Full wwPDB X-ray Structure Validation Report (i)

Feb 1, 2016 – 08:01 AM GMT

PDB ID	:	3CCJ
Title	:	Structure of Anisomycin resistant 50S Ribosomal Subunit: 23S rRNA mutation C2534U
Authors	:	Blaha, G.; Gurel, G.
Deposited on	:	2008-02-26
Resolution	:	2.70 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
http://wwpdb.org/validation/2016/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The following versions of software and data (see references (1)) were used in the production of this report:

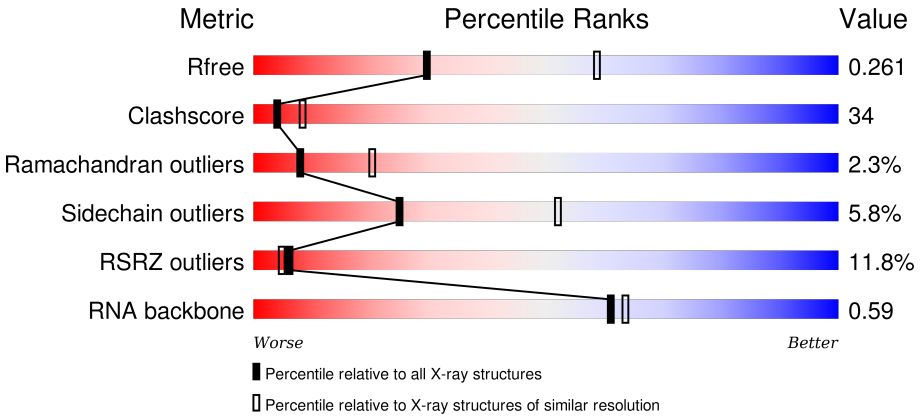
MolProbity	:	4.02b-467
Mogul	:	1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20026688
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk26865

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 2.70 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}	91344	2103 (2.70-2.70)
Clashscore	102246	2422 (2.70-2.70)
Ramachandran outliers	100387	2382 (2.70-2.70)
Sidechain outliers	100360	2382 (2.70-2.70)
RSRZ outliers	91569	2107 (2.70-2.70)
RNA backbone	2183	1069 (3.10-2.30)

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 on the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. 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	14% 49% 45%
2	B	338	9% 46% 50%
3	C	246	7% 56% 39%
4	D	177	37% 39% 37% 21%

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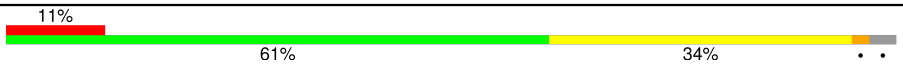
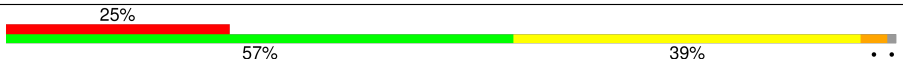
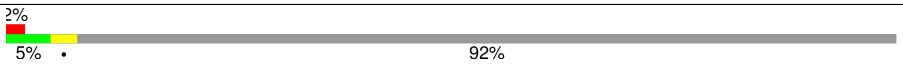
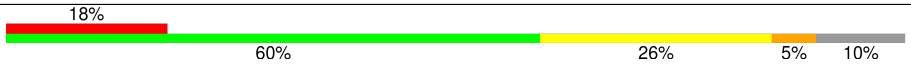
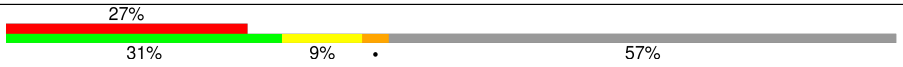
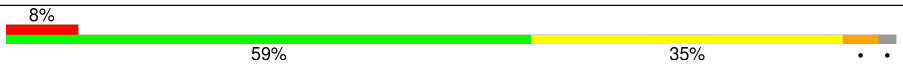
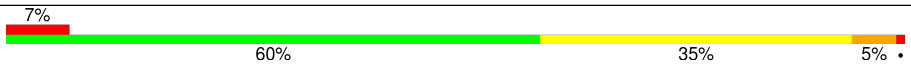
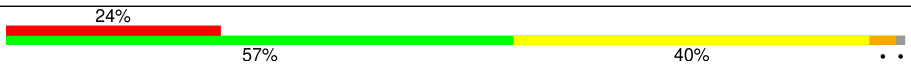
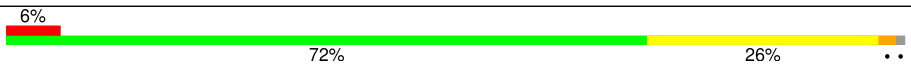
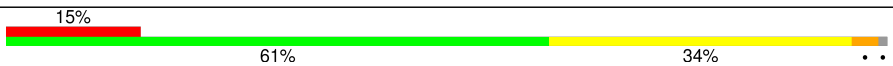
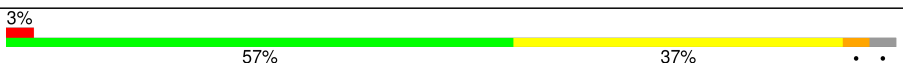
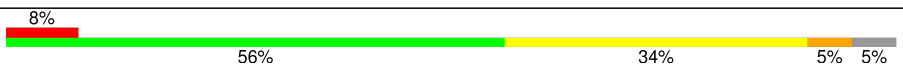
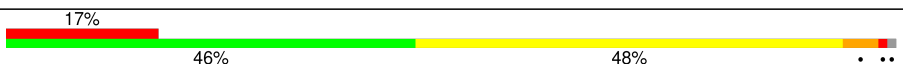
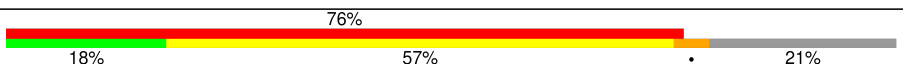
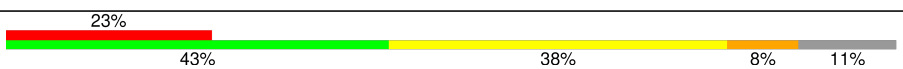
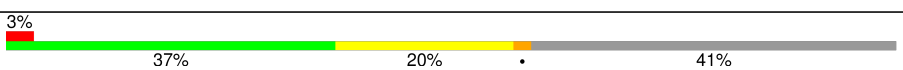
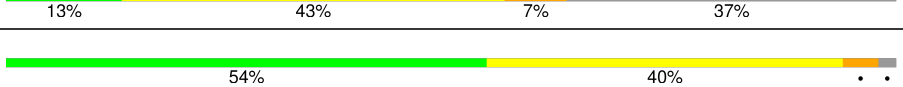
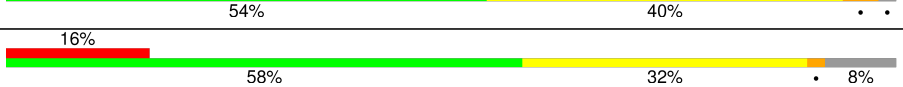
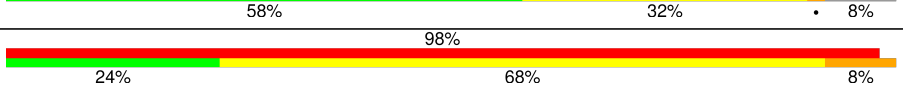
Mol	Chain	Length	Quality of chain
5	E	178	
6	F	120	
7	G	348	
8	H	177	
9	I	162	
10	J	145	
11	K	132	
12	L	165	
13	M	196	
14	N	187	
15	O	116	
16	P	149	
17	Q	96	
18	R	155	
19	S	85	
20	T	120	
21	U	67	
22	V	71	
23	W	154	
24	X	92	
25	Y	241	
26	Z	116	
27	1	57	
28	2	50	
29	3	92	

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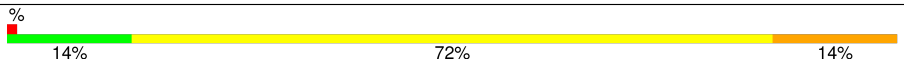
Mol	Chain	Length	Quality of chain
30	0	2923	
31	9	122	

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
32	MG	0	8003	-	-	-	X
32	MG	0	8008	-	-	-	X
32	MG	0	8009	-	-	-	X
32	MG	0	8011	-	-	-	X
32	MG	0	8043	-	-	-	X
32	MG	0	8079	-	-	-	X
32	MG	0	8083	-	-	-	X
32	MG	Y	8086	-	-	-	X
33	K	0	8401	-	-	-	X
34	NA	0	8504	-	-	-	X
34	NA	0	8517	-	-	-	X
34	NA	0	8521	-	-	-	X
34	NA	0	8522	-	-	-	X
34	NA	0	8523	-	-	-	X
34	NA	0	8528	-	-	-	X
34	NA	0	8535	-	-	-	X
34	NA	0	8542	-	-	-	X
34	NA	0	8546	-	-	-	X
34	NA	0	8547	-	-	-	X
34	NA	0	8555	-	-	-	X
34	NA	0	8556	-	-	-	X
34	NA	0	8559	-	-	-	X
34	NA	0	8560	-	-	-	X
34	NA	0	8562	-	-	-	X
34	NA	0	8563	-	-	-	X
34	NA	0	8564	-	-	-	X
34	NA	0	8565	-	-	-	X
34	NA	0	8567	-	-	-	X
34	NA	B	8552	-	-	-	X
34	NA	L	8568	-	-	-	X
34	NA	R	8575	-	-	-	X
35	CL	0	8805	-	-	-	X
35	CL	0	8812	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
35	CL	0	8813	-	-	X	-
35	CL	3	8804	-	-	X	-
35	CL	B	8819	-	-	-	X
35	CL	J	8801	-	-	X	-
35	CL	J	8821	-	-	-	X
35	CL	M	8818	-	-	X	X
35	CL	N	8807	-	-	X	-
36	SR	0	8903	-	-	-	X
36	SR	0	8957	-	-	-	X
36	SR	0	8969	-	-	-	X
36	SR	0	8970	-	-	-	X
36	SR	0	8982	-	-	-	X
36	SR	0	8992	-	-	-	X
36	SR	0	9007	-	-	-	X
36	SR	B	8987	-	-	-	X
37	CD	3	8704	-	-	-	X
37	CD	Z	8703	-	-	-	X

2 Entry composition

There are 38 unique types of molecules in this entry. The entry contains 99122 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
			1753	1072	352	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
			2625	1616	493	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
			1860	1130	345	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
			1094	685	195	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
			1357	840	224	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
			890	551	141	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
			1282	798	240	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
			519	323	81	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
			1120	696	199	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
			994	609	189	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
			1118	670	222	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
			1558	943	333	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
			1445	895	262	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
			865	529	161	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
			1136	683	229	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
			735	450	141	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
			1149	713	209	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
			641	389	111	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
			950	568	180	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
			1196	737	209	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
			654	402	129	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
			573	343	113	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
			755	458	153	137	7			

- Molecule 30 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	0	2754	Total	C	N	O	P	0	0	0
			59020	26349	10872	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
			2599	1160	471	847	121			

- Molecule 32 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	0	85	Total	Mg	0	0
			85	85		
32	Y	2	Total	Mg	0	0
			2	2		
32	K	1	Total	Mg	0	0
			1	1		
32	A	2	Total	Mg	0	0
			2	2		
32	T	1	Total	Mg	0	0
			1	1		
32	9	2	Total	Mg	0	0
			2	2		

- Molecule 33 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	0	1	Total	K	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
33	M	1	Total K 1 1	0	0

- Molecule 34 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	0	63	Total Na 63 63	0	0
34	J	1	Total Na 1 1	0	0
34	Q	1	Total Na 1 1	0	0
34	B	1	Total Na 1 1	0	0
34	C	1	Total Na 1 1	0	0
34	R	3	Total Na 3 3	0	0
34	9	2	Total Na 2 2	0	0
34	L	1	Total Na 1 1	0	0
34	S	1	Total Na 1 1	0	0
34	M	1	Total Na 1 1	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	0	8	Total Cl 8 8	0	0
35	J	4	Total Cl 4 4	0	0
35	Q	1	Total Cl 1 1	0	0
35	B	1	Total Cl 1 1	0	0
35	A	1	Total Cl 1 1	0	0
35	N	1	Total Cl 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	O	1	Total Cl 1 1	0	0
35	R	1	Total Cl 1 1	0	0
35	Y	1	Total Cl 1 1	0	0
35	L	1	Total Cl 1 1	0	0
35	3	1	Total Cl 1 1	0	0
35	M	1	Total Cl 1 1	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	0	93	Total Sr 93 93	0	0
36	J	1	Total Sr 1 1	0	0
36	1	2	Total Sr 2 2	0	0
36	B	2	Total Sr 2 2	0	0
36	3	2	Total Sr 2 2	0	0
36	A	2	Total Sr 2 2	0	0
36	2	1	Total Sr 1 1	0	0
36	R	1	Total Sr 1 1	0	0
36	9	2	Total Sr 2 2	0	0
36	S	1	Total Sr 1 1	0	0
36	F	1	Total Sr 1 1	0	0

- Molecule 37 is CADMIUM ION (three-letter code: CD) (formula: Cd).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	O	1	Total Cd 1 1	0	0
37	Z	1	Total Cd 1 1	0	0
37	1	1	Total Cd 1 1	0	0
37	3	1	Total Cd 1 1	0	0
37	U	1	Total Cd 1 1	0	0

- Molecule 38 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	0	5813	Total O 5813 5813	0	0
38	9	144	Total O 144 144	0	0
38	A	122	Total O 122 122	0	0
38	B	158	Total O 158 158	0	0
38	C	176	Total O 176 176	0	0
38	D	51	Total O 51 51	0	0
38	E	51	Total O 51 51	0	0
38	F	27	Total O 27 27	0	0
38	G	15	Total O 15 15	0	0
38	H	73	Total O 73 73	0	0
38	I	3	Total O 3 3	0	0
38	J	55	Total O 55 55	0	0
38	K	61	Total O 61 61	0	0
38	L	99	Total O 99 99	0	0
38	M	148	Total O 148 148	0	0

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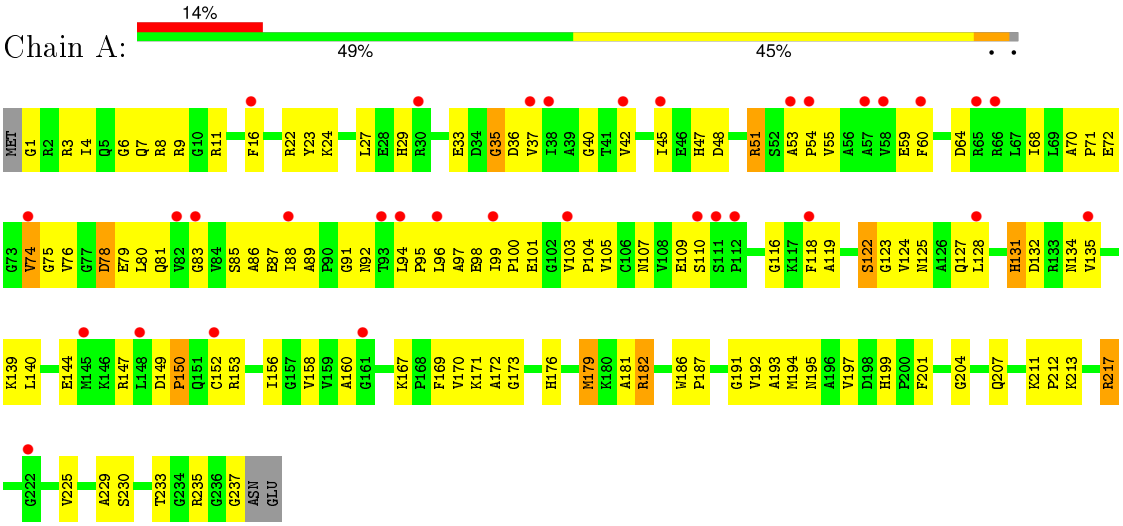
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	N	56	Total O 56 56	0	0
38	O	42	Total O 42 42	0	0
38	P	56	Total O 56 56	0	0
38	Q	58	Total O 58 58	0	0
38	R	78	Total O 78 78	0	0
38	S	37	Total O 37 37	0	0
38	T	41	Total O 41 41	0	0
38	U	34	Total O 34 34	0	0
38	V	10	Total O 10 10	0	0
38	W	71	Total O 71 71	0	0
38	X	28	Total O 28 28	0	0
38	Y	102	Total O 102 102	0	0
38	Z	33	Total O 33 33	0	0
38	1	53	Total O 53 53	0	0
38	2	48	Total O 48 48	0	0
38	3	80	Total O 80 80	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

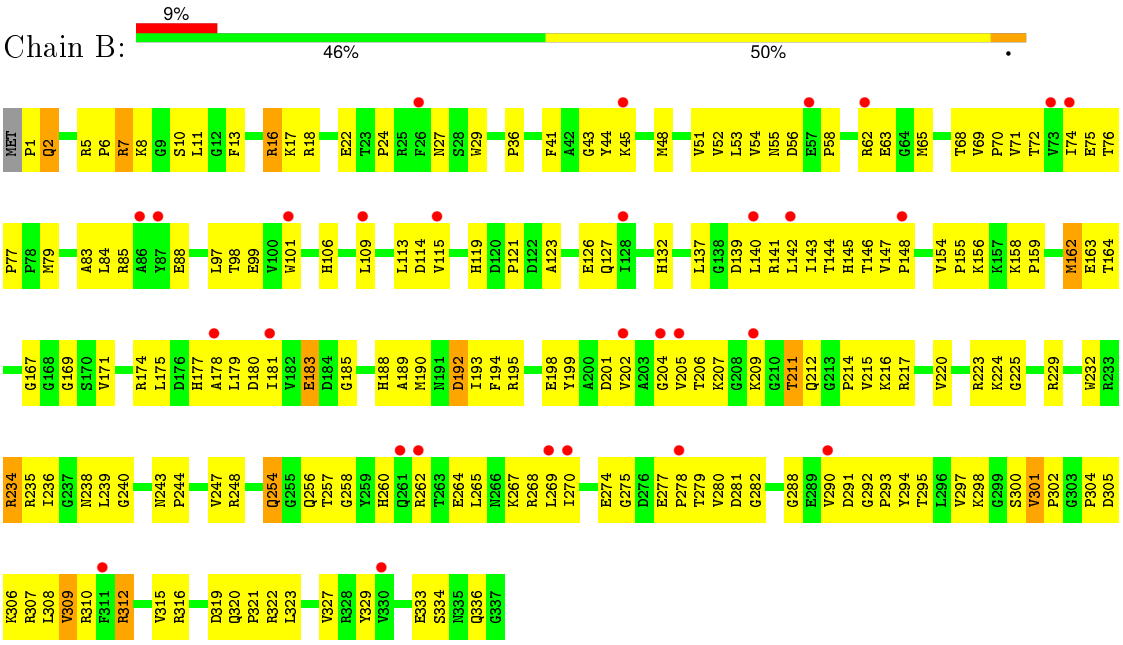
- Molecule 1: 50S ribosomal protein L2P

Chain A:

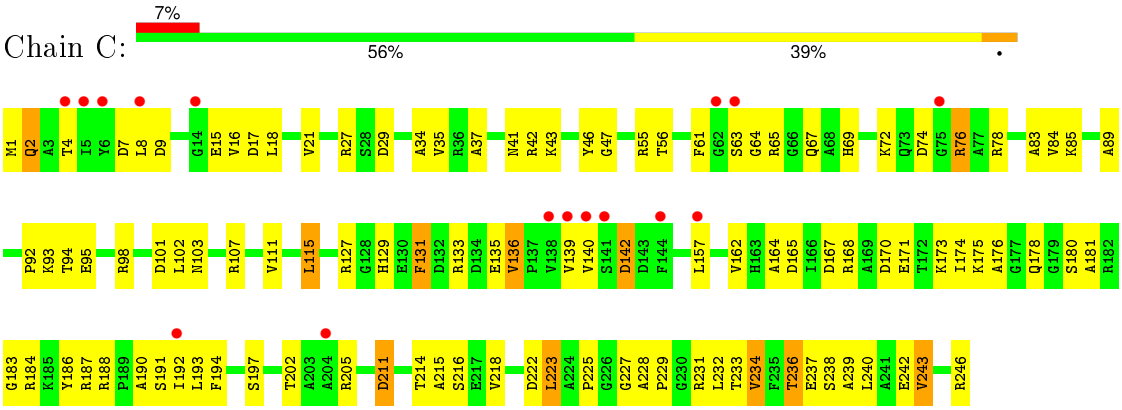


- Molecule 2: 50S ribosomal protein L3P

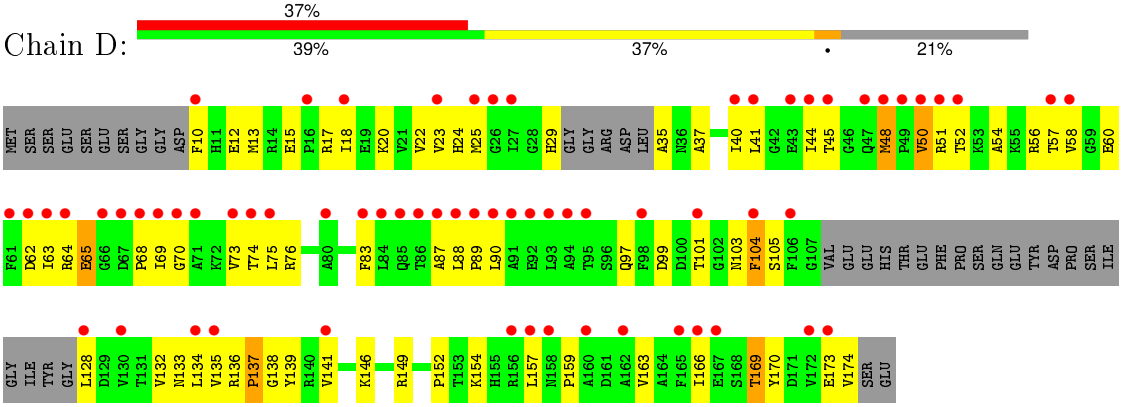
Chain B:



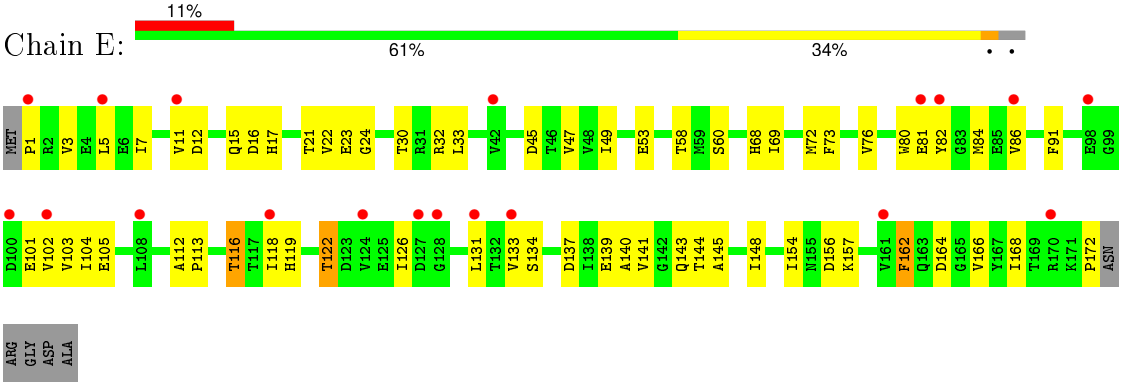
- Molecule 3: 50S ribosomal protein L4P



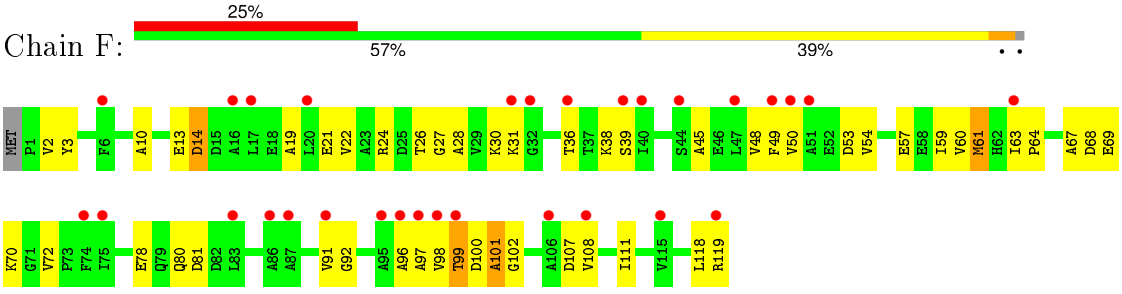
- Molecule 4: 50S ribosomal protein L5P



- Molecule 5: 50S ribosomal protein L6P

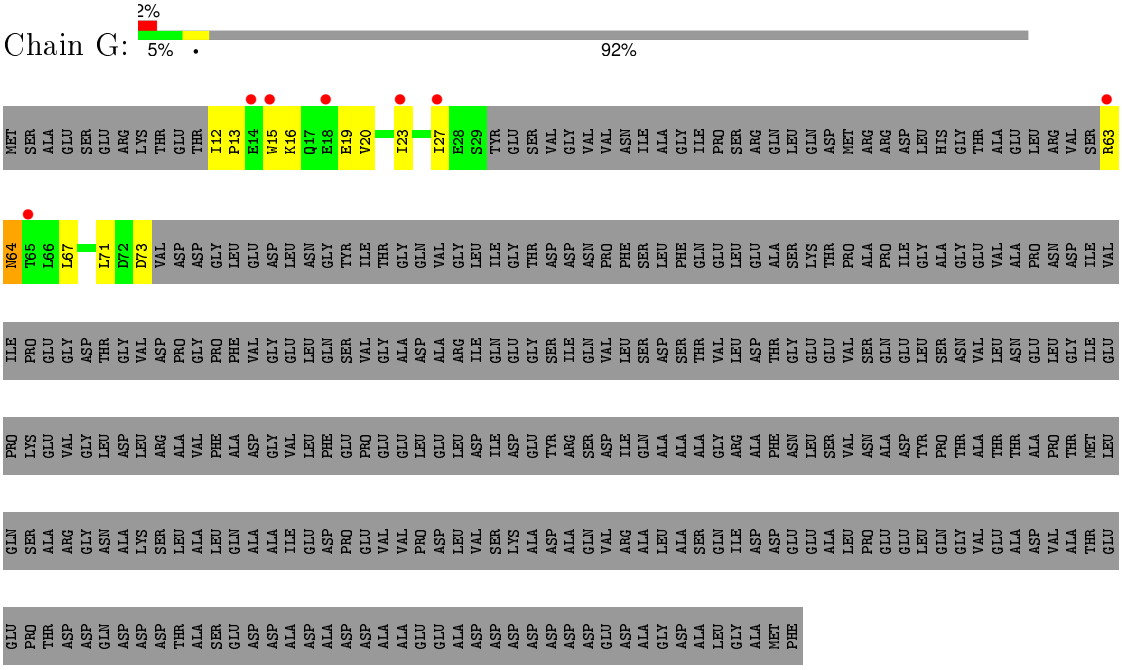


- Molecule 6: 50S ribosomal protein L7Ae



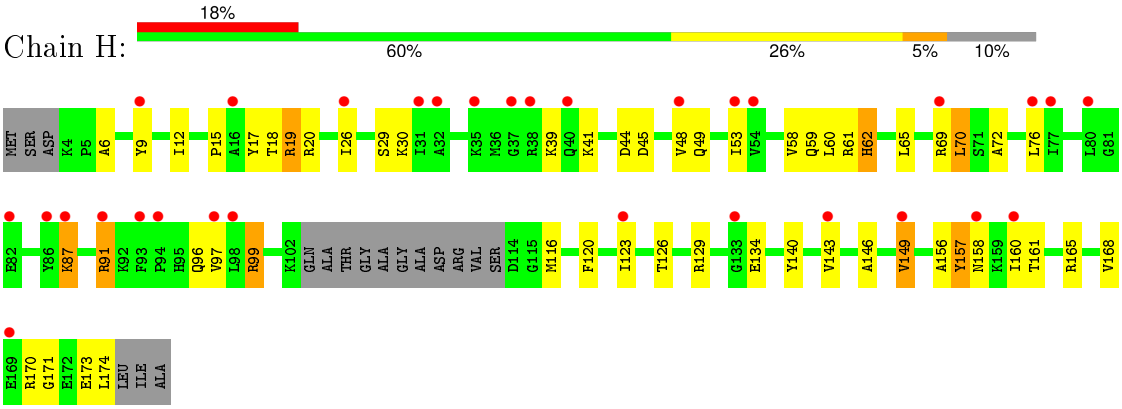
- Molecule 7: 50S ribosomal protein L10E

Chain G:



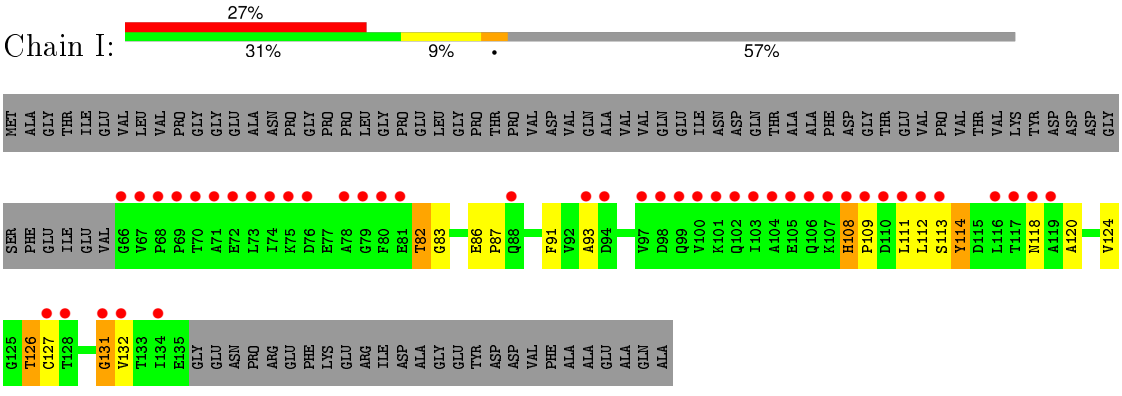
- Molecule 8: 50S ribosomal protein L10e

Chain H:



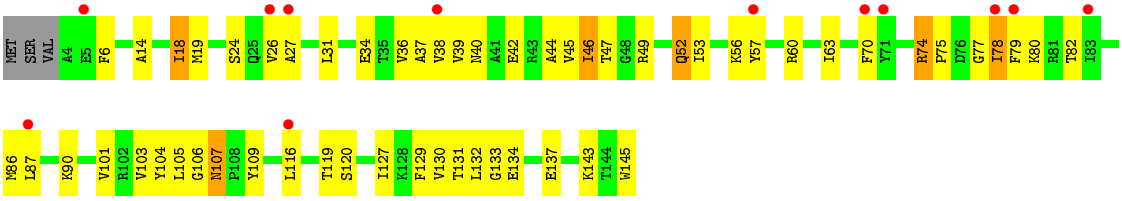
- Molecule 9: 50S ribosomal protein L11P

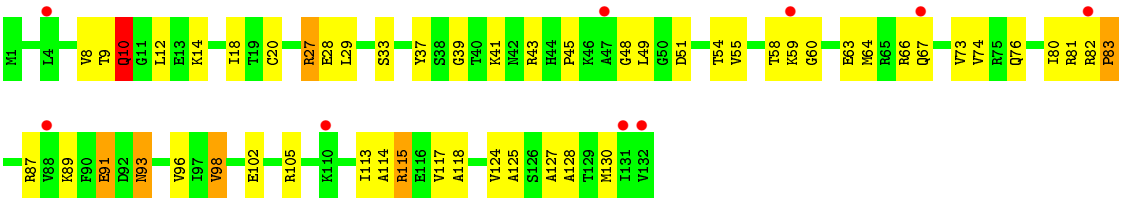
Chain I:



- Molecule 10: 50S ribosomal protein L13P

Chain J:



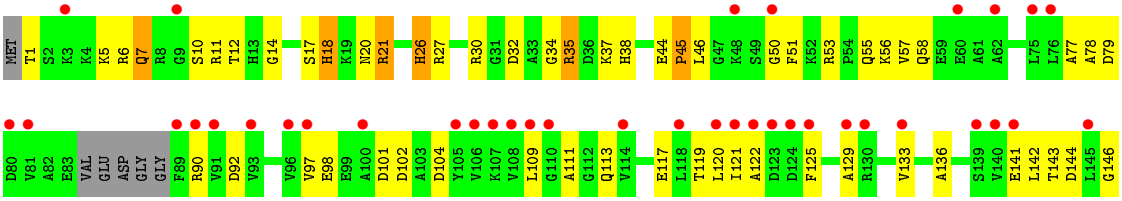


• Molecule 11: 50S ribosomal protein L14P

Chain K:

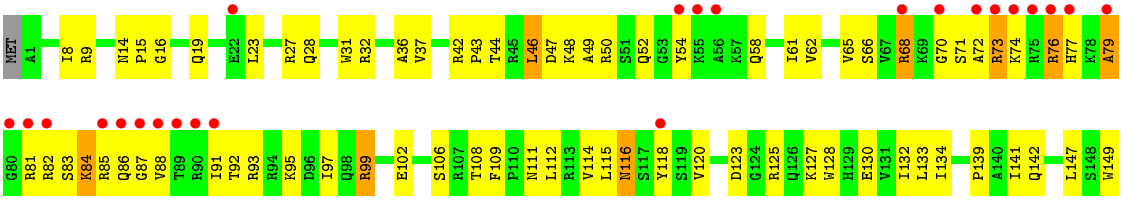
• Molecule 12: 50S ribosomal protein L15P

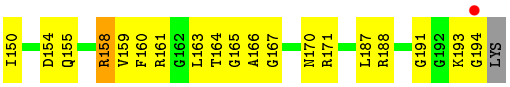
Chain L:



• Molecule 13: 50S ribosomal protein L15e

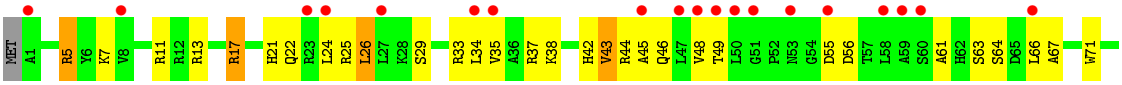
Chain M:

