Full wwPDB X-ray Structure Validation Report ⓘ

Nov 5, 2023 – 11:13 AM EST

PDB ID	:	3CME
Title	:	The Structure of CA and CCA-PHE-CAP-BIO Bound to the Large Ribosomal Subunit of Haloarcula Marismortui
Authors	:	Simonovic, M.; Steitz, T.A.
Deposited on	:	2008-03-21
Resolution	:	2.95 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

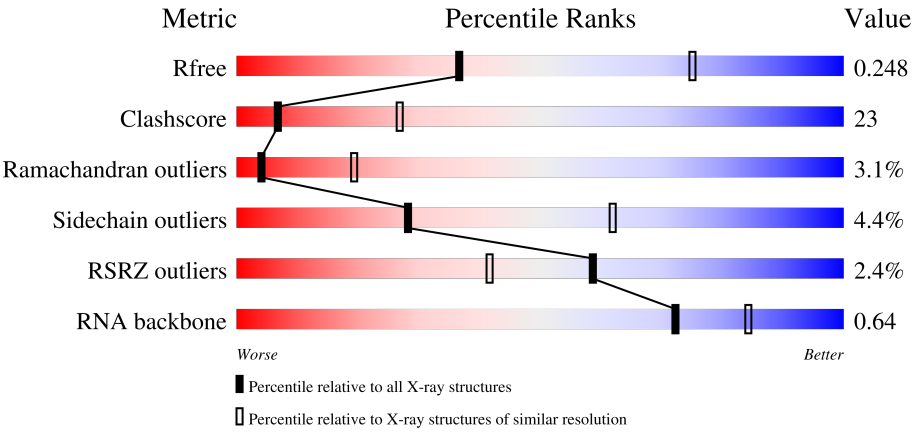
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.95 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3104 (3.00-2.92)
Clashscore	141614	3462 (3.00-2.92)
Ramachandran outliers	138981	3340 (3.00-2.92)
Sidechain outliers	138945	3343 (3.00-2.92)
RSRZ outliers	127900	2986 (3.00-2.92)
RNA backbone	3102	1065 (3.22-2.70)

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

Mol	Chain	Length	Quality of chain
1	A	240	43% 48% 7%
2	B	338	41% 53% 6%
3	C	246	43% 51% 6%
4	D	177	17% 25% 46% 7% 21%

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Mol	Chain	Length	Quality of chain
5	E	178	2% 51% 43%
6	F	120	9% 41% 53% 5%
7	G	348	% 6% 92%
8	H	177	% 44% 42% 5% 10%
9	I	162	29% 12% 28% 57%
10	J	145	50% 42% 6%
11	K	132	52% 45%
12	L	165	% 42% 43% 12%
13	M	196	42% 53%
14	N	187	3% 37% 54% 8%
15	O	116	53% 46%
16	P	149	50% 45%
17	Q	96	53% 42%
18	R	155	52% 42%
19	S	85	% 44% 51% 5%
20	T	120	2% 39% 55% 5%
21	U	67	% 34% 39% 6% 21%
22	V	71	14% 32% 58% 8%
23	W	154	% 40% 55% 5%
24	X	92	5% 41% 42% 5% 11%
25	Y	240	30% 26% 41%
26	Z	116	3% 30% 28% 5% 37%
27	1	57	42% 54%
28	2	50	4% 38% 52% 8%
29	3	92	% 47% 50%

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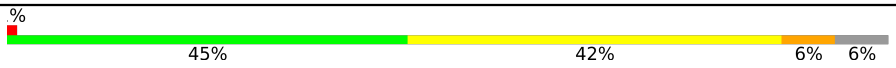
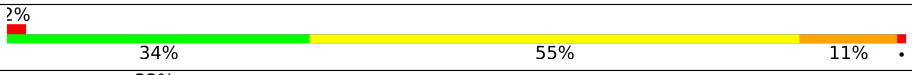
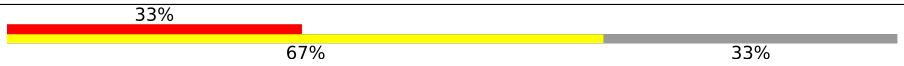
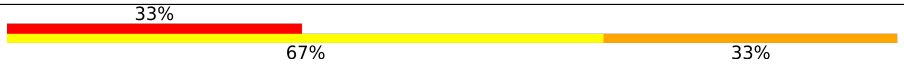
Mol	Chain	Length	Quality of chain
30	0	2923	
31	9	122	
32	5	3	
33	6	3	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
34	MG	0	8010	-	-	-	X
34	MG	0	8066	-	-	-	X
34	MG	0	8078	-	-	-	X
34	MG	0	8085	-	-	-	X
34	MG	0	8087	-	-	-	X
34	MG	0	8090	-	-	-	X
35	CL	J	8801	-	-	X	-
35	CL	L	8814	-	-	X	-
36	SR	0	8920	-	-	-	X
36	SR	0	8994	-	-	-	X
36	SR	0	9007	-	-	-	X
36	SR	L	8969	-	-	-	X
37	NA	0	8516	-	-	-	X
37	NA	0	8519	-	-	-	X
37	NA	0	8527	-	-	-	X
37	NA	0	8535	-	-	-	X
37	NA	0	8547	-	-	-	X
37	NA	0	8571	-	-	-	X
37	NA	9	8544	-	-	-	X
39	K	0	8401	-	-	-	X
39	K	0	8402	-	-	-	X
41	ACA	6	78	-	-	-	X

2 Entry composition (i)

There are 42 unique types of molecules in this entry. The entry contains 99194 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 50S ribosomal protein L2P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	237	Total	C	N	O	S	0	0	0
			1752	1072	351	324	5			

- Molecule 2 is a protein called 50S ribosomal protein L3P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	337	Total	C	N	O	S	0	0	0
			2624	1616	492	511	5			

- Molecule 3 is a protein called 50S ribosomal protein L4P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	246	Total	C	N	O	S	0	0	0
			1859	1130	344	384	1			

- Molecule 4 is a protein called 50S ribosomal protein L5P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	140	Total	C	N	O	S	0	0	0
			1093	685	194	210	4			

- Molecule 5 is a protein called 50S ribosomal protein L6P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	172	Total	C	N	O	S	0	0	0
			1356	840	223	289	4			

- Molecule 6 is a protein called 50S ribosomal protein L7Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	119	Total	C	N	O	S	0	0	0
			889	551	140	197	1			

- Molecule 7 is a protein called 50S ribosomal protein L10E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	29	Total	C	N	O	S	0	0	0
			240	149	39	51	1			

- Molecule 8 is a protein called 50S ribosomal protein L10e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	160	Total	C	N	O	S	0	0	0
			1281	798	239	238	6			

- Molecule 9 is a protein called 50S ribosomal protein L11P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	70	Total	C	N	O	S	0	0	0
			518	323	80	114	1			

- Molecule 10 is a protein called 50S ribosomal protein L13P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	142	Total	C	N	O	S	0	0	0
			1119	696	198	222	3			

- Molecule 11 is a protein called 50S ribosomal protein L14P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	132	Total	C	N	O	S	0	0	0
			993	609	188	192	4			

- Molecule 12 is a protein called 50S ribosomal protein L15P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
12	L	145	Total	C	N	O	0	0	0
			1117	670	221	226			

- Molecule 13 is a protein called 50S ribosomal protein L15e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	194	Total	C	N	O	S	0	0	0
			1557	943	332	281	1			

- Molecule 14 is a protein called 50S ribosomal protein L18P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	186	Total	C	N	O	S	0	0	0
			1444	895	261	286	2			

- Molecule 15 is a protein called 50S ribosomal protein L18e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	O	115	Total	C	N	O	0	0	0
			864	529	160	175			

- Molecule 16 is a protein called 50S ribosomal protein L19e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
16	P	143	Total	C	N	O	0	0	0
			1135	683	228	224			

- Molecule 17 is a protein called 50S ribosomal protein L21e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	Q	95	Total	C	N	O	0	0	0
			734	450	140	144			

- Molecule 18 is a protein called 50S ribosomal protein L22P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	R	150	Total	C	N	O	S	0	0	0
			1148	713	208	223	4			

- Molecule 19 is a protein called 50S ribosomal protein L23P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S	81	Total	C	N	O	S	0	0	0
			640	389	110	138	3			

- Molecule 20 is a protein called 50S ribosomal protein L24P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	T	119	Total	C	N	O	0	0	0
			949	568	179	202			

- Molecule 21 is a protein called 50S ribosomal protein L24e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	U	53	Total	C	N	O	S	0	0	0
			410	244	75	86	5			

- Molecule 22 is a protein called 50S ribosomal protein L29P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	V	65	Total	C	N	O	S	0	0	0
			499	304	94	100	1			

- Molecule 23 is a protein called 50S ribosomal protein L30P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	W	154	Total	C	N	O	S	0	0	0
			1195	737	208	244	6			

- Molecule 24 is a protein called 50S ribosomal protein L31e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	X	82	Total	C	N	O	S	0	0	0
			653	402	128	122	1			

- Molecule 25 is a protein called 50S ribosomal protein L32e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	Y	142	Total	C	N	O	0	0	0
			1130	686	228	216			

- Molecule 26 is a protein called 50S ribosomal protein L37Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Z	73	Total	C	N	O	S	0	0	0
			572	343	112	112	5			

- Molecule 27 is a protein called 50S ribosomal protein L37e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	1	56	Total	C	N	O	S	0	0	0
			431	258	86	83	4			

- Molecule 28 is a protein called 50S ribosomal protein L39e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	2	46	Total	C	N	O	S	0	0	0
			396	239	89	67	1			

- Molecule 29 is a protein called 50S ribosomal protein L44E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	3	92	Total	C	N	O	S	0	0	0
			754	458	152	137	7			

- Molecule 30 is a RNA chain called 50S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	0	2754	Total	C	N	O	P	0	0	0
			59017	26345	10873	19054	2745			

- Molecule 31 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	9	122	Total	C	N	O	P	0	0	0
			2595	1156	471	847	121			

- Molecule 32 is a RNA chain called RNA (5'-R(*C*CP*A)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	5	2	Total	C	N	O	P	0	0	0
			39	19	8	11	1			

- Molecule 33 is a RNA chain called RNA (5'-R(*CP*CP*(8AN))-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	6	3	Total	C	N	O	P	0	0	0
			59	28	12	17	2			

- Molecule 34 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	A	3	Total	Mg	0	0
			3	3		
34	B	2	Total	Mg	0	0
			2	2		
34	C	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	K	1	Total Mg 1 1	0	0
34	T	1	Total Mg 1 1	0	0
34	Y	1	Total Mg 1 1	0	0
34	2	1	Total Mg 1 1	0	0
34	0	82	Total Mg 82 82	0	0
34	9	1	Total Mg 1 1	0	0

- Molecule 35 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	A	1	Total Cl 1 1	0	0
35	B	1	Total Cl 1 1	0	0
35	J	4	Total Cl 4 4	0	0
35	L	2	Total Cl 2 2	0	0
35	M	1	Total Cl 1 1	0	0
35	N	1	Total Cl 1 1	0	0
35	O	1	Total Cl 1 1	0	0
35	Q	1	Total Cl 1 1	0	0
35	R	1	Total Cl 1 1	0	0
35	Y	2	Total Cl 2 2	0	0
35	3	1	Total Cl 1 1	0	0
35	0	6	Total Cl 6 6	0	0

- Molecule 36 is STRONTIUM ION (three-letter code: SR) (formula: Sr).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	A	3	Total Sr 3 3	0	0
36	B	2	Total Sr 2 2	0	0
36	F	1	Total Sr 1 1	0	0
36	H	2	Total Sr 2 2	0	0
36	L	1	Total Sr 1 1	0	0
36	R	1	Total Sr 1 1	0	0
36	T	2	Total Sr 2 2	0	0
36	Y	1	Total Sr 1 1	0	0
36	1	2	Total Sr 2 2	0	0
36	3	3	Total Sr 3 3	0	0
36	0	87	Total Sr 87 87	0	0
36	9	3	Total Sr 3 3	0	0

- Molecule 37 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	C	1	Total Na 1 1	0	0
37	H	1	Total Na 1 1	0	0
37	J	1	Total Na 1 1	0	0
37	M	1	Total Na 1 1	0	0
37	Q	1	Total Na 1 1	0	0
37	R	1	Total Na 1 1	0	0
37	S	1	Total Na 1 1	0	0
37	0	65	Total Na 65 65	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	9	3	Total Na 3 3	0	0

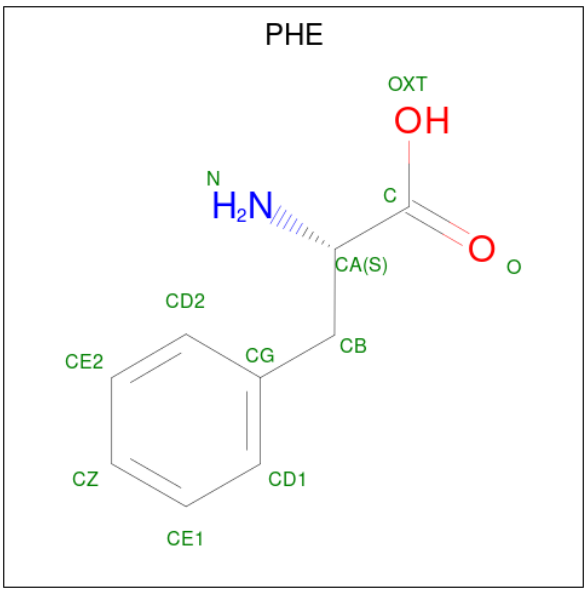
- Molecule 38 is CADMIUM ION (three-letter code: CD) (formula: Cd).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	O	1	Total Cd 1 1	0	0
38	U	1	Total Cd 1 1	0	0
38	Z	1	Total Cd 1 1	0	0
38	1	1	Total Cd 1 1	0	0
38	3	1	Total Cd 1 1	0	0

- Molecule 39 is POTASSIUM ION (three-letter code: K) (formula: K).

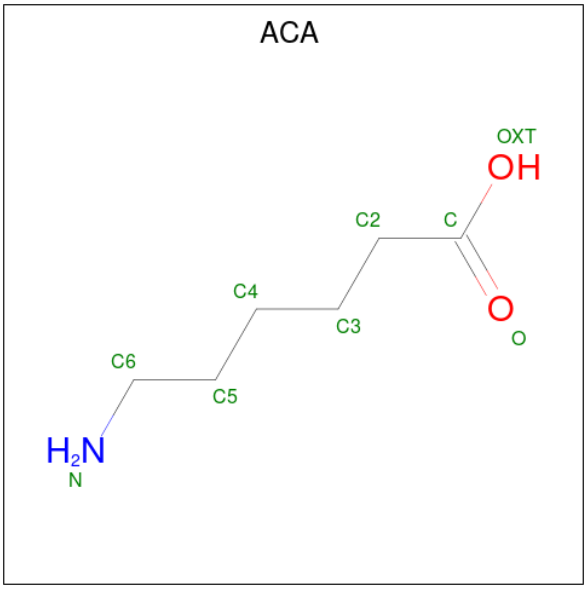
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
39	0	2	Total K 2 2	0	0

- Molecule 40 is PHENYLALANINE (three-letter code: PHE) (formula: $C_9H_{11}NO_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
40	6	1	Total	C	N	O	0	0
			11	9	1	1		

- Molecule 41 is 6-AMINOHEXANOIC ACID (three-letter code: ACA) (formula: $C_6H_{13}NO_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
41	6	1	Total	C	N	O	0	0
			8	6	1	1		

- Molecule 42 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
42	A	134	Total	O	0	0
			134	134		
42	B	156	Total	O	0	0
			156	156		
42	C	168	Total	O	0	0
			168	168		
42	D	49	Total	O	0	0
			49	49		
42	E	49	Total	O	0	0
			49	49		
42	F	31	Total	O	0	0
			31	31		
42	G	20	Total	O	0	0
			20	20		
42	H	78	Total	O	0	0
			78	78		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
42	I	11	Total O 11 11	0	0
42	J	58	Total O 58 58	0	0
42	K	57	Total O 57 57	0	0
42	L	91	Total O 91 91	0	0
42	M	129	Total O 129 129	0	0
42	N	68	Total O 68 68	0	0
42	O	46	Total O 46 46	0	0
42	P	72	Total O 72 72	0	0
42	Q	52	Total O 52 52	0	0
42	R	89	Total O 89 89	0	0
42	S	35	Total O 35 35	0	0
42	T	42	Total O 42 42	0	0
42	U	29	Total O 29 29	0	0
42	V	16	Total O 16 16	0	0
42	W	75	Total O 75 75	0	0
42	X	31	Total O 31 31	0	0
42	Y	105	Total O 105 105	0	0
42	Z	25	Total O 25 25	0	0
42	1	57	Total O 57 57	0	0
42	2	50	Total O 50 50	0	0
42	3	66	Total O 66 66	0	0

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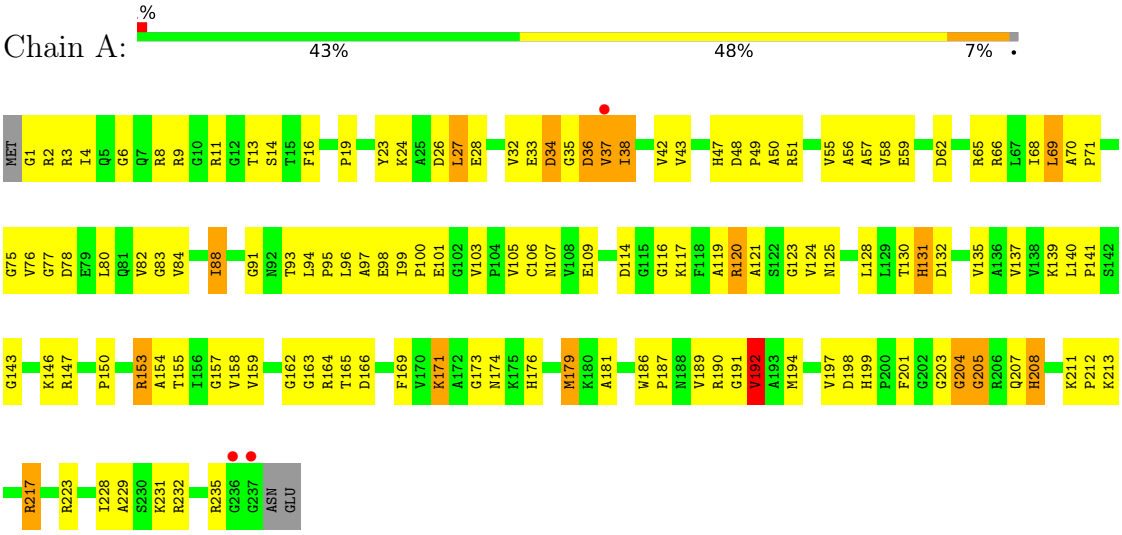
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
42	0	5775	Total O 5775 5775	0	0
42	9	138	Total O 138 138	0	0
42	6	6	Total O 6 6	0	0

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 electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

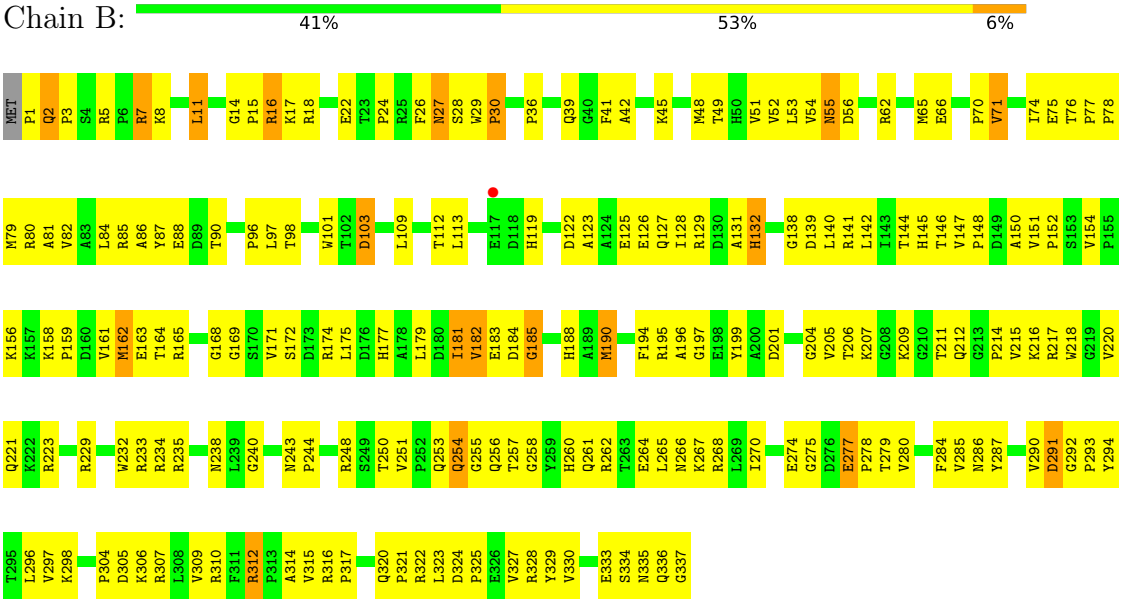
• Molecule 1: 50S ribosomal protein L2P

Chain A:



• Molecule 2: 50S ribosomal protein L3P

Chain B:

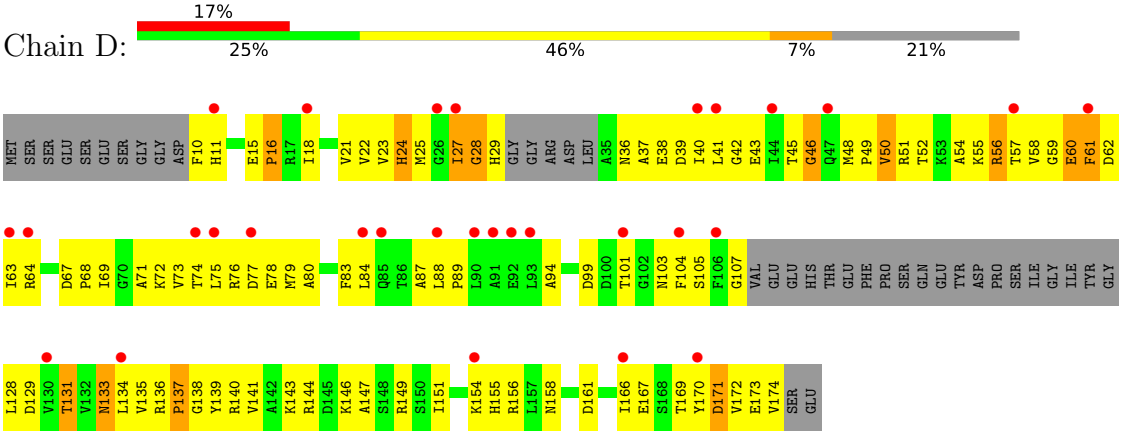


• Molecule 3: 50S ribosomal protein L4P

Chain C:

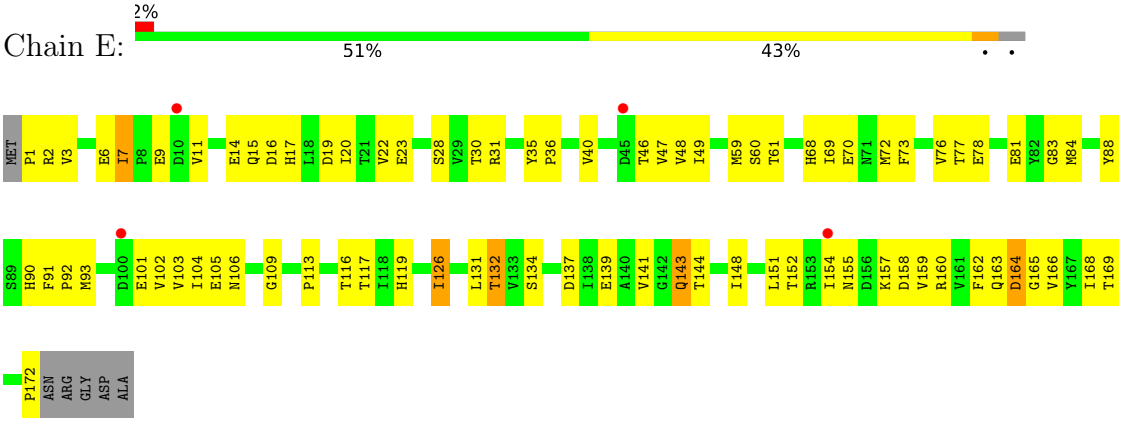
• Molecule 4: 50S ribosomal protein L5P

Chain D:



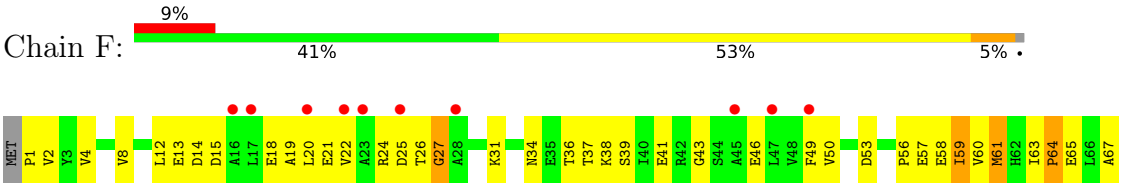
• Molecule 5: 50S ribosomal protein L6P

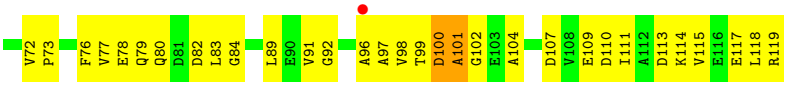
Chain E:



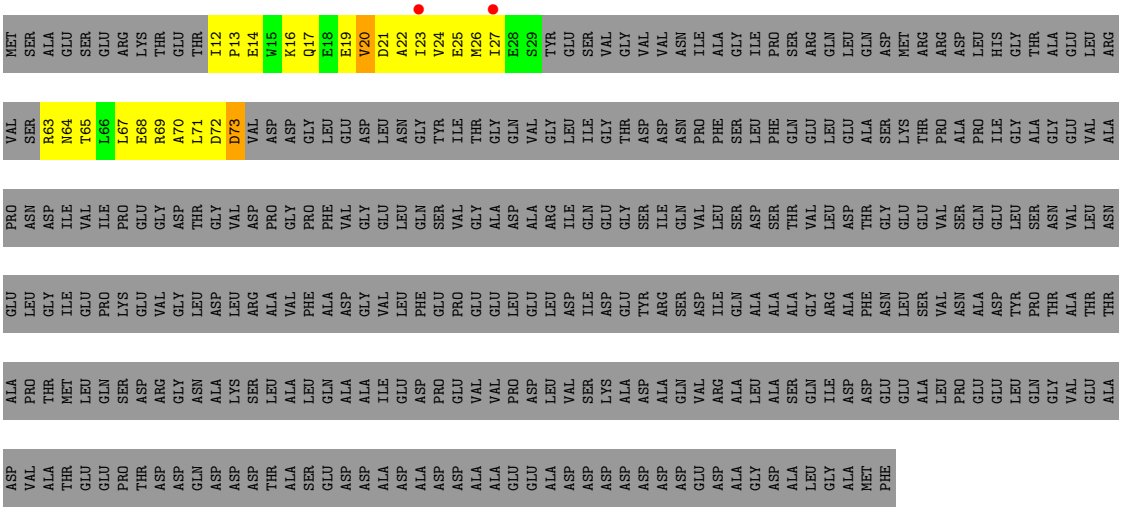
• Molecule 6: 50S ribosomal protein L7Ae

Chain F:

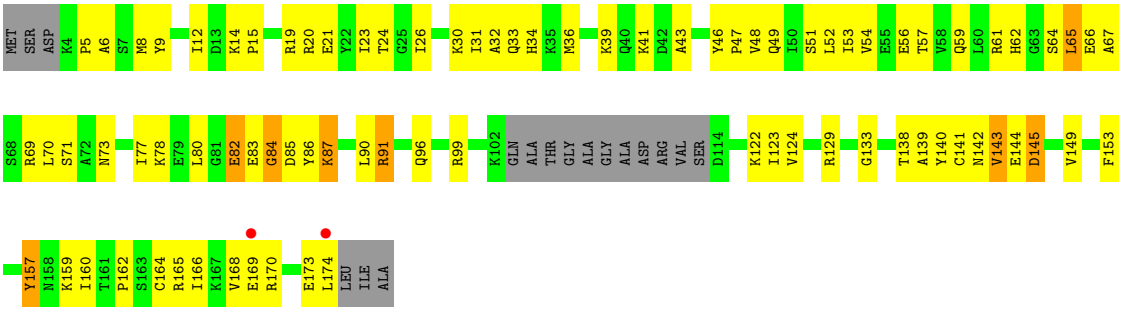




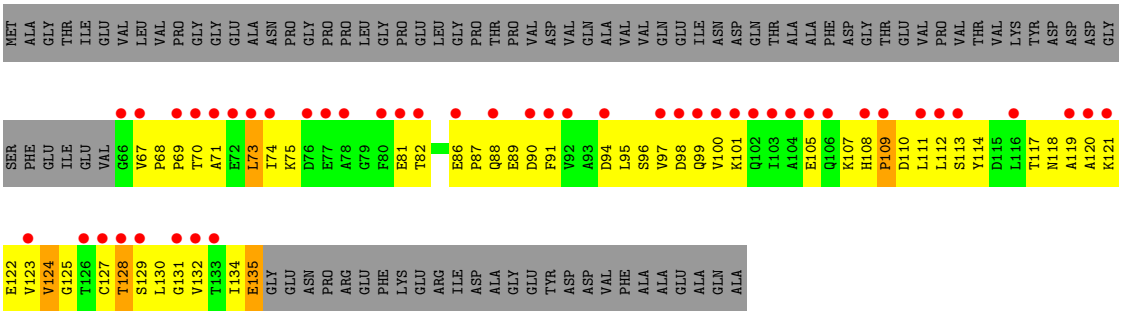
• Molecule 7: 50S ribosomal protein L10E



• Molecule 8: 50S ribosomal protein L10e

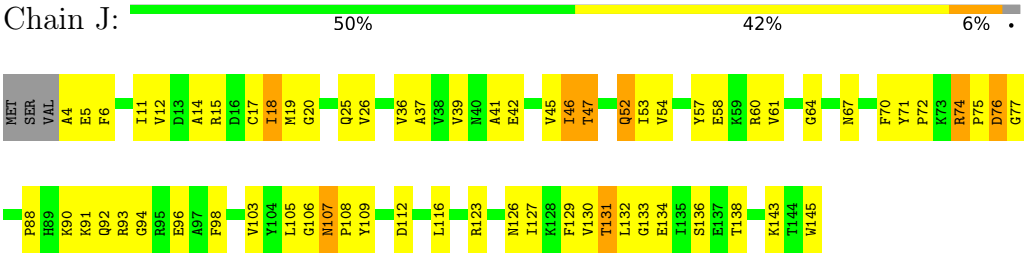


• Molecule 9: 50S ribosomal protein L11P



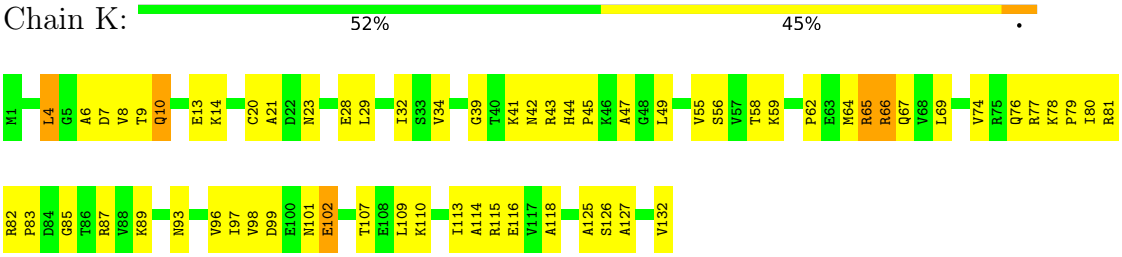
• Molecule 10: 50S ribosomal protein L13P

Chain J:



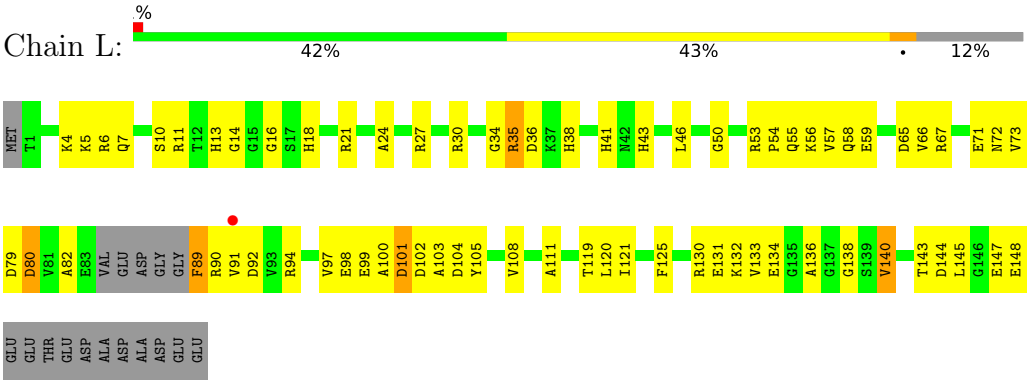
• Molecule 11: 50S ribosomal protein L14P

Chain K:



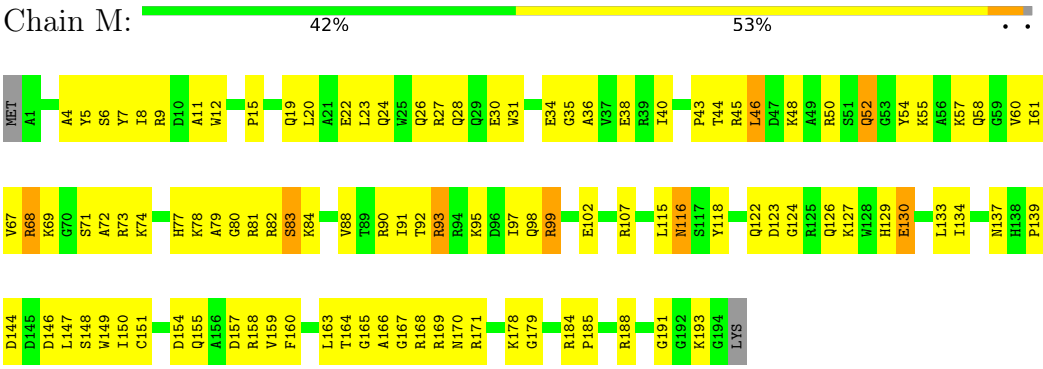
• Molecule 12: 50S ribosomal protein L15P

Chain L:



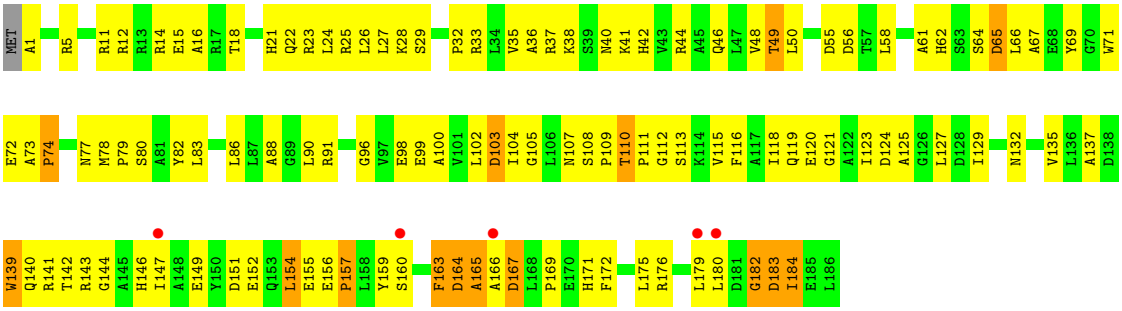
• Molecule 13: 50S ribosomal protein L15e

Chain M:



• Molecule 14: 50S ribosomal protein L18P

Chain N:

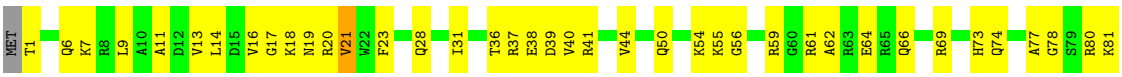


• Molecule 15: 50S ribosomal protein L18e

Chain O:

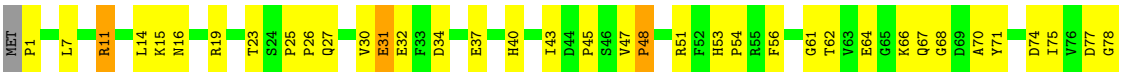
• Molecule 16: 50S ribosomal protein L19e

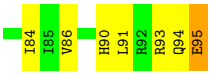
Chain P:



• Molecule 17: 50S ribosomal protein L21e

Chain Q:



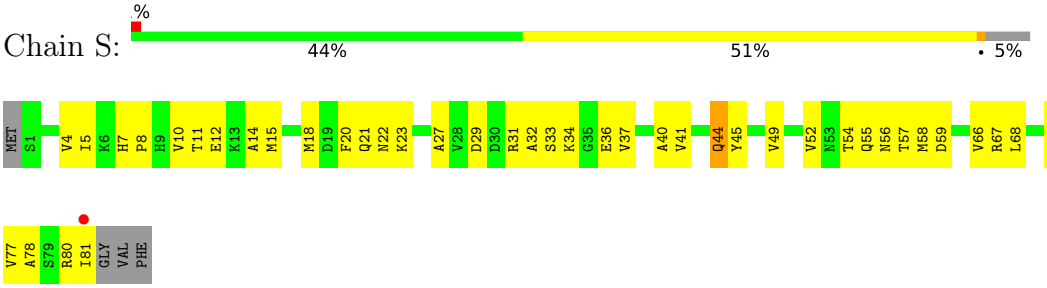


• Molecule 18: 50S ribosomal protein L22P

Chain R:

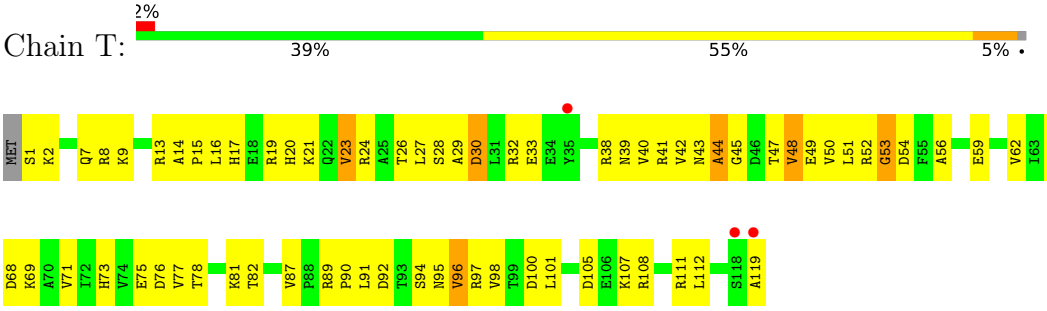
• Molecule 19: 50S ribosomal protein L23P

Chain S:



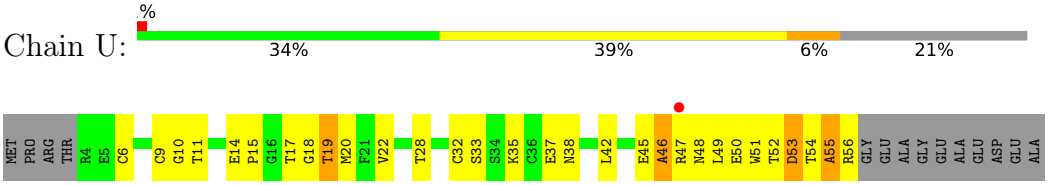
• Molecule 20: 50S ribosomal protein L24P

Chain T:



• Molecule 21: 50S ribosomal protein L24e

Chain U:

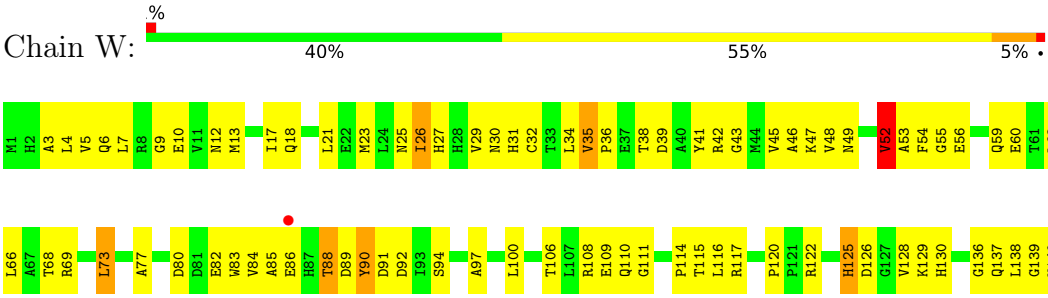


• Molecule 22: 50S ribosomal protein L29P

Chain V:

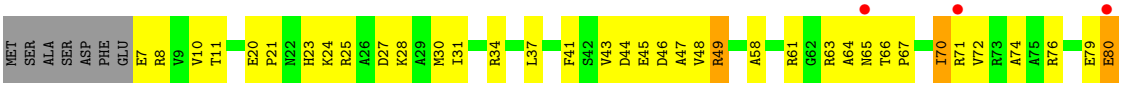
• Molecule 23: 50S ribosomal protein L30P

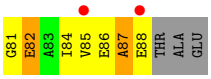
Chain W:



• Molecule 24: 50S ribosomal protein L31e

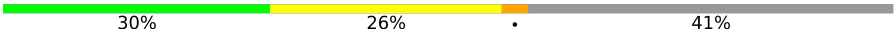
Chain X:

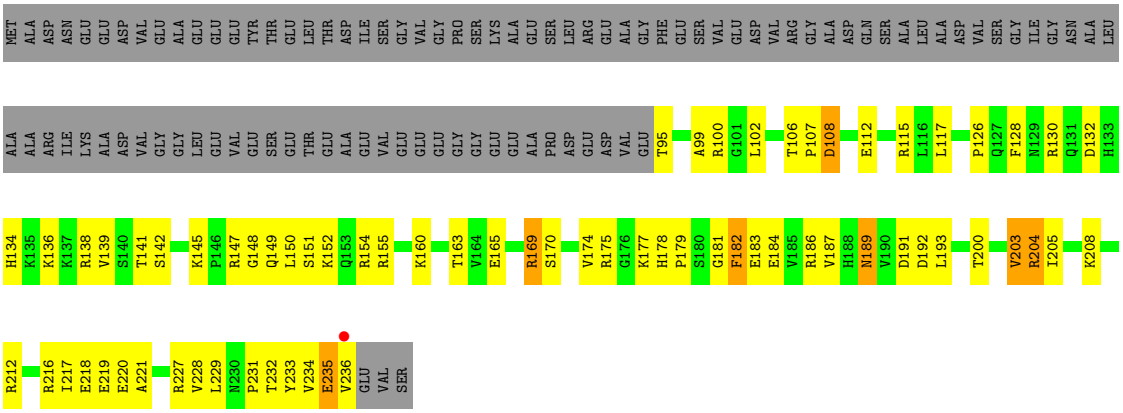




• Molecule 25: 50S ribosomal protein L32e

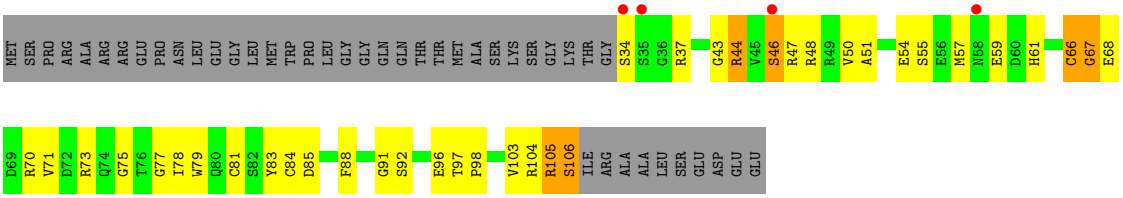
Chain Y:





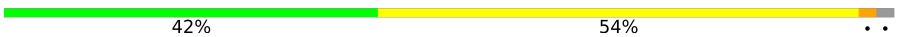
• Molecule 26: 50S ribosomal protein L37Ae

Chain Z:



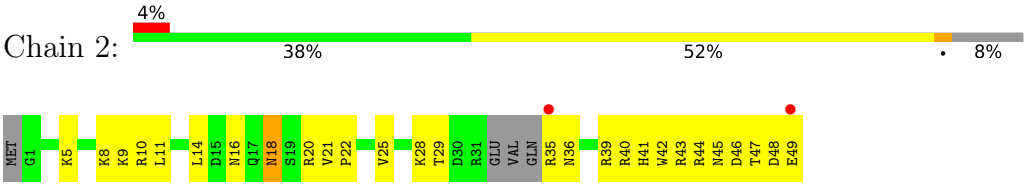
• Molecule 27: 50S ribosomal protein L37e

Chain 1:



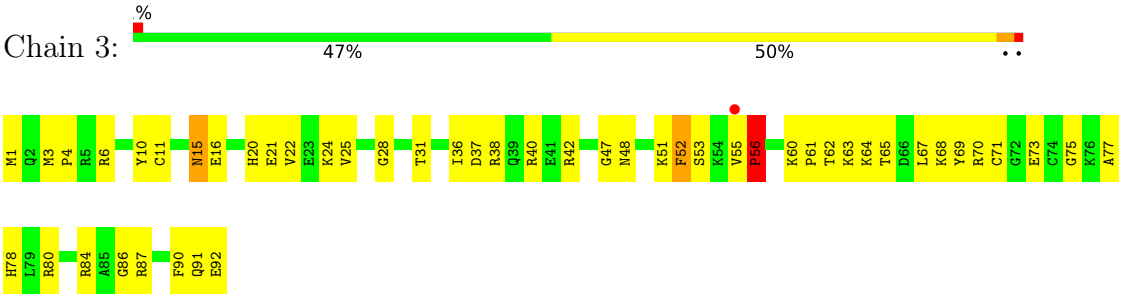
• Molecule 28: 50S ribosomal protein L39e

Chain 2:



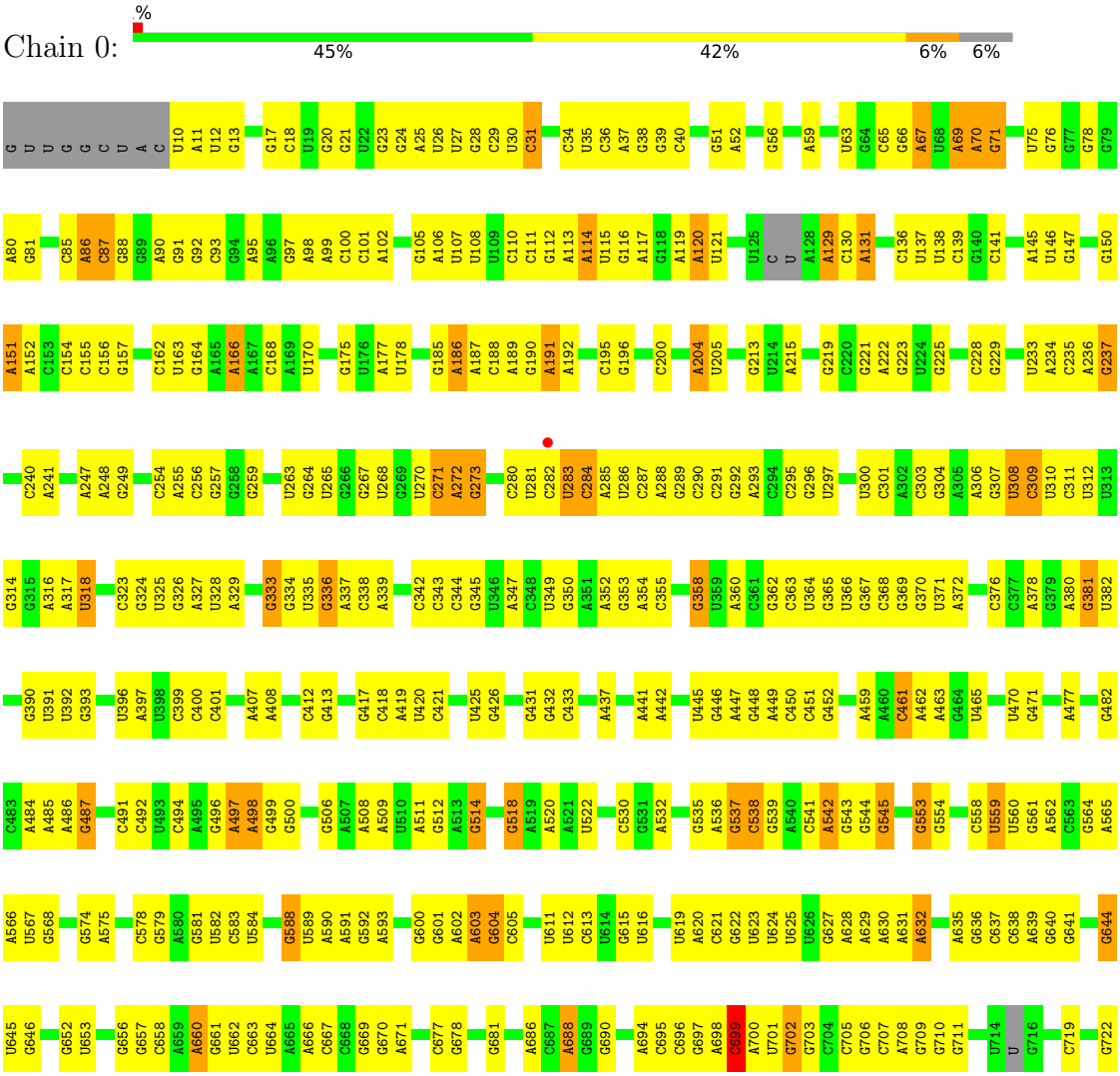
• Molecule 29: 50S ribosomal protein L44E

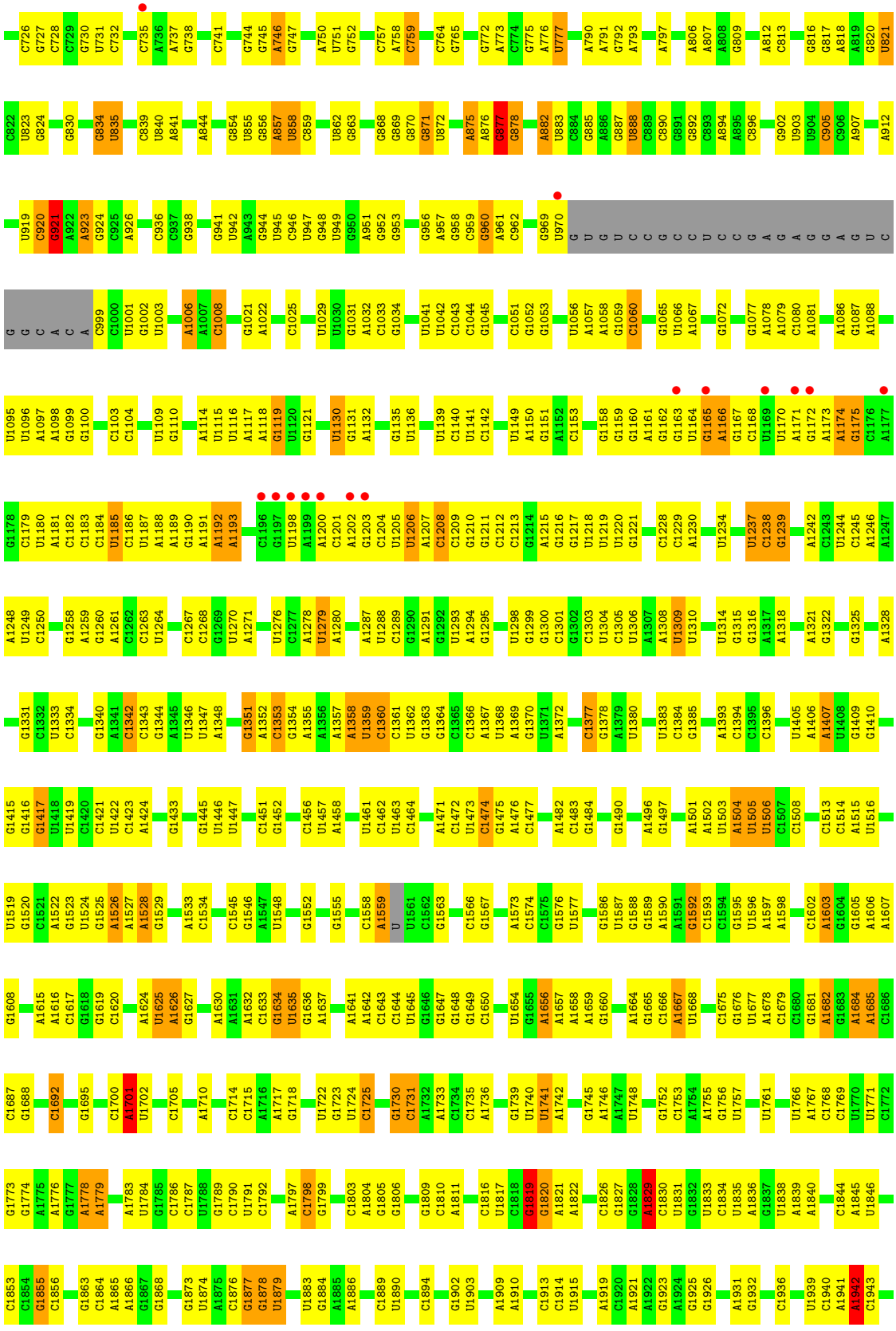
Chain 3:

