	R	30	LYS
32	R	56	ARG
32	R	62	GLU
32	R	64	THR
32	R	74	LEU
32	R	76	GLU
33	S	38	ASP
33	S	45	VAL
33	S	46	LEU
33	S	55	SER
33	S	59	ARG
33	S	89	MET
33	S	92	GLU
34	T	10	LYS
34	T	18	ASP
34	T	22	THR
34	T	39	LEU
34	T	40	GLN
34	T	64	ARG
34	T	66	LEU
34	T	67	LEU
34	T	70	LEU
34	T	73	LYS
34	T	74	ASP
34	T	84	ARG
34	T	85	LEU
35	U	1	MET
35	U	2	VAL
35	U	3	THR
35	U	6	LEU
35	U	18	GLN
35	U	19	VAL
36	V	50	ASN
36	V	51	ASN
36	V	75	LEU

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Mol	Chain	Res	Type
36	V	81	LYS
37	W	21	LYS
37	W	63	THR
37	W	81	ARG
38	X	16	VAL
38	X	25	VAL
38	X	29	ARG
38	X	59	GLU
38	X	68	ASP
38	X	81	MET
38	X	92	ARG
38	X	93	ARG
38	X	104	THR
38	X	117	LYS
39	Y	4	VAL
39	Y	5	GLN
39	Y	10	LEU
39	Y	23	VAL
39	Y	27	LEU
39	Y	30	GLN
39	Y	48	ILE
39	Y	50	LYS
39	Y	60	VAL
39	Y	61	TYR
39	Y	69	VAL
39	Y	85	ILE
39	Y	91	LYS
39	Y	95	ASP
39	Y	99	LYS
39	Y	100	ILE
39	Y	102	ARG
39	Y	104	GLN
39	Y	105	LEU
39	Y	112	LYS
39	Y	116	MET
39	Y	124	MET
39	Y	131	THR
39	Y	135	MET
40	Z	4	LYS
40	Z	6	GLN
40	Z	8	ILE
40	Z	11	VAL

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Mol	Chain	Res	Type
40	Z	16	VAL
40	Z	21	GLU
40	Z	23	ILE
40	Z	26	MET
40	Z	28	GLU
40	Z	30	PHE
43	c	5	CYS
43	c	29	PHE
43	c	48	THR
43	c	60	ASP
45	e	18	LEU
45	e	49	ASP
46	f	3	LYS
46	f	31	ARG
47	g	3	LYS
47	g	47	LYS
47	g	64	PHE
48	h	40	SER
48	h	51	THR
48	h	114	ASP
48	h	130	LEU
48	h	141	VAL
48	h	156	ARG
48	h	187	ASP
48	h	195	VAL
48	h	202	LEU
48	h	203	ARG
48	h	204	VAL
48	h	205	LEU
48	h	258	ARG
48	h	261	LYS
49	i	9	THR
49	i	12	LYS
49	i	26	THR
49	i	29	SER
49	i	31	ASP
49	i	40	ARG
50	j	13	ARG
50	j	52	THR
50	j	77	ARG
50	j	91	THR
50	j	100	LEU

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Mol	Chain	Res	Type
50	j	130	GLN
50	j	151	THR
50	j	193	VAL
51	k	5	ILE
52	l	17	THR
52	l	21	ARG
52	l	40	ARG
52	l	57	LYS
52	l	69	ARG
52	l	108	ILE
52	l	109	LEU
52	l	122	GLU
52	l	140	ASP
52	l	149	ILE
52	l	179	SER
52	l	184	ASP
53	m	24	THR
53	m	42	LEU
54	n	26	MET
54	n	40	VAL
54	n	47	LYS
54	n	57	LEU
54	n	80	ARG
54	n	115	ARG
54	n	117	LEU
54	n	122	PHE
54	n	123	ASP
54	n	132	VAL
54	n	133	ARG
54	n	140	GLU
54	n	141	ILE
54	n	163	ASP
55	o	31	HIS
55	o	55	LEU
56	p	11	VAL
56	p	95	ARG
56	p	133	LEU
56	p	171	THR
56	p	176	LYS
57	q	3	VAL
57	q	26	ILE
58	r	1	MET

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Mol	Chain	Res	Type
58	r	9	VAL
58	r	11	ASN
58	r	12	LEU
58	r	15	LEU
58	r	41	LYS
58	r	66	ASN
58	r	72	ILE
58	r	101	ASP
58	r	119	ASN
58	r	127	GLU
59	s	1	MET
59	s	30	THR
59	s	31	GLU
59	s	40	HIS
59	s	43	GLU
59	s	57	LEU
59	s	140	LEU
59	s	142	ILE
60	t	7	MET
60	t	21	CYS
60	t	35	VAL
60	t	49	ARG
60	t	67	LYS
60	t	70	ARG
60	t	80	ASP
60	t	89	ASN
60	t	104	THR
61	u	5	THR
61	u	27	LEU
61	u	42	SER
61	u	59	ARG
61	u	78	ARG
61	u	84	LYS
62	v	60	GLN
62	v	100	LYS
62	v	127	LYS
62	v	128	THR
63	w	2	ARG
63	w	20	MET
63	w	51	LEU
63	w	65	LEU
63	w	69	ARG

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Mol	Chain	Res	Type
64	x	13	ARG
64	x	47	VAL
64	x	48	LEU
64	x	91	SER
64	x	98	GLN
65	y	8	LEU
65	y	21	ARG
65	y	27	GLU
65	y	40	LEU
65	y	85	SER
65	y	102	GLU
65	y	114	LEU
66	z	3	ARG
66	z	51	ARG
66	z	117	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (79) such sidechains are listed below:

Mol	Chain	Res	Type
3	2	59	ASN
9	9	57	ASN
11	AA	69	GLN
11	AA	314	ASN
11	AA	330	HIS
11	AA	343	HIS
11	AA	513	GLN
11	AA	554	HIS
11	AA	688	GLN
11	AA	762	ASN
11	AA	808	ASN
11	AA	1237	HIS
11	AA	1268	GLN
11	AA	1313	HIS
13	AC	23	HIS
13	AD	66	HIS
13	AD	84	ASN
13	AD	117	HIS
13	AD	128	HIS
13	AD	227	GLN
14	AE	94	GLN
14	AE	196	GLN
14	AE	294	ASN

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Mol	Chain	Res	Type
14	AE	469	HIS
14	AE	865	HIS
14	AE	1195	GLN
14	AE	1238	GLN
14	AE	1249	ASN
14	AE	1259	GLN
15	AF	7	GLN
15	AF	31	GLN
15	AF	62	GLN
16	AG	194	GLN
16	AG	241	ASN
16	AG	260	GLN
16	AG	282	GLN
16	AG	316	GLN
16	AG	323	GLN
16	AG	324	ASN
16	AG	337	ASN
16	AG	428	ASN
17	C	19	GLN
19	E	13	GLN
19	E	48	GLN
20	F	56	HIS
21	G	18	HIS
21	G	168	HIS
23	I	69	HIS
24	J	36	GLN
24	J	140	ASN
25	K	70	ASN
25	K	89	HIS
25	K	121	HIS
26	L	94	HIS
27	M	68	ASN
27	M	130	ASN
27	M	148	ASN
30	P	58	ASN
34	T	80	GLN
38	X	14	HIS
38	X	105	ASN
45	e	36	GLN
47	g	6	HIS
50	j	149	ASN
50	j	150	GLN