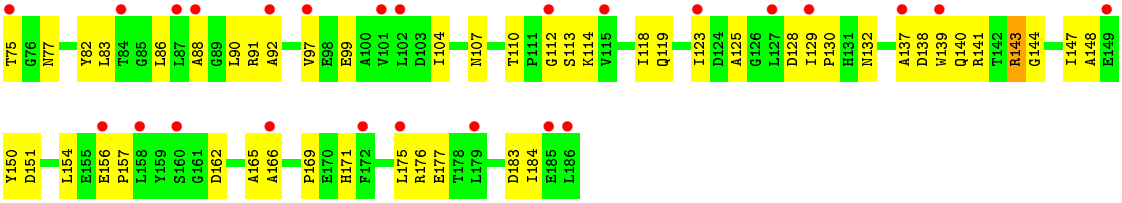




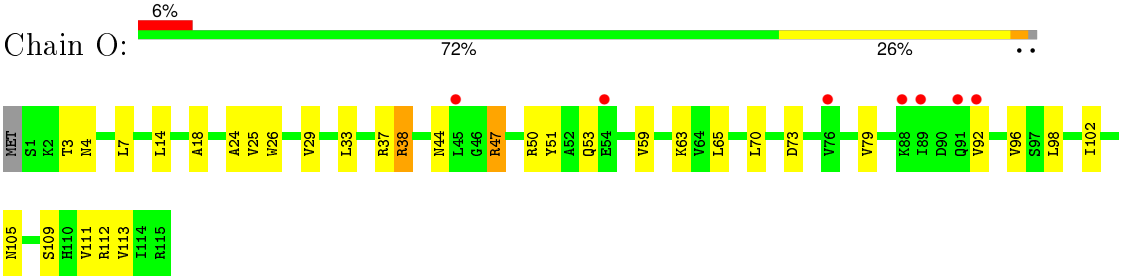
• Molecule 14: 50S ribosomal protein L18P

Chain N:

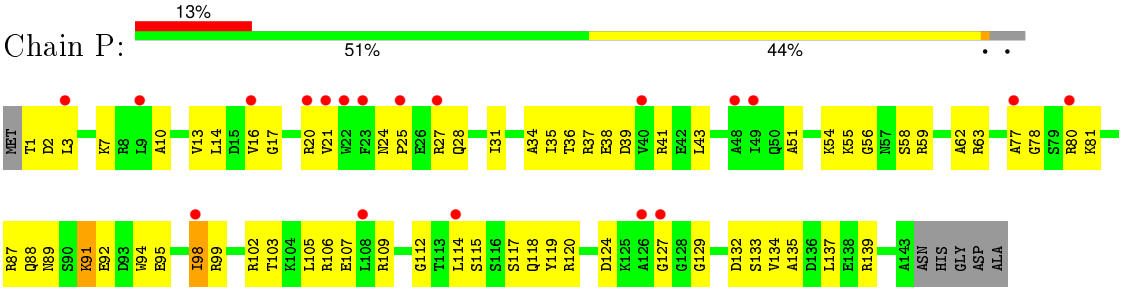




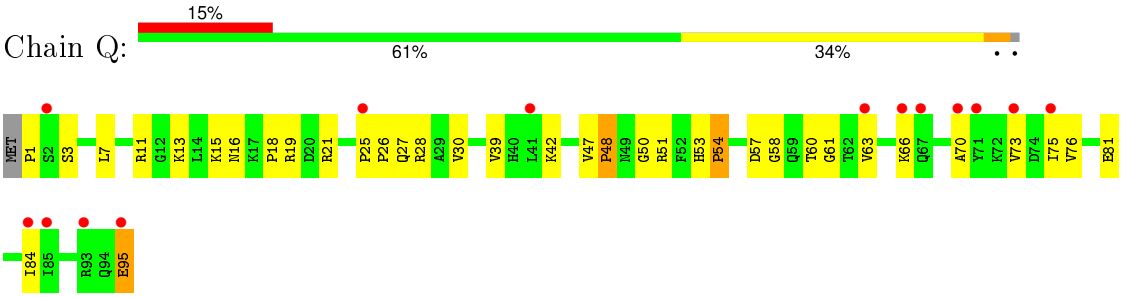
• Molecule 15: 50S ribosomal protein L18e



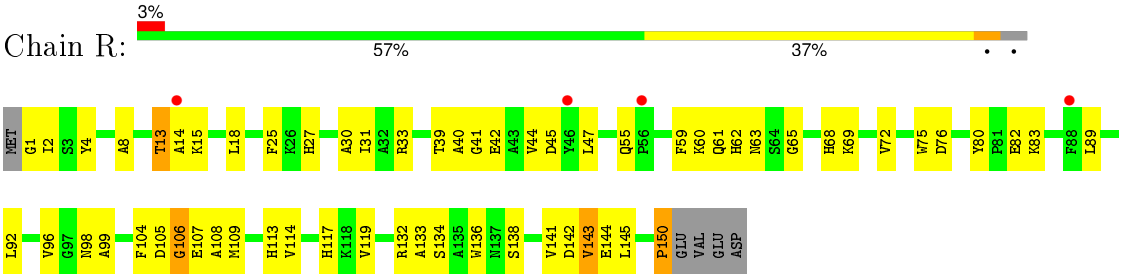
• Molecule 16: 50S ribosomal protein L19e



• Molecule 17: 50S ribosomal protein L21e

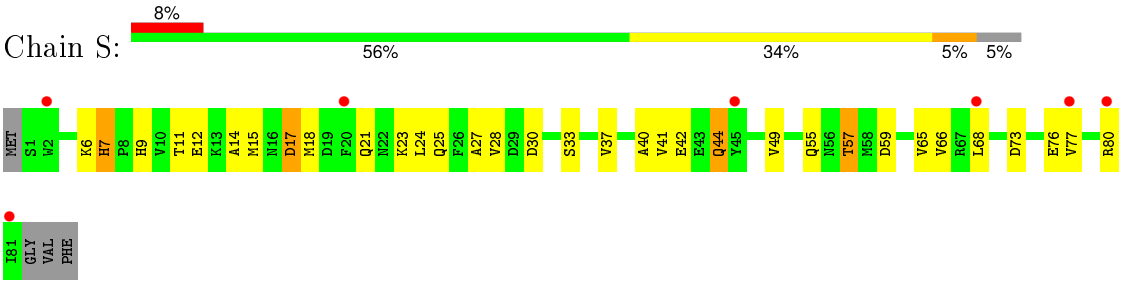


• Molecule 18: 50S ribosomal protein L22P



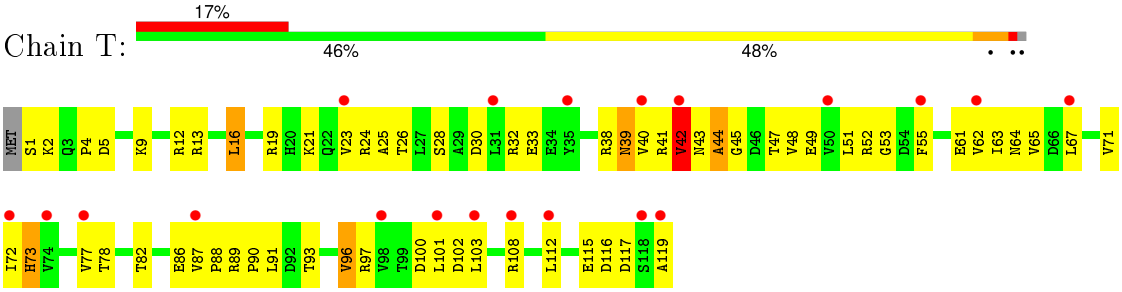
• Molecule 19: 50S ribosomal protein L23P

Chain S:



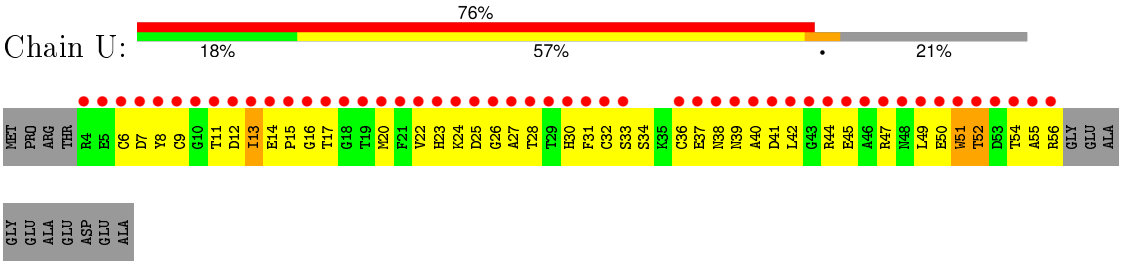
- Molecule 20: 50S ribosomal protein L24P

Chain T:



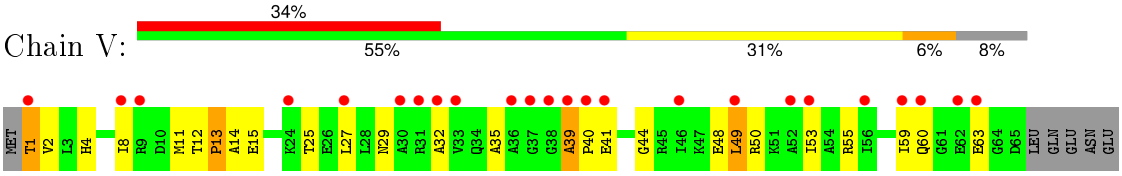
- Molecule 21: 50S ribosomal protein L24e

Chain U:



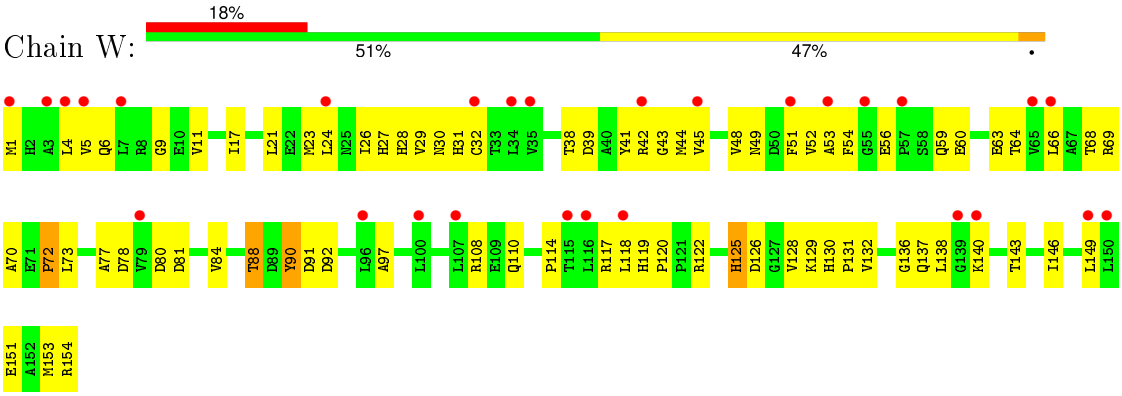
- Molecule 22: 50S ribosomal protein L29P

Chain V:

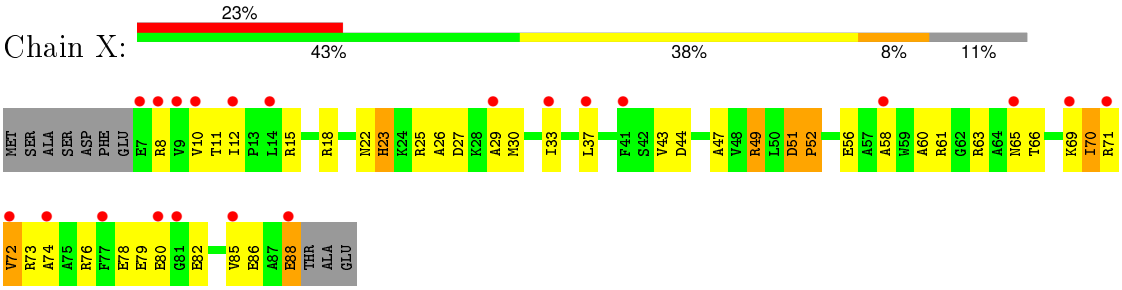


- Molecule 23: 50S ribosomal protein L30P

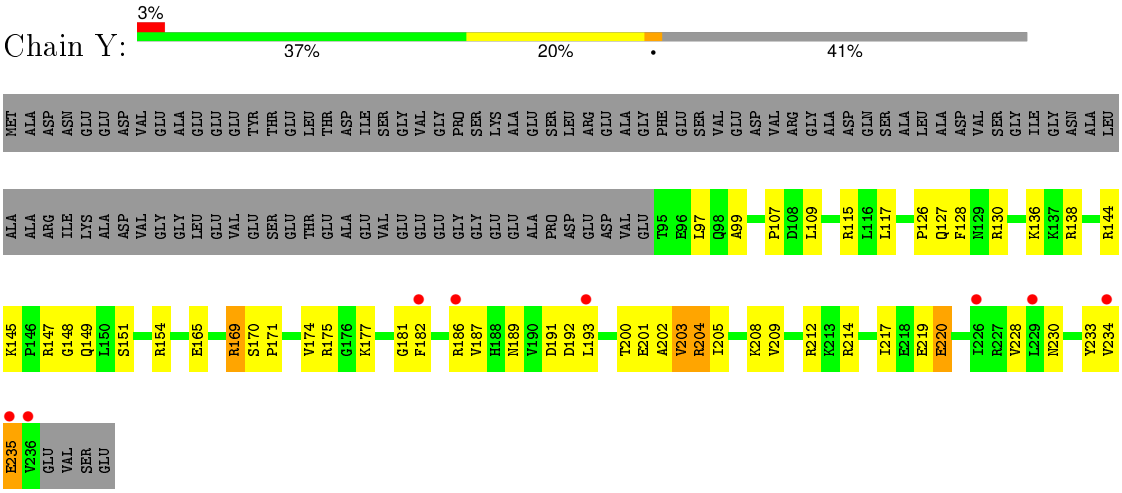
Chain W:



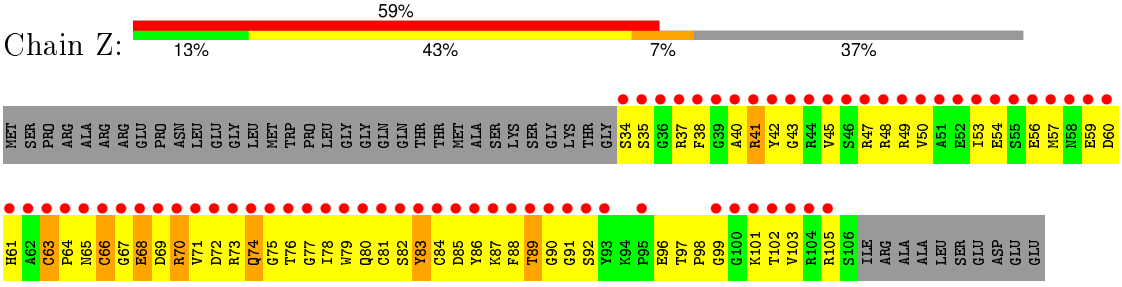
- Molecule 24: 50S ribosomal protein L31e



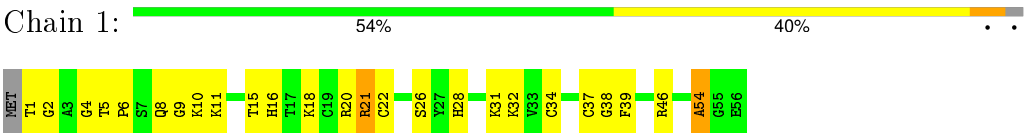
• Molecule 25: 50S ribosomal protein L32e



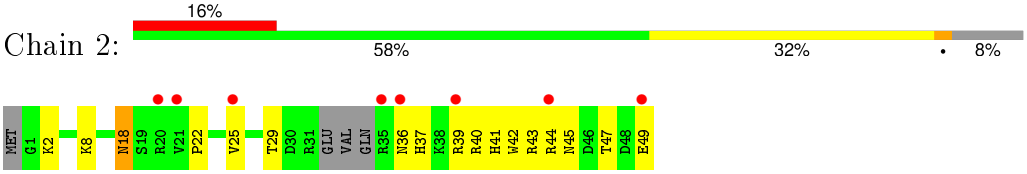
• Molecule 26: 50S ribosomal protein L37Ae



• Molecule 27: 50S ribosomal protein L37e

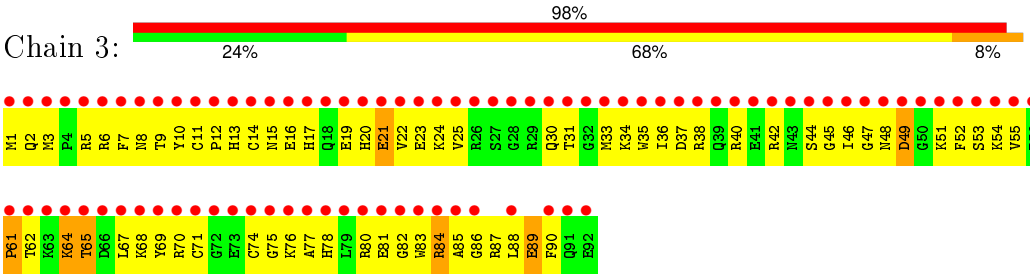


• Molecule 28: 50S ribosomal protein L39e



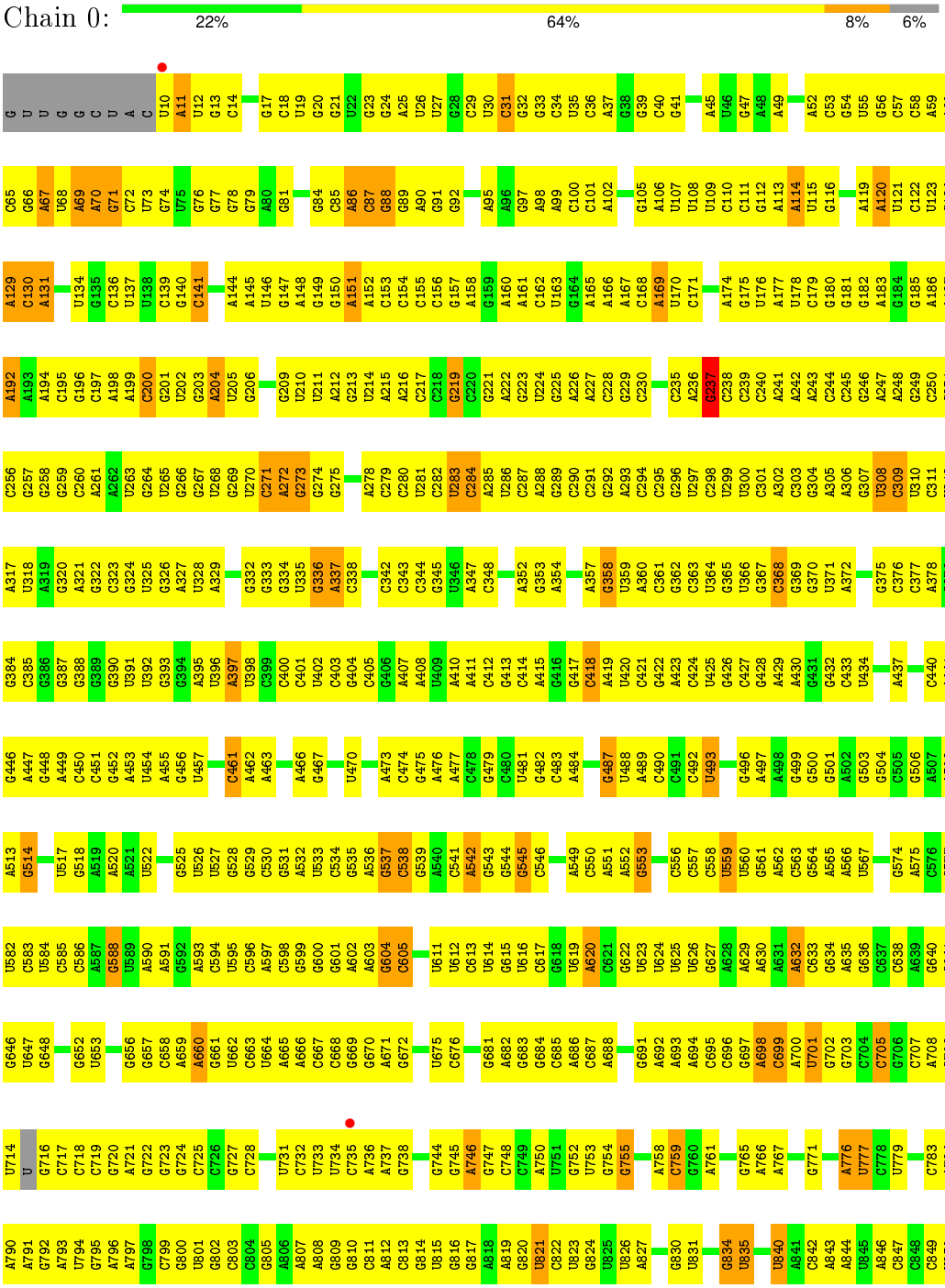
• Molecule 29: 50S ribosomal protein L44E

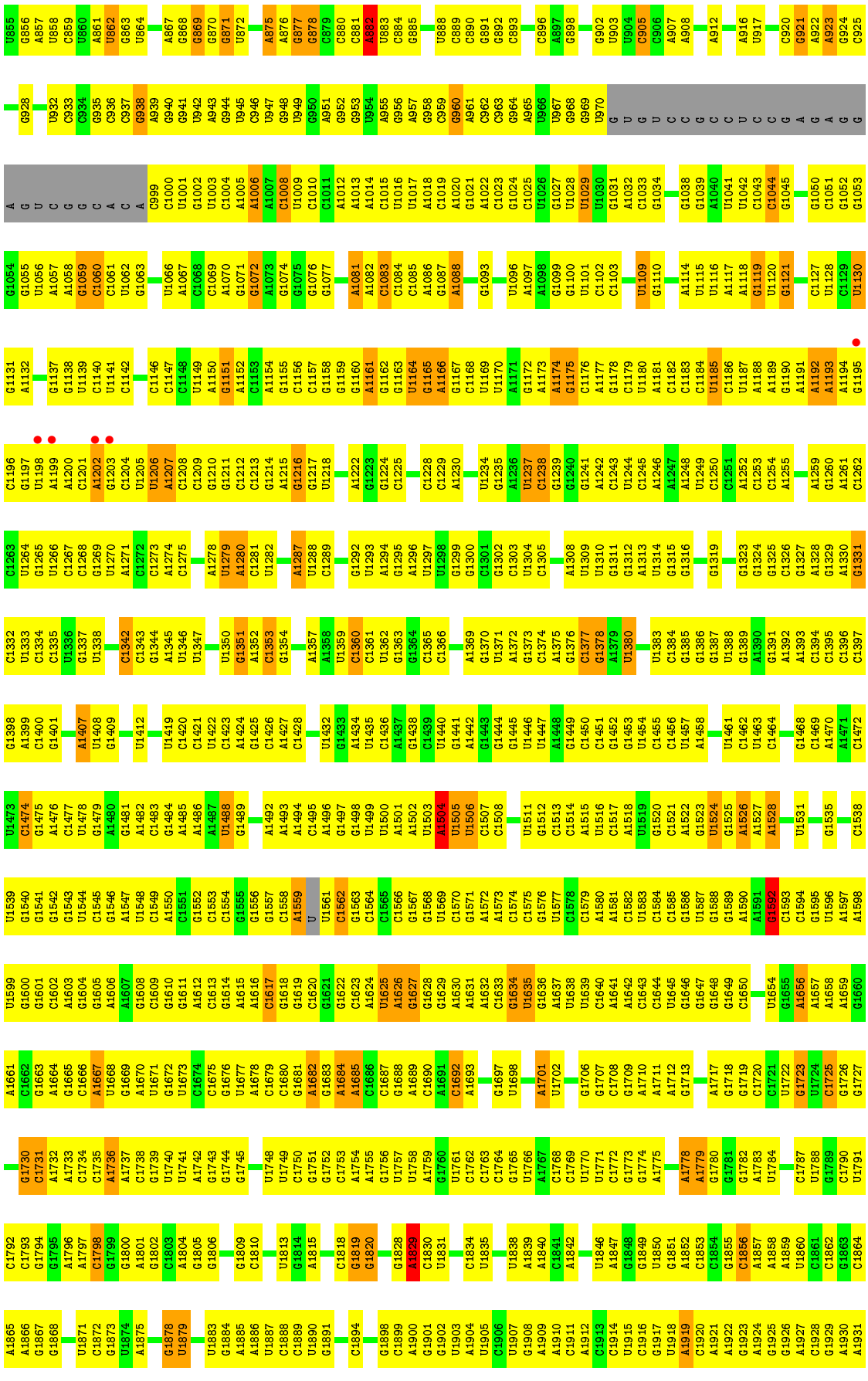
Chain 3:

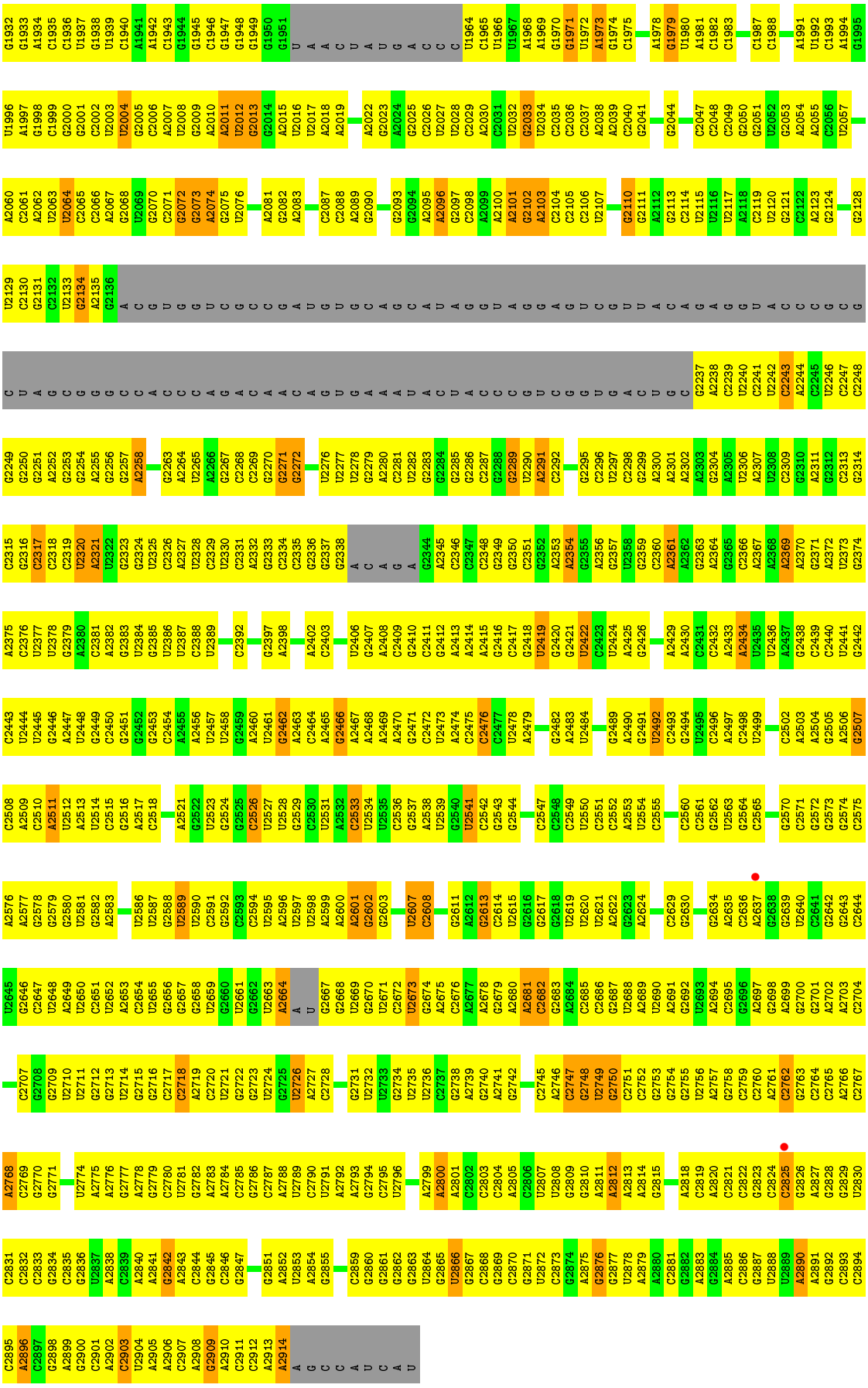


• Molecule 30: 23S RIBOSOMAL RNA

Chain 0:

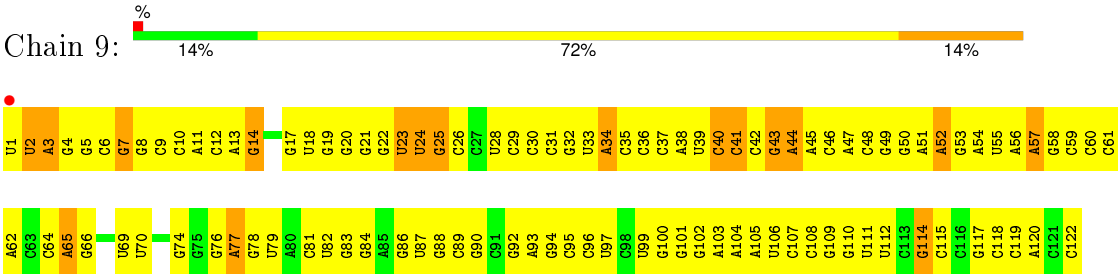






• Molecule 31: 5S RIBOSOMAL RNA

Chain 9:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	212.01Å 299.25Å 573.81Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.83 – 2.70 85.53 – 2.40	Depositor EDS
% Data completeness (in resolution range)	92.7 (49.83-2.70) 89.1 (85.53-2.40)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.00 (at 2.40Å)	Xtriage
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.184 , 0.226 0.185 , 0.261	Depositor DCC
R_{free} test set	4856 reflections (1.97%)	DCC
Wilson B-factor (Å^2)	79.9	Xtriage
Anisotropy	0.112	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 138.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Outliers	0 of 667044 reflections	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	99122	wwPDB-VP
Average B, all atoms (Å^2)	74.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.71% 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, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

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

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	0/1786	0.66	0/2408
2	B	0.38	0/2690	0.67	0/3652
3	C	0.42	0/1885	0.65	0/2552
4	D	0.35	0/1111	0.58	0/1498
5	E	0.36	0/1382	0.61	0/1880
6	F	0.36	0/901	0.60	0/1224
7	G	0.40	0/241	0.53	0/324
8	H	0.36	0/1302	0.66	0/1743
9	I	0.33	0/526	0.54	0/716
10	J	0.42	0/1136	0.63	0/1530
11	K	0.40	0/1004	0.71	0/1351
12	L	0.35	0/1130	0.64	0/1509
13	M	0.41	0/1582	0.64	0/2116
14	N	0.33	0/1474	0.62	0/1999
15	O	0.37	0/874	0.64	0/1181
16	P	0.39	0/1147	0.56	0/1528
17	Q	0.37	0/749	0.67	0/1005
18	R	1.28	7/1172 (0.6%)	1.10	6/1578 (0.4%)
19	S	0.38	0/648	0.59	0/875
20	T	0.39	0/958	0.67	0/1289
21	U	0.46	0/417	0.64	0/562
22	V	0.35	0/502	0.56	0/675
23	W	0.41	0/1219	0.68	0/1655
24	X	0.39	0/664	0.62	0/895
25	Y	0.39	0/1146	0.64	0/1536
26	Z	0.42	0/584	0.63	0/781
27	1	0.47	0/438	0.63	0/578
28	2	0.38	0/401	0.61	0/529
29	3	0.43	0/771	0.67	0/1024
30	0	0.49	0/65957	0.70	6/102867 (0.0%)
31	9	0.37	0/2904	0.68	0/4526
All	All	0.48	7/98701 (0.0%)	0.69	12/147586 (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
18	R	1	0
23	W	0	1
30	0	0	19
All	All	1	20

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	150	PRO	CB-CG	27.13	2.85	1.50
18	R	150	PRO	CA-C	-18.46	1.16	1.52
18	R	150	PRO	CG-CD	14.04	1.97	1.50
18	R	150	PRO	C-O	11.94	1.47	1.23
18	R	150	PRO	N-CA	11.49	1.66	1.47
18	R	150	PRO	N-CD	10.76	1.62	1.47
18	R	150	PRO	CA-CB	7.86	1.69	1.53

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	R	150	PRO	CB-CA-C	-22.46	55.84	112.00
18	R	150	PRO	N-CA-C	-19.38	61.71	112.10
18	R	150	PRO	CA-N-CD	12.12	128.68	111.70
18	R	150	PRO	N-CA-CB	11.03	116.54	103.30
18	R	150	PRO	CA-C-O	-8.33	100.20	120.20
30	0	128	A	N9-C1'-C2'	-6.07	105.32	112.00
18	R	150	PRO	CA-CB-CG	-6.06	92.49	104.00
30	0	1592	G	N9-C1'-C2'	5.81	121.56	114.00
30	0	1504	A	C1'-O4'-C4'	-5.70	105.34	109.90
30	0	755	G	O4'-C4'-C3'	-5.08	98.92	104.00
30	0	1504	A	N9-C1'-C2'	5.04	120.56	114.00
30	0	237	G	N9-C1'-C2'	-5.00	106.50	112.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
18	R	150	PRO	CA

All (20) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	0	1237	U	Sidechain
30	0	1371	U	Sidechain
30	0	1592	G	Sidechain
30	0	1635	U	Sidechain
30	0	1736	A	Sidechain
30	0	1828	G	Sidechain
30	0	1829	A	Sidechain
30	0	1839	A	Sidechain
30	0	1878	G	Sidechain
30	0	2289	G	Sidechain
30	0	2492	U	Sidechain
30	0	2673	U	Sidechain
30	0	2842	G	Sidechain
30	0	2866	U	Sidechain
30	0	493	U	Sidechain
30	0	788	A	Sidechain
30	0	862	U	Sidechain
30	0	882	A	Sidechain
30	0	938	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	1753	0	1766	123	0
2	B	2625	0	2533	168	0
3	C	1860	0	1813	98	0
4	D	1094	0	1085	71	0
5	E	1357	0	1266	49	0
6	F	890	0	843	39	0
7	G	240	0	231	18	0
8	H	1282	0	1292	62	0
9	I	519	0	500	24	0
10	J	1120	0	1098	56	0
11	K	994	0	1027	54	0
12	L	1118	0	1076	54	0
13	M	1558	0	1573	120	0
14	N	1445	0	1401	74	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
15	O	865	0	873	47	0
16	P	1136	0	1123	64	0
17	Q	735	0	729	32	0
18	R	1149	0	1122	58	0
19	S	641	0	605	29	0
20	T	950	0	924	56	0
21	U	410	0	368	58	0
22	V	499	0	511	26	0
23	W	1196	0	1137	79	0
24	X	654	0	653	42	0
25	Y	1130	0	1133	69	0
26	Z	573	0	534	84	0
27	1	431	0	426	27	0
28	2	396	0	413	20	0
29	3	755	0	732	138	0
30	0	59020	0	29802	3476	0
31	9	2599	0	1325	195	0
32	0	85	0	0	0	0
32	9	2	0	0	0	0
32	A	2	0	0	0	0
32	K	1	0	0	0	0
32	T	1	0	0	0	0
32	Y	2	0	0	0	0
33	0	1	0	0	0	0
33	M	1	0	0	0	0
34	0	63	0	0	0	0
34	9	2	0	0	0	0
34	B	1	0	0	0	0
34	C	1	0	0	0	0
34	J	1	0	0	0	0
34	L	1	0	0	0	0
34	M	1	0	0	0	0
34	Q	1	0	0	0	0
34	R	3	0	0	0	0
34	S	1	0	0	0	0
35	0	8	0	0	6	0
35	3	1	0	0	4	0
35	A	1	0	0	0	0
35	B	1	0	0	1	0
35	J	4	0	0	4	0
35	L	1	0	0	0	0
35	M	1	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	N	1	0	0	2	0
35	O	1	0	0	1	0
35	Q	1	0	0	1	0
35	R	1	0	0	0	0
35	Y	1	0	0	1	0
36	0	93	0	0	0	0
36	1	2	0	0	0	0
36	2	1	0	0	0	0
36	3	2	0	0	0	0
36	9	2	0	0	0	0
36	A	2	0	0	0	0
36	B	2	0	0	0	0
36	F	1	0	0	0	0
36	J	1	0	0	0	0
36	R	1	0	0	0	0
36	S	1	0	0	0	0
37	1	1	0	0	0	0
37	3	1	0	0	0	0
37	O	1	0	0	0	0
37	U	1	0	0	0	0
37	Z	1	0	0	0	0
38	0	5813	0	0	458	0
38	1	53	0	0	3	0
38	2	48	0	0	0	0
38	3	80	0	0	12	0
38	9	144	0	0	18	0
38	A	122	0	0	13	0
38	B	158	0	0	21	0
38	C	176	0	0	16	0
38	D	51	0	0	7	0
38	E	51	0	0	3	0
38	F	27	0	0	2	0
38	G	15	0	0	1	0
38	H	73	0	0	2	0
38	I	3	0	0	0	0
38	J	55	0	0	4	0
38	K	61	0	0	5	0
38	L	99	0	0	11	0
38	M	148	0	0	15	0
38	N	56	0	0	7	0
38	O	42	0	0	3	0
38	P	56	0	0	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	Q	58	0	0	5	0
38	R	78	0	0	1	0
38	S	37	0	0	3	0
38	T	41	0	0	3	0
38	U	34	0	0	4	0
38	V	10	0	0	2	0
38	W	71	0	0	4	0
38	X	28	0	0	1	0
38	Y	102	0	0	8	0
38	Z	33	0	0	7	0
All	All	99122	0	59914	5051	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 34.