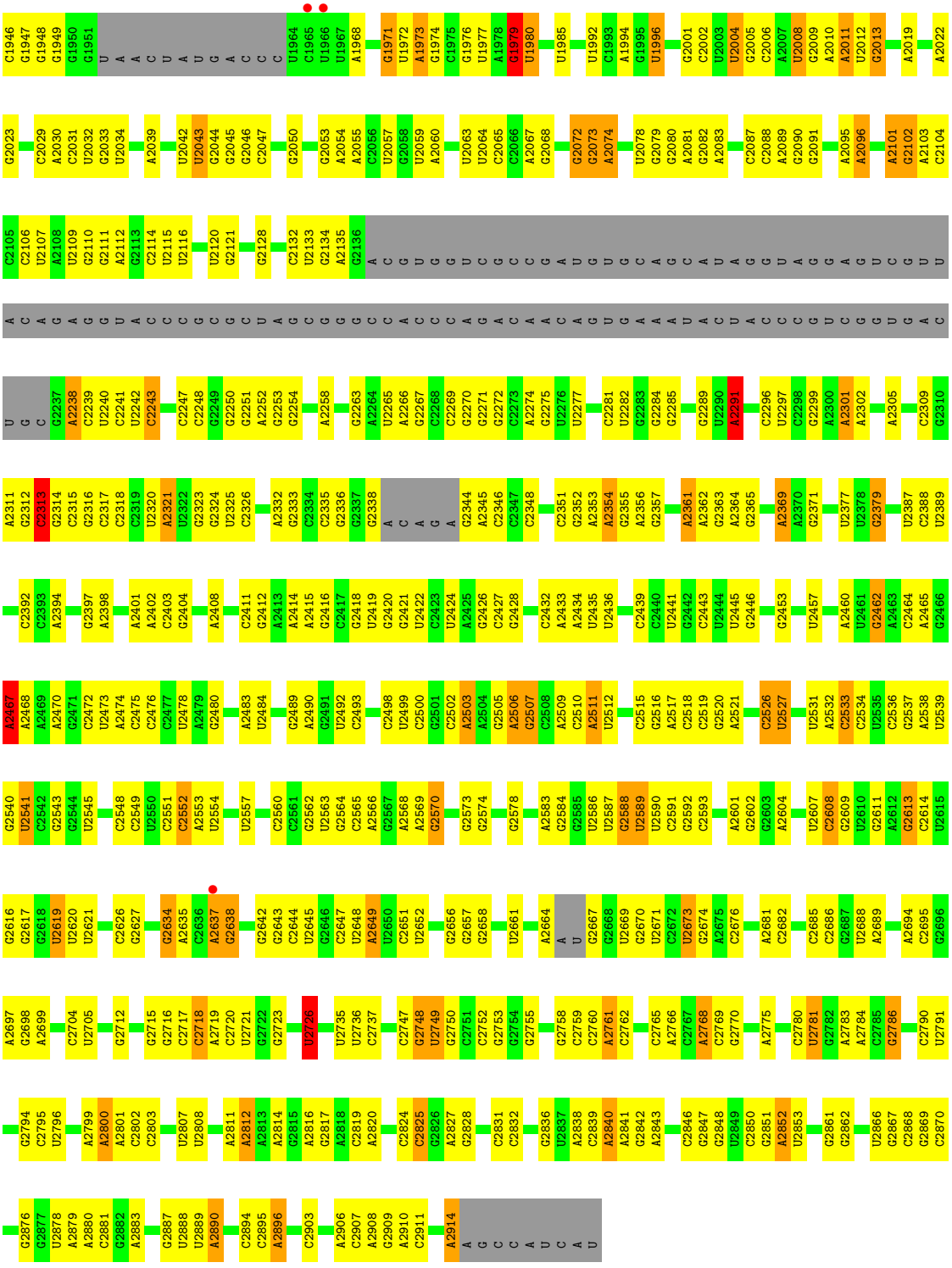


• Molecule 30: 50S RIBOSOMAL RNA

Chain 0:

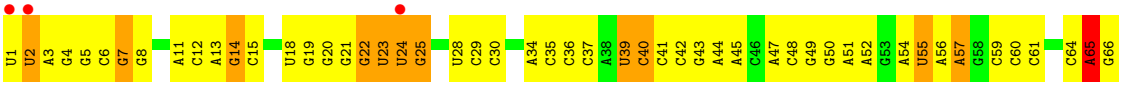


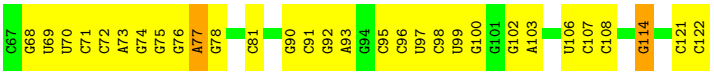

C726 G727 C728 C729 G730 U731 C732 C735 A736 A737 G738 C741 G744 G745 A746 G747 A750 U751 G752 C757 A758 C759 C764 G765 G772 A773 C774 G775 A776 U777 A790 A791 G792 A793 A797 A806 A807 A808 G809 A812 C813 G816 G817 A818 A819 G820 U821
C822 U823 G824 G830 G834 U835 C839 U840 A841 A844 G854 U855 G856 A857 U858 C859 U862 G863 G868 G869 G870 G871 U872 A875 A876 G877 G878 A882 U883 C884 G885 A886 G887 U888 C889 C890 G891 G892 C893 A894 A896 C896 G902 U903 U904 C905 C906 A907 A912
U919 C920 G921 A922 A923 G924 C925 A926 C936 C937 G938 G941 U942 A943 G944 U945 C946 U947 G948 U949 G950 G956 A957 G958 C959 G960 A961 C962 G969 U970 G U G U C C G C C U C G C A G A G G A G U C
G G C A C A C999 C1000 U1001 G1002 U1003 A1006 A1007 C1008 G1021 A1022 C1025 U1029 U1030 G1031 A1032 C1033 G1034 U1041 U1042 C1043 C1044 G1045 C1051 G1052 G1053 U1056 A1057 A1058 G1059 C1060 G1065 U1066 A1067 G1072 G1077 A1078 A1079 C1080 A1081 A1086 G1087 A1088
U1095 U1096 A1097 A1098 G1099 G1100 C1103 C1104 U1109 G1110 A1114 U1115 U1116 A1117 A1118 G1119 U1120 G1121 U1130 G1131 A1132 G1135 U1136 U1139 C1140 U1141 C1142 U1149 A1150 G1151 A1152 C1153 G1158 G1159 G1160 A1161 G1162 G1163 U1164 G1165 A1166 G1167 C1168 U1169 U1170 A1171 G1172 A1173 A1174 G1175 C1176 A1177
G1178 C1179 U1180 A1181 C1182 C1183 C1184 U1185 C1186 U1187 A1188 A1189 G1190 A1191 A1192 A1193 C1196 G1197 U1198 A1199 A1200 C1201 A1202 G1203 C1204 U1205 U1206 A1207 C1208 C1209 G1210 G1211 C1212 C1213 G1214 A1215 G1216 G1217 U1218 U1219 U1220 G1221 C1228 C1229 A1230 U1234 U1237 C1238 G1239 A1242 C1243 U1244 C1245 A1246 A1247
A1248 U1249 C1250 G1258 A1259 G1260 A1261 C1262 C1263 U1264 C1267 C1268 G1269 U1270 A1271 U1276 C1277 A1278 U1279 A1280 A1287 U1288 C1289 G1290 A1291 G1292 U1293 A1294 G1295 U1298 G1299 G1300 C1301 G1302 C1303 U1304 C1305 U1306 A1307 A1308 U1309 U1310 U1314 G1315 G1316 A1317 A1318 A1321 G1322 G1325 A1328
G1331 C1332 U1333 C1334 G1340 A1341 C1342 C1343 G1344 A1345 U1346 U1347 A1348 G1351 A1352 C1353 G1354 A1355 A1356 A1357 A1358 U1359 C1360 C1361 U1362 G1363 G1364 C1365 C1366 A1367 U1368 G1369 G1370 U1371 A1372 C1377 G1378 A1379 U1380 U1383 C1384 G1385 A1393 C1394 C1395 C1396 U1405 A1406 A1407 U1408 G1409 G1410
G1415 G1416 G1417 U1418 U1419 C1420 C1421 U1422 C1423 A1424 G1433 G1445 U1446 U1447 C1451 G1452 C1456 U1457 A1458 U1461 C1462 U1463 C1464 A1471 C1472 U1473 C1474 G1475 A1476 C1477 A1482 C1483 G1484 G1490 A1496 G1497 A1501 A1502 U1503 A1504 U1505 U1506 C1507 C1508 C1513 C1514 A1515 U1516
U1519 G1520 C1521 A1522 G1523 U1524 G1525 A1526 A1527 A1528 G1529 A1533 C1534 C1545 G1546 A1547 U1548 G1552 G1555 C1558 C1559 U C1561 C1562 C1563 C1566 G1567 A1573 C1574 G1575 G1576 U1577 G1586 U1587 G1588 G1589 A1590 A1591 G1592 C1593 C1594 G1595 U1596 A1597 A1598 C1602 A1603 G1604 G1605 A1606 A1607
G1608 A1615 A1616 C1617 G1618 G1619 C1620 A1624 U1625 A1626 G1627 A1630 A1631 A1632 C1633 G1634 U1635 G1636 A1637 A1641 A1642 C1643 C1644 U1645 G1646 G1647 G1648 G1649 C1650 U1654 G1655 A1656 A1657 A1658 A1659 G1660 A1664 G1665 C1666 A1667 U1668 C1675 G1676 U1677 A1678 C1679 C1680 G1681 A1682 G1683 A1684 A1685 C1686
C1687 G1688 C1692 G1695 C1700 A1701 U1702 C1705 A1710 C1714 C1715 A1716 A1717 G1718 U1722 G1723 U1724 C1725 G1730 C1731 A1732 A1733 C1734 C1735 A1736 G1739 U1740 U1741 A1742 G1745 A1746 A1747 U1748 G1752 C1753 A1754 A1755 G1756 U1757 U1761 U1766 A1767 C1768 C1769 U1770 U1771 C1772
G1773 G1774 A1775 A1776 G1777 A1778 A1779 A1783 U1784 G1785 C1786 C1787 U1788 G1789 C1790 U1791 C1792 A1797 C1798 G1799 C1803 A1804 G1805 G1806 G1809 C1810 A1811 C1816 U1817 C1818 G1819 G1820 A1821 A1822 C1826 G1827 G1828 A1829 C1830 U1831 G1832 U1833 C1834 U1835 A1836 G1837 U1838 A1839 A1840 C1844 A1845 U1846
C1853 C1854 G1855 C1856 G1863 C1864 A1865 A1866 G1867 G1868 G1873 U1874 A1875 C1876 G1877 G1878 U1879 U1883 G1884 A1885 A1886 C1889 U1890 C1894 G1902 U1903 A1909 A1910 C1913 C1914 U1915 A1919 C1920 A1921 A1922 G1923 A1924 G1925 G1926 A1931 G1932 C1936 U1939 C1940 A1941 A1942 C1943



• Molecule 31: 5S RIBOSOMAL RNA

Chain 9:





• Molecule 32: RNA (5'-R(*C*CP*A)-3')

• Molecule 33: RNA (5'-R(*CP*CP*(8AN))-3')

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	210.79Å 297.78Å 572.59Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.82 – 2.95 85.07 – 2.39	Depositor EDS
% Data completeness (in resolution range)	90.2 (49.82-2.95) 90.2 (85.07-2.39)	Depositor EDS
R_{merge}	0.26	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.00 (at 2.40Å)	Xtriage
Refinement program	CNS 1.0, REFMAC	Depositor
R, R_{free}	0.198 , 0.255 0.192 , 0.248	Depositor DCC
R_{free} test set	6547 reflections (0.98%)	wwPDB-VP
Wilson B-factor (Å^2)	47.5	Xtriage
Anisotropy	0.294	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 83.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	99194	wwPDB-VP
Average B, all atoms (Å^2)	53.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.73% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: SR, 8AN, UR3, CL, 1MA, NA, K, OMG, CD, PSU, OMU, ACA, MG

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	A	0.37	0/1784	0.67	0/2403
2	B	0.36	0/2687	0.68	0/3644
3	C	0.38	0/1883	0.65	0/2547
4	D	0.33	0/1109	0.58	0/1493
5	E	0.35	0/1380	0.61	0/1875
6	F	0.36	0/899	0.60	0/1219
7	G	0.30	0/241	0.51	0/324
8	H	0.36	0/1300	0.67	0/1738
9	I	0.29	0/524	0.54	0/711
10	J	0.38	0/1134	0.62	0/1525
11	K	0.39	0/1002	0.68	0/1346
12	L	0.34	0/1128	0.65	0/1504
13	M	0.38	0/1580	0.61	0/2111
14	N	0.31	0/1472	0.66	1/1994 (0.1%)
15	O	0.35	0/872	0.64	0/1176
16	P	0.37	0/1145	0.56	0/1524
17	Q	0.36	0/747	0.68	0/1001
18	R	0.39	0/1170	0.66	0/1574
19	S	0.37	0/646	0.60	1/870 (0.1%)
20	T	0.35	0/956	0.64	0/1284
21	U	0.36	0/417	0.64	0/562
22	V	0.29	0/502	0.57	0/675
23	W	0.39	0/1217	1.24	2/1650 (0.1%)
24	X	0.35	0/662	0.61	0/890
25	Y	0.37	0/1146	0.65	0/1536
26	Z	0.36	0/582	0.62	0/776
27	1	0.41	0/438	0.62	0/578
28	2	0.35	0/401	0.56	0/529
29	3	0.40	0/769	0.61	0/1019
30	0	0.42	1/65948 (0.0%)	0.69	18/102852 (0.0%)
31	9	0.37	0/2894	0.71	0/4509
32	5	0.45	0/43	0.61	0/65

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
33	6	0.38	0/40	0.60	0/60
All	All	0.40	1/98718 (0.0%)	0.69	22/147564 (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
23	W	0	1
30	0	0	39
31	9	0	2
All	All	0	42

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	1942	A	O3'-P	-6.61	1.53	1.61

All (22) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	W	52	VAL	CG1-CB-CG2	36.02	168.52	110.90
23	W	52	VAL	CA-CB-CG2	-23.54	75.59	110.90
30	0	1942	A	C5'-C4'-C3'	7.03	127.25	116.00
30	0	1942	A	OP2-P-O3'	6.73	120.00	105.20
30	0	1942	A	C5'-C4'-O4'	6.64	117.07	109.10
30	0	2467	A	C1'-O4'-C4'	-6.45	104.74	109.90
30	0	2291	A	N9-C1'-C2'	6.25	122.13	114.00
30	0	2726	U	N1-C1'-C2'	5.77	121.51	114.00
30	0	921	G	N9-C1'-C2'	5.53	121.19	114.00
30	0	1979	G	N9-C1'-C2'	5.44	121.07	114.00
30	0	1819	G	C5'-C4'-C3'	5.33	124.53	116.00
30	0	1942	A	C1'-O4'-C4'	-5.31	105.65	109.90
30	0	2313	C	C5'-C4'-C3'	5.24	124.39	116.00
30	0	1979	G	C2'-C3'-O3'	5.19	122.00	113.70
30	0	1701	A	C5'-C4'-C3'	5.18	124.29	116.00
14	N	163	PHE	N-CA-C	-5.18	97.02	111.00
19	S	27	ALA	N-CA-C	-5.17	97.04	111.00
30	0	1941	A	O3'-P-O5'	5.15	113.78	104.00
30	0	1504	A	C1'-O4'-C4'	-5.11	105.81	109.90
30	0	1504	A	N9-C1'-C2'	5.11	120.64	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	0	699	C	C1'-O4'-C4'	-5.06	105.85	109.90
30	0	2301	A	N9-C1'-C2'	5.02	120.53	114.00

There are no chirality outliers.

All (42) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	0	1078	A	Sidechain
30	0	1237	U	Sidechain
30	0	1309	U	Sidechain
30	0	1340	G	Sidechain
30	0	1358	A	Sidechain
30	0	1359	U	Sidechain
30	0	1380	U	Sidechain
30	0	1417	G	Sidechain
30	0	1635	U	Sidechain
30	0	1741	U	Sidechain
30	0	1819	G	Sidechain
30	0	1829	A	Sidechain
30	0	1855	G	Sidechain
30	0	1863	G	Sidechain
30	0	1877	G	Sidechain
30	0	1878	G	Sidechain
30	0	2043	U	Sidechain
30	0	2046	G	Sidechain
30	0	2065	C	Sidechain
30	0	2316	G	Sidechain
30	0	2478	U	Sidechain
30	0	2493	C	Sidechain
30	0	2503	A	Sidechain
30	0	2506	A	Sidechain
30	0	2543	G	Sidechain
30	0	2552	C	Sidechain
30	0	2557	U	Sidechain
30	0	2673	U	Sidechain
30	0	2781	U	Sidechain
30	0	2790	C	Sidechain
30	0	2840	A	Sidechain
30	0	333	G	Sidechain
30	0	471	G	Sidechain
30	0	518	G	Sidechain
30	0	63	U	Sidechain

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Mol	Chain	Res	Type	Group
30	0	688	A	Sidechain
30	0	722	G	Sidechain
30	0	877	G	Sidechain
30	0	888	U	Sidechain
31	9	65	A	Sidechain
31	9	90	G	Sidechain
23	W	90	TYR	Sidechain

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	A	1752	0	1764	160	0
2	B	2624	0	2530	225	0
3	C	1859	0	1811	154	0
4	D	1093	0	1083	102	0
5	E	1356	0	1264	81	0
6	F	889	0	841	68	0
7	G	240	0	231	30	0
8	H	1281	0	1290	86	0
9	I	518	0	495	67	0
10	J	1119	0	1096	87	0
11	K	993	0	1025	77	0
12	L	1117	0	1071	85	0
13	M	1557	0	1571	130	0
14	N	1444	0	1399	140	0
15	O	864	0	868	60	0
16	P	1135	0	1120	68	0
17	Q	734	0	726	50	0
18	R	1148	0	1119	81	0
19	S	640	0	600	36	0
20	T	949	0	922	88	0
21	U	410	0	364	38	0
22	V	499	0	511	49	0
23	W	1195	0	1135	118	0
24	X	653	0	651	50	0
25	Y	1130	0	1133	82	0
26	Z	572	0	529	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	1	431	0	426	43	0
28	2	396	0	413	30	0
29	3	754	0	726	58	0
30	0	59017	0	29809	1406	0
31	9	2595	0	1322	96	0
32	5	39	0	24	3	0
33	6	59	0	35	6	0
34	0	82	0	0	0	0
34	2	1	0	0	0	0
34	9	1	0	0	0	0
34	A	3	0	0	0	0
34	B	2	0	0	0	0
34	C	1	0	0	0	0
34	K	1	0	0	0	0
34	T	1	0	0	0	0
34	Y	1	0	0	0	0
35	0	6	0	0	1	0
35	3	1	0	0	0	0
35	A	1	0	0	0	0
35	B	1	0	0	0	0
35	J	4	0	0	4	0
35	L	2	0	0	2	0
35	M	1	0	0	1	0
35	N	1	0	0	0	0
35	O	1	0	0	1	0
35	Q	1	0	0	1	0
35	R	1	0	0	0	0
35	Y	2	0	0	0	0
36	0	87	0	0	1	0
36	1	2	0	0	0	0
36	3	3	0	0	0	0
36	9	3	0	0	0	0
36	A	3	0	0	0	0
36	B	2	0	0	0	0
36	F	1	0	0	0	0
36	H	2	0	0	0	0
36	L	1	0	0	0	0
36	R	1	0	0	0	0
36	T	2	0	0	0	0
36	Y	1	0	0	0	0
37	0	65	0	0	0	0
37	9	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	C	1	0	0	0	0
37	H	1	0	0	0	0
37	J	1	0	0	0	0
37	M	1	0	0	0	0
37	Q	1	0	0	0	0
37	R	1	0	0	0	0
37	S	1	0	0	0	0
38	1	1	0	0	0	0
38	3	1	0	0	0	0
38	O	1	0	0	0	0
38	U	1	0	0	0	0
38	Z	1	0	0	0	0
39	0	2	0	0	0	0
40	6	11	0	8	0	0
41	6	8	0	6	0	0
42	0	5775	0	0	197	0
42	1	57	0	0	3	0
42	2	50	0	0	2	0
42	3	66	0	0	7	0
42	6	6	0	0	4	0
42	9	138	0	0	12	0
42	A	134	0	0	19	0
42	B	156	0	0	21	0
42	C	168	0	0	21	0
42	D	49	0	0	6	0
42	E	49	0	0	5	0
42	F	31	0	0	3	0
42	G	20	0	0	2	0
42	H	78	0	0	9	0
42	I	11	0	0	3	0
42	J	58	0	0	2	0
42	K	57	0	0	3	0
42	L	91	0	0	11	0
42	M	129	0	0	5	0
42	N	68	0	0	14	0
42	O	46	0	0	6	0
42	P	72	0	0	7	0
42	Q	52	0	0	3	0
42	R	89	0	0	5	0
42	S	35	0	0	1	0
42	T	42	0	0	5	0
42	U	29	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	V	16	0	0	2	0
42	W	75	0	0	10	0
42	X	31	0	0	5	0
42	Y	105	0	0	5	0
42	Z	25	0	0	6	0
All	All	99194	0	59918	3515	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 23.