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Mol	Chain	Res	Type
51	k	26	ASN
52	l	163	ASN
55	o	28	ASN
55	o	31	HIS
56	p	104	ASN
58	r	11	ASN
58	r	18	GLN
59	s	80	HIS
61	u	4	ASN
62	v	13	HIS
63	w	3	HIS
64	x	29	HIS
65	y	41	GLN
66	z	71	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
10	A	76/76 (100%)	33 (43%)	10 (13%)
10	B	75/76 (98%)	41 (54%)	8 (10%)
18	D	1513/1542 (98%)	282 (18%)	8 (0%)
41	a	2859/2904 (98%)	534 (18%)	0
44	d	119/120 (99%)	18 (15%)	0
8	7	32/41 (78%)	19 (59%)	4 (12%)
All	All	4674/4759 (98%)	927 (19%)	30 (0%)

All (927) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
8	7	-19	U
8	7	-17	U
8	7	-16	U
8	7	-15	U
8	7	-14	U
8	7	-13	U
8	7	-12	U
8	7	-11	U
8	7	-10	U
8	7	-9	U
8	7	-8	U
8	7	-7	U

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Mol	Chain	Res	Type
8	7	-5	U
8	7	-4	U
8	7	-3	U
8	7	-2	U
8	7	1	U
8	7	12	G
8	7	13	G
10	A	2	G
10	A	4	G
10	A	6	G
10	A	7	G
10	A	8	U
10	A	10	G
10	A	13	C
10	A	14	A
10	A	16	C
10	A	17	C
10	A	18	G
10	A	19	G
10	A	20	U
10	A	21	A
10	A	22	G
10	A	23	C
10	A	45	G
10	A	46	G
10	A	47	U
10	A	48	C
10	A	49	G
10	A	52	G
10	A	54	U
10	A	57	A
10	A	58	A
10	A	59	A
10	A	60	U
10	A	61	C
10	A	66	C
10	A	67	C
10	A	69	C
10	A	71	C
10	A	73	A
10	B	2	G
10	B	6	G

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Mol	Chain	Res	Type
10	B	7	G
10	B	8	U
10	B	10	G
10	B	13	C
10	B	14	A
10	B	16	C
10	B	17	C
10	B	18	G
10	B	19	G
10	B	20	U
10	B	21	A
10	B	22	G
10	B	23	C
10	B	24	U
10	B	29	G
10	B	30	G
10	B	32	C
10	B	33	U
10	B	36	U
10	B	37	A
10	B	38	A
10	B	39	C
10	B	45	G
10	B	46	G
10	B	47	U
10	B	48	C
10	B	49	G
10	B	52	G
10	B	56	C
10	B	57	A
10	B	58	A
10	B	59	A
10	B	60	U
10	B	61	C
10	B	66	C
10	B	67	C
10	B	69	C
10	B	71	C
10	B	73	A
18	D	4	U
18	D	7	A
18	D	9	G

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Mol	Chain	Res	Type
18	D	22	G
18	D	32	A
18	D	39	G
18	D	47	C
18	D	48	C
18	D	50	A
18	D	51	A
18	D	52	C
18	D	68	G
18	D	69	G
18	D	71	A
18	D	72	A
18	D	74	A
18	D	75	G
18	D	76	G
18	D	77	A
18	D	81	A
18	D	82	G
18	D	83	C
18	D	84	U
18	D	87	C
18	D	92	U
18	D	94	G
18	D	95	C
18	D	108	G
18	D	120	A
18	D	121	U
18	D	122	G
18	D	131	A
18	D	141	G
18	D	142	G
18	D	144	G
18	D	146	G
18	D	160	A
18	D	163	C
18	D	164	G
18	D	168	G
18	D	169	C
18	D	173	U
18	D	180	U
18	D	181	A
18	D	182	A

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Mol	Chain	Res	Type
18	D	189	A
18	D	197	A
18	D	198	G
18	D	204	G
18	D	208	U
18	D	210	C
18	D	211	G
18	D	212	G
18	D	226	G
18	D	240	G
18	D	245	U
18	D	247	G
18	D	251	G
18	D	262	A
18	D	266	G
18	D	267	C
18	D	279	A
18	D	289	G
18	D	306	A
18	D	321	A
18	D	328	C
18	D	329	A
18	D	330	C
18	D	332	G
18	D	352	C
18	D	353	A
18	D	354	G
18	D	355	C
18	D	367	U
18	D	372	C
18	D	373	A
18	D	376	G
18	D	381	C
18	D	389	A
18	D	392	C
18	D	397	A
18	D	398	U
18	D	406	G
18	D	412	A
18	D	413	G
18	D	414	A
18	D	421	U

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Mol	Chain	Res	Type
18	D	422	C
18	D	429	U
18	D	451	A
18	D	456	A
18	D	457	G
18	D	458	U
18	D	463	U
18	D	464	U
18	D	467	U
18	D	468	A
18	D	469	C
18	D	476	U
18	D	478	A
18	D	479	U
18	D	481	G
18	D	484	G
18	D	485	U
18	D	486	U
18	D	493	A
18	D	494	G
18	D	496	A
18	D	511	C
18	D	515	G
18	D	518	C
18	D	519	C
18	D	521	G
18	D	531	U
18	D	532	A
18	D	533	A
18	D	547	A
18	D	559	A
18	D	562	U
18	D	564	C
18	D	568	G
18	D	572	A
18	D	573	A
18	D	576	C
18	D	577	G
18	D	579	A
18	D	596	A
18	D	639	G
18	D	650	G

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Mol	Chain	Res	Type
18	D	653	U
18	D	660	C
18	D	665	A
18	D	671	G
18	D	687	A
18	D	700	G
18	D	702	A
18	D	718	A
18	D	721	G
18	D	723	U
18	D	724	G
18	D	731	G
18	D	733	G
18	D	747	A
18	D	748	G
18	D	759	A
18	D	760	G
18	D	777	A
18	D	792	A
18	D	793	U
18	D	794	A
18	D	802	A
18	D	815	A
18	D	817	C
18	D	819	A
18	D	828	U
18	D	829	G
18	D	832	G
18	D	841	C
18	D	844	G
18	D	845	A
18	D	846	G
18	D	849	G
18	D	887	G
18	D	889	A
18	D	902	G
18	D	914	A
18	D	916	U
18	D	926	G
18	D	934	C
18	D	935	A
18	D	958	A

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Mol	Chain	Res	Type
18	D	960	U
18	D	969	A
18	D	975	A
18	D	976	G
18	D	977	A
18	D	992	U
18	D	993	G
18	D	996	A
18	D	999	C
18	D	1004	A
18	D	1005	A
18	D	1008	U
18	D	1009	U
18	D	1017	U
18	D	1018	G
18	D	1021	A
18	D	1026	G
18	D	1027	C
18	D	1028	C
18	D	1030	U
18	D	1031	C
18	D	1032	G
18	D	1033	G
18	D	1037	C
18	D	1043	G
18	D	1044	A
18	D	1046	A
18	D	1065	U
18	D	1085	U
18	D	1094	G
18	D	1095	U
18	D	1101	A
18	D	1108	G
18	D	1124	G
18	D	1132	C
18	D	1133	G
18	D	1135	U
18	D	1136	C
18	D	1137	C
18	D	1139	G
18	D	1140	C
18	D	1141	C

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Mol	Chain	Res	Type
18	D	1142	G
18	D	1145	A
18	D	1146	A
18	D	1151	A
18	D	1152	A
18	D	1154	G
18	D	1158	C
18	D	1159	U
18	D	1167	A
18	D	1171	A
18	D	1174	G
18	D	1175	G
18	D	1176	A
18	D	1184	G
18	D	1196	A
18	D	1197	A
18	D	1212	U
18	D	1213	A
18	D	1215	G
18	D	1227	A
18	D	1238	A
18	D	1239	A
18	D	1257	A
18	D	1275	A
18	D	1276	G
18	D	1278	G
18	D	1279	G
18	D	1280	A
18	D	1285	A
18	D	1286	U
18	D	1287	A
18	D	1299	A
18	D	1300	G
18	D	1302	C
18	D	1305	G
18	D	1317	C
18	D	1320	C
18	D	1323	G
18	D	1332	A
18	D	1346	A
18	D	1353	G
18	D	1363	A