All (5051) 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)
18:R:150:PRO:CD	18:R:150:PRO:CG	1.97	1.43
30:0:871:G:C8	30:0:871:G:H5'	1.74	1.22
31:9:29:C:H2'	31:9:30:C:H5'	1.21	1.17
14:N:37:ARG:NH1	31:9:6:C:H5"	1.59	1.16
31:9:56:A:H2'	31:9:57:A:H5"	1.23	1.16
31:9:92:G:H2'	31:9:93:A:C8	1.81	1.16
30:0:1160:G:H5'	30:0:1161:A:C5'	1.76	1.15
26:Z:63:CYS:SG	26:Z:81:CYS:HB2	1.87	1.15
30:0:1523:G:H2'	30:0:1524:U:C6	1.80	1.15
30:0:735:C:H2'	30:0:736:A:O4'	1.49	1.12
14:N:67:ALA:HA	14:N:71:TRP:HB3	1.32	1.11
30:0:1165:G:H1'	30:0:1174:A:H1'	1.21	1.11
10:J:82:THR:HG23	30:0:1242:A:H5'	1.27	1.10
30:0:1666:C:O2'	30:0:1667:A:H5"	1.52	1.09
30:0:1205:U:H2'	30:0:1206:U:H5'	1.31	1.09
30:0:545:G:H8	30:0:545:G:H5'	1.12	1.08
30:0:1160:G:C5'	30:0:1161:A:H5'	1.83	1.08
30:0:1632:A:H2'	30:0:1633:C:H5'	1.34	1.08
18:R:150:PRO:CG	18:R:150:PRO:C	2.22	1.07
30:0:1375:A:H2'	30:0:1376:G:H5'	1.37	1.06
26:Z:60:ASP:HB3	26:Z:69:ASP:HB3	1.37	1.06
30:0:424:C:H2'	30:0:425:U:H6	1.20	1.05
30:0:1184:C:H1'	38:0:7367:HOH:O	1.57	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2397:G:H2'	30:0:2398:A:H8	1.20	1.04
30:0:871:G:H5'	30:0:871:G:H8	0.89	1.04
25:Y:187:VAL:HG23	25:Y:192:ASP:HB2	1.40	1.04
30:0:595:U:H3'	38:0:6403:HOH:O	1.57	1.04
30:0:735:C:H3'	30:0:736:A:H8	1.18	1.03
30:0:2533:C:H5'	30:0:2533:C:H6	1.24	1.03
13:M:159:VAL:HG12	35:M:8818:CL:CL	1.96	1.02
14:N:37:ARG:HH12	31:9:6:C:H5"	0.89	1.01
30:0:2534:U:H1'	38:0:3475:HOH:O	1.61	1.01
30:0:236:A:H4'	30:0:237:G:H5'	1.37	1.01
29:3:5:ARG:HG3	29:3:6:ARG:HG3	1.43	1.00
28:2:43:ARG:HH22	30:0:1684:A:H1'	1.21	1.00
13:M:171:ARG:HD3	30:0:156:C:H5"	1.43	1.00
30:0:2717:C:C2'	30:0:2718:C:H5"	1.90	1.00
4:D:25:MET:HE3	4:D:37:ALA:HB1	1.41	1.00
15:O:47:ARG:HG3	15:O:47:ARG:HH11	1.23	1.00
13:M:77:HIS:HE1	13:M:86:GLN:HG2	1.25	1.00
30:0:2502:C:H2'	30:0:2503:A:H5'	1.39	0.99
30:0:735:C:H3'	30:0:736:A:C8	1.98	0.99
13:M:79:ALA:HB3	13:M:81:ARG:HH12	1.28	0.98
29:3:11:CYS:SG	29:3:13:HIS:HD2	1.85	0.98
31:9:76:G:H3'	31:9:77:A:H5"	1.46	0.98
17:Q:27:GLN:HE21	31:9:8:G:H4'	1.27	0.98
30:0:871:G:C5'	30:0:871:G:H8	1.76	0.98
30:0:432:G:H3'	38:0:7100:HOH:O	1.63	0.98
25:Y:208:LYS:NZ	30:0:1343:C:H1'	1.80	0.97
30:0:1563:G:H4'	38:0:4202:HOH:O	1.62	0.97
31:9:56:A:C2'	31:9:57:A:H5"	1.95	0.97
30:0:545:G:C8	30:0:545:G:H5'	2.00	0.96
20:T:64:ASN:HB3	20:T:73:HIS:HB2	1.47	0.96
1:A:51:ARG:HH11	1:A:51:ARG:HB2	1.29	0.96
30:0:496:G:H3'	38:0:7569:HOH:O	1.62	0.96
29:3:13:HIS:HB2	29:3:74:CYS:SG	2.05	0.96
30:0:2420:G:O2'	30:0:2421:G:H5'	1.65	0.95
14:N:37:ARG:HD3	35:N:8807:CL:CL	2.03	0.95
30:0:541:C:H2'	30:0:542:A:H5"	1.46	0.95
30:0:1160:G:H5'	30:0:1161:A:H5'	0.99	0.95
30:0:282:C:O2'	30:0:283:U:H5'	1.64	0.95
25:Y:208:LYS:HZ2	30:0:1343:C:H1'	1.30	0.94
30:0:1528:A:H61	30:0:1663:G:H1'	1.32	0.94
30:0:1679:C:H5'	38:0:9328:HOH:O	1.67	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1451:C:H5'	30:0:1505:U:C5	2.02	0.94
30:0:596:C:H2'	30:0:597:A:H8	1.32	0.94
38:Q:2875:HOH:O	30:0:2392:C:H4'	1.66	0.94
30:0:1166:A:P	30:0:1174:A:H4'	2.08	0.94
30:0:2502:C:C2'	30:0:2503:A:H5'	1.97	0.94
30:0:506:G:H22	30:0:509:A:C5'	1.81	0.94
31:9:97:U:H3'	38:9:5983:HOH:O	1.67	0.93
29:3:36:ILE:HD13	30:0:2432:C:H5"	1.50	0.93
31:9:92:G:H2'	31:9:93:A:H8	1.25	0.93
30:0:1205:U:H2'	30:0:1206:U:C5'	1.98	0.93
30:0:1626:A:H2'	30:0:1627:G:H5'	1.50	0.93
30:0:1523:G:H2'	30:0:1524:U:H6	1.32	0.93
30:0:1603:A:H5'	30:0:1605:G:O4'	1.68	0.93
30:0:2440:C:H4'	38:0:3795:HOH:O	1.68	0.92
30:0:1170:U:H1'	30:0:1172:G:N7	1.83	0.92
30:0:363:C:H1'	38:0:5232:HOH:O	1.69	0.92
30:0:1632:A:C2'	30:0:1633:C:H5'	2.00	0.92
12:L:111:ALA:HB2	30:0:698:A:H5"	1.51	0.92
30:0:2717:C:O2'	30:0:2718:C:H5"	1.69	0.91
30:0:2397:G:H2'	30:0:2398:A:C8	2.05	0.91
30:0:2751:C:H3'	38:0:7172:HOH:O	1.71	0.91
30:0:1181:A:H2'	30:0:1182:C:H5'	1.50	0.91
30:0:1736:A:H1'	38:0:7486:HOH:O	1.70	0.91
30:0:2241:C:H2'	30:0:2242:U:H6	1.36	0.90
30:0:1375:A:C2'	30:0:1376:G:H5'	2.01	0.90
30:0:2717:C:H2'	30:0:2718:C:H5"	1.48	0.90
13:M:77:HIS:HB2	13:M:81:ARG:HH21	1.35	0.90
31:9:14:G:H5'	31:9:14:G:H8	1.36	0.90
30:0:197:C:H5'	38:0:4888:HOH:O	1.71	0.90
30:0:1666:C:C2'	30:0:1667:A:H5"	2.02	0.90
30:0:1774:G:O2'	30:0:1775:A:H5'	1.72	0.89
30:0:2371:G:H5'	38:0:4962:HOH:O	1.70	0.89
30:0:2533:C:C6	30:0:2533:C:H5'	2.06	0.89
30:0:951:A:C2'	30:0:952:G:H5'	2.03	0.89
10:J:82:THR:CG2	30:0:1242:A:H5'	2.02	0.89
30:0:2248:C:H3'	38:0:5390:HOH:O	1.71	0.89
13:M:77:HIS:CE1	13:M:86:GLN:HG2	2.07	0.89
30:0:1626:A:H2'	30:0:1627:G:C5'	2.01	0.89
11:K:18:ILE:HG22	11:K:93:ASN:HD22	1.36	0.88
15:O:3:THR:HG22	30:0:656:G:H5'	1.54	0.88
30:0:1130:U:H2'	30:0:1131:G:O4'	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2507:G:H2'	30:0:2510:C:H42	1.36	0.88
30:0:69:A:H5'	30:0:69:A:C8	2.09	0.88
15:O:3:THR:CG2	30:0:656:G:H5'	2.04	0.88
31:9:29:C:C2'	31:9:30:C:H5'	2.02	0.88
31:9:49:G:O2'	31:9:50:G:H5'	1.73	0.88
30:0:2415:A:H2'	30:0:2416:G:H5'	1.55	0.88
30:0:947:U:O2'	30:0:948:G:H5'	1.74	0.88
30:0:2329:C:O2'	30:0:2330:U:H5'	1.74	0.87
29:3:42:ARG:NH1	30:0:396:U:H5'	1.88	0.87
30:0:1834:C:H2'	30:0:1840:A:H62	1.38	0.87
30:0:541:C:C2'	30:0:542:A:H5"	2.04	0.87
4:D:58:VAL:HB	4:D:62:ASP:HB3	1.53	0.87
30:0:870:G:H2'	30:0:871:G:H5"	1.57	0.87
29:3:47:GLY:HA2	30:0:2121:G:H4'	1.57	0.87
11:K:39:GLY:HA2	38:0:5173:HOH:O	1.75	0.87
30:0:2442:G:H2'	38:0:9197:HOH:O	1.75	0.87
13:M:70:GLY:HA2	30:0:2263:G:H5"	1.57	0.86
30:0:924:G:H5"	38:0:3656:HOH:O	1.73	0.86
30:0:1483:C:O2'	30:0:1484:G:H5'	1.74	0.86
30:0:120:A:H3'	38:0:4004:HOH:O	1.74	0.86
22:V:39:ALA:H	22:V:40:PRO:HD2	1.41	0.86
30:0:2465:A:H3'	38:0:3625:HOH:O	1.74	0.86
30:0:1206:U:H2'	30:0:1207:A:O4'	1.75	0.86
30:0:559:U:H6	30:0:559:U:H5'	1.40	0.86
30:0:1372:A:H3'	38:0:7091:HOH:O	1.75	0.86
30:0:1118:A:H3'	30:0:1118:A:C8	2.10	0.86
30:0:292:G:H2'	30:0:358:G:N2	1.90	0.86
30:0:1942:A:H5'	38:0:7247:HOH:O	1.76	0.85
30:0:1201:C:H2'	30:0:1202:A:H5'	1.56	0.85
30:0:718:C:O2'	30:0:719:C:H5'	1.76	0.85
24:X:74:ALA:HB2	24:X:85:VAL:HG13	1.57	0.85
30:0:69:A:H5'	30:0:69:A:H8	1.40	0.85
30:0:877:G:H5'	30:0:878:G:OP1	1.76	0.85
30:0:1641:A:H2'	30:0:1642:A:C5'	2.05	0.85
30:0:1351:G:H3'	38:0:6328:HOH:O	1.74	0.85
3:C:1:MET:HG2	3:C:2:GLN:H	1.41	0.85
30:0:424:C:H2'	30:0:425:U:C6	2.09	0.85
30:0:1641:A:C2'	30:0:1642:A:H5'	2.06	0.85
30:0:2336:G:O2'	30:0:2337:G:H5'	1.76	0.85
30:0:2102:G:H2'	38:0:7667:HOH:O	1.75	0.85
18:R:18:LEU:HB2	18:R:143:VAL:HG13	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:141:ARG:HH21	31:9:48:C:H4'	1.42	0.85
30:0:2661:U:H3	30:0:2812:A:H62	1.19	0.85
4:D:154:LYS:HD2	4:D:154:LYS:H	1.42	0.84
30:0:671:A:O2'	30:0:672:G:H2'	1.77	0.84
30:0:1641:A:H2'	30:0:1642:A:H5'	1.59	0.84
30:0:391:U:H3'	38:0:4623:HOH:O	1.75	0.84
30:0:2506:A:HO2'	30:0:2507:G:H8	0.85	0.84
30:0:1762:C:H2'	30:0:1763:C:H6	1.41	0.84
30:0:2868:C:H1'	38:0:7024:HOH:O	1.76	0.84
30:0:1964:U:O2	30:0:1964:U:H2'	1.77	0.84
30:0:380:A:H2'	38:0:7130:HOH:O	1.78	0.84
1:A:47:HIS:HD2	30:0:1654:U:H2'	1.41	0.84
14:N:37:ARG:HH12	31:9:6:C:C5'	1.84	0.84
29:3:24:LYS:HE2	35:3:8804:CL:CL	2.14	0.84
30:0:664:U:H5'	38:0:3760:HOH:O	1.77	0.84
30:0:1797:A:H4'	30:0:1798:C:C5	2.13	0.84
30:0:24:G:N2	30:0:518:G:H1'	1.93	0.84
2:B:162:MET:HE2	2:B:310:ARG:HD3	1.58	0.84
30:0:1735:C:O2'	30:0:1736:A:H5'	1.77	0.84
30:0:652:G:H5"	38:0:3006:HOH:O	1.78	0.84
30:0:282:C:H1'	30:0:368:C:N4	1.93	0.84
30:0:2472:C:H3'	38:0:3589:HOH:O	1.77	0.83
3:C:127:ARG:NH2	3:C:225:PRO:HG2	1.92	0.83
13:M:70:GLY:HA2	30:0:2263:G:C5'	2.08	0.83
30:0:57:C:H42	30:0:89:G:H1	1.26	0.83
30:0:847:C:H1'	38:0:4278:HOH:O	1.76	0.83
30:0:1810:C:H4'	38:0:6580:HOH:O	1.78	0.83
30:0:1477:C:O2'	30:0:1478:U:H5'	1.78	0.83
30:0:396:U:H4'	38:0:4309:HOH:O	1.79	0.83
27:1:20:ARG:HH21	30:0:120:A:H5'	1.43	0.83
30:0:1834:C:H2'	30:0:1840:A:N6	1.93	0.83
30:0:1116:U:HO2'	30:0:1118:A:H2	0.90	0.83
30:0:1940:C:H1'	38:0:9376:HOH:O	1.78	0.83
29:3:65:THR:HG22	35:3:8804:CL:CL	2.15	0.83
30:0:2469:A:H1'	38:0:3226:HOH:O	1.78	0.83
15:O:51:TYR:HD1	30:0:721:A:H4'	1.43	0.83
30:0:2578:G:H5'	30:0:2578:G:H8	1.43	0.83
11:K:27:ARG:HD2	11:K:60:GLY:HA2	1.60	0.83
30:0:461:C:H2'	38:0:3977:HOH:O	1.78	0.83
30:0:2256:G:H2'	30:0:2257:G:H5'	1.61	0.83
30:0:1181:A:C2'	30:0:1182:C:H5'	2.09	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:164:THR:HG22	13:M:166:ALA:H	1.44	0.83
30:0:2769:C:C2'	30:0:2770:G:H5'	2.09	0.82
30:0:2768:A:H3'	30:0:2768:A:N3	1.94	0.82
30:0:2089:A:O2'	30:0:2090:G:H5'	1.79	0.82
20:T:71:VAL:HG11	20:T:90:PRO:HB3	1.60	0.82
30:0:1450:C:H3'	38:0:9443:HOH:O	1.77	0.82
30:0:2474:A:N7	30:0:2621:PSU:H4'	1.94	0.82
30:0:2508:C:H2'	38:0:6666:HOH:O	1.78	0.82
30:0:90:A:H2'	30:0:91:G:O4'	1.79	0.82
30:0:669:G:O2'	30:0:670:G:H5'	1.80	0.82
30:0:282:C:C2'	30:0:283:U:H5'	2.09	0.82
14:N:37:ARG:NH1	31:9:6:C:C5'	2.42	0.82
13:M:82:ARG:O	13:M:86:GLN:HG3	1.80	0.82
30:0:2506:A:O2'	30:0:2507:G:H8	1.63	0.82
30:0:1477:C:H5'	30:0:1868:G:H5'	1.59	0.82
28:2:41:HIS:HD2	28:2:44:ARG:H	1.27	0.82
30:0:1625:U:H4'	38:0:4622:HOH:O	1.80	0.82
30:0:1118:A:H3'	30:0:1118:A:H8	1.45	0.82
30:0:2871:G:H2'	30:0:2872:U:H6	1.45	0.81
29:3:25:VAL:HG22	29:3:68:LYS:HB2	1.60	0.81
30:0:2281:C:H2'	30:0:2282:U:H5'	1.60	0.81
11:K:76:GLN:HA	11:K:93:ASN:HB3	1.62	0.81
29:3:49:ASP:HB3	29:3:52:PHE:HB2	1.62	0.81
30:0:2468:A:H3'	38:0:5402:HOH:O	1.81	0.81
6:F:39:SER:HB3	6:F:45:ALA:HB2	1.62	0.81
30:0:1666:C:H2'	30:0:1667:A:C5'	2.10	0.81
30:0:2241:C:H2'	30:0:2242:U:C6	2.15	0.81
30:0:2894:C:O2'	30:0:2895:C:H5'	1.81	0.81
38:Y:8920:HOH:O	30:0:1330:A:H4'	1.81	0.81
30:0:1116:U:O2'	30:0:1118:A:H2	1.63	0.81
30:0:2769:C:O2'	30:0:2770:G:H5'	1.80	0.81
30:0:385:C:O5'	30:0:385:C:H6	1.64	0.81
29:3:48:ASN:ND2	30:0:169:A:H1'	1.96	0.81
30:0:2253:G:H2'	30:0:2254:G:H8	1.45	0.81
38:3:9016:HOH:O	30:0:2434:A:H4'	1.81	0.81
30:0:558:C:C2'	30:0:559:U:H5"	2.11	0.81
30:0:1474:C:H6	30:0:1474:C:H5'	1.46	0.81
35:Y:8820:CL:CL	38:0:3632:HOH:O	2.36	0.81
30:0:2065:C:O2'	30:0:2066:C:H5'	1.80	0.80
30:0:1151:G:H2'	38:0:4973:HOH:O	1.79	0.80
13:M:99:ARG:HE	13:M:170:ASN:HD22	1.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2106:C:H2'	30:0:2107:U:C6	2.16	0.80
4:D:141:VAL:HG21	31:9:57:A:C8	2.15	0.80
30:0:2644:C:H4'	38:0:3380:HOH:O	1.81	0.80
30:0:2505:G:H2'	30:0:2506:A:H5'	1.61	0.80
35:0:8813:CL:CL	38:0:4640:HOH:O	2.37	0.80
3:C:129:HIS:CE1	3:C:231:ARG:HA	2.17	0.80
23:W:38:THR:HG22	23:W:39:ASP:H	1.46	0.80
22:V:1:THR:HG23	22:V:2:VAL:H	1.47	0.80
30:0:1855:G:H4'	30:0:1856:C:O5'	1.78	0.80
1:A:100:PRO:HG2	1:A:103:VAL:HG21	1.64	0.80
30:0:1132:A:N6	30:0:1229:C:H2'	1.97	0.80
30:0:368:C:H2'	30:0:369:G:H5'	1.62	0.80
30:0:2871:G:H2'	30:0:2872:U:C6	2.16	0.80
30:0:56:G:H3'	38:0:5388:HOH:O	1.81	0.80
25:Y:154:ARG:HH21	30:0:1293:U:H5'	1.47	0.80
14:N:144:GLY:O	14:N:147:ILE:HG22	1.81	0.80
15:O:51:TYR:CE1	30:0:721:A:H5"	2.16	0.80
1:A:51:ARG:NH1	1:A:51:ARG:HB2	1.95	0.80
21:U:56:ARG:HD2	30:0:2890:A:C8	2.17	0.80
30:0:2243:C:H5"	38:0:3730:HOH:O	1.82	0.79
30:0:1120:U:C6	30:0:1120:U:H5"	2.17	0.79
30:0:2009:G:H5'	38:0:9852:HOH:O	1.81	0.79
10:J:52:GLN:HE22	30:0:1119:G:H2'	1.46	0.79
30:0:213:G:N2	30:0:225:G:H2'	1.97	0.79
30:0:2735:U:H2'	30:0:2736:U:H6	1.45	0.79
30:0:1346:U:H2'	30:0:1347:U:H6	1.46	0.79
30:0:1596:U:H2'	30:0:1598:A:OP2	1.82	0.79
30:0:2533:C:C5'	30:0:2533:C:H6	1.96	0.79
15:O:51:TYR:CD1	30:0:721:A:H4'	2.18	0.79
30:0:449:A:H3'	38:0:5340:HOH:O	1.79	0.79
30:0:1209:C:H2'	30:0:1210:G:H8	1.44	0.79
8:H:158:ASN:ND2	30:0:2502:C:H4'	1.98	0.79
30:0:951:A:O2'	30:0:952:G:H5'	1.81	0.79
30:0:2785:C:H5'	38:0:7614:HOH:O	1.81	0.79
30:0:1666:C:H2'	30:0:1667:A:H5'	1.65	0.79
30:0:560:U:H2'	30:0:561:G:H8	1.48	0.79
31:9:29:C:H2'	31:9:30:C:C5'	2.09	0.79
30:0:506:G:H22	30:0:509:A:H5"	1.48	0.79
30:0:2315:C:H5"	38:0:3506:HOH:O	1.81	0.79
30:0:2717:C:H2'	30:0:2718:C:C5'	2.11	0.79
30:0:1741:U:O2'	30:0:2723:G:H4'	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2005:G:OP2	30:0:2005:G:H3'	1.82	0.79
30:0:2750:G:H2'	30:0:2751:C:C6	2.19	0.78
11:K:14:LYS:HB2	11:K:45:PRO:HG2	1.65	0.78
4:D:141:VAL:HG21	31:9:57:A:H8	1.48	0.78
30:0:213:G:H22	30:0:225:G:H2'	1.47	0.78
30:0:2241:C:O2'	30:0:2242:U:H5'	1.83	0.78
30:0:2908:A:H2'	30:0:2909:G:O4'	1.83	0.78
12:L:90:ARG:HA	12:L:119:THR:HB	1.65	0.78
30:0:1505:U:H4'	38:0:5132:HOH:O	1.83	0.78
30:0:2114:C:H3'	38:0:9705:HOH:O	1.82	0.78
30:0:1278:A:H4'	30:0:1279:U:N3	1.98	0.78
9:I:83:GLY:H	30:0:1168:C:H5"	1.48	0.78
30:0:1202:A:H2'	30:0:1203:G:O4'	1.82	0.78
30:0:1626:A:C2'	30:0:1627:G:H5'	2.12	0.78
30:0:1116:U:H3	30:0:1246:A:H62	1.30	0.78
17:Q:15:LYS:HD3	30:0:2364:A:H5"	1.66	0.78
30:0:541:C:H2'	30:0:542:A:C5'	2.13	0.78
30:0:1773:G:H4'	38:0:3502:HOH:O	1.84	0.78
30:0:107:U:H2'	30:0:108:U:H5'	1.66	0.78
25:Y:165:GLU:HB3	38:0:6614:HOH:O	1.83	0.78
29:3:3:MET:O	29:3:90:PHE:HA	1.84	0.78
30:0:2439:C:H2'	30:0:2440:C:H6	1.46	0.78
38:B:8996:HOH:O	30:0:2766:A:H5'	1.82	0.78
30:0:1664:A:OP1	30:0:1664:A:H8	1.67	0.78
16:P:77:ALA:HA	16:P:80:ARG:HG3	1.64	0.78
30:0:1423:C:O2'	30:0:1424:A:H5'	1.84	0.78
30:0:2507:G:H2'	30:0:2510:C:N4	1.99	0.78
11:K:10:GLN:NE2	11:K:10:GLN:H	1.81	0.78
14:N:17:ARG:HB3	14:N:17:ARG:HH11	1.46	0.78
30:0:200:C:H2'	38:0:3428:HOH:O	1.82	0.77
30:0:228:C:C2'	30:0:229:G:H5'	2.14	0.77
30:0:822:C:H1'	38:0:4074:HOH:O	1.82	0.77
30:0:2410:G:O2'	30:0:2411:C:H5'	1.84	0.77
30:0:2869:G:H5'	38:0:5440:HOH:O	1.84	0.77
30:0:1331:G:O2'	30:0:1332:C:H5'	1.84	0.77
30:0:2794:G:C2	30:0:2795:C:C6	2.73	0.77
30:0:2498:C:O2'	30:0:2499:U:H5'	1.84	0.77
24:X:43:VAL:HG12	24:X:44:ASP:H	1.48	0.77
30:0:2812:A:H1'	38:0:5719:HOH:O	1.84	0.77
13:M:139:PRO:HA	13:M:142:GLN:HB2	1.65	0.77
24:X:37:LEU:HD13	24:X:85:VAL:HG21	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:766:A:H2'	38:0:3818:HOH:O	1.85	0.77
9:I:87:PRO:HD2	30:0:1180:U:H1'	1.66	0.77
30:0:106:A:O2'	30:0:107:U:H5'	1.84	0.77
30:0:182:G:H5'	38:0:5110:HOH:O	1.85	0.77
30:0:625:U:H5"	30:0:1044:C:N4	2.00	0.77
30:0:1947:G:H2'	30:0:1948:G:H8	1.49	0.77
30:0:1119:G:H22	30:0:1246:A:H2	1.33	0.76
30:0:1889:C:C4	30:0:1890:U:C5	2.73	0.76
2:B:36:PRO:HG3	2:B:169:GLY:HA3	1.66	0.76
30:0:154:C:H2'	30:0:155:C:H6	1.48	0.76
30:0:711:G:C2	30:0:718:C:C2	2.72	0.76
30:0:1787:C:O2'	30:0:1788:U:H5'	1.85	0.76
17:Q:27:GLN:HE21	31:9:8:G:C4'	1.99	0.76
30:0:561:G:H2'	30:0:562:A:H8	1.50	0.76
31:9:52:A:H2'	31:9:53:G:O4'	1.85	0.76
12:L:55:GLN:HA	12:L:58:GLN:HE21	1.49	0.76
30:0:557:C:O2'	30:0:558:C:H5'	1.86	0.76
30:0:1119:G:N2	30:0:1246:A:C2	2.51	0.76
1:A:47:HIS:CD2	30:0:1654:U:H2'	2.20	0.76
30:0:506:G:H22	30:0:509:A:H5'	1.48	0.76
1:A:199:HIS:CD2	1:A:201:PHE:H	2.03	0.76
5:E:133:VAL:HG12	5:E:141:VAL:HG13	1.66	0.76
3:C:115:LEU:HD13	3:C:223:LEU:HD21	1.68	0.76
30:0:2073:G:H2'	38:0:3803:HOH:O	1.83	0.76
30:0:2624:A:H1'	38:0:9771:HOH:O	1.84	0.76
31:9:57:A:H2'	31:9:58:G:H5'	1.68	0.76
12:L:53:ARG:HD2	30:0:2441:U:H4'	1.66	0.76
30:0:951:A:H2'	30:0:952:G:H5'	1.66	0.76
22:V:25:THR:HG22	22:V:29:ASN:HD21	1.50	0.76
8:H:59:GLN:HE22	8:H:96:GLN:HG2	1.49	0.76
30:0:1072:G:H5'	38:0:6511:HOH:O	1.85	0.76
30:0:1205:U:C2'	30:0:1206:U:H5'	2.15	0.76
30:0:2803:C:O2'	30:0:2804:C:H5'	1.86	0.76
30:0:2256:G:C2'	30:0:2257:G:H5'	2.16	0.76
14:N:141:ARG:NH2	31:9:48:C:H4'	2.00	0.76
30:0:2687:G:O2'	30:0:2688:U:H5'	1.86	0.76
8:H:123:ILE:HD12	8:H:123:ILE:H	1.51	0.76
30:0:1120:U:H6	30:0:1120:U:H5"	1.51	0.75
23:W:125:HIS:NE2	30:0:1097:A:H5"	2.00	0.75
30:0:1164:U:C2	30:0:1166:A:H4'	2.21	0.75
30:0:1666:C:C2'	30:0:1667:A:C5'	2.63	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:659:A:H5"	38:0:7001:HOH:O	1.87	0.75
30:0:1921:A:O2'	30:0:1922:A:H5'	1.87	0.75
29:3:62:THR:HG21	29:3:84:ARG:HB3	1.68	0.75
23:W:11:VAL:HG11	30:0:1086:A:C6	2.22	0.75
30:0:870:G:C2'	30:0:871:G:H5"	2.17	0.75
1:A:47:HIS:HD2	30:0:1654:U:C2'	1.99	0.75
13:M:95:LYS:HA	13:M:170:ASN:HD21	1.50	0.75
9:I:83:GLY:HA3	30:0:1168:C:H5'	1.68	0.75
30:0:120:A:H2'	30:0:120:A:N3	2.02	0.75
2:B:264:GLU:HG2	2:B:267:LYS:HE3	1.68	0.75
30:0:303:C:O2'	30:0:304:G:H5'	1.86	0.75
29:3:74:CYS:SG	29:3:76:LYS:HD2	2.27	0.75
30:0:2697:A:H2'	30:0:2698:G:O4'	1.87	0.75
8:H:120:PHE:CD1	30:0:2311:A:H5'	2.21	0.75
30:0:136:C:H2'	30:0:137:U:O4'	1.85	0.75
10:J:131:THR:HB	10:J:134:GLU:HG3	1.67	0.75
30:0:1521:C:H2'	30:0:1522:A:H8	1.52	0.75
3:C:129:HIS:HE1	3:C:231:ARG:HA	1.51	0.75
30:0:300:U:H2'	30:0:301:C:H6	1.52	0.75
2:B:238:ASN:HD22	2:B:240:GLY:H	1.32	0.75
31:9:54:A:O2'	31:9:55:U:H5'	1.87	0.74
29:3:12:PRO:HG3	30:0:2382:A:H4'	1.68	0.74
30:0:1175:G:H2'	30:0:1176:C:O4'	1.87	0.74
2:B:206:THR:HG21	30:0:2716:G:H5"	1.67	0.74
30:0:694:A:H1'	38:0:3795:HOH:O	1.86	0.74
8:H:19:ARG:HH12	30:0:1008:C:H5"	1.52	0.74
23:W:88:THR:HB	38:W:6679:HOH:O	1.85	0.74
30:0:1557:G:H2'	30:0:1558:C:H6	1.51	0.74
30:0:503:G:H2'	30:0:504:G:H8	1.51	0.74
30:0:228:C:H2'	30:0:229:G:H5'	1.69	0.74
11:K:8:VAL:HG13	11:K:80:ILE:HG22	1.68	0.74
30:0:2672:C:O2	30:0:2672:C:H2'	1.85	0.74
30:0:594:C:H2'	30:0:595:U:H6	1.53	0.74
31:9:14:G:C8	31:9:14:G:H5'	2.21	0.74
5:E:143:GLN:HE21	30:0:2780:C:H1'	1.51	0.74
30:0:2239:C:H2'	30:0:2240:U:H6	1.50	0.74
30:0:748:C:H3'	38:0:4014:HOH:O	1.86	0.74
30:0:2820:A:H2'	30:0:2821:C:C6	2.22	0.74
30:0:1201:C:H5'	38:0:5677:HOH:O	1.88	0.74
30:0:1741:U:H5'	30:0:1742:A:OP1	1.87	0.74
4:D:25:MET:SD	4:D:40:ILE:HD11	2.27	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:119:A:H2'	30:0:120:A:C5'	2.17	0.74
38:C:8665:HOH:O	30:0:656:G:H1'	1.87	0.74
17:Q:25:PRO:HB2	38:Q:4350:HOH:O	1.88	0.74
30:0:1206:U:H5'	30:0:1206:U:H6	1.50	0.74
23:W:88:THR:HG23	23:W:110:GLN:HB3	1.70	0.74
30:0:2827:A:H2'	30:0:2828:G:O4'	1.87	0.74
30:0:681:G:N3	30:0:681:G:H5'	2.02	0.74
23:W:44:MET:HE2	30:0:944:G:H21	1.52	0.74
2:B:88:GLU:HB3	2:B:97:LEU:HD12	1.70	0.74
30:0:1973:A:H2'	30:0:1974:G:O4'	1.88	0.74
30:0:2426:G:H1'	38:0:6014:HOH:O	1.86	0.74
1:A:217:ARG:HH12	30:0:1853:C:H4'	1.50	0.74
30:0:1527:A:H1'	30:0:1528:A:C8	2.22	0.73
14:N:21:HIS:CE1	30:0:2369:A:H4'	2.22	0.73
6:F:91:VAL:HG12	6:F:92:GLY:H	1.53	0.73
30:0:2472:C:O2'	30:0:2634:G:H4'	1.87	0.73
24:X:26:ALA:HB2	24:X:63:ARG:HA	1.70	0.73
30:0:871:G:C8	30:0:871:G:C5'	2.59	0.73
30:0:558:C:H2'	30:0:559:U:H5"	1.70	0.73
30:0:2735:U:H2'	30:0:2736:U:C6	2.23	0.73
30:0:2587:OMU:H6	30:0:2587:OMU:O5'	1.88	0.73
30:0:2130:C:H1'	38:0:3910:HOH:O	1.89	0.73
29:3:11:CYS:SG	29:3:13:HIS:CD2	2.77	0.73
13:M:74:LYS:HG3	38:M:8885:HOH:O	1.88	0.73
30:0:1451:C:H5'	30:0:1505:U:H5	1.51	0.73
11:K:8:VAL:HG12	11:K:9:THR:H	1.54	0.73
30:0:1181:A:H2'	30:0:1182:C:C5'	2.18	0.73