All (3515) 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)
23:W:21:LEU:HD21	23:W:48:VAL:HG11	1.27	1.15
3:C:236:THR:HG22	3:C:239:ALA:H	1.00	1.13
36:0:8979:SR:SR	42:0:4399:HOH:O	0.84	1.13
14:N:37:ARG:HH12	31:9:6:C:H5"	1.10	1.09
30:0:870:G:H2'	30:0:871:G:H5"	1.30	1.08
14:N:37:ARG:NH1	31:9:6:C:H5"	1.69	1.07
31:9:76:G:H3'	31:9:77:A:H5"	1.29	1.07
10:J:52:GLN:HE22	30:0:1119:G:H2'	0.96	1.05
9:I:97:VAL:HG12	9:I:101:LYS:HE3	1.39	1.05
30:0:871:G:H5'	30:0:871:G:H8	1.17	1.05
6:F:91:VAL:HG12	6:F:92:GLY:H	1.18	1.05
30:0:1160:G:H5'	30:0:1161:A:H5'	1.39	1.04
2:B:36:PRO:HA	2:B:168:GLY:HA3	1.39	1.04
22:V:1:THR:HG23	22:V:2:VAL:H	1.18	1.04
10:J:52:GLN:NE2	30:0:1119:G:H2'	1.73	1.03
24:X:28:LYS:HD2	24:X:31:ILE:HD12	1.41	1.03
10:J:82:THR:HG23	30:0:1242:A:H5'	1.40	1.03
13:M:164:THR:HG22	13:M:166:ALA:H	1.18	1.03
11:K:29:LEU:HB3	11:K:55:VAL:HG11	1.41	1.03
4:D:25:MET:HE3	4:D:37:ALA:HB1	1.37	1.02
30:0:871:G:H5'	30:0:871:G:C8	1.93	1.02
1:A:153:ARG:HB2	1:A:153:ARG:HH11	1.18	1.02
30:0:541:C:H2'	30:0:542:A:H5"	1.42	1.02
11:K:10:GLN:NE2	11:K:10:GLN:H	1.58	1.01
3:C:1:MET:HG2	3:C:2:GLN:H	1.25	0.99
16:P:115:SER:H	16:P:118:GLN:HE21	1.05	0.98
24:X:43:VAL:HG11	24:X:82:GLU:HA	1.42	0.98
25:Y:189:ASN:HA	25:Y:217:ILE:HD11	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2586:U:H3	30:0:2592:G:H22	1.12	0.96
23:W:137:GLN:HE21	23:W:141:HIS:HE1	1.06	0.96
30:0:542:A:H5'	30:0:542:A:H8	1.29	0.96
11:K:74:VAL:HG13	11:K:113:ILE:HG23	1.48	0.96
2:B:36:PRO:HG3	2:B:169:GLY:H	1.30	0.95
1:A:100:PRO:HG2	1:A:103:VAL:HG21	1.43	0.95
30:0:2717:C:H2'	30:0:2718:C:H5"	1.47	0.95
14:N:144:GLY:O	14:N:147:ILE:HG22	1.66	0.95
30:0:1451:C:H5'	30:0:1505:U:C5	2.01	0.95
3:C:115:LEU:HD13	3:C:223:LEU:HD21	1.49	0.94
14:N:83:LEU:HD13	14:N:175:LEU:HD23	1.44	0.94
4:D:57:THR:HG23	4:D:63:ILE:HA	1.50	0.94
4:D:172:VAL:HG12	4:D:173:GLU:H	1.32	0.94
31:9:56:A:H2'	31:9:57:A:H5"	1.49	0.93
29:3:70:ARG:HG2	29:3:77:ALA:HB2	1.51	0.93
30:0:541:C:C2'	30:0:542:A:H5"	1.97	0.93
1:A:211:LYS:HB3	1:A:212:PRO:HD2	1.49	0.93
30:0:2506:A:HO2'	30:0:2507:G:H8	1.04	0.93
5:E:23:GLU:HG2	5:E:28:SER:HB3	1.49	0.92
3:C:236:THR:HG22	3:C:239:ALA:N	1.85	0.92
18:R:8:ALA:HB1	18:R:13:THR:HG21	1.50	0.91
22:V:12:THR:HG22	22:V:15:GLU:HG3	1.52	0.91
10:J:70:PHE:CE1	30:0:2676:C:H4'	2.04	0.91
18:R:39:THR:HB	18:R:42:GLU:HG3	1.50	0.90
2:B:179:LEU:O	2:B:183:GLU:HG2	1.71	0.90
30:0:506:G:H22	30:0:509:A:H5'	1.34	0.90
2:B:206:THR:HG21	30:0:2716:G:H5"	1.51	0.90
8:H:30:LYS:H	8:H:62:HIS:HD2	1.17	0.89
30:0:1667:A:H8	30:0:1667:A:H5'	1.36	0.88
4:D:75:LEU:HD22	4:D:79:MET:HB3	1.53	0.88
11:K:39:GLY:HA2	42:K:4183:HOH:O	1.73	0.88
3:C:233:THR:HG22	3:C:234:VAL:H	1.38	0.88
11:K:87:ARG:HB2	21:U:19:THR:HG23	1.53	0.88
30:0:2005:G:H3'	30:0:2005:G:OP2	1.74	0.88
11:K:10:GLN:H	11:K:10:GLN:HE21	1.19	0.88
3:C:236:THR:HG21	42:C:8580:HOH:O	1.74	0.88
5:E:81:GLU:HG2	5:E:134:SER:HB3	1.54	0.87
13:M:164:THR:HG22	13:M:166:ALA:N	1.89	0.87
30:0:2291:A:C8	30:0:2309:C:H5'	2.09	0.87
5:E:15:GLN:HG2	5:E:19:ASP:O	1.74	0.87
1:A:153:ARG:HH11	1:A:153:ARG:CB	1.86	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:3:THR:HB	30:0:656:G:H5'	1.57	0.87
3:C:27:ARG:HG2	3:C:27:ARG:HH11	1.37	0.86
21:U:9:CYS:HA	21:U:52:THR:HG23	1.57	0.86
3:C:72:LYS:HG2	3:C:77:ALA:HA	1.56	0.86
26:Z:70:ARG:HD2	26:Z:83:TYR:HB2	1.57	0.86
5:E:3:VAL:HG22	5:E:49:ILE:HB	1.56	0.86
11:K:98:VAL:CG1	11:K:102:GLU:HA	2.05	0.86
30:0:1451:C:H5'	30:0:1505:U:H5	1.34	0.86
30:0:1559:A:H1'	42:0:6702:HOH:O	1.74	0.86
30:0:870:G:C2'	30:0:871:G:H5"	2.05	0.86
15:O:32:ARG:HE	15:O:35:LYS:HD3	1.40	0.86
16:P:103:THR:HA	16:P:106:ARG:NH1	1.91	0.85
30:0:681:G:N3	30:0:681:G:H5'	1.91	0.85
1:A:109:GLU:HG2	1:A:116:GLY:H	1.42	0.85
13:M:134:ILE:HG23	13:M:141:ILE:HD13	1.56	0.85
25:Y:151:SER:HB3	25:Y:154:ARG:HB3	1.58	0.85
30:0:545:G:H5'	30:0:545:G:H8	1.40	0.85
4:D:25:MET:HE1	4:D:41:LEU:HG	1.57	0.85
4:D:28:GLY:HA2	4:D:69:ILE:HG23	1.58	0.85
13:M:24:GLN:NE2	13:M:27:ARG:HH11	1.73	0.85
23:W:88:THR:HG23	23:W:110:GLN:HB3	1.55	0.85
29:3:25:VAL:HG22	29:3:68:LYS:HG3	1.58	0.85
10:J:70:PHE:HE1	30:0:2676:C:H4'	1.40	0.84
12:L:55:GLN:HA	12:L:58:GLN:HE21	1.38	0.84
19:S:10:VAL:HG11	22:V:36:ALA:HB2	1.59	0.84
20:T:28:SER:HA	20:T:97:ARG:HD3	1.59	0.84
1:A:153:ARG:HB2	1:A:153:ARG:NH1	1.93	0.84
30:0:2717:C:C2'	30:0:2718:C:H5"	2.07	0.84
24:X:49:ARG:HG3	24:X:49:ARG:O	1.75	0.84
28:2:41:HIS:H	28:2:45:ASN:HD22	1.20	0.84
30:0:2812:A:H2	30:0:2814:A:H62	1.22	0.84
15:O:42:GLU:HB2	42:O:2176:HOH:O	1.77	0.84
30:0:1474:C:H6	30:0:1474:C:H5'	1.41	0.84
31:9:29:C:H2'	31:9:30:C:H5'	1.59	0.84
30:0:1603:A:H5'	30:0:1605:G:O4'	1.77	0.84
6:F:12:LEU:HD21	6:F:111:ILE:HG23	1.58	0.83
30:0:1116:U:O2'	30:0:1118:A:H2	1.61	0.83
42:Z:8705:HOH:O	30:0:1886:A:H4'	1.78	0.83
12:L:35:ARG:HB2	12:L:35:ARG:HH11	1.41	0.83
9:I:112:LEU:HD11	30:0:1162:G:H1'	1.60	0.83
30:0:1160:G:C5'	30:0:1161:A:H5'	2.07	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:75:C:H3'	32:5:76:A:H8	1.42	0.83
21:U:52:THR:HG22	21:U:54:THR:H	1.44	0.83
30:0:1184:C:H1'	42:0:9264:HOH:O	1.79	0.83
6:F:91:VAL:HG12	6:F:92:GLY:N	1.94	0.82
14:N:113:SER:HB2	42:N:8857:HOH:O	1.79	0.82
29:3:6:ARG:NH1	29:3:21:GLU:HG3	1.94	0.82
11:K:32:ILE:HD11	11:K:56:SER:HB3	1.62	0.82
11:K:10:GLN:HE21	11:K:10:GLN:N	1.78	0.81
11:K:109:LEU:HD13	11:K:113:ILE:HD11	1.62	0.81
29:3:48:ASN:HD21	30:0:2468:A:H61	1.28	0.81
30:0:1116:U:HO2'	30:0:1118:A:H2	0.83	0.81
2:B:162:MET:HE1	2:B:310:ARG:HD2	1.63	0.81
10:J:52:GLN:HG3	10:J:53:ILE:N	1.94	0.81
2:B:199:TYR:HE2	2:B:268:ARG:HB2	1.43	0.81
15:O:21:SER:OG	15:O:106:PRO:HB2	1.80	0.81
3:C:127:ARG:NH2	3:C:225:PRO:HG2	1.95	0.81
30:0:1679:C:H5'	42:0:3235:HOH:O	1.78	0.81
16:P:38:GLU:HA	16:P:41:ARG:HD2	1.63	0.81
27:1:20:ARG:HG2	30:0:111:C:O2'	1.81	0.81
9:I:73:LEU:HD12	9:I:107:LYS:NZ	1.96	0.81
30:0:271:C:H41	30:0:378:A:H2	1.27	0.81
4:D:54:ALA:HB2	4:D:69:ILE:HD12	1.62	0.81
18:R:18:LEU:HB2	18:R:143:VAL:HG12	1.63	0.80
30:0:877:G:H5'	30:0:878:G:OP1	1.81	0.80
23:W:6:GLN:HB2	23:W:26:ILE:HD12	1.63	0.80
7:G:23:ILE:HD13	7:G:67:LEU:HD23	1.63	0.80
3:C:225:PRO:O	30:0:1308:A:H4'	1.82	0.80
18:R:99:ALA:HB1	18:R:109:MET:CE	2.12	0.80
2:B:201:ASP:HB2	2:B:312:ARG:HD2	1.64	0.80
30:0:1625:U:H4'	42:0:5524:HOH:O	1.80	0.80
3:C:103:ASN:ND2	30:0:663:C:H5"	1.95	0.80
5:E:154:ILE:HD11	5:E:157:LYS:HB2	1.61	0.80
20:T:71:VAL:HG11	20:T:90:PRO:HB3	1.63	0.80
5:E:20:ILE:HD11	5:E:40:VAL:HG11	1.64	0.80
30:0:1160:G:H5'	30:0:1161:A:C5'	2.12	0.80
18:R:18:LEU:HD12	18:R:143:VAL:HG11	1.63	0.80
6:F:34:ASN:HA	13:M:4:ALA:HB2	1.62	0.79
30:0:2420:G:O2'	30:0:2421:G:H5'	1.82	0.79
1:A:26:ASP:HB2	42:0:4577:HOH:O	1.81	0.79
8:H:30:LYS:H	8:H:62:HIS:CD2	2.01	0.79
18:R:114:VAL:HB	18:R:145:LEU:HD12	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:73:ASP:OD1	19:S:76:GLU:HG3	1.83	0.79
27:1:16:HIS:HD2	30:0:470:U:O2'	1.65	0.79
30:0:1377:C:H5'	30:0:1377:C:H6	1.45	0.79
5:E:84:MET:HE1	5:E:148:ILE:HD12	1.63	0.79
18:R:132:ARG:NH2	30:0:2055:A:H4'	1.98	0.79
2:B:74:ILE:HD13	2:B:309:VAL:HG21	1.64	0.79
21:U:14:GLU:O	21:U:17:THR:HB	1.83	0.78
27:1:21:ARG:HD2	27:1:37:CYS:SG	2.23	0.78
30:0:2042:U:H1'	42:0:9124:HOH:O	1.82	0.78
1:A:33:GLU:H	1:A:33:GLU:CD	1.86	0.78
23:W:80:ASP:O	23:W:84:VAL:HG23	1.84	0.78
13:M:171:ARG:HD3	30:0:156:C:H5"	1.64	0.78
14:N:164:ASP:CG	14:N:167:ASP:HA	2.04	0.78
30:0:1205:U:H2'	30:0:1206:U:H5"	1.66	0.78
1:A:192:VAL:HG13	1:A:207:GLN:HB3	1.66	0.78
22:V:50:ARG:NH1	30:0:56:G:H5"	1.99	0.78
11:K:98:VAL:HG11	11:K:102:GLU:HA	1.64	0.78
16:P:115:SER:OG	16:P:118:GLN:HG3	1.84	0.78
25:Y:187:VAL:HG23	25:Y:192:ASP:HB2	1.63	0.78
2:B:41:PHE:HB3	2:B:190:MET:HE1	1.64	0.78
6:F:58:GLU:CD	13:M:27:ARG:HH22	1.87	0.78
12:L:92:ASP:HA	12:L:121:ILE:HB	1.66	0.78
30:0:2506:A:O2'	30:0:2507:G:H8	1.65	0.78
1:A:199:HIS:CD2	1:A:201:PHE:H	2.02	0.78
18:R:39:THR:HG23	18:R:107:GLU:O	1.83	0.78
16:P:59:ARG:NH2	16:P:66:GLN:HE22	1.82	0.77
2:B:162:MET:CE	2:B:310:ARG:HD2	2.14	0.77
14:N:40:ASN:HD21	31:9:28:U:H5"	1.49	0.77
14:N:40:ASN:ND2	31:9:28:U:H5"	2.00	0.77
1:A:179:MET:HA	1:A:179:MET:CE	2.14	0.77
20:T:9:LYS:HE3	20:T:13:ARG:CZ	2.15	0.77
2:B:275:GLY:O	2:B:291:ASP:HA	1.84	0.77
1:A:191:GLY:HA2	1:A:194:MET:CE	2.14	0.77
3:C:27:ARG:HG2	3:C:27:ARG:NH1	1.95	0.77
23:W:137:GLN:HE21	23:W:141:HIS:CE1	1.98	0.77
26:Z:44:ARG:HH21	30:0:1771:U:H5'	1.48	0.77
3:C:115:LEU:HD21	3:C:243:VAL:HG13	1.67	0.77
14:N:67:ALA:HA	14:N:71:TRP:HB3	1.67	0.76
1:A:66:ARG:HH11	1:A:66:ARG:HB2	1.50	0.76
22:V:12:THR:HG22	22:V:15:GLU:CG	2.16	0.76
4:D:135:VAL:HG21	4:D:139:TYR:CD1	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:64:ASN:O	7:G:68:GLU:HG3	1.86	0.76
8:H:32:ALA:HB3	8:H:69:ARG:HH12	1.49	0.76
10:J:75:PRO:HG2	10:J:105:LEU:HD21	1.65	0.76
22:V:1:THR:HG23	22:V:2:VAL:HG23	1.66	0.76
30:0:541:C:H2'	30:0:542:A:C5'	2.13	0.76
30:0:1835:U:H5	30:0:1840:A:N7	1.83	0.76
2:B:267:LYS:HD3	42:0:3465:HOH:O	1.85	0.76
10:J:131:THR:HG22	10:J:134:GLU:H	1.51	0.76
12:L:90:ARG:HA	12:L:119:THR:HB	1.67	0.76
30:0:2661:U:H3	30:0:2812:A:H62	1.32	0.76
3:C:236:THR:H	3:C:239:ALA:HB3	1.51	0.76
2:B:329:TYR:CE2	21:U:15:PRO:HG2	2.21	0.76
30:0:1116:U:H3	30:0:1246:A:H62	1.32	0.76
13:M:80:GLY:O	13:M:81:ARG:HD2	1.86	0.75
21:U:46:ALA:HB1	21:U:52:THR:HG21	1.69	0.75
18:R:119:VAL:HG21	18:R:142:ASP:CG	2.07	0.75
30:0:871:G:H8	30:0:871:G:C5'	1.95	0.75
30:0:1118:A:H8	30:0:1119:G:H5"	1.51	0.75
32:5:75:C:H3'	32:5:76:A:C8	2.21	0.75
1:A:192:VAL:CG1	1:A:207:GLN:HB3	2.16	0.75
2:B:81:ALA:HB1	2:B:142:LEU:HD13	1.66	0.75
24:X:43:VAL:HG12	24:X:44:ASP:H	1.51	0.75
30:0:1730:G:H5'	30:0:1731:C:C5	2.22	0.75
1:A:203:GLY:HA2	42:0:3401:HOH:O	1.87	0.75
5:E:126:ILE:HB	5:E:131:LEU:HD23	1.69	0.75
30:0:2578:G:H5'	30:0:2578:G:H8	1.50	0.75
4:D:170:TYR:O	4:D:171:ASP:HB3	1.87	0.74
30:0:542:A:H5'	30:0:542:A:C8	2.18	0.74
22:V:1:THR:HG23	22:V:2:VAL:N	1.99	0.74
15:O:57:THR:O	15:O:111:VAL:HG23	1.87	0.74
3:C:180:SER:HB2	42:C:8643:HOH:O	1.86	0.74
4:D:105:SER:HB2	4:D:131:THR:HG23	1.70	0.74
11:K:87:ARG:HG3	30:0:2721:U:H4'	1.68	0.74
20:T:49:GLU:HB3	20:T:59:GLU:HG2	1.69	0.74
30:0:530:C:H4'	30:0:612:U:H4'	1.69	0.74
30:0:625:U:H3'	42:0:4150:HOH:O	1.87	0.74
9:I:101:LYS:O	9:I:105:GLU:HG3	1.87	0.74
22:V:12:THR:HG22	22:V:15:GLU:OE2	1.87	0.74
24:X:61:ARG:HB2	24:X:65:ASN:HB2	1.69	0.74
13:M:23:LEU:HD13	13:M:27:ARG:NH2	2.02	0.74
14:N:169:PRO:O	14:N:172:PHE:HB3	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:292:G:H2'	30:0:358:G:N2	2.02	0.74
30:0:1206:U:H5'	30:0:1206:U:H6	1.51	0.74
2:B:199:TYR:CE2	2:B:268:ARG:HB2	2.22	0.74
7:G:12:ILE:HG23	42:0:6301:HOH:O	1.88	0.74
25:Y:189:ASN:CA	25:Y:217:ILE:HD11	2.16	0.74
14:N:86:LEU:O	14:N:90:LEU:HG	1.88	0.74
14:N:119:GLN:O	14:N:123:ILE:HG13	1.87	0.74
31:9:14:G:H5'	31:9:14:G:H8	1.52	0.74
30:0:1878:G:H5'	42:0:5236:HOH:O	1.87	0.73
11:K:74:VAL:CG1	11:K:113:ILE:HG12	2.18	0.73
30:0:1452:G:H1'	35:0:8803:CL:CL	2.25	0.73
30:0:2073:G:H5"	42:0:4699:HOH:O	1.88	0.73
2:B:27:ASN:HD21	30:0:2807:U:P	2.11	0.73
6:F:63:ILE:HB	6:F:64:PRO:HD3	1.71	0.73
8:H:59:GLN:HE22	8:H:96:GLN:HG2	1.52	0.73
25:Y:169:ARG:HD2	30:0:1328:A:OP1	1.87	0.73
18:R:82:GLU:HG3	18:R:83:LYS:N	2.04	0.73
42:M:8871:HOH:O	30:0:381:G:H5"	1.89	0.73
30:0:1119:G:N2	30:0:1246:A:C2	2.56	0.73
8:H:19:ARG:HH12	30:0:1008:C:H5"	1.53	0.73
23:W:5:VAL:HG11	23:W:153:MET:HE3	1.71	0.73
13:M:72:ALA:HB2	13:M:93:ARG:HG2	1.70	0.72
24:X:72:VAL:HG22	24:X:85:VAL:CG1	2.19	0.72
1:A:135:VAL:HA	1:A:150:PRO:HD3	1.70	0.72
4:D:57:THR:HA	42:D:5728:HOH:O	1.89	0.72
30:0:282:C:H1'	30:0:368:C:N4	2.04	0.72
31:9:50:G:H2'	31:9:51:A:C8	2.24	0.72
4:D:84:LEU:HA	4:D:87:ALA:HB3	1.71	0.72
14:N:110:THR:HB	14:N:113:SER:OG	1.89	0.72
14:N:112:GLY:HA2	14:N:137:ALA:H	1.54	0.72
18:R:39:THR:HB	18:R:42:GLU:CG	2.18	0.72
10:J:77:GLY:HA2	10:J:80:LYS:H	1.54	0.72
10:J:93:ARG:HB3	10:J:93:ARG:HH11	1.54	0.72
25:Y:126:PRO:HG2	25:Y:128:PHE:CE1	2.24	0.72
30:0:78:G:N2	30:0:78:G:N3	2.37	0.72
20:T:2:LYS:HG2	30:0:447:A:OP1	1.90	0.72
30:0:1118:A:H62	30:0:1244:U:H3	1.38	0.72
12:L:143:THR:HG22	12:L:145:LEU:H	1.55	0.72
27:1:1:THR:HA	42:1:435:HOH:O	1.89	0.72
30:0:558:C:H2'	30:0:559:U:H5"	1.71	0.72
28:2:41:HIS:HD2	28:2:44:ARG:H	1.35	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1973:A:H5'	30:0:1973:A:H8	1.55	0.72
2:B:140:LEU:HA	42:B:9050:HOH:O	1.90	0.72
18:R:99:ALA:HB1	18:R:109:MET:HE1	1.72	0.71
30:0:855:U:H3'	42:0:4510:HOH:O	1.89	0.71
4:D:22:VAL:HG22	4:D:74:THR:HG22	1.71	0.71
6:F:36:THR:HG23	6:F:97:ALA:HB2	1.70	0.71
30:0:558:C:C2'	30:0:559:U:H5"	2.19	0.71
6:F:96:ALA:HA	42:F:3111:HOH:O	1.88	0.71
20:T:112:LEU:HD23	20:T:119:ALA:HB3	1.73	0.71
10:J:74:ARG:CB	10:J:74:ARG:HH11	2.04	0.71
30:0:2296:C:H2'	30:0:2297:U:H6	1.55	0.71
30:0:2356:A:H2'	30:0:2357:G:O4'	1.91	0.71
16:P:59:ARG:HH22	16:P:66:GLN:HE22	1.36	0.71
22:V:12:THR:CG2	22:V:15:GLU:HG3	2.20	0.71
30:0:119:A:H2'	30:0:120:A:H5"	1.71	0.71
30:0:1838:U:O2'	30:0:2644:C:H5'	1.90	0.71
30:0:1667:A:H5'	30:0:1667:A:C8	2.25	0.71
13:M:107:ARG:HH11	13:M:107:ARG:HG3	1.56	0.71
18:R:82:GLU:HG3	18:R:83:LYS:H	1.55	0.71
22:V:39:ALA:N	22:V:40:PRO:HD2	2.05	0.71
28:2:41:HIS:HB3	28:2:44:ARG:HB2	1.70	0.71
6:F:58:GLU:HA	6:F:61:MET:CE	2.21	0.70
18:R:6:VAL:HG21	18:R:113:HIS:CD2	2.25	0.70
22:V:1:THR:CG2	22:V:2:VAL:H	2.00	0.70
24:X:49:ARG:HG2	24:X:84:ILE:HG12	1.72	0.70
30:0:1701:A:H4'	30:0:1702:U:H5"	1.72	0.70
1:A:36:ASP:O	1:A:38:ILE:N	2.23	0.70
3:C:194:PHE:HA	3:C:234:VAL:HG13	1.73	0.70
17:Q:66:LYS:HB2	17:Q:70:ALA:O	1.91	0.70
30:0:1372:A:H3'	42:0:7993:HOH:O	1.91	0.70
14:N:164:ASP:OD1	14:N:167:ASP:HA	1.91	0.70
30:0:1474:C:H5'	30:0:1474:C:C6	2.24	0.70
29:3:68:LYS:HE2	30:0:2436:U:H5'	1.71	0.70
14:N:11:ARG:HD3	31:9:114:G:O6	1.91	0.70
14:N:132:ASN:O	14:N:135:VAL:HG12	1.92	0.70
3:C:1:MET:HG2	3:C:2:GLN:N	2.04	0.70
20:T:54:ASP:OD2	30:0:316:A:H5'	1.90	0.70
30:0:1183:C:N4	30:0:1184:C:H41	1.89	0.70
30:0:2851:G:O2'	30:0:2852:A:H5'	1.90	0.70
30:0:2908:A:H2'	30:0:2909:G:O4'	1.92	0.70
5:E:84:MET:HG2	5:E:168:ILE:HA	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:9:GLY:HA2	30:0:1687:C:O2	1.91	0.70
5:E:49:ILE:HD11	5:E:69:ILE:HD12	1.72	0.70
18:R:128:ARG:NH2	30:0:2054:A:N3	2.39	0.70
23:W:141:HIS:HB2	23:W:146:ILE:HG12	1.73	0.70
3:C:27:ARG:HH11	3:C:27:ARG:CG	2.05	0.70
3:C:84:VAL:HG12	3:C:85:LYS:HG2	1.72	0.69
8:H:36:MET:HB3	8:H:73:ASN:ND2	2.07	0.69
13:M:57:LYS:HE2	13:M:140:ALA:O	1.92	0.69
13:M:164:THR:CG2	13:M:166:ALA:H	2.02	0.69
24:X:37:LEU:HD13	24:X:85:VAL:HG21	1.73	0.69
31:9:56:A:C2'	31:9:57:A:H5"	2.20	0.69
30:0:951:A:C2'	30:0:952:G:H5'	2.22	0.69
14:N:71:TRP:CE3	14:N:175:LEU:HD22	2.27	0.69
30:0:236:A:H4'	30:0:237:G:H5'	1.74	0.69
30:0:1829:A:H2'	30:0:1830:C:H5'	1.74	0.69
31:9:92:G:H2'	31:9:93:A:C8	2.27	0.69
30:0:1634:G:H3'	42:0:4766:HOH:O	1.92	0.69
3:C:233:THR:HG22	3:C:234:VAL:N	2.07	0.69
8:H:31:ILE:HA	8:H:66:GLU:OE1	1.93	0.69
18:R:18:LEU:HD12	18:R:143:VAL:CG1	2.23	0.69
26:Z:46:SER:O	26:Z:50:VAL:HG23	1.92	0.69
31:9:75:G:H1	31:9:106:U:H3	1.39	0.69
5:E:15:GLN:HG3	5:E:20:ILE:HG12	1.74	0.69
13:M:134:ILE:CG2	13:M:141:ILE:HD13	2.23	0.69
25:Y:117:LEU:HD13	25:Y:174:VAL:HG11	1.73	0.69
30:0:2637:A:H4'	30:0:2638:G:C5'	2.23	0.69
2:B:30:PRO:HB2	2:B:39:GLN:NE2	2.08	0.69
2:B:175:LEU:O	2:B:175:LEU:HD23	1.93	0.69
13:M:24:GLN:NE2	13:M:27:ARG:HD2	2.07	0.69
25:Y:234:VAL:HG12	25:Y:235:GLU:H	1.56	0.69
29:3:60:LYS:HG3	29:3:61:PRO:HD2	1.74	0.69
30:0:1205:U:H2'	30:0:1206:U:C5'	2.22	0.69
30:0:2004:U:H2'	30:0:2004:U:O2	1.93	0.69
30:0:2102:G:H2'	42:0:9555:HOH:O	1.93	0.69
23:W:52:VAL:HG23	23:W:53:ALA:N	1.64	0.69
30:0:2387:U:H2'	30:0:2388:C:C6	2.28	0.69
25:Y:187:VAL:HG23	25:Y:192:ASP:CB	2.22	0.69
1:A:199:HIS:HD2	1:A:201:PHE:H	1.38	0.68
22:V:11:MET:HB3	22:V:15:GLU:HB2	1.73	0.68
17:Q:16:ASN:HD21	17:Q:45:PRO:HD2	1.58	0.68
21:U:56:ARG:NH2	30:0:2890:A:H1'	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:25:ARG:HD3	24:X:64:ALA:O	1.93	0.68
2:B:229:ARG:HD2	42:B:8991:HOH:O	1.93	0.68
20:T:9:LYS:HE3	20:T:13:ARG:NH1	2.07	0.68
3:C:118:THR:HG22	3:C:137:PRO:HB3	1.76	0.68
3:C:193:LEU:HD13	3:C:222:ASP:HB2	1.76	0.68
30:0:2247:C:H2'	30:0:2248:C:H6	1.59	0.68
1:A:139:LYS:HE2	1:A:143:GLY:HA2	1.76	0.68
1:A:211:LYS:HB3	1:A:212:PRO:CD	2.23	0.68
10:J:4:ALA:O	10:J:5:GLU:HB2	1.94	0.68
16:P:139:ARG:HG3	16:P:139:ARG:HH11	1.58	0.68
20:T:71:VAL:HG11	20:T:90:PRO:CB	2.23	0.68
23:W:38:THR:HG22	23:W:39:ASP:N	2.09	0.68
30:0:304:G:H1'	30:0:347:A:N6	2.08	0.68
30:0:1300:G:H1'	42:0:5541:HOH:O	1.91	0.68
8:H:6:ALA:HB3	30:0:2521:A:OP2	1.94	0.68
14:N:5:ARG:NH1	30:0:962:C:H1'	2.09	0.68
16:P:115:SER:H	16:P:118:GLN:NE2	1.86	0.68
4:D:135:VAL:HG21	4:D:139:TYR:CG	2.28	0.68
6:F:14:ASP:O	6:F:18:GLU:HG3	1.94	0.68
23:W:13:MET:CE	23:W:17:ILE:HG22	2.24	0.68
30:0:2851:G:C2'	30:0:2852:A:H5'	2.24	0.68
3:C:153:VAL:O	3:C:157:LEU:HG	1.94	0.68
30:0:558:C:H2'	30:0:559:U:C5'	2.24	0.68
2:B:214:PRO:HD2	42:0:2996:HOH:O	1.92	0.68
20:T:77:VAL:HG11	20:T:91:LEU:HD11	1.75	0.68
23:W:137:GLN:NE2	23:W:141:HIS:HE1	1.87	0.68
30:0:282:C:O2'	30:0:283:U:H5'	1.93	0.68
25:Y:170:SER:OG	25:Y:175:ARG:HG3	1.94	0.67
30:0:1166:A:H1'	30:0:1192:A:C2	2.28	0.67
30:0:2505:G:O2'	30:0:2506:A:H5'	1.95	0.67
6:F:83:LEU:HD11	6:F:96:ALA:HB3	1.76	0.67
23:W:84:VAL:HG12	42:W:6679:HOH:O	1.94	0.67
30:0:1182:C:H1'	30:0:1192:A:H8	1.59	0.67
30:0:2588:OMG:HN21	32:5:76:A:H2	1.40	0.67
29:3:3:MET:HG3	29:3:4:PRO:HD2	1.76	0.67
7:G:27:ILE:HD13	7:G:71:LEU:HD23	1.76	0.67
10:J:54:VAL:O	10:J:58:GLU:HG3	1.95	0.67
12:L:6:ARG:HD3	30:0:1299:G:O6	1.94	0.67
18:R:117:HIS:HD2	30:0:20:G:H21	1.40	0.67
22:V:1:THR:HB	30:0:93:C:H5"	1.77	0.67
22:V:56:ILE:O	22:V:60:GLN:HG3	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:25:VAL:HG13	29:3:68:LYS:HE3	1.75	0.67
4:D:27:ILE:HD11	4:D:37:ALA:CB	2.25	0.67
4:D:27:ILE:HD11	4:D:37:ALA:HB3	1.76	0.67
11:K:74:VAL:HG11	11:K:113:ILE:HG12	1.75	0.67
21:U:11:THR:HG22	21:U:53:ASP:HB2	1.77	0.67
1:A:201:PHE:HA	42:A:9065:HOH:O	1.94	0.67
2:B:74:ILE:HG22	2:B:76:THR:HG23	1.76	0.67
2:B:321:PRO:HA	42:B:9136:HOH:O	1.94	0.67
3:C:211:ASP:HB2	3:C:231:ARG:HH22	1.60	0.67
5:E:101:GLU:HB3	5:E:117:THR:HA	1.75	0.67
8:H:48:VAL:HA	8:H:170:ARG:O	1.94	0.67
14:N:49:THR:HG22	14:N:56:ASP:HB2	1.76	0.67
16:P:80:ARG:HG2	16:P:87:ARG:CZ	2.25	0.67
30:0:2073:G:OP2	30:0:2490:A:H5'	1.94	0.67
31:9:18:U:H2'	31:9:19:G:H8	1.59	0.67
18:R:18:LEU:HB2	18:R:143:VAL:CG1	2.23	0.67
8:H:59:GLN:NE2	8:H:129:ARG:HE	1.92	0.67
11:K:20:CYS:HB2	11:K:29:LEU:HG	1.77	0.67
11:K:41:LYS:HE2	11:K:42:ASN:HD21	1.60	0.67
27:1:25:LYS:HD2	28:2:49:GLU:H	1.58	0.67
30:0:1058:A:H2'	30:0:1060:C:C5'	2.25	0.67
31:9:49:G:H5"	42:9:9086:HOH:O	1.95	0.67
1:A:103:VAL:O	1:A:105:VAL:HG23	1.95	0.67
3:C:174:ILE:CD1	30:0:338:C:H4'	2.25	0.67
13:M:24:GLN:HE22	13:M:27:ARG:HH11	1.41	0.67
30:0:1730:G:H5'	30:0:1731:C:C6	2.30	0.67
30:0:451:C:O2'	30:0:452:G:H5'	1.95	0.67
30:0:1834:C:H2'	30:0:1840:A:N6	2.10	0.67
30:0:2047:C:H5'	42:0:3722:HOH:O	1.95	0.67
23:W:122:ARG:NH2	23:W:154:ARG:HB3	2.10	0.66
26:Z:70:ARG:CD	26:Z:83:TYR:HB2	2.25	0.66
30:0:2102:G:H1'	42:0:6120:HOH:O	1.94	0.66
2:B:235:ARG:HD3	30:0:2091:G:O3'	1.95	0.66
5:E:23:GLU:HG2	5:E:28:SER:CB	2.25	0.66
18:R:16:ALA:HB1	18:R:94:ASN:HD22	1.60	0.66
18:R:106:GLY:HA2	18:R:109:MET:HE3	1.76	0.66
30:0:1766:U:O2	30:0:1778:A:H5'	1.95	0.66
12:L:55:GLN:HA	12:L:58:GLN:NE2	2.07	0.66
27:1:16:HIS:HE1	30:0:775:G:OP1	1.79	0.66
30:0:1461:U:H2'	30:0:1462:C:C6	2.31	0.66
3:C:236:THR:CG2	3:C:239:ALA:H	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:131:THR:HG21	30:0:2348:C:H1'	1.77	0.66
18:R:68:HIS:CD2	18:R:76:ASP:HB2	2.30	0.66
20:T:9:LYS:HD2	42:0:4631:HOH:O	1.96	0.66
22:V:26:GLU:OE2	22:V:45:ARG:HD3	1.95	0.66
30:0:1666:C:O2'	30:0:1667:A:H5"	1.96	0.66
12:L:53:ARG:NH2	12:L:57:VAL:HG12	2.10	0.66
30:0:256:C:H2'	30:0:257:G:O4'	1.96	0.66
6:F:26:THR:HG21	6:F:102:GLY:C	2.16	0.66
30:0:1159:G:H21	30:0:1189:A:H8	1.43	0.66
13:M:31:TRP:HA	13:M:34:GLU:HG3	1.78	0.66
1:A:191:GLY:HA2	1:A:194:MET:HE2	1.75	0.66
2:B:217:ARG:HG3	2:B:257:THR:HG22	1.76	0.66
30:0:272:A:H5'	30:0:273:G:OP2	1.94	0.66
30:0:2769:C:H2'	30:0:2770:G:O4'	1.95	0.66
2:B:211:THR:HG23	30:0:2840:A:OP1	1.96	0.66
13:M:15:PRO:HA	13:M:20:LEU:HD23	1.78	0.66
14:N:36:ALA:HB1	14:N:118:ILE:HD12	1.77	0.66
21:U:45:GLU:HB2	21:U:48:ASN:HD22	1.60	0.66
24:X:80:GLU:HB3	42:X:5564:HOH:O	1.96	0.66
30:0:1171:A:H2'	30:0:1172:G:H5'	1.78	0.66
30:0:1666:C:H2'	30:0:1667:A:H5'	1.78	0.66
1:A:94:LEU:HD12	1:A:98:GLU:HB2	1.77	0.66
3:C:246:ARG:HB3	3:C:246:ARG:NH1	2.11	0.66
20:T:48:VAL:HG23	20:T:98:VAL:HA	1.78	0.66
30:0:946:C:H2'	30:0:947:U:H6	1.61	0.66
30:0:1118:A:C8	30:0:1118:A:H3'	2.30	0.66
1:A:33:GLU:O	1:A:34:ASP:HB2	1.95	0.65
3:C:111:VAL:HB	42:C:8521:HOH:O	1.95	0.65
10:J:25:GLN:HE22	10:J:116:LEU:HB3	1.61	0.65
18:R:39:THR:CB	18:R:42:GLU:HG3	2.24	0.65
25:Y:235:GLU:H	25:Y:235:GLU:CD	1.98	0.65
26:Z:61:HIS:HB2	26:Z:71:VAL:HB	1.77	0.65
33:6:76:8AN:C2	42:6:82:HOH:O	2.44	0.65
1:A:88:ILE:O	1:A:88:ILE:HG22	1.96	0.65
3:C:156:LEU:O	3:C:160:LEU:HG	1.96	0.65
2:B:36:PRO:CA	2:B:168:GLY:HA3	2.19	0.65
4:D:173:GLU:O	4:D:174:VAL:O	2.13	0.65
10:J:19:MET:HE2	10:J:79:PHE:HA	1.77	0.65
5:E:84:MET:HE1	5:E:148:ILE:CD1	2.27	0.65
8:H:5:PRO:O	8:H:8:MET:HB2	1.95	0.65
21:U:45:GLU:HB2	21:U:48:ASN:ND2	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:8:GLN:HE22	27:1:11:LYS:NZ	1.94	0.65
31:9:23:U:O2'	31:9:24:U:H4'	1.95	0.65
2:B:51:VAL:HG23	2:B:330:VAL:HG22	1.79	0.65
5:E:116:THR:HG22	5:E:151:LEU:HD22	1.79	0.65
1:A:207:GLN:HA	42:A:9036:HOH:O	1.95	0.65
3:C:242:GLU:HG3	42:C:8587:HOH:O	1.95	0.65
11:K:81:ARG:HD3	11:K:87:ARG:CZ	2.27	0.65
17:Q:75:ILE:CD1	17:Q:84:ILE:HD11	2.25	0.65
19:S:22:ASN:ND2	19:S:68:LEU:HB2	2.12	0.65
31:9:76:G:C3'	31:9:77:A:H5"	2.16	0.65
6:F:84:GLY:O	6:F:89:LEU:HB2	1.95	0.65
10:J:76:ASP:HA	42:J:5907:HOH:O	1.97	0.65
30:0:1201:C:H5"	42:0:7064:HOH:O	1.96	0.65
8:H:6:ALA:HA	8:H:61:ARG:NH1	2.11	0.65
16:P:121:ASP:O	16:P:125:LYS:HG3	1.96	0.65
23:W:139:GLY:O	23:W:141:HIS:HD2	1.79	0.65
30:0:168:C:H5"	42:0:3347:HOH:O	1.96	0.65
9:I:127:CYS:C	9:I:129:SER:H	2.00	0.65
14:N:78:MET:HB2	14:N:146:HIS:CE1	2.32	0.65
30:0:2387:U:H2'	30:0:2388:C:H6	1.61	0.65
6:F:27:GLY:HA3	6:F:101:ALA:O	1.97	0.65
6:F:46:GLU:O	6:F:73:PRO:HD2	1.97	0.65
9:I:82:THR:HG23	30:0:1168:C:H5"	1.79	0.65
30:0:506:G:H22	30:0:509:A:C5'	2.07	0.64
31:9:13:A:O2'	31:9:14:G:H5"	1.97	0.64
1:A:191:GLY:HA2	1:A:194:MET:HE3	1.79	0.64
2:B:77:PRO:HA	2:B:293:PRO:HB2	1.79	0.64
11:K:4:LEU:HD22	11:K:116:GLU:HB3	1.79	0.64
13:M:34:GLU:HB3	13:M:38:GLU:HG3	1.79	0.64
30:0:545:G:H5'	30:0:545:G:C8	2.29	0.64
3:C:5:ILE:HD11	3:C:16:VAL:CG2	2.28	0.64
21:U:6:CYS:O	21:U:10:GLY:HA2	1.98	0.64
28:2:41:HIS:CD2	28:2:44:ARG:H	2.14	0.64
30:0:1118:A:H8	30:0:1118:A:H3'	1.62	0.64
30:0:1136:U:H2'	42:0:5826:HOH:O	1.96	0.64
30:0:1189:A:O2'	30:0:1208:C:H2'	1.96	0.64
2:B:24:PRO:HG3	2:B:204:GLY:HA2	1.80	0.64
3:C:5:ILE:HD11	3:C:16:VAL:HG22	1.79	0.64
6:F:37:THR:O	6:F:41:GLU:HG3	1.97	0.64
14:N:182:GLY:O	14:N:184:ILE:HG22	1.97	0.64
17:Q:95:GLU:HA	30:0:949:U:H4'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:48:VAL:CG2	20:T:96:VAL:HG13	2.28	0.64
27:1:28:HIS:HD2	27:1:30:LYS:H	1.45	0.64
30:0:660:A:H4'	30:0:661:G:O5'	1.98	0.64
30:0:2637:A:H4'	30:0:2638:G:H5'	1.79	0.64
6:F:57:GLU:O	6:F:61:MET:HG3	1.98	0.64
15:O:65:LEU:HD13	30:0:746:A:C6	2.32	0.64
30:0:2540:G:O2'	30:0:2541:U:H5"	1.98	0.64
14:N:160:SER:HB3	31:9:51:A:H5'	1.80	0.64
16:P:7:LYS:HD3	16:P:23:PHE:CZ	2.32	0.64
17:Q:7:LEU:HD12	30:0:2424:U:H1'	1.80	0.64
19:S:33:SER:O	19:S:37:VAL:HG23	1.97	0.64
8:H:14:LYS:HE2	42:0:4718:HOH:O	1.98	0.64
13:M:24:GLN:NE2	13:M:27:ARG:NH1	2.45	0.64
13:M:68:ARG:O	13:M:68:ARG:HD3	1.98	0.64
2:B:211:THR:HG21	42:0:9253:HOH:O	1.98	0.64
19:S:52:VAL:HG22	19:S:66:VAL:HG22	1.79	0.64
21:U:9:CYS:SG	21:U:11:THR:HG23	2.38	0.64
25:Y:187:VAL:HG13	25:Y:205:ILE:HA	1.79	0.64
31:9:2:U:OP2	31:9:3:A:H5'	1.96	0.64
1:A:217:ARG:HH11	1:A:217:ARG:CG	2.11	0.64
9:I:110:ASP:O	30:0:1163:G:H5'	1.98	0.64
14:N:37:ARG:NH1	31:9:6:C:C5'	2.56	0.64
16:P:1:THR:O	30:0:1396:C:H1'	1.97	0.64
30:0:316:A:N3	30:0:336:G:O2'	2.31	0.64
2:B:62:ARG:HA	2:B:65:MET:CE	2.28	0.64
8:H:6:ALA:HA	8:H:61:ARG:HH12	1.63	0.64
22:V:50:ARG:HH12	30:0:56:G:H5"	1.60	0.64
3:C:246:ARG:HB3	3:C:246:ARG:HH11	1.63	0.63
9:I:96:SER:HB3	9:I:99:GLN:HE21	1.61	0.63
10:J:90:LYS:HB2	35:J:8802:CL:CL	2.35	0.63
20:T:16:LEU:HB2	30:0:100:C:H4'	1.80	0.63
31:9:59:C:H2'	31:9:60:C:C6	2.33	0.63
3:C:78:ARG:HH11	3:C:78:ARG:HG3	1.62	0.63
6:F:58:GLU:HA	6:F:61:MET:HE2	1.79	0.63
6:F:91:VAL:CG1	6:F:92:GLY:H	2.02	0.63
18:R:51:ILE:HD13	18:R:86:LYS:HG2	1.79	0.63
29:3:73:GLU:HB3	42:3:9050:HOH:O	1.97	0.63
31:9:29:C:C2'	31:9:30:C:H5'	2.29	0.63
1:A:11:ARG:NH1	42:A:9044:HOH:O	2.31	0.63
2:B:139:ASP:OD2	2:B:165:ARG:HD2	1.97	0.63
29:3:62:THR:HB	42:3:9041:HOH:O	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2827:A:H2'	30:0:2828:G:O4'	1.98	0.63
15:O:32:ARG:O	15:O:32:ARG:HD3	1.98	0.63
3:C:34:ALA:HB3	3:C:220:THR:HG21	1.80	0.63
11:K:125:ALA:C	11:K:127:ALA:H	2.02	0.63
12:L:67:ARG:O	12:L:71:GLU:HG3	1.99	0.63
30:0:1042:U:O2'	30:0:1043:C:H5'	1.98	0.63
1:A:217:ARG:HH11	1:A:217:ARG:HG3	1.61	0.63
18:R:96:VAL:HG13	18:R:106:GLY:HA3	1.81	0.63
21:U:14:GLU:OE1	21:U:15:PRO:HD2	1.98	0.63
23:W:88:THR:HB	42:W:6679:HOH:O	1.99	0.63
30:0:1189:A:H3'	42:0:9471:HOH:O	1.98	0.63
1:A:8:ARG:HG2	42:A:9031:HOH:O	1.96	0.63
3:C:104:ASP:O	3:C:108:GLN:HG3	1.98	0.63
6:F:50:VAL:CG2	6:F:63:ILE:HG21	2.29	0.63
7:G:16:LYS:O	7:G:20:VAL:HG23	1.98	0.63
25:Y:126:PRO:HG2	25:Y:128:PHE:CZ	2.34	0.63
1:A:121:ALA:O	1:A:124:VAL:HG22	1.99	0.63
1:A:179:MET:HA	1:A:179:MET:HE3	1.80	0.63
3:C:58:ALA:HA	3:C:73:GLN:HE21	1.64	0.63
3:C:129:HIS:CE1	3:C:231:ARG:HA	2.34	0.63
17:Q:64:GLU:HG3	17:Q:74:ASP:OD2	1.98	0.63
20:T:21:LYS:HA	20:T:24:ARG:HG3	1.81	0.63
30:0:1183:C:H2'	42:0:7072:HOH:O	1.99	0.63
30:0:2106:C:H5'	30:0:2284:G:H21	1.64	0.63
20:T:50:VAL:HG12	20:T:56:ALA:HA	1.81	0.63
24:X:21:PRO:HG2	24:X:24:LYS:HD3	1.81	0.63
30:0:463:A:H5'	30:0:465:U:O4'	1.99	0.63
30:0:95:A:H5"	30:0:97:G:O4'	1.99	0.62
30:0:151:A:H2'	30:0:152:A:O4'	1.99	0.62
2:B:97:LEU:O	2:B:98:THR:HG23	1.99	0.62
2:B:150:ALA:O	2:B:152:PRO:HD3	1.98	0.62
7:G:69:ARG:NH2	30:0:1150:A:N7	2.47	0.62
30:0:858:U:H2'	30:0:859:C:H6	1.64	0.62
5:E:31:ARG:HH12	5:E:68:HIS:CG	2.17	0.62
12:L:35:ARG:C	12:L:35:ARG:HD3	2.20	0.62
13:M:171:ARG:CD	30:0:156:C:H5"	2.28	0.62
20:T:49:GLU:OE2	20:T:97:ARG:NH1	2.32	0.62
22:V:13:PRO:HA	22:V:16:ARG:NH1	2.14	0.62
23:W:46:ALA:O	23:W:49:ASN:HB2	1.99	0.62
10:J:130:VAL:HG12	10:J:131:THR:N	2.15	0.62
12:L:7:GLN:HG3	35:L:8814:CL:CL	2.37	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:75:ILE:HD13	17:Q:84:ILE:HD11	1.78	0.62
24:X:47:ALA:HB1	24:X:82:GLU:HB3	1.81	0.62
30:0:281:U:H2'	30:0:282:C:O4'	1.98	0.62
30:0:603:A:H4'	30:0:604:G:O5'	2.00	0.62
30:0:871:G:C8	30:0:871:G:C5'	2.74	0.62
30:0:2362:A:H2'	30:0:2363:G:C8	2.34	0.62
20:T:48:VAL:HG21	20:T:96:VAL:HG13	1.80	0.62
27:1:9:GLY:HA3	30:0:1695:G:H1'	1.79	0.62
30:0:280:C:H2'	30:0:281:U:O4'	1.99	0.62
30:0:726:C:H2'	30:0:727:G:O4'	2.00	0.62
30:0:790:A:H1'	30:0:1710:A:H2'	1.82	0.62
30:0:1058:A:H2'	30:0:1060:C:H5"	1.80	0.62
30:0:1218:U:H2'	30:0:1219:U:C6	2.34	0.62
30:0:2266:A:H2'	30:0:2267:G:C8	2.35	0.62
31:9:98:C:H2'	31:9:99:U:H6	1.64	0.62
4:D:64:ARG:NE	4:D:67:ASP:HB3	2.15	0.62
9:I:112:LEU:CD1	30:0:1162:G:H1'	2.29	0.62
16:P:143:ALA:HA	42:P:5521:HOH:O	1.99	0.62
20:T:19:ARG:HD3	20:T:67:LEU:O	2.00	0.62
31:9:73:A:H61	31:9:108:C:H42	1.48	0.62
12:L:66:VAL:HG23	12:L:67:ARG:N	2.14	0.62
30:0:204:A:H2'	30:0:205:U:H5'	1.82	0.62
5:E:47:VAL:HG11	5:E:69:ILE:HD13	1.80	0.62
5:E:84:MET:HG2	5:E:168:ILE:HD13	1.82	0.62
25:Y:169:ARG:HD3	30:0:1328:A:C8	2.35	0.62
30:0:241:A:C2	30:0:378:A:H4'	2.35	0.62
30:0:1406:A:H4'	30:0:1407:A:H5"	1.82	0.62
2:B:265:LEU:HD21	2:B:316:ARG:HD3	1.81	0.62
3:C:214:THR:HG22	3:C:216:SER:H	1.64	0.62
4:D:25:MET:CE	4:D:37:ALA:HB1	2.23	0.62
30:0:59:A:H5'	42:0:5197:HOH:O	1.98	0.62
30:0:2106:C:H1'	30:0:2484:U:O2	2.00	0.62
5:E:36:PRO:HD3	10:J:127:ILE:CD1	2.30	0.62
5:E:131:LEU:HD12	5:E:166:VAL:HG11	1.81	0.62
16:P:9:LEU:O	16:P:13:VAL:HG12	2.00	0.62
24:X:76:ARG:HH11	24:X:76:ARG:HG3	1.65	0.62
27:1:25:LYS:O	27:1:25:LYS:HG2	2.00	0.62
5:E:144:THR:O	5:E:148:ILE:HG13	1.99	0.61
12:L:56:LYS:HE3	30:0:2443:C:O3'	2.00	0.61
24:X:72:VAL:HG22	24:X:85:VAL:HG12	1.80	0.61
27:1:28:HIS:CE1	27:1:31:LYS:HE2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:48:VAL:CG1	14:N:55:ASP:HB3	2.29	0.61
29:3:6:ARG:HH11	29:3:21:GLU:HG3	1.65	0.61
30:0:564:G:H1'	42:0:7141:HOH:O	1.99	0.61
30:0:951:A:H2'	30:0:952:G:H5'	1.81	0.61
30:0:2766:A:H5'	42:0:3465:HOH:O	1.99	0.61
31:9:14:G:H5'	31:9:14:G:C8	2.35	0.61
23:W:6:GLN:HB2	23:W:26:ILE:CD1	2.30	0.61
30:0:946:C:H2'	30:0:947:U:C6	2.34	0.61
30:0:2866:U:H4'	30:0:2867:G:H5'	1.81	0.61
31:9:64:C:H2'	31:9:65:A:H5'	1.82	0.61
2:B:141:ARG:HG2	2:B:165:ARG:HA	1.83	0.61
3:C:101:ASP:HB2	30:0:750:A:O3'	2.01	0.61
6:F:58:GLU:OE1	13:M:27:ARG:NH2	2.33	0.61
12:L:53:ARG:HD2	30:0:2441:U:H4'	1.82	0.61
12:L:125:PHE:CZ	12:L:140:VAL:HG22	2.35	0.61
14:N:147:ILE:HD12	42:9:9086:HOH:O	2.00	0.61
30:0:589:U:H2'	30:0:590:A:H8	1.64	0.61
30:0:1976:G:O2'	30:0:1977:U:H5'	2.01	0.61
30:0:2533:C:H5'	30:0:2533:C:H6	1.65	0.61
2:B:207:LYS:HG3	30:0:2717:C:OP1	2.00	0.61
16:P:121:ASP:OD1	16:P:125:LYS:HE3	1.99	0.61
18:R:29:LYS:HB3	42:R:8939:HOH:O	1.99	0.61
30:0:247:A:H2'	42:0:4794:HOH:O	2.00	0.61
30:0:494:C:H2'	30:0:496:G:OP2	2.00	0.61
30:0:1461:U:H2'	30:0:1462:C:H6	1.65	0.61
1:A:19:PRO:HG2	1:A:23:TYR:CE2	2.35	0.61
9:I:73:LEU:HD12	9:I:107:LYS:HZ2	1.64	0.61
10:J:70:PHE:CD1	30:0:2676:C:H4'	2.35	0.61
13:M:61:ILE:HD12	13:M:61:ILE:N	2.15	0.61
20:T:41:ARG:HG2	20:T:41:ARG:HH11	1.66	0.61
29:3:65:THR:CG2	29:3:67:LEU:HG	2.31	0.61
30:0:1205:U:C2'	30:0:1206:U:H5"	2.30	0.61
3:C:121:ALA:N	3:C:136:VAL:HG11	2.15	0.61
13:M:9:ARG:HD2	30:0:380:A:OP2	2.00	0.61
18:R:46:TYR:HD2	18:R:47:LEU:HD23	1.65	0.61
30:0:185:G:H4'	30:0:186:A:H4'	1.81	0.61
7:G:12:ILE:HG22	7:G:17:GLN:NE2	2.16	0.61
13:M:43:PRO:HG3	13:M:62:VAL:HG21	1.82	0.61
14:N:112:GLY:HA2	14:N:137:ALA:N	2.15	0.61
20:T:64:ASN:HB3	20:T:73:HIS:HB2	1.81	0.61
25:Y:148:GLY:O	25:Y:154:ARG:HD3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1528:A:H2'	30:0:1529:G:O4'	2.00	0.61
30:0:2735:U:H2'	30:0:2736:U:C6	2.36	0.61
30:0:2896:A:N3	30:0:2896:A:H2'	2.16	0.61
31:9:64:C:C2'	31:9:65:A:H5'	2.31	0.61
3:C:51:TYR:CE1	27:1:56:GLU:HB2	2.35	0.61
3:C:235:PHE:HE2	3:C:243:VAL:HG21	1.65	0.61
4:D:58:VAL:HB	4:D:62:ASP:HB3	1.83	0.61
5:E:20:ILE:HD11	5:E:40:VAL:CG1	2.30	0.61
30:0:120:A:H2'	30:0:120:A:N3	2.15	0.61
30:0:2795:C:O2'	30:0:2796:U:H5'	2.00	0.61
4:D:58:VAL:CG1	4:D:60:GLU:HG2	2.29	0.61
10:J:127:ILE:N	35:J:8801:CL:CL	2.66	0.61
15:O:14:LEU:HG	15:O:102:ILE:HD11	1.83	0.61
5:E:35:TYR:HA	10:J:127:ILE:HD11	1.83	0.60
11:K:66:ARG:HH12	30:0:1992:U:H3'	1.66	0.60
21:U:9:CYS:HA	21:U:52:THR:CG2	2.30	0.60
23:W:48:VAL:O	23:W:48:VAL:HG12	2.00	0.60
2:B:42:ALA:HB2	2:B:162:MET:HE1	1.83	0.60
5:E:166:VAL:HG12	42:E:3134:HOH:O	2.00	0.60
13:M:22:GLU:O	13:M:26:GLN:HG3	2.01	0.60
14:N:48:VAL:HG13	14:N:55:ASP:HB3	1.83	0.60
30:0:536:A:H3'	42:0:5901:HOH:O	2.00	0.60
30:0:2534:C:H1'	42:0:4385:HOH:O	2.00	0.60
2:B:75:GLU:C	2:B:77:PRO:HD3	2.22	0.60
10:J:74:ARG:HH11	10:J:74:ARG:HB3	1.65	0.60
30:0:664:U:O4	30:0:681:G:H5"	2.00	0.60
2:B:16:ARG:HD3	42:B:9081:HOH:O	2.01	0.60
2:B:279:THR:HG22	2:B:280:VAL:H	1.64	0.60
7:G:67:LEU:O	7:G:71:LEU:HG	2.01	0.60
11:K:113:ILE:HG22	11:K:114:ALA:N	2.16	0.60
1:A:130:THR:HB	1:A:137:VAL:HB	1.84	0.60
15:O:59:VAL:CG2	15:O:111:VAL:HG21	2.32	0.60
19:S:37:VAL:O	19:S:41:VAL:HG23	2.01	0.60
23:W:13:MET:HE2	23:W:17:ILE:HG22	1.83	0.60
23:W:125:HIS:NE2	30:0:1097:A:H5"	2.15	0.60
30:0:1206:U:H2'	30:0:1207:A:O4'	2.01	0.60
1:A:84:VAL:O	1:A:98:GLU:HG3	2.01	0.60
21:U:17:THR:CG2	21:U:18:GLY:N	2.64	0.60
23:W:85:ALA:HB2	23:W:91:ASP:O	2.00	0.60
25:Y:152:LYS:HB3	25:Y:160:LYS:HG3	1.84	0.60
30:0:1249:U:H2'	30:0:1250:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1931:A:H2'	30:0:1932:G:H5'	1.83	0.60
3:C:7:ASP:OD2	3:C:9:ASP:HB2	2.01	0.60
5:E:68:HIS:O	5:E:72:MET:HG3	2.00	0.60
7:G:20:VAL:O	7:G:24:VAL:HG23	2.02	0.60
13:M:165:GLY:O	13:M:169:ARG:HB2	2.02	0.60
31:9:20:G:O2'	31:9:21:G:H5'	2.02	0.60
3:C:78:ARG:HG3	3:C:78:ARG:NH1	2.16	0.60
10:J:75:PRO:HG2	10:J:105:LEU:CD2	2.32	0.60
11:K:14:LYS:HB2	11:K:45:PRO:HG2	1.83	0.60
30:0:1209:C:H2'	30:0:1210:G:H8	1.66	0.60
30:0:1416:G:C2'	30:0:1417:G:H5'	2.32	0.60
30:0:1909:A:N1	30:0:2128:G:H1'	2.17	0.60
30:0:2296:C:H2'	30:0:2297:U:C6	2.37	0.60
30:0:2415:A:H2'	30:0:2416:G:H5'	1.83	0.60
2:B:238:ASN:HD22	2:B:240:GLY:H	1.49	0.60
12:L:143:THR:HG22	12:L:144:ASP:N	2.17	0.60
21:U:11:THR:HG22	21:U:53:ASP:CB	2.31	0.60
22:V:29:ASN:O	22:V:33:VAL:HG23	2.02	0.60
30:0:1377:C:H5'	30:0:1377:C:C6	2.32	0.60
30:0:2472:C:O2'	30:0:2634:G:H4'	2.00	0.60
2:B:175:LEU:HD23	2:B:175:LEU:C	2.22	0.60
3:C:211:ASP:HB2	3:C:231:ARG:NH2	2.17	0.60
22:V:5:VAL:HG12	22:V:9:ARG:NH1	2.17	0.60
25:Y:208:LYS:NZ	30:0:1343:C:H1'	2.17	0.60
30:0:2816:A:H5"	30:0:2817:G:H5'	1.83	0.60
2:B:162:MET:HE3	2:B:310:ARG:HH11	1.67	0.59
14:N:152:GLU:C	14:N:154:LEU:H	2.05	0.59
17:Q:32:GLU:HA	17:Q:71:TYR:OH	2.01	0.59
21:U:17:THR:HG22	21:U:18:GLY:N	2.16	0.59
30:0:2748:G:H2'	42:0:9338:HOH:O	2.01	0.59
2:B:26:PHE:HD1	2:B:310:ARG:HH21	1.50	0.59
5:E:132:THR:HB	42:E:2227:HOH:O	2.03	0.59
9:I:120:ALA:O	9:I:124:VAL:HG23	2.02	0.59
11:K:41:LYS:HE2	11:K:42:ASN:ND2	2.17	0.59
20:T:8:ARG:NH1	30:0:31:C:OP2	2.35	0.59
30:0:2626:C:H2'	30:0:2627:G:C8	2.37	0.59
1:A:33:GLU:CD	1:A:33:GLU:N	2.55	0.59
2:B:320:GLN:HE21	2:B:321:PRO:HD2	1.67	0.59
3:C:47:GLY:HA2	3:C:92:PRO:HB2	1.83	0.59
20:T:76:ASP:C	20:T:78:THR:HG23	2.23	0.59
30:0:2802:C:H2'	30:0:2803:C:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:107:LYS:HB3	9:I:110:ASP:HB2	1.85	0.59
9:I:127:CYS:HB3	9:I:132:VAL:HB	1.84	0.59
12:L:148:GLU:HA	42:L:9037:HOH:O	2.00	0.59
30:0:336:G:H5"	42:0:4601:HOH:O	2.02	0.59
30:0:969:G:H1	30:0:999:C:H42	1.50	0.59
30:0:1883:U:H5"	30:0:2013:G:OP2	2.01	0.59
1:A:82:VAL:HG22	1:A:93:THR:HB	1.83	0.59
14:N:77:ASN:C	14:N:80:SER:HB3	2.23	0.59
30:0:248:A:H5'	30:0:249:G:OP2	2.03	0.59
30:0:459:A:H4'	42:0:3355:HOH:O	2.03	0.59
30:0:530:C:C4'	30:0:612:U:H4'	2.32	0.59
30:0:1172:G:H1'	42:0:5831:HOH:O	2.01	0.59
30:0:1545:C:H2'	30:0:1546:G:O4'	2.02	0.59
3:C:154:VAL:O	3:C:158:GLU:HG3	2.03	0.59
9:I:108:HIS:N	9:I:109:PRO:HD2	2.17	0.59
15:O:32:ARG:HH21	15:O:35:LYS:NZ	2.00	0.59
24:X:72:VAL:HG22	24:X:85:VAL:HG11	1.84	0.59
30:0:2326:C:H4'	30:0:2412:G:C4'	2.33	0.59
5:E:152:THR:HG21	5:E:165:GLY:HA2	1.84	0.59
8:H:54:VAL:HG13	8:H:162:PRO:CG	2.32	0.59
12:L:27:ARG:NH2	12:L:30:ARG:HG2	2.17	0.59
14:N:149:GLU:HA	14:N:152:GLU:HB2	1.83	0.59
30:0:368:C:H2'	30:0:369:G:H5'	1.85	0.59
30:0:834:G:H3'	30:0:835:U:H4'	1.83	0.59
30:0:1132:A:N6	30:0:1229:C:H2'	2.18	0.59
30:0:1416:G:H2'	30:0:1417:G:H5'	1.85	0.59
30:0:1555:G:H4'	30:0:1630:A:H2	1.67	0.59
6:F:61:MET:HB3	13:M:19:GLN:OE1	2.02	0.59
12:L:35:ARG:HB2	12:L:35:ARG:NH1	2.13	0.59
12:L:71:GLU:HG2	30:0:700:A:C2	2.38	0.59
18:R:79:ARG:HB3	30:0:2050:G:OP1	2.03	0.59
25:Y:117:LEU:HD13	25:Y:174:VAL:CG1	2.33	0.59
9:I:121:LYS:HD3	30:0:1185:U:OP1	2.02	0.59
30:0:625:U:H5"	30:0:1044:C:N4	2.17	0.59
30:0:1634:G:H2'	30:0:1635:U:C6	2.38	0.59
30:0:1735:C:O2'	30:0:1736:A:H5'	2.02	0.59
4:D:38:GLU:OE2	4:D:51:ARG:NE	2.35	0.59
18:R:77:ALA:O	18:R:78:GLY:CA	2.51	0.59
30:0:213:G:N2	30:0:225:G:H2'	2.18	0.59
5:E:126:ILE:HB	5:E:131:LEU:CD2	2.32	0.58
8:H:80:LEU:HD21	8:H:145:ASP:HB3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:10:GLN:NE2	11:K:10:GLN:N	2.37	0.58
15:O:53:GLN:HG2	15:O:56:GLU:OE1	2.03	0.58
17:Q:25:PRO:HB2	42:9:9077:HOH:O	2.03	0.58
18:R:106:GLY:HA2	18:R:109:MET:CE	2.33	0.58
20:T:43:ASN:C	20:T:45:GLY:H	2.06	0.58
24:X:43:VAL:HG22	24:X:76:ARG:NH1	2.18	0.58
28:2:25:VAL:O	28:2:29:THR:HG23	2.02	0.58
30:0:559:U:H6	30:0:559:U:H5'	1.66	0.58
14:N:71:TRP:HB2	42:N:8838:HOH:O	2.04	0.58
14:N:86:LEU:HD21	14:N:180:LEU:HD12	1.85	0.58
23:W:122:ARG:NH1	23:W:152:ALA:O	2.35	0.58
25:Y:165:GLU:HB3	42:0:7515:HOH:O	2.03	0.58
30:0:318:U:H5'	30:0:339:A:C2	2.39	0.58
1:A:66:ARG:HB2	1:A:66:ARG:NH1	2.16	0.58
11:K:43:ARG:NH1	30:0:2712:G:OP1	2.35	0.58
17:Q:26:PRO:O	17:Q:30:VAL:HG23	2.03	0.58
30:0:958:G:O2'	30:0:959:C:H5'	2.03	0.58
1:A:55:VAL:HG23	1:A:68:ILE:O	2.03	0.58
2:B:177:HIS:O	2:B:181:ILE:HG13	2.03	0.58
2:B:268:ARG:NH2	2:B:325:PRO:HG3	2.17	0.58
14:N:96:GLY:O	14:N:98:GLU:HG3	2.04	0.58
14:N:139:TRP:HA	14:N:139:TRP:CE3	2.37	0.58
15:O:14:LEU:CD2	15:O:102:ILE:HD11	2.33	0.58
16:P:16:VAL:HG13	16:P:20:ARG:NH1	2.18	0.58
24:X:47:ALA:HB1	24:X:82:GLU:CB	2.32	0.58
25:Y:134:HIS:HE1	30:0:538:C:OP2	1.86	0.58
30:0:65:C:O2'	30:0:66:G:H5'	2.03	0.58
30:0:1067:A:H5'	42:0:5212:HOH:O	2.04	0.58
30:0:1187:U:O2'	30:0:1189:A:H2	1.86	0.58
30:0:1829:A:C2'	30:0:1830:C:H5'	2.33	0.58
30:0:2392:C:H4'	42:0:5133:HOH:O	2.03	0.58
4:D:58:VAL:HG12	4:D:60:GLU:HG2	1.86	0.58
9:I:129:SER:O	9:I:130:LEU:HD23	2.03	0.58
12:L:140:VAL:HB	42:L:9020:HOH:O	2.03	0.58
13:M:159:VAL:HG12	35:M:8818:CL:CL	2.41	0.58
22:V:50:ARG:HD3	42:V:2826:HOH:O	2.03	0.58
30:0:1527:A:H1'	30:0:1528:A:C8	2.38	0.58
2:B:262:ARG:HD2	30:0:2715:G:O2'	2.03	0.58
3:C:2:GLN:HB3	42:C:8589:HOH:O	2.02	0.58
5:E:84:MET:SD	5:E:168:ILE:HD13	2.43	0.58
12:L:59:GLU:HA	12:L:104:ASP:OD2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:459:A:H5”	42:0:2968:HOH:O	2.03	0.58
30:0:1180:U:H1’	42:0:4130:HOH:O	2.04	0.58
30:0:2320:U:H4’	30:0:2321:A:O4’	2.03	0.58
30:0:2667:G:H1’	30:0:2914:A:N3	2.19	0.58
2:B:3:PRO:HG2	42:0:9686:HOH:O	2.02	0.58
4:D:18:ILE:HG12	4:D:134:LEU:HD23	1.84	0.58
4:D:52:THR:HG21	30:0:2346:C:O2’	2.03	0.58
4:D:99:ASP:HB3	4:D:103:ASN:H	1.69	0.58
14:N:61:ALA:HB3	14:N:88:ALA:HB2	1.86	0.58
14:N:139:TRP:HA	14:N:139:TRP:HE3	1.69	0.58
15:O:31:GLU:O	15:O:35:LYS:HG3	2.04	0.58
30:0:221:G:H2’	30:0:222:A:C8	2.39	0.58
30:0:264:G:H1’	30:0:265:U:H5	1.69	0.58
2:B:16:ARG:HB3	2:B:217:ARG:NH2	2.19	0.58
5:E:137:ASP:OD1	5:E:139:GLU:HB2	2.04	0.58
8:H:15:PRO:HG3	30:0:1053:G:OP1	2.03	0.58
13:M:158:ARG:HB2	13:M:163:LEU:HB2	1.86	0.58
14:N:67:ALA:HA	14:N:71:TRP:CB	2.34	0.58
22:V:64:GLY:O	22:V:65:ASP:HB2	2.04	0.58
27:1:45:ARG:HB3	42:1:988:HOH:O	2.02	0.58
30:0:150:G:H1’	42:0:4496:HOH:O	2.04	0.58
30:0:157:G:H3’	42:0:4827:HOH:O	2.03	0.58
30:0:2608:C:H2’	42:0:4456:HOH:O	2.04	0.58
30:0:2670:G:O2’	30:0:2671:U:H5’	2.03	0.58
1:A:107:ASN:OD1	1:A:120:ARG:HD2	2.04	0.58
2:B:320:GLN:NE2	2:B:321:PRO:HD2	2.19	0.58
8:H:165:ARG:HD3	42:H:9040:HOH:O	2.03	0.58
11:K:77:ARG:C	11:K:78:LYS:CA	2.72	0.58
13:M:71:SER:HB2	13:M:92:THR:HG22	1.86	0.58
15:O:14:LEU:HD23	15:O:102:ILE:HD11	1.86	0.58
23:W:130:HIS:O	23:W:136:GLY:HA3	2.04	0.58
29:3:28:GLY:HA3	30:0:2434:A:O3’	2.04	0.58
30:0:23:G:H1’	30:0:520:A:N6	2.19	0.58
30:0:1615:A:H5’	42:0:5049:HOH:O	2.04	0.58
30:0:2089:A:O2’	30:0:2090:G:H5’	2.04	0.58
30:0:2239:C:H2’	30:0:2240:U:C6	2.38	0.58
30:0:2314:G:C2’	30:0:2315:C:H5’	2.34	0.58
4:D:40:ILE:HG13	4:D:41:LEU:N	2.19	0.58
23:W:90:TYR:N	23:W:90:TYR:CD1	2.71	0.58
30:0:31:C:H2’	42:0:9479:HOH:O	2.03	0.58
6:F:83:LEU:HD11	6:F:96:ALA:CB	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:99:ARG:HD2	13:M:167:GLY:HA2	1.86	0.57
14:N:143:ARG:HH21	14:N:169:PRO:HB2	1.68	0.57
25:Y:234:VAL:HG12	25:Y:235:GLU:N	2.19	0.57
30:0:2251:G:H2'	30:0:2252:A:C8	2.38	0.57
3:C:20:ASP:O	3:C:23:GLU:HB2	2.03	0.57
7:G:23:ILE:HG22	7:G:27:ILE:HD11	1.85	0.57
17:Q:32:GLU:O	17:Q:93:ARG:NH2	2.37	0.57
30:0:2312:G:H2'	30:0:2313:C:H5'	1.85	0.57
1:A:187:PRO:HB2	30:0:1845:A:O3'	2.04	0.57
1:A:199:HIS:HD2	1:A:201:PHE:HB2	1.69	0.57
3:C:184:ARG:NH2	30:0:450:C:OP1	2.37	0.57
6:F:4:VAL:HG13	6:F:76:PHE:CD1	2.38	0.57
24:X:20:GLU:CD	24:X:21:PRO:HD2	2.24	0.57
28:2:11:LEU:HD22	30:0:1417:G:O2'	2.04	0.57
28:2:20:ARG:HG2	42:2:5444:HOH:O	2.04	0.57
29:3:15:ASN:O	30:0:2408:A:H4'	2.05	0.57
30:0:137:U:H2'	30:0:139:C:C5	2.38	0.57
30:0:2878:U:H2'	30:0:2879:A:O4'	2.04	0.57
3:C:168:ARG:NH2	3:C:190:ALA:O	2.37	0.57
10:J:107:ASN:ND2	10:J:109:TYR:H	2.02	0.57
16:P:37:ARG:HD2	30:0:1501:A:OP2	2.04	0.57
21:U:52:THR:CG2	21:U:54:THR:HB	2.34	0.57
23:W:55:GLY:HA3	23:W:146:ILE:HG13	1.86	0.57
23:W:110:GLN:HA	23:W:110:GLN:NE2	2.20	0.57
30:0:136:C:H2'	30:0:137:U:O4'	2.04	0.57
30:0:757:C:H2'	30:0:758:A:C8	2.39	0.57
30:0:2896:A:H5"	42:0:6932:HOH:O	2.04	0.57
2:B:85:ARG:NH1	42:B:9110:HOH:O	2.37	0.57
2:B:86:ALA:HA	42:B:9050:HOH:O	2.05	0.57
10:J:52:GLN:HG3	10:J:53:ILE:H	1.67	0.57
16:P:77:ALA:O	16:P:78:GLY:CA	2.52	0.57
23:W:35:VAL:HG22	23:W:36:PRO:O	2.05	0.57
23:W:154:ARG:NH1	30:0:588:G:O6	2.37	0.57
30:0:380:A:H2'	42:0:9039:HOH:O	2.03	0.57
4:D:25:MET:CE	4:D:41:LEU:HG	2.30	0.57
11:K:74:VAL:HG13	11:K:113:ILE:CG2	2.29	0.57
12:L:34:GLY:HA3	12:L:38:HIS:CE1	2.38	0.57
12:L:92:ASP:OD1	12:L:94:ARG:HB2	2.04	0.57
14:N:23:ARG:NH1	14:N:27:LEU:HD11	2.18	0.57
23:W:108:ARG:HG3	23:W:114:PRO:HG3	1.85	0.57
25:Y:154:ARG:HH21	30:0:1293:U:H5'	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:73:ARG:HG2	26:Z:75:GLY:H	1.69	0.57
30:0:12:U:H2'	30:0:13:G:H5'	1.85	0.57
30:0:619:U:H3'	42:0:4175:HOH:O	2.05	0.57
30:0:1097:A:H2'	30:0:1098:A:C8	2.39	0.57
30:0:1249:U:H2'	30:0:1250:C:H6	1.68	0.57
33:6:76:8AN:N3	42:6:80:HOH:O	2.32	0.57
1:A:105:VAL:HG12	1:A:106:CYS:N	2.20	0.57
2:B:42:ALA:HB2	2:B:162:MET:CE	2.35	0.57
2:B:77:PRO:C	2:B:78:PRO:HG3	2.25	0.57
2:B:314:ALA:HB3	2:B:317:PRO:HG3	1.87	0.57
4:D:103:ASN:ND2	4:D:134:LEU:H	2.02	0.57
13:M:92:THR:HB	30:0:401:C:O2'	2.05	0.57
23:W:64:THR:O	23:W:68:THR:HG22	2.05	0.57
30:0:1946:C:H2'	30:0:1971:G:C8	2.40	0.57
30:0:2032:U:H2'	30:0:2033:G:H5"	1.87	0.57
1:A:117:LYS:HA	42:A:9015:HOH:O	2.05	0.57
2:B:87:TYR:OH	2:B:163:GLU:OE2	2.16	0.57
6:F:13:GLU:OE1	6:F:77:VAL:HG13	2.04	0.57
9:I:69:PRO:HA	30:0:1164:U:OP1	2.05	0.57
14:N:86:LEU:HD12	14:N:125:ALA:HB2	1.87	0.57
14:N:176:ARG:HG2	14:N:180:LEU:HD13	1.86	0.57
30:0:1165:G:O2'	30:0:1174:A:H4'	2.05	0.57
19:S:55:GLN:NE2	30:0:1446:U:H2'	2.19	0.57
19:S:57:THR:HG22	19:S:59:ASP:N	2.20	0.57
29:3:36:ILE:HG23	29:3:37:ASP:N	2.19	0.57
30:0:447:A:O2'	30:0:448:G:H5'	2.04	0.57
2:B:56:ASP:OD1	2:B:322:ARG:HB3	2.05	0.57
23:W:60:GLU:O	23:W:63:GLU:HB2	2.05	0.57
30:0:941:G:O2'	30:0:942:U:H5'	2.04	0.57
30:0:1624:A:H4'	30:0:1626:A:H5"	1.86	0.57
30:0:2301:A:H5"	30:0:2302:A:H5'	1.86	0.57
3:C:181:ALA:HA	42:T:2331:HOH:O	2.04	0.56
15:O:14:LEU:CG	15:O:102:ILE:HD11	2.35	0.56
20:T:71:VAL:CG1	20:T:90:PRO:HB3	2.33	0.56
23:W:115:THR:HG22	23:W:116:LEU:N	2.20	0.56
23:W:122:ARG:HH12	23:W:154:ARG:N	2.03	0.56
30:0:699:C:H2'	30:0:744:G:O4'	2.05	0.56
30:0:710:G:O2'	30:0:711:G:H5'	2.05	0.56
30:0:1278:A:H4'	30:0:1279:U:C4	2.40	0.56
30:0:1342:C:O2'	30:0:1343:C:H5'	2.05	0.56
30:0:1482:A:O2'	30:0:1483:C:H5'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2011:A:H5'	30:0:2013:G:H1'	1.85	0.56
6:F:50:VAL:HG21	6:F:63:ILE:HG21	1.86	0.56
25:Y:235:GLU:CD	25:Y:235:GLU:N	2.58	0.56
27:1:15:THR:HG1	30:0:777:U:H5	1.53	0.56
30:0:1118:A:C8	30:0:1119:G:H5"	2.37	0.56
30:0:1364:G:H1'	42:0:5657:HOH:O	2.05	0.56
2:B:8:LYS:HG3	2:B:220:VAL:HG12	1.87	0.56
2:B:141:ARG:HD2	2:B:163:GLU:OE2	2.05	0.56
2:B:162:MET:HB2	2:B:310:ARG:NH1	2.21	0.56
2:B:190:MET:HE2	2:B:194:PHE:CD1	2.41	0.56
7:G:63:ARG:O	7:G:67:LEU:HG	2.04	0.56
13:M:102:GLU:OE1	13:M:164:THR:HG21	2.05	0.56
15:O:77:ALA:HA	15:O:96:VAL:O	2.05	0.56
19:S:57:THR:HG22	19:S:58:MET:N	2.21	0.56
24:X:30:MET:HE1	24:X:58:ALA:HB3	1.88	0.56
30:0:255:A:H2'	30:0:256:C:C6	2.41	0.56
30:0:1419:U:H2'	30:0:1685:A:C2	2.39	0.56
4:D:167:GLU:OE2	4:D:173:GLU:HB3	2.05	0.56
11:K:109:LEU:CD1	11:K:113:ILE:HD11	2.33	0.56
13:M:82:ARG:O	13:M:84:LYS:N	2.38	0.56
16:P:83:LYS:HG2	30:0:793:A:H5"	1.88	0.56
16:P:91:LYS:O	16:P:95:GLU:HG3	2.05	0.56
23:W:5:VAL:HG11	23:W:153:MET:CE	2.35	0.56
29:3:77:ALA:C	29:3:78:HIS:CA	2.74	0.56
30:0:499:G:O2'	30:0:500:G:H5'	2.05	0.56
30:0:1279:U:O2	30:0:1279:U:H2'	2.06	0.56
8:H:23:ILE:HG22	8:H:123:ILE:HD11	1.88	0.56
14:N:23:ARG:NH2	31:9:7:G:H4'	2.21	0.56
16:P:82:GLY:O	30:0:1761:U:H4'	2.04	0.56
20:T:26:THR:HG23	20:T:97:ARG:HG3	1.87	0.56
30:0:334:G:H2'	30:0:335:U:O4'	2.05	0.56
30:0:1730:G:C5'	30:0:1731:C:C6	2.89	0.56
1:A:51:ARG:HD2	30:0:1874:U:OP1	2.05	0.56
1:A:88:ILE:HD13	1:A:100:PRO:HD3	1.88	0.56
1:A:217:ARG:HG2	1:A:229:ALA:HB2	1.88	0.56
12:L:55:GLN:CA	12:L:58:GLN:HE21	2.17	0.56
18:R:71:LYS:HE2	30:0:2831:C:O3'	2.05	0.56
23:W:13:MET:HE1	23:W:18:GLN:HA	1.88	0.56
30:0:69:A:H5'	30:0:69:A:C8	2.40	0.56
30:0:706:G:N2	30:0:707:C:H41	2.04	0.56
30:0:1346:U:H2'	30:0:1347:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:127:ARG:HD2	3:C:229:PRO:O	2.05	0.56
6:F:50:VAL:HG13	6:F:60:VAL:HG11	1.86	0.56
10:J:19:MET:HE3	10:J:132:LEU:HD11	1.88	0.56
13:M:60:VAL:HG22	13:M:134:ILE:HD12	1.87	0.56
18:R:40:ALA:O	18:R:43:ALA:HB3	2.05	0.56
18:R:99:ALA:HB1	18:R:109:MET:HE3	1.87	0.56
30:0:119:A:H2'	30:0:120:A:C5'	2.36	0.56
1:A:9:ARG:HG2	1:A:16:PHE:CD2	2.41	0.56
2:B:206:THR:CG2	30:0:2716:G:H5"	2.30	0.56
3:C:149:LYS:NZ	30:0:327:A:OP1	2.38	0.56
13:M:58:GLN:NE2	30:0:259:G:H21	2.03	0.56
24:X:23:HIS:HE1	30:0:2044:G:OP1	1.89	0.56
25:Y:208:LYS:HZ3	30:0:1343:C:H1'	1.71	0.56
30:0:137:U:OP1	30:0:259:G:O2'	2.24	0.56
30:0:1342:C:C2'	30:0:1343:C:H5'	2.36	0.56
31:9:54:A:O2'	31:9:55:U:H5'	2.06	0.56
2:B:62:ARG:HA	2:B:65:MET:HE2	1.87	0.56
2:B:144:THR:HB	42:B:9099:HOH:O	2.03	0.56
12:L:91:VAL:CG1	12:L:120:LEU:HD23	2.36	0.56
12:L:108:VAL:HB	12:L:125:PHE:CD2	2.41	0.56
14:N:24:LEU:HD13	17:Q:26:PRO:HB3	1.86	0.56
30:0:622:G:O2'	30:0:623:U:H5'	2.05	0.56
30:0:2353:A:H4'	30:0:2354:A:O5'	2.05	0.56
1:A:204:GLY:N	30:0:2634:G:OP2	2.38	0.56
8:H:61:ARG:HH11	8:H:61:ARG:HG3	1.69	0.56
10:J:25:GLN:NE2	10:J:116:LEU:HB3	2.20	0.56
10:J:93:ARG:O	10:J:96:GLU:HB2	2.06	0.56
20:T:81:LYS:HG3	20:T:87:VAL:HG13	1.88	0.56
30:0:637:C:H2'	30:0:638:C:C6	2.41	0.56
1:A:32:VAL:HG12	1:A:34:ASP:H	1.70	0.55
2:B:132:HIS:NE2	2:B:171:VAL:HG23	2.21	0.55
8:H:34:HIS:HD2	8:H:90:LEU:O	1.88	0.55
10:J:19:MET:CE	10:J:132:LEU:HD11	2.36	0.55
12:L:120:LEU:HD12	12:L:133:VAL:HG21	1.87	0.55
17:Q:16:ASN:HB2	42:0:7765:HOH:O	2.06	0.55
18:R:77:ALA:C	18:R:78:GLY:CA	2.75	0.55
19:S:11:THR:O	19:S:14:ALA:HB3	2.06	0.55
25:Y:187:VAL:CG1	25:Y:205:ILE:HA	2.36	0.55
30:0:612:U:H2'	30:0:613:C:C6	2.41	0.55
30:0:2439:C:H5'	42:0:6330:HOH:O	2.06	0.55
5:E:31:ARG:NH1	5:E:68:HIS:CG	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:53:ASP:OD1	6:F:80:GLN:HB2	2.07	0.55
12:L:13:HIS:HB3	42:L:9060:HOH:O	2.05	0.55
13:M:12:TRP:O	13:M:15:PRO:HD3	2.06	0.55
16:P:36:THR:O	16:P:40:VAL:HG23	2.05	0.55
30:0:2507:G:H2'	30:0:2510:C:H42	1.71	0.55
1:A:211:LYS:O	30:0:1943:C:H4'	2.06	0.55
4:D:60:GLU:HG3	4:D:60:GLU:O	2.07	0.55
5:E:7:ILE:HD11	5:E:11:VAL:O	2.07	0.55
5:E:36:PRO:HD3	10:J:127:ILE:HG13	1.89	0.55
7:G:63:ARG:N	42:G:2569:HOH:O	2.39	0.55
11:K:87:ARG:NH2	30:0:2720:C:O2	2.39	0.55
24:X:74:ALA:CA	24:X:85:VAL:HG13	2.37	0.55
29:3:22:VAL:HG11	29:3:67:LEU:HD13	1.88	0.55
29:3:70:ARG:HB3	42:3:9062:HOH:O	2.06	0.55
1:A:43:VAL:HG21	1:A:59:GLU:HG3	1.87	0.55
2:B:254:GLN:HG2	2:B:255:GLY:N	2.21	0.55
8:H:30:LYS:N	8:H:62:HIS:HD2	1.96	0.55
10:J:12:VAL:HG21	10:J:116:LEU:HD11	1.88	0.55
21:U:20:MET:HE2	21:U:28:THR:HG21	1.88	0.55
23:W:91:ASP:HB2	42:W:5425:HOH:O	2.06	0.55
30:0:553:G:H5'	42:0:4389:HOH:O	2.06	0.55
2:B:24:PRO:CG	2:B:204:GLY:HA2	2.36	0.55
2:B:274:GLU:HA	2:B:292:GLY:O	2.06	0.55
3:C:207:LEU:HB2	3:C:210:ALA:HB2	1.87	0.55
4:D:60:GLU:O	4:D:61:PHE:C	2.45	0.55
6:F:65:GLU:HB3	42:F:5163:HOH:O	2.06	0.55
8:H:69:ARG:HD3	42:H:9037:HOH:O	2.05	0.55
13:M:178:LYS:HB2	42:0:7686:HOH:O	2.06	0.55
14:N:74:PRO:HG2	14:N:159:TYR:CE1	2.42	0.55
25:Y:174:VAL:HG13	25:Y:177:LYS:HD2	1.88	0.55
30:0:624:U:H3'	42:0:5060:HOH:O	2.07	0.55
30:0:1701:A:H4'	30:0:1702:U:C5'	2.37	0.55
2:B:98:THR:HG21	2:B:127:GLN:OE1	2.06	0.55
4:D:24:HIS:HB2	4:D:72:LYS:HA	1.88	0.55
4:D:25:MET:SD	4:D:40:ILE:HD11	2.47	0.55
6:F:19:ALA:O	6:F:22:VAL:HG22	2.07	0.55
8:H:96:GLN:NE2	8:H:129:ARG:NH2	2.55	0.55
13:M:12:TRP:CD2	13:M:45:ARG:HD2	2.41	0.55
16:P:11:ALA:HB1	16:P:16:VAL:O	2.06	0.55
18:R:113:HIS:HB3	18:R:146:ILE:HD12	1.89	0.55
23:W:4:LEU:HD22	23:W:52:VAL:HB	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:1:THR:O	30:0:1836:A:H1'	2.07	0.55
30:0:292:G:H1'	30:0:360:A:H61	1.72	0.55
30:0:2562:G:H4'	42:0:5081:HOH:O	2.07	0.55
30:0:2828:G:O5'	30:0:2828:G:H8	1.90	0.55
1:A:2:ARG:HD3	1:A:198:ASP:OD1	2.06	0.55
3:C:246:ARG:HD2	42:C:8576:HOH:O	2.07	0.55
42:C:8562:HOH:O	15:O:3:THR:HG21	2.06	0.55
5:E:77:THR:O	5:E:78:GLU:CA	2.55	0.55
13:M:146:ASP:O	13:M:147:LEU:HD23	2.06	0.55
14:N:21:HIS:HB2	42:N:8831:HOH:O	2.07	0.55
16:P:74:GLN:HG2	30:0:1786:C:OP1	2.06	0.55
23:W:88:THR:HG22	23:W:89:ASP:H	1.71	0.55
24:X:23:HIS:NE2	24:X:24:LYS:HD2	2.21	0.55
29:3:11:CYS:HB2	29:3:20:HIS:NE2	2.21	0.55
30:0:1260:G:H3'	30:0:1261:A:N7	2.21	0.55
30:0:2032:U:H2'	30:0:2033:G:C5'	2.37	0.55
30:0:2115:U:H2'	30:0:2116:U:C6	2.41	0.55
31:9:76:G:H3'	31:9:77:A:C5'	2.20	0.55
1:A:66:ARG:NH1	1:A:66:ARG:CB	2.69	0.55
22:V:20:LEU:HD22	22:V:60:GLN:HE22	1.71	0.55
30:0:2401:A:H2'	30:0:2402:A:C8	2.42	0.55
1:A:32:VAL:HG12	1:A:34:ASP:N	2.22	0.55
1:A:69:LEU:HD21	1:A:120:ARG:HB3	1.88	0.55
1:A:82:VAL:HA	1:A:93:THR:O	2.07	0.55
1:A:189:VAL:HA	30:0:1845:A:OP1	2.07	0.55
2:B:36:PRO:HA	2:B:168:GLY:CA	2.25	0.55
5:E:91:PHE:CE1	30:0:2694:A:H4'	2.42	0.55
6:F:4:VAL:HG13	6:F:76:PHE:CE1	2.42	0.55
8:H:23:ILE:CG2	8:H:123:ILE:HD11	2.37	0.55
28:2:10:ARG:NH2	30:0:121:U:OP2	2.40	0.55
2:B:18:ARG:HG3	2:B:256:GLN:HG3	1.89	0.55
3:C:227:GLY:O	3:C:229:PRO:HD3	2.07	0.55
4:D:172:VAL:HG12	4:D:173:GLU:N	2.13	0.55
8:H:139:ALA:HB3	8:H:149:VAL:HG21	1.88	0.55
18:R:120:GLY:HA3	42:R:8961:HOH:O	2.07	0.55
25:Y:149:GLN:HE22	30:0:1293:U:H4'	1.72	0.55
30:0:307:G:H3'	30:0:342:C:OP2	2.07	0.55
30:0:841:A:H5"	42:0:7724:HOH:O	2.07	0.55
30:0:1529:G:H5'	42:0:9193:HOH:O	2.05	0.55
2:B:75:GLU:OE2	2:B:151:VAL:HG13	2.07	0.54
5:E:36:PRO:HD3	10:J:127:ILE:HD12	1.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:37:ARG:NE	42:N:8833:HOH:O	2.39	0.54
18:R:82:GLU:O	18:R:86:LYS:HG3	2.07	0.54
28:2:8:LYS:NZ	30:0:1677:U:OP2	2.36	0.54
10:J:80:LYS:HE2	10:J:98:PHE:CZ	2.43	0.54
12:L:14:GLY:O	30:0:1295:G:H5"	2.06	0.54
13:M:84:LYS:HE2	42:0:5258:HOH:O	2.08	0.54
23:W:4:LEU:HD22	23:W:52:VAL:HG11	1.89	0.54
30:0:107:U:H2'	30:0:108:U:H5'	1.89	0.54
30:0:905:C:H3'	42:0:6033:HOH:O	2.06	0.54
30:0:945:U:H2'	30:0:946:C:C6	2.42	0.54
30:0:1681:G:H5"	30:0:1682:A:H5'	1.88	0.54
30:0:2502:C:C2'	30:0:2503:A:H5'	2.37	0.54
1:A:95:PRO:HA	1:A:153:ARG:HA	1.90	0.54
2:B:80:ARG:HB2	2:B:145:HIS:CE1	2.42	0.54
3:C:165:ASP:O	3:C:168:ARG:HB3	2.06	0.54
15:O:63:LYS:HG3	15:O:80:ASP:O	2.07	0.54
22:V:39:ALA:N	22:V:40:PRO:CD	2.70	0.54
30:0:1198:U:H2'	30:0:1200:A:OP2	2.07	0.54
30:0:1730:G:C5'	30:0:1731:C:H6	2.20	0.54
30:0:2072:G:C6	30:0:2533:C:H1'	2.43	0.54
30:0:2783:A:H3'	42:0:6077:HOH:O	2.08	0.54
1:A:125:ASN:CB	1:A:158:VAL:HG12	2.38	0.54
3:C:80:VAL:HA	42:C:8554:HOH:O	2.08	0.54
3:C:206:ASN:HB2	30:0:329:A:OP2	2.07	0.54
5:E:81:GLU:O	5:E:172:PRO:HD3	2.07	0.54
9:I:70:THR:HG21	42:I:5331:HOH:O	2.08	0.54
9:I:114:TYR:HE1	30:0:1186:C:H4'	1.72	0.54
13:M:24:GLN:NE2	13:M:24:GLN:HA	2.23	0.54
13:M:60:VAL:C	13:M:61:ILE:HD12	2.27	0.54
19:S:15:MET:O	19:S:18:MET:HB3	2.07	0.54
20:T:48:VAL:HG21	20:T:96:VAL:CG1	2.37	0.54
22:V:5:VAL:HG23	42:V:2271:HOH:O	2.07	0.54
24:X:71:ARG:HD3	42:X:7542:HOH:O	2.07	0.54
30:0:666:A:H2'	30:0:667:C:O4'	2.08	0.54
30:0:1447:U:H3'	30:0:1506:U:O2	2.07	0.54
30:0:1632:A:H2'	30:0:1633:C:H5'	1.90	0.54
30:0:2326:C:H4'	30:0:2412:G:H4'	1.90	0.54