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Mol	Chain	Res	Type
18	D	1370	G
18	D	1378	C
18	D	1379	G
18	D	1381	U
18	D	1391	U
18	D	1397	C
18	D	1398	A
18	D	1404	C
18	D	1419	G
18	D	1429	A
18	D	1441	A
18	D	1446	A
18	D	1452	C
18	D	1453	G
18	D	1475	G
18	D	1487	G
18	D	1493	A
18	D	1494	G
18	D	1497	G
18	D	1502	A
18	D	1503	A
18	D	1506	U
18	D	1517	G
18	D	1528	U
18	D	1529	G
18	D	1530	G
18	D	1534	A
41	a	10	A
41	a	15	G
41	a	23	G
41	a	34	U
41	a	44	A
41	a	46	G
41	a	58	G
41	a	60	G
41	a	62	U
41	a	63	A
41	a	71	A
41	a	74	A
41	a	75	G
41	a	83	A
41	a	84	A

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Mol	Chain	Res	Type
41	a	85	G
41	a	101	A
41	a	102	U
41	a	103	A
41	a	118	A
41	a	120	U
41	a	137	U
41	a	139	U
41	a	140	C
41	a	149	A
41	a	163	C
41	a	165	A
41	a	181	A
41	a	196	A
41	a	199	A
41	a	215	G
41	a	216	A
41	a	221	A
41	a	222	A
41	a	224	U
41	a	241	A
41	a	248	G
41	a	249	C
41	a	264	C
41	a	265	A
41	a	266	G
41	a	270	A
41	a	271	G
41	a	272	A
41	a	275	C
41	a	276	U
41	a	278	A
41	a	279	A
41	a	285	G
41	a	300	A
41	a	311	A
41	a	315	G
41	a	329	G
41	a	330	A
41	a	352	A
41	a	353	C
41	a	361	G

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Mol	Chain	Res	Type
41	a	362	A
41	a	371	A
41	a	372	G
41	a	375	G
41	a	386	G
41	a	396	G
41	a	405	U
41	a	411	G
41	a	412	A
41	a	420	C
41	a	424	G
41	a	451	U
41	a	456	C
41	a	457	A
41	a	477	A
41	a	479	A
41	a	481	G
41	a	490	C
41	a	491	G
41	a	501	A
41	a	505	A
41	a	506	G
41	a	509	C
41	a	510	C
41	a	531	C
41	a	532	A
41	a	533	G
41	a	543	G
41	a	544	C
41	a	545	U
41	a	546	U
41	a	547	A
41	a	549	G
41	a	550	C
41	a	551	G
41	a	563	A
41	a	569	U
41	a	573	U
41	a	575	A
41	a	588	U
41	a	603	A
41	a	609	A

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Mol	Chain	Res	Type
41	a	613	A
41	a	614	A
41	a	615	U
41	a	616	A
41	a	627	A
41	a	637	A
41	a	645	C
41	a	647	G
41	a	654	A
41	a	655	A
41	a	668	A
41	a	685	A
41	a	686	U
41	a	709	U
41	a	710	U
41	a	717	C
41	a	730	A
41	a	738	G
41	a	757	G
41	a	765	C
41	a	775	G
41	a	776	G
41	a	782	A
41	a	784	G
41	a	785	G
41	a	789	A
41	a	792	A
41	a	800	A
41	a	805	G
41	a	812	C
41	a	819	A
41	a	827	U
41	a	828	U
41	a	845	A
41	a	846	U
41	a	857	G
41	a	858	G
41	a	859	G
41	a	869	G
41	a	878	A
41	a	879	G
41	a	881	G

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Mol	Chain	Res	Type
41	a	884	U
41	a	885	C
41	a	886	A
41	a	891	G
41	a	895	U
41	a	896	A
41	a	897	C
41	a	899	A
41	a	910	A
41	a	914	G
41	a	915	C
41	a	931	U
41	a	941	A
41	a	946	C
41	a	953	G
41	a	961	C
41	a	973	A
41	a	974	G
41	a	983	A
41	a	984	A
41	a	995	C
41	a	996	A
41	a	999	U
41	a	1005	C
41	a	1012	U
41	a	1013	C
41	a	1023	U
41	a	1025	G
41	a	1026	G
41	a	1028	A
41	a	1029	A
41	a	1033	U
41	a	1034	G
41	a	1043	C
41	a	1045	C
41	a	1046	A
41	a	1047	G
41	a	1051	G
41	a	1064	C
41	a	1065	U
41	a	1066	U
41	a	1067	A

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Mol	Chain	Res	Type
41	a	1068	G
41	a	1070	A
41	a	1071	G
41	a	1073	A
41	a	1074	G
41	a	1079	C
41	a	1081	U
41	a	1082	U
41	a	1083	U
41	a	1087	G
41	a	1088	A
41	a	1101	U
41	a	1111	A
41	a	1112	G
41	a	1119	U
41	a	1122	G
41	a	1126	A
41	a	1128	G
41	a	1130	U
41	a	1132	U
41	a	1133	A
41	a	1134	A
41	a	1135	C
41	a	1136	G
41	a	1142	A
41	a	1169	A
41	a	1170	C
41	a	1171	G
41	a	1172	C
41	a	1173	U
41	a	1175	A
41	a	1176	U
41	a	1177	G
41	a	1178	C
41	a	1179	G
41	a	1180	U
41	a	1182	G
41	a	1186	G
41	a	1204	A
41	a	1210	G
41	a	1238	G
41	a	1241	A

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Mol	Chain	Res	Type
41	a	1248	G
41	a	1249	U
41	a	1253	A
41	a	1256	G
41	a	1266	G
41	a	1271	G
41	a	1272	A
41	a	1273	U
41	a	1300	G
41	a	1301	A
41	a	1313	U
41	a	1320	C
41	a	1329	U
41	a	1345	C
41	a	1352	U
41	a	1359	A
41	a	1365	A
41	a	1368	G
41	a	1379	U
41	a	1380	G
41	a	1383	A
41	a	1392	A
41	a	1395	A
41	a	1408	G
41	a	1409	U
41	a	1412	U
41	a	1416	G
41	a	1417	C
41	a	1419	A
41	a	1420	A
41	a	1427	A
41	a	1428	C
41	a	1452	G
41	a	1453	A
41	a	1455	G
41	a	1460	U
41	a	1482	G
41	a	1490	A
41	a	1497	U
41	a	1502	A
41	a	1503	A
41	a	1508	A

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Mol	Chain	Res	Type
41	a	1509	A
41	a	1510	G
41	a	1515	A
41	a	1529	G
41	a	1532	A
41	a	1534	U
41	a	1535	A
41	a	1536	C
41	a	1537	G
41	a	1538	G
41	a	1558	C
41	a	1566	A
41	a	1569	A
41	a	1578	U
41	a	1580	A
41	a	1581	G
41	a	1583	A
41	a	1586	A
41	a	1589	U
41	a	1590	A
41	a	1608	A
41	a	1610	A
41	a	1616	A
41	a	1647	U
41	a	1648	U
41	a	1649	G
41	a	1651	G
41	a	1664	A
41	a	1665	A
41	a	1674	G
41	a	1677	A
41	a	1698	A
41	a	1703	G
41	a	1714	U
41	a	1715	G
41	a	1722	A
41	a	1729	U
41	a	1730	C
41	a	1732	C
41	a	1738	G
41	a	1758	U
41	a	1764	C