30:0:1205:U:C2'	30:0:1206:U:C5'	2.66	0.73
30:0:287:C:H42	30:0:365:G:H1	1.37	0.73
13:M:99:ARG:HD2	13:M:167:GLY:HA2	1.68	0.73
30:0:418:C:H2'	30:0:419:A:C8	2.24	0.73
30:0:1255:A:H3'	38:0:7057:HOH:O	1.87	0.73
30:0:119:A:H2'	30:0:120:A:H5"	1.71	0.73
2:B:198:GLU:HA	38:B:9141:HOH:O	1.88	0.73
5:E:154:ILE:HD11	5:E:157:LYS:HB2	1.70	0.73
30:0:1366:C:H1'	38:0:9256:HOH:O	1.87	0.73
30:0:2106:C:H2'	30:0:2107:U:H6	1.52	0.73
30:0:1759:A:N3	30:0:1818:C:H2'	2.04	0.73
2:B:244:PRO:HG3	2:B:248:ARG:HH21	1.53	0.73
12:L:46:LEU:O	30:0:2430:A:H4'	1.88	0.73
26:Z:59:GLU:HB2	26:Z:61:HIS:CE1	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2586:U:H3	30:0:2592:G:H22	1.37	0.73
25:Y:204:ARG:HH22	30:0:553:G:P	2.12	0.73
30:0:2667:G:H1'	30:0:2914:A:N3	2.04	0.73
1:A:207:GLN:HA	38:A:8983:HOH:O	1.89	0.73
30:0:116:G:H1'	30:0:129:A:N3	2.04	0.73
8:H:29:SER:HA	8:H:62:HIS:HD2	1.52	0.73
30:0:2040:C:O2'	30:0:2041:G:H5'	1.89	0.73
29:3:47:GLY:CA	30:0:2121:G:H4'	2.19	0.72
4:D:50:VAL:HG13	31:9:41:C:O4'	1.90	0.72
9:I:83:GLY:H	30:0:1168:C:C5'	2.01	0.72
30:0:267:G:H2'	30:0:268:U:O4'	1.89	0.72
30:0:1942:A:O2'	30:0:1943:C:H5'	1.89	0.72
30:0:2851:G:H2'	30:0:2902:A:H61	1.51	0.72
30:0:1016:U:H2'	30:0:1017:U:H6	1.52	0.72
30:0:596:C:H2'	30:0:597:A:C8	2.20	0.72
2:B:212:GLN:HB2	2:B:257:THR:HG21	1.70	0.72
30:0:711:G:N2	30:0:718:C:C2	2.58	0.72
27:1:38:GLY:HA3	38:1:6935:HOH:O	1.88	0.72
31:9:49:G:H5"	38:9:4707:HOH:O	1.88	0.72
16:P:80:ARG:HD3	16:P:87:ARG:HH11	1.55	0.72
27:1:2:GLY:O	27:1:6:PRO:HG2	1.89	0.72
30:0:1730:G:H5"	30:0:1731:C:H5	1.53	0.72
30:0:2647:C:H1'	38:0:6339:HOH:O	1.87	0.72
30:0:2297:U:O2'	30:0:2298:C:H5'	1.89	0.72
2:B:217:ARG:HG3	2:B:257:THR:HG22	1.72	0.72
30:0:1474:C:C6	30:0:1474:C:H5'	2.25	0.72
3:C:46:TYR:CE1	30:0:450:C:H4'	2.24	0.72
31:9:36:C:H2'	31:9:37:C:H5'	1.72	0.72
30:0:2576:A:H3'	38:0:9077:HOH:O	1.89	0.72
16:P:115:SER:H	16:P:118:GLN:HB2	1.55	0.72
13:M:27:ARG:HH12	13:M:44:THR:HG21	1.53	0.72
30:0:1667:A:H8	30:0:1667:A:H5'	1.54	0.71
30:0:1309:U:H3'	38:0:4114:HOH:O	1.90	0.71
30:0:708:A:H2'	30:0:709:G:O4'	1.90	0.71
30:0:2073:G:H5"	38:0:3803:HOH:O	1.88	0.71
16:P:13:VAL:HG21	16:P:41:ARG:HG2	1.72	0.71
30:0:2061:C:H2'	30:0:2062:A:H5'	1.72	0.71
30:0:2748:G:H2'	38:0:7440:HOH:O	1.89	0.71
26:Z:70:ARG:HG2	26:Z:83:TYR:N	2.05	0.71
13:M:70:GLY:HA2	30:0:2263:G:H4'	1.72	0.71
30:0:2769:C:H2'	30:0:2770:G:O4'	1.88	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:7:GLN:HE21	12:L:7:GLN:HA	1.55	0.71
29:3:68:LYS:HE3	30:0:2436:U:H5'	1.71	0.71
18:R:114:VAL:HB	18:R:145:LEU:HD12	1.70	0.71
31:9:108:C:H2'	31:9:109:G:C8	2.24	0.71
21:U:56:ARG:NE	30:0:2890:A:H1'	2.06	0.71
30:0:2004:U:H2'	30:0:2004:U:O2	1.91	0.71
30:0:192:A:H5'	38:0:7544:HOH:O	1.90	0.71
30:0:421:C:H4'	30:0:1919:A:C6	2.25	0.71
30:0:2479:A:H5"	38:0:4609:HOH:O	1.91	0.71
20:T:48:VAL:HG21	20:T:96:VAL:HG13	1.72	0.71
30:0:814:G:H4'	38:0:3121:HOH:O	1.90	0.71
3:C:236:THR:HA	38:C:8655:HOH:O	1.90	0.71
30:0:1165:G:H21	30:0:1173:A:C5'	2.04	0.71
30:0:24:G:H22	30:0:518:G:H1'	1.56	0.71
30:0:2256:G:H2'	30:0:2257:G:C5'	2.20	0.71
30:0:1278:A:H4'	30:0:1279:U:C4	2.26	0.71
8:H:59:GLN:NE2	8:H:129:ARG:HE	1.88	0.71
30:0:1972:U:H2'	30:0:1973:A:H5'	1.71	0.71
30:0:1574:C:H2'	30:0:1575:C:H6	1.54	0.71
23:W:88:THR:HG22	23:W:90:TYR:HD1	1.55	0.71
1:A:211:LYS:HB3	1:A:212:PRO:HD2	1.70	0.71
3:C:174:ILE:HD11	30:0:338:C:H4'	1.73	0.71
30:0:2717:C:C2'	30:0:2718:C:C5'	2.68	0.71
30:0:2505:G:C2'	30:0:2506:A:H5'	2.20	0.71
30:0:1118:A:H62	30:0:1244:U:H3	1.36	0.71
30:0:2103:A:H2'	30:0:2104:C:H5'	1.73	0.71
30:0:1477:C:H5'	30:0:1868:G:C5'	2.20	0.71
30:0:2890:A:N3	30:0:2890:A:H2'	2.06	0.71
30:0:300:U:C5	30:0:301:C:H5	2.09	0.71
30:0:2061:C:C2'	30:0:2062:A:H5'	2.20	0.71
2:B:84:LEU:HD23	2:B:142:LEU:HD23	1.73	0.71
31:9:119:C:H4'	38:9:2285:HOH:O	1.90	0.71
30:0:1342:C:H2'	30:0:1343:C:H5'	1.73	0.71
30:0:1043:C:H2'	38:0:3180:HOH:O	1.90	0.71
30:0:2536:C:H3'	38:0:9240:HOH:O	1.90	0.71
30:0:2239:C:H2'	30:0:2240:U:C6	2.26	0.70
23:W:44:MET:CE	30:0:944:G:H21	2.04	0.70
24:X:26:ALA:HB3	24:X:63:ARG:HG3	1.72	0.70
30:0:960:G:H1'	38:0:5895:HOH:O	1.89	0.70
30:0:1189:A:H3'	38:0:7580:HOH:O	1.90	0.70
30:0:1701:A:H4'	30:0:1702:U:H5"	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2670:G:O2'	30:0:2671:U:H5'	1.91	0.70
25:Y:187:VAL:HG23	25:Y:192:ASP:CB	2.19	0.70
30:0:2689:A:H2'	30:0:2690:U:H5'	1.72	0.70
10:J:107:ASN:HD21	10:J:109:TYR:HB2	1.56	0.70
30:0:2250:G:H2'	30:0:2251:G:C8	2.26	0.70
1:A:179:MET:HG2	1:A:186:TRP:HB2	1.73	0.70
30:0:2482:G:H5"	38:0:4984:HOH:O	1.90	0.70
30:0:282:C:H1'	30:0:368:C:H41	1.54	0.70
30:0:1118:A:C3'	30:0:1118:A:C8	2.74	0.70
30:0:106:A:C2'	30:0:107:U:H5'	2.21	0.70
30:0:2747:C:H4'	30:0:2748:G:OP1	1.91	0.70
17:Q:53:HIS:N	35:Q:8811:CL:CL	2.61	0.70
30:0:893:C:H5"	38:0:7590:HOH:O	1.90	0.70
30:0:1167:G:H2'	30:0:1168:C:O4'	1.91	0.70
30:0:2812:A:H2	30:0:2814:A:H62	1.37	0.70
30:0:447:A:O2'	30:0:448:G:H5'	1.90	0.70
30:0:529:G:C5	30:0:530:C:C5	2.79	0.70
30:0:558:C:H2'	30:0:559:U:C5'	2.22	0.70
12:L:56:LYS:HE3	30:0:2443:C:H1'	1.74	0.70
24:X:43:VAL:HG11	24:X:82:GLU:HA	1.74	0.70
30:0:2659:U:H5"	38:0:4098:HOH:O	1.91	0.70
30:0:1641:A:O2'	30:0:1642:A:H5'	1.90	0.70
30:0:1805:G:O2'	30:0:1806:G:H5'	1.92	0.70
30:0:1835:U:H5	30:0:1840:A:N7	1.89	0.70
16:P:117:SER:HB3	30:0:1593:C:OP1	1.92	0.70
3:C:174:ILE:CD1	30:0:338:C:H4'	2.22	0.70
30:0:843:A:C2	30:0:846:A:C8	2.80	0.70
38:Y:8887:HOH:O	30:0:2060:A:H4'	1.92	0.70
2:B:223:ARG:HD3	35:B:8819:CL:CL	2.29	0.70
30:0:2906:A:H5'	30:0:2907:C:O4'	1.92	0.70
13:M:83:SER:HB2	29:3:47:GLY:HA3	1.72	0.70
30:0:243:A:H61	30:0:269:G:C1'	2.05	0.70
30:0:292:G:H1'	30:0:360:A:N6	2.06	0.70
30:0:2820:A:H2'	30:0:2821:C:H6	1.54	0.70
30:0:2748:G:H5'	38:0:7440:HOH:O	1.91	0.70
25:Y:169:ARG:HD2	30:0:1328:A:OP1	1.92	0.70
8:H:17:TYR:HE1	30:0:1006:A:H62	1.39	0.70
30:0:2752:C:O2'	30:0:2753:G:H5'	1.91	0.70
1:A:4:ILE:HG12	1:A:7:GLN:HG3	1.73	0.70
30:0:1051:C:H2'	30:0:1052:G:O4'	1.92	0.70
30:0:2301:A:H5"	30:0:2302:A:H5'	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:671:A:HO2'	30:0:672:G:H2'	1.56	0.70
30:0:2783:A:H3'	38:0:5184:HOH:O	1.90	0.70
8:H:26:ILE:HA	8:H:123:ILE:HG21	1.74	0.70
38:M:8871:HOH:O	30:0:2244:A:H1'	1.92	0.70
30:0:1447:U:H3'	30:0:1506:U:O2	1.92	0.70
30:0:960:G:H4'	38:0:7334:HOH:O	1.92	0.69
20:T:61:GLU:HG2	38:T:3851:HOH:O	1.90	0.69
13:M:52:GLN:NE2	13:M:118:TYR:HB3	2.07	0.69
30:0:1165:G:O3'	30:0:1174:A:H4'	1.92	0.69
29:3:51:LYS:HA	29:3:54:LYS:HE3	1.72	0.69
18:R:98:ASN:HD21	30:0:500:G:H21	1.41	0.69
1:A:95:PRO:HA	1:A:153:ARG:HA	1.74	0.69
31:9:24:U:H3'	31:9:25:G:C5'	2.22	0.69
6:F:49:PHE:HB2	6:F:96:ALA:HB3	1.74	0.69
16:P:28:GLN:HE22	30:0:1387:G:H1'	1.57	0.69
38:Q:5297:HOH:O	30:0:2402:A:H4'	1.91	0.69
30:0:685:C:O2	30:0:748:C:H4'	1.93	0.69
30:0:289:G:O2'	30:0:290:C:H5'	1.92	0.69
30:0:1931:A:H2'	30:0:1932:G:H5'	1.72	0.69
30:0:2578:G:C8	30:0:2578:G:H5'	2.26	0.69
30:0:1585:C:H2'	30:0:1586:G:H8	1.57	0.69
26:Z:64:PRO:HB2	26:Z:86:TYR:CE2	2.28	0.69
30:0:734:U:H2'	30:0:736:A:OP2	1.93	0.69
28:2:43:ARG:NH2	30:0:1684:A:H1'	2.03	0.69
30:0:1564:C:H5'	38:0:4202:HOH:O	1.93	0.69
30:0:302:A:C2'	30:0:303:C:H5'	2.22	0.69
26:Z:57:MET:SD	26:Z:73:ARG:HD2	2.31	0.69
30:0:2787:C:H5	38:0:4591:HOH:O	1.75	0.69
30:0:210:U:O2'	30:0:211:U:H5'	1.93	0.69
30:0:2712:G:H1'	38:0:5774:HOH:O	1.92	0.69
30:0:2887:G:H2'	30:0:2888:U:C6	2.27	0.69
30:0:2591:C:H2'	30:0:2592:G:O4'	1.93	0.69
31:9:108:C:H2'	31:9:109:G:H8	1.57	0.69
22:V:44:GLY:HA3	30:0:92:G:H4'	1.73	0.69
9:I:112:LEU:HD11	30:0:1162:G:H1'	1.75	0.69
30:0:1183:C:H2'	38:0:6169:HOH:O	1.91	0.69
9:I:82:THR:HG22	30:0:1168:C:H5"	1.73	0.69
30:0:2461:U:O2	30:0:2466:G:H1'	1.92	0.69
30:0:960:G:N3	30:0:960:G:H2'	2.07	0.69
21:U:45:GLU:HB3	38:U:4381:HOH:O	1.91	0.69
30:0:122:C:H5"	38:0:3570:HOH:O	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:139:VAL:HG13	38:C:8651:HOH:O	1.92	0.69
18:R:96:VAL:HG13	18:R:106:GLY:HA3	1.75	0.69
21:U:9:CYS:SG	21:U:11:THR:HG23	2.32	0.69
30:0:2064:U:H5'	30:0:2652:U:O3'	1.92	0.69
30:0:100:C:H2'	30:0:101:C:H6	1.58	0.69
30:0:10:U:C4	30:0:532:A:C8	2.81	0.69
30:0:1164:U:N3	30:0:1166:A:H4'	2.08	0.69
30:0:283:U:H5	30:0:284:C:N3	1.91	0.69
27:1:20:ARG:HG2	30:0:111:C:O2'	1.93	0.69
30:0:2114:C:O2'	30:0:2115:U:H5'	1.93	0.69
30:0:2781:U:C2'	30:0:2782:G:H5'	2.22	0.69
30:0:1965:C:H2'	30:0:1966:U:C6	2.28	0.69
30:0:279:C:O2'	30:0:280:C:H5'	1.93	0.69
30:0:970:U:H6	30:0:970:U:H3'	1.57	0.69
30:0:867:A:H5"	38:0:4374:HOH:O	1.92	0.68
30:0:2318:C:H2'	30:0:2319:C:H6	1.57	0.68
30:0:363:C:O2'	30:0:364:U:H5'	1.93	0.68
30:0:432:G:H2'	30:0:433:C:H6	1.58	0.68
30:0:1706:G:C5	30:0:1707:G:C6	2.81	0.68
30:0:1300:G:H1'	38:0:4640:HOH:O	1.90	0.68
13:M:161:ARG:HH11	30:0:183:A:H1'	1.56	0.68
30:0:2824:C:O3'	30:0:2825:C:H6	1.75	0.68
30:0:2852:A:C8	30:0:2902:A:C6	2.82	0.68
30:0:1464:C:H5"	38:0:5843:HOH:O	1.93	0.68
30:0:601:G:O2'	30:0:602:A:H5'	1.93	0.68
30:0:247:A:H2'	38:0:3901:HOH:O	1.93	0.68
24:X:73:ARG:HH12	24:X:88:GLU:HA	1.57	0.68
30:0:292:G:H2'	30:0:358:G:H21	1.57	0.68
22:V:25:THR:HG22	22:V:29:ASN:ND2	2.08	0.68
11:K:28:GLU:HB3	11:K:58:THR:HB	1.75	0.68
14:N:151:ASP:HB3	38:N:8822:HOH:O	1.94	0.68
30:0:1157:C:C2'	30:0:1158:G:H5'	2.23	0.68
26:Z:70:ARG:HG3	26:Z:82:SER:HB2	1.75	0.68
26:Z:42:TYR:HA	30:0:1829:A:H61	1.59	0.68
30:0:1566:C:H2'	30:0:1567:G:H8	1.59	0.68
30:0:169:A:H4'	38:0:9690:HOH:O	1.94	0.68
30:0:821:U:H3'	38:0:3750:HOH:O	1.92	0.68
30:0:2348:C:H2'	30:0:2349:G:H8	1.57	0.68
30:0:2781:U:O2'	30:0:2782:G:H5'	1.94	0.68
30:0:1398:G:H4'	38:0:6576:HOH:O	1.92	0.68
30:0:226:A:H1'	30:0:393:G:C5	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:34:SER:HA	30:0:797:A:H4'	1.74	0.68
30:0:2533:C:O2'	30:0:2534:U:H5'	1.94	0.68
30:0:2421:G:H1'	38:0:3680:HOH:O	1.94	0.68
30:0:2281:C:C2'	30:0:2282:U:H5'	2.23	0.68
30:0:1585:C:N3	30:0:1611:G:C2	2.62	0.68
30:0:1421:C:H2'	30:0:1422:U:H6	1.58	0.68
30:0:308:U:C4	30:0:342:C:H1'	2.29	0.68
4:D:135:VAL:HG21	4:D:139:TYR:CD1	2.29	0.68
30:0:2564:G:H5"	30:0:2565:C:H5"	1.76	0.68
30:0:236:A:C4'	30:0:237:G:H5'	2.20	0.68
30:0:613:C:H2'	30:0:614:U:H6	1.59	0.68
21:U:56:ARG:HD2	30:0:2890:A:H8	1.59	0.68
30:0:1982:C:H2'	30:0:1983:C:O4'	1.93	0.68
38:3:9033:HOH:O	30:0:2382:A:H5'	1.94	0.68
30:0:1666:C:HO2'	30:0:1667:A:H5"	1.55	0.68
15:O:47:ARG:NH1	15:O:47:ARG:HG3	2.03	0.68
13:M:79:ALA:HB3	13:M:81:ARG:NH1	2.04	0.68
30:0:1970:G:H5"	38:0:6973:HOH:O	1.93	0.68
30:0:1363:G:H1'	38:0:9415:HOH:O	1.93	0.68
4:D:23:VAL:HG22	4:D:73:VAL:HB	1.74	0.68
9:I:127:CYS:HB3	9:I:132:VAL:HB	1.75	0.68
10:J:90:LYS:HB2	35:J:8802:CL:CL	2.31	0.68
2:B:244:PRO:HG3	2:B:248:ARG:NH2	2.08	0.67
30:0:2685:C:H1'	38:0:3426:HOH:O	1.94	0.67
30:0:1074:G:H4'	30:0:1260:G:C6	2.29	0.67
29:3:81:GLU:HG2	38:3:9067:HOH:O	1.93	0.67
18:R:150:PRO:O	18:R:150:PRO:CG	2.41	0.67
30:0:1829:A:H5"	38:0:3071:HOH:O	1.93	0.67
30:0:625:U:H5'	38:0:3172:HOH:O	1.93	0.67
3:C:115:LEU:HD21	3:C:243:VAL:HG22	1.75	0.67
30:0:2594:C:O2'	30:0:2595:U:H5'	1.94	0.67
30:0:702:G:O2'	30:0:703:G:H5'	1.94	0.67
30:0:1197:G:H1'	30:0:1203:G:H22	1.59	0.67
30:0:2750:G:H2'	30:0:2751:C:H6	1.58	0.67
2:B:162:MET:CE	2:B:310:ARG:HD3	2.23	0.67
30:0:1595:G:O2'	30:0:1596:U:H5'	1.94	0.67
1:A:42:VAL:HG21	1:A:74:VAL:CG1	2.24	0.67
30:0:1165:G:N2	30:0:1173:A:H5'	2.09	0.67
29:3:62:THR:CG2	29:3:84:ARG:HB3	2.25	0.67
10:J:52:GLN:NE2	30:0:1119:G:H2'	2.09	0.67
5:E:91:PHE:CE1	30:0:2694:A:H4'	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:753:U:H4'	38:0:6877:HOH:O	1.94	0.67
4:D:173:GLU:HG3	4:D:174:VAL:HG23	1.76	0.67
30:0:1969:A:H3'	30:0:1970:G:N2	2.10	0.67
30:0:1024:G:C5	30:0:1025:C:C5	2.83	0.67
1:A:11:ARG:HD3	38:A:8938:HOH:O	1.93	0.67
30:0:2531:U:H4'	38:0:9592:HOH:O	1.94	0.67
2:B:179:LEU:O	2:B:183:GLU:HG2	1.93	0.67
29:3:68:LYS:CE	30:0:2436:U:H5'	2.24	0.67
35:J:8801:CL:CL	38:J:4038:HOH:O	2.50	0.67
30:0:248:A:H5'	30:0:249:G:OP2	1.93	0.67
30:0:252:C:O2	30:0:252:C:H2'	1.95	0.67
30:0:39:G:C2	30:0:444:C:C2	2.83	0.67
31:9:2:U:OP2	31:9:3:A:H5'	1.95	0.67
30:0:1495:C:H1'	30:0:1573:A:H1'	1.77	0.67
30:0:1701:A:H5'	38:0:6206:HOH:O	1.95	0.67
8:H:59:GLN:HE21	8:H:129:ARG:HE	1.42	0.67
30:0:1759:A:C2	30:0:1818:C:C2	2.82	0.67
30:0:1931:A:C2'	30:0:1932:G:H5'	2.25	0.67
21:U:31:PHE:CG	21:U:37:GLU:HG2	2.29	0.67
14:N:5:ARG:HH11	14:N:5:ARG:HB2	1.60	0.67
14:N:86:LEU:HD12	14:N:125:ALA:HB2	1.76	0.67
30:0:152:A:O2'	30:0:153:C:H5'	1.95	0.67
1:A:96:LEU:HD22	1:A:128:LEU:HD13	1.77	0.67
30:0:544:G:H2'	30:0:545:G:H5"	1.76	0.67
3:C:2:GLN:HA	3:C:18:LEU:H	1.60	0.67
11:K:37:TYR:HB3	38:0:7270:HOH:O	1.94	0.67
27:1:34:CYS:HB3	27:1:39:PHE:H	1.59	0.67
30:0:1391:G:N2	30:0:1434:A:H5"	2.10	0.67
30:0:1081:A:H5"	38:0:3140:HOH:O	1.93	0.67
30:0:2512:U:H4'	30:0:2514:U:O4	1.95	0.67
1:A:48:ASP:HB3	38:A:9024:HOH:O	1.94	0.67
29:3:35:TRP:HA	29:3:38:ARG:NH1	2.09	0.67
30:0:107:U:C2'	30:0:108:U:H5'	2.24	0.67
30:0:67:A:H2'	38:0:4106:HOH:O	1.95	0.67
30:0:228:C:H2'	30:0:229:G:C5'	2.25	0.67
4:D:88:LEU:HB2	4:D:89:PRO:HD3	1.76	0.67
30:0:559:U:H2'	30:0:560:U:H5'	1.77	0.66
25:Y:117:LEU:HB2	25:Y:174:VAL:HG21	1.77	0.66
30:0:1644:C:O2'	30:0:1645:U:H5'	1.94	0.66
30:0:544:G:C2'	30:0:545:G:H5"	2.26	0.66
30:0:1609:C:H2'	30:0:1610:G:H8	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:154:LEU:HD11	14:N:157:PRO:HA	1.76	0.66
30:0:154:C:C2	30:0:155:C:C5	2.83	0.66
10:J:49:ARG:HD3	30:0:1119:G:OP2	1.95	0.66
30:0:1706:G:C6	30:0:1707:G:C6	2.83	0.66
30:0:334:G:H2'	30:0:335:U:O4'	1.95	0.66
31:9:18:U:H2'	31:9:19:G:H8	1.60	0.66
30:0:1640:C:H5	38:0:6032:HOH:O	1.78	0.66
30:0:2354:A:C2	30:0:2367:A:C8	2.83	0.66
30:0:2313:C:H3'	38:0:5898:HOH:O	1.95	0.66
10:J:26:VAL:HG13	10:J:36:VAL:HG11	1.76	0.66
30:0:1878:G:H1'	38:0:6044:HOH:O	1.96	0.66
30:0:2846:C:H4'	38:0:5034:HOH:O	1.94	0.66
30:0:2134:G:N2	30:0:2242:U:C2	2.64	0.66
31:9:5:G:O2'	31:9:6:C:H5'	1.96	0.66
30:0:2133:U:H4'	30:0:2134:G:H5'	1.77	0.66
2:B:264:GLU:HG2	2:B:267:LYS:CE	2.26	0.66
30:0:1444:G:O2'	30:0:1445:G:H5'	1.96	0.66
25:Y:174:VAL:HG23	25:Y:177:LYS:HD2	1.75	0.66
30:0:2026:C:O2'	30:0:2027:U:H5'	1.95	0.66
15:O:38:ARG:HD3	38:0:7633:HOH:O	1.95	0.66
30:0:128:A:H3'	30:0:128:A:C8	2.30	0.66
30:0:124:C:H5'	38:0:6332:HOH:O	1.94	0.66
31:9:36:C:H4'	38:9:1968:HOH:O	1.94	0.66
30:0:2875:A:C2	30:0:2883:A:C2	2.83	0.66
30:0:302:A:O2'	30:0:303:C:H5'	1.95	0.66
23:W:4:LEU:HD23	23:W:54:PHE:HB3	1.76	0.66
18:R:2:ILE:HG22	30:0:21:G:H4'	1.78	0.66
31:9:29:C:C5	31:9:30:C:C6	2.84	0.66
30:0:1362:U:O2'	30:0:1363:G:H5'	1.96	0.66
30:0:940:G:H2'	30:0:941:G:H5'	1.77	0.66
30:0:1809:G:H4'	38:0:6148:HOH:O	1.95	0.66
13:M:76:ARG:HA	38:M:8947:HOH:O	1.94	0.66
26:Z:43:GLY:HA2	30:0:1771:U:O2	1.95	0.66
30:0:2415:A:C2'	30:0:2416:G:H5'	2.24	0.66
20:T:9:LYS:HD2	38:0:3736:HOH:O	1.95	0.66
38:B:9002:HOH:O	30:0:2678:A:H1'	1.95	0.66
30:0:1711:A:H3'	38:0:6254:HOH:O	1.96	0.66
30:0:1185:U:H5'	38:0:7367:HOH:O	1.94	0.66
30:0:1935:C:H2'	30:0:1936:C:H6	1.59	0.66
30:0:128:A:H3'	30:0:128:A:H8	1.61	0.66
18:R:99:ALA:HB1	18:R:109:MET:HE1	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:582:U:H2'	30:0:583:C:C6	2.31	0.66
30:0:228:C:O2'	30:0:229:G:H5'	1.96	0.65
30:0:1730:G:H4'	30:0:1731:C:H6	1.59	0.65
30:0:1165:G:H21	30:0:1173:A:H5'	1.58	0.65
29:3:47:GLY:O	30:0:2121:G:H4'	1.96	0.65
31:9:96:C:H2'	31:9:97:U:H6	1.61	0.65
30:0:660:A:N6	30:0:746:A:O4'	2.29	0.65
15:O:25:VAL:HG12	30:0:709:G:O2'	1.96	0.65
30:0:1856:C:H5'	30:0:1858:A:O4'	1.95	0.65
30:0:77:G:O2'	30:0:78:G:H5'	1.95	0.65
31:9:20:G:H3'	38:9:2984:HOH:O	1.94	0.65
2:B:270:ILE:HG12	2:B:298:LYS:HB2	1.76	0.65
13:M:97:ILE:HD12	13:M:127:LYS:HD2	1.78	0.65
14:N:130:PRO:HA	38:N:8834:HOH:O	1.96	0.65
16:P:89:ASN:OD1	16:P:92:GLU:HG3	1.97	0.65
30:0:2539:U:H1'	38:0:7688:HOH:O	1.95	0.65
29:3:47:GLY:HA2	30:0:2121:G:C4'	2.26	0.65
30:0:559:U:H2'	30:0:560:U:C5'	2.27	0.65
30:0:821:U:H2'	30:0:822:C:H6	1.59	0.65
21:U:51:TRP:HA	21:U:56:ARG:HE	1.61	0.65
30:0:1325:G:C2	30:0:1326:C:C6	2.85	0.65
1:A:135:VAL:HG21	1:A:147:ARG:HB3	1.78	0.65
30:0:963:C:H2'	30:0:964:G:C8	2.31	0.65
21:U:52:THR:HG22	21:U:54:THR:H	1.61	0.65
28:2:43:ARG:HH22	30:0:1684:A:C1'	2.02	0.65
30:0:542:A:H5'	30:0:542:A:H8	1.61	0.65
30:0:272:A:H5'	30:0:273:G:OP2	1.95	0.65
13:M:68:ARG:HB2	38:0:6930:HOH:O	1.95	0.65
1:A:47:HIS:CD2	30:0:1654:U:C6	2.84	0.65
30:0:2872:U:H2'	30:0:2873:C:H6	1.60	0.65
30:0:1302:G:H5'	30:0:1331:G:H4'	1.79	0.65
30:0:1878:G:HO2'	30:0:1879:U:H6	1.44	0.65
13:M:66:SER:HB3	13:M:128:TRP:CD1	2.31	0.65
8:H:49:GLN:HE21	8:H:170:ARG:HE	1.43	0.65
30:0:352:A:O2'	30:0:353:G:H5'	1.95	0.65
30:0:2511:A:H2'	30:0:2512:U:O4'	1.97	0.65
30:0:1118:A:H8	30:0:1119:G:H5"	1.62	0.65
30:0:2474:A:C8	30:0:2621:PSU:H4'	2.31	0.65
30:0:2777:G:O2'	30:0:2778:A:H5'	1.96	0.65
5:E:81:GLU:O	5:E:172:PRO:HD3	1.97	0.65
10:J:105:LEU:HA	38:J:5907:HOH:O	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:182:PHE:HD2	25:Y:200:THR:O	1.80	0.65
26:Z:47:ARG:HH21	30:0:1771:U:H1'	1.61	0.65
30:0:2804:C:H2'	30:0:2805:A:O4'	1.97	0.65
30:0:1016:U:C2	30:0:1017:U:C6	2.84	0.65
25:Y:219:GLU:HG3	25:Y:220:GLU:N	2.11	0.65
30:0:1412:U:O4	30:0:1681:G:H2'	1.97	0.65
30:0:255:A:H2'	30:0:256:C:H6	1.60	0.65
30:0:255:A:H2'	30:0:256:C:C6	2.32	0.65
30:0:2742:G:H5'	38:0:5759:HOH:O	1.97	0.65
30:0:1769:C:O2'	30:0:1770:U:H5'	1.97	0.65
30:0:969:G:N2	30:0:1000:C:C2	2.64	0.65
5:E:7:ILE:HG22	5:E:73:PHE:CZ	2.32	0.65
30:0:1157:C:O2'	30:0:1158:G:H5'	1.97	0.65
30:0:2795:C:O2'	30:0:2796:U:H5'	1.96	0.65
30:0:1279:U:O2	30:0:1279:U:H2'	1.95	0.65
30:0:1397:C:O2'	30:0:1398:G:H5'	1.97	0.65
30:0:146:U:O2'	30:0:147:G:H5'	1.97	0.65
11:K:20:CYS:HB2	11:K:29:LEU:HG	1.77	0.65
30:0:1201:C:H6	38:0:5689:HOH:O	1.78	0.65
30:0:1342:C:C2'	30:0:1343:C:H5'	2.27	0.65
30:0:2867:G:H2'	30:0:2868:C:C6	2.32	0.65
30:0:1742:A:H61	30:0:2037:C:H42	1.44	0.65
30:0:2110:G:H4'	38:0:7608:HOH:O	1.96	0.65
2:B:201:ASP:HB2	2:B:312:ARG:HD2	1.77	0.65
15:O:73:ASP:HA	15:O:92:VAL:O	1.96	0.65
30:0:429:A:C8	38:0:3806:HOH:O	2.50	0.65
30:0:560:U:H2'	30:0:561:G:C8	2.29	0.65
31:9:96:C:H2'	31:9:97:U:C6	2.32	0.65
16:P:98:ILE:HD12	16:P:102:ARG:NE	2.12	0.65
30:0:574:G:O2'	30:0:575:A:H5'	1.96	0.65
30:0:2272:G:H5"	38:0:4183:HOH:O	1.97	0.65
30:0:549:A:C2	30:0:550:C:C2	2.85	0.65
13:M:84:LYS:HB2	30:0:170:U:OP1	1.98	0.64
30:0:1527:A:N6	30:0:1663:G:H2'	2.12	0.64
30:0:1118:A:C8	30:0:1119:G:H5"	2.32	0.64
31:9:45:A:C5	31:9:46:C:C5	2.86	0.64
30:0:1741:U:C4	30:0:2033:G:C8	2.85	0.64
16:P:114:LEU:HA	16:P:118:GLN:NE2	2.11	0.64
30:0:37:A:C2	30:0:446:G:C2	2.85	0.64