30:0:2697:A:H2'	30:0:2698:G:O4'	2.08	0.54
2:B:2:GLN:NE2	30:0:2545:U:OP2	2.41	0.54
3:C:235:PHE:CE2	3:C:243:VAL:HG21	2.41	0.54
4:D:36:ASN:HA	42:D:7500:HOH:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:99:GLU:HG3	42:O:6044:HOH:O	2.07	0.54
28:2:48:ASP:O	28:2:49:GLU:HB2	2.08	0.54
30:0:485:A:N3	30:0:487:G:H5"	2.22	0.54
30:0:589:U:H2'	30:0:590:A:C8	2.41	0.54
30:0:631:A:C6	30:0:2074:A:H5'	2.43	0.54
30:0:1647:G:O2'	30:0:1648:G:H5'	2.08	0.54
30:0:1839:A:H5'	30:0:2643:G:H4'	1.89	0.54
31:9:30:C:H42	31:9:50:G:H1	1.55	0.54
1:A:94:LEU:HG	1:A:99:ILE:HD11	1.88	0.54
2:B:98:THR:HG22	30:0:2820:A:OP1	2.07	0.54
2:B:212:GLN:HA	30:0:1733:A:H4'	1.89	0.54
3:C:58:ALA:HA	3:C:73:GLN:NE2	2.22	0.54
8:H:59:GLN:HE21	8:H:129:ARG:HG2	1.73	0.54
11:K:82:ARG:NH2	11:K:115:ARG:HG2	2.22	0.54
30:0:1189:A:H1'	30:0:1209:C:H1'	1.90	0.54
3:C:77:ALA:C	3:C:78:ARG:CA	2.76	0.54
18:R:98:ASN:HD22	18:R:98:ASN:N	2.06	0.54
25:Y:136:LYS:HB3	25:Y:139:VAL:HG23	1.90	0.54
25:Y:203:VAL:HG12	25:Y:228:VAL:HG22	1.88	0.54
26:Z:54:GLU:HG2	26:Z:57:MET:HE2	1.90	0.54
30:0:304:G:H1'	30:0:347:A:H61	1.73	0.54
30:0:1298:U:H2'	30:0:1299:G:C8	2.42	0.54
30:0:2042:U:H2'	30:0:2043:U:C6	2.42	0.54
30:0:2281:C:C2'	30:0:2282:U:H5'	2.37	0.54
14:N:37:ARG:HH12	31:9:6:C:C5'	2.00	0.54
18:R:39:THR:HB	18:R:42:GLU:CD	2.27	0.54
23:W:27:HIS:CD2	30:0:1288:U:H4'	2.43	0.54
30:0:407:A:H2'	30:0:408:A:C8	2.43	0.54
30:0:602:A:O2'	30:0:605:C:H4'	2.07	0.54
30:0:1666:C:H2'	30:0:1667:A:C5'	2.37	0.54
30:0:2502:C:N3	30:0:2518:C:N4	2.55	0.54
18:R:132:ARG:HH21	30:0:2055:A:H4'	1.69	0.54
20:T:28:SER:CA	20:T:97:ARG:HD3	2.35	0.54
30:0:90:A:H2'	30:0:91:G:O4'	2.07	0.54
30:0:187:A:H3'	30:0:188:C:H6	1.73	0.54
30:0:2032:U:C2'	30:0:2033:G:H5"	2.38	0.54
9:I:127:CYS:C	9:I:129:SER:N	2.62	0.54
10:J:77:GLY:C	10:J:78:ILE:CA	2.77	0.54
11:K:98:VAL:HG13	11:K:102:GLU:HA	1.87	0.54
13:M:122:GLN:OE1	13:M:127:LYS:HE2	2.07	0.54
27:1:46:ARG:HA	42:0:3919:HOH:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:84:ARG:HB3	42:3:9041:HOH:O	2.08	0.54
30:0:1834:C:H2'	30:0:1840:A:H62	1.72	0.54
31:9:78:G:H1'	31:9:78:G:N3	2.22	0.54
2:B:333:GLU:HB2	21:U:14:GLU:OE2	2.09	0.53
9:I:88:GLN:HA	9:I:91:PHE:HE2	1.73	0.53
14:N:62:HIS:HB3	14:N:65:ASP:OD1	2.08	0.53
19:S:34:LYS:HG2	19:S:54:THR:HG23	1.89	0.53
30:0:877:G:H1'	42:0:3080:HOH:O	2.07	0.53
30:0:2332:A:H3'	30:0:2333:G:H8	1.73	0.53
30:0:2526:C:O2'	30:0:2527:U:H5'	2.09	0.53
30:0:2824:C:O3'	30:0:2825:C:H6	1.91	0.53
1:A:173:GLY:O	1:A:176:HIS:HB3	2.07	0.53
2:B:244:PRO:HB3	30:0:1234:U:N3	2.23	0.53
8:H:66:GLU:HA	42:H:9037:HOH:O	2.07	0.53
8:H:174:LEU:HD11	30:0:1220:U:H4'	1.90	0.53
13:M:84:LYS:HB2	30:0:170:U:OP1	2.08	0.53
25:Y:138:ARG:NH1	30:0:638:C:OP2	2.38	0.53
30:0:812:A:H2'	30:0:813:C:C6	2.43	0.53
30:0:1940:C:H4'	42:0:9153:HOH:O	2.07	0.53
2:B:53:LEU:HD21	2:B:270:ILE:HG23	1.91	0.53
5:E:91:PHE:HE1	30:0:2694:A:H4'	1.72	0.53
18:R:9:ASP:O	18:R:13:THR:HG22	2.08	0.53
23:W:65:VAL:HA	23:W:68:THR:HG22	1.90	0.53
23:W:137:GLN:HG3	23:W:137:GLN:O	2.08	0.53
30:0:138:U:H5"	30:0:139:C:OP2	2.08	0.53
30:0:705:C:H3'	30:0:706:G:H8	1.73	0.53
2:B:14:GLY:HA2	2:B:15:PRO:C	2.28	0.53
3:C:139:VAL:HG12	42:C:8645:HOH:O	2.08	0.53
5:E:81:GLU:HG2	5:E:134:SER:CB	2.33	0.53
23:W:115:THR:HB	42:W:6871:HOH:O	2.09	0.53
30:0:690:G:H4'	30:0:741:C:O2	2.09	0.53
30:0:1947:G:H2'	30:0:1948:G:H8	1.71	0.53
1:A:212:PRO:HA	30:0:1943:C:O4'	2.08	0.53
4:D:23:VAL:HG21	4:D:45:THR:HG21	1.89	0.53
6:F:20:LEU:HB2	6:F:49:PHE:CZ	2.43	0.53
9:I:91:PHE:HD2	9:I:131:GLY:HA2	1.74	0.53
16:P:89:ASN:HB3	16:P:92:GLU:HB2	1.91	0.53
23:W:39:ASP:HB2	42:W:3580:HOH:O	2.09	0.53
30:0:708:A:H2'	30:0:709:G:O4'	2.08	0.53
30:0:1118:A:C8	30:0:1118:A:C3'	2.91	0.53
30:0:1160:G:H5'	30:0:1161:A:C4'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2761:A:H2'	42:0:6484:HOH:O	2.08	0.53
30:0:2802:C:H2'	30:0:2803:C:C6	2.44	0.53
1:A:194:MET:SD	30:0:875:A:C2	3.02	0.53
3:C:1:MET:HG2	3:C:2:GLN:HE21	1.74	0.53
3:C:233:THR:CG2	3:C:234:VAL:H	2.16	0.53
6:F:58:GLU:OE2	13:M:27:ARG:NH2	2.40	0.53
13:M:91:ILE:HD13	42:0:4059:HOH:O	2.08	0.53
14:N:80:SER:HB2	42:N:8835:HOH:O	2.07	0.53
23:W:55:GLY:CA	23:W:146:ILE:HG13	2.38	0.53
26:Z:54:GLU:HB2	42:Z:8712:HOH:O	2.09	0.53
27:1:8:GLN:HE22	27:1:11:LYS:HZ2	1.56	0.53
30:0:78:G:N2	30:0:78:G:N1	2.56	0.53
30:0:354:A:H2'	30:0:355:C:C6	2.43	0.53
30:0:2239:C:H2'	30:0:2240:U:H6	1.74	0.53
30:0:2420:G:H4'	42:0:4965:HOH:O	2.09	0.53
30:0:2748:G:H4'	30:0:2749:U:C5'	2.39	0.53
1:A:38:ILE:HG22	1:A:38:ILE:O	2.08	0.53
1:A:179:MET:HG2	1:A:186:TRP:CB	2.38	0.53
2:B:36:PRO:HB3	2:B:174:ARG:HB3	1.90	0.53
8:H:168:VAL:HG13	42:H:9015:HOH:O	2.08	0.53
11:K:76:GLN:HA	11:K:93:ASN:HA	1.90	0.53
12:L:90:ARG:NH2	12:L:121:ILE:HD11	2.24	0.53
13:M:99:ARG:CD	13:M:167:GLY:HA2	2.39	0.53
15:O:59:VAL:HG23	15:O:111:VAL:HG21	1.91	0.53
18:R:111:ILE:HG23	18:R:145:LEU:HD11	1.91	0.53
19:S:10:VAL:HG11	22:V:36:ALA:CB	2.36	0.53
19:S:23:LYS:HE2	42:0:5526:HOH:O	2.09	0.53
20:T:105:ASP:OD2	20:T:107:LYS:HB2	2.08	0.53
23:W:151:GLU:O	23:W:154:ARG:HB2	2.08	0.53
30:0:855:U:H4'	30:0:856:G:O4'	2.08	0.53
30:0:2698:G:H2'	30:0:2699:A:C8	2.44	0.53
1:A:190:ARG:HD2	30:0:1884:G:O6	2.09	0.53
1:A:207:GLN:O	1:A:208:HIS:HB3	2.07	0.53
1:A:211:LYS:NZ	1:A:223:ARG:HH21	2.07	0.53
2:B:8:LYS:HB3	2:B:218:TRP:O	2.08	0.53
2:B:56:ASP:HB3	2:B:322:ARG:HH21	1.74	0.53
13:M:107:ARG:HG3	13:M:107:ARG:NH1	2.23	0.53
14:N:37:ARG:NH1	31:9:6:C:OP1	2.42	0.53
42:N:8841:HOH:O	17:Q:19:ARG:HD2	2.09	0.53
23:W:39:ASP:OD1	23:W:42:ARG:NH2	2.42	0.53
25:Y:152:LYS:CB	25:Y:160:LYS:HG3	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:78:G:N3	30:0:78:G:N9	2.57	0.53
30:0:820:G:O2'	30:0:856:G:H4'	2.09	0.53
30:0:839:C:H1'	42:0:6899:HOH:O	2.07	0.53
2:B:171:VAL:HG23	2:B:172:SER:N	2.24	0.53
2:B:304:PRO:HD2	2:B:307:ARG:NE	2.23	0.53
3:C:142:ASP:OD1	3:C:236:THR:HG23	2.08	0.53
9:I:130:LEU:HD22	30:0:1167:G:H4'	1.91	0.53
10:J:131:THR:HG22	10:J:133:GLY:N	2.24	0.53
15:O:3:THR:CB	30:0:656:G:H5'	2.34	0.53
42:P:6012:HOH:O	30:0:1548:U:H4'	2.07	0.53
23:W:21:LEU:HD13	23:W:26:ILE:HD11	1.91	0.53
23:W:117:ARG:HB3	23:W:117:ARG:HH11	1.74	0.53
30:0:482:G:H4'	30:0:508:A:N1	2.23	0.53
30:0:858:U:H2'	30:0:859:C:C6	2.43	0.53
30:0:1165:G:H4'	30:0:1174:A:O2'	2.08	0.53
30:0:2587:OMU:H2'	30:0:2589:U:H5"	1.90	0.53
1:A:34:ASP:C	1:A:36:ASP:H	2.12	0.53
1:A:37:VAL:HG23	42:A:9074:HOH:O	2.09	0.53
1:A:199:HIS:CD2	1:A:201:PHE:HB2	2.44	0.53
2:B:5:ARG:HD2	2:B:8:LYS:HE2	1.91	0.53
4:D:172:VAL:CG1	4:D:173:GLU:H	2.15	0.53
12:L:54:PRO:HG2	12:L:57:VAL:HG21	1.89	0.53
13:M:67:VAL:HG11	13:M:97:ILE:HG23	1.91	0.53
14:N:77:ASN:OD1	14:N:79:PRO:HD2	2.09	0.53
16:P:103:THR:HA	16:P:106:ARG:HH12	1.68	0.53
18:R:15:LYS:HE3	42:R:8986:HOH:O	2.09	0.53
19:S:33:SER:OG	19:S:36:GLU:HG3	2.09	0.53
30:0:1181:A:H2'	30:0:1182:C:H5'	1.91	0.53
30:0:2274:A:O2'	30:0:2275:G:H5'	2.09	0.53
30:0:2562:G:H1'	42:0:6532:HOH:O	2.09	0.53
2:B:122:ASP:O	2:B:126:GLU:HB2	2.09	0.52
5:E:84:MET:CG	5:E:168:ILE:HD13	2.39	0.52
6:F:99:THR:HG23	6:F:99:THR:O	2.09	0.52
8:H:14:LYS:HB3	42:H:9007:HOH:O	2.09	0.52
13:M:115:LEU:HD13	13:M:116:ASN:HB2	1.91	0.52
14:N:27:LEU:HD22	14:N:50:LEU:HD22	1.91	0.52
16:P:55:LYS:HG2	16:P:56:GLY:N	2.23	0.52
20:T:30:ASP:O	20:T:33:GLU:HB3	2.10	0.52
24:X:45:GLU:HG3	42:X:6178:HOH:O	2.09	0.52
25:Y:193:LEU:CD1	25:Y:221:ALA:HB2	2.39	0.52
29:3:80:ARG:O	30:0:2457:U:H4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:558:C:O2'	30:0:559:U:H5"	2.09	0.52
30:0:1160:G:HO2'	30:0:1190:G:H8	1.57	0.52
30:0:1218:U:H2'	30:0:1219:U:H6	1.73	0.52
30:0:1445:G:N2	30:0:1678:A:H1'	2.23	0.52
30:0:2414:A:H2'	30:0:2415:A:C8	2.43	0.52
30:0:2786:G:H2'	42:0:7991:HOH:O	2.10	0.52
30:0:2880:A:H2'	30:0:2881:C:H5'	1.91	0.52
3:C:236:THR:HA	42:C:8648:HOH:O	2.07	0.52
5:E:106:ASN:ND2	5:E:109:GLY:HA2	2.25	0.52
8:H:33:GLN:H	8:H:69:ARG:NH1	2.07	0.52
9:I:98:ASP:OD1	9:I:101:LYS:HD2	2.09	0.52
25:Y:208:LYS:HZ1	30:0:1343:C:C2'	2.22	0.52
30:0:948:G:O2'	30:0:949:U:H5'	2.08	0.52
30:0:2584:G:H8	42:0:5461:HOH:O	1.91	0.52
1:A:186:TRP:CG	1:A:187:PRO:HA	2.44	0.52
2:B:171:VAL:HG23	2:B:172:SER:H	1.74	0.52
3:C:18:LEU:HD12	3:C:19:PRO:HD2	1.91	0.52
6:F:2:VAL:HG22	6:F:57:GLU:OE1	2.08	0.52
10:J:130:VAL:HG12	10:J:131:THR:H	1.72	0.52
30:0:1496:A:H2'	30:0:1497:G:O4'	2.09	0.52
30:0:1902:G:H2'	30:0:1903:U:O4'	2.10	0.52
30:0:2613:G:O2'	30:0:2614:C:H5'	2.09	0.52
1:A:96:LEU:CD2	1:A:128:LEU:HD22	2.39	0.52
3:C:123:LEU:O	3:C:126:ASP:N	2.42	0.52
4:D:21:VAL:HG23	4:D:80:ALA:HB1	1.91	0.52
4:D:99:ASP:HB3	4:D:103:ASN:HB2	1.90	0.52
4:D:136:ARG:NH1	4:D:156:ARG:O	2.41	0.52
5:E:14:GLU:O	5:E:15:GLN:HB2	2.09	0.52
10:J:14:ALA:O	10:J:17:CYS:HB2	2.10	0.52
11:K:96:VAL:HG21	11:K:109:LEU:HD22	1.92	0.52
13:M:77:HIS:C	13:M:78:LYS:CA	2.78	0.52
18:R:18:LEU:HG	18:R:91:LEU:HD13	1.92	0.52
18:R:114:VAL:HB	18:R:145:LEU:CD1	2.36	0.52
19:S:57:THR:HG22	19:S:59:ASP:H	1.73	0.52
25:Y:107:PRO:HD3	25:Y:182:PHE:CD1	2.44	0.52
30:0:195:C:H2'	30:0:196:G:H5'	1.92	0.52
30:0:583:C:H2'	30:0:584:U:H6	1.75	0.52
30:0:2432:C:O2'	30:0:2433:A:H5'	2.10	0.52
30:0:2505:G:C2'	30:0:2506:A:H5'	2.39	0.52
30:0:2634:G:O2'	30:0:2635:A:H5'	2.09	0.52
2:B:145:HIS:HD2	2:B:146:THR:O	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:336:GLN:O	30:0:2862:G:H4'	2.10	0.52
4:D:99:ASP:OD2	4:D:101:THR:HB	2.08	0.52
13:M:139:PRO:HA	13:M:142:GLN:HB2	1.92	0.52
14:N:82:TYR:OH	14:N:176:ARG:NH1	2.43	0.52
20:T:66:ASP:OD1	20:T:69:LYS:N	2.34	0.52
30:0:462:A:N6	30:0:477:A:C2	2.77	0.52
30:0:578:C:H2'	30:0:579:G:O4'	2.10	0.52
30:0:1819:G:H2'	30:0:1820:G:C5'	2.40	0.52
30:0:2768:A:O2'	30:0:2769:C:H5'	2.10	0.52
1:A:217:ARG:CG	1:A:217:ARG:NH1	2.70	0.52
4:D:49:PRO:HA	4:D:73:VAL:HG22	1.90	0.52
8:H:54:VAL:HG13	8:H:162:PRO:HG3	1.90	0.52
8:H:91:ARG:O	30:0:1003:U:H4'	2.10	0.52
9:I:89:GLU:OE2	30:0:1181:A:H5'	2.10	0.52
10:J:46:ILE:HA	42:0:3802:HOH:O	2.09	0.52
23:W:35:VAL:HG23	23:W:41:TYR:CD2	2.45	0.52
24:X:74:ALA:HA	24:X:85:VAL:HG13	1.92	0.52
30:0:25:A:O2'	30:0:640:G:H5'	2.10	0.52
30:0:830:G:H5"	42:0:9420:HOH:O	2.09	0.52
30:0:1183:C:H5	30:0:1192:A:OP1	1.91	0.52
30:0:1244:U:H4'	30:0:1246:A:O4'	2.10	0.52
30:0:1314:U:H2'	42:0:6711:HOH:O	2.08	0.52
30:0:1783:A:O2'	30:0:1784:U:H5'	2.08	0.52
30:0:2649:A:H2'	42:0:6965:HOH:O	2.08	0.52
1:A:14:SER:HB2	42:A:9016:HOH:O	2.09	0.52
1:A:176:HIS:CD2	30:0:857:A:H4'	2.45	0.52
2:B:36:PRO:HB3	2:B:174:ARG:CB	2.40	0.52
3:C:93:LYS:O	3:C:98:ARG:NH2	2.42	0.52
3:C:124:VAL:HG12	3:C:131:PHE:HE2	1.74	0.52
9:I:123:VAL:C	9:I:125:GLY:H	2.13	0.52
13:M:158:ARG:HA	13:M:163:LEU:HD12	1.90	0.52
14:N:163:PHE:HZ	14:N:171:HIS:HD1	1.56	0.52
19:S:57:THR:CG2	19:S:58:MET:N	2.73	0.52
20:T:66:ASP:OD1	20:T:68:ASP:N	2.42	0.52
24:X:66:THR:CG2	24:X:67:PRO:HD2	2.40	0.52
30:0:35:U:O2'	30:0:36:C:H5'	2.09	0.52
30:0:37:A:H2'	30:0:38:G:C8	2.45	0.52
30:0:336:G:H2'	42:0:4601:HOH:O	2.08	0.52
30:0:1117:A:H2'	42:0:5754:HOH:O	2.09	0.52
30:0:1809:G:N2	30:0:1811:A:H3'	2.24	0.52
2:B:258:GLY:H	2:B:260:HIS:CE1	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:23:ARG:NH1	42:N:8868:HOH:O	2.42	0.52
14:N:33:ARG:HH21	14:N:48:VAL:HG11	1.74	0.52
14:N:115:VAL:HG13	42:9:9103:HOH:O	2.10	0.52
15:O:32:ARG:HB2	42:O:4656:HOH:O	2.10	0.52
15:O:44:ASN:HB2	35:O:8808:CL:CL	2.47	0.52
23:W:38:THR:CG2	23:W:39:ASP:N	2.73	0.52
23:W:68:THR:HG23	23:W:69:ARG:HG2	1.91	0.52
23:W:120:PRO:HG2	30:0:1095:U:O2	2.10	0.52
30:0:204:A:C2'	30:0:205:U:H5'	2.39	0.52
30:0:625:U:H5'	42:0:4081:HOH:O	2.10	0.52
30:0:627:G:H1'	42:0:5293:HOH:O	2.08	0.52
30:0:1406:A:H4'	30:0:1407:A:C5'	2.39	0.52
3:C:124:VAL:HG12	3:C:131:PHE:CE2	2.45	0.52
3:C:175:LYS:NZ	3:C:184:ARG:HB3	2.25	0.52
9:I:108:HIS:N	9:I:109:PRO:CD	2.72	0.52
10:J:54:VAL:HG11	10:J:138:THR:HG21	1.91	0.52
42:K:4183:HOH:O	30:0:2712:G:H5'	2.10	0.52
12:L:11:ARG:NH1	30:0:903:U:OP2	2.41	0.52
14:N:73:ALA:HB1	14:N:74:PRO:CD	2.39	0.52
17:Q:15:LYS:NZ	42:Q:5620:HOH:O	2.43	0.52
30:0:78:G:N3	30:0:78:G:N1	2.58	0.52
30:0:396:U:O2'	30:0:418:C:H4'	2.09	0.52
30:0:951:A:O2'	30:0:952:G:H5'	2.10	0.52
30:0:1574:C:O5'	30:0:1574:C:H6	1.92	0.52
30:0:1748:U:H4'	42:0:9318:HOH:O	2.10	0.52
30:0:2253:G:O2'	30:0:2254:G:H5'	2.09	0.52
30:0:2314:G:H2'	30:0:2315:C:H5'	1.92	0.52
30:0:2531:U:O2'	30:0:2532:A:H5'	2.09	0.52
30:0:2765:C:H2'	30:0:2766:A:C8	2.45	0.52
31:9:78:G:N3	31:9:78:G:N1	2.58	0.52
3:C:33:LYS:HE2	42:C:8564:HOH:O	2.09	0.52
7:G:22:ALA:O	7:G:25:GLU:HB3	2.10	0.52
18:R:96:VAL:O	18:R:99:ALA:HB3	2.09	0.52
21:U:49:LEU:HG	42:U:3805:HOH:O	2.10	0.52
26:Z:77:GLY:HA2	26:Z:91:GLY:O	2.10	0.52
27:1:28:HIS:ND1	27:1:31:LYS:HE2	2.25	0.52
30:0:2426:G:H1'	42:0:6925:HOH:O	2.09	0.52
2:B:28:SER:HB3	30:0:2807:U:OP1	2.11	0.51
20:T:43:ASN:O	20:T:45:GLY:N	2.41	0.51
22:V:27:LEU:HA	22:V:49:LEU:HD13	1.92	0.51
25:Y:150:LEU:HB2	42:0:6295:HOH:O	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:132:ASP:HB3	1:A:135:VAL:H	1.75	0.51
2:B:41:PHE:CE1	2:B:79:MET:HG3	2.44	0.51
7:G:64:ASN:HD22	7:G:64:ASN:N	2.07	0.51
11:K:29:LEU:HB3	11:K:55:VAL:CG1	2.26	0.51
14:N:157:PRO:HA	42:N:8823:HOH:O	2.09	0.51
24:X:87:ALA:O	24:X:88:GLU:HB3	2.10	0.51
25:Y:177:LYS:HD3	25:Y:181:GLY:O	2.11	0.51
26:Z:66:CYS:SG	26:Z:67:GLY:N	2.81	0.51
30:0:432:G:H2'	30:0:433:C:H6	1.75	0.51
1:A:16:PHE:HB3	42:A:9032:HOH:O	2.09	0.51
1:A:77:GLY:C	1:A:78:ASP:CA	2.79	0.51
2:B:145:HIS:CD2	2:B:159:PRO:HB3	2.45	0.51
4:D:173:GLU:HG3	4:D:174:VAL:HG23	1.92	0.51
6:F:58:GLU:HA	6:F:61:MET:HE1	1.91	0.51
7:G:27:ILE:HD12	7:G:70:ALA:HB1	1.92	0.51
9:I:111:LEU:HD23	30:0:1163:G:H4'	1.93	0.51
10:J:90:LYS:HE2	30:0:2083:A:N6	2.26	0.51
12:L:79:ASP:HB3	42:L:9021:HOH:O	2.10	0.51
15:O:32:ARG:NE	15:O:35:LYS:HD3	2.18	0.51
30:0:105:G:O2'	30:0:106:A:H5'	2.10	0.51
30:0:2247:C:H2'	30:0:2248:C:C6	2.43	0.51
2:B:243:ASN:HA	2:B:244:PRO:C	2.29	0.51
4:D:23:VAL:CG2	4:D:73:VAL:HB	2.40	0.51
13:M:133:LEU:O	13:M:134:ILE:HD13	2.10	0.51
24:X:87:ALA:O	24:X:88:GLU:CB	2.57	0.51
29:3:84:ARG:HD3	42:3:9041:HOH:O	2.11	0.51
1:A:96:LEU:HD22	1:A:128:LEU:HD22	1.93	0.51
4:D:75:LEU:HD13	4:D:79:MET:O	2.10	0.51
16:P:125:LYS:HB3	16:P:130:GLU:HG3	1.92	0.51
16:P:139:ARG:HG3	16:P:139:ARG:NH1	2.21	0.51
23:W:142:ASP:O	23:W:145:GLY:N	2.43	0.51
25:Y:148:GLY:HA3	30:0:622:G:P	2.51	0.51
30:0:1190:G:H4'	30:0:1207:A:N1	2.24	0.51
30:0:2765:C:H2'	30:0:2766:A:H8	1.75	0.51
30:0:2842:G:H2'	30:0:2843:A:H5'	1.93	0.51
2:B:145:HIS:HD2	2:B:159:PRO:HB3	1.76	0.51
3:C:140:VAL:HB	42:C:8648:HOH:O	2.10	0.51
6:F:56:PRO:HB2	6:F:58:GLU:OE1	2.10	0.51
7:G:23:ILE:HG22	7:G:27:ILE:CD1	2.39	0.51
9:I:96:SER:OG	9:I:99:GLN:HG3	2.10	0.51
10:J:6:PHE:HB3	10:J:109:TYR:OH	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:18:HIS:HB3	42:L:8973:HOH:O	2.09	0.51
13:M:48:LYS:HE3	13:M:52:GLN:NE2	2.25	0.51
16:P:37:ARG:NH2	30:0:1502:A:OP1	2.43	0.51
22:V:64:GLY:O	22:V:65:ASP:CB	2.58	0.51
25:Y:177:LYS:HE2	25:Y:183:GLU:OE2	2.09	0.51
28:2:36:ASN:HB3	28:2:39:ARG:HG3	1.92	0.51
30:0:146:U:O2'	30:0:147:G:H5'	2.11	0.51
30:0:1161:A:H1'	42:0:4752:HOH:O	2.11	0.51
30:0:1471:A:H2'	30:0:1472:C:C6	2.45	0.51
30:0:1746:A:H5"	42:0:6929:HOH:O	2.10	0.51
30:0:1790:C:H2'	30:0:1791:U:H6	1.75	0.51
30:0:2850:C:H1'	42:0:9168:HOH:O	2.10	0.51
2:B:316:ARG:O	2:B:316:ARG:HG3	2.11	0.51
3:C:65:ARG:HG3	3:C:67:GLN:HB2	1.93	0.51
9:I:91:PHE:HA	9:I:131:GLY:HA3	1.93	0.51
11:K:101:ASN:O	11:K:102:GLU:HB2	2.10	0.51
12:L:56:LYS:HE3	30:0:2443:C:H1'	1.93	0.51
15:O:97:SER:H	15:O:100:GLN:NE2	2.08	0.51
16:P:14:LEU:O	16:P:16:VAL:HG23	2.10	0.51
20:T:24:ARG:HG2	20:T:24:ARG:HH11	1.75	0.51
20:T:40:VAL:HG23	20:T:119:ALA:OXT	2.10	0.51
23:W:77:ALA:HB3	42:W:5763:HOH:O	2.11	0.51
25:Y:112:GLU:CD	25:Y:115:ARG:HH12	2.13	0.51
25:Y:203:VAL:CG1	25:Y:228:VAL:HG22	2.41	0.51
27:1:12:ASN:O	30:0:1415:G:H5'	2.11	0.51
29:3:31:THR:O	30:0:1923:G:H4'	2.11	0.51
30:0:1303:C:O2	30:0:1353:C:H1'	2.09	0.51
30:0:1700:C:OP2	42:0:6868:HOH:O	2.19	0.51
30:0:1705:C:O2	30:0:2735:U:H5"	2.11	0.51
31:9:96:C:H2'	31:9:97:U:C6	2.46	0.51
1:A:109:GLU:HG2	1:A:116:GLY:N	2.20	0.51
4:D:40:ILE:HA	4:D:43:GLU:OE1	2.11	0.51
5:E:159:VAL:O	5:E:163:GLN:HG2	2.11	0.51
12:L:73:VAL:HG23	12:L:74:THR:H	1.75	0.51
20:T:43:ASN:HD22	20:T:108:ARG:CZ	2.24	0.51
21:U:35:LYS:HE2	21:U:51:TRP:CH2	2.46	0.51
23:W:117:ARG:HH11	23:W:117:ARG:CB	2.23	0.51
30:0:1979:G:H2'	42:0:3192:HOH:O	2.10	0.51
30:0:2566:A:H61	30:0:2699:A:H61	1.59	0.51
1:A:51:ARG:NH1	1:A:120:ARG:O	2.44	0.51
1:A:66:ARG:HH11	1:A:66:ARG:CB	2.21	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:11:LEU:HD21	2:B:250:THR:HG22	1.93	0.51
3:C:175:LYS:HZ3	3:C:184:ARG:HB3	1.76	0.51
4:D:154:LYS:H	4:D:154:LYS:HD2	1.75	0.51
8:H:87:LYS:HB2	8:H:87:LYS:NZ	2.26	0.51
9:I:134:ILE:HG22	9:I:135:GLU:N	2.26	0.51
30:0:1333:U:H2'	30:0:1334:C:C6	2.46	0.51
30:0:1835:U:C5	30:0:1840:A:N7	2.71	0.51
30:0:2502:C:H2'	30:0:2503:A:H5'	1.92	0.51
31:9:3:A:H2	31:9:21:G:N3	2.09	0.51
31:9:97:U:H3'	42:9:9104:HOH:O	2.11	0.51
2:B:216:LYS:HA	42:0:5933:HOH:O	2.11	0.51
4:D:10:PHE:CE1	4:D:11:HIS:HB3	2.46	0.51
8:H:20:ARG:HD3	8:H:26:ILE:HD12	1.92	0.51
13:M:124:GLY:HA3	30:0:2132:C:H1'	1.93	0.51
14:N:11:ARG:NH1	31:9:8:G:O6	2.43	0.51
14:N:61:ALA:CB	14:N:88:ALA:HB2	2.41	0.51
14:N:143:ARG:HG2	14:N:172:PHE:CD2	2.46	0.51
17:Q:1:PRO:HA	30:0:2299:G:O6	2.11	0.51
17:Q:7:LEU:HD12	30:0:2424:U:C1'	2.41	0.51
20:T:107:LYS:O	20:T:111:ARG:HB2	2.09	0.51
23:W:142:ASP:HB3	42:W:2729:HOH:O	2.11	0.51
30:0:1422:U:H2'	30:0:1423:C:C6	2.45	0.51
30:0:1477:C:H5'	30:0:1868:G:C5'	2.40	0.51
30:0:2735:U:H2'	30:0:2736:U:H6	1.76	0.51
30:0:2911:C:H3'	42:0:6395:HOH:O	2.11	0.51
31:9:92:G:H2'	31:9:93:A:H8	1.75	0.51
2:B:101:TRP:HB2	2:B:119:HIS:CD2	2.46	0.50
3:C:236:THR:HB	3:C:239:ALA:HB2	1.93	0.50
5:E:35:TYR:HA	10:J:127:ILE:CD1	2.41	0.50
8:H:49:GLN:OE1	8:H:169:GLU:HG2	2.11	0.50
12:L:80:ASP:HB2	12:L:90:ARG:O	2.11	0.50
14:N:86:LEU:HD21	14:N:180:LEU:CD1	2.41	0.50
20:T:49:GLU:OE2	20:T:51:LEU:HD21	2.11	0.50
23:W:117:ARG:CB	23:W:117:ARG:NH1	2.74	0.50
23:W:122:ARG:CZ	23:W:154:ARG:HB3	2.40	0.50
23:W:139:GLY:O	23:W:141:HIS:CD2	2.62	0.50
25:Y:189:ASN:HD22	25:Y:191:ASP:N	2.10	0.50
29:3:84:ARG:HD2	30:0:2427:C:OP2	2.10	0.50
30:0:354:A:H2'	30:0:355:C:H6	1.76	0.50
30:0:566:A:H2'	30:0:567:U:H5'	1.91	0.50
30:0:2251:G:H2'	30:0:2252:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:125:GLU:O	2:B:129:ARG:HG3	2.11	0.50
2:B:214:PRO:HB2	2:B:220:VAL:HG21	1.93	0.50
4:D:135:VAL:HG22	4:D:136:ARG:N	2.26	0.50
5:E:36:PRO:HD3	10:J:127:ILE:CG1	2.42	0.50
10:J:88:PRO:HD3	30:0:1104:C:H4'	1.92	0.50
16:P:54:LYS:HB2	30:0:1717:A:H5"	1.93	0.50
20:T:43:ASN:OD1	30:0:80:A:H3'	2.11	0.50
30:0:213:G:H22	30:0:225:G:H2'	1.76	0.50
30:0:314:G:N2	30:0:316:A:H3'	2.26	0.50
30:0:561:G:O2'	30:0:562:A:H5'	2.11	0.50
30:0:1595:G:O2'	30:0:1596:U:H5'	2.11	0.50
30:0:2819:C:H2'	30:0:2820:A:C8	2.46	0.50
2:B:279:THR:HG22	2:B:280:VAL:N	2.26	0.50
3:C:168:ARG:NH1	30:0:1310:U:OP2	2.44	0.50
6:F:46:GLU:OE2	6:F:100:ASP:HA	2.10	0.50
10:J:71:TYR:CD1	10:J:72:PRO:HD2	2.46	0.50
25:Y:99:ALA:HB2	25:Y:233:TYR:CZ	2.47	0.50
25:Y:102:LEU:HG	42:Y:8887:HOH:O	2.11	0.50
25:Y:112:GLU:OE1	25:Y:115:ARG:NH1	2.44	0.50
1:A:146:LYS:NZ	30:0:1855:G:O3'	2.44	0.50
3:C:129:HIS:HE1	3:C:231:ARG:HA	1.75	0.50
14:N:1:ALA:HB2	31:9:14:G:O2'	2.11	0.50
16:P:134:VAL:O	16:P:138:GLU:HG3	2.11	0.50
23:W:13:MET:HE3	23:W:17:ILE:HG22	1.92	0.50
23:W:73:LEU:HD22	23:W:111:GLY:HA2	1.94	0.50
25:Y:170:SER:HG	25:Y:175:ARG:HG3	1.76	0.50
29:3:38:ARG:NH1	30:0:396:U:OP2	2.43	0.50
30:0:1116:U:O2'	30:0:1118:A:C2	2.46	0.50
30:0:1878:G:O2'	30:0:1879:U:P	2.69	0.50
30:0:2324:G:N2	30:0:2377:U:H1'	2.26	0.50
31:9:106:U:O2'	31:9:107:C:H5'	2.11	0.50
3:C:7:ASP:O	3:C:9:ASP:N	2.44	0.50
5:E:83:GLY:O	5:E:169:THR:N	2.35	0.50
8:H:49:GLN:O	8:H:169:GLU:HB3	2.11	0.50
9:I:97:VAL:O	9:I:101:LYS:HG3	2.12	0.50
11:K:74:VAL:HG13	11:K:113:ILE:HG12	1.93	0.50
12:L:13:HIS:ND1	35:L:8814:CL:CL	2.77	0.50
14:N:183:ASP:O	14:N:184:ILE:O	2.28	0.50
22:V:39:ALA:O	22:V:41:GLU:N	2.43	0.50
24:X:10:VAL:HG12	24:X:11:THR:N	2.26	0.50
1:A:69:LEU:HD11	1:A:159:VAL:HG13	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:43:LYS:HG2	30:0:449:A:N7	2.27	0.50
4:D:170:TYR:O	4:D:171:ASP:CB	2.59	0.50
5:E:3:VAL:CG2	5:E:49:ILE:HB	2.35	0.50
14:N:78:MET:HB2	14:N:146:HIS:HE1	1.76	0.50
20:T:16:LEU:HB2	30:0:100:C:C4'	2.41	0.50
20:T:52:ARG:HB2	20:T:95:ASN:HB3	1.94	0.50
23:W:7:LEU:HD12	23:W:53:ALA:HB2	1.93	0.50
30:0:371:U:H2'	30:0:372:A:H8	1.76	0.50
30:0:506:G:N1	30:0:509:A:OP2	2.43	0.50
30:0:553:G:H2'	30:0:554:G:H5'	1.94	0.50
30:0:823:U:H3'	42:0:5310:HOH:O	2.12	0.50
30:0:1185:U:H2'	30:0:1186:C:C6	2.46	0.50
30:0:1301:C:O2'	30:0:1331:G:H4'	2.11	0.50
30:0:1309:U:H2'	30:0:1310:U:O4'	2.12	0.50
30:0:1649:G:O2'	30:0:1650:C:H5'	2.11	0.50
3:C:27:ARG:NH2	30:0:657:G:OP1	2.44	0.50
4:D:76:ARG:NE	31:9:44:A:O4'	2.45	0.50
9:I:86:GLU:HB2	9:I:90:ASP:OD2	2.12	0.50
11:K:64:MET:O	11:K:67:GLN:HB2	2.12	0.50
19:S:56:ASN:O	28:2:8:LYS:NZ	2.45	0.50
19:S:77:VAL:C	19:S:78:ALA:CA	2.80	0.50
20:T:20:HIS:O	20:T:23:VAL:HG23	2.11	0.50
23:W:4:LEU:HD23	23:W:54:PHE:HB3	1.94	0.50
29:3:3:MET:O	29:3:90:PHE:HA	2.12	0.50
29:3:22:VAL:CG1	29:3:67:LEU:HD13	2.42	0.50
30:0:303:C:H2'	30:0:304:G:O4'	2.12	0.50
30:0:1659:A:H2'	30:0:1660:G:O4'	2.11	0.50
30:0:1755:A:H2'	30:0:1756:G:O4'	2.11	0.50
30:0:1805:G:O2'	30:0:1806:G:H5'	2.12	0.50
30:0:1980:U:H5'	30:0:2626:C:H1'	1.93	0.50
2:B:7:ARG:HG2	2:B:7:ARG:HH11	1.76	0.50
2:B:197:GLY:HA3	2:B:323:LEU:HA	1.93	0.50
5:E:1:PRO:HG2	5:E:59:MET:SD	2.52	0.50
5:E:40:VAL:HB	42:E:2857:HOH:O	2.11	0.50
6:F:1:PRO:H3	6:F:4:VAL:HG23	1.76	0.50
8:H:41:LYS:O	8:H:87:LYS:HE2	2.11	0.50
22:V:1:THR:C	22:V:3:LEU:N	2.65	0.50
22:V:6:GLN:HB2	42:0:7782:HOH:O	2.11	0.50
30:0:1200:A:H3'	42:0:6592:HOH:O	2.11	0.50
30:0:1590:A:H1'	30:0:1606:A:C2	2.47	0.50
30:0:1992:U:H2'	30:0:1994:A:OP2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:5:ILE:HG22	3:C:6:TYR:N	2.27	0.50
3:C:124:VAL:HA	3:C:230:GLY:O	2.11	0.50
5:E:22:VAL:O	5:E:28:SER:HA	2.11	0.50
11:K:55:VAL:HG12	11:K:56:SER:N	2.27	0.50
12:L:4:LYS:HE2	30:0:645:U:OP2	2.12	0.50
12:L:10:SER:O	12:L:11:ARG:HB3	2.12	0.50
13:M:46:LEU:HD22	13:M:50:ARG:CD	2.42	0.50
14:N:151:ASP:OD1	14:N:166:ALA:HA	2.11	0.50
15:O:43:VAL:CG1	15:O:47:ARG:HD2	2.42	0.50
25:Y:189:ASN:HD22	25:Y:191:ASP:H	1.59	0.50
29:3:40:ARG:HD2	42:3:9047:HOH:O	2.12	0.50
30:0:162:C:H2'	30:0:163:U:H5'	1.94	0.50
30:0:445:U:O2'	30:0:446:G:H5'	2.12	0.50
30:0:1503:U:C2'	30:0:1504:A:H5'	2.42	0.50
30:0:1641:A:H2'	30:0:1642:A:H5'	1.93	0.50
30:0:1778:A:H2'	30:0:1779:A:H5'	1.94	0.50
30:0:1985:U:C5	30:0:1996:U:C2	3.00	0.50
30:0:2836:G:O2'	30:0:2838:A:N7	2.34	0.50
1:A:26:ASP:O	1:A:28:GLU:N	2.45	0.49
1:A:47:HIS:CD2	30:0:1654:U:H2'	2.46	0.49
1:A:94:LEU:HG	1:A:99:ILE:CD1	2.42	0.49
1:A:100:PRO:HG2	1:A:103:VAL:CG2	2.30	0.49
2:B:305:ASP:O	2:B:306:LYS:HB2	2.12	0.49
12:L:89:PHE:CD1	12:L:89:PHE:N	2.80	0.49
17:Q:16:ASN:ND2	17:Q:45:PRO:HB2	2.27	0.49
18:R:44:VAL:O	18:R:48:GLU:HG3	2.12	0.49
21:U:56:ARG:O	21:U:56:ARG:CD	2.60	0.49
23:W:29:VAL:O	23:W:30:ASN:HB2	2.10	0.49
25:Y:184:GLU:OE1	25:Y:204:ARG:NH1	2.45	0.49
29:3:68:LYS:HE2	30:0:2436:U:C5'	2.40	0.49
30:0:101:C:H2'	30:0:102:A:C8	2.46	0.49
30:0:412:C:H2'	30:0:413:G:O4'	2.11	0.49
30:0:875:A:H5'	30:0:876:A:N7	2.27	0.49
30:0:2001:G:O2'	30:0:2002:C:H5'	2.12	0.49
30:0:2114:C:O2'	30:0:2115:U:H5'	2.11	0.49
2:B:1:PRO:HG3	30:0:2591:C:OP1	2.11	0.49
3:C:96:LYS:NZ	30:0:1351:G:OP1	2.45	0.49
3:C:195:VAL:HA	3:C:213:ALA:O	2.12	0.49
5:E:31:ARG:NH1	42:E:5919:HOH:O	2.46	0.49
18:R:9:ASP:OD1	18:R:11:ASP:HB2	2.12	0.49
20:T:53:GLY:HA3	42:0:7613:HOH:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1270:U:H2'	30:0:1271:A:C8	2.46	0.49
30:0:1714:C:O2'	30:0:1715:C:H5'	2.12	0.49
30:0:1773:G:H4'	42:0:4407:HOH:O	2.12	0.49
30:0:1878:G:H1'	42:0:6953:HOH:O	2.11	0.49
30:0:2252:A:H2'	30:0:2253:G:O4'	2.11	0.49
30:0:2314:G:O2'	30:0:2315:C:H5'	2.11	0.49
30:0:2839:C:H2'	30:0:2840:A:H5"	1.95	0.49
31:9:98:C:H2'	31:9:99:U:C6	2.44	0.49
1:A:65:ARG:C	1:A:66:ARG:HG3	2.32	0.49
2:B:221:GLN:HE22	11:K:42:ASN:HD22	1.59	0.49
3:C:202:THR:HG22	30:0:328:U:O4'	2.12	0.49
4:D:54:ALA:HB2	4:D:69:ILE:CD1	2.40	0.49
4:D:57:THR:HG23	4:D:63:ILE:CA	2.32	0.49
6:F:38:LYS:HA	6:F:41:GLU:OE1	2.12	0.49
9:I:87:PRO:HD3	42:0:4130:HOH:O	2.12	0.49
14:N:154:LEU:O	14:N:155:GLU:HB3	2.12	0.49
20:T:1:SER:HB2	30:0:447:A:P	2.53	0.49
26:Z:105:ARG:O	26:Z:106:SER:C	2.50	0.49
42:Z:8722:HOH:O	30:0:1886:A:H5'	2.11	0.49
30:0:283:U:H5"	30:0:284:C:OP2	2.12	0.49
30:0:1165:G:H1'	30:0:1174:A:H1'	1.95	0.49
30:0:1201:C:H2'	30:0:1202:A:H5'	1.94	0.49
4:D:77:ASP:C	4:D:78:GLU:CA	2.81	0.49
4:D:151:ILE:CG2	4:D:155:HIS:HB3	2.43	0.49
11:K:77:ARG:O	11:K:78:LYS:CA	2.60	0.49
12:L:108:VAL:HB	12:L:125:PHE:HD2	1.77	0.49
13:M:133:LEU:HD12	13:M:133:LEU:N	2.26	0.49
14:N:15:GLU:O	14:N:16:ALA:HB3	2.13	0.49
14:N:64:SER:C	14:N:66:LEU:H	2.15	0.49
19:S:40:ALA:O	19:S:44:GLN:HB2	2.12	0.49
20:T:27:LEU:HB2	20:T:32:ARG:CG	2.42	0.49
22:V:12:THR:HG22	22:V:15:GLU:CD	2.31	0.49
42:X:4132:HOH:O	30:0:2895:C:H4'	2.12	0.49
25:Y:212:ARG:HD2	42:Y:8907:HOH:O	2.12	0.49
26:Z:77:GLY:O	26:Z:78:ILE:CA	2.61	0.49
29:3:55:VAL:HB	29:3:56:PRO:HD2	1.94	0.49
31:9:78:G:N2	31:9:102:G:H2'	2.27	0.49
1:A:169:PHE:O	1:A:171:LYS:N	2.43	0.49
2:B:277:GLU:N	2:B:278:PRO:HD2	2.27	0.49
5:E:88:TYR:CE1	5:E:92:PRO:HA	2.47	0.49
14:N:141:ARG:HH12	31:9:35:C:H2'	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:176:ARG:O	14:N:180:LEU:HD13	2.12	0.49
15:O:47:ARG:HH11	15:O:47:ARG:HG3	1.77	0.49
16:P:64:GLU:HG2	42:P:2495:HOH:O	2.13	0.49
22:V:16:ARG:NH1	22:V:65:ASP:O	2.45	0.49
30:0:568:G:C6	30:0:588:G:H1'	2.48	0.49
30:0:695:C:H2'	30:0:696:C:H6	1.77	0.49
30:0:764:C:H2'	30:0:765:G:O4'	2.13	0.49
30:0:772:G:H2'	30:0:773:A:O4'	2.12	0.49
30:0:945:U:H2'	30:0:946:C:H6	1.78	0.49
30:0:2296:C:H4'	30:0:2362:A:H2	1.78	0.49
1:A:165:THR:HG22	42:A:9096:HOH:O	2.11	0.49
2:B:161:VAL:HG12	2:B:162:MET:N	2.28	0.49
9:I:96:SER:HB3	9:I:99:GLN:NE2	2.27	0.49
13:M:57:LYS:HZ3	13:M:144:ASP:HB2	1.78	0.49
13:M:58:GLN:HG3	42:M:8907:HOH:O	2.12	0.49
15:O:26:TRP:HA	15:O:26:TRP:CE3	2.48	0.49
15:O:38:ARG:NH1	42:O:7674:HOH:O	2.45	0.49
15:O:77:ALA:C	15:O:78:ALA:CA	2.81	0.49
16:P:6:GLN:HG2	16:P:31:ILE:HG22	1.93	0.49
17:Q:11:ARG:NH1	30:0:2363:G:O3'	2.45	0.49
20:T:26:THR:CG2	20:T:97:ARG:HG3	2.42	0.49
20:T:77:VAL:C	20:T:78:THR:CA	2.81	0.49
23:W:62:LEU:HD21	23:W:100:LEU:HD12	1.94	0.49
25:Y:132:ASP:OD2	30:0:621:C:H5'	2.13	0.49
25:Y:154:ARG:NH1	25:Y:155:ARG:HG3	2.28	0.49
30:0:98:A:C2'	30:0:99:A:H5'	2.42	0.49
30:0:285:A:H2'	30:0:286:U:O4'	2.12	0.49
30:0:300:U:O2'	30:0:301:C:H5'	2.12	0.49
30:0:816:G:H5'	30:0:1598:A:H4'	1.95	0.49
30:0:2289:G:H21	30:0:2291:A:H2	1.57	0.49
30:0:2498:C:O2'	30:0:2499:U:H5'	2.12	0.49
31:9:18:U:H2'	31:9:19:G:C8	2.44	0.49
1:A:105:VAL:CG1	1:A:154:ALA:HB1	2.43	0.49
2:B:29:TRP:CZ3	2:B:164:THR:HG23	2.48	0.49
2:B:279:THR:HG23	2:B:290:VAL:H	1.77	0.49
9:I:118:ASN:HA	9:I:121:LYS:HD2	1.95	0.49
11:K:87:ARG:HD2	42:K:4066:HOH:O	2.12	0.49
13:M:40:ILE:HD11	13:M:62:VAL:HG12	1.94	0.49
18:R:46:TYR:O	18:R:50:VAL:HG23	2.13	0.49
19:S:5:ILE:HD12	19:S:44:GLN:HG3	1.93	0.49
24:X:25:ARG:HD2	42:X:5356:HOH:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:16:GLU:HB2	42:0:6515:HOH:O	2.12	0.49
30:0:98:A:H2'	30:0:99:A:H5'	1.95	0.49
30:0:1230:A:H8	30:0:1230:A:OP1	1.95	0.49
30:0:1314:U:H5"	30:0:1316:G:O4'	2.12	0.49
30:0:2566:A:H2	30:0:2695:C:O2	1.95	0.49
30:0:2583:A:H3'	42:0:5461:HOH:O	2.13	0.49
30:0:2909:G:O2'	30:0:2910:A:H5'	2.13	0.49
31:9:29:C:H2'	31:9:30:C:C5'	2.38	0.49
4:D:80:ALA:O	4:D:83:PHE:HB3	2.13	0.49
10:J:18:ILE:HD13	30:0:1244:U:OP1	2.12	0.49
10:J:67:ASN:OD1	30:0:2082:G:H1'	2.12	0.49
11:K:9:THR:O	11:K:10:GLN:C	2.51	0.49
13:M:144:ASP:O	13:M:148:SER:HB3	2.12	0.49
15:O:26:TRP:HA	15:O:26:TRP:HE3	1.78	0.49
19:S:56:ASN:HD22	30:0:1676:G:P	2.34	0.49
26:Z:54:GLU:HA	26:Z:57:MET:HB3	1.93	0.49
30:0:565:A:OP2	30:0:592:G:N1	2.42	0.49
30:0:669:G:O2'	30:0:670:G:H5'	2.13	0.49
30:0:1367:A:H2'	30:0:1368:U:O4'	2.12	0.49
30:0:2426:G:H5"	30:0:2427:C:O4'	2.11	0.49
30:0:2718:C:H6	30:0:2718:C:H5'	1.78	0.49
2:B:41:PHE:CZ	2:B:79:MET:HG3	2.48	0.49
2:B:52:VAL:C	2:B:53:LEU:HD12	2.33	0.49
3:C:131:PHE:CD2	3:C:232:LEU:HD22	2.47	0.49
3:C:188:ARG:NH2	42:C:8523:HOH:O	2.44	0.49
14:N:140:GLN:O	14:N:143:ARG:HB2	2.13	0.49
23:W:34:LEU:HD13	23:W:100:LEU:HD13	1.94	0.49
23:W:129:LYS:HE2	30:0:1098:A:O3'	2.12	0.49
24:X:43:VAL:HG12	24:X:44:ASP:N	2.25	0.49
24:X:63:ARG:HG2	24:X:63:ARG:O	2.13	0.49
25:Y:107:PRO:HD3	25:Y:182:PHE:CE1	2.48	0.49
28:2:20:ARG:HG3	28:2:21:VAL:N	2.28	0.49
29:3:51:LYS:HB2	42:0:5348:HOH:O	2.12	0.49
30:0:222:A:H2'	30:0:223:G:O4'	2.12	0.49
30:0:658:C:O2'	30:0:662:U:OP1	2.25	0.49
30:0:690:G:H1'	30:0:731:U:H1'	1.95	0.49
30:0:737:A:H2'	30:0:738:G:O4'	2.12	0.49
30:0:1393:A:H2'	30:0:1394:C:C6	2.48	0.49
30:0:1666:C:C2'	30:0:1667:A:C5'	2.91	0.49
1:A:204:GLY:O	1:A:205:GLY:C	2.51	0.49
1:A:211:LYS:HB2	42:A:9098:HOH:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A:9044:HOH:O	30:0:871:G:H4'	2.12	0.49
2:B:128:ILE:O	2:B:131:ALA:HB3	2.12	0.49
3:C:87:ARG:NH2	30:0:894:A:C2	2.80	0.49
12:L:4:LYS:HD2	42:0:5885:HOH:O	2.13	0.49
17:Q:77:ASP:C	17:Q:78:GLY:CA	2.82	0.49
20:T:101:LEU:HD22	20:T:108:ARG:NH2	2.27	0.49
23:W:42:ARG:HA	23:W:45:VAL:HG22	1.95	0.49
28:2:43:ARG:HH21	30:0:1685:A:H4'	1.78	0.49
30:0:17:G:H2'	30:0:18:C:C6	2.48	0.49
30:0:71:G:H8	42:0:4782:HOH:O	1.96	0.49
30:0:883:U:C5	30:0:888:U:H5'	2.48	0.49
30:0:1774:G:H1'	42:0:5405:HOH:O	2.13	0.49
30:0:2642:G:H2'	30:0:2643:G:O4'	2.13	0.49
4:D:52:THR:CG2	30:0:2346:C:H4'	2.43	0.48
5:E:137:ASP:O	5:E:141:VAL:HG23	2.13	0.48
6:F:50:VAL:CG1	6:F:60:VAL:HG11	2.43	0.48
6:F:100:ASP:O	6:F:101:ALA:O	2.31	0.48
10:J:52:GLN:NE2	30:0:1119:G:C2'	2.63	0.48
14:N:155:GLU:O	14:N:156:GLU:HG3	2.13	0.48
20:T:44:ALA:HA	20:T:62:VAL:HG12	1.95	0.48
21:U:33:SER:O	21:U:37:GLU:HG3	2.13	0.48
23:W:117:ARG:NH1	23:W:117:ARG:HB2	2.28	0.48
30:0:1139:U:H2'	30:0:1140:C:C6	2.48	0.48
30:0:1175:G:H1'	30:0:1193:A:H2'	1.94	0.48
30:0:2073:G:H2'	42:0:4699:HOH:O	2.13	0.48
30:0:2387:U:O2	30:0:2402:A:C2	2.66	0.48
30:0:2473:U:O3'	30:0:2474:A:H3'	2.13	0.48
2:B:280:VAL:HG13	2:B:333:GLU:O	2.14	0.48
2:B:285:VAL:O	2:B:286:ASN:HB2	2.13	0.48
4:D:59:GLY:O	4:D:61:PHE:N	2.46	0.48
4:D:129:ASP:OD1	30:0:2338:G:H2'	2.13	0.48
7:G:14:GLU:HB3	42:G:4173:HOH:O	2.13	0.48
12:L:6:ARG:NH2	42:L:9012:HOH:O	2.45	0.48
14:N:37:ARG:HG3	14:N:37:ARG:HH11	1.78	0.48
16:P:41:ARG:O	16:P:44:VAL:HB	2.13	0.48
25:Y:99:ALA:HB2	25:Y:233:TYR:CE2	2.48	0.48
26:Z:54:GLU:HG2	26:Z:57:MET:CE	2.43	0.48
30:0:1121:G:H4'	42:0:6381:HOH:O	2.13	0.48
30:0:2312:G:C2'	30:0:2313:C:H5'	2.43	0.48
30:0:2688:U:H2'	30:0:2689:A:H8	1.79	0.48
31:9:28:U:H2'	31:9:29:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:316:ARG:HB2	30:0:2768:A:C8	2.48	0.48
6:F:111:ILE:O	6:F:115:VAL:HG23	2.12	0.48
8:H:23:ILE:HG22	8:H:123:ILE:CD1	2.43	0.48
42:J:2219:HOH:O	30:0:1103:C:H5"	2.13	0.48
14:N:143:ARG:HA	14:N:172:PHE:CD2	2.49	0.48
15:O:102:ILE:HB	42:O:7481:HOH:O	2.13	0.48
27:1:50:TRP:O	30:0:890:C:O2'	2.28	0.48
28:2:28:LYS:O	30:0:87:C:H2'	2.13	0.48
30:0:1666:C:C2'	30:0:1667:A:H5"	2.42	0.48
1:A:179:MET:C	1:A:181:ALA:H	2.17	0.48
2:B:45:LYS:HG2	2:B:305:ASP:HA	1.94	0.48
42:B:9059:HOH:O	30:0:2819:C:H5'	2.13	0.48
3:C:37:ALA:O	3:C:38:ALA:C	2.51	0.48
8:H:122:LYS:O	8:H:124:VAL:HG13	2.13	0.48
14:N:100:ALA:HB3	14:N:129:ILE:HG12	1.95	0.48
16:P:77:ALA:C	16:P:78:GLY:CA	2.81	0.48
21:U:52:THR:HG22	21:U:54:THR:HB	1.95	0.48
28:2:42:TRP:CZ3	28:2:43:ARG:HB2	2.48	0.48
30:0:380:A:O4'	30:0:382:U:H1'	2.13	0.48
30:0:441:A:H1'	30:0:442:A:N7	2.28	0.48
30:0:1505:U:H4'	42:0:6027:HOH:O	2.12	0.48
30:0:2607:U:H4'	42:0:3343:HOH:O	2.12	0.48
30:0:2780:C:H2'	30:0:2781:U:C6	2.49	0.48
1:A:4:ILE:HG22	1:A:198:ASP:O	2.14	0.48
4:D:23:VAL:HG21	4:D:45:THR:CG2	2.43	0.48
6:F:49:PHE:HE1	6:F:98:VAL:HG23	1.77	0.48
8:H:24:THR:O	8:H:123:ILE:HD12	2.13	0.48
9:I:81:GLU:OE1	9:I:81:GLU:N	2.46	0.48
11:K:98:VAL:CG1	11:K:99:ASP:N	2.76	0.48
25:Y:108:ASP:N	25:Y:108:ASP:OD1	2.47	0.48
25:Y:193:LEU:HD13	25:Y:221:ALA:HB2	1.95	0.48
28:2:5:LYS:HD2	30:0:1675:C:H5"	1.95	0.48
30:0:1405:U:H2'	42:0:7653:HOH:O	2.14	0.48
30:0:1475:G:N3	30:0:1866:A:H2	2.11	0.48
4:D:23:VAL:HG23	4:D:23:VAL:O	2.13	0.48
4:D:45:THR:HB	4:D:75:LEU:HD11	1.96	0.48
4:D:50:VAL:O	4:D:71:ALA:HA	2.13	0.48
10:J:61:VAL:HA	42:0:3397:HOH:O	2.13	0.48
12:L:150:GLN:HB3	42:L:9035:HOH:O	2.14	0.48
17:Q:53:HIS:CD2	30:0:2389:U:H4'	2.48	0.48
20:T:21:LYS:HA	20:T:24:ARG:CG	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:27:LEU:O	22:V:30:ALA:HB3	2.13	0.48
23:W:21:LEU:HB3	23:W:26:ILE:HG12	1.96	0.48
29:3:64:LYS:HA	29:3:84:ARG:HA	1.94	0.48
30:0:368:C:C2'	30:0:369:G:H5'	2.44	0.48
30:0:694:A:H2'	30:0:695:C:H5'	1.95	0.48
30:0:887:G:H2'	30:0:888:U:C6	2.48	0.48
30:0:1409:G:H5'	42:0:4602:HOH:O	2.13	0.48
30:0:1876:C:H4'	30:0:1877:G:OP2	2.14	0.48
30:0:2755:G:H1'	42:0:5540:HOH:O	2.12	0.48
2:B:16:ARG:NH1	42:B:9091:HOH:O	2.45	0.48
5:E:81:GLU:OE2	5:E:132:THR:OG1	2.31	0.48
5:E:162:PHE:N	5:E:162:PHE:CD1	2.81	0.48
12:L:97:VAL:HB	12:L:100:ALA:HB2	1.96	0.48
13:M:184:ARG:HG3	13:M:185:PRO:HA	1.96	0.48
14:N:25:ARG:HG2	30:0:2416:G:O2'	2.13	0.48
18:R:100:ASP:C	18:R:102:GLN:H	2.16	0.48
20:T:20:HIS:HB3	20:T:41:ARG:HD2	1.95	0.48
25:Y:182:PHE:HD2	25:Y:200:THR:O	1.95	0.48
30:0:333:G:O2'	30:0:334:G:H5'	2.13	0.48
30:0:1394:C:H3'	30:0:1433:G:H22	1.78	0.48
30:0:2351:C:H2'	30:0:2352:G:O4'	2.14	0.48
4:D:51:ARG:HH11	4:D:68:PRO:HB3	1.78	0.48
12:L:77:ALA:C	12:L:79:ASP:H	2.17	0.48
13:M:46:LEU:HD22	13:M:50:ARG:HD2	1.96	0.48
14:N:12:ARG:HD3	14:N:18:THR:OG1	2.13	0.48
22:V:42:ASN:O	22:V:44:GLY:N	2.47	0.48
28:2:46:ASP:OD1	28:2:47:THR:O	2.32	0.48
30:0:111:C:C2'	30:0:112:G:H5'	2.44	0.48
30:0:746:A:H4'	30:0:747:G:H5'	1.95	0.48
30:0:1189:A:H1'	30:0:1209:C:C1'	2.43	0.48
30:0:1353:C:H5"	42:0:7423:HOH:O	2.12	0.48
1:A:57:ALA:HB1	1:A:65:ARG:HE	1.78	0.48
2:B:294:TYR:CD1	2:B:294:TYR:C	2.87	0.48
9:I:127:CYS:O	9:I:129:SER:N	2.47	0.48
13:M:5:TYR:CE2	13:M:50:ARG:HD3	2.49	0.48
13:M:95:LYS:CE	30:0:157:G:H4'	2.44	0.48
15:O:96:VAL:CG1	15:O:100:GLN:HB2	2.44	0.48
17:Q:77:ASP:O	17:Q:78:GLY:C	2.51	0.48
17:Q:86:VAL:HG11	17:Q:91:LEU:HD21	1.94	0.48
20:T:81:LYS:HE3	30:0:486:A:O5'	2.13	0.48
21:U:37:GLU:HB3	42:U:408:HOH:O	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:128:VAL:O	23:W:138:LEU:HD11	2.14	0.48
25:Y:117:LEU:CD1	25:Y:174:VAL:HG11	2.40	0.48
26:Z:51:ALA:HA	42:Z:8712:HOH:O	2.13	0.48
28:2:5:LYS:O	28:2:9:LYS:HG3	2.14	0.48
30:0:349:U:O2'	30:0:350:G:H5'	2.14	0.48
30:0:419:A:H1'	30:0:1921:A:C2	2.49	0.48
30:0:670:G:H2'	30:0:671:A:C8	2.48	0.48
30:0:696:C:O2'	30:0:731:U:OP1	2.30	0.48
30:0:1490:G:H4'	30:0:1533:A:OP1	2.14	0.48
30:0:1819:G:H2'	30:0:1820:G:H5'	1.96	0.48
2:B:264:GLU:HG3	42:B:9010:HOH:O	2.13	0.48
3:C:107:ARG:NH2	30:0:678:G:OP2	2.46	0.48
11:K:49:LEU:HD22	11:K:80:ILE:HD13	1.96	0.48
11:K:66:ARG:NH2	30:0:1994:A:P	2.87	0.48
13:M:150:ILE:HA	13:M:155:GLN:HG3	1.95	0.48
14:N:151:ASP:O	14:N:154:LEU:HD13	2.13	0.48
16:P:104:LYS:HE2	16:P:138:GLU:HG2	1.95	0.48
20:T:9:LYS:CE	20:T:13:ARG:NH1	2.76	0.48
21:U:11:THR:CG2	21:U:53:ASP:HB2	2.42	0.48
22:V:50:ARG:HH12	30:0:56:G:C5'	2.26	0.48
26:Z:73:ARG:HB2	26:Z:79:TRP:CZ3	2.49	0.48
30:0:1457:U:O2'	30:0:1458:A:H5'	2.13	0.48
30:0:1819:G:C2'	30:0:1820:G:H5'	2.43	0.48
30:0:2045:G:H5"	42:0:9032:HOH:O	2.14	0.48
30:0:2253:G:H2'	30:0:2254:G:H8	1.78	0.48
31:9:78:G:N3	31:9:78:G:N2	2.62	0.48
2:B:123:ALA:O	2:B:126:GLU:HB3	2.14	0.47
9:I:87:PRO:HG3	30:0:1181:A:H1'	1.96	0.47
10:J:60:ARG:NH2	30:0:1242:A:OP2	2.37	0.47
12:L:53:ARG:NH2	12:L:57:VAL:CG1	2.76	0.47
14:N:82:TYR:HE1	14:N:120:GLU:HG2	1.77	0.47
15:O:26:TRP:N	42:O:3062:HOH:O	2.47	0.47
23:W:21:LEU:CD2	23:W:48:VAL:HG11	2.20	0.47
23:W:73:LEU:HD12	23:W:73:LEU:HA	1.72	0.47
30:0:559:U:H5'	30:0:559:U:C6	2.48	0.47
30:0:635:A:H2'	30:0:636:G:H5"	1.96	0.47
30:0:1057:A:H1'	30:0:2492:U:O2'	2.14	0.47
30:0:1346:U:H2'	30:0:1347:U:H6	1.79	0.47
2:B:132:HIS:CE1	2:B:171:VAL:HG21	2.50	0.47
2:B:314:ALA:CB	2:B:317:PRO:HG3	2.44	0.47
5:E:103:VAL:HG12	5:E:104:ILE:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:52:LEU:HD13	8:H:153:PHE:HB3	1.96	0.47
11:K:8:VAL:HG12	11:K:9:THR:N	2.29	0.47
18:R:98:ASN:N	18:R:98:ASN:ND2	2.62	0.47
18:R:136:TRP:CE2	30:0:2053:G:H4'	2.50	0.47
21:U:11:THR:HG22	21:U:53:ASP:CG	2.34	0.47
23:W:43:GLY:HA3	30:0:945:U:O2'	2.15	0.47
23:W:117:ARG:HB3	30:0:1263:C:OP1	2.14	0.47
26:Z:43:GLY:O	26:Z:47:ARG:HG2	2.14	0.47
26:Z:54:GLU:HA	26:Z:57:MET:HE2	1.95	0.47
27:1:37:CYS:SG	27:1:39:PHE:HB2	2.54	0.47
30:0:100:C:H2'	30:0:101:C:H6	1.80	0.47
30:0:364:U:H2'	30:0:365:G:O4'	2.14	0.47
30:0:567:U:O5'	30:0:567:U:H6	1.96	0.47
30:0:1033:C:H2'	30:0:1034:G:H5'	1.96	0.47
30:0:1159:G:H1	30:0:1208:C:H42	1.62	0.47
30:0:1167:G:H2'	30:0:1168:C:O4'	2.14	0.47
30:0:1248:A:H2'	30:0:1249:U:C6	2.49	0.47
30:0:1278:A:H2'	30:0:1280:A:C8	2.49	0.47
30:0:1790:C:H2'	30:0:1791:U:C6	2.50	0.47
30:0:1948:G:H2'	30:0:1949:G:C8	2.49	0.47
30:0:1948:G:H2'	30:0:1949:G:H8	1.79	0.47
1:A:125:ASN:HB3	1:A:158:VAL:HG12	1.96	0.47
2:B:154:VAL:HG12	2:B:156:LYS:HG2	1.96	0.47
8:H:32:ALA:C	8:H:33:GLN:HG3	2.34	0.47
30:0:425:U:O2'	30:0:426:G:H5'	2.14	0.47
30:0:1067:A:H3'	42:0:5158:HOH:O	2.14	0.47
30:0:1383:U:O2'	30:0:1384:C:H5'	2.14	0.47
1:A:80:LEU:HD22	1:A:91:GLY:O	2.13	0.47
3:C:53:GLY:O	3:C:79:ARG:HA	2.14	0.47
5:E:60:SER:OG	30:0:2784:A:H1'	2.15	0.47
8:H:77:ILE:C	8:H:78:LYS:CA	2.83	0.47
8:H:143:VAL:HG21	8:H:173:GLU:HG2	1.96	0.47
9:I:129:SER:HB3	30:0:1192:A:N6	2.29	0.47
11:K:115:ARG:HG3	11:K:116:GLU:N	2.29	0.47
18:R:82:GLU:CG	18:R:83:LYS:N	2.77	0.47
27:1:4:GLY:O	27:1:8:GLN:HG2	2.14	0.47
27:1:28:HIS:HE1	30:0:776:A:OP1	1.96	0.47
30:0:514:G:OP1	30:0:514:G:H3'	2.15	0.47
30:0:816:G:C6	30:0:817:G:N1	2.82	0.47
30:0:876:A:H2'	30:0:876:A:N3	2.29	0.47
30:0:1079:A:N3	30:0:2078:U:H1'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1816:C:H2'	30:0:1817:U:O4'	2.15	0.47
30:0:1819:G:H2'	30:0:1820:G:H4'	1.96	0.47
30:0:2578:G:H5'	30:0:2578:G:C8	2.40	0.47
1:A:58:VAL:O	1:A:65:ARG:HA	2.15	0.47
2:B:17:LYS:O	2:B:260:HIS:HD2	1.97	0.47
2:B:62:ARG:HA	2:B:65:MET:HE3	1.95	0.47
4:D:21:VAL:CG2	4:D:80:ALA:HB1	2.45	0.47
6:F:56:PRO:HG3	13:M:44:THR:HA	1.95	0.47
6:F:117:GLU:C	6:F:119:ARG:H	2.17	0.47
7:G:65:THR:HG23	42:0:6310:HOH:O	2.15	0.47
8:H:96:GLN:HE21	8:H:129:ARG:HH21	1.62	0.47
9:I:118:ASN:HA	9:I:121:LYS:CD	2.44	0.47
10:J:74:ARG:NH1	10:J:76:ASP:HB2	2.29	0.47
42:N:8812:HOH:O	31:9:36:C:H4'	2.13	0.47
18:R:106:GLY:O	18:R:109:MET:HB2	2.14	0.47
24:X:72:VAL:HG23	24:X:86:GLU:O	2.15	0.47
30:0:78:G:N1	30:0:78:G:N7	2.62	0.47
30:0:323:C:O2'	30:0:324:G:H5'	2.14	0.47
30:0:344:C:H2'	30:0:345:G:O4'	2.13	0.47
30:0:1051:C:H2'	30:0:1052:G:O4'	2.15	0.47
30:0:1259:A:N1	30:0:1261:A:H1'	2.29	0.47
30:0:1736:A:H5'	42:0:5472:HOH:O	2.14	0.47
30:0:1973:A:H5'	30:0:1973:A:C8	2.42	0.47
30:0:2520:G:O2'	30:0:2521:A:H5'	2.14	0.47
1:A:212:PRO:HB2	42:A:9041:HOH:O	2.14	0.47
2:B:51:VAL:CG2	2:B:330:VAL:HG22	2.43	0.47
2:B:248:ARG:NH2	42:B:8995:HOH:O	2.47	0.47
6:F:21:GLU:O	6:F:24:ARG:CG	2.63	0.47
13:M:137:ASN:ND2	30:0:145:A:H4'	2.29	0.47
23:W:110:GLN:HA	23:W:110:GLN:HE21	1.78	0.47
23:W:142:ASP:O	23:W:143:THR:C	2.53	0.47
27:1:13:THR:HG22	27:1:14:THR:N	2.30	0.47
30:0:264:G:H1'	30:0:265:U:C5	2.49	0.47
30:0:270:U:H5"	42:0:5432:HOH:O	2.14	0.47
30:0:544:G:H2'	30:0:545:G:H5"	1.97	0.47
30:0:590:A:H2'	30:0:591:A:H5'	1.97	0.47
30:0:695:C:H2'	30:0:696:C:C6	2.50	0.47
30:0:1180:U:H2'	30:0:1181:A:C8	2.50	0.47
30:0:1976:G:O2'	30:0:1977:U:C5'	2.63	0.47
1:A:83:GLY:O	1:A:94:LEU:HB3	2.14	0.47
2:B:214:PRO:C	2:B:220:VAL:HG22	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:34:ALA:CB	3:C:220:THR:HG21	2.44	0.47
8:H:39:LYS:HA	8:H:87:LYS:HZ1	1.78	0.47
8:H:85:ASP:OD2	8:H:142:ASN:ND2	2.37	0.47
10:J:39:VAL:HG13	10:J:106:GLY:O	2.14	0.47
13:M:57:LYS:NZ	13:M:144:ASP:HB2	2.30	0.47
13:M:149:TRP:C	13:M:151:CYS:H	2.18	0.47
14:N:24:LEU:HG	14:N:28:LYS:HE3	1.97	0.47
14:N:152:GLU:C	14:N:154:LEU:N	2.67	0.47
15:O:25:VAL:HG12	30:0:709:G:O2'	2.14	0.47
17:Q:27:GLN:NE2	31:9:8:G:H4'	2.30	0.47
17:Q:47:VAL:HA	17:Q:48:PRO:HD3	1.72	0.47
18:R:98:ASN:ND2	18:R:98:ASN:H	2.12	0.47
21:U:52:THR:HG21	21:U:54:THR:HB	1.96	0.47
30:0:352:A:H2'	30:0:353:G:C8	2.50	0.47
30:0:636:G:H5'	30:0:2059:U:OP2	2.14	0.47
30:0:970:U:O5'	30:0:970:U:H6	1.98	0.47
30:0:1309:U:O2'	30:0:1310:U:H5'	2.13	0.47
30:0:1333:U:H2'	30:0:1334:C:H6	1.79	0.47
30:0:1730:G:H5'	30:0:1731:C:H5	1.75	0.47
30:0:1972:U:H2'	30:0:1973:A:C5'	2.44	0.47
31:9:78:G:N1	31:9:78:G:N7	2.62	0.47
31:9:100:G:H3'	42:9:9133:HOH:O	2.14	0.47
1:A:26:ASP:O	1:A:26:ASP:CG	2.52	0.47
1:A:231:LYS:HG3	30:0:1853:C:OP1	2.15	0.47
4:D:166:ILE:O	4:D:169:THR:N	2.48	0.47
6:F:79:GLN:HB2	6:F:82:ASP:OD2	2.14	0.47
11:K:28:GLU:HB3	11:K:59:LYS:HB2	1.95	0.47
13:M:69:LYS:HG2	13:M:127:LYS:HE3	1.95	0.47
14:N:49:THR:HB	14:N:58:LEU:HD13	1.97	0.47
30:0:187:A:H3'	30:0:188:C:C6	2.50	0.47
30:0:366:U:H2'	30:0:367:G:O4'	2.15	0.47
30:0:1158:G:O2'	30:0:1159:G:H5'	2.15	0.47
30:0:1309:U:C2'	30:0:1310:U:H5'	2.45	0.47
30:0:1519:U:H2'	30:0:1520:G:C8	2.50	0.47
30:0:1809:G:H2'	30:0:1811:A:OP2	2.15	0.47
30:0:2517:A:C2'	30:0:2518:C:H5'	2.44	0.47
1:A:6:GLY:HA3	42:0:5481:HOH:O	2.15	0.47
4:D:60:GLU:O	4:D:62:ASP:HB2	2.14	0.47
11:K:13:GLU:OE2	11:K:44:HIS:HB2	2.14	0.47
14:N:86:LEU:HA	14:N:121:GLY:O	2.14	0.47
15:O:35:LYS:O	15:O:40:HIS:NE2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:69:ARG:HA	16:P:73:HIS:O	2.14	0.47
23:W:4:LEU:HD22	23:W:52:VAL:CG1	2.45	0.47
30:0:185:G:C4'	30:0:186:A:H4'	2.45	0.47
30:0:1203:G:O2'	30:0:1204:C:H5'	2.15	0.47
30:0:1682:A:H2'	42:0:3704:HOH:O	2.15	0.47
30:0:1745:G:H22	30:0:2033:G:H5'	1.80	0.47
30:0:2515:C:H2'	30:0:2516:G:O4'	2.14	0.47
2:B:36:PRO:CG	2:B:169:GLY:H	2.16	0.47
2:B:147:VAL:O	2:B:147:VAL:HG12	2.15	0.47
3:C:173:LYS:HB3	3:C:187:ARG:HG3	1.96	0.47
4:D:40:ILE:HG13	4:D:41:LEU:H	1.79	0.47
13:M:170:ASN:HB2	42:M:8837:HOH:O	2.15	0.47
14:N:164:ASP:OD2	14:N:167:ASP:HA	2.15	0.47
19:S:44:GLN:HB3	19:S:45:TYR:CD1	2.50	0.47
23:W:106:THR:OG1	23:W:109:GLU:HG3	2.14	0.47
24:X:7:GLU:HG3	24:X:74:ALA:O	2.15	0.47
29:3:77:ALA:O	29:3:78:HIS:CA	2.63	0.47
30:0:308:U:H5'	30:0:309:C:OP1	2.14	0.47
30:0:400:C:H2'	30:0:401:C:C6	2.51	0.47
30:0:1347:U:H2'	30:0:1348:A:C8	2.50	0.47
30:0:1503:U:H2'	30:0:1504:A:H5'	1.96	0.47
30:0:1665:G:H2'	30:0:1666:C:O4'	2.14	0.47
30:0:2499:U:O2'	30:0:2500:C:H5'	2.14	0.47
30:0:2831:C:C2'	30:0:2832:C:H5'	2.45	0.47
3:C:238:SER:O	3:C:241:ALA:HB3	2.14	0.46
8:H:12:ILE:HD12	8:H:57:THR:CG2	2.45	0.46
13:M:68:ARG:HG2	13:M:73:ARG:CZ	2.45	0.46
14:N:108:SER:HA	14:N:109:PRO:HD3	1.79	0.46
15:O:112:ARG:HD2	42:0:3570:HOH:O	2.15	0.46
25:Y:100:ARG:HD2	25:Y:218:GLU:OE1	2.15	0.46
30:0:512:G:H1'	42:0:7627:HOH:O	2.15	0.46
30:0:583:C:H2'	30:0:584:U:C6	2.50	0.46
30:0:615:G:H2'	30:0:616:U:C6	2.50	0.46
30:0:1909:A:H2'	30:0:1910:A:C8	2.50	0.46
30:0:2554:U:H1'	42:0:6968:HOH:O	2.15	0.46
30:0:2775:A:C6	30:0:2799:A:C8	3.03	0.46
31:9:11:A:O2'	31:9:12:C:H3'	2.15	0.46
3:C:48:SER:OG	3:C:91:PRO:HB2	2.16	0.46
3:C:67:GLN:O	30:0:1359:U:C4	2.68	0.46
6:F:15:ASP:O	6:F:18:GLU:HB2	2.16	0.46
10:J:36:VAL:CG1	10:J:37:ALA:N	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:24:ALA:CB	12:L:30:ARG:HG3	2.46	0.46
12:L:134:GLU:HA	12:L:138:GLY:O	2.15	0.46
12:L:136:ALA:HB3	42:L:9038:HOH:O	2.15	0.46
15:O:25:VAL:CG1	30:0:710:G:H5'	2.45	0.46
25:Y:204:ARG:HH22	30:0:553:G:P	2.37	0.46
30:0:177:A:H2'	30:0:178:U:O4'	2.16	0.46
30:0:652:G:H2'	30:0:653:U:O4'	2.16	0.46
30:0:824:G:N2	42:0:6935:HOH:O	2.48	0.46
30:0:1077:G:H2'	30:0:1080:C:H42	1.79	0.46
30:0:1131:G:C6	30:0:1230:A:C4	3.03	0.46
30:0:1361:C:H2'	30:0:1362:U:H6	1.80	0.46
30:0:2102:G:H5"	30:0:2538:A:C2	2.51	0.46
30:0:2511:A:H2'	30:0:2512:U:O4'	2.15	0.46
30:0:2568:A:H2'	30:0:2569:A:O4'	2.14	0.46
2:B:148:PRO:HG2	2:B:158:LYS:O	2.15	0.46
2:B:304:PRO:HD2	2:B:307:ARG:HE	1.80	0.46
3:C:51:TYR:HA	3:C:54:LEU:HD12	1.97	0.46
4:D:167:GLU:C	4:D:169:THR:H	2.19	0.46
11:K:21:ALA:HB1	11:K:110:LYS:O	2.14	0.46
16:P:91:LYS:NZ	30:0:816:G:OP1	2.39	0.46
17:Q:67:GLN:NE2	30:0:2403:C:O2	2.48	0.46
29:3:42:ARG:HH11	29:3:42:ARG:HG3	1.79	0.46
30:0:107:U:C2'	30:0:108:U:H5'	2.45	0.46
30:0:920:C:H2'	30:0:2109:U:C2	2.51	0.46
30:0:1149:U:C5	30:0:1215:A:C5	3.03	0.46
30:0:1477:C:H5'	30:0:1868:G:H5'	1.97	0.46
30:0:1931:A:C2'	30:0:1932:G:H5'	2.44	0.46
30:0:2651:C:H2'	30:0:2652:U:O4'	2.15	0.46
1:A:101:GLU:OE2	1:A:131:HIS:HB2	2.14	0.46
1:A:109:GLU:HG2	1:A:114:ASP:OD1	2.15	0.46
2:B:248:ARG:NH2	30:0:2549:C:H1'	2.30	0.46
2:B:251:VAL:HG23	2:B:253:GLN:HG3	1.97	0.46
6:F:107:ASP:O	6:F:111:ILE:HG13	2.15	0.46
8:H:62:HIS:HA	8:H:65:LEU:HD23	1.97	0.46
8:H:87:LYS:HB2	8:H:87:LYS:HZ2	1.81	0.46
8:H:149:VAL:HG22	42:H:9034:HOH:O	2.13	0.46
11:K:62:PRO:HA	11:K:65:ARG:NH2	2.31	0.46
26:Z:43:GLY:HA2	30:0:1771:U:O2	2.16	0.46
29:3:36:ILE:CG2	29:3:37:ASP:N	2.79	0.46
30:0:292:G:H1'	30:0:360:A:N6	2.29	0.46
30:0:806:A:H2'	30:0:807:A:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2296:C:H4'	30:0:2362:A:C2	2.51	0.46
31:9:3:A:H2'	42:9:9043:HOH:O	2.15	0.46
1:A:42:VAL:O	1:A:76:VAL:HG13	2.14	0.46
3:C:90:HIS:HB2	42:C:8544:HOH:O	2.14	0.46
3:C:176:ALA:HB2	30:0:1343:C:C5	2.50	0.46
4:D:18:ILE:HG12	4:D:134:LEU:CD2	2.45	0.46
5:E:139:GLU:OE2	30:0:2781:U:H1'	2.15	0.46
13:M:52:GLN:HG2	13:M:116:ASN:CG	2.36	0.46
14:N:29:SER:HB3	30:0:2415:A:O2'	2.16	0.46
16:P:88:GLN:HE22	30:0:1799:G:H21	1.63	0.46
18:R:135:ALA:O	30:0:2054:A:H4'	2.16	0.46
23:W:10:GLU:O	23:W:13:MET:HB3	2.16	0.46
24:X:66:THR:HG23	24:X:67:PRO:HD2	1.97	0.46
30:0:1410:G:H3'	42:0:6433:HOH:O	2.15	0.46
30:0:2453:G:H5'	42:0:5549:HOH:O	2.15	0.46
31:9:39:U:C2'	31:9:40:C:OP1	2.64	0.46
1:A:27:LEU:HD11	1:A:51:ARG:HE	1.79	0.46
1:A:75:GLY:HA2	26:Z:88:PHE:HA	1.98	0.46
2:B:312:ARG:HD3	2:B:315:VAL:HG13	1.97	0.46
3:C:178:GLN:O	3:C:179:GLY:C	2.54	0.46
3:C:241:ALA:O	3:C:244:ALA:HB3	2.14	0.46
4:D:39:ASP:HB2	42:D:5583:HOH:O	2.15	0.46
5:E:7:ILE:HD11	5:E:11:VAL:C	2.36	0.46
11:K:34:VAL:HG22	11:K:47:ALA:HB2	1.96	0.46
15:O:44:ASN:CG	15:O:67:SER:HB3	2.36	0.46
16:P:134:VAL:O	16:P:137:LEU:HB3	2.16	0.46
20:T:49:GLU:CB	20:T:59:GLU:HG2	2.41	0.46
30:0:129:A:O2'	30:0:131:A:OP1	2.32	0.46
30:0:574:G:H2'	30:0:575:A:O4'	2.16	0.46
30:0:699:C:H6	30:0:744:G:O4'	1.98	0.46
30:0:791:A:H2'	30:0:792:G:O4'	2.16	0.46
30:0:1001:U:O2'	30:0:1002:G:H5'	2.15	0.46
30:0:1181:A:C2'	30:0:1182:C:H5'	2.45	0.46
30:0:1791:U:H2'	30:0:1792:C:C6	2.51	0.46
30:0:1971:G:H5"	42:0:7875:HOH:O	2.14	0.46
30:0:2250:G:H2'	30:0:2251:G:O4'	2.16	0.46
30:0:2445:U:H2'	30:0:2446:G:C8	2.51	0.46
30:0:2838:A:H2'	30:0:2839:C:C6	2.51	0.46
1:A:140:LEU:HB3	1:A:141:PRO:HD2	1.98	0.46
2:B:215:VAL:HA	2:B:220:VAL:HG22	1.98	0.46
13:M:45:ARG:HB2	13:M:118:TYR:CE1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:98:GLN:HB2	13:M:129:HIS:CD2	2.51	0.46
14:N:11:ARG:HG3	14:N:14:ARG:NH1	2.31	0.46
16:P:36:THR:O	16:P:39:ASP:HB2	2.16	0.46
22:V:49:LEU:O	22:V:53:ILE:HG13	2.15	0.46
30:0:558:C:H2'	30:0:559:U:H5'	1.97	0.46
30:0:566:A:C2'	30:0:567:U:H5'	2.46	0.46
30:0:1130:U:H2'	30:0:1131:G:O4'	2.16	0.46
30:0:1515:A:H2'	30:0:1516:U:C6	2.50	0.46
30:0:1596:U:H2'	30:0:1598:A:OP2	2.15	0.46
30:0:2589:U:H2'	30:0:2590:U:C6	2.51	0.46
30:0:2842:G:C2'	30:0:2843:A:H5'	2.45	0.46
2:B:109:LEU:HD22	2:B:145:HIS:CE1	2.51	0.46
2:B:238:ASN:ND2	2:B:240:GLY:H	2.11	0.46
2:B:284:PHE:HB2	2:B:287:TYR:HB3	1.96	0.46
9:I:82:THR:CG2	30:0:1168:C:H5"	2.45	0.46
11:K:81:ARG:HG3	11:K:85:GLY:O	2.15	0.46
16:P:107:GLU:C	16:P:109:ARG:H	2.19	0.46
18:R:119:VAL:HG23	18:R:142:ASP:HB2	1.98	0.46
19:S:49:VAL:HG13	19:S:66:VAL:HG13	1.96	0.46
30:0:535:G:C5	30:0:2063:U:C4	3.04	0.46
30:0:612:U:H2'	30:0:613:C:H6	1.80	0.46
30:0:1098:A:H2'	30:0:1099:G:O4'	2.15	0.46
30:0:1135:G:H5'	42:0:6761:HOH:O	2.16	0.46
30:0:1202:A:H2'	30:0:1203:G:O4'	2.16	0.46
30:0:1657:A:H2'	30:0:1658:A:C8	2.51	0.46
31:9:39:U:H1'	31:9:44:A:H61	1.81	0.46
2:B:305:ASP:O	2:B:306:LYS:CB	2.63	0.46
3:C:139:VAL:HG13	3:C:240:LEU:HD12	1.98	0.46
6:F:49:PHE:HB2	6:F:96:ALA:HB3	1.98	0.46
10:J:45:VAL:HG23	10:J:129:PHE:HD1	1.81	0.46
11:K:23:ASN:HD21	11:K:107:THR:HB	1.80	0.46
11:K:64:MET:HA	11:K:67:GLN:HE21	1.80	0.46
13:M:40:ILE:HD11	13:M:130:GLU:HG2	1.97	0.46
14:N:164:ASP:OD1	14:N:167:ASP:OD1	2.34	0.46
15:O:19:ARG:HH11	30:0:1276:U:H3'	1.81	0.46
17:Q:25:PRO:HB3	42:9:9006:HOH:O	2.15	0.46
19:S:68:LEU:HB3	19:S:72:ASP:HB2	1.97	0.46
20:T:38:ARG:HH21	30:0:306:A:P	2.38	0.46
30:0:111:C:O2'	30:0:112:G:H5'	2.16	0.46
30:0:956:G:H5'	31:9:81:C:H4'	1.98	0.46
30:0:1260:G:H3'	30:0:1261:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1304:U:H2'	30:0:1305:C:C6	2.51	0.46
30:0:2371:G:H5'	42:0:5865:HOH:O	2.14	0.46
31:9:74:G:C6	31:9:75:G:N7	2.84	0.46
2:B:76:THR:O	2:B:77:PRO:C	2.53	0.46
2:B:139:ASP:HB2	2:B:165:ARG:HE	1.80	0.46
2:B:337:GLY:N	42:B:9013:HOH:O	2.49	0.46
5:E:158:ASP:OD1	5:E:160:ARG:HB2	2.15	0.46
8:H:49:GLN:NE2	8:H:140:TYR:CE2	2.84	0.46
8:H:61:ARG:NH1	8:H:61:ARG:HG3	2.30	0.46
8:H:86:TYR:CD1	8:H:86:TYR:C	2.90	0.46
11:K:62:PRO:HG3	11:K:65:ARG:NH2	2.31	0.46
14:N:26:LEU:HD21	14:N:103:ASP:HA	1.97	0.46
18:R:39:THR:O	18:R:40:ALA:C	2.55	0.46
22:V:23:LEU:O	22:V:24:LYS:C	2.54	0.46
30:0:25:A:H2'	30:0:26:U:H5'	1.98	0.46
30:0:1165:G:H4'	30:0:1174:A:HO2'	1.80	0.46
30:0:1206:U:H5'	30:0:1206:U:C6	2.42	0.46
30:0:1607:A:H2'	30:0:1608:G:O4'	2.16	0.46
30:0:2748:G:H4'	30:0:2749:U:H5'	1.98	0.46
30:0:2760:C:H5"	42:0:6171:HOH:O	2.16	0.46
1:A:135:VAL:HG13	1:A:135:VAL:O	2.16	0.45
4:D:15:GLU:HA	4:D:16:PRO:HD3	1.80	0.45
6:F:8:VAL:HG13	6:F:12:LEU:HD13	1.98	0.45
6:F:13:GLU:OE2	6:F:78:GLU:HG2	2.17	0.45
42:N:8846:HOH:O	31:9:7:G:H5'	2.16	0.45
15:O:19:ARG:NH1	30:0:1276:U:H3'	2.30	0.45
16:P:104:LYS:HG2	16:P:137:LEU:HD23	1.98	0.45
16:P:115:SER:N	16:P:118:GLN:HE21	1.89	0.45
18:R:8:ALA:HB1	18:R:13:THR:CG2	2.35	0.45
28:2:45:ASN:HB3	28:2:46:ASP:H	1.58	0.45
30:0:37:A:C2	30:0:446:G:C2	3.04	0.45
30:0:1209:C:O2'	30:0:1210:G:H5'	2.15	0.45
30:0:1393:A:N1	30:0:1725:C:O2'	2.43	0.45
30:0:1463:U:H2'	30:0:1464:C:C6	2.51	0.45
30:0:1739:G:H1'	30:0:2726:U:O4	2.16	0.45
30:0:2269:C:H2'	30:0:2270:G:O4'	2.15	0.45
30:0:2506:A:O2'	30:0:2507:G:O5'	2.35	0.45
31:9:39:U:HO2'	31:9:42:C:H5	1.57	0.45
3:C:2:GLN:HB2	42:C:8534:HOH:O	2.16	0.45
11:K:81:ARG:HB2	11:K:87:ARG:NH1	2.31	0.45
20:T:23:VAL:O	20:T:42:VAL:HG23	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:29:ALA:HA	42:T:7653:HOH:O	2.16	0.45
22:V:1:THR:O	22:V:3:LEU:N	2.50	0.45
25:Y:106:THR:CG2	25:Y:107:PRO:HD2	2.46	0.45
25:Y:174:VAL:HA	25:Y:177:LYS:HE3	1.97	0.45
30:0:425:U:H4'	42:0:7746:HOH:O	2.16	0.45
30:0:544:G:C2'	30:0:545:G:H5"	2.45	0.45
30:0:820:G:H5'	30:0:821:U:C5'	2.47	0.45
30:0:2087:C:C2	30:0:2658:G:C2	3.04	0.45
30:0:2507:G:H2'	30:0:2510:C:N4	2.31	0.45
1:A:105:VAL:HG13	1:A:155:THR:O	2.16	0.45
3:C:193:LEU:HD23	3:C:233:THR:HG23	1.99	0.45
4:D:27:ILE:HD11	4:D:37:ALA:HB2	1.98	0.45
4:D:149:ARG:HH12	14:N:15:GLU:HA	1.79	0.45
11:K:115:ARG:O	11:K:118:ALA:HB3	2.16	0.45
18:R:64:SER:OG	30:0:1369:A:H5"	2.16	0.45
22:V:44:GLY:HA3	30:0:92:G:H4'	1.98	0.45
23:W:31:HIS:HB3	23:W:115:THR:HG21	1.98	0.45
23:W:117:ARG:HH22	30:0:1264:U:P	2.39	0.45
25:Y:112:GLU:CD	25:Y:115:ARG:NH1	2.69	0.45
30:0:228:C:H2'	30:0:229:G:H5'	1.97	0.45
30:0:584:U:H3'	42:0:6928:HOH:O	2.17	0.45
30:0:644:G:H1'	42:0:7230:HOH:O	2.16	0.45
30:0:710:G:C2'	30:0:711:G:H5'	2.47	0.45
30:0:1183:C:H41	30:0:1192:A:P	2.39	0.45
30:0:1361:C:H2'	30:0:1362:U:C6	2.51	0.45
30:0:1588:G:H1'	30:0:1607:A:H61	1.81	0.45
30:0:1619:G:H2'	30:0:1620:C:O4'	2.15	0.45
30:0:1864:C:H2'	30:0:1865:A:O4'	2.16	0.45