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Mol	Chain	Res	Type
41	a	1773	A
41	a	1791	A
41	a	1800	C
41	a	1801	A
41	a	1808	A
41	a	1811	G
41	a	1816	C
41	a	1829	A
41	a	1833	C
41	a	1847	A
41	a	1848	A
41	a	1858	A
41	a	1859	U
41	a	1862	G
41	a	1864	U
41	a	1869	G
41	a	1870	C
41	a	1871	A
41	a	1872	A
41	a	1906	G
41	a	1907	G
41	a	1913	A
41	a	1914	C
41	a	1920	C
41	a	1921	G
41	a	1923	U
41	a	1925	C
41	a	1928	A
41	a	1929	G
41	a	1930	G
41	a	1938	A
41	a	1955	U
41	a	1965	C
41	a	1966	A
41	a	1967	C
41	a	1970	A
41	a	1971	U
41	a	1972	G
41	a	1982	U
41	a	1991	U
41	a	1992	G
41	a	1993	U

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Mol	Chain	Res	Type
41	a	1996	C
41	a	1997	C
41	a	2002	G
41	a	2020	A
41	a	2022	U
41	a	2023	C
41	a	2027	G
41	a	2032	G
41	a	2033	A
41	a	2043	C
41	a	2052	A
41	a	2055	C
41	a	2056	G
41	a	2060	A
41	a	2061	G
41	a	2062	A
41	a	2063	C
41	a	2093	G
41	a	2096	C
41	a	2097	A
41	a	2100	G
41	a	2107	G
41	a	2108	A
41	a	2110	G
41	a	2111	U
41	a	2113	U
41	a	2115	G
41	a	2116	G
41	a	2117	A
41	a	2118	U
41	a	2122	U
41	a	2124	G
41	a	2125	G
41	a	2126	A
41	a	2127	G
41	a	2128	G
41	a	2131	U
41	a	2132	U
41	a	2133	G
41	a	2134	A
41	a	2139	U
41	a	2147	A

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Mol	Chain	Res	Type
41	a	2154	A
41	a	2157	G
41	a	2158	A
41	a	2159	G
41	a	2161	C
41	a	2162	G
41	a	2163	A
41	a	2164	C
41	a	2165	C
41	a	2169	A
41	a	2171	A
41	a	2172	U
41	a	2173	A
41	a	2182	U
41	a	2183	A
41	a	2189	U
41	a	2190	G
41	a	2193	G
41	a	2194	U
41	a	2198	A
41	a	2204	G
41	a	2211	A
41	a	2212	A
41	a	2225	A
41	a	2226	C
41	a	2229	U
41	a	2238	G
41	a	2239	G
41	a	2243	U
41	a	2250	G
41	a	2258	C
41	a	2266	A
41	a	2268	A
41	a	2269	G
41	a	2278	A
41	a	2279	G
41	a	2283	C
41	a	2286	G
41	a	2287	A
41	a	2288	A
41	a	2296	U
41	a	2297	A

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Mol	Chain	Res	Type
41	a	2305	U
41	a	2308	G
41	a	2309	A
41	a	2315	G
41	a	2322	A
41	a	2325	G
41	a	2327	A
41	a	2333	A
41	a	2335	A
41	a	2339	C
41	a	2345	G
41	a	2347	C
41	a	2350	C
41	a	2357	G
41	a	2361	G
41	a	2376	A
41	a	2383	G
41	a	2385	C
41	a	2396	G
41	a	2402	U
41	a	2403	C
41	a	2410	G
41	a	2422	C
41	a	2423	U
41	a	2425	A
41	a	2426	A
41	a	2429	G
41	a	2430	A
41	a	2431	U
41	a	2435	A
41	a	2441	U
41	a	2448	A
41	a	2449	U
41	a	2470	G
41	a	2474	U
41	a	2476	A
41	a	2484	G
41	a	2491	U
41	a	2493	U
41	a	2497	A
41	a	2502	G
41	a	2506	U

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Mol	Chain	Res	Type
41	a	2512	C
41	a	2513	A
41	a	2518	A
41	a	2520	C
41	a	2525	G
41	a	2529	G
41	a	2535	G
41	a	2554	U
41	a	2566	A
41	a	2567	G
41	a	2574	G
41	a	2582	G
41	a	2585	U
41	a	2602	A
41	a	2603	G
41	a	2609	U
41	a	2613	U
41	a	2629	U
41	a	2630	G
41	a	2660	A
41	a	2661	G
41	a	2689	U
41	a	2690	U
41	a	2714	G
41	a	2725	A
41	a	2726	A
41	a	2727	A
41	a	2733	A
41	a	2744	G
41	a	2748	A
41	a	2758	A
41	a	2777	G
41	a	2778	A
41	a	2791	G
41	a	2793	C
41	a	2795	C
41	a	2796	U
41	a	2797	U
41	a	2798	U
41	a	2799	A
41	a	2818	U
41	a	2820	A

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Mol	Chain	Res	Type
41	a	2821	A
41	a	2823	A
41	a	2825	G
41	a	2849	U
41	a	2850	A
41	a	2859	G
41	a	2861	U
41	a	2867	G
41	a	2879	A
41	a	2880	C
41	a	2883	A
41	a	2884	U
41	a	2885	G
41	a	2891	U
41	a	2898	U
44	d	2	G
44	d	9	G
44	d	15	A
44	d	16	G
44	d	17	C
44	d	30	C
44	d	35	C
44	d	42	C
44	d	51	G
44	d	56	G
44	d	66	A
44	d	67	G
44	d	88	C
44	d	89	U
44	d	90	C
44	d	99	A
44	d	109	A
44	d	119	A

All (30) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
8	7	-17	U
8	7	-11	U
8	7	0	U
8	7	11	U
10	A	1	C

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Mol	Chain	Res	Type
10	A	6	G
10	A	9	G
10	A	12	G
10	A	21	A
10	A	22	G
10	A	48	C
10	A	57	A
10	A	58	A
10	A	60	U
10	B	6	G
10	B	9	G
10	B	12	G
10	B	21	A
10	B	22	G
10	B	57	A
10	B	58	A
10	B	60	U
18	D	197	A
18	D	207	C
18	D	428	G
18	D	496	A
18	D	758	C
18	D	1145	A
18	D	1214	C
18	D	1493	A

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 3 ligands modelled in this entry, 3 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

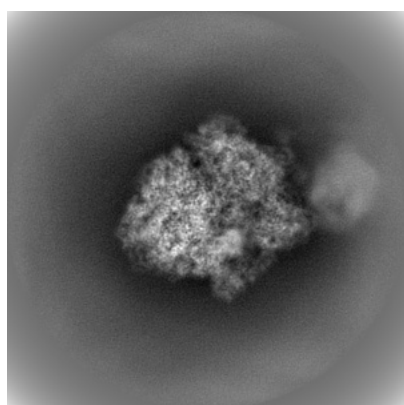
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-22082. These allow visual inspection of the internal detail of the map and identification of artifacts.