30:0:1778:A:H2'	30:0:1779:A:H5'	1.79	0.64
17:Q:13:LYS:HD3	38:0:4008:HOH:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:67:ALA:CA	14:N:71:TRP:HB3	2.21	0.64
30:0:1172:G:H1'	38:0:4927:HOH:O	1.96	0.64
30:0:2289:G:O2'	30:0:2290:U:H5'	1.98	0.64
13:M:52:GLN:HE22	13:M:118:TYR:HB3	1.62	0.64
30:0:1632:A:C3'	30:0:1633:C:H5'	2.27	0.64
30:0:559:U:C2'	30:0:560:U:H5'	2.27	0.64
30:0:294:C:H5	30:0:357:A:N6	1.94	0.64
20:T:1:SER:HB2	30:0:447:A:P	2.37	0.64
30:0:2402:A:O2'	30:0:2403:C:H5'	1.97	0.64
30:0:405:C:H3'	38:0:7424:HOH:O	1.95	0.64
30:0:2278:U:O2	30:0:2470:A:C8	2.50	0.64
30:0:1359:U:C5	30:0:2101:A:C8	2.85	0.64
30:0:1835:U:C5	30:0:1840:A:N7	2.65	0.64
30:0:2769:C:H2'	30:0:2770:G:C5'	2.27	0.64
21:U:39:ASN:ND2	21:U:44:ARG:HH11	1.96	0.64
31:9:28:U:O2	31:9:28:U:H2'	1.97	0.64
31:9:9:C:H2'	31:9:10:C:H5'	1.79	0.64
30:0:281:U:H2'	30:0:282:C:O4'	1.97	0.64
30:0:2326:C:H4'	30:0:2412:G:C4'	2.27	0.64
3:C:2:GLN:HB3	3:C:17:ASP:HA	1.80	0.64
30:0:1398:G:O2'	30:0:1399:A:H5'	1.96	0.64
30:0:29:C:O2'	30:0:30:U:H5'	1.97	0.64
38:K:4440:HOH:O	30:0:2582:G:H4'	1.96	0.64
30:0:2268:C:H2'	30:0:2269:C:H6	1.63	0.64
30:0:1628:G:O2'	30:0:1629:G:H5'	1.98	0.64
30:0:1634:G:H2'	30:0:1635:U:C6	2.32	0.64
10:J:131:THR:HG22	10:J:133:GLY:H	1.63	0.64
30:0:100:C:C5	30:0:101:C:H5	2.15	0.64
5:E:91:PHE:HE1	30:0:2694:A:H4'	1.62	0.64
30:0:195:C:H2'	30:0:196:G:H5'	1.78	0.64
30:0:1750:C:H5"	38:0:3647:HOH:O	1.97	0.64
30:0:1928:C:H2'	30:0:1929:G:O4'	1.97	0.64
30:0:1159:G:H2'	30:0:1160:G:O4'	1.97	0.64
30:0:1479:G:H5"	38:0:3720:HOH:O	1.97	0.64
30:0:420:U:H2'	30:0:421:C:C6	2.33	0.64
30:0:1933:G:N2	30:0:1934:A:H1'	2.12	0.64
25:Y:170:SER:OG	25:Y:175:ARG:HG3	1.98	0.64
30:0:451:C:O2'	30:0:452:G:H5'	1.97	0.64
30:0:736:A:H2	30:0:2406:U:H1'	1.63	0.64
29:3:11:CYS:SG	29:3:20:HIS:NE2	2.71	0.64
27:1:1:THR:HB	38:0:7045:HOH:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:110:G:C5	31:9:111:U:C5	2.85	0.64
30:0:1520:G:O2'	30:0:1521:C:H5'	1.97	0.64
30:0:1568:G:O2'	30:0:1569:U:H5'	1.98	0.64
31:9:86:G:C2	31:9:88:G:C8	2.86	0.64
13:M:164:THR:HG22	13:M:166:ALA:N	2.13	0.64
21:U:56:ARG:HB2	30:0:2890:A:H8	1.61	0.64
30:0:1634:G:H3'	38:0:3870:HOH:O	1.96	0.64
30:0:1909:A:H2'	30:0:1910:A:C8	2.32	0.64
30:0:629:A:H4'	38:0:4483:HOH:O	1.96	0.64
30:0:1933:G:O2'	30:0:1934:A:H5'	1.98	0.64
22:V:44:GLY:HA3	30:0:92:G:C4'	2.28	0.64
31:9:18:U:H2'	31:9:19:G:C8	2.33	0.64
30:0:2491:G:H1'	38:0:6784:HOH:O	1.96	0.64
30:0:525:G:H5"	38:0:4554:HOH:O	1.98	0.64
30:0:594:C:C5	30:0:595:U:C5	2.86	0.63
30:0:2769:C:H2'	30:0:2770:G:H5'	1.80	0.63
31:9:64:C:C2'	31:9:65:A:H5'	2.28	0.63
27:1:46:ARG:HA	38:0:3013:HOH:O	1.98	0.63
26:Z:37:ARG:HB2	30:0:819:A:H4'	1.80	0.63
38:Y:8896:HOH:O	30:0:1357:A:H4'	1.98	0.63
30:0:1160:G:O2'	30:0:1190:G:H8	1.81	0.63
30:0:1641:A:C2'	30:0:1642:A:C5'	2.73	0.63
4:D:154:LYS:HD2	4:D:154:LYS:N	2.11	0.63
8:H:59:GLN:NE2	8:H:96:GLN:HG2	2.13	0.63
30:0:717:C:O2'	30:0:718:C:H5'	1.97	0.63
1:A:1:GLY:HA2	30:0:2114:C:OP1	1.98	0.63
30:0:2830:U:O2'	30:0:2831:C:H5'	1.98	0.63
30:0:314:G:N2	30:0:317:A:C8	2.66	0.63
1:A:105:VAL:HG12	1:A:156:ILE:HA	1.81	0.63
13:M:84:LYS:HD3	13:M:85:ARG:HH11	1.64	0.63
31:9:89:C:O2'	31:9:90:G:H5'	1.97	0.63
2:B:274:GLU:HA	2:B:292:GLY:O	1.98	0.63
30:0:1224:G:H2'	30:0:1225:C:H6	1.61	0.63
21:U:23:HIS:HD2	21:U:27:ALA:HB3	1.64	0.63
30:0:802:G:H2'	30:0:803:C:C6	2.33	0.63
26:Z:47:ARG:NH2	30:0:1771:U:H1'	2.14	0.63
13:M:73:ARG:HG2	30:0:1469:C:H5"	1.79	0.63
7:G:16:LYS:HZ3	7:G:63:ARG:HH12	1.44	0.63
29:3:33:MET:HG2	30:0:1922:A:H2'	1.80	0.63
3:C:98:ARG:HD3	38:C:8549:HOH:O	1.98	0.63
13:M:72:ALA:HB3	38:M:8965:HOH:O	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:149:GLN:HG2	38:Y:8856:HOH:O	1.98	0.63
14:N:112:GLY:HA2	14:N:137:ALA:HB2	1.79	0.63
3:C:218:VAL:HG23	3:C:222:ASP:OD1	1.99	0.63
30:0:1189:A:O2'	30:0:1208:C:H2'	1.97	0.63
30:0:1209:C:H2'	30:0:1210:G:C8	2.31	0.63
13:M:77:HIS:CD2	13:M:81:ARG:H	2.16	0.63
26:Z:47:ARG:HD3	38:Z:8720:HOH:O	1.99	0.63
30:0:10:U:H5"	30:0:531:G:C6	2.34	0.63
30:0:2564:G:H5"	30:0:2565:C:C5'	2.29	0.63
30:0:466:A:H61	30:0:475:G:H1'	1.64	0.63
30:0:2304:G:H5'	38:0:3355:HOH:O	1.98	0.63
4:D:103:ASN:ND2	4:D:133:ASN:HA	2.13	0.63
30:0:297:U:H2'	30:0:298:C:H6	1.63	0.63
30:0:908:A:C4'	38:0:4914:HOH:O	2.45	0.63
31:9:3:A:H2	31:9:21:G:N3	1.95	0.63
30:0:1585:C:H2'	30:0:1586:G:C8	2.32	0.63
23:W:4:LEU:HD22	23:W:52:VAL:HG21	1.80	0.63
27:1:10:LYS:HG3	38:1:2979:HOH:O	1.98	0.63
21:U:42:LEU:O	30:0:1810:C:H5'	1.99	0.63
30:0:109:U:O2	30:0:109:U:H2'	1.98	0.63
18:R:99:ALA:HB1	18:R:109:MET:CE	2.29	0.63
1:A:80:LEU:HD22	1:A:91:GLY:HA3	1.81	0.63
30:0:2608:C:H2'	38:0:3556:HOH:O	1.98	0.63
17:Q:27:GLN:HE21	31:9:8:G:C5'	2.12	0.63
30:0:432:G:C2	30:0:433:C:C5	2.86	0.63
30:0:1449:G:H4'	38:0:9214:HOH:O	1.99	0.63
30:0:2255:A:O2'	30:0:2256:G:H5'	1.99	0.63
1:A:199:HIS:HD2	1:A:201:PHE:H	1.47	0.63
31:9:17:G:O2'	31:9:18:U:H5'	1.99	0.63
30:0:1552:G:C6	30:0:1634:G:C6	2.87	0.63
30:0:287:C:N4	30:0:365:G:H1	1.96	0.62
30:0:1819:G:H2'	30:0:1820:G:C5'	2.29	0.62
30:0:2613:G:O2'	30:0:2614:C:H5'	1.99	0.62
11:K:118:ALA:HA	11:K:125:ALA:HB2	1.80	0.62
26:Z:63:CYS:SG	26:Z:71:VAL:HG23	2.39	0.62
30:0:2502:C:H2'	30:0:2503:A:C5'	2.23	0.62
30:0:1504:A:H5"	38:0:4378:HOH:O	1.99	0.62
25:Y:174:VAL:CG2	25:Y:177:LYS:HD2	2.28	0.62
30:0:1224:G:H2'	30:0:1225:C:C6	2.33	0.62
14:N:24:LEU:HD13	17:Q:26:PRO:HB3	1.81	0.62
14:N:119:GLN:O	14:N:123:ILE:HG13	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:72:GLU:HG3	26:Z:90:GLY:HA2	1.81	0.62
30:0:236:A:H4'	30:0:237:G:OP1	1.99	0.62
30:0:57:C:N4	30:0:89:G:H1	1.97	0.62
30:0:1900:A:O2'	30:0:1901:G:H5'	1.99	0.62
30:0:275:G:C2	30:0:376:C:C2	2.87	0.62
2:B:214:PRO:HD2	38:0:9081:HOH:O	1.99	0.62
18:R:39:THR:HB	18:R:42:GLU:CG	2.30	0.62
30:0:2388:C:O2'	30:0:2389:U:H5'	1.99	0.62
30:0:727:G:H3'	30:0:728:C:H6	1.63	0.62
30:0:1156:C:O5'	30:0:1156:C:H6	1.83	0.62
30:0:1182:C:H1'	30:0:1192:A:H8	1.63	0.62
30:0:2071:C:O2'	30:0:2534:U:H4'	2.00	0.62
30:0:1051:C:H5"	38:0:5864:HOH:O	2.00	0.62
2:B:282:GLY:O	30:0:2898:G:H1'	1.99	0.62
30:0:2694:A:C8	30:0:2695:C:C5	2.87	0.62
35:0:8812:CL:CL	38:0:5079:HOH:O	2.53	0.62
20:T:19:ARG:HD3	20:T:67:LEU:O	2.00	0.62
30:0:424:C:C2	30:0:425:U:C5	2.87	0.62
30:0:694:A:H2'	30:0:695:C:H5'	1.81	0.62
1:A:42:VAL:O	1:A:76:VAL:HA	2.00	0.62
29:3:12:PRO:HD2	38:3:9035:HOH:O	1.98	0.62
30:0:1667:A:C2	30:0:1668:U:C2	2.88	0.62
13:M:68:ARG:HG3	30:0:1469:C:OP1	2.00	0.62
30:0:290:C:O2'	30:0:291:C:H5'	1.99	0.62
2:B:307:ARG:HG3	2:B:307:ARG:HH11	1.64	0.62
30:0:2246:U:H2'	30:0:2247:C:C6	2.34	0.62
30:0:2637:A:H4'	38:0:4882:HOH:O	1.99	0.62
30:0:1619:G:H2'	30:0:1620:C:C6	2.33	0.62
30:0:178:U:H2'	30:0:179:C:H6	1.63	0.62
30:0:737:A:H2'	30:0:738:G:C8	2.34	0.62
30:0:1666:C:O2	30:0:1667:A:C8	2.53	0.62
26:Z:43:GLY:O	26:Z:47:ARG:HG2	1.99	0.62
30:0:1477:C:C2'	30:0:1478:U:H5'	2.29	0.62
30:0:2064:U:H2'	30:0:2065:C:H6	1.64	0.62
30:0:1160:G:HO2'	30:0:1190:G:H8	1.47	0.62
3:C:129:HIS:CE1	3:C:232:LEU:H	2.18	0.62
11:K:76:GLN:HA	11:K:93:ASN:HA	1.82	0.62
30:0:107:U:H2'	30:0:108:U:C5'	2.29	0.62
30:0:2590:U:H2'	30:0:2591:C:H5'	1.80	0.62
30:0:2851:G:O2'	30:0:2852:A:H5'	1.98	0.62
26:Z:73:ARG:HG2	26:Z:74:GLN:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1434:A:H2'	30:0:1436:C:C5	2.34	0.62
30:0:2313:C:H6	38:0:5898:HOH:O	1.82	0.62
18:R:39:THR:HB	18:R:42:GLU:HG3	1.81	0.62
30:0:1076:G:O2'	30:0:1077:G:H5'	1.99	0.62
20:T:32:ARG:HG2	20:T:38:ARG:HA	1.80	0.62
26:Z:70:ARG:HG2	26:Z:83:TYR:H	1.63	0.62
30:0:1309:U:C4	30:0:1310:U:C5	2.88	0.62
30:0:1528:A:N6	30:0:1663:G:H1'	2.11	0.62
13:M:70:GLY:HA2	30:0:2263:G:C4'	2.29	0.62
30:0:245:C:H2'	30:0:246:G:H5'	1.80	0.62
30:0:2639:G:O2'	30:0:2640:U:H5'	1.99	0.62
3:C:64:GLY:O	30:0:2100:A:H4'	1.99	0.62
30:0:2010:A:H2'	38:0:5883:HOH:O	1.99	0.62
30:0:1904:A:H2'	30:0:1905:U:O4'	2.00	0.62
30:0:1161:A:O5'	30:0:1161:A:H8	1.83	0.62
4:D:25:MET:HE1	4:D:41:LEU:HG	1.81	0.62
8:H:158:ASN:HD22	30:0:2502:C:H4'	1.62	0.62
2:B:212:GLN:HA	30:0:1733:A:H4'	1.82	0.62
30:0:1346:U:H1'	38:0:4405:HOH:O	2.00	0.62
27:1:54:ALA:HB2	30:0:892:G:H5"	1.82	0.62
31:9:3:A:N6	31:9:22:G:H1'	2.14	0.61
30:0:1165:G:H1'	30:0:1174:A:C1'	2.14	0.61
29:3:2:GLN:H	30:0:2320:U:H5'	1.64	0.61
30:0:542:A:O2'	30:0:543:G:H5'	2.00	0.61
30:0:1511:U:O2'	30:0:1512:G:H5'	2.00	0.61
30:0:661:G:C6	30:0:662:U:C4	2.88	0.61
30:0:2032:U:H2'	30:0:2033:G:C5'	2.30	0.61
30:0:2251:G:C6	30:0:2252:A:C6	2.88	0.61
30:0:536:A:H3'	38:0:5002:HOH:O	2.00	0.61
30:0:2421:G:H3'	30:0:2422:U:C5'	2.31	0.61
30:0:293:A:O2'	30:0:294:C:H5'	2.00	0.61
30:0:1964:U:O2	30:0:1964:U:C2'	2.48	0.61
30:0:517:U:H2'	30:0:518:G:H5'	1.81	0.61
25:Y:126:PRO:HG2	25:Y:128:PHE:CE1	2.34	0.61
30:0:957:A:H8	30:0:957:A:O5'	1.83	0.61
13:M:43:PRO:HG3	13:M:62:VAL:HG21	1.83	0.61
30:0:1616:A:H5"	30:0:1617:C:OP1	2.00	0.61
30:0:2734:G:H4'	38:0:9571:HOH:O	1.99	0.61
23:W:151:GLU:O	23:W:154:ARG:HB2	1.99	0.61
30:0:853:C:H3'	38:0:4515:HOH:O	1.98	0.61
30:0:2635:A:O2'	30:0:2636:C:H5'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1346:U:O2'	30:0:1347:U:H5'	2.00	0.61
30:0:2314:G:C2'	30:0:2315:C:H5'	2.30	0.61
30:0:1921:A:C6	30:0:1922:A:C2	2.88	0.61
3:C:140:VAL:HB	38:C:8655:HOH:O	2.00	0.61
30:0:932:U:O2'	30:0:1296:A:H1'	2.00	0.61
30:0:807:A:O2'	30:0:808:A:H5'	2.00	0.61
6:F:13:GLU:OE2	6:F:78:GLU:HG2	2.00	0.61
30:0:1165:G:H3'	30:0:1166:A:C5'	2.31	0.61
30:0:958:G:H4'	31:9:105:A:H4'	1.81	0.61
30:0:243:A:H61	30:0:269:G:H1'	1.64	0.61
30:0:1483:C:C2'	30:0:1484:G:H5'	2.30	0.61
2:B:36:PRO:HB3	2:B:174:ARG:HA	1.81	0.61
30:0:2070:G:H2'	30:0:2072:G:OP1	2.01	0.61
30:0:1015:C:H2'	30:0:1016:U:H6	1.65	0.61
30:0:963:C:O2	30:0:1005:A:N1	2.33	0.61
30:0:869:G:H1'	38:0:3296:HOH:O	2.01	0.61
6:F:30:LYS:HB2	6:F:97:ALA:HB3	1.83	0.61
6:F:63:ILE:HB	6:F:64:PRO:HD3	1.82	0.61
1:A:51:ARG:HG3	38:A:9024:HOH:O	2.00	0.61
30:0:271:C:N4	30:0:378:A:C2	2.69	0.61
30:0:1623:C:C5	30:0:1624:A:C5	2.88	0.61
30:0:1774:G:C2'	30:0:1775:A:H5'	2.31	0.61
30:0:946:C:H2'	30:0:947:U:C6	2.35	0.61
24:X:47:ALA:HB1	24:X:82:GLU:CB	2.31	0.61
30:0:2707:C:H2'	30:0:2707:C:O2	2.00	0.61
30:0:1931:A:H2'	30:0:1932:G:C5'	2.30	0.61
30:0:2787:C:H2'	30:0:2788:A:O4'	2.00	0.61
23:W:52:VAL:HG22	23:W:53:ALA:H	1.64	0.61
30:0:2110:G:C2	30:0:2478:U:C2	2.88	0.61
30:0:1613:C:H2'	30:0:1614:G:O4'	2.01	0.61
30:0:527:U:H2'	30:0:528:G:H8	1.66	0.61
30:0:1206:U:C6	30:0:1206:U:H3'	2.35	0.61
30:0:1670:A:O2'	30:0:1671:U:H5'	2.01	0.61
29:3:38:ARG:HD2	29:3:42:ARG:HH12	1.66	0.61
12:L:53:ARG:NH2	12:L:57:VAL:HG12	2.15	0.61
29:3:54:LYS:HB3	38:3:9017:HOH:O	1.99	0.61
2:B:267:LYS:HD3	38:B:8996:HOH:O	2.00	0.61
5:E:139:GLU:OE2	30:0:2781:U:H1'	2.01	0.61
2:B:142:LEU:HD21	2:B:178:ALA:HB1	1.83	0.61
30:0:60:A:C2	30:0:61:G:C8	2.89	0.61
30:0:2526:C:O2'	30:0:2527:U:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:723:G:H2'	30:0:724:G:H8	1.63	0.61
12:L:121:ILE:HA	12:L:141:GLU:O	2.01	0.61
30:0:283:U:H5"	30:0:284:C:OP2	2.01	0.61
30:0:1642:A:C8	30:0:1643:C:C5	2.88	0.61
30:0:2032:U:O2'	30:0:2033:G:H5"	2.00	0.61
24:X:73:ARG:NH2	24:X:88:GLU:HB2	2.15	0.61
30:0:1127:C:C5	30:0:1128:U:C4	2.88	0.61
30:0:2637:A:H5'	38:0:9278:HOH:O	1.99	0.61
30:0:2111:G:H1'	38:0:9053:HOH:O	2.00	0.61
30:0:1485:A:H3'	38:0:5253:HOH:O	1.99	0.61
38:H:196:HOH:O	30:0:965:A:H2'	2.00	0.61
30:0:2248:C:H2'	30:0:2249:G:H8	1.65	0.61
30:0:684:G:H2'	30:0:685:C:C6	2.36	0.61
30:0:304:G:H1'	30:0:347:A:N6	2.15	0.61
30:0:249:G:N2	30:0:250:C:C2	2.69	0.61
30:0:1790:C:H2'	30:0:1791:U:H6	1.65	0.61
16:P:134:VAL:O	16:P:137:LEU:HB3	2.00	0.61
30:0:1453:G:H2'	30:0:1454:U:O4'	2.01	0.61
30:0:1165:G:N2	30:0:1173:A:C5'	2.64	0.61
30:0:946:C:H2'	30:0:947:U:H6	1.65	0.61
30:0:2727:A:H2'	30:0:2728:C:H5'	1.83	0.61
13:M:95:LYS:HE3	30:0:157:G:H4'	1.82	0.61
30:0:1531:U:O2	30:0:1661:A:C2	2.54	0.61
26:Z:60:ASP:CB	26:Z:69:ASP:HB3	2.23	0.60
30:0:366:U:H2'	30:0:367:G:O4'	2.01	0.60
30:0:2291:A:C8	30:0:2309:C:H5'	2.36	0.60
30:0:64:G:O2'	30:0:65:C:H5'	2.00	0.60
7:G:64:ASN:N	7:G:64:ASN:HD22	1.98	0.60
30:0:2703:A:H2'	30:0:2704:C:H6	1.66	0.60
29:3:2:GLN:H	30:0:2320:U:C5'	2.14	0.60
30:0:2421:G:H3'	30:0:2422:U:H5"	1.82	0.60
16:P:115:SER:N	16:P:118:GLN:HB2	2.15	0.60
30:0:2563:U:O2'	30:0:2564:G:H8	1.84	0.60
21:U:31:PHE:CD2	21:U:37:GLU:HG2	2.36	0.60
23:W:48:VAL:HG12	23:W:52:VAL:HB	1.83	0.60
19:S:21:GLN:HE22	30:0:1508:C:H4'	1.66	0.60
30:0:1238:C:H5"	38:0:6777:HOH:O	1.99	0.60
13:M:28:GLN:O	13:M:32:ARG:HG3	2.00	0.60
13:M:46:LEU:HD22	13:M:50:ARG:HD2	1.82	0.60
4:D:159:PRO:O	4:D:163:VAL:HG23	2.01	0.60
31:9:55:U:H4'	31:9:56:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1603:A:H5”	30:0:1605:G:H5’	1.83	0.60
30:0:2820:A:H2’	30:0:2821:C:O4’	2.01	0.60
23:W:24:LEU:HD21	23:W:44:MET:SD	2.42	0.60
1:A:192:VAL:HG23	38:A:9014:HOH:O	2.01	0.60
9:I:113:SER:HA	30:0:1186:C:H5’	1.83	0.60
30:0:1209:C:O2’	30:0:1210:G:H5’	2.02	0.60
30:0:545:G:H8	30:0:545:G:C5’	2.00	0.60
30:0:597:A:C2	30:0:598:C:C4	2.89	0.60
26:Z:42:TYR:HD2	30:0:1829:A:H61	1.48	0.60
30:0:2089:A:C2’	30:0:2090:G:H5’	2.30	0.60
30:0:2757:A:H2’	30:0:2758:G:H5’	1.83	0.60
31:9:107:C:O2’	31:9:108:C:H5’	2.01	0.60
30:0:2694:A:C2	30:0:2702:A:C4	2.89	0.60
30:0:1819:G:H2’	30:0:1820:G:H5’	1.84	0.60
30:0:513:A:H1’	38:0:3639:HOH:O	2.00	0.60
6:F:2:VAL:HG22	6:F:57:GLU:OE1	2.01	0.60
16:P:35:ILE:HA	38:P:2641:HOH:O	2.00	0.60
30:0:1159:G:H1	30:0:1208:C:H42	1.50	0.60
30:0:1168:C:C5	30:0:1169:U:C5	2.89	0.60
30:0:1182:C:H1’	30:0:1192:A:C8	2.36	0.60
30:0:287:C:H2’	30:0:288:A:C8	2.37	0.60
11:K:76:GLN:HA	11:K:93:ASN:CB	2.31	0.60
25:Y:154:ARG:NH2	30:0:1293:U:H5’	2.16	0.60
21:U:56:ARG:HG3	21:U:56:ARG:HH11	1.66	0.60
30:0:1568:G:C4	30:0:1569:U:C6	2.89	0.60
30:0:2253:G:H2’	30:0:2254:G:C8	2.32	0.60
30:0:1964:U:H6	38:0:4522:HOH:O	1.83	0.60
30:0:2895:C:H4’	38:0:5133:HOH:O	2.01	0.60
22:V:50:ARG:NH1	30:0:56:G:H5”	2.16	0.60
30:0:2900:G:O2’	30:0:2901:C:H5’	2.00	0.60
30:0:586:C:H5”	38:0:7189:HOH:O	2.02	0.60
30:0:255:A:C5	30:0:256:C:C4	2.89	0.60
30:0:1928:C:N3	30:0:1929:G:C8	2.70	0.60
30:0:810:G:C5	30:0:811:C:C5	2.89	0.60
18:R:82:GLU:HG3	18:R:83:LYS:N	2.16	0.60
30:0:316:A:N3	30:0:336:G:O2’	2.34	0.60
30:0:1377:C:C5	30:0:1693:A:C6	2.89	0.60
31:9:60:C:O2’	31:9:61:C:H5’	2.02	0.60
9:I:112:LEU:CD1	30:0:1162:G:H1’	2.32	0.60
30:0:1203:G:H5’	38:0:7165:HOH:O	2.01	0.60
30:0:1494:A:H4’	30:0:1494:A:OP1	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2019:A:H1'	38:0:5660:HOH:O	2.00	0.60
5:E:137:ASP:OD1	5:E:139:GLU:HB2	2.01	0.60
30:0:10:U:C5	30:0:532:A:C8	2.89	0.60
24:X:73:ARG:HH22	24:X:88:GLU:HB2	1.65	0.60
2:B:154:VAL:CG1	2:B:156:LYS:HG2	2.31	0.60
6:F:27:GLY:H	6:F:102:GLY:HA3	1.66	0.60
30:0:1725:C:H4'	38:0:3409:HOH:O	2.00	0.60
30:0:1538:C:O2'	30:0:1539:U:H5'	2.02	0.60
38:D:217:HOH:O	31:9:54:A:H4'	2.00	0.60
25:Y:189:ASN:HD22	25:Y:191:ASP:H	1.47	0.60
30:0:300:U:C4	30:0:301:C:C5	2.89	0.60
30:0:1566:C:H2'	30:0:1567:G:C8	2.36	0.60
30:0:31:C:H4'	38:0:7326:HOH:O	2.01	0.60
30:0:1883:U:H5"	30:0:2013:G:OP2	2.02	0.60
29:3:24:LYS:HE3	29:3:90:PHE:HE1	1.67	0.60
30:0:365:G:C5	30:0:366:U:C5	2.90	0.60
17:Q:1:PRO:HA	30:0:2299:G:O6	2.00	0.60
29:3:40:ARG:HA	29:3:52:PHE:CE2	2.37	0.60
30:0:2757:A:C2'	30:0:2758:G:H5'	2.32	0.60
30:0:2781:U:H2'	30:0:2782:G:H5'	1.84	0.60
30:0:1421:C:H2'	30:0:1422:U:C6	2.36	0.60
30:0:451:C:C5	30:0:452:G:C5	2.90	0.60
31:9:94:G:O2'	31:9:95:C:H5'	2.02	0.60
29:3:48:ASN:CG	30:0:169:A:H1'	2.20	0.60
31:9:79:U:O2	31:9:79:U:H2'	2.02	0.60
30:0:283:U:C5	30:0:284:C:N3	2.69	0.60
15:O:65:LEU:HD13	30:0:746:A:C6	2.37	0.60
30:0:1424:A:N1	30:0:1441:G:C6	2.70	0.60
30:0:1934:A:C8	30:0:1935:C:C5	2.90	0.60
10:J:56:LYS:HE2	10:J:60:ARG:HH21	1.66	0.60
30:0:2325:U:O2'	30:0:2411:C:H1'	2.01	0.59
30:0:718:C:C2'	30:0:719:C:H5'	2.32	0.59
29:3:51:LYS:HB3	30:0:219:G:O2'	2.02	0.59
30:0:1081:A:C6	30:0:1082:A:N1	2.69	0.59
11:K:8:VAL:HG12	11:K:9:THR:N	2.15	0.59
13:M:52:GLN:OE1	13:M:116:ASN:HB3	2.01	0.59
6:F:50:VAL:HG21	6:F:63:ILE:HG21	1.84	0.59
30:0:724:G:O2'	30:0:725:C:H5'	2.01	0.59
30:0:844:A:C6	30:0:882:A:C5	2.89	0.59
12:L:6:ARG:HD3	30:0:1299:G:O6	2.02	0.59
2:B:310:ARG:HD2	38:B:9130:HOH:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:148:GLY:HA3	30:0:622:G:P	2.42	0.59
25:Y:151:SER:HB3	25:Y:154:ARG:HB3	1.84	0.59
30:0:1424:A:C2	30:0:1441:G:C6	2.90	0.59
30:0:1332:C:H2'	30:0:1333:U:H6	1.66	0.59
30:0:522:U:O2'	30:0:1366:C:H5'	2.02	0.59
26:Z:34:SER:HA	30:0:797:A:C4'	2.33	0.59
30:0:1083:C:H4'	38:0:7040:HOH:O	2.02	0.59
30:0:1883:U:H5'	30:0:2012:U:OP2	2.00	0.59
30:0:1925:G:O2'	30:0:1926:G:H5'	2.02	0.59
14:N:114:LYS:O	14:N:118:ILE:HG13	2.02	0.59
3:C:101:ASP:HB2	30:0:750:A:O3'	2.03	0.59
6:F:21:GLU:O	6:F:24:ARG:HG2	2.01	0.59
21:U:12:ASP:HB2	38:U:6067:HOH:O	2.02	0.59
30:0:1213:C:O2'	30:0:1214:G:H5'	2.03	0.59
30:0:1665:G:O2'	30:0:1666:C:H5'	2.02	0.59
13:M:77:HIS:HB2	13:M:81:ARG:NH2	2.14	0.59
3:C:225:PRO:O	30:0:1308:A:H4'	2.03	0.59
30:0:1626:A:C2'	30:0:1627:G:C5'	2.77	0.59
15:O:44:ASN:HB2	35:O:8808:CL:CL	2.38	0.59
30:0:625:U:H3'	38:0:3239:HOH:O	2.01	0.59
30:0:192:A:C4	30:0:194:A:H1'	2.38	0.59
30:0:891:G:O2'	30:0:892:G:H5'	2.01	0.59
30:0:101:C:H2'	30:0:102:A:H8	1.66	0.59
1:A:60:PHE:HD1	1:A:64:ASP:HB3	1.67	0.59
14:N:143:ARG:HH21	14:N:169:PRO:HB2	1.67	0.59
30:0:735:C:C3'	30:0:736:A:H8	2.03	0.59
30:0:529:G:H5"	30:0:546:C:O2'	2.03	0.59
30:0:1622:G:H2'	30:0:1623:C:H5'	1.83	0.59
26:Z:40:ALA:O	30:0:2018:A:H2	1.85	0.59
30:0:292:G:C2'	30:0:358:G:N2	2.63	0.59
30:0:1838:U:O2'	30:0:2644:C:H5'	2.03	0.59
21:U:49:LEU:HD13	21:U:51:TRP:CZ2	2.37	0.59
30:0:1044:C:H5"	38:0:9030:HOH:O	2.03	0.59
30:0:2830:U:C2'	30:0:2831:C:H5'	2.33	0.59
30:0:2297:U:H3'	38:0:7375:HOH:O	2.03	0.59
30:0:970:U:H3'	30:0:970:U:C6	2.37	0.59
31:9:64:C:O2'	31:9:65:A:H5'	2.02	0.59
21:U:23:HIS:CD2	21:U:27:ALA:HB3	2.37	0.59
30:0:62:C:H2'	30:0:63:U:C6	2.36	0.59
12:L:10:SER:O	12:L:11:ARG:HB3	2.02	0.59
30:0:2332:A:H3'	30:0:2333:G:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:64:THR:O	23:W:68:THR:HG22	2.01	0.59
30:0:635:A:H2'	30:0:636:G:H5"	1.85	0.59
30:0:1270:U:O2'	30:0:1271:A:H5'	2.02	0.59
30:0:1971:G:H5'	38:0:7283:HOH:O	2.02	0.59
30:0:711:G:O2'	30:0:712:C:H5'	2.03	0.59
30:0:163:U:O3'	30:0:896:C:H4'	2.02	0.59
30:0:2668:G:H2'	30:0:2669:U:H6	1.67	0.59
30:0:2587:OMU:CM2	30:0:2589:U:C6	2.86	0.59
30:0:1323:G:H1	30:0:1334:C:H42	1.50	0.59
30:0:226:A:H2'	30:0:227:A:O4'	2.02	0.59
30:0:20:G:H2'	30:0:21:G:O5'	2.01	0.59
30:0:810:G:C6	30:0:811:C:C4	2.91	0.59