30:0:2004:U:O2	30:0:2004:U:C2'	2.64	0.45
30:0:2560:C:H4'	42:0:7451:HOH:O	2.17	0.45
30:0:2831:C:H2'	30:0:2832:C:H5'	1.98	0.45
33:6:76:8AN:H2	42:6:82:HOH:O	2.15	0.45
1:A:48:ASP:OD2	1:A:51:ARG:HG3	2.17	0.45
2:B:88:GLU:HB3	2:B:97:LEU:HD12	1.99	0.45
2:B:279:THR:HA	2:B:284:PHE:HE1	1.81	0.45
3:C:101:ASP:HA	42:C:8646:HOH:O	2.16	0.45
6:F:67:ALA:HB1	6:F:72:VAL:O	2.16	0.45
7:G:23:ILE:CD1	7:G:67:LEU:HD23	2.42	0.45
8:H:141:CYS:HB2	42:H:8997:HOH:O	2.15	0.45
9:I:91:PHE:CD2	9:I:131:GLY:HA2	2.50	0.45
11:K:125:ALA:O	11:K:127:ALA:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:132:VAL:HG11	21:U:22:VAL:HG22	1.98	0.45
12:L:6:ARG:NH1	30:0:1299:G:N7	2.65	0.45
12:L:125:PHE:CE1	12:L:140:VAL:HG22	2.52	0.45
13:M:8:ILE:O	13:M:11:ALA:HB3	2.17	0.45
16:P:16:VAL:HG12	16:P:17:GLY:N	2.31	0.45
16:P:73:HIS:HE1	30:0:1789:G:O6	2.00	0.45
18:R:100:ASP:C	18:R:102:GLN:N	2.68	0.45
20:T:41:ARG:NH1	20:T:42:VAL:O	2.50	0.45
20:T:52:ARG:HD2	30:0:317:A:H5"	1.97	0.45
20:T:82:THR:HA	42:0:4859:HOH:O	2.15	0.45
23:W:52:VAL:CG2	23:W:53:ALA:N	2.49	0.45
24:X:87:ALA:O	24:X:88:GLU:HG2	2.16	0.45
25:Y:130:ARG:HB2	25:Y:142:SER:O	2.16	0.45
30:0:27:U:H2'	30:0:28:G:O4'	2.17	0.45
30:0:652:G:C2	30:0:653:U:H1'	2.51	0.45
30:0:2842:G:H2'	30:0:2843:A:C5'	2.46	0.45
30:0:2846:C:H2'	30:0:2847:G:H8	1.80	0.45
30:0:2894:C:O2'	30:0:2895:C:H5'	2.16	0.45
31:9:12:C:H4'	31:9:69:U:O2	2.17	0.45
1:A:23:TYR:CD1	1:A:50:ALA:HB2	2.51	0.45
2:B:140:LEU:HD13	2:B:175:LEU:HA	1.98	0.45
6:F:21:GLU:O	6:F:24:ARG:HG2	2.17	0.45
10:J:26:VAL:HG13	10:J:36:VAL:HG11	1.98	0.45
14:N:72:GLU:HB3	14:N:163:PHE:CE1	2.52	0.45
14:N:73:ALA:HB1	14:N:74:PRO:HD2	1.97	0.45
19:S:11:THR:H	19:S:14:ALA:HB3	1.82	0.45
26:Z:51:ALA:O	26:Z:55:SER:HB2	2.16	0.45
30:0:604:G:H2'	42:0:9543:HOH:O	2.16	0.45
30:0:731:U:H2'	30:0:732:C:C6	2.52	0.45
30:0:1165:G:H21	30:0:1173:A:H5"	1.82	0.45
30:0:1181:A:H2'	30:0:1182:C:C5'	2.47	0.45
30:0:1394:C:H3'	30:0:1433:G:N2	2.32	0.45
30:0:1787:C:H4'	30:0:2883:A:O4'	2.17	0.45
30:0:1810:C:H2'	30:0:1811:A:O4'	2.17	0.45
30:0:1889:C:H2'	30:0:1890:U:O4'	2.17	0.45
1:A:199:HIS:N	42:A:9110:HOH:O	2.49	0.45
2:B:185:GLY:HA2	42:B:9109:HOH:O	2.15	0.45
5:E:20:ILE:O	5:E:30:THR:HG23	2.16	0.45
7:G:64:ASN:OD1	30:0:1211:G:H5"	2.16	0.45
11:K:101:ASN:O	11:K:102:GLU:CB	2.63	0.45
14:N:77:ASN:C	14:N:78:MET:CA	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:73:ASP:HB3	19:S:76:GLU:OE1	2.17	0.45
20:T:43:ASN:ND2	20:T:108:ARG:CZ	2.79	0.45
27:1:15:THR:O	27:1:29:THR:N	2.46	0.45
30:0:24:G:N2	30:0:518:G:H1'	2.31	0.45
30:0:116:G:H2'	30:0:117:A:C8	2.52	0.45
30:0:168:C:H5'	30:0:2277:U:OP1	2.16	0.45
30:0:1484:G:H2'	42:0:3021:HOH:O	2.17	0.45
30:0:1833:U:O2'	30:0:1834:C:H5'	2.16	0.45
30:0:2419:U:H5"	30:0:2420:G:H5'	1.97	0.45
30:0:2506:A:O2'	30:0:2507:G:P	2.75	0.45
31:9:13:A:H3'	31:9:14:G:H5'	1.99	0.45
3:C:76:ARG:HB3	3:C:78:ARG:NH1	2.32	0.45
12:L:66:VAL:CG2	12:L:67:ARG:N	2.78	0.45
13:M:69:LYS:O	30:0:2263:G:H4'	2.17	0.45
14:N:102:LEU:HG	14:N:104:ILE:HG23	1.98	0.45
14:N:151:ASP:OD1	14:N:154:LEU:HD13	2.17	0.45
15:O:59:VAL:HG23	15:O:111:VAL:CG2	2.46	0.45
17:Q:14:LEU:HB3	42:Q:3971:HOH:O	2.16	0.45
20:T:17:HIS:HB3	30:0:100:C:O2	2.17	0.45
22:V:43:PRO:O	22:V:46:ILE:HG22	2.16	0.45
30:0:295:C:H2'	30:0:296:G:O4'	2.16	0.45
30:0:343:C:O2'	30:0:344:C:H5'	2.16	0.45
30:0:1056:U:H2'	30:0:1057:A:O4'	2.17	0.45
30:0:1741:U:H5"	42:0:3669:HOH:O	2.17	0.45
30:0:1831:U:O4	30:0:1845:A:H2	1.99	0.45
30:0:2081:A:H2'	30:0:2082:G:O4'	2.17	0.45
1:A:211:LYS:HZ2	1:A:223:ARG:HH21	1.64	0.45
2:B:141:ARG:CG	2:B:165:ARG:HA	2.47	0.45
2:B:188:HIS:HD1	2:B:188:HIS:H	1.64	0.45
3:C:193:LEU:HA	3:C:211:ASP:O	2.17	0.45
4:D:88:LEU:HB2	4:D:89:PRO:HD3	1.98	0.45
8:H:9:TYR:HE2	8:H:99:ARG:O	2.00	0.45
10:J:75:PRO:HD3	10:J:136:SER:OG	2.17	0.45
12:L:130:ARG:HA	42:L:9020:HOH:O	2.17	0.45
16:P:61:ARG:NH2	30:0:2737:C:OP2	2.43	0.45
17:Q:62:THR:O	17:Q:64:GLU:HG2	2.16	0.45
20:T:27:LEU:HB2	20:T:32:ARG:HG3	1.99	0.45
23:W:122:ARG:NH2	42:0:6133:HOH:O	2.50	0.45
28:2:22:PRO:HG2	28:2:25:VAL:CG2	2.46	0.45
29:3:65:THR:HG23	29:3:67:LEU:HG	1.99	0.45
30:0:12:U:C2'	30:0:13:G:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:325:U:H2'	30:0:326:G:H8	1.79	0.45
30:0:750:A:H2'	30:0:751:U:C6	2.51	0.45
30:0:2011:A:H5'	30:0:2013:G:C1'	2.46	0.45
31:9:1:U:H5'	31:9:121:C:O2	2.16	0.45
31:9:60:C:H2'	31:9:61:C:H6	1.80	0.45
2:B:74:ILE:HG13	42:B:9078:HOH:O	2.16	0.45
3:C:219:ASN:O	3:C:223:LEU:HB2	2.16	0.45
10:J:36:VAL:HG12	10:J:37:ALA:N	2.32	0.45
13:M:30:GLU:O	13:M:34:GLU:HG3	2.16	0.45
15:O:49:GLU:OE1	15:O:70:LEU:HD12	2.16	0.45
18:R:27:HIS:O	18:R:31:ILE:HG13	2.17	0.45
23:W:80:ASP:H	23:W:83:TRP:HB3	1.82	0.45
25:Y:142:SER:OG	30:0:1331:G:OP2	2.31	0.45
26:Z:37:ARG:HD3	42:Z:8713:HOH:O	2.16	0.45
30:0:1626:A:H2'	30:0:1627:G:O4'	2.17	0.45
30:0:2135:A:O4'	30:0:2243:C:N4	2.50	0.45
30:0:2443:C:H3'	42:0:4363:HOH:O	2.17	0.45
30:0:2887:G:H2'	30:0:2888:U:C6	2.52	0.45
2:B:66:GLU:OE1	2:B:328:ARG:HD2	2.17	0.45
2:B:113:LEU:HD21	2:B:161:VAL:HG21	1.97	0.45
2:B:232:TRP:CD1	2:B:235:ARG:HD2	2.52	0.45
2:B:294:TYR:HE2	42:B:9128:HOH:O	1.99	0.45
2:B:297:VAL:HB	42:B:9078:HOH:O	2.17	0.45
3:C:236:THR:O	3:C:237:GLU:C	2.55	0.45
4:D:141:VAL:HG13	4:D:144:ARG:NH2	2.32	0.45
8:H:91:ARG:NH1	8:H:138:THR:OG1	2.49	0.45
14:N:22:GLN:HB3	42:N:8873:HOH:O	2.17	0.45
16:P:138:GLU:O	16:P:139:ARG:C	2.54	0.45
17:Q:95:GLU:HA	30:0:949:U:C4'	2.46	0.45
23:W:25:ASN:OD1	30:0:1025:C:H5"	2.17	0.45
24:X:20:GLU:CG	24:X:21:PRO:HD2	2.45	0.45
29:3:73:GLU:C	29:3:75:GLY:N	2.69	0.45
30:0:191:A:C4	30:0:237:G:N7	2.85	0.45
30:0:290:C:O2'	30:0:291:C:H5'	2.16	0.45
30:0:1985:U:C2	30:0:1996:U:O4'	2.70	0.45
30:0:2088:C:H1'	30:0:2841:A:C2	2.52	0.45
30:0:2361:A:H2'	30:0:2362:A:C8	2.51	0.45
1:A:38:ILE:HD13	1:A:38:ILE:HA	1.87	0.44
1:A:94:LEU:HD23	1:A:94:LEU:N	2.31	0.44
5:E:9:GLU:HG2	42:E:7544:HOH:O	2.17	0.44
8:H:59:GLN:NE2	8:H:96:GLN:HG2	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:67:ALA:HB1	8:H:159:LYS:HD3	1.98	0.44
13:M:72:ALA:HB1	13:M:93:ARG:NE	2.32	0.44
13:M:80:GLY:C	13:M:81:ARG:HD2	2.37	0.44
18:R:62:HIS:HB3	30:0:1370:G:O5'	2.16	0.44
30:0:297:U:H1'	42:0:4807:HOH:O	2.16	0.44
30:0:1031:G:O3'	30:0:1032:A:H8	2.00	0.44
30:0:1165:G:O2'	30:0:1174:A:C4'	2.65	0.44
30:0:1291:A:H2	42:0:6136:HOH:O	2.00	0.44
30:0:1477:C:H4'	30:0:1868:G:OP1	2.17	0.44
30:0:2072:G:H3'	30:0:2073:G:C5'	2.47	0.44
30:0:2335:C:H2'	30:0:2336:G:H8	1.82	0.44
30:0:2435:U:H1'	42:0:6273:HOH:O	2.17	0.44
31:9:73:A:H61	31:9:108:C:N4	2.13	0.44
2:B:195:ARG:HG3	2:B:196:ALA:N	2.31	0.44
2:B:261:GLN:HG2	30:0:2808:U:OP1	2.17	0.44
3:C:145:GLU:CD	3:C:196:THR:HB	2.38	0.44
11:K:44:HIS:O	11:K:45:PRO:C	2.56	0.44
12:L:54:PRO:HG2	12:L:57:VAL:CG2	2.47	0.44
14:N:37:ARG:HH21	14:N:105:GLY:CA	2.30	0.44
15:O:62:GLY:O	15:O:79:VAL:HG23	2.18	0.44
17:Q:61:GLY:HA3	17:Q:74:ASP:O	2.17	0.44
23:W:9:GLY:N	30:0:1086:A:OP1	2.50	0.44
23:W:56:GLU:O	23:W:143:THR:HG23	2.17	0.44
23:W:115:THR:HG23	42:W:5420:HOH:O	2.17	0.44
23:W:126:ASP:O	23:W:136:GLY:HA2	2.16	0.44
25:Y:95:THR:N	25:Y:236:VAL:O	2.51	0.44
25:Y:95:THR:O	25:Y:95:THR:HG22	2.16	0.44
26:Z:77:GLY:C	26:Z:78:ILE:CA	2.86	0.44
27:1:16:HIS:CD2	30:0:470:U:O2'	2.57	0.44
27:1:42:SER:HB3	30:0:1473:U:O4'	2.17	0.44
27:1:54:ALA:HB2	30:0:892:G:H5"	1.98	0.44
29:3:24:LYS:HE3	29:3:90:PHE:CE1	2.52	0.44
30:0:23:G:C6	30:0:24:G:N1	2.85	0.44
30:0:2394:A:H4'	42:0:9457:HOH:O	2.16	0.44
30:0:2869:G:H2'	30:0:2870:C:C6	2.52	0.44
2:B:209:LYS:HE2	42:B:9040:HOH:O	2.15	0.44
2:B:274:GLU:HG3	2:B:292:GLY:C	2.38	0.44
5:E:73:PHE:O	5:E:76:VAL:HG22	2.18	0.44
10:J:57:TYR:O	10:J:61:VAL:HG23	2.18	0.44
10:J:70:PHE:HE1	30:0:2676:C:C4'	2.19	0.44
10:J:107:ASN:HD22	10:J:109:TYR:H	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:73:VAL:HG23	12:L:74:THR:N	2.31	0.44
13:M:79:ALA:HB3	13:M:81:ARG:NH1	2.33	0.44
13:M:98:GLN:HB2	13:M:129:HIS:NE2	2.32	0.44
13:M:193:LYS:HB3	30:0:392:U:C5'	2.47	0.44
18:R:39:THR:CG2	18:R:42:GLU:HG3	2.48	0.44
19:S:67:ARG:HD3	42:0:5526:HOH:O	2.16	0.44
24:X:41:PHE:HD2	24:X:76:ARG:HB2	1.81	0.44
25:Y:186:ARG:HD2	42:0:5056:HOH:O	2.17	0.44
30:0:34:C:H2'	30:0:35:U:C6	2.52	0.44
30:0:254:C:H2'	30:0:255:A:O4'	2.18	0.44
30:0:812:A:H2'	30:0:813:C:O4'	2.17	0.44
30:0:877:G:C2	30:0:885:G:O4'	2.70	0.44
30:0:1021:G:O2'	30:0:1022:A:H5'	2.18	0.44
30:0:1187:U:HO2'	30:0:1188:A:H8	1.65	0.44
30:0:1298:U:H2'	30:0:1299:G:H8	1.81	0.44
30:0:1617:C:C5	30:0:1643:C:H4'	2.53	0.44
30:0:1803:C:H2'	30:0:1804:A:C8	2.52	0.44
30:0:2323:G:H5'	42:0:7829:HOH:O	2.17	0.44
30:0:2592:G:H2'	30:0:2593:C:C6	2.52	0.44
2:B:22:GLU:HA	2:B:205:VAL:HG21	1.98	0.44
2:B:41:PHE:HB3	2:B:190:MET:CE	2.42	0.44
2:B:79:MET:HE3	2:B:144:THR:CG2	2.47	0.44
2:B:307:ARG:HH11	2:B:307:ARG:HG3	1.82	0.44
3:C:77:ALA:O	3:C:78:ARG:CA	2.65	0.44
11:K:65:ARG:C	11:K:67:GLN:H	2.19	0.44
12:L:36:ASP:HB2	42:0:5147:HOH:O	2.18	0.44
12:L:98:GLU:O	12:L:99:GLU:HB2	2.16	0.44
13:M:28:GLN:HA	13:M:31:TRP:HB2	1.98	0.44
13:M:122:GLN:HB2	13:M:126:GLN:O	2.18	0.44
15:O:65:LEU:HD13	30:0:746:A:N6	2.33	0.44
17:Q:25:PRO:HA	17:Q:26:PRO:HD3	1.83	0.44
23:W:12:ASN:HA	30:0:1067:A:O2'	2.17	0.44
23:W:65:VAL:HA	23:W:68:THR:CG2	2.47	0.44
26:Z:34:SER:OG	30:0:797:A:H4'	2.18	0.44
30:0:166:A:H2'	30:0:2109:U:H5	1.83	0.44
30:0:542:A:H1'	42:0:5534:HOH:O	2.16	0.44
30:0:567:U:O2'	30:0:568:G:H5'	2.17	0.44
30:0:941:G:C5	30:0:942:U:C4	3.06	0.44
30:0:1238:C:H5'	30:0:1239:G:OP2	2.17	0.44
30:0:1558:C:O2	30:0:1563:G:N2	2.45	0.44
30:0:2846:C:H4'	42:0:5931:HOH:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:212:PRO:HA	30:0:1943:C:C4’	2.48	0.44
2:B:84:LEU:HB2	2:B:182:VAL:HG21	2.00	0.44
2:B:217:ARG:CG	2:B:257:THR:HG22	2.44	0.44
6:F:31:LYS:HD2	42:0:5661:HOH:O	2.17	0.44
8:H:39:LYS:HA	8:H:87:LYS:NZ	2.32	0.44
8:H:59:GLN:HE21	8:H:129:ARG:HE	1.63	0.44
9:I:91:PHE:HA	9:I:131:GLY:CA	2.47	0.44
10:J:41:ALA:HB2	10:J:103:VAL:CG1	2.47	0.44
13:M:179:GLY:O	30:0:399:C:H5’	2.18	0.44
13:M:188:ARG:HD3	30:0:155:C:OP2	2.18	0.44
17:Q:56:PHE:HE2	35:Q:8811:CL:CL	2.38	0.44
18:R:88:PHE:O	18:R:91:LEU:HB3	2.17	0.44
19:S:20:PHE:N	19:S:20:PHE:CD2	2.85	0.44
20:T:52:ARG:O	30:0:317:A:OP1	2.36	0.44
20:T:92:ASP:OD2	30:0:335:U:H4’	2.18	0.44
24:X:49:ARG:NH1	30:0:1385:G:O3’	2.51	0.44
29:3:24:LYS:HE3	29:3:90:PHE:HE1	1.83	0.44
30:0:255:A:C5	30:0:256:C:C4	3.05	0.44
30:0:291:C:H2’	30:0:292:G:O4’	2.17	0.44
30:0:376:C:H6	30:0:376:C:O5’	2.00	0.44
30:0:1191:A:H2	30:0:1206:U:H3	1.65	0.44
30:0:1913:C:H2’	30:0:1914:C:C6	2.52	0.44
30:0:2285:G:H1	33:6:74:C:H42	1.65	0.44
1:A:192:VAL:HG12	42:A:9070:HOH:O	2.18	0.44
5:E:35:TYR:HB2	5:E:61:THR:HG21	2.00	0.44
8:H:6:ALA:CA	8:H:61:ARG:HH12	2.28	0.44
9:I:98:ASP:C	9:I:100:VAL:H	2.21	0.44
13:M:159:VAL:HG13	13:M:160:PHE:N	2.32	0.44
15:O:87:THR:O	15:O:88:LYS:C	2.55	0.44
15:O:96:VAL:HG13	15:O:100:GLN:CD	2.37	0.44
23:W:4:LEU:CD2	23:W:52:VAL:HB	2.47	0.44
30:0:362:G:O2’	30:0:363:C:H5’	2.18	0.44
30:0:462:A:N6	30:0:477:A:H2	2.15	0.44
30:0:522:U:O2’	30:0:1366:C:H5’	2.17	0.44
30:0:1457:U:H5	42:0:9660:HOH:O	2.00	0.44
30:0:1636:G:O2’	30:0:1637:A:H5’	2.17	0.44
30:0:1644:C:O2’	30:0:1645:U:H5’	2.18	0.44
30:0:1878:G:O2’	30:0:1879:U:H6	2.01	0.44
30:0:2415:A:C2’	30:0:2416:G:H5’	2.47	0.44
30:0:2889:U:H4’	30:0:2890:A:H5’	1.98	0.44
31:9:107:C:H2’	31:9:108:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:88:ILE:HG21	1:A:100:PRO:HG3	1.99	0.44
1:A:157:GLY:HA2	26:Z:103:VAL:CG1	2.48	0.44
1:A:190:ARG:NH2	1:A:207:GLN:OE1	2.51	0.44
3:C:177:GLY:HA2	42:0:3551:HOH:O	2.17	0.44
4:D:104:PHE:CE2	4:D:166:ILE:HD13	2.53	0.44
8:H:54:VAL:HG12	8:H:56:GLU:O	2.17	0.44
9:I:70:THR:OG1	9:I:107:LYS:HE2	2.18	0.44
9:I:71:ALA:O	9:I:75:LYS:HE3	2.17	0.44
9:I:124:VAL:O	9:I:124:VAL:HG12	2.18	0.44
13:M:46:LEU:HD11	30:0:263:U:O3'	2.17	0.44
13:M:74:LYS:HG3	42:M:8878:HOH:O	2.18	0.44
14:N:35:VAL:HG11	31:9:6:C:H4'	1.99	0.44
17:Q:45:PRO:O	30:0:2365:G:H4'	2.18	0.44
20:T:48:VAL:HG22	20:T:97:ARG:C	2.37	0.44
23:W:122:ARG:NH2	42:W:5817:HOH:O	2.44	0.44
25:Y:102:LEU:O	25:Y:227:ARG:HG3	2.18	0.44
25:Y:212:ARG:HB3	42:Y:8835:HOH:O	2.18	0.44
29:3:10:TYR:CD1	30:0:2408:A:H1'	2.52	0.44
30:0:371:U:H2'	30:0:372:A:C8	2.52	0.44
30:0:553:G:O4'	30:0:1325:G:H5'	2.18	0.44
30:0:844:A:C6	30:0:882:A:C6	3.06	0.44
30:0:970:U:H2'	42:0:7156:HOH:O	2.16	0.44
30:0:1174:A:C5	30:0:1201:C:H4'	2.52	0.44
30:0:1826:C:O2'	30:0:1827:G:H5'	2.17	0.44
30:0:1894:C:N4	30:0:1939:U:H2'	2.33	0.44
1:A:71:PRO:HA	1:A:158:VAL:O	2.18	0.44
1:A:190:ARG:NE	42:A:9070:HOH:O	2.51	0.44
2:B:109:LEU:HA	2:B:159:PRO:HG2	1.99	0.44
2:B:141:ARG:CB	2:B:165:ARG:HA	2.47	0.44
2:B:251:VAL:HG22	42:0:5183:HOH:O	2.18	0.44
3:C:225:PRO:CD	3:C:231:ARG:HD2	2.48	0.44
4:D:45:THR:OG1	4:D:46:GLY:N	2.48	0.44
4:D:99:ASP:CB	4:D:103:ASN:HB2	2.48	0.44
5:E:90:HIS:CD2	30:0:2694:A:H5"	2.53	0.44
5:E:105:GLU:HG2	5:E:113:PRO:HB3	2.00	0.44
7:G:64:ASN:N	7:G:64:ASN:ND2	2.65	0.44
8:H:77:ILE:O	8:H:78:LYS:C	2.55	0.44
9:I:97:VAL:CG1	9:I:101:LYS:HE3	2.28	0.44
13:M:36:ALA:O	13:M:65:VAL:HG13	2.18	0.44
13:M:164:THR:CG2	13:M:165:GLY:N	2.80	0.44
14:N:21:HIS:CD2	30:0:2369:A:H5"	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:16:ASN:HD21	17:Q:45:PRO:CD	2.29	0.44
19:S:21:GLN:NE2	30:0:1508:C:H5'	2.32	0.44
20:T:14:ALA:HA	20:T:15:PRO:HD3	1.90	0.44
30:0:70:A:H4'	42:0:4782:HOH:O	2.17	0.44
30:0:138:U:OP2	30:0:139:C:H5	2.01	0.44
30:0:236:A:H8	30:0:236:A:OP1	2.00	0.44
30:0:349:U:H2'	30:0:350:G:O4'	2.17	0.44
30:0:834:G:H4'	30:0:835:U:OP2	2.18	0.44
30:0:1318:A:H4'	30:0:1343:C:H4'	2.00	0.44
30:0:1534:C:O2'	30:0:1656:A:OP1	2.24	0.44
30:0:1586:G:O2'	30:0:1587:U:H5'	2.17	0.44
30:0:2344:G:H2'	30:0:2344:G:N3	2.32	0.44
30:0:2634:G:H5'	42:0:3070:HOH:O	2.16	0.44
1:A:171:LYS:NZ	42:A:8996:HOH:O	2.51	0.44
2:B:17:LYS:O	2:B:260:HIS:CD2	2.71	0.44
2:B:132:HIS:CE1	2:B:171:VAL:CG2	3.01	0.44
12:L:149:ARG:O	12:L:150:GLN:HB2	2.17	0.44
13:M:9:ARG:NH2	30:0:378:A:OP1	2.42	0.44
13:M:163:LEU:O	13:M:168:ARG:NH1	2.51	0.44
14:N:79:PRO:HG3	14:N:143:ARG:C	2.38	0.44
16:P:107:GLU:O	16:P:109:ARG:N	2.50	0.44
22:V:1:THR:C	22:V:3:LEU:H	2.20	0.44
22:V:5:VAL:CG1	22:V:9:ARG:NH1	2.80	0.44
25:Y:145:LYS:O	25:Y:147:ARG:HG2	2.18	0.44
26:Z:84:CYS:O	26:Z:85:ASP:HB2	2.18	0.44
27:1:25:LYS:HD2	28:2:48:ASP:HB3	2.00	0.44
28:2:48:ASP:O	28:2:49:GLU:CB	2.65	0.44
30:0:491:C:H2'	30:0:492:C:C6	2.53	0.44
30:0:1845:A:O2'	30:0:1846:U:H5'	2.17	0.44
30:0:2090:G:H2'	30:0:2091:G:C8	2.53	0.44
30:0:2379:G:N3	30:0:2418:G:H2'	2.33	0.44
31:9:56:A:C3'	31:9:57:A:H5"	2.48	0.44
1:A:194:MET:CE	1:A:199:HIS:HB2	2.48	0.43
2:B:74:ILE:CD1	2:B:309:VAL:HG21	2.39	0.43
2:B:232:TRP:HD1	2:B:235:ARG:HD2	1.83	0.43
3:C:51:TYR:HE1	27:1:55:GLY:O	2.00	0.43
3:C:181:ALA:HB2	30:0:30:U:OP2	2.18	0.43
4:D:103:ASN:OD1	4:D:133:ASN:ND2	2.51	0.43
4:D:146:LYS:NZ	14:N:38:LYS:HE2	2.33	0.43
5:E:119:HIS:HB2	5:E:144:THR:OG1	2.17	0.43
7:G:63:ARG:HG2	30:0:1210:G:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:19:ARG:HG2	42:H:8976:HOH:O	2.18	0.43
10:J:11:ILE:HD13	10:J:109:TYR:CD1	2.52	0.43
12:L:5:LYS:HE3	30:0:1354:G:O6	2.17	0.43
12:L:18:HIS:HB2	30:0:903:U:O4	2.18	0.43
12:L:66:VAL:HG23	12:L:67:ARG:H	1.80	0.43
13:M:123:ASP:OD1	13:M:126:GLN:HG2	2.17	0.43
14:N:5:ARG:HB2	42:0:7582:HOH:O	2.18	0.43
14:N:79:PRO:HG3	14:N:144:GLY:CA	2.47	0.43
15:O:47:ARG:HG3	15:O:47:ARG:NH1	2.32	0.43
21:U:45:GLU:O	21:U:46:ALA:C	2.56	0.43
26:Z:70:ARG:NH2	30:0:1602:C:OP2	2.50	0.43
27:1:5:THR:N	27:1:6:PRO:HD2	2.32	0.43
28:2:14:LEU:HD13	28:2:47:THR:CG2	2.48	0.43
30:0:23:G:H1'	30:0:520:A:H61	1.83	0.43
30:0:619:U:H2'	30:0:629:A:O4'	2.18	0.43
30:0:1096:U:H5"	30:0:1258:G:O6	2.17	0.43
30:0:1267:C:O2'	30:0:1268:C:H5'	2.18	0.43
30:0:1776:A:C8	30:0:1778:A:O4'	2.71	0.43
30:0:1902:G:N2	30:0:1936:C:C2	2.86	0.43
30:0:2031:C:H2'	30:0:2032:U:C6	2.53	0.43
30:0:2059:U:H2'	30:0:2060:A:C8	2.53	0.43
30:0:2106:C:H2'	30:0:2107:U:C6	2.53	0.43
30:0:2616:G:N3	30:0:2616:G:H2'	2.33	0.43
30:0:2907:C:H2'	30:0:2908:A:O4'	2.17	0.43
1:A:11:ARG:HH12	1:A:13:THR:CG2	2.31	0.43
1:A:128:LEU:HG	42:A:9054:HOH:O	2.18	0.43
3:C:7:ASP:OD1	3:C:11:ASN:O	2.36	0.43
6:F:119:ARG:OXT	6:F:119:ARG:HD3	2.18	0.43
8:H:36:MET:HB3	8:H:73:ASN:HD21	1.83	0.43
11:K:96:VAL:CG2	11:K:109:LEU:HD22	2.48	0.43
22:V:4:HIS:O	22:V:8:ILE:HG13	2.17	0.43
23:W:21:LEU:HD22	23:W:26:ILE:HD13	2.01	0.43
30:0:637:C:H2'	30:0:638:C:H6	1.83	0.43
30:0:697:G:H4'	30:0:730:G:O3'	2.19	0.43
30:0:702:G:O2'	30:0:703:G:H5'	2.18	0.43
30:0:2019:A:H5'	42:0:5405:HOH:O	2.17	0.43
30:0:2346:C:H6	30:0:2346:C:O5'	2.02	0.43
30:0:2361:A:H5'	30:0:2361:A:H8	1.83	0.43
30:0:2402:A:H1'	42:0:4055:HOH:O	2.17	0.43
30:0:2619:UR3:H2'	30:0:2620:U:C6	2.53	0.43
30:0:2704:C:H2'	30:0:2705:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:5:G:O2'	31:9:6:C:H5'	2.18	0.43
1:A:123:GLY:HA3	1:A:162:GLY:HA2	2.01	0.43
2:B:51:VAL:HG13	2:B:53:LEU:CD1	2.49	0.43
12:L:35:ARG:NE	12:L:46:LEU:CD2	2.81	0.43
12:L:56:LYS:CE	30:0:2443:C:H1'	2.48	0.43
13:M:5:TYR:O	13:M:8:ILE:N	2.51	0.43
14:N:46:GLN:NE2	31:9:5:G:N3	2.65	0.43
14:N:82:TYR:CD2	14:N:82:TYR:C	2.92	0.43
14:N:155:GLU:O	14:N:156:GLU:CG	2.66	0.43
15:O:25:VAL:HG23	15:O:26:TRP:N	2.33	0.43
20:T:47:THR:HB	20:T:100:ASP:HB3	2.00	0.43
27:1:36:SER:O	27:1:46:ARG:HD3	2.17	0.43
30:0:603:A:H5"	30:0:604:G:OP1	2.18	0.43
30:0:923:A:H2'	42:0:6521:HOH:O	2.17	0.43
30:0:1667:A:H2'	30:0:1668:U:C6	2.52	0.43
30:0:1768:C:H2'	30:0:1769:C:O4'	2.18	0.43
30:0:1878:G:O2'	30:0:1879:U:C6	2.65	0.43
30:0:1914:C:H2'	30:0:1915:U:H6	1.82	0.43
30:0:2332:A:H3'	30:0:2333:G:C8	2.51	0.43
31:9:70:U:H2'	31:9:71:C:O4'	2.19	0.43
1:A:43:VAL:HG21	1:A:59:GLU:CG	2.48	0.43
3:C:7:ASP:C	3:C:9:ASP:H	2.21	0.43
7:G:21:ASP:O	7:G:22:ALA:C	2.56	0.43
13:M:24:GLN:HE21	13:M:27:ARG:HD2	1.83	0.43
18:R:65:GLY:HA3	42:R:9001:HOH:O	2.18	0.43
25:Y:150:LEU:HB3	42:Y:8857:HOH:O	2.17	0.43
29:3:42:ARG:HD2	42:3:9003:HOH:O	2.17	0.43
30:0:1119:G:N2	30:0:1246:A:N1	2.66	0.43
30:0:2088:C:H1'	30:0:2841:A:N1	2.33	0.43
30:0:2120:U:H2'	30:0:2121:G:O4'	2.18	0.43
30:0:2345:A:N6	42:0:6637:HOH:O	2.49	0.43
1:A:213:LYS:CE	30:0:1942:A:H5"	2.48	0.43
2:B:27:ASN:C	2:B:27:ASN:ND2	2.71	0.43
2:B:77:PRO:O	2:B:78:PRO:CA	2.67	0.43
2:B:277:GLU:N	2:B:278:PRO:CD	2.81	0.43
3:C:174:ILE:HD11	30:0:338:C:H4'	2.00	0.43
5:E:91:PHE:HA	5:E:92:PRO:HD3	1.81	0.43
9:I:87:PRO:HD2	30:0:1180:U:O2'	2.18	0.43
9:I:96:SER:H	9:I:99:GLN:CD	2.21	0.43
10:J:131:THR:CG2	10:J:133:GLY:H	2.31	0.43
12:L:30:ARG:HD3	30:0:164:G:H4'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:90:ARG:NH2	30:0:2266:A:OP2	2.48	0.43
18:R:114:VAL:HA	18:R:144:GLU:O	2.18	0.43
23:W:38:THR:HG22	23:W:39:ASP:H	1.81	0.43
23:W:110:GLN:NE2	23:W:110:GLN:CA	2.81	0.43
25:Y:100:ARG:HE	25:Y:234:VAL:HG21	1.84	0.43
28:2:35:ARG:N	42:2:2691:HOH:O	2.50	0.43
29:3:69:TYR:O	29:3:77:ALA:HA	2.17	0.43
30:0:235:C:O2'	30:0:236:A:H2'	2.18	0.43
30:0:292:G:O5'	30:0:292:G:H8	2.01	0.43
30:0:463:A:H3'	42:0:7246:HOH:O	2.19	0.43
30:0:657:G:H2'	30:0:658:C:C6	2.54	0.43
30:0:957:A:H8	30:0:957:A:O5'	2.01	0.43
30:0:960:G:H3'	30:0:960:G:N3	2.33	0.43
30:0:1006:A:N1	30:0:2311:A:H1'	2.34	0.43
30:0:1163:G:H1	30:0:1184:C:N4	2.17	0.43
30:0:1359:U:O5'	30:0:1360:C:H5"	2.17	0.43
30:0:2852:A:H4'	30:0:2853:U:H5	1.83	0.43
31:9:39:U:H3'	31:9:40:C:H5"	2.00	0.43
31:9:95:C:O2'	31:9:96:C:H5'	2.19	0.43
4:D:107:GLY:O	30:0:2338:G:O3'	2.37	0.43
5:E:93:MET:CE	5:E:165:GLY:H	2.32	0.43
7:G:12:ILE:HG22	7:G:17:GLN:HE21	1.81	0.43
9:I:98:ASP:HA	9:I:101:LYS:HD2	2.01	0.43
9:I:111:LEU:HD22	9:I:122:GLU:OE1	2.18	0.43
12:L:18:HIS:CD2	30:0:902:G:N7	2.87	0.43
12:L:72:ASN:O	12:L:76:LEU:HG	2.19	0.43
13:M:50:ARG:HG2	13:M:50:ARG:HH11	1.84	0.43
16:P:98:ILE:HD12	16:P:102:ARG:NE	2.34	0.43
18:R:125:ARG:HG2	42:R:8948:HOH:O	2.18	0.43
21:U:38:ASN:O	21:U:42:LEU:HG	2.18	0.43
22:V:19:GLU:HG3	22:V:56:ILE:HD11	2.01	0.43
24:X:70:ILE:HG23	24:X:70:ILE:O	2.18	0.43
27:1:15:THR:O	27:1:28:HIS:HA	2.18	0.43
30:0:29:C:O2'	30:0:30:U:H5'	2.19	0.43
30:0:1171:A:N6	30:0:1172:G:C2	2.87	0.43
30:0:1359:U:O4	30:0:2101:A:H5"	2.19	0.43
1:A:70:ALA:HA	1:A:71:PRO:HD3	1.84	0.43
1:A:82:VAL:HG13	1:A:93:THR:HB	2.00	0.43
2:B:29:TRP:CH2	2:B:164:THR:HA	2.53	0.43
2:B:87:TYR:CE2	2:B:96:PRO:HG3	2.54	0.43
3:C:236:THR:HB	3:C:239:ALA:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:240:LEU:HD23	3:C:240:LEU:O	2.18	0.43
4:D:103:ASN:ND2	4:D:133:ASN:HD22	2.17	0.43
4:D:140:ARG:NH1	31:9:45:A:OP1	2.50	0.43
5:E:93:MET:HB2	5:E:93:MET:HE3	1.81	0.43
5:E:143:GLN:HE21	30:0:2780:C:H1'	1.82	0.43
6:F:99:THR:HA	42:F:3461:HOH:O	2.18	0.43
9:I:119:ALA:O	9:I:123:VAL:HG23	2.18	0.43
10:J:88:PRO:O	10:J:94:GLY:HA3	2.18	0.43
12:L:144:ASP:O	12:L:147:GLU:HB2	2.18	0.43
14:N:41:LYS:HD3	42:9:9061:HOH:O	2.18	0.43
15:O:15:LYS:HD3	15:O:19:ARG:NH2	2.34	0.43
15:O:106:PRO:HG2	15:O:107:GLU:OE2	2.18	0.43
24:X:85:VAL:HG12	24:X:86:GLU:N	2.34	0.43
25:Y:169:ARG:HB2	30:0:1268:C:O2'	2.18	0.43
26:Z:97:THR:O	26:Z:98:PRO:C	2.56	0.43
30:0:581:G:O2'	30:0:582:U:H5'	2.18	0.43
30:0:854:G:H5"	30:0:855:U:OP1	2.18	0.43
30:0:936:C:H42	30:0:1034:G:H1	1.66	0.43
30:0:1077:G:H2'	30:0:1080:C:N4	2.34	0.43
30:0:1167:G:H1	30:0:1179:C:H42	1.67	0.43
30:0:1299:G:N2	42:0:5541:HOH:O	2.52	0.43
30:0:1766:U:H2'	30:0:1776:A:N6	2.34	0.43
33:6:75:C:H5"	33:6:76:8AN:O1P	2.18	0.43
2:B:51:VAL:HG22	2:B:327:VAL:HG13	2.00	0.43
2:B:103:ASP:HB2	42:B:9064:HOH:O	2.17	0.43
5:E:2:ARG:HH21	5:E:48:VAL:HG21	1.82	0.43
5:E:6:GLU:HG2	5:E:46:THR:HG22	2.01	0.43
6:F:1:PRO:HB2	42:M:8924:HOH:O	2.17	0.43
7:G:71:LEU:O	7:G:73:ASP:N	2.52	0.43
10:J:74:ARG:HH11	10:J:74:ARG:CG	2.31	0.43
14:N:72:GLU:HG2	14:N:163:PHE:HD1	1.84	0.43
20:T:21:LYS:HA	20:T:24:ARG:CD	2.49	0.43
20:T:48:VAL:HG22	20:T:97:ARG:O	2.19	0.43
20:T:101:LEU:HD13	20:T:112:LEU:HD11	2.01	0.43
22:V:45:ARG:C	22:V:47:LYS:N	2.72	0.43
27:1:48:TYR:CZ	30:0:773:A:H4'	2.54	0.43
30:0:234:A:H4'	30:0:437:A:O4'	2.19	0.43
30:0:758:A:H2'	30:0:759:C:O4'	2.19	0.43
30:0:790:A:H1'	30:0:1710:A:C2'	2.49	0.43
30:0:2569:A:H2'	30:0:2570:G:O4'	2.18	0.43
30:0:2752:C:O2'	30:0:2753:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:73:A:N6	31:9:108:C:H42	2.15	0.43
2:B:87:TYR:O	2:B:138:GLY:N	2.42	0.43
2:B:145:HIS:CD2	2:B:146:THR:O	2.72	0.43
4:D:48:MET:HE2	4:D:48:MET:HB3	1.89	0.43
6:F:22:VAL:HG23	6:F:104:ALA:HB2	2.00	0.43
9:I:112:LEU:HG	42:I:6070:HOH:O	2.19	0.43
10:J:123:ARG:NH1	10:J:129:PHE:HZ	2.16	0.43
14:N:11:ARG:HG2	14:N:15:GLU:OE2	2.18	0.43
22:V:27:LEU:CA	22:V:49:LEU:HD13	2.48	0.43
25:Y:184:GLU:HG2	25:Y:229:LEU:HD11	2.01	0.43
27:1:53:LYS:O	27:1:54:ALA:C	2.57	0.43
30:0:710:G:N2	30:0:719:C:C2	2.87	0.43
30:0:812:A:H2'	30:0:813:C:H6	1.83	0.43
30:0:1473:U:O2'	30:0:1474:C:H5"	2.18	0.43
30:0:1476:A:O2'	30:0:1477:C:H5'	2.18	0.43
30:0:1503:U:H2'	30:0:1504:A:O4'	2.18	0.43
30:0:1616:A:H5"	30:0:1617:C:OP1	2.18	0.43
30:0:2005:G:N2	30:0:2008:U:H1'	2.34	0.43
30:0:2073:G:N1	30:0:2607:U:C6	2.86	0.43
1:A:171:LYS:HG3	1:A:174:ASN:ND2	2.33	0.43
1:A:231:LYS:O	1:A:232:ARG:HB3	2.19	0.43
4:D:156:ARG:HG3	4:D:156:ARG:HH11	1.84	0.43
8:H:46:TYR:HA	8:H:47:PRO:HD3	1.80	0.43
10:J:130:VAL:CG1	10:J:131:THR:N	2.82	0.43
13:M:102:GLU:OE2	13:M:164:THR:HG21	2.19	0.43
14:N:24:LEU:CD1	17:Q:26:PRO:HB3	2.49	0.43
16:P:20:ARG:HD2	30:0:1718:G:OP2	2.19	0.43
16:P:50:GLN:HG2	42:P:6904:HOH:O	2.19	0.43
18:R:46:TYR:CD2	18:R:47:LEU:HD23	2.50	0.43
20:T:48:VAL:HG22	20:T:96:VAL:HG13	2.00	0.43
24:X:85:VAL:HG12	24:X:86:GLU:H	1.83	0.43
25:Y:216:ARG:O	25:Y:219:GLU:HG2	2.19	0.43
30:0:228:C:C2'	30:0:229:G:H5'	2.49	0.43
30:0:462:A:H2'	42:0:5741:HOH:O	2.19	0.43
30:0:1217:G:O2'	30:0:1218:U:H5'	2.19	0.43
3:C:149:LYS:NZ	30:0:328:U:OP1	2.52	0.42
8:H:83:GLU:O	8:H:84:GLY:C	2.58	0.42
8:H:87:LYS:NZ	8:H:87:LYS:CB	2.82	0.42
12:L:145:LEU:HD23	12:L:145:LEU:O	2.19	0.42
14:N:37:ARG:HA	14:N:37:ARG:HD3	1.90	0.42
15:O:49:GLU:O	15:O:72:LYS:HE3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:51:G:O2'	30:0:52:A:H5'	2.19	0.42
30:0:431:G:O2'	30:0:432:G:H5'	2.19	0.42
30:0:542:A:H2'	30:0:543:G:O4'	2.19	0.42
30:0:1245:C:O5'	30:0:1245:C:H6	2.01	0.42
30:0:1724:U:H5"	42:0:4609:HOH:O	2.19	0.42
30:0:1767:A:H3'	42:0:5918:HOH:O	2.19	0.42
30:0:1819:G:H2'	30:0:1820:G:C4'	2.49	0.42
30:0:1925:G:O2'	30:0:1926:G:H5'	2.19	0.42
30:0:1972:U:H2'	30:0:1973:A:H5'	2.01	0.42
30:0:2029:C:H2'	30:0:2030:A:O4'	2.19	0.42
30:0:2241:C:O2'	30:0:2242:U:H5'	2.19	0.42
31:9:107:C:H2'	31:9:108:C:C6	2.54	0.42
33:6:75:C:H2'	42:6:80:HOH:O	2.19	0.42
1:A:95:PRO:C	1:A:97:ALA:H	2.23	0.42
2:B:280:VAL:HG11	2:B:335:ASN:OD1	2.19	0.42
10:J:20:GLY:HA3	30:0:1242:A:O3'	2.20	0.42
10:J:93:ARG:HH11	10:J:93:ARG:CB	2.27	0.42
11:K:8:VAL:CG1	11:K:9:THR:N	2.81	0.42
12:L:16:GLY:HA2	30:0:1294:A:O3'	2.19	0.42
12:L:144:ASP:HA	12:L:147:GLU:HG3	2.01	0.42
15:O:39:THR:O	15:O:115:ARG:NH2	2.51	0.42
15:O:105:ASN:HD21	15:O:109:SER:H	1.66	0.42
16:P:104:LYS:HA	16:P:104:LYS:HD2	1.91	0.42
17:Q:43:ILE:O	17:Q:45:PRO:HD3	2.20	0.42
17:Q:86:VAL:HG13	17:Q:91:LEU:HD11	2.00	0.42
23:W:47:LYS:HE2	30:0:944:G:O3'	2.19	0.42
23:W:66:LEU:HA	23:W:66:LEU:HD23	1.87	0.42
23:W:125:HIS:CD2	23:W:125:HIS:H	2.37	0.42
29:3:63:LYS:NZ	30:0:2460:A:OP1	2.51	0.42
30:0:67:A:H2'	42:0:5002:HOH:O	2.19	0.42
30:0:101:C:H2'	30:0:102:A:H8	1.83	0.42
30:0:639:A:H2'	30:0:640:G:C8	2.54	0.42
30:0:1503:U:H2'	30:0:1504:A:C5'	2.48	0.42
30:0:1632:A:C2'	30:0:1633:C:H5'	2.48	0.42
2:B:48:MET:O	2:B:49:THR:HG23	2.19	0.42
3:C:142:ASP:CG	3:C:238:SER:HG	2.23	0.42
3:C:246:ARG:NH2	30:0:677:C:H4'	2.34	0.42
4:D:10:PHE:CD1	4:D:11:HIS:N	2.87	0.42
4:D:143:LYS:O	31:9:45:A:H4'	2.19	0.42
5:E:16:ASP:O	5:E:17:HIS:HB2	2.19	0.42
6:F:24:ARG:HG3	6:F:25:ASP:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:109:GLU:O	6:F:113:ASP:OD2	2.37	0.42
7:G:12:ILE:HG22	7:G:12:ILE:O	2.17	0.42
7:G:19:GLU:O	7:G:20:VAL:C	2.57	0.42
8:H:61:ARG:O	8:H:64:SER:N	2.43	0.42
8:H:157:TYR:CD1	8:H:157:TYR:C	2.92	0.42
10:J:45:VAL:CG2	10:J:129:PHE:CD1	3.02	0.42
12:L:101:ASP:C	12:L:103:ALA:H	2.23	0.42
12:L:143:THR:CG2	12:L:144:ASP:N	2.81	0.42
13:M:57:LYS:HZ2	13:M:144:ASP:CG	2.23	0.42
13:M:95:LYS:HE2	30:0:157:G:H4'	2.01	0.42
13:M:163:LEU:HD21	30:0:188:C:H5"	2.00	0.42
14:N:14:ARG:NH2	31:9:13:A:N3	2.66	0.42
14:N:179:LEU:HD23	14:N:184:ILE:HD12	2.01	0.42
23:W:52:VAL:H	23:W:52:VAL:HG22	1.45	0.42
27:1:8:GLN:HE22	27:1:11:LYS:HZ1	1.66	0.42
27:1:28:HIS:CD2	27:1:30:LYS:HB2	2.54	0.42
27:1:45:ARG:NH2	42:1:2086:HOH:O	2.50	0.42
28:2:40:ARG:HG3	28:2:45:ASN:CB	2.49	0.42
30:0:432:G:O2'	30:0:433:C:H5'	2.19	0.42
30:0:699:C:C6	30:0:744:G:O4'	2.73	0.42
30:0:1211:G:H2'	30:0:1212:C:C6	2.53	0.42
30:0:1362:U:O2'	30:0:1363:G:H5'	2.19	0.42
30:0:1566:C:H2'	30:0:1567:G:C8	2.54	0.42
30:0:1971:G:N2	30:0:2009:G:H2'	2.34	0.42
30:0:2464:C:H5"	30:0:2465:A:OP1	2.20	0.42
30:0:2647:C:H1'	42:0:7245:HOH:O	2.19	0.42
31:9:14:G:C6	31:9:68:G:C2	3.07	0.42
1:A:120:ARG:HD3	42:A:9015:HOH:O	2.19	0.42
1:A:135:VAL:HG21	1:A:147:ARG:NH1	2.35	0.42
2:B:162:MET:CE	2:B:310:ARG:HH11	2.31	0.42
2:B:243:ASN:ND2	30:0:2607:U:OP2	2.45	0.42
3:C:27:ARG:HG2	3:C:29:ASP:OD1	2.19	0.42
3:C:40:ALA:O	3:C:43:LYS:HB2	2.19	0.42
9:I:67:VAL:HG13	9:I:68:PRO:HD2	2.00	0.42
9:I:114:TYR:CD1	9:I:114:TYR:N	2.87	0.42
9:I:130:LEU:HA	42:I:7210:HOH:O	2.19	0.42
10:J:77:GLY:O	10:J:78:ILE:CA	2.68	0.42
11:K:4:LEU:HD23	11:K:4:LEU:HA	1.86	0.42
11:K:28:GLU:OE2	11:K:58:THR:HG21	2.19	0.42
13:M:71:SER:CB	13:M:92:THR:HG22	2.47	0.42
14:N:42:HIS:CG	14:N:62:HIS:HE1	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:119:GLN:HG2	14:N:123:ILE:HD11	2.01	0.42
15:O:18:ALA:HB2	15:O:27:GLY:N	2.34	0.42
17:Q:34:ASP:HB2	17:Q:37:GLU:HG3	2.00	0.42
21:U:56:ARG:O	21:U:56:ARG:HD2	2.20	0.42
23:W:35:VAL:HA	23:W:36:PRO:HD3	1.92	0.42
30:0:564:G:H2'	30:0:592:G:C6	2.54	0.42
30:0:611:U:H2'	30:0:612:U:C6	2.54	0.42
30:0:640:G:C6	30:0:641:G:N7	2.87	0.42
30:0:1058:A:H2'	30:0:1060:C:H5'	2.00	0.42
30:0:1342:C:H2'	30:0:1343:C:H5'	2.02	0.42
30:0:2067:A:H2'	30:0:2068:G:O4'	2.18	0.42
1:A:1:GLY:HA2	30:0:2114:C:OP1	2.19	0.42
3:C:174:ILE:HD12	30:0:338:C:H4'	1.99	0.42
7:G:63:ARG:NH1	30:0:1151:G:OP1	2.52	0.42
8:H:77:ILE:O	8:H:78:LYS:CA	2.68	0.42
12:L:27:ARG:HH22	12:L:30:ARG:HG2	1.81	0.42
13:M:84:LYS:HZ1	30:0:391:U:P	2.42	0.42
18:R:119:VAL:O	18:R:119:VAL:CG1	2.67	0.42
21:U:20:MET:CG	21:U:28:THR:HG23	2.50	0.42
21:U:50:GLU:HB3	30:0:2866:U:C4	2.55	0.42
23:W:82:GLU:O	23:W:86:GLU:HG3	2.19	0.42
24:X:76:ARG:HG3	24:X:76:ARG:NH1	2.31	0.42
42:Y:8878:HOH:O	30:0:1355:A:H5"	2.19	0.42
28:2:18:ASN:O	28:2:18:ASN:ND2	2.52	0.42
30:0:284:C:H4'	30:0:285:A:H8	1.84	0.42
30:0:420:U:H2'	30:0:421:C:C6	2.54	0.42
30:0:559:U:H2'	30:0:560:U:O4'	2.20	0.42
30:0:1299:G:H2'	30:0:1300:G:O4'	2.20	0.42
30:0:1821:A:O2'	30:0:1822:A:H5'	2.20	0.42
30:0:2470:A:H5"	42:0:4137:HOH:O	2.19	0.42
30:0:2604:A:H4'	42:0:9401:HOH:O	2.20	0.42
2:B:112:THR:HG23	2:B:158:LYS:NZ	2.35	0.42
3:C:46:TYR:CE1	3:C:92:PRO:HB3	2.55	0.42
3:C:68:ALA:O	3:C:70:VAL:N	2.52	0.42
8:H:53:ILE:HG23	8:H:133:GLY:O	2.20	0.42
11:K:74:VAL:HG21	11:K:96:VAL:HG23	2.01	0.42
12:L:65:ASP:CG	12:L:111:ALA:HB3	2.39	0.42
13:M:193:LYS:HB3	30:0:392:U:H5"	2.01	0.42
14:N:40:ASN:HB2	42:9:9062:HOH:O	2.20	0.42
17:Q:27:GLN:HB2	42:9:9006:HOH:O	2.19	0.42
25:Y:231:PRO:HG2	25:Y:233:TYR:CE1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:43:ARG:HH21	30:0:1685:A:C4'	2.32	0.42
30:0:370:G:O2'	30:0:371:U:H5'	2.19	0.42
30:0:2039:A:H4'	30:0:2760:C:O2'	2.20	0.42
30:0:2611:G:H5'	30:0:2613:G:C8	2.55	0.42
30:0:2791:U:C4	30:0:2794:G:O6	2.73	0.42
31:9:24:U:H3'	31:9:25:G:H5'	2.01	0.42
1:A:163:GLY:CA	1:A:166:ASP:OD2	2.68	0.42
2:B:7:ARG:CZ	2:B:11:LEU:HD13	2.49	0.42
2:B:52:VAL:O	2:B:53:LEU:HD12	2.19	0.42
2:B:205:VAL:O	2:B:307:ARG:NE	2.53	0.42
2:B:238:ASN:HD21	30:0:2609:G:N2	2.17	0.42
3:C:21:VAL:HG22	42:C:8598:HOH:O	2.20	0.42
5:E:88:TYR:CD1	5:E:91:PHE:O	2.71	0.42
13:M:61:ILE:N	13:M:61:ILE:CD1	2.81	0.42
13:M:78:LYS:HE2	30:0:870:G:OP1	2.19	0.42
14:N:103:ASP:C	14:N:103:ASP:OD1	2.57	0.42
15:O:89:ILE:HG21	15:O:95:ALA:HB2	2.01	0.42
16:P:81:LYS:HG2	42:0:3439:HOH:O	2.19	0.42
16:P:109:ARG:NH1	16:P:119:TYR:CE2	2.88	0.42
20:T:30:ASP:O	20:T:33:GLU:N	2.53	0.42
22:V:45:ARG:HA	22:V:48:GLU:HB2	2.01	0.42
23:W:13:MET:HA	42:W:4944:HOH:O	2.20	0.42
25:Y:100:ARG:HE	25:Y:234:VAL:CG2	2.32	0.42
30:0:353:G:O2'	30:0:354:A:H5'	2.19	0.42
30:0:1548:U:O2'	30:0:1798:C:O2	2.32	0.42
30:0:1684:A:H5'	30:0:1692:C:OP1	2.19	0.42
30:0:2079:G:H2'	30:0:2080:G:O4'	2.19	0.42
30:0:2355:G:H5"	30:0:2356:A:OP2	2.20	0.42
30:0:2673:U:C4	30:0:2674:G:C6	3.07	0.42
30:0:2819:C:H2'	30:0:2820:A:H8	1.84	0.42
2:B:54:VAL:O	2:B:55:ASN:C	2.56	0.42
4:D:55:LYS:O	4:D:56:ARG:HB2	2.20	0.42
4:D:88:LEU:N	4:D:89:PRO:CD	2.83	0.42
4:D:94:ALA:HA	4:D:174:VAL:C	2.40	0.42
9:I:87:PRO:HB3	9:I:129:SER:O	2.19	0.42
11:K:69:LEU:HD12	11:K:97:ILE:HD13	2.02	0.42
13:M:171:ARG:HD3	30:0:156:C:C5'	2.43	0.42
14:N:175:LEU:HA	14:N:175:LEU:HD12	1.86	0.42
16:P:115:SER:O	16:P:117:SER:N	2.52	0.42
18:R:82:GLU:CG	18:R:83:LYS:H	2.29	0.42
20:T:9:LYS:HE3	20:T:13:ARG:NH2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:1:THR:CB	30:0:93:C:H5”	2.46	0.42
22:V:59:ILE:HA	22:V:62:GLU:HB2	2.02	0.42
24:X:30:MET:HG2	30:0:1384:C:H5’	2.00	0.42
26:Z:96:GLU:OE1	26:Z:104:ARG:NH2	2.53	0.42
29:3:1:MET:N	29:3:87:ARG:O	2.49	0.42
29:3:42:ARG:NH1	30:0:396:U:H5’	2.35	0.42
30:0:312:U:O5’	30:0:312:U:H6	2.02	0.42
30:0:1477:C:C5’	30:0:1868:G:H5”	2.50	0.42
30:0:1504:A:O2’	30:0:1506:U:OP2	2.38	0.42
30:0:2506:A:H2’	30:0:2506:A:O5’	2.20	0.42
31:9:14:G:O2’	31:9:15:C:H5’	2.19	0.42
31:9:72:C:H2’	31:9:73:A:H8	1.85	0.42
1:A:34:ASP:O	1:A:36:ASP:N	2.53	0.42
2:B:56:ASP:HB3	2:B:322:ARG:NH2	2.35	0.42
2:B:244:PRO:HB3	30:0:1234:U:C2	2.55	0.42
3:C:63:SER:OG	30:0:2101:A:H2’	2.20	0.42
3:C:150:THR:OG1	30:0:327:A:H2’	2.19	0.42
6:F:39:SER:O	6:F:43:GLY:N	2.53	0.42
6:F:118:LEU:O	6:F:119:ARG:OXT	2.38	0.42
8:H:59:GLN:HE21	8:H:129:ARG:CG	2.32	0.42
10:J:75:PRO:HD3	10:J:136:SER:CB	2.50	0.42
11:K:66:ARG:NH2	30:0:1994:A:OP2	2.42	0.42
12:L:18:HIS:HD2	30:0:902:G:N7	2.18	0.42
14:N:44:ARG:NH2	31:9:4:G:O2’	2.52	0.42
14:N:111:PRO:HD2	31:9:37:C:H4’	2.02	0.42
14:N:165:ALA:C	14:N:167:ASP:H	2.22	0.42
16:P:18:LYS:O	16:P:21:VAL:HG13	2.20	0.42
16:P:107:GLU:C	16:P:109:ARG:N	2.73	0.42
18:R:82:GLU:HB2	18:R:86:LYS:HE3	2.02	0.42
19:S:29:ASP:OD1	19:S:31:ARG:HG3	2.20	0.42
20:T:24:ARG:HG2	20:T:24:ARG:NH1	2.35	0.42
21:U:47:ARG:HG3	42:U:4381:HOH:O	2.20	0.42
24:X:49:ARG:O	24:X:49:ARG:CG	2.58	0.42
25:Y:178:HIS:CG	25:Y:179:PRO:HD2	2.55	0.42
25:Y:212:ARG:HB2	30:0:1315:G:C4	2.54	0.42
26:Z:34:SER:HB3	42:Z:8723:HOH:O	2.18	0.42
29:3:51:LYS:C	29:3:53:SER:H	2.23	0.42
29:3:71:CYS:O	29:3:75:GLY:HA2	2.20	0.42
30:0:75:U:H2’	30:0:76:G:C8	2.55	0.42
30:0:461:C:H2’	42:0:4868:HOH:O	2.20	0.42
30:0:644:G:H5’	30:0:644:G:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:912:A:H4'	42:0:6799:HOH:O	2.19	0.42
30:0:1044:C:H5	42:0:7418:HOH:O	2.03	0.42
30:0:1141:U:O2'	30:0:1142:C:H5'	2.19	0.42
30:0:1165:G:N2	30:0:1173:A:H5"	2.35	0.42
30:0:1603:A:H5'	30:0:1605:G:C4'	2.49	0.42
30:0:1664:A:H8	30:0:1664:A:OP1	2.03	0.42
30:0:1972:U:C2'	30:0:1973:A:H5"	2.50	0.42
30:0:2106:C:H1'	30:0:2484:U:C2	2.55	0.42
30:0:2510:C:H5'	30:0:2511:A:OP2	2.20	0.42
1:A:186:TRP:CD1	1:A:187:PRO:HA	2.55	0.42
2:B:66:GLU:HG2	42:B:9125:HOH:O	2.20	0.42
2:B:334:SER:HG	30:0:2861:G:HO2'	1.62	0.42
3:C:80:VAL:HA	3:C:81:PRO:HD3	1.85	0.42
3:C:94:THR:C	3:C:96:LYS:H	2.22	0.42
4:D:138:GLY:HA2	31:9:29:C:O3'	2.20	0.42
5:E:69:ILE:O	5:E:72:MET:HB2	2.19	0.42
8:H:157:TYR:C	8:H:157:TYR:HD1	2.24	0.42
9:I:88:GLN:HE21	9:I:128:THR:CG2	2.33	0.42
9:I:117:THR:O	9:I:120:ALA:HB3	2.19	0.42
10:J:47:THR:HB	30:0:1244:U:C6	2.55	0.42
11:K:66:ARG:HH22	30:0:1994:A:P	2.40	0.42
12:L:133:VAL:HA	42:L:9038:HOH:O	2.20	0.42
13:M:122:GLN:HB3	13:M:127:LYS:HG2	2.02	0.42
13:M:171:ARG:NH2	30:0:189:A:OP1	2.52	0.42
14:N:32:PRO:HD2	14:N:99:GLU:O	2.20	0.42
14:N:79:PRO:HA	14:N:142:THR:O	2.20	0.42
20:T:51:LEU:O	20:T:52:ARG:HG2	2.20	0.42
21:U:6:CYS:HB2	21:U:32:CYS:HB3	2.01	0.42
23:W:4:LEU:O	23:W:32:CYS:HA	2.19	0.42
25:Y:106:THR:HG23	25:Y:107:PRO:HD2	2.01	0.42
26:Z:37:ARG:HD2	30:0:818:A:O2'	2.20	0.42
30:0:432:G:H2'	30:0:433:C:C6	2.55	0.42
30:0:696:C:O2'	30:0:697:G:H5'	2.20	0.42
30:0:1890:U:H4'	30:0:2010:A:C6	2.55	0.42
30:0:2133:U:H4'	30:0:2134:G:H5'	2.02	0.42
30:0:2462:G:O4'	30:0:2464:C:C2	2.73	0.42
30:0:2467:A:H5'	42:0:5160:HOH:O	2.19	0.42
30:0:2519:C:O2'	30:0:2520:G:H5'	2.20	0.42
1:A:56:ALA:O	1:A:68:ILE:N	2.53	0.41
2:B:175:LEU:C	2:B:175:LEU:CD2	2.88	0.41
2:B:190:MET:CE	2:B:194:PHE:CD1	3.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:217:ARG:HB2	2:B:257:THR:HG21	2.01	0.41
2:B:274:GLU:HG3	2:B:292:GLY:HA2	2.02	0.41
3:C:81:PRO:HD3	42:C:8554:HOH:O	2.20	0.41
3:C:236:THR:N	3:C:239:ALA:HB3	2.28	0.41
8:H:160:ILE:HD11	8:H:164:CYS:SG	2.60	0.41
9:I:94:ASP:O	9:I:95:LEU:HD23	2.20	0.41
10:J:42:GLU:O	10:J:131:THR:HG23	2.20	0.41
13:M:9:ARG:HG3	42:0:4079:HOH:O	2.20	0.41
13:M:31:TRP:CA	13:M:34:GLU:HG3	2.48	0.41
14:N:38:LYS:HE2	14:N:107:ASN:HD21	1.84	0.41
14:N:127:LEU:HB2	42:N:8856:HOH:O	2.19	0.41
14:N:182:GLY:O	14:N:183:ASP:C	2.59	0.41
15:O:21:SER:CB	15:O:106:PRO:HB2	2.50	0.41
16:P:133:SER:HA	42:P:1882:HOH:O	2.20	0.41
18:R:29:LYS:HD3	42:0:5581:HOH:O	2.20	0.41
18:R:61:GLN:HG2	18:R:62:HIS:CD2	2.55	0.41
18:R:122:GLN:HB3	18:R:138:SER:HB2	2.01	0.41
20:T:68:ASP:HB2	42:T:4787:HOH:O	2.20	0.41
23:W:92:ASP:OD2	23:W:94:SER:HB2	2.19	0.41
24:X:34:ARG:NH1	24:X:48:VAL:O	2.53	0.41
25:Y:112:GLU:OE1	25:Y:112:GLU:HA	2.20	0.41
29:3:6:ARG:HA	29:3:20:HIS:O	2.20	0.41
30:0:25:A:C2'	30:0:26:U:H5'	2.50	0.41
30:0:163:U:O3'	30:0:896:C:H4'	2.20	0.41
30:0:271:C:N4	30:0:378:A:H2	2.06	0.41
30:0:289:G:O2'	30:0:290:C:H5'	2.19	0.41
30:0:310:U:H2'	30:0:311:C:C6	2.54	0.41
30:0:1153:C:N3	30:0:2786:G:O6	2.52	0.41
30:0:1844:C:O5'	30:0:1844:C:H6	2.03	0.41
30:0:2896:A:N3	30:0:2896:A:C2'	2.83	0.41
30:0:2906:A:H5'	30:0:2907:C:O4'	2.20	0.41
3:C:7:ASP:C	3:C:9:ASP:N	2.74	0.41
3:C:184:ARG:HD2	30:0:1306:U:H5"	2.02	0.41
4:D:101:THR:O	4:D:101:THR:HG22	2.21	0.41
8:H:153:PHE:HD1	8:H:166:ILE:HG23	1.84	0.41
9:I:67:VAL:CG1	9:I:68:PRO:HD2	2.50	0.41
13:M:82:ARG:O	13:M:83:SER:C	2.59	0.41
13:M:99:ARG:NE	13:M:167:GLY:HA2	2.35	0.41
13:M:102:GLU:CD	13:M:164:THR:HG21	2.41	0.41
13:M:157:ASP:O	13:M:158:ARG:C	2.58	0.41
14:N:116:PHE:O	14:N:119:GLN:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:30:VAL:O	17:Q:31:GLU:C	2.59	0.41
17:Q:68:GLY:HA3	30:0:2404:G:C5'	2.50	0.41
18:R:114:VAL:HG13	18:R:114:VAL:O	2.21	0.41
23:W:10:GLU:HG2	42:0:3876:HOH:O	2.19	0.41
30:0:432:G:H3'	42:0:8000:HOH:O	2.18	0.41
30:0:484:A:N1	30:0:506:G:H4'	2.35	0.41
30:0:1131:G:H5'	31:9:91:C:O4'	2.21	0.41
30:0:2072:G:O2'	30:0:2489:G:N2	2.52	0.41
30:0:2281:C:O2'	30:0:2282:U:H5'	2.20	0.41
31:9:77:A:N1	31:9:103:A:H5"	2.35	0.41
1:A:35:GLY:C	1:A:37:VAL:H	2.23	0.41
1:A:38:ILE:HD11	1:A:62:ASP:OD1	2.21	0.41
1:A:208:HIS:O	1:A:208:HIS:CG	2.74	0.41
2:B:335:ASN:HA	42:0:4561:HOH:O	2.20	0.41
3:C:22:PHE:HA	3:C:116:ALA:HA	2.01	0.41
3:C:93:LYS:HD2	30:0:646:G:O4'	2.20	0.41
3:C:223:LEU:HD12	3:C:223:LEU:HA	1.94	0.41
4:D:23:VAL:HG22	4:D:73:VAL:HB	2.02	0.41
4:D:42:GLY:N	42:D:5828:HOH:O	2.53	0.41
10:J:52:GLN:HE21	30:0:1119:G:H5'	1.84	0.41
11:K:79:PRO:HG3	11:K:89:LYS:HB3	2.01	0.41
14:N:77:ASN:O	14:N:78:MET:CA	2.68	0.41
14:N:91:ARG:HD3	42:N:8811:HOH:O	2.20	0.41
30:0:11:A:H2'	30:0:11:A:N3	2.36	0.41
30:0:497:A:H2'	30:0:498:A:C5'	2.51	0.41
30:0:506:G:N2	30:0:509:A:H5'	2.16	0.41
30:0:600:G:N2	30:0:601:G:H1'	2.35	0.41
30:0:921:G:H4'	30:0:924:G:C6	2.55	0.41
30:0:1741:U:H5'	30:0:1742:A:OP1	2.20	0.41
30:0:1741:U:O2'	30:0:2723:G:H4'	2.20	0.41
30:0:2398:A:O2'	30:0:2428:G:H4'	2.20	0.41
30:0:2649:A:H5'	30:0:2649:A:C8	2.55	0.41
31:9:3:A:N6	31:9:22:G:H1'	2.35	0.41
2:B:266:ASN:OD1	2:B:317:PRO:HA	2.20	0.41
3:C:246:ARG:HH11	3:C:246:ARG:CB	2.32	0.41
10:J:45:VAL:HG22	10:J:46:ILE:N	2.35	0.41
10:J:64:GLY:HA3	35:J:8821:CL:CL	2.57	0.41
10:J:126:ASN:HA	35:J:8801:CL:CL	2.57	0.41
11:K:125:ALA:C	11:K:127:ALA:N	2.69	0.41
12:L:41:HIS:CD2	30:0:926:A:O2'	2.73	0.41
14:N:33:ARG:NH1	14:N:103:ASP:OD2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:115:SER:C	16:P:117:SER:N	2.73	0.41
16:P:135:ALA:HB2	42:P:4754:HOH:O	2.20	0.41
19:S:32:ALA:HA	19:S:36:GLU:OE1	2.20	0.41
24:X:74:ALA:HB2	24:X:85:VAL:HG13	2.01	0.41
30:0:287:C:H2'	30:0:288:A:C8	2.55	0.41
30:0:553:G:C2'	30:0:554:G:H5'	2.50	0.41
30:0:558:C:C2'	30:0:559:U:C5'	2.89	0.41
30:0:1416:G:H2'	30:0:1417:G:C5'	2.50	0.41
30:0:1526:A:H4'	30:0:1527:A:C5'	2.50	0.41
30:0:1588:G:C6	30:0:1589:G:C6	3.08	0.41
30:0:2095:A:OP1	30:0:2096:A:H4'	2.20	0.41
30:0:2265:U:H2'	30:0:2266:A:C8	2.56	0.41
30:0:2783:A:H2'	30:0:2784:A:C8	2.55	0.41
1:A:48:ASP:HA	1:A:49:PRO:HD3	1.86	0.41
1:A:105:VAL:HG11	1:A:154:ALA:CB	2.51	0.41
2:B:141:ARG:HG2	2:B:165:ARG:CA	2.49	0.41
2:B:195:ARG:HD2	2:B:324:ASP:OD1	2.20	0.41
3:C:98:ARG:NH1	42:C:8560:HOH:O	2.53	0.41
6:F:110:ASP:O	6:F:114:LYS:HG3	2.20	0.41
10:J:143:LYS:HG3	10:J:145:TRP:CE2	2.56	0.41
13:M:139:PRO:C	13:M:141:ILE:N	2.71	0.41
14:N:5:ARG:HD3	42:0:7778:HOH:O	2.20	0.41
17:Q:11:ARG:HD3	42:Q:5620:HOH:O	2.20	0.41
17:Q:47:VAL:HB	17:Q:90:HIS:CE1	2.55	0.41
17:Q:94:GLN:HG2	17:Q:95:GLU:OE1	2.21	0.41
20:T:51:LEU:O	20:T:52:ARG:NH1	2.52	0.41
23:W:9:GLY:H	30:0:1086:A:P	2.42	0.41
30:0:111:C:H2'	30:0:112:G:H5'	2.03	0.41
30:0:154:C:H2'	30:0:155:C:C6	2.55	0.41
30:0:282:C:H2'	30:0:283:U:O4'	2.20	0.41
30:0:390:G:H5"	42:0:3451:HOH:O	2.20	0.41
30:0:407:A:H5'	42:0:6858:HOH:O	2.20	0.41
30:0:1212:C:H2'	30:0:1213:C:H5'	2.02	0.41
30:0:2669:U:H2'	30:0:2670:G:C8	2.55	0.41
30:0:2847:G:O2'	30:0:2848:G:H5'	2.20	0.41
2:B:321:PRO:HG3	42:B:9072:HOH:O	2.19	0.41
4:D:29:HIS:HB2	42:D:2768:HOH:O	2.20	0.41
11:K:34:VAL:CG2	11:K:47:ALA:HB2	2.51	0.41
11:K:64:MET:HA	11:K:67:GLN:NE2	2.36	0.41
12:L:98:GLU:O	12:L:99:GLU:CB	2.67	0.41
13:M:99:ARG:HD2	13:M:167:GLY:CA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:117:ARG:HD3	30:0:1287:A:O4'	2.20	0.41
27:1:26:SER:CB	27:1:36:SER:HB2	2.51	0.41
30:0:75:U:H2'	30:0:76:G:H8	1.86	0.41
30:0:581:G:H2'	30:0:582:U:H6	1.85	0.41
30:0:1033:C:H2'	30:0:1034:G:C5'	2.51	0.41
30:0:1513:C:H2'	30:0:1514:C:H6	1.85	0.41
30:0:1576:G:H2'	30:0:1577:U:C6	2.55	0.41
30:0:2022:A:H5"	30:0:2023:G:OP2	2.21	0.41
30:0:2133:U:H4'	30:0:2134:G:C5'	2.51	0.41
30:0:2758:G:H2'	30:0:2759:C:C6	2.56	0.41
1:A:228:ILE:O	1:A:229:ALA:C	2.58	0.41
3:C:51:TYR:CD1	27:1:56:GLU:HB2	2.56	0.41
5:E:2:ARG:NH2	5:E:48:VAL:HG21	2.36	0.41
8:H:48:VAL:O	8:H:140:TYR:HA	2.21	0.41
8:H:143:VAL:CG2	8:H:173:GLU:HG2	2.51	0.41
11:K:113:ILE:HG22	11:K:114:ALA:H	1.86	0.41
14:N:69:TYR:N	14:N:69:TYR:CD1	2.89	0.41
17:Q:47:VAL:O	17:Q:51:ARG:NE	2.48	0.41
18:R:119:VAL:HG21	18:R:142:ASP:OD1	2.20	0.41
18:R:132:ARG:HD3	42:0:3121:HOH:O	2.20	0.41
19:S:80:ARG:HA	42:S:8538:HOH:O	2.21	0.41
20:T:32:ARG:NH1	20:T:38:ARG:NH1	2.69	0.41
20:T:94:SER:OG	30:0:334:G:N2	2.54	0.41
23:W:3:ALA:O	23:W:54:PHE:HA	2.19	0.41
30:0:111:C:H2'	30:0:112:G:C5'	2.50	0.41
30:0:293:A:P	30:0:358:G:H22	2.44	0.41
30:0:400:C:H2'	30:0:401:C:H6	1.86	0.41
30:0:1065:G:H2'	30:0:1066:U:C6	2.56	0.41
30:0:1159:G:H1	30:0:1208:C:N4	2.18	0.41
30:0:1205:U:H2'	30:0:1206:U:H5'	2.00	0.41
30:0:1592:G:H2'	30:0:1593:C:C6	2.55	0.41
30:0:1684:A:O2'	30:0:1685:A:H5"	2.20	0.41
30:0:1839:A:C5'	30:0:2643:G:H4'	2.51	0.41
30:0:2238:A:O2'	30:0:2239:C:H5'	2.21	0.41
30:0:2332:A:H5'	30:0:2333:G:OP2	2.21	0.41
3:C:123:LEU:HD11	42:C:8660:HOH:O	2.20	0.41
4:D:128:LEU:HB2	42:D:6007:HOH:O	2.19	0.41
5:E:40:VAL:HA	5:E:48:VAL:O	2.21	0.41
10:J:91:LYS:O	10:J:92:GLN:C	2.58	0.41
10:J:131:THR:HG22	10:J:134:GLU:N	2.28	0.41
12:L:27:ARG:NE	42:L:8980:HOH:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:38:LYS:HE2	14:N:107:ASN:ND2	2.35	0.41
17:Q:40:HIS:HE1	30:0:949:U:O2'	2.04	0.41
21:U:52:THR:HB	21:U:55:ALA:H	1.85	0.41
24:X:23:HIS:C	24:X:24:LYS:HG3	2.41	0.41
24:X:41:PHE:CZ	24:X:74:ALA:HB3	2.56	0.41
25:Y:187:VAL:HG23	25:Y:192:ASP:HB3	2.02	0.41
27:1:20:ARG:HH21	30:0:120:A:H5'	1.85	0.41
27:1:25:LYS:O	27:1:25:LYS:CG	2.67	0.41
29:3:20:HIS:CD2	29:3:71:CYS:HA	2.56	0.41
29:3:47:GLY:HA2	30:0:2121:G:H4'	2.01	0.41
30:0:52:A:C2	30:0:110:C:C2	3.08	0.41
30:0:215:A:N1	30:0:393:G:H1'	2.36	0.41
30:0:240:C:H1'	30:0:431:G:N2	2.35	0.41
30:0:537:G:H4'	30:0:538:C:O5'	2.21	0.41
30:0:705:C:H3'	30:0:706:G:C8	2.55	0.41
30:0:727:G:H5'	30:0:728:C:OP2	2.21	0.41
30:0:1170:U:O2'	30:0:1172:G:N7	2.49	0.41
30:0:1183:C:H42	30:0:1184:C:H41	1.62	0.41
30:0:1522:A:H2'	30:0:1523:G:H5'	2.03	0.41
30:0:1736:A:H1'	42:0:9381:HOH:O	2.21	0.41
30:0:2867:G:H2'	30:0:2868:C:C6	2.56	0.41
1:A:105:VAL:HG12	1:A:106:CYS:H	1.83	0.41
1:A:235:ARG:NH1	42:A:9014:HOH:O	2.53	0.41
2:B:286:ASN:O	2:B:306:LYS:HE3	2.21	0.41
3:C:123:LEU:O	3:C:125:ALA:N	2.54	0.41
3:C:194:PHE:HA	3:C:234:VAL:CG1	2.47	0.41
4:D:76:ARG:NH1	31:9:42:C:O2	2.52	0.41
4:D:158:ASN:HB2	4:D:161:ASP:HB2	2.02	0.41
6:F:24:ARG:HG3	6:F:25:ASP:H	1.86	0.41
6:F:59:ILE:HD13	30:0:263:U:O4'	2.20	0.41
9:I:130:LEU:HB2	9:I:132:VAL:HG23	2.03	0.41
10:J:107:ASN:HD22	10:J:108:PRO:N	2.19	0.41
12:L:145:LEU:O	12:L:148:GLU:HG3	2.20	0.41
13:M:20:LEU:HA	13:M:23:LEU:HB2	2.03	0.41
15:O:25:VAL:HG23	15:O:26:TRP:CE3	2.56	0.41
16:P:28:GLN:HB2	42:P:6051:HOH:O	2.20	0.41
16:P:98:ILE:HG21	30:0:1597:A:H5"	2.02	0.41
17:Q:31:GLU:HA	17:Q:31:GLU:OE1	2.21	0.41
18:R:94:ASN:ND2	30:0:500:G:O2'	2.47	0.41
20:T:1:SER:H3	20:T:7:GLN:HE21	1.69	0.41
20:T:52:ARG:HH22	30:0:308:U:H2'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:23:MET:C	23:W:25:ASN:H	2.22	0.41
23:W:31:HIS:HB3	23:W:115:THR:CG2	2.51	0.41
23:W:130:HIS:C	23:W:136:GLY:HA3	2.40	0.41
26:Z:81:CYS:SG	26:Z:83:TYR:HB3	2.61	0.41
29:3:60:LYS:HG3	42:0:9354:HOH:O	2.21	0.41
30:0:10:U:O4	30:0:532:A:OP2	2.39	0.41
30:0:113:A:H3'	30:0:114:A:C5'	2.50	0.41
30:0:116:G:H2'	30:0:117:A:H8	1.86	0.41
30:0:491:C:H2'	30:0:492:C:H6	1.86	0.41
30:0:919:U:H5'	30:0:2465:A:O2'	2.21	0.41
30:0:1118:A:H3'	30:0:1119:G:H5"	2.03	0.41
30:0:1211:G:H2'	30:0:1212:C:H6	1.85	0.41
30:0:1321:A:H2'	30:0:1322:G:C8	2.56	0.41
30:0:1343:C:H2'	30:0:1344:G:O5'	2.21	0.41
30:0:1358:A:N7	30:0:1360:C:C2	2.89	0.41
30:0:1421:C:H2'	30:0:1422:U:H6	1.86	0.41
30:0:1423:C:O2'	30:0:1424:A:H5'	2.21	0.41
30:0:1456:C:H2'	30:0:1457:U:C6	2.56	0.41
30:0:1573:A:N7	30:0:1574:C:C2	2.89	0.41
30:0:1617:C:C4	30:0:1643:C:H4'	2.56	0.41
30:0:1757:U:H6	30:0:1757:U:O5'	2.03	0.41
30:0:1973:A:H2'	30:0:1974:G:O4'	2.21	0.41
30:0:2096:A:H2'	30:0:2539:U:O4'	2.21	0.41
30:0:2111:G:H2'	30:0:2112:A:O4'	2.21	0.41
30:0:2305:A:H4'	30:0:2392:C:C6	2.56	0.41
30:0:2397:G:H2'	30:0:2398:A:C8	2.56	0.41
30:0:2474:A:H4'	30:0:2475:C:O5'	2.21	0.41
30:0:2531:U:C2'	30:0:2532:A:H5'	2.51	0.41
30:0:2573:G:O2'	30:0:2574:G:H5'	2.20	0.41
1:A:141:PRO:HG2	30:0:1855:G:O6	2.20	0.41
1:A:164:ARG:HB2	26:Z:92:SER:OG	2.21	0.41
2:B:71:VAL:HG11	2:B:296:LEU:HD22	2.02	0.41
2:B:221:GLN:HB2	42:B:9055:HOH:O	2.21	0.41
3:C:133:ARG:HD2	42:C:8613:HOH:O	2.21	0.41
9:I:95:LEU:HG	9:I:132:VAL:CG1	2.51	0.41
11:K:6:ALA:HB3	11:K:116:GLU:HG2	2.01	0.41
13:M:5:TYR:O	13:M:7:TYR:N	2.54	0.41
13:M:54:TYR:CG	13:M:55:LYS:N	2.89	0.41
14:N:165:ALA:HA	42:N:8823:HOH:O	2.21	0.41
16:P:59:ARG:O	16:P:62:ALA:HB3	2.20	0.41
17:Q:15:LYS:HD3	30:0:2364:A:H5"	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:84:ALA:O	18:R:88:PHE:HD1	2.04	0.41
19:S:7:HIS:HA	19:S:8:PRO:HD3	1.92	0.41
19:S:41:VAL:HG21	19:S:66:VAL:HG21	2.03	0.41
24:X:20:GLU:HG3	24:X:21:PRO:HD2	2.03	0.41
28:2:21:VAL:O	28:2:22:PRO:C	2.59	0.41
30:0:287:C:H2'	30:0:288:A:H8	1.86	0.41
30:0:544:G:H2'	30:0:545:G:C5'	2.51	0.41
30:0:574:G:O2'	30:0:575:A:H5'	2.21	0.41
30:0:629:A:H2'	30:0:630:A:O4'	2.21	0.41
30:0:907:A:H4'	30:0:1328:A:C2	2.56	0.41
30:0:1207:A:H5'	30:0:1208:C:OP2	2.21	0.41
30:0:1220:U:O2'	30:0:1221:G:H5'	2.20	0.41
30:0:2032:U:O2'	30:0:2033:G:H5"	2.21	0.41
30:0:2326:C:H4'	30:0:2412:G:O4'	2.21	0.41
30:0:2588:OMG:HM23	30:0:2617:G:C2	2.56	0.41
31:9:3:A:C2	31:9:21:G:N3	2.89	0.41
31:9:47:A:C2	31:9:48:C:C2	3.08	0.41
2:B:215:VAL:N	2:B:220:VAL:HG22	2.36	0.40
2:B:223:ARG:NE	2:B:232:TRP:HB3	2.35	0.40
2:B:233:ARG:HD2	42:0:9321:HOH:O	2.21	0.40
3:C:78:ARG:O	3:C:79:ARG:HB3	2.21	0.40
3:C:136:VAL:HG22	3:C:137:PRO:HA	2.03	0.40
5:E:15:GLN:CG	5:E:20:ILE:HG12	2.48	0.40
8:H:170:ARG:HD2	42:H:8992:HOH:O	2.21	0.40
13:M:72:ALA:CB	13:M:93:ARG:NE	2.84	0.40
13:M:191:GLY:O	30:0:175:G:H5"	2.21	0.40
16:P:55:LYS:CG	16:P:56:GLY:N	2.84	0.40
20:T:43:ASN:C	20:T:45:GLY:N	2.72	0.40
20:T:75:GLU:HB3	42:T:4772:HOH:O	2.21	0.40
23:W:59:GLN:NE2	23:W:97:ALA:HB3	2.36	0.40
26:Z:48:ARG:O	26:Z:51:ALA:HB3	2.21	0.40
30:0:85:C:H3'	30:0:86:A:H2'	2.03	0.40
30:0:267:G:H2'	30:0:268:U:O4'	2.20	0.40
30:0:820:G:H5'	30:0:821:U:H5'	2.03	0.40
30:0:1065:G:H2'	30:0:1066:U:O4'	2.21	0.40
30:0:1359:U:C5	30:0:2101:A:C8	3.10	0.40
30:0:1588:G:H1'	30:0:1607:A:N6	2.37	0.40
30:0:1739:G:O2'	30:0:1740:U:H5'	2.21	0.40
30:0:1773:G:N2	30:0:1774:G:C8	2.89	0.40
30:0:1797:A:H2'	30:0:1799:G:O5'	2.21	0.40
30:0:2057:U:O5'	30:0:2057:U:H6	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2656:G:O2'	30:0:2657:G:H5'	2.20	0.40
30:0:2851:G:H2'	30:0:2852:A:H5'	2.00	0.40
8:H:43:ALA:HB1	8:H:140:TYR:CE2	2.56	0.40
8:H:49:GLN:NE2	8:H:140:TYR:HE2	2.19	0.40
9:I:70:THR:O	9:I:74:ILE:HG13	2.22	0.40
9:I:132:VAL:O	9:I:132:VAL:HG12	2.21	0.40
10:J:107:ASN:HD22	10:J:107:ASN:C	2.24	0.40
20:T:21:LYS:HA	20:T:24:ARG:HD2	2.03	0.40
23:W:115:THR:CG2	23:W:116:LEU:N	2.84	0.40
29:3:11:CYS:HB2	29:3:20:HIS:CE1	2.56	0.40
29:3:42:ARG:HG3	29:3:42:ARG:NH1	2.36	0.40
29:3:86:GLY:HA3	30:0:2318:C:OP1	2.21	0.40
30:0:69:A:C8	30:0:69:A:C3'	3.04	0.40
30:0:233:U:H2'	30:0:234:A:O4'	2.21	0.40
30:0:297:U:H6	30:0:297:U:O5'	2.03	0.40
30:0:451:C:C2'	30:0:452:G:H5'	2.51	0.40
30:0:632:A:OP2	30:0:2534:C:O2'	2.34	0.40
30:0:1041:U:H4'	30:0:1295:G:H5'	2.02	0.40
30:0:1552:G:N2	30:0:1634:G:H1'	2.36	0.40
30:0:1724:U:H2'	42:0:5552:HOH:O	2.21	0.40
30:0:2563:U:H2'	30:0:2565:C:O5'	2.21	0.40
30:0:2800:A:H5'	30:0:2801:A:OP2	2.21	0.40
30:0:2831:C:H2'	30:0:2832:C:C5'	2.51	0.40
2:B:70:PRO:HG3	30:0:2719:A:C2	2.57	0.40
2:B:215:VAL:HG11	2:B:234:ARG:NH2	2.36	0.40
5:E:36:PRO:CD	10:J:127:ILE:HG13	2.52	0.40
5:E:70:GLU:O	5:E:73:PHE:HB2	2.21	0.40
7:G:26:MET:HE1	42:0:9290:HOH:O	2.20	0.40
8:H:142:ASN:O	8:H:144:GLU:N	2.53	0.40
10:J:47:THR:HB	30:0:1244:U:H6	1.85	0.40
14:N:143:ARG:NH2	14:N:169:PRO:HB2	2.35	0.40
15:O:87:THR:O	15:O:91:GLN:HG3	2.20	0.40
20:T:2:LYS:HE2	42:T:2822:HOH:O	2.21	0.40
30:0:36:C:C2	30:0:447:A:C2	3.10	0.40
30:0:39:G:H2'	30:0:40:C:O4'	2.21	0.40
30:0:80:A:H4'	30:0:81:G:O5'	2.22	0.40
30:0:190:G:O2'	30:0:204:A:N3	2.46	0.40
30:0:426:G:H5"	42:0:9419:HOH:O	2.21	0.40
30:0:653:U:H3	30:0:752:G:H1	1.70	0.40
30:0:745:G:H5"	30:0:746:A:OP1	2.20	0.40
30:0:1270:U:H2'	30:0:1271:A:H8	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1445:G:H21	30:0:1678:A:H1'	1.84	0.40
30:0:2685:C:O2'	30:0:2686:C:H5'	2.22	0.40
2:B:229:ARG:NH2	30:0:1753:C:O2	2.38	0.40
2:B:267:LYS:HA	42:0:3465:HOH:O	2.22	0.40
4:D:170:TYR:N	4:D:170:TYR:CD1	2.89	0.40
6:F:26:THR:HG21	6:F:102:GLY:O	2.20	0.40
7:G:23:ILE:O	7:G:27:ILE:HG13	2.21	0.40
8:H:82:GLU:O	8:H:83:GLU:HG3	2.22	0.40
12:L:130:ARG:O	12:L:132:LYS:N	2.54	0.40
15:O:4:ASN:HA	15:O:5:PRO:HD3	1.88	0.40
16:P:59:ARG:HH22	16:P:66:GLN:NE2	2.11	0.40
19:S:45:TYR:HE2	19:S:81:ILE:HG12	1.86	0.40
29:3:6:ARG:HB3	29:3:20:HIS:O	2.21	0.40
30:0:17:G:H2'	30:0:18:C:H6	1.85	0.40
30:0:168:C:O5'	30:0:168:C:H6	2.05	0.40
30:0:661:G:C5	30:0:686:A:C2	3.10	0.40
30:0:1114:A:H2'	30:0:1115:U:H6	1.86	0.40
30:0:2325:U:O2'	30:0:2411:C:H1'	2.21	0.40
30:0:2852:A:H4'	30:0:2853:U:C5	2.57	0.40
1:A:2:ARG:HG3	1:A:197:VAL:HG22	2.03	0.40
2:B:5:ARG:NH2	30:0:2548:C:OP2	2.54	0.40
2:B:51:VAL:HG23	2:B:329:TYR:O	2.21	0.40
2:B:298:LYS:HG2	42:0:6362:HOH:O	2.21	0.40
10:J:71:TYR:HA	10:J:72:PRO:HD2	1.89	0.40
12:L:104:ASP:O	12:L:105:TYR:HB3	2.21	0.40
14:N:41:LYS:HE3	42:9:9020:HOH:O	2.22	0.40
17:Q:16:ASN:ND2	17:Q:45:PRO:CG	2.84	0.40
18:R:2:ILE:HG22	30:0:21:G:H4'	2.03	0.40
18:R:43:ALA:O	18:R:46:TYR:HB3	2.22	0.40
20:T:16:LEU:HD12	30:0:100:C:H5'	2.02	0.40
23:W:54:PHE:CZ	23:W:140:LYS:HB2	2.57	0.40
25:Y:100:ARG:HD2	25:Y:232:THR:HB	2.03	0.40
26:Z:54:GLU:HA	26:Z:57:MET:CE	2.50	0.40
29:3:40:ARG:HG3	29:3:52:PHE:CD2	2.57	0.40
29:3:91:GLN:O	29:3:92:GLU:HB2	2.22	0.40
30:0:69:A:C8	30:0:69:A:H3'	2.56	0.40
30:0:862:U:O2'	30:0:863:G:H5'	2.21	0.40
30:0:1228:C:H2'	30:0:1229:C:O4'	2.21	0.40
30:0:1688:G:C6	30:0:1692:C:C6	3.09	0.40
30:0:2551:C:O2'	30:0:2552:C:H5'	2.21	0.40
30:0:2604:A:H5'	42:0:6629:HOH:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2824:C:H5"	30:0:2825:C:H5'	2.04	0.40
31:9:1:U:O3'	31:9:3:A:H5"	2.21	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 X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	233/240 (97%)	198 (85%)	25 (11%)	10 (4%)	2 12
2	B	333/338 (98%)	285 (86%)	41 (12%)	7 (2%)	7 29
3	C	242/246 (98%)	202 (84%)	32 (13%)	8 (3%)	4 18
4	D	132/177 (75%)	87 (66%)	35 (26%)	10 (8%)	1 4
5	E	168/178 (94%)	150 (89%)	17 (10%)	1 (1%)	25 60
6	F	115/120 (96%)	94 (82%)	15 (13%)	6 (5%)	2 9
7	G	25/348 (7%)	15 (60%)	7 (28%)	3 (12%)	0 1
8	H	154/177 (87%)	125 (81%)	23 (15%)	6 (4%)	3 14
9	I	66/162 (41%)	43 (65%)	18 (27%)	5 (8%)	1 4
10	J	138/145 (95%)	120 (87%)	15 (11%)	3 (2%)	6 28
11	K	128/132 (97%)	115 (90%)	8 (6%)	5 (4%)	3 14
12	L	139/165 (84%)	106 (76%)	27 (19%)	6 (4%)	2 12
13	M	190/196 (97%)	170 (90%)	16 (8%)	4 (2%)	7 29
14	N	182/187 (97%)	153 (84%)	19 (10%)	10 (6%)	2 8
15	O	111/116 (96%)	92 (83%)	19 (17%)	0	100 100
16	P	139/149 (93%)	129 (93%)	8 (6%)	2 (1%)	11 39
17	Q	91/96 (95%)	76 (84%)	11 (12%)	4 (4%)	2 12
18	R	146/155 (94%)	131 (90%)	12 (8%)	3 (2%)	7 29