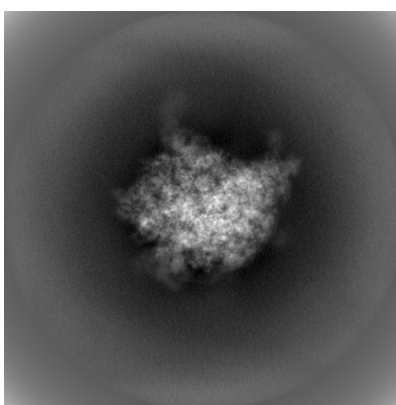
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

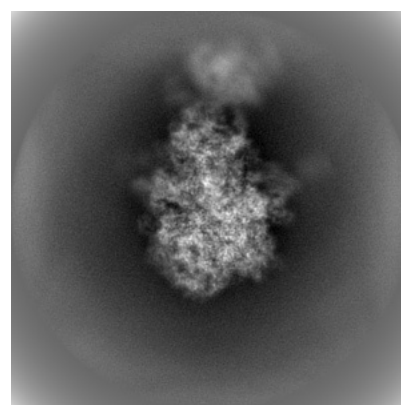
6.1.1 Primary map



X



Y

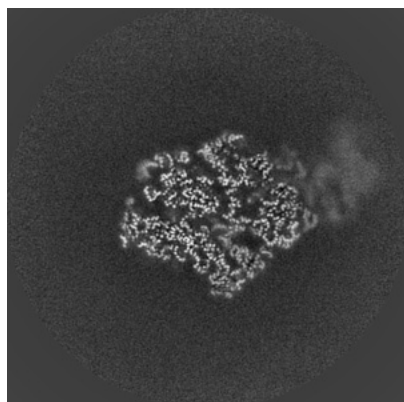


Z

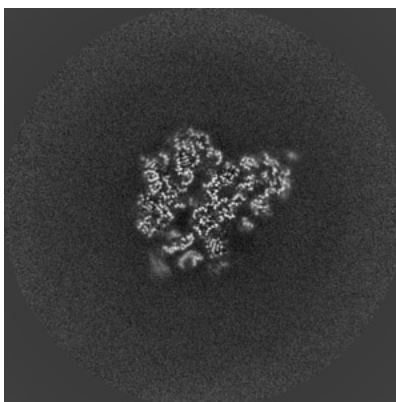
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

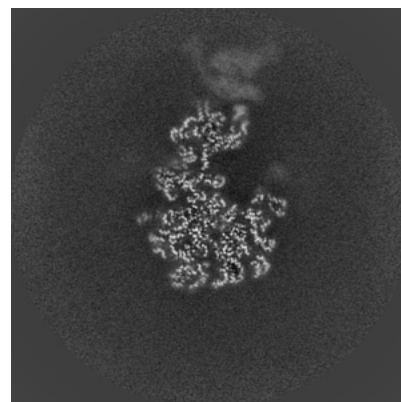
6.2.1 Primary map



X Index: 256



Y Index: 256

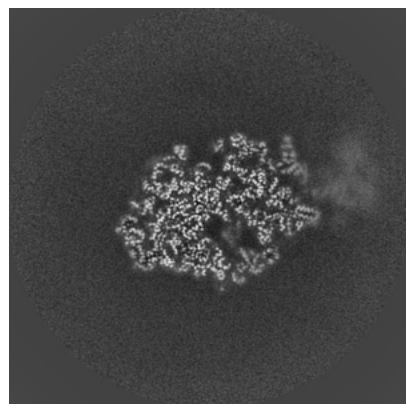


Z Index: 256

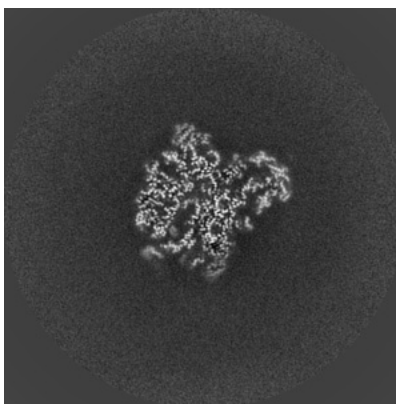
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

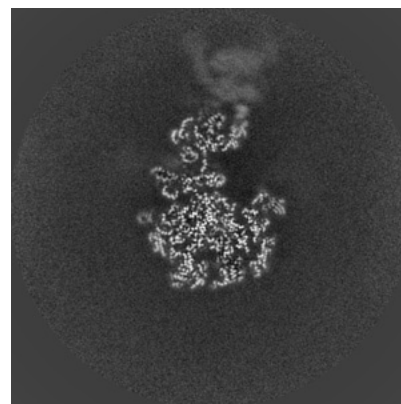
6.3.1 Primary map



X Index: 242



Y Index: 250

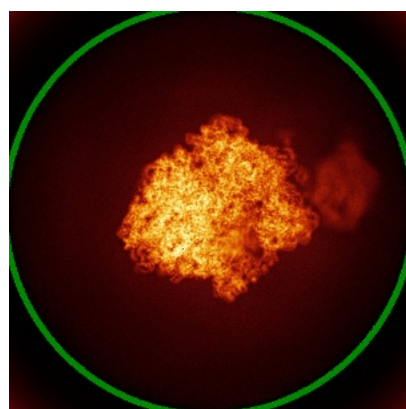


Z Index: 259

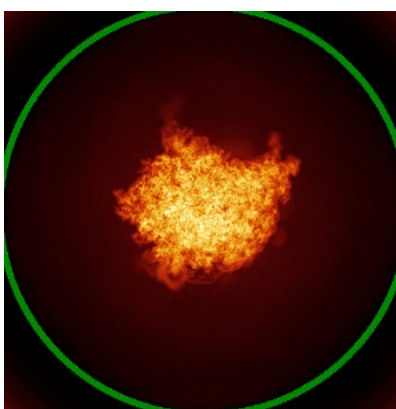
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

6.4.1 Primary map



X



Y

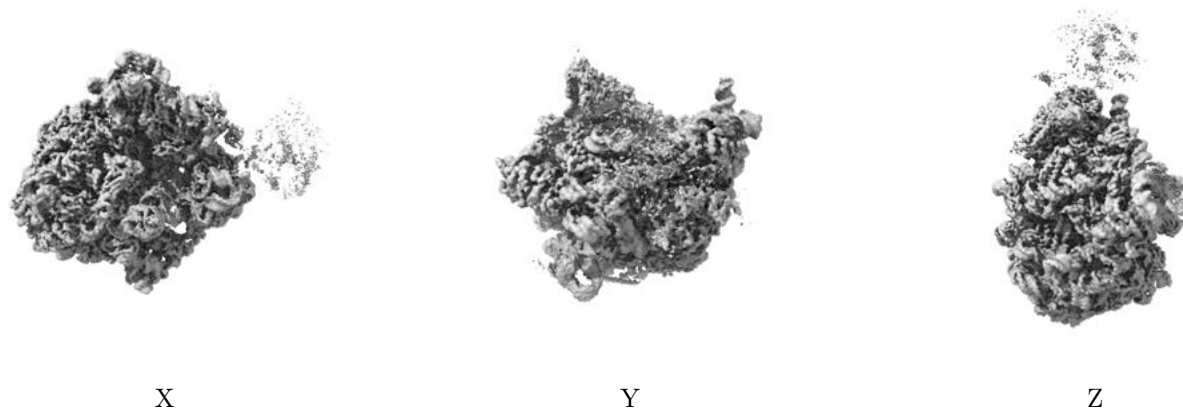


Z

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 0.014. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