30:0:1206:U:C6	30:0:1206:U:H5'	2.35	0.59
30:0:559:U:C6	30:0:559:U:H5'	2.31	0.59
8:H:48:VAL:HA	8:H:170:ARG:O	2.03	0.59
30:0:1790:C:H4'	38:0:6543:HOH:O	2.02	0.59
8:H:6:ALA:HA	8:H:61:ARG:NH1	2.18	0.59
31:9:104:A:H3'	38:9:4108:HOH:O	2.02	0.59
30:0:2731:G:O2'	30:0:2732:U:H5'	2.02	0.59
30:0:1512:G:H2'	30:0:1513:C:H6	1.67	0.59
30:0:1575:C:O2'	30:0:1576:G:H5'	2.03	0.59
30:0:1771:U:O2'	30:0:1773:G:N7	2.36	0.59
30:0:1249:U:H2'	30:0:1250:C:C6	2.38	0.59
15:O:112:ARG:HG3	15:O:113:VAL:N	2.18	0.59
24:X:71:ARG:HB2	24:X:88:GLU:HG2	1.84	0.59
30:0:249:G:O2'	30:0:250:C:H5'	2.03	0.59
19:S:73:ASP:HB3	19:S:76:GLU:HB2	1.85	0.59
2:B:5:ARG:HH11	2:B:8:LYS:HE2	1.68	0.59
8:H:53:ILE:HA	8:H:134:GLU:O	2.03	0.59
31:9:3:A:C2	31:9:21:G:N3	2.71	0.59
30:0:1156:C:C6	30:0:1156:C:H3'	2.37	0.59
17:Q:27:GLN:NE2	31:9:8:G:H4'	2.08	0.59
30:0:1309:U:O2'	30:0:1310:U:H5'	2.02	0.59
30:0:368:C:C2'	30:0:369:G:H5'	2.32	0.59
30:0:128:A:C8	30:0:128:A:C3'	2.84	0.59
30:0:844:A:C6	30:0:882:A:C6	2.90	0.59
13:M:93:ARG:HG2	38:0:3430:HOH:O	2.02	0.59
14:N:34:LEU:HD22	14:N:129:ILE:HD13	1.84	0.59
30:0:2714:U:H2'	30:0:2715:G:C8	2.37	0.59
30:0:1187:U:H2'	38:0:6812:HOH:O	2.02	0.58
25:Y:205:ILE:HD12	25:Y:214:ARG:NH1	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:80:ARG:NH2	30:0:2381:C:H4'	2.18	0.58
30:0:2721:U:H3	30:0:2763:G:H1'	1.68	0.58
30:0:1583:U:O2'	30:0:1584:C:H5'	2.03	0.58
30:0:2563:U:HO2'	30:0:2564:G:H8	1.49	0.58
30:0:937:C:O2'	30:0:938:G:H5'	2.03	0.58
27:1:15:THR:HB	27:1:28:HIS:CD2	2.37	0.58
1:A:22:ARG:HH22	1:A:181:ALA:HA	1.67	0.58
29:3:60:LYS:NZ	30:0:2462:G:N7	2.46	0.58
30:0:169:A:HO2'	30:0:170:U:H6	1.48	0.58
30:0:282:C:H2'	30:0:283:U:O4'	2.02	0.58
30:0:1346:U:H2'	30:0:1347:U:C6	2.32	0.58
30:0:1441:G:H1'	38:0:7665:HOH:O	2.01	0.58
6:F:49:PHE:HE1	6:F:98:VAL:HG23	1.68	0.58
9:I:93:ALA:O	9:I:132:VAL:HA	2.02	0.58
5:E:145:ALA:HB1	5:E:168:ILE:HD11	1.84	0.58
15:O:4:ASN:HB3	15:O:7:LEU:HB3	1.85	0.58
18:R:80:TYR:O	30:0:2050:G:H5"	2.03	0.58
30:0:2271:G:N3	30:0:2271:G:H2'	2.17	0.58
18:R:59:PHE:O	18:R:63:ASN:HB3	2.02	0.58
23:W:130:HIS:O	23:W:136:GLY:HA3	2.03	0.58
1:A:122:SER:O	1:A:124:VAL:HG13	2.03	0.58
1:A:3:ARG:HB2	1:A:8:ARG:HE	1.67	0.58
30:0:1523:G:C5	30:0:1524:U:C4	2.91	0.58
30:0:1170:U:H1'	30:0:1172:G:C8	2.39	0.58
30:0:2397:G:C5	30:0:2465:A:C6	2.91	0.58
30:0:2572:G:O2'	30:0:2573:G:H5'	2.03	0.58
30:0:24:G:C2	30:0:518:G:N3	2.71	0.58
30:0:210:U:H2'	30:0:211:U:O4'	2.03	0.58
30:0:1766:U:O2	30:0:1778:A:H5'	2.03	0.58
4:D:54:ALA:HB2	4:D:69:ILE:CD1	2.33	0.58
2:B:79:MET:HB2	2:B:188:HIS:HE1	1.68	0.58
30:0:170:U:H2'	30:0:171:C:H5'	1.85	0.58
30:0:433:C:C2	30:0:434:U:C6	2.91	0.58
30:0:1829:A:H2'	30:0:1830:C:H5'	1.84	0.58
30:0:1579:C:H4'	30:0:1580:A:OP1	2.02	0.58
29:3:78:HIS:HD2	29:3:80:ARG:HG3	1.67	0.58
24:X:43:VAL:HG22	24:X:76:ARG:NH1	2.18	0.58
30:0:2824:C:H5'	30:0:2914:A:N6	2.18	0.58
30:0:2691:A:OP1	30:0:2691:A:H8	1.85	0.58
20:T:4:PRO:HB3	30:0:333:G:H5"	1.86	0.58
30:0:124:C:H3'	38:0:7559:HOH:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:4:LEU:O	23:W:32:CYS:HA	2.04	0.58
20:T:40:VAL:HG11	20:T:101:LEU:HD21	1.83	0.58
23:W:80:ASP:O	23:W:84:VAL:HG23	2.03	0.58
12:L:77:ALA:HB3	38:L:8831:HOH:O	2.03	0.58
15:O:59:VAL:HG23	15:O:111:VAL:HG21	1.85	0.58
30:0:876:A:N7	30:0:878:G:H1'	2.18	0.58
30:0:1120:U:H5'	30:0:1121:G:OP2	2.04	0.58
2:B:144:THR:HG22	2:B:145:HIS:H	1.67	0.58
30:0:1100:G:N2	30:0:1101:U:C2	2.72	0.58
3:C:4:THR:HA	3:C:15:GLU:HB3	1.85	0.58
31:9:58:G:C8	31:9:59:C:C5	2.91	0.58
1:A:51:ARG:NH2	1:A:53:ALA:HB3	2.18	0.58
31:9:49:G:C2'	31:9:50:G:H5'	2.33	0.58
30:0:1481:G:H2'	30:0:1482:A:C8	2.38	0.58
30:0:1617:C:C5	30:0:1643:C:H4'	2.38	0.58
30:0:57:C:O2'	30:0:58:C:H5'	2.03	0.58
30:0:2282:U:H4'	30:0:2309:C:C5	2.39	0.58
13:M:95:LYS:CE	30:0:157:G:H4'	2.33	0.58
30:0:65:C:O2'	30:0:66:G:H5'	2.02	0.58
21:U:39:ASN:HD22	21:U:44:ARG:HD3	1.67	0.58
30:0:413:G:O2'	30:0:414:C:H5'	2.03	0.58
30:0:1587:U:C2'	30:0:1588:G:H5'	2.32	0.58
30:0:2581:U:H1'	38:0:4436:HOH:O	2.03	0.58
4:D:17:ARG:NH1	4:D:137:PRO:HA	2.18	0.58
30:0:1753:C:H6	30:0:1753:C:O5'	1.86	0.58
4:D:134:LEU:HD11	4:D:166:ILE:HD11	1.85	0.58
16:P:78:GLY:O	30:0:1813:U:H4'	2.04	0.58
30:0:499:G:O2'	30:0:500:G:H5'	2.04	0.58
38:A:8939:HOH:O	30:0:2270:G:H4'	2.04	0.58
4:D:57:THR:HG23	4:D:63:ILE:HA	1.85	0.58
6:F:31:LYS:HD2	38:0:4760:HOH:O	2.02	0.58
30:0:881:C:H5"	38:0:3619:HOH:O	2.01	0.58
30:0:2655:U:C4	30:0:2656:G:N7	2.71	0.58
30:0:537:G:O4'	30:0:538:C:C5	2.57	0.58
31:9:114:G:H2'	31:9:115:C:H6	1.67	0.58
30:0:287:C:H2'	30:0:288:A:H8	1.68	0.58
29:3:44:SER:HA	29:3:49:ASP:OD2	2.04	0.58
14:N:48:VAL:CG1	14:N:55:ASP:HB3	2.33	0.58
30:0:2493:C:O2	30:0:2493:C:H2'	2.04	0.58
16:P:133:SER:HB3	30:0:1793:C:H5"	1.86	0.58
11:K:64:MET:HA	11:K:67:GLN:HE21	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:189:ALA:O	2:B:192:ASP:HB2	2.04	0.58
30:0:1281:C:H2'	30:0:1282:U:O4'	2.04	0.58
30:0:1188:A:N7	30:0:1189:A:C2	2.71	0.58
9:I:83:GLY:CA	30:0:1168:C:H5'	2.32	0.58
30:0:686:A:O2'	30:0:747:G:H4'	2.04	0.58
22:V:39:ALA:H	22:V:40:PRO:CD	2.14	0.58
30:0:2780:C:H2'	30:0:2781:U:C6	2.38	0.58
30:0:303:C:C2'	30:0:304:G:H5'	2.34	0.58
12:L:143:THR:HG22	12:L:144:ASP:H	1.67	0.58
30:0:149:G:O2'	30:0:150:G:H5'	2.04	0.58
10:J:27:ALA:HB1	10:J:87:LEU:HD21	1.85	0.58
11:K:114:ALA:HB3	11:K:117:VAL:HG23	1.84	0.58
4:D:13:MET:HB3	31:9:56:A:C4	2.39	0.58
30:0:1206:U:C6	30:0:1206:U:C3'	2.86	0.58
30:0:2328:U:N3	30:0:2329:C:C5	2.72	0.58
30:0:2769:C:C2'	30:0:2770:G:C5'	2.82	0.58
21:U:56:ARG:HD2	30:0:2890:A:C1'	2.33	0.58
30:0:2498:C:C2'	30:0:2499:U:H5'	2.33	0.58
30:0:1434:A:O2'	30:0:1435:U:H2'	2.04	0.58
30:0:2387:U:H2'	30:0:2388:C:C6	2.39	0.58
30:0:148:A:O2'	30:0:149:G:H5'	2.04	0.58
30:0:1167:G:H2'	30:0:1168:C:C6	2.39	0.57
30:0:23:G:H1'	30:0:520:A:N6	2.19	0.57
1:A:237:GLY:O	30:0:1939:U:H5"	2.03	0.57
30:0:229:G:O2'	30:0:230:C:H5'	2.03	0.57
30:0:116:G:H1'	30:0:129:A:C4	2.38	0.57
30:0:413:G:C6	30:0:428:G:C6	2.92	0.57
30:0:2402:A:H1'	38:0:4380:HOH:O	2.04	0.57
1:A:167:LYS:CE	26:Z:50:VAL:HG13	2.34	0.57
30:0:2695:C:N4	30:0:2701:G:N2	2.52	0.57
30:0:1253:C:H2'	30:0:1254:C:H6	1.68	0.57
30:0:1634:G:H2'	30:0:1635:U:H6	1.69	0.57
30:0:727:G:C2	30:0:728:C:H1'	2.39	0.57
6:F:26:THR:HB	6:F:102:GLY:HA3	1.86	0.57
4:D:52:THR:HG23	30:0:2346:C:O3'	2.04	0.57
20:T:49:GLU:OE2	20:T:97:ARG:HD2	2.05	0.57
30:0:907:A:C2	30:0:1299:G:C6	2.92	0.57
5:E:102:VAL:HG11	5:E:148:ILE:HD11	1.86	0.57
30:0:221:G:H5'	38:0:6463:HOH:O	2.03	0.57
30:0:1187:U:O2'	30:0:1189:A:H2	1.87	0.57
29:3:1:MET:HA	30:0:2319:C:H3'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2061:C:H2'	30:0:2062:A:C5'	2.34	0.57
30:0:1464:C:H4'	38:0:6125:HOH:O	2.04	0.57
30:0:2694:A:C6	30:0:2702:A:C8	2.92	0.57
30:0:962:C:H2'	30:0:963:C:H5'	1.86	0.57
12:L:133:VAL:HA	38:L:8886:HOH:O	2.03	0.57
30:0:1312:G:O2'	30:0:1313:A:H5'	2.05	0.57
30:0:745:G:H5"	30:0:746:A:OP1	2.04	0.57
30:0:1482:A:O2'	30:0:1483:C:H5'	2.05	0.57
30:0:2103:A:H2'	30:0:2104:C:C5'	2.34	0.57
20:T:71:VAL:HG11	20:T:90:PRO:CB	2.32	0.57
30:0:2829:G:N2	30:0:2912:C:C2	2.73	0.57
30:0:2689:A:C2'	30:0:2690:U:H5'	2.34	0.57
30:0:1587:U:O2'	30:0:1588:G:H5'	2.04	0.57
2:B:79:MET:HB2	2:B:188:HIS:CE1	2.39	0.57
3:C:133:ARG:NH2	3:C:135:GLU:HB2	2.19	0.57
16:P:88:GLN:HE21	30:0:1800:G:H1'	1.67	0.57
30:0:1014:A:H5"	31:9:101:G:O2'	2.04	0.57
25:Y:115:ARG:HH21	30:0:1266:U:H4'	1.70	0.57
19:S:25:GLN:HG2	19:S:65:VAL:HG13	1.87	0.57
29:3:47:GLY:HA2	30:0:2121:G:O2'	2.03	0.57
30:0:1768:C:H2'	30:0:1769:C:O4'	2.04	0.57
30:0:2777:G:H5'	38:0:9874:HOH:O	2.05	0.57
11:K:10:GLN:N	11:K:10:GLN:NE2	2.50	0.57
28:2:29:THR:HG22	30:0:86:A:O4'	2.04	0.57
8:H:61:ARG:HH11	8:H:61:ARG:HG3	1.70	0.57
3:C:34:ALA:HA	3:C:102:LEU:CD2	2.34	0.57
30:0:590:A:H2'	30:0:591:A:H5'	1.86	0.57
30:0:387:G:O2'	30:0:388:G:H5'	2.04	0.57
30:0:2843:A:H2'	30:0:2844:C:H5'	1.86	0.57
30:0:2326:C:H2'	30:0:2327:A:C8	2.38	0.57
30:0:2375:A:H2'	30:0:2376:C:C6	2.39	0.57
30:0:292:G:H8	30:0:292:G:O5'	1.87	0.57
30:0:2793:A:H1'	38:0:6249:HOH:O	2.04	0.57
30:0:1969:A:O2'	30:0:1970:G:H5'	2.05	0.57
30:0:1930:A:H2'	30:0:1931:A:C8	2.39	0.57
30:0:1588:G:C6	30:0:1589:G:N1	2.73	0.57
30:0:1361:C:H2'	30:0:1362:U:H6	1.68	0.57
18:R:1:GLY:HA2	18:R:119:VAL:HG21	1.86	0.57
23:W:154:ARG:NH1	30:0:588:G:O6	2.37	0.57
11:K:74:VAL:HG11	11:K:113:ILE:HG12	1.85	0.57
30:0:2673:U:C4	30:0:2674:G:C6	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:99:GLY:O	26:Z:103:VAL:HG23	2.05	0.57
30:0:1462:C:O2'	30:0:1463:U:H5'	2.04	0.57
29:3:23:GLU:HA	38:3:9000:HOH:O	2.04	0.57
30:0:1559:A:O2'	30:0:1561:U:H5	1.88	0.57
30:0:559:U:H6	30:0:559:U:C5'	2.14	0.57
30:0:716:G:N2	30:0:717:C:C2	2.73	0.57
30:0:877:G:C5'	30:0:878:G:OP1	2.51	0.57
18:R:18:LEU:HB2	18:R:143:VAL:CG1	2.34	0.57
31:9:42:C:H5'	31:9:43:G:OP2	2.03	0.57
30:0:64:G:H2'	30:0:65:C:O4'	2.05	0.57
30:0:1278:A:O2'	30:0:1279:U:H3'	2.04	0.57
16:P:37:ARG:HB2	38:0:4445:HOH:O	2.04	0.57
31:9:99:U:H2'	31:9:100:G:H8	1.70	0.57
30:0:619:U:H3'	38:0:3266:HOH:O	2.04	0.57
30:0:633:C:O2'	30:0:634:G:H5'	2.04	0.57
30:0:1206:U:C5'	30:0:1206:U:H6	2.16	0.57
29:3:83:TRP:HD1	29:3:85:ALA:HB2	1.69	0.57
30:0:2327:A:H61	30:0:2372:A:N6	2.02	0.57
30:0:1762:C:H2'	30:0:1763:C:C6	2.31	0.57
30:0:2256:G:O2'	30:0:2257:G:H5'	2.05	0.57
25:Y:115:ARG:NH2	30:0:1266:U:H4'	2.19	0.57
30:0:840:U:C2	30:0:2648:U:O4	2.58	0.57
4:D:105:SER:OG	30:0:2338:G:H1'	2.05	0.57
19:S:33:SER:O	19:S:37:VAL:HG23	2.04	0.57
30:0:878:G:H5'	38:0:9229:HOH:O	2.04	0.57
30:0:1398:G:H2'	30:0:1399:A:C8	2.40	0.57
30:0:101:C:H2'	30:0:102:A:C8	2.40	0.57
18:R:39:THR:HG23	18:R:107:GLU:O	2.05	0.57
28:2:36:ASN:HD22	28:2:39:ARG:HG2	1.70	0.57
30:0:383:A:H2'	30:0:384:G:O4'	2.05	0.57
17:Q:19:ARG:NH2	31:9:11:A:H3'	2.19	0.57
31:9:77:A:H1'	31:9:79:U:C6	2.40	0.57
2:B:234:ARG:HD3	30:0:1734:C:OP1	2.04	0.57
20:T:65:VAL:HG22	20:T:72:ILE:HG22	1.87	0.57
30:0:1982:C:H3'	30:0:1983:C:C6	2.40	0.57
30:0:2268:C:H2'	30:0:2269:C:C6	2.40	0.57
30:0:2608:C:H3'	38:0:7708:HOH:O	2.04	0.57
20:T:28:SER:O	20:T:32:ARG:HG3	2.05	0.57
4:D:63:ILE:HG13	4:D:64:ARG:N	2.20	0.57
10:J:70:PHE:CD1	30:0:2676:C:H4'	2.40	0.57
14:N:66:LEU:HD11	14:N:83:LEU:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1185:U:H2'	30:0:1186:C:H6	1.70	0.56
30:0:2429:A:H5'	38:0:9501:HOH:O	2.05	0.56
30:0:236:A:H4'	30:0:237:G:C5'	2.24	0.56
30:0:282:C:C2'	30:0:283:U:C5'	2.82	0.56
30:0:686:A:C5	30:0:687:C:C5	2.92	0.56
30:0:1325:G:N3	30:0:1326:C:C6	2.73	0.56
2:B:235:ARG:HA	38:B:9071:HOH:O	2.03	0.56
30:0:1503:U:O2'	30:0:1504:A:H5'	2.05	0.56
30:0:1878:G:O2'	30:0:1879:U:H6	1.88	0.56
1:A:230:SER:CB	30:0:1852:A:H4'	2.35	0.56
19:S:17:ASP:HB3	19:S:23:LYS:HB2	1.88	0.56
30:0:125:U:H4'	38:0:4400:HOH:O	2.04	0.56
30:0:1748:U:C5	30:0:1749:U:C5	2.93	0.56
30:0:792:G:H4'	38:0:3403:HOH:O	2.05	0.56
3:C:142:ASP:OD1	3:C:237:GLU:HB3	2.05	0.56
26:Z:63:CYS:SG	26:Z:81:CYS:CB	2.79	0.56
30:0:168:C:H6	30:0:168:C:O5'	1.88	0.56
30:0:2574:G:H2'	30:0:2575:C:H6	1.70	0.56
30:0:822:C:C2	30:0:823:U:C5	2.93	0.56
30:0:293:A:P	30:0:358:G:H22	2.27	0.56
38:K:992:HOH:O	30:0:2583:A:H5'	2.05	0.56
27:1:28:HIS:O	27:1:32:LYS:N	2.34	0.56
30:0:2570:G:H5"	38:0:4868:HOH:O	2.04	0.56
14:N:46:GLN:HE22	31:9:5:G:H21	1.52	0.56
30:0:1188:A:C5	30:0:1189:A:C2	2.93	0.56
30:0:2460:A:C2	30:0:2461:U:C2	2.93	0.56
30:0:2411:C:H2'	30:0:2412:G:C8	2.40	0.56
30:0:2348:C:H2'	30:0:2349:G:C8	2.39	0.56
29:3:69:TYR:O	29:3:77:ALA:HA	2.05	0.56
30:0:2908:A:H2'	30:0:2909:G:C1'	2.35	0.56
23:W:11:VAL:HG11	30:0:1086:A:N6	2.20	0.56
30:0:2899:A:C2	30:0:2900:G:C4	2.93	0.56
30:0:2799:A:H5'	30:0:2800:A:P	2.44	0.56
30:0:1419:U:H5'	30:0:1420:C:OP2	2.05	0.56
30:0:2678:A:O2'	30:0:2679:G:H5'	2.05	0.56
30:0:257:G:C2	30:0:258:G:C4	2.93	0.56
30:0:999:C:O2'	30:0:1000:C:H5'	2.04	0.56
30:0:1909:A:N1	30:0:2128:G:H1'	2.21	0.56
17:Q:26:PRO:O	17:Q:30:VAL:HG23	2.05	0.56
28:2:22:PRO:HG2	28:2:25:VAL:HG23	1.86	0.56
30:0:1748:U:C5	30:0:1749:U:C4	2.92	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:15:PRO:HG3	30:0:1053:G:OP1	2.05	0.56
13:M:115:LEU:HD23	13:M:150:ILE:HD12	1.87	0.56
3:C:170:ASP:HA	3:C:188:ARG:HH21	1.71	0.56
4:D:87:ALA:O	4:D:90:LEU:HB2	2.06	0.56
12:L:78:ALA:HB2	38:L:8866:HOH:O	2.05	0.56
30:0:1156:C:O2'	30:0:1157:C:H5'	2.06	0.56
30:0:1678:A:C5	30:0:1679:C:C5	2.93	0.56
30:0:2439:C:H2'	30:0:2440:C:C6	2.35	0.56
30:0:1829:A:C2'	30:0:1830:C:H5'	2.35	0.56
30:0:669:G:C5	30:0:670:G:C8	2.94	0.56
30:0:669:G:C6	30:0:670:G:N7	2.73	0.56
24:X:43:VAL:HG12	24:X:44:ASP:N	2.17	0.56
29:3:33:MET:HG2	30:0:1922:A:C2'	2.35	0.56
30:0:556:C:C2	30:0:602:A:C2	2.93	0.56
30:0:1024:G:C6	30:0:1025:C:C4	2.93	0.56
30:0:1024:G:C4	30:0:1025:C:C5	2.92	0.56
30:0:1903:U:H2'	30:0:1905:U:O4	2.05	0.56
30:0:1647:G:O2'	30:0:1648:G:H5'	2.04	0.56
30:0:1304:U:H3	30:0:1350:U:H3	1.52	0.56
14:N:44:ARG:NH1	31:9:4:G:H21	2.03	0.56
30:0:1603:A:H5"	30:0:1604:G:H3'	1.86	0.56
30:0:1103:C:C2	30:0:1241:G:N2	2.74	0.56
30:0:1568:G:C5	30:0:1569:U:C5	2.94	0.56
30:0:292:G:H1'	30:0:360:A:H61	1.70	0.56
30:0:380:A:H5'	30:0:430:A:N3	2.20	0.56
30:0:2473:U:O2'	30:0:2474:A:H5"	2.04	0.56
30:0:2756:U:H3	30:0:2896:A:H2	1.54	0.56
30:0:107:U:C5	30:0:108:U:C5	2.94	0.56
1:A:97:ALA:HB2	1:A:150:PRO:HB2	1.88	0.56
30:0:306:A:O2'	30:0:325:U:H1'	2.05	0.56
30:0:257:G:N2	30:0:258:G:C4	2.73	0.56
10:J:63:ILE:HG23	30:0:1235:G:C1'	2.36	0.56
30:0:2001:G:O2'	30:0:2002:C:H5'	2.06	0.56
30:0:545:G:C8	30:0:545:G:C5'	2.83	0.56
15:O:47:ARG:CG	15:O:47:ARG:HH11	2.08	0.56
13:M:83:SER:HB2	29:3:47:GLY:CA	2.35	0.56
30:0:613:C:H2'	30:0:614:U:C6	2.40	0.56
3:C:27:ARG:NH2	30:0:657:G:OP1	2.37	0.56
30:0:710:G:O2'	30:0:711:G:H5'	2.05	0.56
30:0:2872:U:H2'	30:0:2873:C:C6	2.40	0.56
30:0:922:A:N7	30:0:2281:C:H5'	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:106:A:H2'	30:0:107:U:H5'	1.88	0.56
30:0:1889:C:C5	30:0:1890:U:H5	2.23	0.56
30:0:1324:G:C6	30:0:1325:G:N7	2.74	0.56
30:0:1586:G:O2'	30:0:1587:U:H5'	2.06	0.56
30:0:940:G:C2'	30:0:941:G:H5'	2.36	0.56
30:0:1634:G:C5	30:0:1635:U:C4	2.93	0.56
30:0:1635:U:O2'	30:0:1636:G:H5'	2.05	0.56
18:R:68:HIS:O	30:0:2842:G:H5'	2.06	0.56
30:0:206:G:C6	30:0:437:A:C2	2.93	0.56
30:0:2541:U:H3'	38:0:9065:HOH:O	2.05	0.56
30:0:2279:G:H4'	38:0:7466:HOH:O	2.06	0.56
30:0:264:G:H1'	30:0:265:U:H5	1.69	0.56
30:0:483:C:C4	30:0:484:A:C6	2.94	0.56
26:Z:40:ALA:O	30:0:2018:A:C2	2.59	0.56
30:0:302:A:H2'	30:0:303:C:H5'	1.87	0.56
30:0:1324:G:H3'	38:0:6144:HOH:O	2.06	0.56
19:S:21:GLN:OE1	30:0:1508:C:H5'	2.06	0.56
30:0:1173:A:H4'	30:0:1174:A:C8	2.41	0.56
30:0:2464:C:H5"	30:0:2465:A:OP1	2.05	0.56
30:0:700:A:H5"	30:0:701:U:H5'	1.88	0.56
31:9:36:C:C2'	31:9:37:C:H5'	2.35	0.56
31:9:37:C:O2	31:9:47:A:H1'	2.05	0.56
30:0:2363:G:C6	30:0:2364:A:C5	2.94	0.56
30:0:2803:C:C2'	30:0:2804:C:H5'	2.36	0.56
30:0:1690:C:C5	30:0:1692:C:C4	2.94	0.56
30:0:297:U:H2'	30:0:298:C:C6	2.40	0.56
6:F:27:GLY:N	6:F:102:GLY:HA3	2.21	0.56
10:J:56:LYS:HE2	10:J:60:ARG:NH2	2.20	0.56
8:H:61:ARG:HG3	38:0:4925:HOH:O	2.06	0.56
30:0:1793:C:H2'	30:0:1794:G:C8	2.41	0.56
5:E:3:VAL:HG22	5:E:49:ILE:HB	1.88	0.56
30:0:1268:C:H2'	30:0:1269:G:C8	2.40	0.56
13:M:191:GLY:O	30:0:175:G:H3'	2.05	0.56
26:Z:84:CYS:SG	26:Z:86:TYR:HB2	2.45	0.56
30:0:594:C:C6	30:0:595:U:C5	2.94	0.56
30:0:191:A:H2'	30:0:237:G:O6	2.06	0.56
30:0:2377:U:C2	30:0:2378:U:H5	2.23	0.56
30:0:2326:C:H4'	30:0:2412:G:H4'	1.87	0.56
22:V:55:ARG:O	22:V:59:ILE:HG12	2.06	0.56
30:0:1166:A:H3'	38:0:4377:HOH:O	2.05	0.56
30:0:1517:C:O2	30:0:1670:A:C2	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:657:G:H2'	30:0:658:C:H6	1.70	0.56
30:0:1481:G:H2'	30:0:1482:A:H8	1.70	0.56
30:0:2661:U:H3	30:0:2812:A:N6	1.97	0.56
30:0:2267:G:O2'	30:0:2268:C:H5'	2.05	0.56
30:0:2128:G:C5	30:0:2129:U:C5	2.94	0.56
2:B:7:ARG:HG2	2:B:7:ARG:HH11	1.70	0.56
19:S:24:LEU:CD1	19:S:68:LEU:HD11	2.36	0.56
30:0:1202:A:H2'	30:0:1203:G:C8	2.40	0.55
30:0:1515:A:H2'	30:0:1516:U:C6	2.41	0.55
30:0:1571:G:H2'	30:0:1624:A:N6	2.21	0.55
3:C:27:ARG:HH22	30:0:657:G:P	2.29	0.55
30:0:1797:A:O3'	30:0:1798:C:C6	2.59	0.55
29:3:70:ARG:HG2	29:3:77:ALA:HB2	1.89	0.55
30:0:1819:G:C2'	30:0:1820:G:H5'	2.36	0.55
2:B:5:ARG:HD2	2:B:8:LYS:HE2	1.88	0.55
19:S:37:VAL:O	19:S:41:VAL:HG23	2.05	0.55
30:0:2840:A:N3	30:0:2840:A:H2'	2.21	0.55
30:0:1188:A:C6	30:0:1189:A:C6	2.94	0.55
29:3:83:TRP:CD1	29:3:85:ALA:HB2	2.41	0.55
4:D:41:LEU:HA	4:D:44:ILE:HG22	1.87	0.55
30:0:2505:G:H2'	30:0:2506:A:C5'	2.32	0.55
30:0:1559:A:H1'	30:0:1562:C:N4	2.21	0.55
30:0:694:A:N3	38:0:3795:HOH:O	2.33	0.55
15:O:37:ARG:HD2	30:0:656:G:OP2	2.06	0.55
30:0:1482:A:H1'	38:0:9425:HOH:O	2.07	0.55
31:9:45:A:N7	31:9:46:C:C5	2.74	0.55
11:K:27:ARG:CD	11:K:60:GLY:HA2	2.34	0.55
30:0:583:C:H2'	30:0:584:U:H6	1.71	0.55
30:0:844:A:N1	30:0:882:A:C5	2.74	0.55
14:N:61:ALA:HB3	14:N:88:ALA:HB2	1.87	0.55
31:9:70:U:H5	38:9:6867:HOH:O	1.90	0.55
30:0:1159:G:H1	30:0:1208:C:N4	2.04	0.55
9:I:111:LEU:HD23	30:0:1163:G:H4'	1.87	0.55
30:0:2407:G:O2'	30:0:2408:A:H5'	2.06	0.55
30:0:1521:C:H2'	30:0:1522:A:C8	2.36	0.55
30:0:542:A:H2'	30:0:543:G:O4'	2.06	0.55
30:0:282:C:HO2'	30:0:283:U:H5'	1.71	0.55
30:0:2372:A:H2'	30:0:2373:U:C6	2.41	0.55
30:0:1246:A:C4	30:0:1248:A:C8	2.94	0.55
30:0:1477:C:C5'	30:0:1868:G:C5'	2.84	0.55
1:A:88:ILE:HD13	1:A:100:PRO:HD3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:766:A:O2'	30:0:767:A:H5"	2.07	0.55
30:0:2851:G:H2'	30:0:2902:A:N6	2.21	0.55
31:9:110:G:C4	31:9:111:U:C6	2.94	0.55
30:0:298:C:N3	30:0:299:U:C5	2.74	0.55
30:0:1268:C:H2'	30:0:1269:G:H8	1.72	0.55
19:S:24:LEU:HD11	19:S:68:LEU:HD11	1.87	0.55
30:0:1177:A:N3	30:0:1177:A:H2'	2.21	0.55
30:0:1581:A:C5	30:0:1582:C:C5	2.94	0.55
30:0:2451:G:H8	38:0:5131:HOH:O	1.90	0.55
6:F:53:ASP:OD1	6:F:80:GLN:HB2	2.06	0.55
30:0:13:G:H2'	30:0:14:C:H6	1.72	0.55
23:W:132:VAL:HG21	23:W:140:LYS:O	2.06	0.55
30:0:1157:C:H2'	30:0:1158:G:H5'	1.87	0.55
30:0:1174:A:C6	30:0:1201:C:H4'	2.41	0.55
30:0:2471:G:C4	30:0:2472:C:C5	2.94	0.55
29:3:49:ASP:O	29:3:52:PHE:HD1	1.90	0.55
30:0:2804:C:N4	30:0:2805:A:C2	2.74	0.55
1:A:97:ALA:HA	1:A:131:HIS:NE2	2.21	0.55
4:D:135:VAL:HG22	4:D:136:ARG:H	1.71	0.55
30:0:1377:C:H5'	30:0:1377:C:C6	2.41	0.55
26:Z:54:GLU:HG3	38:0:7399:HOH:O	2.06	0.55
10:J:74:ARG:HB3	10:J:74:ARG:HH11	1.71	0.55
30:0:1166:A:N3	30:0:1166:A:H2'	2.21	0.55
29:3:48:ASN:ND2	30:0:169:A:O2'	2.39	0.55
30:0:52:A:H1'	30:0:121:U:O2	2.06	0.55
30:0:1856:C:H1'	38:0:5804:HOH:O	2.06	0.55
11:K:10:GLN:N	11:K:10:GLN:HE21	2.05	0.55
30:0:1928:C:O2'	30:0:1929:G:H5'	2.06	0.55