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
19	S	77/85 (91%)	67 (87%)	9 (12%)	1 (1%)	12 41
20	T	115/120 (96%)	95 (83%)	17 (15%)	3 (3%)	5 24
21	U	51/67 (76%)	45 (88%)	4 (8%)	2 (4%)	3 14
22	V	63/71 (89%)	53 (84%)	9 (14%)	1 (2%)	9 36
23	W	150/154 (97%)	131 (87%)	19 (13%)	0	100 100
24	X	78/92 (85%)	68 (87%)	7 (9%)	3 (4%)	3 15
25	Y	140/240 (58%)	128 (91%)	11 (8%)	1 (1%)	22 56
26	Z	69/116 (60%)	51 (74%)	13 (19%)	5 (7%)	1 4
27	1	54/57 (95%)	47 (87%)	6 (11%)	1 (2%)	8 32
28	2	42/50 (84%)	34 (81%)	8 (19%)	0	100 100
29	3	88/92 (96%)	77 (88%)	9 (10%)	2 (2%)	6 27
All	All	3659/4471 (82%)	3087 (84%)	460 (13%)	112 (3%)	4 19

All (112) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	27	LEU
1	A	34	ASP
1	A	37	VAL
1	A	208	HIS
2	B	181	ILE
4	D	16	PRO
4	D	27	ILE
4	D	171	ASP
6	F	101	ALA
9	I	113	SER
12	L	80	ASP
13	M	83	SER
14	N	154	LEU
14	N	183	ASP
14	N	184	ILE
24	X	87	ALA
26	Z	44	ARG
26	Z	105	ARG
29	3	56	PRO
1	A	205	GLY
2	B	291	ASP
3	C	69	HIS