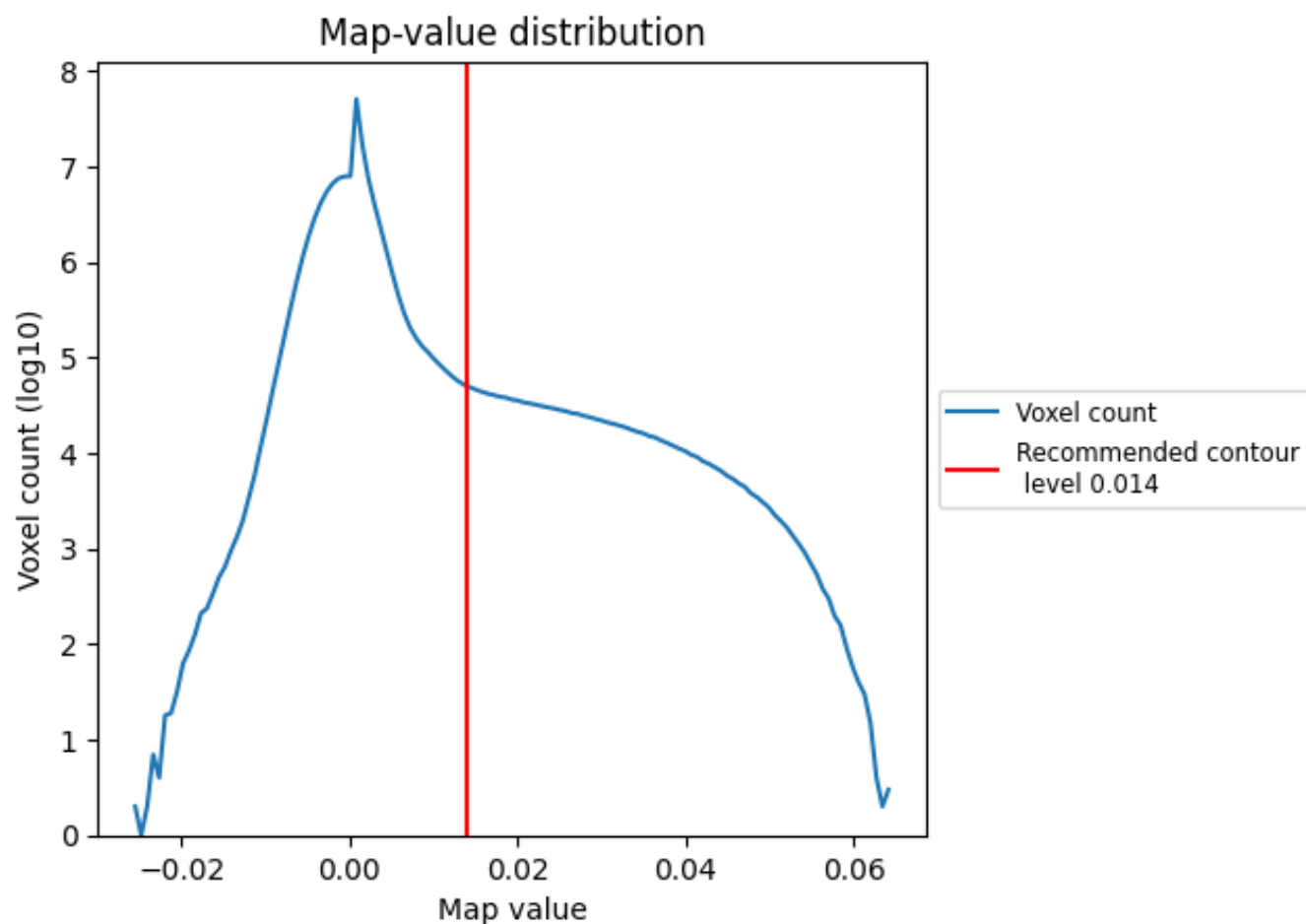
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

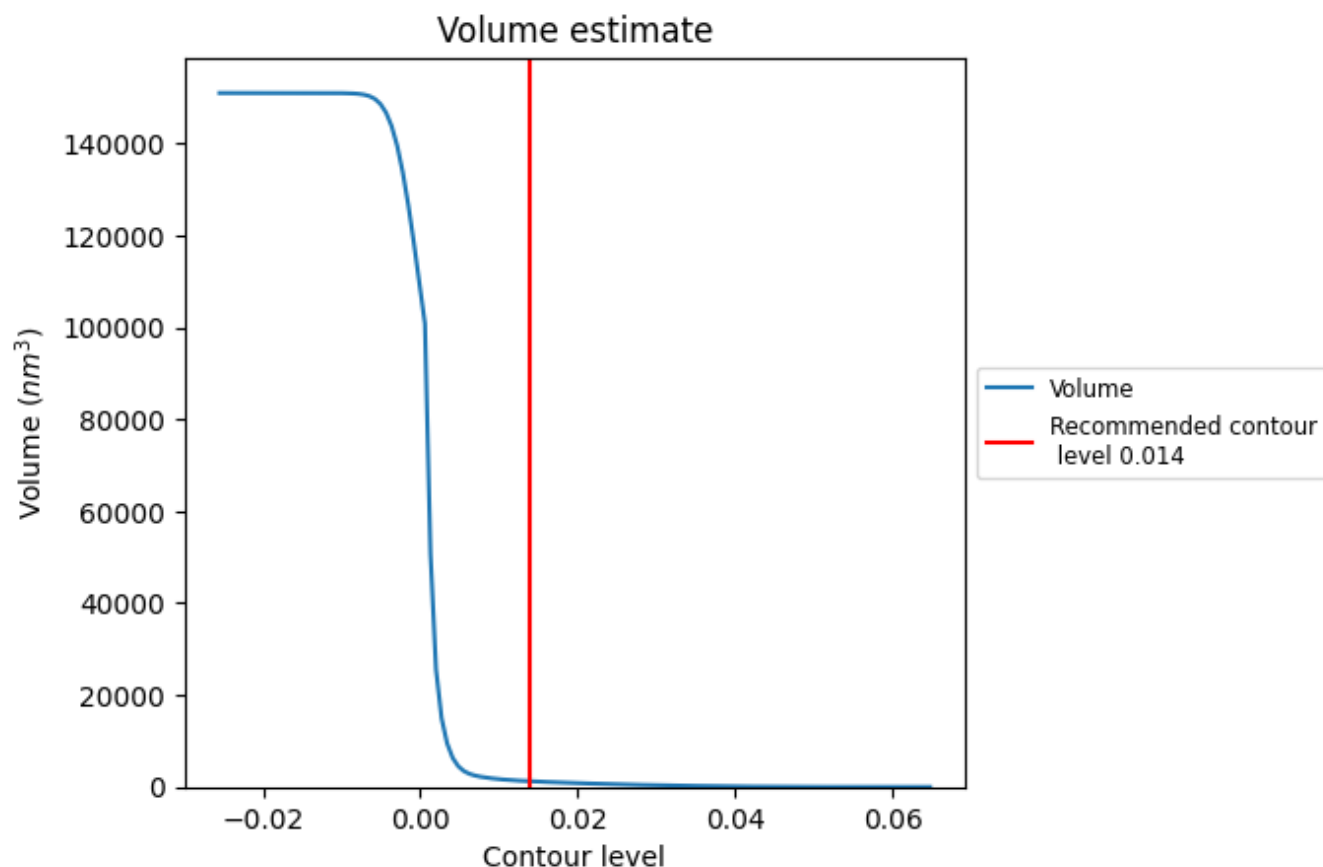
This section contains the results of statistical analysis of the map.

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.