30:0:1275:C:N3	30:0:1281:C:N4	2.55	0.55
4:D:52:THR:HG21	30:0:2346:C:O2'	2.06	0.55
30:0:2541:U:O2	30:0:2619:UR3:H3U2	2.07	0.55
22:V:8:ILE:HG21	22:V:59:ILE:HG13	1.89	0.55
30:0:2891:A:C2	30:0:2892:G:C4	2.95	0.55
2:B:239:LEU:HD12	30:0:2093:G:OP1	2.06	0.55
31:9:57:A:H2'	31:9:58:G:C5'	2.36	0.55
30:0:1168:C:C4	30:0:1169:U:C5	2.94	0.55
31:9:76:G:C3'	31:9:77:A:H5"	2.28	0.55
30:0:1559:A:O2'	30:0:1561:U:C5	2.59	0.55
30:0:1736:A:H8	30:0:1736:A:O5'	1.90	0.55
26:Z:41:ARG:HD2	30:0:1830:C:O2	2.07	0.55
30:0:1835:U:H3'	38:0:5521:HOH:O	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1894:C:C5	30:0:1940:C:C5	2.94	0.55
30:0:2064:U:H4'	30:0:2653:A:OP1	2.07	0.55
30:0:2607:U:H5'	38:0:5345:HOH:O	2.06	0.55
8:H:9:TYR:O	8:H:59:GLN:HB2	2.07	0.55
10:J:107:ASN:ND2	10:J:109:TYR:H	2.05	0.55
30:0:577:G:N2	30:0:580:A:OP2	2.40	0.55
30:0:2346:C:O5'	30:0:2346:C:C6	2.60	0.55
30:0:534:C:O2'	30:0:535:G:H5'	2.07	0.55
6:F:107:ASP:O	6:F:111:ILE:HG13	2.06	0.55
11:K:130:MET:SD	21:U:26:GLY:HA3	2.46	0.55
1:A:6:GLY:HA3	38:0:4582:HOH:O	2.07	0.55
30:0:1212:C:H2'	30:0:1213:C:O4'	2.06	0.55
1:A:51:ARG:CB	1:A:51:ARG:HH11	2.13	0.55
14:N:147:ILE:HD12	38:9:4707:HOH:O	2.05	0.55
22:V:39:ALA:N	22:V:40:PRO:HD2	2.16	0.55
30:0:1441:G:O2'	30:0:1442:A:H5'	2.06	0.55
1:A:217:ARG:HH11	1:A:229:ALA:HB3	1.71	0.55
30:0:1759:A:C2	30:0:1818:C:N3	2.75	0.55
30:0:2576:A:H4'	30:0:2799:A:N1	2.21	0.55
2:B:223:ARG:HG3	2:B:232:TRP:O	2.07	0.55
30:0:1398:G:H2'	30:0:1399:A:H8	1.71	0.55
30:0:279:C:C2'	30:0:280:C:H5'	2.36	0.55
30:0:1245:C:H3'	30:0:1245:C:H6	1.72	0.55
25:Y:99:ALA:HB2	25:Y:233:TYR:CZ	2.41	0.55
17:Q:61:GLY:HA3	17:Q:73:VAL:CG1	2.36	0.55
30:0:441:A:H8	30:0:441:A:O5'	1.90	0.55
30:0:2514:U:OP1	30:0:2572:G:H1'	2.06	0.55
30:0:2573:G:O2'	30:0:2574:G:H5'	2.06	0.55
31:9:13:A:O2'	31:9:14:G:H5"	2.07	0.55
30:0:1311:G:C5	30:0:1344:G:C6	2.95	0.55
30:0:558:C:O2'	30:0:559:U:H5"	2.07	0.55
30:0:1576:G:C6	30:0:1577:U:C4	2.95	0.55
30:0:1626:A:O2'	30:0:1627:G:H5'	2.05	0.55
30:0:421:C:H4'	30:0:1919:A:N6	2.22	0.55
30:0:1503:U:H2'	30:0:1504:A:O4'	2.07	0.55
6:F:96:ALA:HA	38:F:3111:HOH:O	2.05	0.55
30:0:970:U:C3'	30:0:970:U:C6	2.90	0.55
30:0:941:G:C5	30:0:942:U:C4	2.95	0.55
12:L:92:ASP:HA	12:L:121:ILE:HB	1.87	0.55
30:0:1454:U:H5"	30:0:1455:C:OP2	2.06	0.55
14:N:48:VAL:HG11	14:N:55:ASP:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:149:G:C2'	30:0:150:G:H5'	2.37	0.55
13:M:147:LEU:O	13:M:150:ILE:HG22	2.07	0.55
30:0:2840:A:H3'	38:0:7548:HOH:O	2.06	0.55
26:Z:75:GLY:HA3	38:Z:8716:HOH:O	2.06	0.55
2:B:123:ALA:O	2:B:126:GLU:HB2	2.07	0.55
5:E:101:GLU:HB2	5:E:116:THR:O	2.07	0.55
1:A:191:GLY:HA2	1:A:194:MET:HE3	1.88	0.55
30:0:1165:G:H3'	30:0:1166:A:H5'	1.89	0.55
30:0:2318:C:H2'	30:0:2319:C:C6	2.41	0.55
30:0:561:G:H2'	30:0:562:A:C8	2.39	0.55
30:0:1622:G:C2'	30:0:1623:C:H5'	2.37	0.55
2:B:234:ARG:HG3	30:0:1735:C:OP2	2.07	0.55
30:0:2367:A:C5'	38:0:5062:HOH:O	2.55	0.55
30:0:661:G:C4	30:0:686:A:C2	2.94	0.55
30:0:716:G:C6	30:0:717:C:N4	2.75	0.55
30:0:2867:G:H2'	30:0:2868:C:H6	1.72	0.55
13:M:9:ARG:HD2	30:0:380:A:OP2	2.06	0.55
30:0:56:G:N3	30:0:70:A:C2	2.75	0.55
30:0:2799:A:H5'	30:0:2800:A:OP2	2.07	0.55
30:0:325:U:O2	30:0:326:G:C8	2.60	0.55
30:0:731:U:H2'	30:0:732:C:C6	2.41	0.55
30:0:1476:A:O5'	30:0:1476:A:H8	1.89	0.55
30:0:1038:G:O2'	30:0:1039:G:H5'	2.07	0.55
30:0:2710:U:O2'	30:0:2711:U:H5'	2.06	0.55
29:3:9:THR:HG23	29:3:20:HIS:ND1	2.22	0.55
30:0:1562:C:O2	30:0:1562:C:H2'	2.06	0.55
30:0:2019:A:H5'	38:0:4502:HOH:O	2.06	0.55
26:Z:41:ARG:HG2	38:0:7344:HOH:O	2.07	0.55
15:O:51:TYR:CD1	30:0:721:A:H5"	2.42	0.55
16:P:1:THR:O	30:0:1396:C:H1'	2.07	0.55
30:0:10:U:C4	30:0:532:A:H8	2.25	0.55
30:0:62:C:H2'	30:0:63:U:H6	1.72	0.55
18:R:132:ARG:HG2	18:R:133:ALA:N	2.21	0.55
30:0:858:U:H2'	30:0:859:C:H6	1.72	0.55
30:0:1252:A:H1'	38:0:5158:HOH:O	2.06	0.55
23:W:120:PRO:HG3	30:0:1262:C:H1'	1.88	0.55
1:A:54:PRO:HG2	1:A:160:ALA:HB3	1.88	0.55
30:0:1186:C:N4	30:0:1187:U:C4	2.75	0.54
30:0:2327:A:N6	30:0:2372:A:N6	2.55	0.54
30:0:2757:A:H2'	30:0:2758:G:C5'	2.37	0.54
13:M:161:ARG:NH1	30:0:183:A:H1'	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1589:G:H5”	38:0:6772:HOH:O	2.07	0.54
20:T:16:LEU:HB2	30:0:100:C:H4’	1.89	0.54
30:0:624:U:C2	30:0:632:A:C2	2.96	0.54
38:M:8875:HOH:O	30:0:381:G:H5”	2.06	0.54
30:0:2433:A:O5’	30:0:2433:A:H8	1.90	0.54
30:0:1198:U:C6	30:0:1200:A:OP2	2.60	0.54
25:Y:187:VAL:HG13	25:Y:205:ILE:HA	1.90	0.54
3:C:1:MET:HG2	3:C:2:GLN:N	2.17	0.54
16:P:80:ARG:CD	16:P:87:ARG:HH11	2.20	0.54
1:A:167:LYS:HD2	26:Z:53:ILE:HG21	1.88	0.54
1:A:42:VAL:HG23	1:A:78:ASP:O	2.07	0.54
6:F:50:VAL:CG2	6:F:63:ILE:HG21	2.37	0.54
3:C:135:GLU:O	3:C:136:VAL:HB	2.07	0.54
2:B:45:LYS:HD2	2:B:301:VAL:HG12	1.89	0.54
30:0:2836:G:H5”	38:0:5114:HOH:O	2.07	0.54
30:0:2745:C:H5”	38:0:6211:HOH:O	2.06	0.54
31:9:58:G:H3’	31:9:59:C:C5	2.42	0.54
30:0:736:A:C2	30:0:2406:U:H1’	2.42	0.54
29:3:47:GLY:C	30:0:2121:G:H4’	2.27	0.54
30:0:2420:G:C2’	30:0:2421:G:H5’	2.36	0.54
30:0:378:A:H1’	38:0:3483:HOH:O	2.07	0.54
30:0:1244:U:H4’	30:0:1246:A:O4’	2.08	0.54
25:Y:154:ARG:HH22	30:0:1071:G:H4’	1.71	0.54
30:0:2890:A:N3	30:0:2890:A:C2’	2.70	0.54
21:U:51:TRP:HA	21:U:56:ARG:NE	2.22	0.54
30:0:1889:C:H2’	30:0:1890:U:H6	1.70	0.54
18:R:4:TYR:CZ	18:R:15:LYS:HB3	2.42	0.54
1:A:167:LYS:HE2	26:Z:50:VAL:HG13	1.89	0.54
30:0:2278:U:H5’	38:0:9472:HOH:O	2.06	0.54
30:0:2247:C:H6	30:0:2247:C:O5’	1.91	0.54
26:Z:77:GLY:HA2	26:Z:92:SER:HA	1.88	0.54
30:0:1012:A:H8	30:0:1012:A:O5’	1.91	0.54
24:X:23:HIS:HE1	30:0:2044:G:OP1	1.90	0.54
30:0:95:A:C8	30:0:97:G:N1	2.75	0.54
13:M:187:LEU:CD2	13:M:194:GLY:HA3	2.38	0.54
30:0:1997:A:N6	30:0:1998:G:C6	2.76	0.54
19:S:7:HIS:CD2	19:S:27:ALA:HB3	2.42	0.54
30:0:1202:A:C8	30:0:1203:G:C8	2.95	0.54
30:0:2317:C:C5	30:0:2318:C:C4	2.96	0.54
30:0:2397:G:C5	30:0:2465:A:N6	2.75	0.54
30:0:2367:A:H5”	38:0:5062:HOH:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:660:A:H4'	30:0:661:G:O5'	2.08	0.54
30:0:1016:U:H2'	30:0:1017:U:C6	2.40	0.54
30:0:1502:A:H2'	38:0:9624:HOH:O	2.08	0.54
30:0:312:U:O2'	30:0:313:U:H5'	2.07	0.54
31:9:65:A:N6	31:9:112:U:C6	2.75	0.54
1:A:230:SER:HB2	30:0:1852:A:H4'	1.89	0.54
30:0:1764:C:O2'	30:0:1765:G:H5'	2.08	0.54
31:9:9:C:OP2	31:9:10:C:H5	1.91	0.54
2:B:41:PHE:CD1	2:B:79:MET:HE2	2.42	0.54
31:9:99:U:H2'	31:9:100:G:C8	2.42	0.54
1:A:110:SER:O	1:A:152:CYS:SG	2.59	0.54
29:3:45:GLY:HA3	38:3:9027:HOH:O	2.06	0.54
16:P:129:GLY:HA2	38:P:641:HOH:O	2.06	0.54
30:0:1384:C:H2'	30:0:1385:G:H8	1.73	0.54
18:R:105:ASP:HB3	18:R:108:ALA:HB3	1.89	0.54
30:0:1185:U:C2	30:0:1186:C:C6	2.95	0.54
29:3:14:CYS:SG	29:3:74:CYS:HB2	2.48	0.54
29:3:3:MET:SD	29:3:83:TRP:HZ2	2.31	0.54
28:2:42:TRP:HZ2	30:0:1438:G:H1'	1.72	0.54
13:M:171:ARG:NH2	30:0:189:A:OP1	2.41	0.54
30:0:614:U:H2'	30:0:615:G:H8	1.72	0.54
12:L:57:VAL:HG21	30:0:2443:C:H5'	1.90	0.54
30:0:951:A:H2'	30:0:952:G:C5'	2.37	0.54
30:0:2426:G:H5'	38:0:9237:HOH:O	2.08	0.54
30:0:68:U:H1'	38:0:6239:HOH:O	2.06	0.54
17:Q:28:ARG:HG2	38:Q:4350:HOH:O	2.05	0.54
1:A:186:TRP:CG	1:A:187:PRO:HA	2.43	0.54
30:0:100:C:C5	30:0:101:C:C5	2.95	0.54
30:0:31:C:H2'	38:0:7589:HOH:O	2.06	0.54
30:0:2117:U:OP2	30:0:2271:G:N2	2.38	0.54
29:3:31:THR:O	30:0:1923:G:H4'	2.07	0.54
30:0:1380:U:H3'	38:0:9693:HOH:O	2.07	0.54
30:0:17:G:O2'	30:0:18:C:H5'	2.08	0.54
6:F:54:VAL:HG13	30:0:263:U:C4	2.43	0.54
30:0:1210:G:C4	30:0:1211:G:C8	2.96	0.54
30:0:105:G:O2'	30:0:106:A:H5'	2.07	0.54
16:P:10:ALA:HA	16:P:13:VAL:HG12	1.89	0.54
30:0:308:U:H5'	30:0:309:C:OP1	2.07	0.54
30:0:325:U:O2'	30:0:326:G:H5'	2.07	0.54
30:0:585:C:H2'	30:0:586:C:C6	2.43	0.54
1:A:135:VAL:HG11	1:A:147:ARG:NH2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:807:A:H2'	30:0:808:A:O4'	2.07	0.54
30:0:1453:G:C2	30:0:1675:C:C2	2.95	0.54
30:0:1377:C:H5'	30:0:1377:C:H6	1.73	0.54
30:0:834:G:H4'	30:0:835:U:OP2	2.08	0.54
30:0:1886:A:H4'	38:0:9329:HOH:O	2.07	0.54
30:0:1559:A:N3	30:0:1563:G:O6	2.40	0.54
30:0:1561:U:C5	30:0:1562:C:H5	2.26	0.54
30:0:274:G:N2	30:0:377:C:C2	2.76	0.54
30:0:1494:A:C4	30:0:1495:C:C5	2.96	0.54
30:0:1496:A:H5'	30:0:1572:A:H1'	1.89	0.54
30:0:1871:U:O4'	30:0:1873:G:C8	2.60	0.54
30:0:2852:A:C8	30:0:2902:A:N6	2.76	0.54
30:0:1730:G:H5"	30:0:1731:C:C5	2.37	0.54
1:A:212:PRO:HB2	38:0:4330:HOH:O	2.08	0.54
30:0:98:A:C2'	30:0:99:A:H5'	2.37	0.54
30:0:2713:G:C2'	30:0:2714:U:H5'	2.38	0.54
30:0:1383:U:C4	30:0:1384:C:N4	2.76	0.54
2:B:297:VAL:HB	38:B:9083:HOH:O	2.06	0.54
13:M:158:ARG:HH11	13:M:158:ARG:HG3	1.73	0.54
30:0:492:C:O2'	30:0:493:U:H5'	2.08	0.54
1:A:9:ARG:HG2	1:A:16:PHE:CD2	2.42	0.54
30:0:2327:A:C5	30:0:2328:U:C5	2.96	0.54
30:0:2712:G:H5'	38:0:5173:HOH:O	2.07	0.54
30:0:2314:G:H2'	30:0:2315:C:H5'	1.89	0.54
30:0:2576:A:H4'	30:0:2799:A:C2	2.43	0.54
30:0:100:C:C6	30:0:101:C:H5	2.26	0.54
30:0:1361:C:H2'	30:0:1362:U:C6	2.43	0.54
30:0:1024:G:C4	30:0:1025:C:C6	2.96	0.54
14:N:86:LEU:O	14:N:90:LEU:HG	2.08	0.54
25:Y:219:GLU:HG3	25:Y:220:GLU:H	1.72	0.54
30:0:2269:C:O2'	30:0:2270:G:H5'	2.07	0.54
30:0:1859:A:N7	30:0:1860:U:C5	2.75	0.54
30:0:2497:A:C2	30:0:2524:G:C4	2.95	0.54
30:0:1315:G:H3'	30:0:1316:G:H5'	1.90	0.54
8:H:146:ALA:O	8:H:149:VAL:HG12	2.07	0.54
14:N:113:SER:HB3	38:9:5851:HOH:O	2.08	0.54
30:0:1192:A:H3'	30:0:1193:A:H5'	1.89	0.54
29:3:2:GLN:HG2	30:0:2320:U:O5'	2.08	0.54
31:9:114:G:C4	31:9:115:C:C5	2.95	0.54
14:N:26:LEU:HD13	30:0:2415:A:N3	2.23	0.54
30:0:1641:A:H2'	30:0:1642:A:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:67:A:N1	30:0:109:U:H1'	2.23	0.54
30:0:1557:G:O2'	30:0:1558:C:H5'	2.08	0.54
30:0:1503:U:C2'	30:0:1504:A:H5'	2.38	0.54
16:P:2:ASP:OD1	30:0:1396:C:H4'	2.08	0.54
30:0:1878:G:C1'	38:0:6044:HOH:O	2.54	0.54
20:T:9:LYS:HE3	20:T:13:ARG:NH1	2.22	0.54
2:B:312:ARG:HD3	2:B:315:VAL:HG13	1.89	0.54
30:0:908:A:H4'	38:0:4914:HOH:O	2.08	0.54
30:0:1649:G:O2'	30:0:1650:C:H5'	2.08	0.54
2:B:70:PRO:HG3	30:0:2719:A:C2	2.43	0.54
30:0:239:C:H2'	30:0:240:C:O5'	2.07	0.54
30:0:1063:G:H5"	38:0:9858:HOH:O	2.08	0.54
31:9:30:C:O2	31:9:51:A:H2	1.91	0.54
31:9:59:C:O5'	31:9:59:C:H6	1.91	0.54
30:0:1185:U:H2'	30:0:1186:C:C6	2.43	0.54
30:0:1187:U:C2	30:0:1189:A:OP2	2.61	0.54
30:0:2506:A:H1'	38:0:3726:HOH:O	2.07	0.54
30:0:652:G:C2	30:0:653:U:H1'	2.42	0.54
16:P:91:LYS:O	16:P:95:GLU:HG3	2.08	0.54
2:B:243:ASN:HB2	30:0:2607:U:OP2	2.08	0.54
30:0:2818:A:H2'	30:0:2819:C:H6	1.72	0.54
30:0:1730:G:H4'	30:0:1731:C:C6	2.42	0.54
30:0:2447:A:C5	30:0:2448:U:C5	2.96	0.54
30:0:2278:U:O2	30:0:2470:A:H3'	2.08	0.54
30:0:2246:U:O2'	30:0:2247:C:H5'	2.08	0.54
7:G:64:ASN:HD22	7:G:64:ASN:H	1.55	0.54
30:0:903:U:C5'	38:0:4328:HOH:O	2.56	0.54
27:1:28:HIS:HB3	27:1:31:LYS:HB2	1.90	0.54
2:B:145:HIS:CD2	2:B:146:THR:O	2.61	0.54
14:N:113:SER:HB2	38:N:8850:HOH:O	2.08	0.54
30:0:551:A:C6	30:0:552:A:N1	2.75	0.54
30:0:49:A:H61	30:0:112:G:C2'	2.22	0.54
30:0:889:C:H2'	30:0:890:C:C6	2.43	0.54
4:D:152:PRO:HD2	31:9:57:A:O2'	2.08	0.53
30:0:1195:G:N1	30:0:1196:C:C4	2.76	0.53
30:0:1200:A:H3'	38:0:5689:HOH:O	2.09	0.53
30:0:2716:G:O2'	30:0:2717:C:H5'	2.08	0.53
27:1:18:LYS:HG2	30:0:121:U:O4	2.08	0.53
30:0:790:A:H2'	30:0:791:A:H5'	1.89	0.53
30:0:1928:C:C4	30:0:1929:G:N7	2.76	0.53
24:X:10:VAL:HG12	24:X:11:THR:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1427:A:H61	30:0:1440:U:C1'	2.21	0.53
3:C:242:GLU:HB2	38:C:8577:HOH:O	2.08	0.53
38:D:198:HOH:O	31:9:59:C:H5'	2.09	0.53
30:0:2562:G:H4'	38:0:4188:HOH:O	2.07	0.53
30:0:282:C:H2'	30:0:283:U:C4'	2.39	0.53
30:0:506:G:N2	30:0:509:A:H5"	2.22	0.53
30:0:2326:C:H2'	30:0:2327:A:H8	1.73	0.53
30:0:2327:A:N6	30:0:2372:A:H61	2.06	0.53
30:0:1921:A:H2'	30:0:1922:A:O4'	2.08	0.53
30:0:1937:U:O2'	30:0:1938:G:H5'	2.08	0.53
30:0:444:C:H2'	30:0:445:U:C6	2.43	0.53
30:0:146:U:C2'	30:0:147:G:H5'	2.38	0.53
30:0:1548:U:O2'	30:0:1549:C:H5'	2.08	0.53
30:0:527:U:H2'	30:0:528:G:C8	2.42	0.53
30:0:2681:A:H4'	30:0:2682:C:OP1	2.08	0.53
10:J:27:ALA:HB1	10:J:87:LEU:CD2	2.38	0.53
24:X:12:ILE:HG21	24:X:33:ILE:HA	1.91	0.53
30:0:1183:C:N4	30:0:1184:C:H41	2.05	0.53
30:0:1518:A:H61	30:0:1667:A:N6	2.07	0.53
30:0:1574:C:H2'	30:0:1575:C:C6	2.41	0.53
30:0:2414:A:H2'	30:0:2415:A:C8	2.43	0.53
38:J:1727:HOH:O	30:0:2065:C:H4'	2.08	0.53
30:0:1294:A:H2'	30:0:1295:G:O4'	2.09	0.53
30:0:1682:A:H5"	38:0:9460:HOH:O	2.08	0.53
30:0:404:G:OP1	30:0:2131:G:H1'	2.09	0.53
30:0:1540:G:O2'	30:0:1541:G:H5'	2.08	0.53
13:M:187:LEU:HD21	13:M:194:GLY:HA3	1.91	0.53
11:K:63:GLU:HG2	38:K:6344:HOH:O	2.08	0.53
23:W:66:LEU:O	23:W:70:ALA:HB3	2.09	0.53
12:L:18:HIS:HD2	30:0:902:G:N7	2.05	0.53
29:3:62:THR:HG22	30:0:2317:C:OP2	2.07	0.53
13:M:159:VAL:CG1	35:M:8818:CL:CL	2.85	0.53
30:0:2650:U:O2'	30:0:2651:C:H5'	2.08	0.53
30:0:2314:G:O2'	30:0:2315:C:H5'	2.09	0.53
30:0:1096:U:H1'	38:0:3468:HOH:O	2.08	0.53
30:0:1387:G:H2'	30:0:1388:U:H6	1.73	0.53
30:0:10:U:H5"	30:0:531:G:O6	2.09	0.53
30:0:940:G:N3	30:0:1032:A:C2	2.77	0.53
30:0:2457:U:H2'	30:0:2458:U:H6	1.72	0.53
30:0:1063:G:H8	38:0:9858:HOH:O	1.92	0.53
2:B:54:VAL:HB	38:B:9093:HOH:O	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:39:VAL:HG13	10:J:106:GLY:O	2.09	0.53
1:A:70:ALA:HB1	26:Z:89:THR:CG2	2.39	0.53
30:0:1216:G:N2	30:0:1217:G:H1'	2.23	0.53
8:H:143:VAL:HG11	8:H:173:GLU:HB3	1.91	0.53
30:0:2511:A:H3'	30:0:2512:U:C6	2.44	0.53
30:0:2336:G:C2'	30:0:2337:G:H5'	2.38	0.53
21:U:42:LEU:HD22	30:0:1810:C:H1'	1.90	0.53
29:3:49:ASP:CB	29:3:52:PHE:HB2	2.36	0.53
30:0:2296:C:H2'	30:0:2297:U:C6	2.43	0.53
30:0:1502:A:H3'	38:0:9624:HOH:O	2.07	0.53
30:0:256:C:H2'	30:0:257:G:O4'	2.09	0.53
30:0:1634:G:C3'	38:0:3870:HOH:O	2.56	0.53
12:L:120:LEU:HD12	12:L:133:VAL:HG21	1.91	0.53
1:A:127:GLN:HB3	1:A:139:LYS:HB3	1.91	0.53
30:0:1156:C:C3'	30:0:1156:C:C6	2.91	0.53
26:Z:70:ARG:HA	38:Z:8731:HOH:O	2.07	0.53
29:3:13:HIS:CD2	29:3:76:LYS:HB2	2.44	0.53
30:0:1667:A:O2'	30:0:1668:U:H5'	2.09	0.53
30:0:1561:U:H2'	30:0:1562:C:O5'	2.09	0.53
30:0:2326:C:H4'	30:0:2412:G:O4'	2.09	0.53
15:O:25:VAL:HG23	15:O:26:TRP:N	2.23	0.53
24:X:85:VAL:HG12	24:X:86:GLU:N	2.24	0.53
7:G:12:ILE:HG21	30:0:1150:A:N7	2.23	0.53
30:0:2911:C:O2'	30:0:2912:C:H5'	2.09	0.53
5:E:154:ILE:HD11	5:E:157:LYS:HE2	1.90	0.53
30:0:1485:A:H1'	38:0:9173:HOH:O	2.07	0.53
6:F:59:ILE:CD1	30:0:263:U:C2	2.91	0.53
8:H:41:LYS:HE2	8:H:45:ASP:HB3	1.91	0.53
30:0:212:A:O4'	30:0:214:U:C6	2.61	0.53
30:0:2657:G:H1'	38:0:9492:HOH:O	2.08	0.53
13:M:81:ARG:HG3	30:0:161:A:OP1	2.08	0.53
30:0:364:U:H2'	30:0:365:G:O4'	2.08	0.53
30:0:1496:A:H2'	30:0:1497:G:O4'	2.08	0.53
30:0:2781:U:H2'	30:0:2782:G:C5'	2.38	0.53
30:0:1889:C:C5	30:0:1890:U:C5	2.96	0.53
3:C:236:THR:HG22	3:C:239:ALA:H	1.74	0.53
30:0:1434:A:H4'	30:0:1435:U:H5	1.74	0.53
30:0:2387:U:H2'	30:0:2388:C:H6	1.73	0.53
18:R:60:LYS:HB2	38:R:8947:HOH:O	2.08	0.53
2:B:202:VAL:HG11	2:B:301:VAL:HG22	1.90	0.53
30:0:1314:U:H5"	30:0:1316:G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:47:THR:HB	20:T:100:ASP:HB3	1.89	0.53
38:A:8979:HOH:O	26:Z:91:GLY:HA3	2.08	0.53
30:0:1400:C:C2'	30:0:1401:G:H5'	2.39	0.53
3:C:84:VAL:HG12	3:C:85:LYS:HG2	1.90	0.53
30:0:1369:A:H5'	38:0:7739:HOH:O	2.09	0.53
29:3:51:LYS:HB2	38:3:9030:HOH:O	2.08	0.53
21:U:56:ARG:CZ	30:0:2890:A:H1'	2.39	0.53
11:K:9:THR:HG23	38:0:3270:HOH:O	2.09	0.53
30:0:1323:G:N2	30:0:1334:C:N3	2.50	0.53
30:0:2859:C:H42	30:0:2898:G:H1	1.57	0.53
30:0:2902:A:H2'	30:0:2902:A:N3	2.23	0.53
13:M:27:ARG:HH12	13:M:44:THR:CG2	2.21	0.53
30:0:256:C:C2'	30:0:257:G:H5'	2.39	0.53
31:9:110:G:C6	31:9:111:U:C5	2.97	0.53
18:R:39:THR:HG22	18:R:41:GLY:H	1.73	0.53
31:9:61:C:H2'	31:9:62:A:H8	1.74	0.53
5:E:166:VAL:HG12	38:E:3134:HOH:O	2.08	0.53
2:B:51:VAL:CG2	2:B:327:VAL:HG13	2.39	0.53
3:C:103:ASN:HB3	38:0:9119:HOH:O	2.08	0.53
17:Q:95:GLU:HA	30:0:949:U:H4'	1.90	0.53
11:K:33:SER:HB2	11:K:54:THR:HB	1.90	0.53
30:0:1066:U:H2'	30:0:1067:A:C8	2.44	0.53
38:C:8545:HOH:O	30:0:457:U:H4'	2.08	0.53
22:V:12:THR:HG22	22:V:15:GLU:HG3	1.91	0.53
30:0:1205:U:O2'	30:0:1206:U:H5"	2.08	0.53
30:0:265:U:C2	30:0:266:G:C8	2.97	0.53
30:0:559:U:H2'	30:0:560:U:O4'	2.09	0.53
31:9:38:A:H2'	31:9:39:U:C6	2.43	0.53
30:0:2735:U:C2	30:0:2736:U:C5	2.97	0.53
30:0:105:G:H1'	38:0:5120:HOH:O	2.08	0.53
30:0:106:A:H2'	30:0:107:U:C5'	2.38	0.53
30:0:1423:C:C2'	30:0:1424:A:H5'	2.38	0.53
30:0:420:U:H2'	30:0:421:C:H6	1.72	0.53
1:A:167:LYS:HE3	26:Z:50:VAL:HA	1.91	0.53
30:0:314:G:C2	30:0:317:A:C8	2.96	0.53
30:0:590:A:C2'	30:0:591:A:H5'	2.39	0.53
14:N:63:SER:HB2	14:N:75:THR:HB	1.91	0.53
13:M:193:LYS:HB3	30:0:392:U:C5'	2.39	0.53
30:0:488:U:H2'	38:0:3983:HOH:O	2.09	0.53
30:0:1141:U:O2'	30:0:1142:C:H5'	2.09	0.53
30:0:1191:A:H3'	30:0:1192:A:H5"	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1202:A:C8	30:0:1203:G:N7	2.77	0.53
30:0:1518:A:N6	30:0:1667:A:H61	2.07	0.53
29:3:64:LYS:HA	29:3:84:ARG:HA	1.90	0.53
27:1:20:ARG:HA	30:0:121:U:C5	2.43	0.53
30:0:1119:G:C5	30:0:1243:C:C4	2.97	0.53
30:0:2770:G:H2'	30:0:2771:G:O4'	2.08	0.53
8:H:59:GLN:HE21	8:H:129:ARG:HG2	1.73	0.53
30:0:1009:U:H5	38:0:6019:HOH:O	1.92	0.53
30:0:2589:U:H2'	30:0:2590:U:C6	2.44	0.53
31:9:24:U:H3'	31:9:25:G:H5'	1.91	0.53
30:0:2402:A:C2'	30:0:2403:C:H5'	2.39	0.53
30:0:334:G:C5	30:0:335:U:C5	2.96	0.53
30:0:255:A:C5	30:0:256:C:C5	2.97	0.53
30:0:535:G:C5	30:0:2063:U:C4	2.97	0.53
30:0:2433:A:H2	30:0:2458:U:H3	1.57	0.53
5:E:1:PRO:HD2	5:E:53:GLU:O	2.09	0.53
2:B:254:GLN:HB3	38:0:3539:HOH:O	2.08	0.53
31:9:83:G:C2	31:9:84:G:C8	2.97	0.53
30:0:1197:G:H1'	30:0:1203:G:N2	2.24	0.52
29:3:60:LYS:HG3	29:3:61:PRO:HD2	1.90	0.52
30:0:191:A:N6	30:0:236:A:C2	2.77	0.52
30:0:2377:U:N3	30:0:2378:U:H5	2.06	0.52
30:0:1774:G:H2'	30:0:1775:A:C5'	2.39	0.52
30:0:661:G:C5	30:0:686:A:C2	2.97	0.52
14:N:22:GLN:O	14:N:26:LEU:HB2	2.08	0.52
15:O:24:ALA:HB3	30:0:710:G:OP1	2.08	0.52
4:D:76:ARG:CZ	31:9:44:A:H1'	2.40	0.52
30:0:2651:C:H2'	30:0:2652:U:O4'	2.08	0.52
30:0:2792:A:N3	30:0:2792:A:H2'	2.23	0.52
30:0:1556:G:O2'	30:0:1557:G:H5'	2.09	0.52
30:0:1585:C:H3'	30:0:1585:C:H6	1.74	0.52
2:B:76:THR:H	2:B:294:TYR:HA	1.74	0.52
30:0:1393:A:C2	30:0:1726:G:H4'	2.44	0.52
30:0:537:G:C6	30:0:620:A:C8	2.97	0.52
3:C:103:ASN:ND2	30:0:663:C:H5"	2.24	0.52
30:0:1917:G:C5	30:0:1918:U:C5	2.97	0.52
30:0:2878:U:H2'	30:0:2879:A:O4'	2.08	0.52
30:0:2292:C:C2	30:0:2463:A:H4'	2.44	0.52
30:0:1523:G:C4	30:0:1524:U:C5	2.98	0.52
30:0:154:C:H2'	30:0:155:C:C6	2.38	0.52
30:0:2377:U:C2	30:0:2378:U:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1679:C:H2'	30:0:1679:C:O2	2.08	0.52
30:0:256:C:H2'	30:0:257:G:H5'	1.89	0.52