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Mol	Chain	Res	Type
6	F	27	GLY
8	H	84	GLY
9	I	124	VAL
12	L	82	ALA
14	N	165	ALA
20	T	44	ALA
20	T	53	GLY
21	U	55	ALA
22	V	43	PRO
24	X	81	GLY
26	Z	59	GLU
1	A	24	LYS
1	A	119	ALA
3	C	8	LEU
3	C	121	ALA
4	D	28	GLY
4	D	60	GLU
4	D	61	PHE
4	D	137	PRO
4	D	147	ALA
5	E	164	ASP
6	F	100	ASP
7	G	72	ASP
8	H	71	SER
8	H	82	GLU
9	I	128	THR
10	J	15	ARG
10	J	76	ASP
11	K	65	ARG
11	K	126	SER
12	L	21	ARG
14	N	65	ASP
14	N	74	PRO
14	N	164	ASP
14	N	167	ASP
14	N	182	GLY
16	P	19	ASN
16	P	108	LEU
17	Q	23	THR
17	Q	48	PRO
19	S	4	VAL
21	U	46	ALA

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Mol	Chain	Res	Type
24	X	70	ILE
2	B	55	ASN
2	B	185	GLY
4	D	56	ARG
6	F	61	MET
6	F	64	PRO
8	H	70	LEU
8	H	143	VAL
8	H	145	ASP
12	L	50	GLY
12	L	102	ASP
13	M	6	SER
13	M	35	GLY
18	R	114	VAL
20	T	30	ASP
29	3	52	PHE
2	B	2	GLN
3	C	232	LEU
3	C	234	VAL
4	D	46	GLY
9	I	73	LEU
11	K	66	ARG
12	L	131	GLU
17	Q	31	GLU
18	R	20	GLU
26	Z	66	CYS
27	1	54	ALA
1	A	204	GLY
2	B	182	VAL
3	C	95	GLU
6	F	59	ILE
11	K	102	GLU
13	M	88	VAL
17	Q	54	PRO
18	R	32	ALA
25	Y	182	PHE
1	A	192	VAL
3	C	124	VAL
10	J	18	ILE
26	Z	67	GLY
2	B	30	PRO
1	A	88	ILE