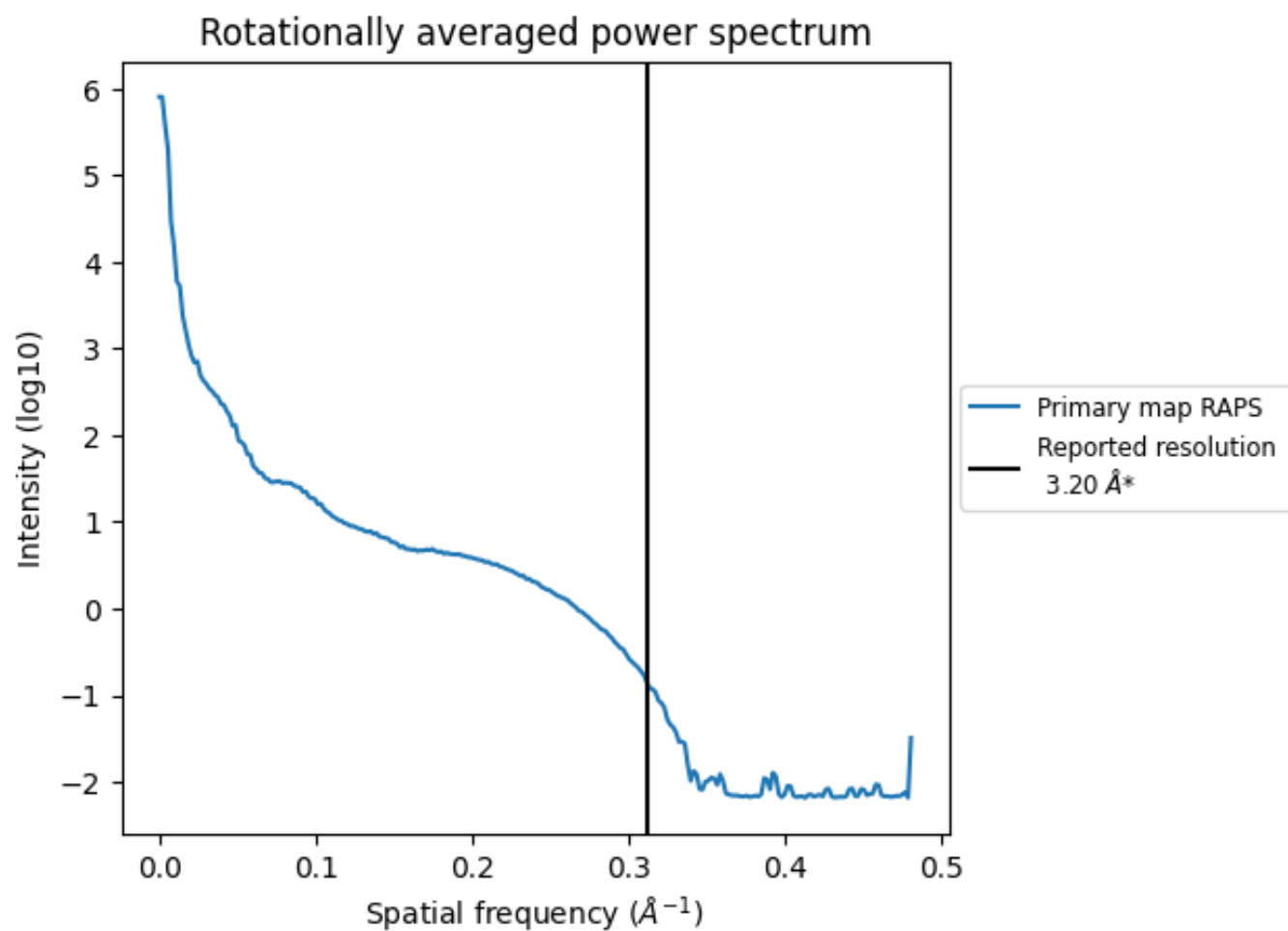
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1238 nm^3 ; this corresponds to an approximate mass of 1118 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 0.312 Å⁻¹

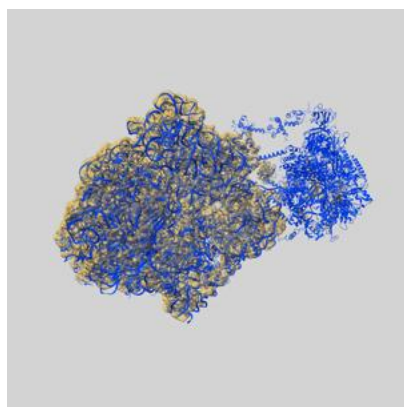
8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

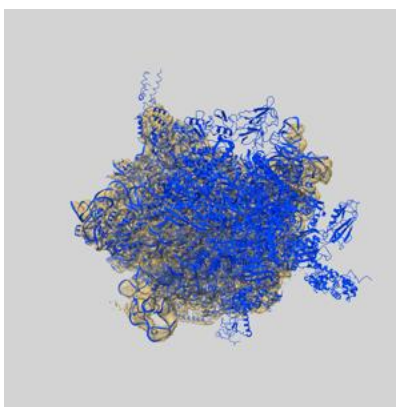
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-22082 and PDB model 6X6T. Per-residue inclusion information can be found in [section 3](#) on [page 17](#).

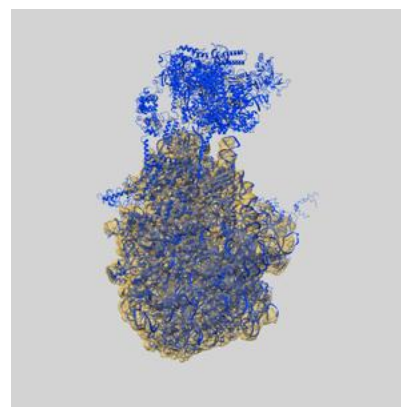
9.1 Map-model overlay [i](#)



X



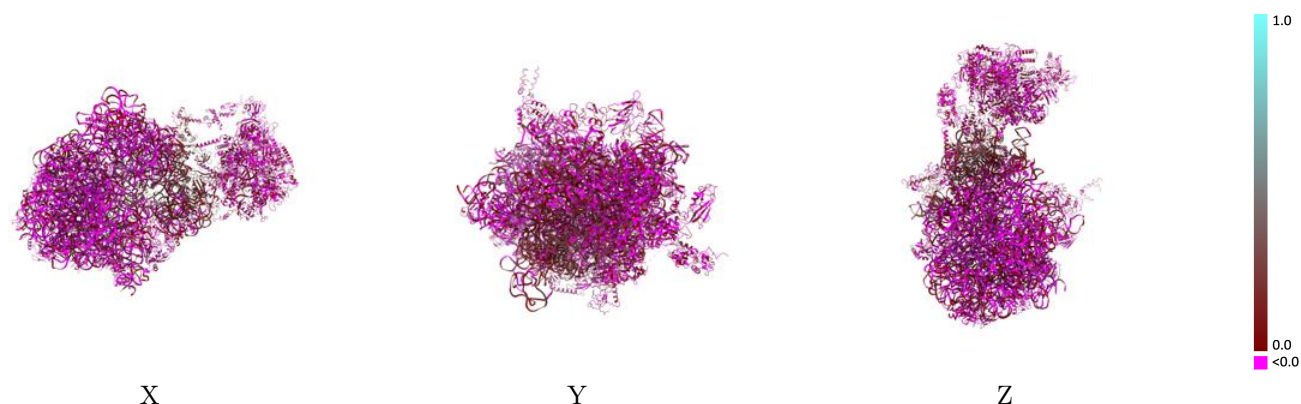
Y



Z

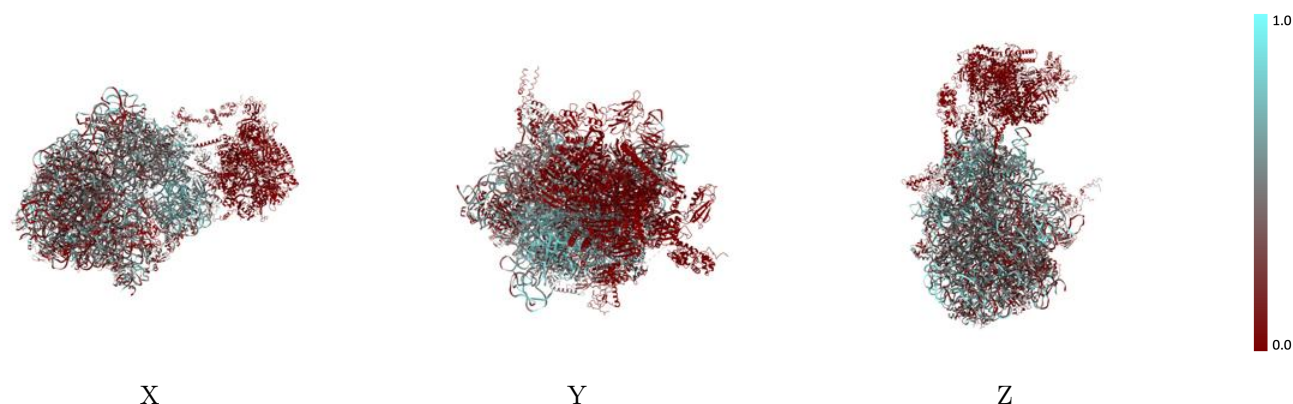
The images above show the 3D surface view of the map at the recommended contour level 0.014 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