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Mol	Chain	Res	Type
3	C	57	PRO
7	G	13	PRO
11	K	83	PRO
14	N	157	PRO
7	G	20	VAL
9	I	109	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	178/182 (98%)	167 (94%)	11 (6%)	18	48
2	B	281/283 (99%)	266 (95%)	15 (5%)	22	55
3	C	192/193 (100%)	179 (93%)	13 (7%)	16	45
4	D	116/148 (78%)	111 (96%)	5 (4%)	29	62
5	E	151/156 (97%)	144 (95%)	7 (5%)	27	60
6	F	92/94 (98%)	92 (100%)	0	100	100
7	G	27/283 (10%)	26 (96%)	1 (4%)	34	66
8	H	133/145 (92%)	127 (96%)	6 (4%)	27	61
9	I	58/130 (45%)	57 (98%)	1 (2%)	60	83
10	J	117/121 (97%)	109 (93%)	8 (7%)	16	45
11	K	105/106 (99%)	102 (97%)	3 (3%)	42	73
12	L	113/127 (89%)	108 (96%)	5 (4%)	28	62
13	M	157/160 (98%)	149 (95%)	8 (5%)	24	56
14	N	148/150 (99%)	143 (97%)	5 (3%)	37	69
15	O	93/94 (99%)	93 (100%)	0	100	100
16	P	113/117 (97%)	111 (98%)	2 (2%)	59	82
17	Q	79/80 (99%)	77 (98%)	2 (2%)	47	76
18	R	117/122 (96%)	112 (96%)	5 (4%)	29	62
19	S	71/74 (96%)	69 (97%)	2 (3%)	43	74

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
20	T	104/106 (98%)	99 (95%)	5 (5%)	25 59
21	U	44/53 (83%)	42 (96%)	2 (4%)	27 61
22	V	51/57 (90%)	51 (100%)	0	100 100
23	W	129/130 (99%)	122 (95%)	7 (5%)	22 54
24	X	65/74 (88%)	58 (89%)	7 (11%)	6 23
25	Y	120/195 (62%)	111 (92%)	9 (8%)	13 40
26	Z	59/94 (63%)	56 (95%)	3 (5%)	24 56
27	1	46/47 (98%)	46 (100%)	0	100 100
28	2	42/46 (91%)	40 (95%)	2 (5%)	25 59
29	3	78/79 (99%)	76 (97%)	2 (3%)	46 75
All	All	3079/3646 (84%)	2943 (96%)	136 (4%)	28 62

All (136) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3	ARG
1	A	36	ASP
1	A	38	ILE
1	A	69	LEU
1	A	120	ARG
1	A	131	HIS
1	A	153	ARG
1	A	171	LYS
1	A	179	MET
1	A	192	VAL
1	A	217	ARG
2	B	7	ARG
2	B	11	LEU
2	B	16	ARG
2	B	27	ASN
2	B	71	VAL
2	B	82	VAL
2	B	90	THR
2	B	103	ASP
2	B	132	HIS
2	B	162	MET
2	B	184	ASP
2	B	190	MET

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Mol	Chain	Res	Type
2	B	254	GLN
2	B	277	GLU
2	B	312	ARG
3	C	16	VAL
3	C	27	ARG
3	C	76	ARG
3	C	101	ASP
3	C	115	LEU
3	C	132	ASP
3	C	172	THR
3	C	187	ARG
3	C	188	ARG
3	C	211	ASP
3	C	236	THR
3	C	237	GLU
3	C	240	LEU
4	D	24	HIS
4	D	50	VAL
4	D	131	THR
4	D	133	ASN
4	D	137	PRO
5	E	7	ILE
5	E	102	VAL
5	E	126	ILE
5	E	132	THR
5	E	143	GLN
5	E	155	ASN
5	E	164	ASP
7	G	73	ASP
8	H	21	GLU
8	H	51	SER
8	H	65	LEU
8	H	87	LYS
8	H	91	ARG
8	H	157	TYR
9	I	135	GLU
10	J	46	ILE
10	J	47	THR
10	J	52	GLN
10	J	74	ARG
10	J	79	PHE
10	J	107	ASN

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Mol	Chain	Res	Type
10	J	112	ASP
10	J	131	THR
11	K	4	LEU
11	K	7	ASP
11	K	10	GLN
12	L	35	ARG
12	L	43	HIS
12	L	89	PHE
12	L	101	ASP
12	L	140	VAL
13	M	46	LEU
13	M	52	GLN
13	M	68	ARG
13	M	93	ARG
13	M	99	ARG
13	M	116	ASN
13	M	130	GLU
13	M	154	ASP
14	N	49	THR
14	N	103	ASP
14	N	110	THR
14	N	124	ASP
14	N	139	TRP
16	P	21	VAL
16	P	98	ILE
17	Q	11	ARG
17	Q	95	GLU
18	R	39	THR
18	R	61	GLN
18	R	70	SER
18	R	76	ASP
18	R	90	ASP
19	S	12	GLU
19	S	44	GLN
20	T	23	VAL
20	T	39	ASN
20	T	48	VAL
20	T	89	ARG
20	T	96	VAL
21	U	19	THR
21	U	53	ASP
23	W	26	ILE

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Mol	Chain	Res	Type
23	W	35	VAL
23	W	52	VAL
23	W	73	LEU
23	W	88	THR
23	W	125	HIS
23	W	146	ILE
24	X	8	ARG
24	X	27	ASP
24	X	46	ASP
24	X	49	ARG
24	X	79	GLU
24	X	80	GLU
24	X	82	GLU
25	Y	108	ASP
25	Y	141	THR
25	Y	163	THR
25	Y	169	ARG
25	Y	189	ASN
25	Y	203	VAL
25	Y	204	ARG
25	Y	220	GLU
25	Y	235	GLU
26	Z	46	SER
26	Z	68	GLU
26	Z	106	SER
28	2	16	ASN
28	2	18	ASN
29	3	15	ASN
29	3	56	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (92) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	199	HIS
2	B	27	ASN
2	B	145	HIS
2	B	238	ASN
2	B	260	HIS
2	B	320	GLN
2	B	332	ASN
3	C	2	GLN
3	C	11	ASN

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Mol	Chain	Res	Type
3	C	39	GLN
3	C	73	GLN
3	C	129	HIS
4	D	47	GLN
4	D	103	ASN
4	D	133	ASN
4	D	155	HIS
5	E	74	HIS
5	E	90	HIS
5	E	106	ASN
5	E	143	GLN
7	G	17	GLN
7	G	64	ASN
8	H	34	HIS
8	H	59	GLN
8	H	62	HIS
8	H	148	HIS
9	I	88	GLN
9	I	99	GLN
10	J	25	GLN
10	J	52	GLN
10	J	107	ASN
10	J	126	ASN
11	K	10	GLN
11	K	42	ASN
12	L	18	HIS
12	L	20	ASN
12	L	41	HIS
12	L	42	ASN
12	L	43	HIS
12	L	58	GLN
13	M	24	GLN
13	M	52	GLN
13	M	58	GLN
13	M	137	ASN
14	N	21	HIS
14	N	40	ASN
14	N	93	GLN
14	N	107	ASN
14	N	153	GLN
15	O	100	GLN
16	P	50	GLN

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Mol	Chain	Res	Type
16	P	66	GLN
16	P	88	GLN
16	P	118	GLN
17	Q	16	ASN
17	Q	40	HIS
17	Q	67	GLN
18	R	22	GLN
18	R	61	GLN
18	R	94	ASN
18	R	98	ASN
18	R	113	HIS
18	R	117	HIS
18	R	122	GLN
18	R	123	GLN
19	S	44	GLN
19	S	51	GLN
19	S	53	ASN
20	T	7	GLN
20	T	11	GLN
20	T	39	ASN
21	U	39	ASN
21	U	48	ASN
22	V	60	GLN
23	W	49	ASN
23	W	59	GLN
23	W	110	GLN
23	W	119	HIS
23	W	125	HIS
23	W	141	HIS
24	X	23	HIS
25	Y	134	HIS
25	Y	149	GLN
25	Y	189	ASN
27	1	8	GLN
27	1	16	HIS
27	1	28	HIS
28	2	16	ASN
28	2	18	ASN
28	2	41	HIS
28	2	45	ASN
29	3	48	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
30	0	2745/2923 (93%)	240 (8%)	30 (1%)
31	9	121/122 (99%)	18 (14%)	2 (1%)
32	5	1/3 (33%)	0	0
33	6	1/3 (33%)	0	0
All	All	2868/3051 (94%)	258 (8%)	32 (1%)

All (258) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
30	0	31	C
30	0	67	A
30	0	69	A
30	0	70	A
30	0	71	G
30	0	86	A
30	0	87	C
30	0	88	G
30	0	114	A
30	0	115	U
30	0	120	A
30	0	130	C
30	0	131	A
30	0	141	C
30	0	151	A
30	0	166	A
30	0	186	A
30	0	191	A
30	0	192	A
30	0	200	C
30	0	204	A
30	0	219	G
30	0	237	G
30	0	271	C
30	0	272	A
30	0	273	G
30	0	283	U
30	0	284	C
30	0	308	U
30	0	309	C
30	0	318	U
30	0	336	G

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Mol	Chain	Res	Type
30	0	337	A
30	0	358	G
30	0	381	G
30	0	397	A
30	0	417	G
30	0	461	C
30	0	487	G
30	0	497	A
30	0	498	A
30	0	511	A
30	0	514	G
30	0	537	G
30	0	538	C
30	0	539	G
30	0	542	A
30	0	545	G
30	0	553	G
30	0	559	U
30	0	588	G
30	0	593	A
30	0	604	G
30	0	620	A
30	0	632	A
30	0	644	G
30	0	660	A
30	0	688	A
30	0	698	A
30	0	701	U
30	0	702	G
30	0	735	C
30	0	746	A
30	0	759	C
30	0	777	U
30	0	809	G
30	0	821	U
30	0	835	U
30	0	840	U
30	0	857	A
30	0	858	U
30	0	868	G
30	0	869	G
30	0	871	G

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Mol	Chain	Res	Type
30	0	872	U
30	0	875	A
30	0	877	G
30	0	878	G
30	0	882	A
30	0	905	C
30	0	920	C
30	0	921	G
30	0	923	A
30	0	938	G
30	0	953	G
30	0	960	G
30	0	961	A
30	0	1006	A
30	0	1008	C
30	0	1029	U
30	0	1045	G
30	0	1059	G
30	0	1060	C
30	0	1072	G
30	0	1081	A
30	0	1087	G
30	0	1088	A
30	0	1100	G
30	0	1109	U
30	0	1110	G
30	0	1119	G
30	0	1130	U
30	0	1165	G
30	0	1166	A
30	0	1174	A
30	0	1175	G
30	0	1185	U
30	0	1192	A
30	0	1193	A
30	0	1206	U
30	0	1208	C
30	0	1216	G
30	0	1238	C
30	0	1239	G
30	0	1279	U
30	0	1289	C

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Mol	Chain	Res	Type
30	0	1342	C
30	0	1351	G
30	0	1353	C
30	0	1357	A
30	0	1360	C
30	0	1377	C
30	0	1378	G
30	0	1407	A
30	0	1474	C
30	0	1505	U
30	0	1506	U
30	0	1524	U
30	0	1525	G
30	0	1526	A
30	0	1528	A
30	0	1559	A
30	0	1592	G
30	0	1603	A
30	0	1625	U
30	0	1626	A
30	0	1634	G
30	0	1656	A
30	0	1667	A
30	0	1682	A
30	0	1685	A
30	0	1692	C
30	0	1701	A
30	0	1722	U
30	0	1723	G
30	0	1725	C
30	0	1731	C
30	0	1752	G
30	0	1778	A
30	0	1779	A
30	0	1798	C
30	0	1819	G
30	0	1820	G
30	0	1829	A
30	0	1856	C
30	0	1873	G
30	0	1879	U
30	0	1919	A

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Mol	Chain	Res	Type
30	0	1942	A
30	0	1968	A
30	0	1971	G
30	0	1973	A
30	0	1980	U
30	0	1996	U
30	0	2004	U
30	0	2006	C
30	0	2008	U
30	0	2011	A
30	0	2012	U
30	0	2013	G
30	0	2034	U
30	0	2064	U
30	0	2072	G
30	0	2073	G
30	0	2074	A
30	0	2096	A
30	0	2101	A
30	0	2102	G
30	0	2103	A
30	0	2104	C
30	0	2110	G
30	0	2238	A
30	0	2243	C
30	0	2258	A
30	0	2271	G
30	0	2272	G
30	0	2291	A
30	0	2317	C
30	0	2321	A
30	0	2354	A
30	0	2361	A
30	0	2369	A
30	0	2379	G
30	0	2422	U
30	0	2462	G
30	0	2476	C
30	0	2480	G
30	0	2483	A
30	0	2507	G
30	0	2509	A

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Mol	Chain	Res	Type
30	0	2511	A
30	0	2527	U
30	0	2533	C
30	0	2536	C
30	0	2537	G
30	0	2541	U
30	0	2553	A
30	0	2564	G
30	0	2570	G
30	0	2589	U
30	0	2601	A
30	0	2602	G
30	0	2608	C
30	0	2613	G
30	0	2634	G
30	0	2637	A
30	0	2638	G
30	0	2645	U
30	0	2648	U
30	0	2649	A
30	0	2664	A
30	0	2681	A
30	0	2682	C
30	0	2726	U
30	0	2747	C
30	0	2748	G
30	0	2749	U
30	0	2750	G
30	0	2762	C
30	0	2768	A
30	0	2786	G
30	0	2800	A
30	0	2811	A
30	0	2812	A
30	0	2825	C
30	0	2876	G
30	0	2890	A
30	0	2896	A
30	0	2903	C
30	0	2914	A
31	9	2	U
31	9	7	G

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Mol	Chain	Res	Type
31	9	14	G
31	9	22	G
31	9	23	U
31	9	24	U
31	9	25	G
31	9	34	A
31	9	39	U
31	9	40	C
31	9	41	C
31	9	43	G
31	9	52	A
31	9	57	A
31	9	66	G
31	9	77	A
31	9	114	G
31	9	122	C

All (32) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
30	0	129	A
30	0	603	A
30	0	644	G
30	0	699	C
30	0	834	G
30	0	857	A
30	0	871	G
30	0	877	G
30	0	1237	U
30	0	1352	A
30	0	1474	C
30	0	1684	A
30	0	1692	C
30	0	1730	G
30	0	1856	C
30	0	1942	A
30	0	1979	G
30	0	2011	A
30	0	2103	A
30	0	2313	C
30	0	2467	A
30	0	2526	C

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Mol	Chain	Res	Type
30	0	2536	C
30	0	2637	A
30	0	2649	A
30	0	2681	A
30	0	2718	C
30	0	2726	U
30	0	2761	A
30	0	2852	A
31	9	55	U
31	9	65	A

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

6 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
30	1MA	0	628	37,30	16,25,26	1.39	3 (18%)	18,37,40	1.41	4 (22%)
30	OMG	0	2588	32,30	18,26,27	1.18	2 (11%)	19,38,41	0.75	1 (5%)
30	PSU	0	2621	30	18,21,22	1.50	2 (11%)	22,30,33	1.29	3 (13%)
33	8AN	6	76	33,30	19,24,25	1.10	1 (5%)	13,35,38	1.79	3 (23%)
30	UR3	0	2619	30	19,22,23	0.56	0	26,32,35	0.61	1 (3%)
30	OMU	0	2587	30	19,22,23	0.35	0	26,31,34	0.37	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	1MA	0	628	37,30	-	0/3/25/26	0/3/3/3
30	OMG	0	2588	32,30	-	0/5/27/28	0/3/3/3
30	PSU	0	2621	30	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	8AN	6	76	33,30	-	3/3/25/26	0/3/3/3
30	UR3	0	2619	30	-	0/7/25/26	0/2/2/2
30	OMU	0	2587	30	-	0/9/27/28	0/2/2/2

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	2621	PSU	C2-N1	5.10	1.43	1.36
30	0	628	1MA	C2-N3	3.74	1.33	1.29
30	0	2588	OMG	C5-C6	-3.57	1.40	1.47
30	0	2621	PSU	C6-C5	2.65	1.38	1.35
30	0	628	1MA	C6-N6	2.58	1.34	1.27
30	0	2588	OMG	C8-N7	-2.31	1.31	1.35
33	6	76	8AN	C3'-N3'	-2.18	1.44	1.47
30	0	628	1MA	C8-N7	-2.15	1.31	1.35

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	6	76	8AN	O2'-C2'-C3'	3.74	121.22	111.47
30	0	2621	PSU	C6-C5-C4	3.52	120.66	118.20
33	6	76	8AN	O4'-C4'-C3'	3.51	109.19	104.15
30	0	628	1MA	CM1-N1-C6	3.31	125.29	120.27
30	0	628	1MA	N1-C2-N3	2.85	129.35	126.02
30	0	2621	PSU	O2-C2-N1	2.66	125.72	122.79
30	0	2621	PSU	C6-N1-C2	-2.54	120.09	122.68
30	0	628	1MA	C5-C6-N1	2.53	117.66	113.90
30	0	2619	UR3	C4-N3-C2	2.22	126.66	124.56
30	0	2588	OMG	O6-C6-C5	2.14	128.55	124.37
30	0	628	1MA	CM1-N1-C2	-2.04	116.25	120.55
33	6	76	8AN	C5-C6-N6	2.02	123.42	120.35

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
33	6	76	8AN	O4'-C4'-C5'-O5'
33	6	76	8AN	C4'-C5'-O5'-P
33	6	76	8AN	C3'-C4'-C5'-O5'

There are no ring outliers.

4 monomers are involved in 8 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	0	2588	OMG	2	0
33	6	76	8AN	4	0
30	0	2619	UR3	1	0
30	0	2587	OMU	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 307 ligands modelled in this entry, 305 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
41	ACA	6	78	-	7,7,8	1.83	2 (28%)	6,6,8	1.37	1 (16%)
40	PHE	6	77	-	10,11,12	1.29	2 (20%)	10,13,15	0.55	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
41	ACA	6	78	-	-	3/4/5/6	-
40	PHE	6	77	-	-	2/5/6/8	0/1/1/1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	6	78	ACA	C3-C2	-3.99	1.36	1.52
40	6	77	PHE	CE1-CD1	2.50	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	6	77	PHE	CA-N	-2.28	1.41	1.48
41	6	78	ACA	C5-C6	2.19	1.62	1.51

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	6	78	ACA	C5-C4-C3	-2.34	102.56	114.42

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
40	6	77	PHE	C-CA-CB-CG
41	6	78	ACA	C2-C3-C4-C5
41	6	78	ACA	C3-C4-C5-C6
40	6	77	PHE	N-CA-CB-CG
41	6	78	ACA	C4-C5-C6-N

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A	237/240 (98%)	-0.34	3 (1%) 77 61	24, 46, 80, 105	0
2	B	337/338 (99%)	-0.53	1 (0%) 94 87	26, 49, 75, 88	0
3	C	246/246 (100%)	-0.45	0 100 100	24, 45, 69, 80	0
4	D	140/177 (79%)	0.98	30 (21%) 0 0	64, 93, 124, 135	0
5	E	172/178 (96%)	-0.17	4 (2%) 60 43	41, 62, 84, 92	0
6	F	119/120 (99%)	0.40	11 (9%) 9 5	50, 73, 100, 114	0
7	G	29/348 (8%)	0.81	2 (6%) 16 10	75, 95, 109, 113	0
8	H	160/177 (90%)	-0.13	2 (1%) 77 61	39, 58, 93, 99	0
9	I	70/162 (43%)	3.41	47 (67%) 0 0	141, 152, 166, 168	0
10	J	142/145 (97%)	-0.46	0 100 100	35, 47, 66, 86	0
11	K	132/132 (100%)	-0.67	0 100 100	28, 41, 63, 73	0
12	L	145/165 (87%)	-0.09	1 (0%) 87 76	22, 67, 105, 121	0
13	M	194/196 (98%)	-0.49	0 100 100	25, 46, 68, 82	0
14	N	186/187 (99%)	-0.12	5 (2%) 54 38	42, 63, 116, 124	0
15	O	115/116 (99%)	-0.37	0 100 100	39, 55, 67, 75	0
16	P	143/149 (95%)	-0.48	0 100 100	35, 51, 62, 68	0
17	Q	95/96 (98%)	-0.39	0 100 100	35, 49, 66, 75	0
18	R	150/155 (96%)	-0.56	0 100 100	22, 42, 62, 69	0
19	S	81/85 (95%)	-0.30	1 (1%) 79 63	44, 56, 81, 94	0
20	T	119/120 (99%)	-0.17	3 (2%) 57 40	38, 54, 84, 116	0
21	U	53/67 (79%)	-0.33	1 (1%) 66 49	38, 49, 73, 86	0
22	V	65/71 (91%)	0.91	10 (15%) 2 1	55, 78, 115, 122	0
23	W	154/154 (100%)	-0.38	1 (0%) 89 78	37, 48, 72, 86	0
24	X	82/92 (89%)	-0.19	5 (6%) 21 12	39, 55, 80, 103	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
25	Y	142/240 (59%)	-0.54	1 (0%) 87 76	25, 44, 64, 90	0
26	Z	73/116 (62%)	0.10	4 (5%) 25 15	48, 67, 87, 96	0
27	1	56/57 (98%)	-0.60	0 100 100	22, 32, 39, 51	0
28	2	46/50 (92%)	-0.15	2 (4%) 35 22	29, 61, 76, 89	0
29	3	92/92 (100%)	-0.27	1 (1%) 80 65	33, 58, 71, 81	0
30	0	2749/2923 (94%)	-0.57	19 (0%) 87 76	16, 45, 92, 179	0
31	9	122/122 (100%)	-0.60	3 (2%) 57 40	36, 65, 92, 148	0
32	5	2/3 (66%)	2.19	1 (50%) 0 0	100, 100, 100, 102	0
33	6	2/3 (66%)	1.70	1 (50%) 0 0	96, 96, 96, 104	0
All	All	6650/7522 (88%)	-0.35	159 (2%) 59 42	16, 50, 99, 179	0

All (159) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
9	I	66	GLY	16.5
22	V	40	PRO	8.6
9	I	113	SER	7.9
9	I	132	VAL	7.4
9	I	72	GLU	7.4
9	I	74	ILE	7.0
4	D	57	THR	7.0
9	I	108	HIS	6.8
9	I	70	THR	6.6
9	I	71	ALA	6.5
22	V	1	THR	6.3
9	I	103	ILE	6.2
9	I	111	LEU	5.9
4	D	63	ILE	5.9
9	I	69	PRO	5.6
22	V	38	GLY	5.6
9	I	100	VAL	5.5
9	I	98	ASP	5.5
4	D	90	LEU	5.4
9	I	112	LEU	5.2
20	T	119	ALA	5.1
9	I	97	VAL	5.0
26	Z	34	SER	5.0
9	I	99	GLN	5.0
26	Z	35	SER	4.9

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Mol	Chain	Res	Type	RSRZ
19	S	81	ILE	4.7
9	I	101	LYS	4.7
9	I	121	LYS	4.6
9	I	73	LEU	4.4
9	I	116	LEU	4.3
9	I	80	PHE	4.3
26	Z	46	SER	4.3
9	I	123	VAL	4.2
9	I	76	ASP	4.2
9	I	109	PRO	4.2
9	I	104	ALA	4.2
4	D	93	LEU	4.2
30	0	1172	G	4.2
9	I	105	GLU	4.2
30	0	1199	A	4.1
4	D	106	PHE	4.1
7	G	23	ILE	4.0
28	2	49	GLU	4.0
6	F	16	ALA	3.9
30	0	1198	U	3.8
4	D	134	LEU	3.7
14	N	166	ALA	3.6
31	9	1	U	3.6
4	D	84	LEU	3.6
22	V	39	ALA	3.6
9	I	119	ALA	3.5
22	V	46	ILE	3.5
4	D	92	GLU	3.5
9	I	102	GLN	3.5
4	D	41	LEU	3.4
9	I	129	SER	3.4
4	D	40	ILE	3.4
4	D	44	ILE	3.4
9	I	106	GLN	3.3
26	Z	58	ASN	3.3
30	0	1200	A	3.3
6	F	17	LEU	3.3
4	D	26	GLY	3.2
9	I	91	PHE	3.2
6	F	28	ALA	3.2
6	F	22	VAL	3.2
9	I	128	THR	3.2

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Mol	Chain	Res	Type	RSRZ
9	I	94	ASP	3.1
4	D	166	ILE	3.1
14	N	160	SER	3.0
9	I	82	THR	3.0
6	F	47	LEU	3.0
9	I	86	GLU	3.0
31	9	2	U	3.0
4	D	74	THR	3.0
9	I	67	VAL	3.0
30	0	1169	U	2.9
9	I	127	CYS	2.9
1	A	37	VAL	2.9
9	I	120	ALA	2.9
24	X	71	ARG	2.9
30	0	735	C	2.9
30	0	1202	A	2.9
14	N	180	LEU	2.9
21	U	47	ARG	2.9
5	E	10	ASP	2.9
4	D	88	LEU	2.8
33	6	75	C	2.8
32	5	76	A	2.7
6	F	23	ALA	2.7
23	W	86	GLU	2.7
4	D	91	ALA	2.7
22	V	8	ILE	2.7
9	I	131	GLY	2.7
22	V	37	GLY	2.7
9	I	90	ASP	2.7
8	H	169	GLU	2.7
6	F	49	PHE	2.6
4	D	18	ILE	2.6
30	0	1177	A	2.6
12	L	91	VAL	2.6
2	B	117	GLU	2.6
8	H	174	LEU	2.6
4	D	85	GLN	2.5
14	N	179	LEU	2.5
9	I	133	THR	2.5
5	E	45	ASP	2.5
24	X	88	GLU	2.5
4	D	104	PHE	2.5

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Mol	Chain	Res	Type	RSRZ
9	I	77	GLU	2.5
4	D	61	PHE	2.4
4	D	27	ILE	2.4
30	0	970	U	2.4
1	A	236	GLY	2.4
4	D	130	VAL	2.4
4	D	170	TYR	2.4
20	T	35	TYR	2.4
9	I	126	THR	2.3
30	0	1165	G	2.3
30	0	1196	C	2.3
25	Y	236	VAL	2.3
24	X	65	ASN	2.3
30	0	2637	A	2.3
6	F	96	ALA	2.3
7	G	27	ILE	2.3
29	3	55	VAL	2.2
22	V	36	ALA	2.2
4	D	154	LYS	2.2
30	0	1197	G	2.2
4	D	75	LEU	2.2
6	F	20	LEU	2.2
24	X	80	GLU	2.2
4	D	64	ARG	2.2
4	D	77	ASP	2.2
5	E	154	ILE	2.2
6	F	45	ALA	2.2
22	V	3	LEU	2.2
14	N	147	ILE	2.1
22	V	41	GLU	2.1
28	2	35	ARG	2.1
9	I	78	ALA	2.1
9	I	81	GLU	2.1
4	D	101	THR	2.1
30	0	1171	A	2.1
30	0	282	C	2.1
30	0	1965	C	2.1
9	I	88	GLN	2.1
9	I	92	VAL	2.1
4	D	11	HIS	2.1
1	A	237	GLY	2.1
24	X	85	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
30	0	1163	G	2.1
5	E	100	ASP	2.1
4	D	47	GLN	2.0
30	0	1966	U	2.0
20	T	118	SER	2.0
31	9	24	U	2.0
6	F	25	ASP	2.0
30	0	1203	G	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
33	8AN	6	76	22/23	0.86	0.29	87,92,94,95	0
30	OMG	0	2588	24/25	0.97	0.12	30,34,35,37	0
30	OMU	0	2587	21/22	0.97	0.12	30,33,38,38	0
30	UR3	0	2619	21/22	0.98	0.14	40,41,44,47	0
30	PSU	0	2621	20/21	0.98	0.15	36,38,42,42	0
30	1MA	0	628	23/24	0.98	0.17	36,40,42,42	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	SR	0	8994	1/1	-0.13	0.78	200,200,200,200	0
39	K	0	8402	1/1	-0.04	0.92	117,117,117,117	0
36	SR	0	8961	1/1	-0.02	0.13	185,185,185,185	0
36	SR	0	8989	1/1	0.05	0.29	200,200,200,200	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
34	MG	0	8078	1/1	0.13	0.42	115,115,115,115	0
37	NA	0	8557	1/1	0.14	0.20	82,82,82,82	0
34	MG	0	8087	1/1	0.14	0.81	107,107,107,107	0
34	MG	0	8017	1/1	0.38	0.23	123,123,123,123	0
36	SR	0	9001	1/1	0.41	0.37	190,190,190,190	0
37	NA	0	8573	1/1	0.46	0.20	79,79,79,79	0
34	MG	0	8010	1/1	0.46	0.42	78,78,78,78	0
39	K	0	8401	1/1	0.49	0.83	82,82,82,82	0
36	SR	0	8983	1/1	0.53	0.22	169,169,169,169	0
36	SR	0	8971	1/1	0.54	0.13	191,191,191,191	0
36	SR	0	8920	1/1	0.55	0.93	200,200,200,200	0
34	MG	0	8090	1/1	0.56	0.58	130,130,130,130	0
37	NA	0	8535	1/1	0.56	0.87	75,75,75,75	0
34	MG	A	8044	1/1	0.60	0.08	51,51,51,51	0
37	NA	9	8572	1/1	0.60	0.25	96,96,96,96	0
36	SR	0	8962	1/1	0.60	0.11	104,104,104,104	0
34	MG	B	8042	1/1	0.60	0.20	103,103,103,103	0
37	NA	0	8519	1/1	0.61	0.82	71,71,71,71	0
34	MG	0	8040	1/1	0.62	0.34	70,70,70,70	0
41	ACA	6	78	8/9	0.62	0.52	88,90,91,91	0
37	NA	0	8511	1/1	0.63	0.18	35,35,35,35	0
36	SR	0	8944	1/1	0.64	0.17	155,155,155,155	0
37	NA	0	8541	1/1	0.64	0.20	103,103,103,103	0
37	NA	9	8543	1/1	0.65	0.17	65,65,65,65	0
34	MG	0	8066	1/1	0.67	0.80	98,98,98,98	0
34	MG	0	8038	1/1	0.68	0.25	97,97,97,97	0
34	MG	2	8060	1/1	0.68	0.21	45,45,45,45	0
36	SR	0	8998	1/1	0.68	0.22	113,113,113,113	0
37	NA	0	8526	1/1	0.69	0.10	55,55,55,55	0
37	NA	0	8514	1/1	0.69	0.25	83,83,83,83	0
36	SR	0	8959	1/1	0.70	0.06	120,120,120,120	0
37	NA	9	8544	1/1	0.71	0.54	73,73,73,73	0
34	MG	0	8063	1/1	0.72	0.28	69,69,69,69	0
37	NA	0	8567	1/1	0.72	0.34	61,61,61,61	0
34	MG	0	8030	1/1	0.72	0.25	167,167,167,167	0
34	MG	0	8085	1/1	0.73	0.69	92,92,92,92	0
36	SR	L	8969	1/1	0.75	0.46	175,175,175,175	0
37	NA	0	8571	1/1	0.78	0.42	85,85,85,85	0
35	CL	Q	8811	1/1	0.78	0.23	86,86,86,86	0
36	SR	9	8968	1/1	0.79	0.10	117,117,117,117	0
37	NA	0	8547	1/1	0.79	0.61	78,78,78,78	0
37	NA	0	8527	1/1	0.79	0.43	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
37	NA	0	8525	1/1	0.79	0.18	53,53,53,53	0
34	MG	0	8070	1/1	0.80	0.24	63,63,63,63	0
35	CL	Y	8817	1/1	0.80	0.13	55,55,55,55	0
36	SR	0	9007	1/1	0.80	0.58	195,195,195,195	0
34	MG	0	8079	1/1	0.80	0.39	64,64,64,64	0
37	NA	S	8510	1/1	0.80	0.65	80,80,80,80	0
34	MG	0	8081	1/1	0.80	0.55	91,91,91,91	0
37	NA	0	8545	1/1	0.80	0.34	64,64,64,64	0
36	SR	0	8996	1/1	0.80	0.13	158,158,158,158	0
37	NA	0	8516	1/1	0.80	0.54	65,65,65,65	0
37	NA	0	8560	1/1	0.81	0.34	134,134,134,134	0
34	MG	0	8092	1/1	0.81	0.70	76,76,76,76	0
37	NA	0	8569	1/1	0.82	0.22	32,32,32,32	0
36	SR	0	8979	1/1	0.82	1.96	184,184,184,184	0
36	SR	H	8972	1/1	0.82	0.09	132,132,132,132	0
37	NA	0	8506	1/1	0.83	0.07	50,50,50,50	0
36	SR	0	9000	1/1	0.84	0.27	147,147,147,147	0
37	NA	0	8562	1/1	0.84	0.36	55,55,55,55	0
37	NA	0	8559	1/1	0.84	0.16	64,64,64,64	0
37	NA	0	8549	1/1	0.85	0.17	36,36,36,36	0
36	SR	0	8976	1/1	0.85	0.23	117,117,117,117	0
34	MG	0	8059	1/1	0.85	0.16	88,88,88,88	0
34	MG	0	8016	1/1	0.85	0.40	131,131,131,131	0
34	MG	0	8052	1/1	0.85	0.14	42,42,42,42	0
36	SR	0	8993	1/1	0.86	0.04	146,146,146,146	0
37	NA	0	8564	1/1	0.86	0.09	35,35,35,35	0
34	MG	0	8047	1/1	0.86	0.26	92,92,92,92	0
36	SR	B	8987	1/1	0.86	0.39	199,199,199,199	0
36	SR	0	8933	1/1	0.86	0.30	126,126,126,126	0
40	PHE	6	77	11/12	0.86	0.34	88,88,90,90	0
34	MG	0	8035	1/1	0.86	0.14	84,84,84,84	0
36	SR	0	8991	1/1	0.87	0.10	148,148,148,148	0
37	NA	0	8508	1/1	0.87	0.11	27,27,27,27	0
36	SR	9	8980	1/1	0.87	0.07	132,132,132,132	0
37	NA	0	8566	1/1	0.87	0.36	54,54,54,54	0
34	MG	0	8065	1/1	0.87	0.39	102,102,102,102	0
36	SR	0	8942	1/1	0.88	0.31	155,155,155,155	0
37	NA	0	8536	1/1	0.88	0.18	63,63,63,63	0
36	SR	0	9004	1/1	0.88	0.18	121,121,121,121	0
35	CL	0	8822	1/1	0.88	0.35	66,66,66,66	0
34	MG	0	8072	1/1	0.88	0.18	55,55,55,55	0
38	CD	O	8705	1/1	0.88	0.05	111,111,111,111	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
37	NA	0	8565	1/1	0.88	0.37	48,48,48,48	0
34	MG	0	8064	1/1	0.88	0.24	53,53,53,53	0
37	NA	0	8550	1/1	0.88	0.25	51,51,51,51	0
37	NA	0	8553	1/1	0.88	0.25	100,100,100,100	0
37	NA	0	8552	1/1	0.89	0.26	86,86,86,86	0
37	NA	R	8532	1/1	0.89	0.12	25,25,25,25	0
37	NA	0	8556	1/1	0.89	0.80	75,75,75,75	0
34	MG	0	8091	1/1	0.89	0.11	76,76,76,76	0
34	MG	0	8045	1/1	0.89	0.64	119,119,119,119	0
35	CL	L	8810	1/1	0.89	0.08	56,56,56,56	0
36	SR	0	9006	1/1	0.89	0.73	198,198,198,198	0
34	MG	0	8089	1/1	0.89	0.10	31,31,31,31	0
34	MG	0	8008	1/1	0.89	0.17	9,9,9,9	0
36	SR	0	8985	1/1	0.89	0.11	142,142,142,142	0
37	NA	C	8503	1/1	0.89	0.27	31,31,31,31	0
36	SR	0	8992	1/1	0.90	0.06	122,122,122,122	0
34	MG	0	8056	1/1	0.90	0.38	94,94,94,94	0
34	MG	0	8039	1/1	0.90	0.23	40,40,40,40	0
37	NA	0	8520	1/1	0.90	0.23	58,58,58,58	0
34	MG	0	8075	1/1	0.90	0.08	38,38,38,38	0
35	CL	0	8815	1/1	0.90	0.09	69,69,69,69	0
36	SR	0	8955	1/1	0.90	0.08	127,127,127,127	0
37	NA	0	8551	1/1	0.90	0.10	32,32,32,32	0
37	NA	0	8529	1/1	0.90	0.08	24,24,24,24	0
37	NA	0	8530	1/1	0.90	0.24	49,49,49,49	0
36	SR	0	8986	1/1	0.91	0.10	108,108,108,108	0
37	NA	0	8513	1/1	0.91	0.25	53,53,53,53	0
36	SR	0	8928	1/1	0.91	0.11	92,92,92,92	0
36	SR	0	8957	1/1	0.91	0.13	124,124,124,124	0
35	CL	J	8821	1/1	0.91	0.16	64,64,64,64	0
36	SR	Y	9002	1/1	0.91	0.11	124,124,124,124	0
37	NA	0	8568	1/1	0.91	0.44	18,18,18,18	0
35	CL	0	8803	1/1	0.91	0.06	51,51,51,51	0
36	SR	0	8995	1/1	0.91	0.15	98,98,98,98	0
35	CL	N	8807	1/1	0.92	0.07	70,70,70,70	0
37	NA	0	8509	1/1	0.92	0.33	80,80,80,80	0
35	CL	O	8808	1/1	0.92	0.16	75,75,75,75	0
34	MG	0	8077	1/1	0.92	0.19	41,41,41,41	0
34	MG	0	8023	1/1	0.92	0.23	25,25,25,25	0
36	SR	0	8901	1/1	0.92	0.19	48,48,48,48	0
35	CL	3	8804	1/1	0.92	0.11	60,60,60,60	0
36	SR	0	8967	1/1	0.92	0.07	103,103,103,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	SR	9	9003	1/1	0.92	0.04	144,144,144,144	0
35	CL	B	8819	1/1	0.92	0.11	62,62,62,62	0
37	NA	Q	8540	1/1	0.92	0.11	66,66,66,66	0
37	NA	0	8528	1/1	0.92	0.16	55,55,55,55	0
34	MG	0	8034	1/1	0.92	0.20	30,30,30,30	0
34	MG	0	8029	1/1	0.92	0.24	83,83,83,83	0
36	SR	0	8982	1/1	0.92	0.09	116,116,116,116	0
34	MG	0	8069	1/1	0.93	0.17	120,120,120,120	0
34	MG	0	8080	1/1	0.93	0.09	45,45,45,45	0
35	CL	0	8813	1/1	0.93	0.09	63,63,63,63	0
35	CL	J	8816	1/1	0.93	0.14	80,80,80,80	0
35	CL	J	8801	1/1	0.93	0.13	62,62,62,62	0
34	MG	0	8062	1/1	0.93	0.29	41,41,41,41	0
34	MG	0	8071	1/1	0.93	0.41	88,88,88,88	0
34	MG	0	8003	1/1	0.93	0.18	14,14,14,14	0
34	MG	0	8036	1/1	0.93	0.16	50,50,50,50	0
37	NA	0	8575	1/1	0.93	0.15	44,44,44,44	0
34	MG	0	8015	1/1	0.93	0.17	41,41,41,41	0
37	NA	0	8554	1/1	0.93	0.25	42,42,42,42	0
37	NA	0	8555	1/1	0.93	0.39	52,52,52,52	0
36	SR	0	8905	1/1	0.93	0.25	61,61,61,61	0
36	SR	0	8973	1/1	0.93	0.13	98,98,98,98	0
37	NA	0	8558	1/1	0.93	0.91	67,67,67,67	0
37	NA	0	8504	1/1	0.93	0.23	31,31,31,31	0
34	MG	0	8046	1/1	0.93	0.44	72,72,72,72	0
36	SR	0	8990	1/1	0.94	0.55	177,177,177,177	0
34	MG	0	8053	1/1	0.94	0.15	33,33,33,33	0
34	MG	0	8027	1/1	0.94	0.15	28,28,28,28	0
35	CL	Y	8820	1/1	0.94	0.06	48,48,48,48	0
34	MG	0	8041	1/1	0.94	0.19	33,33,33,33	0
37	NA	0	8570	1/1	0.94	0.15	48,48,48,48	0
36	SR	0	8923	1/1	0.94	0.21	72,72,72,72	0
34	MG	0	8005	1/1	0.94	0.25	25,25,25,25	0
34	MG	0	8084	1/1	0.94	0.10	27,27,27,27	0
34	MG	0	8037	1/1	0.94	0.16	64,64,64,64	0
34	MG	0	8073	1/1	0.94	0.12	58,58,58,58	0
35	CL	M	8818	1/1	0.94	0.12	46,46,46,46	0
34	MG	0	8014	1/1	0.94	0.18	16,16,16,16	0
37	NA	0	8512	1/1	0.94	0.44	46,46,46,46	0
34	MG	A	8051	1/1	0.94	0.98	82,82,82,82	0
37	NA	0	8563	1/1	0.94	0.30	51,51,51,51	0
37	NA	0	8546	1/1	0.94	0.78	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
37	NA	0	8523	1/1	0.95	0.23	61,61,61,61	0
36	SR	0	8956	1/1	0.95	0.16	111,111,111,111	0
34	MG	0	8049	1/1	0.95	0.99	103,103,103,103	0
36	SR	0	8914	1/1	0.95	0.27	88,88,88,88	0
36	SR	0	8915	1/1	0.95	0.14	84,84,84,84	0
36	SR	A	8929	1/1	0.95	0.09	114,114,114,114	0
37	NA	0	8501	1/1	0.95	0.16	107,107,107,107	0
37	NA	0	8534	1/1	0.95	0.32	68,68,68,68	0
36	SR	0	8965	1/1	0.95	0.13	95,95,95,95	0
34	MG	0	8033	1/1	0.95	0.11	44,44,44,44	0
37	NA	0	8537	1/1	0.95	0.09	21,21,21,21	0
37	NA	0	8507	1/1	0.95	0.26	29,29,29,29	0
37	NA	0	8542	1/1	0.95	0.20	31,31,31,31	0
36	SR	0	8926	1/1	0.95	0.17	87,87,87,87	0
34	MG	Y	8086	1/1	0.95	0.06	48,48,48,48	0
36	SR	0	8975	1/1	0.95	0.06	125,125,125,125	0
35	CL	0	8805	1/1	0.95	0.07	60,60,60,60	0
36	SR	0	8936	1/1	0.95	0.18	67,67,67,67	0
34	MG	0	8032	1/1	0.95	0.04	21,21,21,21	0
36	SR	3	8932	1/1	0.95	0.17	74,74,74,74	0
37	NA	0	8517	1/1	0.95	0.20	36,36,36,36	0
36	SR	0	8945	1/1	0.95	0.09	104,104,104,104	0
35	CL	A	8809	1/1	0.95	0.14	51,51,51,51	0
37	NA	0	8521	1/1	0.95	0.35	51,51,51,51	0
34	MG	0	8076	1/1	0.96	0.28	72,72,72,72	0
34	MG	0	8088	1/1	0.96	0.14	40,40,40,40	0
37	NA	0	8533	1/1	0.96	0.27	64,64,64,64	0
34	MG	0	8028	1/1	0.96	0.22	1,1,1,1	0
35	CL	L	8814	1/1	0.96	0.13	62,62,62,62	0
36	SR	0	8916	1/1	0.96	0.14	64,64,64,64	0
36	SR	0	8919	1/1	0.96	0.15	92,92,92,92	0
34	MG	0	8021	1/1	0.96	0.09	24,24,24,24	0
36	SR	0	8966	1/1	0.96	0.15	85,85,85,85	0
34	MG	K	8054	1/1	0.96	0.15	15,15,15,15	0
36	SR	A	8977	1/1	0.96	0.16	95,95,95,95	0
36	SR	B	8950	1/1	0.96	0.17	98,98,98,98	0
34	MG	0	8024	1/1	0.96	0.37	69,69,69,69	0
34	MG	0	8093	1/1	0.96	0.07	27,27,27,27	0
34	MG	0	8026	1/1	0.96	0.10	43,43,43,43	0
36	SR	0	9008	1/1	0.96	0.21	90,90,90,90	0
34	MG	0	8050	1/1	0.96	0.32	152,152,152,152	0
34	MG	0	8020	1/1	0.96	0.20	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	SR	0	8984	1/1	0.96	0.15	92,92,92,92	0
36	SR	0	8946	1/1	0.96	0.20	98,98,98,98	0
36	SR	0	8947	1/1	0.96	0.15	91,91,91,91	0
36	SR	0	8988	1/1	0.96	0.10	114,114,114,114	0
35	CL	R	8806	1/1	0.97	0.09	44,44,44,44	0
34	MG	0	8004	1/1	0.97	0.20	21,21,21,21	0
34	MG	T	8057	1/1	0.97	0.16	31,31,31,31	0
36	SR	A	8930	1/1	0.97	0.16	78,78,78,78	0
36	SR	0	8937	1/1	0.97	0.22	69,69,69,69	0
36	SR	0	8964	1/1	0.97	0.15	102,102,102,102	0
36	SR	0	8938	1/1	0.97	0.12	95,95,95,95	0
34	MG	0	8011	1/1	0.97	0.18	4,4,4,4	0
34	MG	0	8006	1/1	0.97	0.18	8,8,8,8	0
34	MG	0	8061	1/1	0.97	0.25	17,17,17,17	0
37	NA	H	8518	1/1	0.97	0.29	69,69,69,69	0
37	NA	M	8539	1/1	0.97	0.13	33,33,33,33	0
37	NA	0	8574	1/1	0.97	0.35	43,43,43,43	0
37	NA	0	8522	1/1	0.97	0.12	72,72,72,72	0
36	SR	F	9005	1/1	0.97	0.10	98,98,98,98	0
37	NA	0	8524	1/1	0.97	0.13	52,52,52,52	0
35	CL	0	8812	1/1	0.97	0.13	50,50,50,50	0
36	SR	0	8948	1/1	0.97	0.17	65,65,65,65	0
34	MG	0	8031	1/1	0.97	0.05	41,41,41,41	0
37	NA	0	8502	1/1	0.97	0.34	60,60,60,60	0
36	SR	0	8997	1/1	0.97	0.04	116,116,116,116	0
36	SR	0	8981	1/1	0.97	0.18	117,117,117,117	0
34	MG	0	8048	1/1	0.98	0.26	49,49,49,49	0
36	SR	0	8918	1/1	0.98	0.19	53,53,53,53	0
34	MG	0	8082	1/1	0.98	0.14	70,70,70,70	0
36	SR	0	8951	1/1	0.98	0.09	105,105,105,105	0
36	SR	0	8954	1/1	0.98	0.16	82,82,82,82	0
37	NA	0	8561	1/1	0.98	0.19	66,66,66,66	0
36	SR	T	8911	1/1	0.98	0.12	58,58,58,58	0
36	SR	0	8921	1/1	0.98	0.14	58,58,58,58	0
34	MG	B	8043	1/1	0.98	0.17	29,29,29,29	0
37	NA	0	8531	1/1	0.98	0.15	41,41,41,41	0
36	SR	1	8952	1/1	0.98	0.20	67,67,67,67	0
36	SR	0	8927	1/1	0.98	0.19	70,70,70,70	0
36	SR	3	8953	1/1	0.98	0.16	110,110,110,110	0
36	SR	0	8963	1/1	0.98	0.14	74,74,74,74	0
34	MG	A	8025	1/1	0.98	0.22	39,39,39,39	0
36	SR	0	8934	1/1	0.98	0.17	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
36	SR	0	8935	1/1	0.98	0.14	73,73,73,73	0
34	MG	9	8074	1/1	0.98	0.23	52,52,52,52	0
36	SR	0	8970	1/1	0.98	0.08	99,99,99,99	0
36	SR	0	8903	1/1	0.98	0.21	55,55,55,55	0
37	NA	0	8515	1/1	0.98	0.22	26,26,26,26	0
36	SR	0	8904	1/1	0.98	0.21	55,55,55,55	0
36	SR	0	8940	1/1	0.98	0.17	51,51,51,51	0
34	MG	0	8013	1/1	0.98	0.04	20,20,20,20	0
36	SR	0	8978	1/1	0.98	0.17	71,71,71,71	0
34	MG	C	8012	1/1	0.98	0.28	17,17,17,17	0
34	MG	0	8009	1/1	0.98	0.32	1,1,1,1	0
36	SR	0	8906	1/1	0.99	0.21	56,56,56,56	0
36	SR	0	8908	1/1	0.99	0.16	64,64,64,64	0
36	SR	0	8909	1/1	0.99	0.16	56,56,56,56	0
36	SR	0	8910	1/1	0.99	0.16	47,47,47,47	0
36	SR	0	8941	1/1	0.99	0.22	77,77,77,77	0
36	SR	0	8974	1/1	0.99	0.23	125,125,125,125	0
34	MG	0	8083	1/1	0.99	0.11	29,29,29,29	0
36	SR	0	8943	1/1	0.99	0.12	88,88,88,88	0
34	MG	0	8022	1/1	0.99	0.21	11,11,11,11	0
34	MG	0	8067	1/1	0.99	0.33	33,33,33,33	0
36	SR	0	8917	1/1	0.99	0.17	67,67,67,67	0
37	NA	J	8538	1/1	0.99	0.12	31,31,31,31	0
36	SR	T	8939	1/1	0.99	0.14	70,70,70,70	0
34	MG	0	8068	1/1	0.99	0.13	50,50,50,50	0
36	SR	0	8949	1/1	0.99	0.16	62,62,62,62	0
36	SR	1	8913	1/1	0.99	0.20	54,54,54,54	0
34	MG	0	8019	1/1	0.99	0.16	1,1,1,1	0
34	MG	0	8007	1/1	0.99	0.15	30,30,30,30	0
36	SR	0	8924	1/1	0.99	0.23	80,80,80,80	0
37	NA	0	8505	1/1	0.99	0.55	29,29,29,29	0
36	SR	0	8925	1/1	0.99	0.17	70,70,70,70	0
36	SR	0	8958	1/1	0.99	0.14	77,77,77,77	0
35	CL	J	8802	1/1	0.99	0.12	69,69,69,69	0
36	SR	0	8960	1/1	0.99	0.08	98,98,98,98	0
34	MG	0	8055	1/1	0.99	0.27	26,26,26,26	0
37	NA	0	8548	1/1	0.99	0.17	26,26,26,26	0
38	CD	U	8701	1/1	0.99	0.09	57,57,57,57	0
38	CD	Z	8703	1/1	0.99	0.10	55,55,55,55	0
38	CD	1	8702	1/1	0.99	0.12	57,57,57,57	0
38	CD	3	8704	1/1	0.99	0.08	52,52,52,52	0
36	SR	0	8902	1/1	0.99	0.19	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
34	MG	0	8001	1/1	0.99	0.23	7,7,7,7	0
34	MG	0	8058	1/1	0.99	0.20	1,1,1,1	0
36	SR	H	8907	1/1	0.99	0.14	48,48,48,48	0
36	SR	0	8931	1/1	1.00	0.20	80,80,80,80	0
34	MG	0	8018	1/1	1.00	0.26	3,3,3,3	0
36	SR	3	8999	1/1	1.00	0.13	69,69,69,69	0
34	MG	0	8002	1/1	1.00	0.28	19,19,19,19	0
36	SR	0	8922	1/1	1.00	0.17	61,61,61,61	0
36	SR	R	8912	1/1	1.00	0.20	64,64,64,64	0

6.5 Other polymers (i)

There are no such residues in this entry.