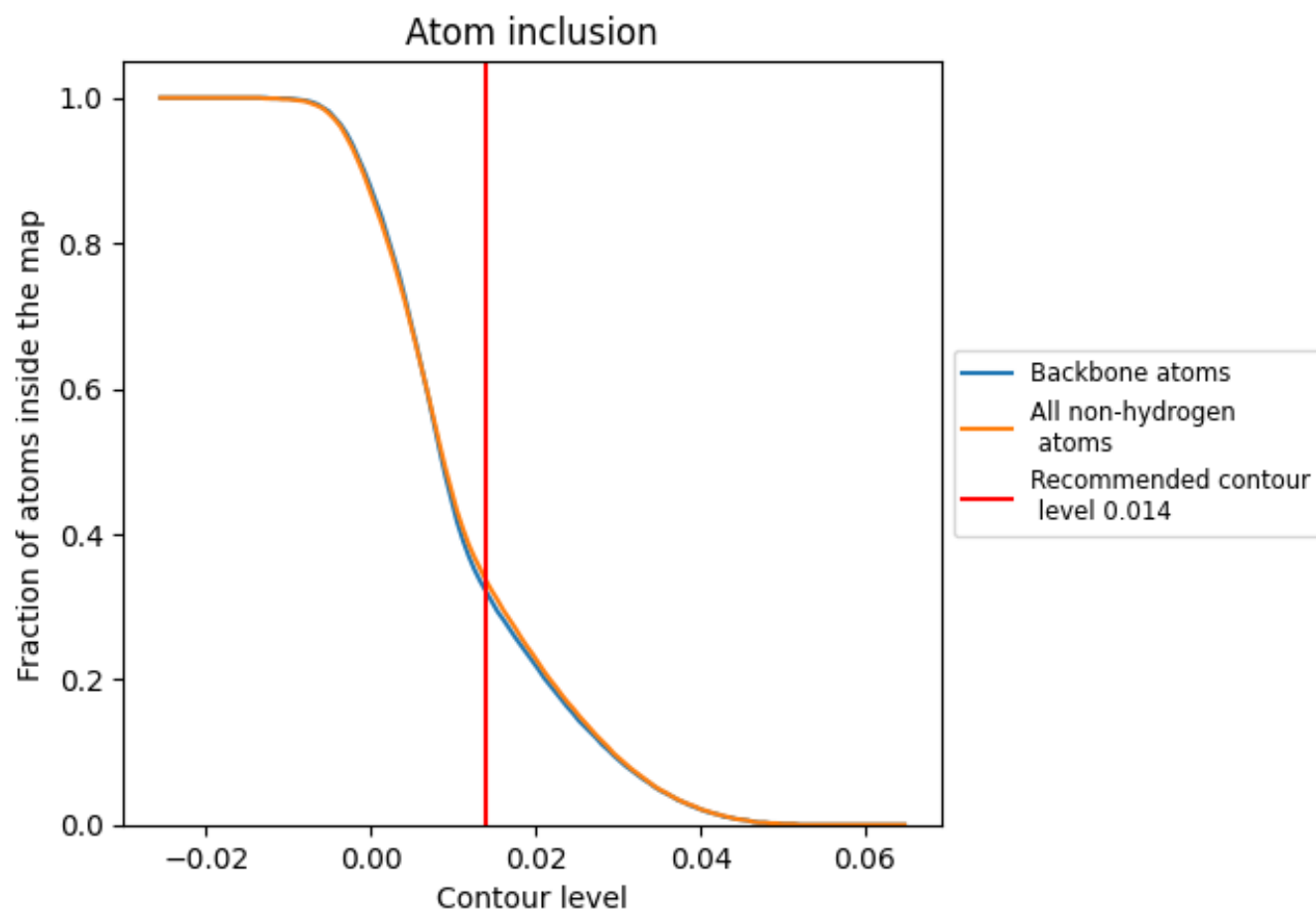
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.014).

9.4 Atom inclusion [i](#)



At the recommended contour level, 32% of all backbone atoms, 34% 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 (0.014) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.3360	 0.0150
0	 0.2720	 -0.0410
1	 0.2300	 -0.0340
2	 0.2890	 0.0050
3	 0.4240	 0.0080
4	 0.3270	 0.0250
5	 0.0250	 0.0380
6	 0.0760	 0.0390
7	 0.1340	 0.0770
9	 0.1540	 0.0020
A	 0.4380	 0.0920
AA	 0.0070	 0.0250
AB	 0.1210	 0.1110
AC	 0.0010	 0.0090
AD	 0.0010	 0.0120
AE	 0.0030	 0.0160
AF	 0.0000	 0.0220
AG	 0.1970	 0.1380
B	 0.4330	 0.0350
C	 0.4020	 0.0440
D	 0.5580	 0.0510
E	 0.2630	 -0.0470
F	 0.3720	 0.1300
G	 0.4710	 0.1440
H	 0.0300	 0.0480
I	 0.5160	 0.2070
J	 0.4130	 0.0240
K	 0.3480	 0.0120
L	 0.3170	 -0.0540
M	 0.5520	 0.2370
N	 0.2880	 -0.0650
O	 0.5360	 0.1620
P	 0.4380	 0.1200
Q	 0.5270	 0.1840
R	 0.2590	 -0.0640



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Chain	Atom inclusion	Q-score
S	 0.4380	 0.1180
T	 0.3040	 -0.0380
U	 0.3090	 -0.0520
V	 0.3730	 -0.0230
W	 0.3460	 -0.0050
X	 0.3550	 0.0100
Y	 0.0340	 -0.0050
Z	 0.0000	 0.0130
a	 0.4330	 -0.0200
b	 0.2620	 -0.0670
c	 0.3560	 -0.0570
d	 0.4860	 -0.0050
e	 0.3520	 -0.0330
f	 0.2960	 0.0030
g	 0.2430	 0.0390
h	 0.2920	 -0.0770
i	 0.3530	 -0.0260
j	 0.2900	 -0.0160
k	 0.3090	 -0.0500
l	 0.2990	 -0.0110
m	 0.3380	 -0.0130
n	 0.2830	 -0.0430
o	 0.3180	 -0.0230
p	 0.2090	 -0.0260
q	 0.2330	 -0.0190
r	 0.2470	 0.0160
s	 0.2660	 -0.0210
t	 0.2770	 0.0020
u	 0.3100	 -0.0260
v	 0.2800	 -0.0150
w	 0.3380	 -0.0330
x	 0.3560	 -0.0420
y	 0.3130	 -0.0130
z	 0.3030	 -0.0140