30:0:473:A:O2'	30:0:890:C:H5'	2.10	0.52
30:0:2292:C:O2	30:0:2463:A:H4'	2.09	0.52
29:3:17:HIS:CG	30:0:2409:C:H4'	2.43	0.52
30:0:1303:C:O2	30:0:1353:C:H1'	2.09	0.52
23:W:129:LYS:HE3	30:0:1099:G:OP1	2.08	0.52
30:0:1343:C:H2'	30:0:1344:G:O5'	2.09	0.52
3:C:127:ARG:CZ	3:C:225:PRO:HG2	2.39	0.52
29:3:34:LYS:HB2	29:3:37:ASP:HB2	1.92	0.52
30:0:1769:C:C2'	30:0:1770:U:H5'	2.40	0.52
30:0:1150:A:H8	38:0:4681:HOH:O	1.93	0.52
30:0:70:A:N3	30:0:70:A:H2'	2.23	0.52
30:0:2646:G:C5	30:0:2647:C:C5	2.98	0.52
30:0:579:G:H2'	30:0:580:A:C8	2.45	0.52
30:0:1682:A:O2'	30:0:1683:G:H5"	2.08	0.52
30:0:536:A:C2	30:0:2075:G:N3	2.78	0.52
30:0:903:U:H5'	38:0:4328:HOH:O	2.08	0.52
23:W:117:ARG:HH22	30:0:1264:U:P	2.32	0.52
5:E:80:TRP:O	5:E:134:SER:HA	2.09	0.52
30:0:1157:C:H2'	30:0:1158:G:C5'	2.39	0.52
30:0:1168:C:C2'	30:0:1169:U:H5'	2.39	0.52
15:O:50:ARG:HD2	15:O:51:TYR:CE2	2.45	0.52
15:O:59:VAL:HG23	15:O:111:VAL:CG2	2.40	0.52
30:0:2727:A:N1	30:0:2756:U:C2	2.77	0.52
30:0:1279:U:C2'	30:0:1279:U:O2	2.58	0.52
30:0:182:G:O2'	30:0:183:A:H5'	2.10	0.52
24:X:73:ARG:NH1	24:X:88:GLU:HA	2.22	0.52
4:D:54:ALA:HB2	4:D:69:ILE:HD11	1.90	0.52
1:A:191:GLY:HA2	1:A:194:MET:CE	2.39	0.52
30:0:462:A:N6	30:0:477:A:C2	2.78	0.52
8:H:72:ALA:HB2	8:H:156:ALA:HB2	1.91	0.52
4:D:45:THR:HB	4:D:75:LEU:HD21	1.91	0.52
30:0:1337:G:C5	30:0:1338:U:C5	2.98	0.52
3:C:42:ARG:NH1	30:0:675:U:O2'	2.43	0.52
30:0:905:C:H3'	38:0:5139:HOH:O	2.10	0.52
30:0:1375:A:H2'	30:0:1376:G:C5'	2.26	0.52
15:O:25:VAL:HG23	15:O:26:TRP:H	1.75	0.52
29:3:67:LEU:HB2	29:3:69:TYR:CE1	2.45	0.52
29:3:49:ASP:H	29:3:53:SER:HG	1.58	0.52
30:0:1150:A:H3'	30:0:1151:G:C5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2250:G:C6	30:0:2251:G:C6	2.98	0.52
30:0:324:G:C2	30:0:325:U:C5	2.98	0.52
30:0:257:G:N2	30:0:258:G:N3	2.58	0.52
30:0:1634:G:C2'	38:0:3870:HOH:O	2.57	0.52
30:0:1909:A:H4'	38:0:3505:HOH:O	2.08	0.52
30:0:1531:U:C2	30:0:1661:A:C2	2.98	0.52
30:0:1541:G:O2'	30:0:1542:G:H5'	2.09	0.52
2:B:72:THR:HB	38:B:9083:HOH:O	2.10	0.52
13:M:61:ILE:HD12	13:M:61:ILE:N	2.25	0.52
30:0:407:A:H2'	30:0:408:A:C8	2.45	0.52
18:R:76:ASP:OD2	30:0:2087:C:H1'	2.10	0.52
30:0:692:A:H2'	30:0:693:A:O4'	2.10	0.52
30:0:912:A:C4	30:0:1294:A:C2	2.98	0.52
21:U:56:ARG:NH1	30:0:2890:A:C8	2.78	0.52
30:0:2027:U:O2'	30:0:2028:U:H5'	2.10	0.52
30:0:536:A:H2	30:0:2075:G:N3	2.07	0.52
12:L:6:ARG:NH1	30:0:1299:G:N7	2.57	0.52
30:0:187:A:C5	30:0:188:C:C5	2.97	0.52
30:0:2054:A:N3	30:0:2054:A:H2'	2.25	0.52
6:F:118:LEU:O	6:F:119:ARG:HB3	2.10	0.52
30:0:2579:G:O2'	30:0:2580:G:H5'	2.10	0.52
30:0:594:C:C4	30:0:595:U:C5	2.98	0.52
30:0:682:A:H2'	30:0:683:G:O4'	2.09	0.52
30:0:1642:A:N7	30:0:1643:C:C4	2.78	0.52
21:U:44:ARG:HB3	21:U:49:LEU:HD11	1.92	0.52
30:0:2723:G:O2'	30:0:2724:U:H5'	2.09	0.52
30:0:301:C:H2'	30:0:301:C:O2	2.09	0.52
30:0:312:U:C2	30:0:320:G:N2	2.77	0.52
1:A:70:ALA:HB1	26:Z:89:THR:HG21	1.91	0.52
2:B:109:LEU:HD11	2:B:113:LEU:HD12	1.92	0.52
12:L:17:SER:HB3	12:L:20:ASN:OD1	2.10	0.52
1:A:36:ASP:HA	1:A:83:GLY:HA3	1.90	0.52
10:J:86:MET:HE2	30:0:1241:G:N3	2.25	0.52
30:0:597:A:H2'	30:0:598:C:C6	2.45	0.52
30:0:2416:G:H2'	30:0:2417:C:C6	2.45	0.52
30:0:790:A:H2'	30:0:791:A:C5'	2.40	0.52
20:T:71:VAL:HG13	20:T:91:LEU:O	2.09	0.52
30:0:2727:A:C6	30:0:2756:U:C4	2.98	0.52
23:W:125:HIS:HE1	38:W:3071:HOH:O	1.92	0.52
6:F:50:VAL:HG13	6:F:60:VAL:HG11	1.91	0.52
19:S:73:ASP:O	19:S:77:VAL:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2345:A:H3'	30:0:2346:C:C5	2.44	0.52
22:V:11:MET:HB3	22:V:15:GLU:HB2	1.91	0.52
2:B:280:VAL:HG12	2:B:281:ASP:N	2.25	0.52
30:0:285:A:H2'	30:0:286:U:O4'	2.10	0.52
5:E:21:THR:HA	5:E:30:THR:HA	1.92	0.52
30:0:2549:C:O2'	30:0:2550:U:H5'	2.10	0.52
29:3:13:HIS:CB	29:3:74:CYS:SG	2.91	0.52
13:M:83:SER:CB	29:3:47:GLY:HA3	2.39	0.52
30:0:287:C:H3'	30:0:287:C:H6	1.73	0.52
30:0:2237:G:H1'	30:0:2238:A:C8	2.45	0.52
30:0:517:U:C2'	30:0:518:G:H5'	2.40	0.52
10:J:127:ILE:HG22	35:J:8801:CL:CL	2.47	0.52
11:K:43:ARG:O	30:0:2583:A:H4'	2.10	0.52
30:0:2011:A:H4'	30:0:2012:U:O5'	2.10	0.52
30:0:1649:G:H5'	38:0:9906:HOH:O	2.09	0.52
1:A:54:PRO:HD3	26:Z:77:GLY:HA3	1.91	0.52
30:0:1400:C:H2'	30:0:1401:G:H5'	1.92	0.52
31:9:31:C:O2'	31:9:32:G:H5'	2.09	0.52
30:0:788:A:H4'	38:0:6882:HOH:O	2.09	0.52
8:H:168:VAL:HG13	38:H:216:HOH:O	2.10	0.52
2:B:258:GLY:H	2:B:260:HIS:CE1	2.28	0.52
2:B:260:HIS:HE1	38:B:9063:HOH:O	1.93	0.52
30:0:1189:A:H1'	30:0:1209:C:O4'	2.10	0.52
13:M:87:GLY:HA3	13:M:91:ILE:HD12	1.92	0.52
31:9:105:A:H2'	31:9:106:U:H5'	1.92	0.52
30:0:700:A:C5'	30:0:701:U:H5'	2.40	0.52
30:0:1706:G:C6	30:0:1707:G:N1	2.78	0.52
30:0:2032:U:C2'	30:0:2033:G:C5'	2.88	0.52
30:0:2363:G:C6	30:0:2364:A:N7	2.78	0.52
30:0:418:C:H2'	30:0:419:A:H8	1.74	0.52
1:A:42:VAL:HG21	1:A:74:VAL:HG12	1.90	0.52
30:0:1764:C:H2'	30:0:1765:G:O4'	2.10	0.52
30:0:2128:G:H2'	30:0:2129:U:O4'	2.10	0.52
30:0:1904:A:C2	30:0:1905:U:H1'	2.45	0.52
30:0:643:A:H2	30:0:902:G:N3	2.08	0.52
30:0:564:G:N2	30:0:593:A:OP2	2.43	0.52
2:B:320:GLN:NE2	2:B:321:PRO:HD2	2.25	0.52
38:B:8993:HOH:O	30:0:2547:C:H1'	2.10	0.52
26:Z:45:VAL:HA	26:Z:48:ARG:HB3	1.92	0.52
30:0:2754:G:H2'	30:0:2755:G:O4'	2.09	0.52
3:C:175:LYS:HE3	38:0:6736:HOH:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1183:C:C2	30:0:1184:C:C5	2.98	0.51
30:0:1165:G:C1'	30:0:1174:A:H1'	2.15	0.51
30:0:958:G:H2'	30:0:959:C:C6	2.45	0.51
30:0:1244:U:H6	38:0:4793:HOH:O	1.93	0.51
29:3:68:LYS:HE2	29:3:70:ARG:NH1	2.25	0.51
30:0:1424:A:C2	30:0:1441:G:C2	2.98	0.51
30:0:1947:G:C5	30:0:1948:G:N7	2.78	0.51
30:0:962:C:H2'	30:0:963:C:C5'	2.40	0.51
6:F:28:ALA:HB3	6:F:99:THR:O	2.10	0.51
10:J:56:LYS:O	10:J:60:ARG:HG3	2.09	0.51
30:0:110:C:H1'	38:0:6615:HOH:O	2.10	0.51
26:Z:96:GLU:OE1	26:Z:101:LYS:HG2	2.10	0.51
30:0:801:U:O5'	30:0:801:U:H6	1.93	0.51
25:Y:203:VAL:HG12	25:Y:228:VAL:HA	1.92	0.51
18:R:150:PRO:CB	18:R:150:PRO:CG	2.85	0.51
2:B:207:LYS:HG3	30:0:2717:C:OP1	2.10	0.51
30:0:1312:G:C6	30:0:1343:C:N3	2.79	0.51
30:0:2421:G:H4'	38:0:4740:HOH:O	2.09	0.51
30:0:1545:C:H2'	30:0:1546:G:O4'	2.09	0.51
30:0:2255:A:C2	30:0:2256:G:C4	2.98	0.51
30:0:2765:C:H2'	30:0:2766:A:C8	2.45	0.51
30:0:2073:G:OP2	30:0:2490:A:H5'	2.10	0.51
30:0:116:G:C1'	30:0:129:A:C4	2.93	0.51
30:0:2747:C:H3'	38:0:3844:HOH:O	2.09	0.51
30:0:2752:C:C2'	30:0:2753:G:H5'	2.40	0.51
13:M:120:VAL:HG11	13:M:130:GLU:HG3	1.90	0.51
30:0:152:A:H1'	30:0:440:C:O2'	2.10	0.51
27:1:37:CYS:SG	27:1:39:PHE:HB2	2.51	0.51
8:H:44:ASP:HA	8:H:170:ARG:HH12	1.76	0.51
30:0:1779:A:H2'	30:0:1780:G:H5'	1.92	0.51
30:0:1619:G:H2'	30:0:1620:C:O4'	2.09	0.51
30:0:1531:U:C2	30:0:1661:A:N1	2.78	0.51
12:L:11:ARG:HG2	12:L:12:THR:HG23	1.93	0.51
30:0:2658:G:H4'	30:0:2842:G:C8	2.45	0.51
24:X:29:ALA:CB	24:X:66:THR:HG21	2.41	0.51
26:Z:97:THR:O	26:Z:101:LYS:HG3	2.09	0.51
30:0:1754:A:H2'	30:0:1755:A:O4'	2.10	0.51
31:9:35:C:H5"	38:9:4078:HOH:O	2.10	0.51
29:3:30:GLN:HB3	38:3:9055:HOH:O	2.09	0.51
15:O:96:VAL:HA	38:O:4258:HOH:O	2.10	0.51
30:0:2383:G:C6	30:0:2384:U:N3	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:369:G:O2'	30:0:370:G:H5'	2.10	0.51
30:0:2102:G:N2	30:0:2104:C:C2	2.78	0.51
30:0:57:C:C2'	30:0:58:C:H5'	2.39	0.51
30:0:1096:U:O2	30:0:1261:A:C2	2.64	0.51
30:0:300:U:C6	30:0:301:C:H5	2.27	0.51
1:A:95:PRO:HG2	1:A:98:GLU:HG2	1.91	0.51
30:0:1388:U:H2'	30:0:1389:G:O4'	2.10	0.51
24:X:71:ARG:CB	24:X:88:GLU:HG2	2.40	0.51
4:D:135:VAL:HG22	4:D:136:ARG:N	2.24	0.51
30:0:353:G:H2'	30:0:354:A:C8	2.45	0.51
12:L:121:ILE:HG12	12:L:141:GLU:HB2	1.91	0.51
30:0:1791:U:O2'	30:0:1792:C:H5'	2.10	0.51
3:C:4:THR:HA	3:C:15:GLU:CB	2.41	0.51
30:0:1540:G:C6	30:0:1646:G:C5	2.98	0.51
30:0:1268:C:O2'	30:0:1269:G:H5'	2.10	0.51
30:0:1915:U:H2'	30:0:1916:C:C6	2.46	0.51
30:0:2097:G:N2	30:0:2098:C:H1'	2.25	0.51
30:0:1637:A:C2	30:0:1638:U:C2	2.98	0.51
30:0:87:C:O2'	30:0:88:G:H5"	2.11	0.51
30:0:1947:G:N2	30:0:1966:U:C2	2.78	0.51
30:0:300:U:C4	30:0:301:C:H5	2.28	0.51
30:0:35:U:O2'	30:0:36:C:H5'	2.10	0.51
30:0:1583:U:C2'	30:0:1584:C:H5'	2.40	0.51
30:0:77:G:C2'	30:0:78:G:H5'	2.39	0.51
30:0:623:U:O2'	30:0:624:U:H5'	2.10	0.51
29:3:60:LYS:HD2	29:3:61:PRO:HD2	1.92	0.51
29:3:24:LYS:HE3	29:3:90:PHE:CE1	2.46	0.51
26:Z:41:ARG:HB3	38:0:5660:HOH:O	2.11	0.51
30:0:1130:U:H5'	38:0:7572:HOH:O	2.11	0.51
28:2:49:GLU:OE1	30:0:120:A:H2	1.92	0.51
30:0:1592:G:C5	30:0:1593:C:C4	2.99	0.51
30:0:2032:U:C2'	30:0:2033:G:H5"	2.41	0.51
1:A:86:ALA:HB3	1:A:94:LEU:HB3	1.92	0.51
16:P:27:ARG:O	16:P:31:ILE:HG13	2.10	0.51
30:0:1584:C:O2	30:0:1612:A:C2	2.64	0.51
30:0:1982:C:H3'	30:0:1983:C:H6	1.75	0.51
30:0:1059:G:C8	30:0:2491:G:H4'	2.46	0.51
30:0:1304:U:H2'	30:0:1305:C:C6	2.44	0.51
14:N:42:HIS:HA	14:N:75:THR:O	2.11	0.51
30:0:188:C:O2	30:0:188:C:H2'	2.10	0.51
2:B:215:VAL:HA	2:B:220:VAL:HG22	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:13:PRO:HB2	7:G:15:TRP:CD1	2.45	0.51
30:0:1160:G:H2'	38:0:5570:HOH:O	2.10	0.51
30:0:1524:U:O5'	30:0:1524:U:H6	1.93	0.51
30:0:2407:G:C2	30:0:2408:A:C4	2.99	0.51
30:0:1168:C:H2'	30:0:1169:U:H5'	1.92	0.51
30:0:161:A:H2'	30:0:162:C:C6	2.46	0.51
30:0:170:U:C5	30:0:171:C:C6	2.99	0.51
30:0:509:A:C6	30:0:511:A:N6	2.79	0.51
30:0:2375:A:H2'	30:0:2376:C:H6	1.75	0.51
30:0:707:C:C2	30:0:708:A:C8	2.98	0.51
30:0:1132:A:H61	30:0:1229:C:H2'	1.72	0.51
21:U:56:ARG:CD	30:0:2890:A:C8	2.89	0.51
30:0:1745:G:H22	30:0:2033:G:H5'	1.75	0.51
30:0:422:G:C6	30:0:2446:G:C6	2.99	0.51
3:C:83:ALA:HA	30:0:1361:C:H1'	1.92	0.51
30:0:20:G:C2'	30:0:21:G:O5'	2.58	0.51
30:0:939:A:C2	30:0:1027:G:N3	2.79	0.51
30:0:1819:G:H2'	30:0:1820:G:H4'	1.93	0.51
30:0:723:G:H2'	30:0:724:G:C8	2.45	0.51
2:B:41:PHE:CE1	2:B:79:MET:HG3	2.45	0.51
2:B:48:MET:HB2	30:0:2719:A:OP1	2.10	0.51
30:0:2642:G:H4'	38:0:9613:HOH:O	2.09	0.51
30:0:1211:G:H2'	30:0:1212:C:C6	2.46	0.51
30:0:1195:G:N2	30:0:1205:U:C2	2.78	0.51
29:3:1:MET:HA	30:0:2320:U:C5'	2.41	0.51
29:3:6:ARG:HG2	29:3:21:GLU:HG2	1.91	0.51
29:3:60:LYS:CG	29:3:61:PRO:HD2	2.40	0.51
31:9:88:G:C2	31:9:89:C:C5	2.99	0.51
30:0:1701:A:H1'	30:0:1710:A:N7	2.26	0.51
31:9:39:U:H3	31:9:42:C:H5"	1.76	0.51
30:0:1149:U:C5'	30:0:1151:G:H5'	2.41	0.51
17:Q:11:ARG:HG3	30:0:2363:G:O2'	2.11	0.51
30:0:18:C:H2'	30:0:19:U:H6	1.76	0.51
1:A:118:PHE:HB3	1:A:140:LEU:HD22	1.92	0.51
16:P:7:LYS:HD2	16:P:21:VAL:HG13	1.93	0.51
30:0:483:C:N4	30:0:506:G:O2'	2.44	0.51
14:N:25:ARG:HG2	30:0:2416:G:O2'	2.11	0.51
30:0:2644:C:H5	38:0:7010:HOH:O	1.93	0.51
30:0:68:U:C4	30:0:107:U:H4'	2.46	0.51
29:3:33:MET:CG	30:0:1922:A:H2'	2.41	0.51
30:0:302:A:H2'	30:0:303:C:C5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:205:ARG:NH2	30:0:347:A:O2'	2.44	0.51
30:0:2061:C:O2'	30:0:2062:A:H5'	2.11	0.51
30:0:1042:U:O2'	30:0:1043:C:H5'	2.10	0.51
30:0:960:G:N3	30:0:960:G:C2'	2.72	0.51
23:W:131:PRO:O	23:W:136:GLY:N	2.41	0.51
30:0:2842:G:H2'	30:0:2843:A:C5'	2.39	0.51
30:0:174:A:O4'	30:0:176:U:C6	2.63	0.51
31:9:12:C:H5'	31:9:70:U:O4'	2.09	0.51
30:0:642:G:N2	38:0:9079:HOH:O	2.42	0.51
2:B:329:TYR:CE2	21:U:15:PRO:HG2	2.45	0.51
30:0:2276:U:H2'	30:0:2277:U:C6	2.46	0.51
30:0:1514:C:O2'	30:0:1515:A:H5'	2.10	0.51
30:0:2505:G:O2'	30:0:2506:A:H5'	2.10	0.51
3:C:176:ALA:HB2	30:0:1343:C:C5	2.46	0.51
30:0:57:C:N3	30:0:89:G:N2	2.55	0.51
28:2:41:HIS:CD2	28:2:44:ARG:H	2.18	0.51
16:P:99:ARG:HE	30:0:1597:A:H5'	1.76	0.51
1:A:199:HIS:CE1	1:A:225:VAL:HG11	2.46	0.51
30:0:1391:G:H2'	30:0:1392:A:H5'	1.92	0.51
30:0:1377:C:H1'	38:0:3734:HOH:O	2.11	0.51
20:T:82:THR:HG21	30:0:488:U:O2'	2.11	0.51
30:0:2356:A:H2'	30:0:2357:G:O4'	2.10	0.51
14:N:37:ARG:CD	35:N:8807:CL:CL	2.90	0.51
38:D:189:HOH:O	31:9:58:G:H1'	2.11	0.51
29:3:1:MET:HE3	30:0:2320:U:C5	2.46	0.51
30:0:546:C:O5'	30:0:546:C:H6	1.94	0.51
30:0:1835:U:H6	38:0:5521:HOH:O	1.93	0.51
7:G:16:LYS:NZ	7:G:63:ARG:HH12	2.07	0.51
30:0:347:A:O2'	30:0:348:C:H5'	2.10	0.51
30:0:2831:C:H2'	30:0:2832:C:O4'	2.11	0.51
30:0:2852:A:O4'	30:0:2853:U:H5	1.94	0.51
18:R:92:LEU:HD23	18:R:145:LEU:HD21	1.93	0.51
30:0:727:G:H3'	30:0:728:C:C6	2.46	0.51
6:F:36:THR:HG23	6:F:97:ALA:HB2	1.93	0.51
30:0:1926:G:C4	30:0:1927:A:C8	2.99	0.51
8:H:53:ILE:HB	8:H:165:ARG:HB2	1.93	0.51
30:0:2050:G:O2'	30:0:2051:G:H5'	2.11	0.51
4:D:17:ARG:CZ	4:D:137:PRO:HA	2.41	0.51
30:0:1859:A:C5	30:0:1860:U:C5	2.98	0.51
12:L:26:HIS:HB2	38:L:8811:HOH:O	2.09	0.51
30:0:604:G:H4'	30:0:605:C:O5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:117:GLU:HA	38:L:8857:HOH:O	2.11	0.51
31:9:92:G:C6	31:9:93:A:N6	2.79	0.50
30:0:1188:A:C8	30:0:1189:A:C2	2.99	0.50
30:0:1666:C:C2	30:0:1667:A:C8	2.98	0.50
30:0:790:A:H1'	30:0:1710:A:H2'	1.93	0.50
21:U:56:ARG:CD	30:0:2890:A:H1'	2.41	0.50
30:0:98:A:H2'	30:0:99:A:H5'	1.93	0.50
30:0:1878:G:O2'	30:0:1879:U:P	2.69	0.50
23:W:4:LEU:HD23	23:W:54:PHE:CB	2.41	0.50
30:0:722:G:H2'	30:0:723:G:H5'	1.93	0.50
30:0:2842:G:C2'	30:0:2843:A:H5'	2.41	0.50
30:0:1245:C:H3'	30:0:1245:C:C6	2.46	0.50
26:Z:102:THR:HG23	26:Z:105:ARG:HD3	1.92	0.50
16:P:16:VAL:HG12	16:P:20:ARG:HB2	1.93	0.50
11:K:105:ARG:HH11	11:K:105:ARG:HG3	1.75	0.50
30:0:2038:A:O2'	30:0:2039:A:H5'	2.11	0.50
28:2:2:LYS:HG3	30:0:1486:A:C5	2.46	0.50
38:L:8903:HOH:O	25:Y:147:ARG:HG3	2.10	0.50
30:0:2622:A:H1'	38:0:4060:HOH:O	2.11	0.50
30:0:616:U:C4	30:0:617:C:C4	2.99	0.50
30:0:2015:A:H2'	30:0:2016:U:H6	1.76	0.50
29:3:60:LYS:CD	29:3:61:PRO:HD2	2.41	0.50
30:0:1573:A:N7	30:0:1574:C:C2	2.79	0.50
30:0:2088:C:H2'	30:0:2089:A:H8	1.77	0.50
30:0:2859:C:N4	30:0:2898:G:H1	2.09	0.50
30:0:1908:G:H1'	30:0:1931:A:N6	2.25	0.50
30:0:99:A:H2'	30:0:100:C:H5'	1.92	0.50
21:U:22:VAL:HA	21:U:27:ALA:O	2.11	0.50
28:2:36:ASN:HD22	28:2:39:ARG:CG	2.24	0.50
2:B:320:GLN:HE21	2:B:321:PRO:HD2	1.76	0.50
30:0:2642:G:C6	30:0:2643:G:C6	2.99	0.50
10:J:45:VAL:HG23	10:J:130:VAL:O	2.11	0.50
20:T:87:VAL:HB	20:T:88:PRO:HD2	1.93	0.50
6:F:68:ASP:C	6:F:70:LYS:H	2.15	0.50
30:0:812:A:H2'	30:0:813:C:C6	2.47	0.50
30:0:59:A:C5'	38:0:4297:HOH:O	2.59	0.50
30:0:1438:G:C4	30:0:1684:A:C2	3.00	0.50
30:0:1572:A:H3'	38:0:4076:HOH:O	2.11	0.50
30:0:2239:C:C2	30:0:2240:U:C5	3.00	0.50
30:0:1131:G:C6	30:0:1230:A:C4	3.00	0.50
13:M:68:ARG:HD3	13:M:68:ARG:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:711:G:C2	30:0:718:C:N3	2.78	0.50
30:0:1543:G:N1	30:0:1641:A:OP2	2.26	0.50
30:0:2871:G:C6	30:0:2887:G:C6	2.99	0.50
30:0:2105:C:H2'	30:0:2106:C:C6	2.47	0.50
2:B:288:GLY:HA2	30:0:2898:G:H4'	1.94	0.50
1:A:211:LYS:NZ	38:A:9041:HOH:O	2.39	0.50
30:0:323:C:O2'	30:0:324:G:H5'	2.12	0.50
4:D:135:VAL:HG21	4:D:139:TYR:CG	2.45	0.50
30:0:2741:A:H2'	30:0:2742:G:O4'	2.10	0.50
30:0:1550:A:C2	30:0:1636:G:C4	3.00	0.50
30:0:632:A:C4	30:0:633:C:C5	2.99	0.50
1:A:125:ASN:CB	1:A:158:VAL:HG12	2.41	0.50
12:L:142:LEU:HD11	12:L:146:GLY:HA3	1.93	0.50
1:A:40:GLY:O	1:A:79:GLU:HG3	2.10	0.50
30:0:2466:G:H5'	38:0:3625:HOH:O	2.10	0.50
31:9:114:G:H2'	31:9:115:C:C6	2.45	0.50
30:0:2300:A:C2	30:0:2306:U:C5	3.00	0.50
30:0:2248:C:N3	30:0:2254:G:C2	2.80	0.50
24:X:43:VAL:HG22	24:X:76:ARG:HH12	1.77	0.50
30:0:2747:C:C3'	38:0:3844:HOH:O	2.59	0.50
30:0:1387:G:C2	30:0:1396:C:C2	3.00	0.50
30:0:1586:G:C5	30:0:1587:U:C5	2.99	0.50
30:0:324:G:C2	30:0:325:U:C6	3.00	0.50
30:0:962:C:C2'	30:0:963:C:H5'	2.42	0.50
8:H:49:GLN:HG3	8:H:140:TYR:CE2	2.47	0.50
24:X:70:ILE:O	24:X:70:ILE:HG23	2.12	0.50
25:Y:127:GLN:HA	38:Y:8915:HOH:O	2.11	0.50
30:0:1488:U:H3'	38:0:6122:HOH:O	2.10	0.50
27:1:4:GLY:O	27:1:8:GLN:HG2	2.11	0.50
12:L:27:ARG:HH21	12:L:30:ARG:HG2	1.76	0.50
5:E:118:ILE:HG23	5:E:144:THR:HG21	1.94	0.50
31:9:58:G:N7	31:9:59:C:C4	2.79	0.50
30:0:735:C:C2	30:0:736:A:H1'	2.47	0.50
30:0:1631:A:C6	30:0:1632:A:N1	2.80	0.50
38:M:8832:HOH:O	29:3:46:ILE:HB	2.10	0.50
30:0:1774:G:C2'	30:0:1775:A:C5'	2.90	0.50
30:0:2248:C:C2	30:0:2254:G:C2	3.00	0.50
10:J:47:THR:HB	38:0:4793:HOH:O	2.11	0.50
30:0:719:C:H2'	30:0:720:G:O5'	2.11	0.50
30:0:2771:G:N3	30:0:2771:G:H2'	2.26	0.50
30:0:1742:A:H61	30:0:2037:C:N4	2.08	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:48:VAL:HG23	20:T:97:ARG:C	2.31	0.50
30:0:1933:G:C2'	30:0:1934:A:H5'	2.41	0.50
30:0:334:G:C4	30:0:335:U:C6	2.99	0.50
23:W:52:VAL:HG22	23:W:53:ALA:N	2.27	0.50
2:B:304:PRO:HD2	2:B:307:ARG:NE	2.27	0.50
9:I:114:TYR:CD1	9:I:114:TYR:N	2.78	0.50
2:B:305:ASP:O	2:B:306:LYS:HB2	2.11	0.50
10:J:104:TYR:HA	38:J:2238:HOH:O	2.12	0.50
30:0:784:A:H2'	30:0:785:U:O4'	2.11	0.50
11:K:91:GLU:OE2	21:U:24:LYS:HB2	2.11	0.50
30:0:1183:C:N3	30:0:1184:C:N4	2.59	0.50
26:Z:61:HIS:HB2	26:Z:71:VAL:HB	1.92	0.50
31:9:13:A:O4'	31:9:114:G:C8	2.65	0.50
30:0:271:C:C2	30:0:273:G:O4'	2.65	0.50
30:0:2432:C:O5'	30:0:2432:C:H6	1.94	0.50
30:0:1762:C:N3	30:0:1783:A:C2	2.79	0.50
30:0:66:G:C2	30:0:109:U:C4	2.99	0.50
21:U:56:ARG:HG3	21:U:56:ARG:NH1	2.27	0.50
30:0:2489:G:H1'	38:0:7179:HOH:O	2.11	0.50
30:0:1323:G:C2	30:0:1324:G:N7	2.80	0.50
29:3:55:VAL:HG13	38:3:9004:HOH:O	2.12	0.50
31:9:114:G:C5	31:9:115:C:C5	2.99	0.50
30:0:1544:U:H2'	30:0:1545:C:C6	2.47	0.50
30:0:790:A:C2'	30:0:791:A:H5'	2.41	0.50
30:0:2471:G:H2'	30:0:2472:C:H6	1.75	0.50
30:0:2064:U:H2'	30:0:2065:C:C6	2.47	0.50
7:G:19:GLU:O	7:G:23:ILE:HG13	2.12	0.50
21:U:39:ASN:ND2	21:U:51:TRP:HZ2	2.09	0.50
5:E:69:ILE:HA	5:E:72:MET:CE	2.42	0.50
30:0:1948:G:C2	30:0:1949:G:C4	3.00	0.50
30:0:1096:U:C2	30:0:1261:A:C2	3.00	0.50
30:0:1008:C:O2'	30:0:1009:U:H5'	2.12	0.50
30:0:415:A:C2	30:0:426:G:C2	2.99	0.50
30:0:45:A:N6	30:0:147:G:C4	2.80	0.50
30:0:387:G:C2'	30:0:388:G:H5'	2.41	0.50
25:Y:212:ARG:HB2	30:0:1315:G:C4	2.46	0.50
12:L:27:ARG:NH2	12:L:30:ARG:HG2	2.27	0.50
31:9:117:G:H2'	31:9:118:C:H6	1.76	0.50
30:0:287:C:N3	30:0:365:G:N2	2.52	0.50
30:0:269:G:C2	30:0:270:U:O4	2.65	0.50
30:0:272:A:C5'	30:0:273:G:OP2	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:233:THR:HB	30:0:1942:A:H5"	1.93	0.50
4:D:154:LYS:CD	4:D:154:LYS:H	2.21	0.50
30:0:669:G:C4	30:0:670:G:C8	2.99	0.50
29:3:51:LYS:HD2	30:0:219:G:H4'	1.92	0.50
30:0:2721:U:O2'	30:0:2722:G:H5'	2.11	0.50
23:W:38:THR:HG22	23:W:39:ASP:N	2.22	0.50
23:W:24:LEU:O	23:W:26:ILE:HG22	2.11	0.50
25:Y:204:ARG:HA	25:Y:230:ASN:OD1	2.11	0.50
25:Y:169:ARG:HD3	30:0:1328:A:C8	2.46	0.50
30:0:317:A:H4'	38:0:3752:HOH:O	2.10	0.50
30:0:937:C:C2'	30:0:938:G:H5'	2.42	0.50
23:W:119:HIS:HD2	23:W:120:PRO:O	1.95	0.50
30:0:1067:A:H3'	38:0:4262:HOH:O	2.11	0.50
30:0:2878:U:H5"	38:0:4138:HOH:O	2.12	0.50
13:M:163:LEU:HD21	30:0:188:C:H5"	1.93	0.50
2:B:280:VAL:HA	38:B:9031:HOH:O	2.11	0.50
21:U:7:ASP:HB2	21:U:30:HIS:H	1.77	0.50
12:L:37:LYS:NZ	38:L:8812:HOH:O	2.44	0.50
25:Y:186:ARG:HD2	38:0:4161:HOH:O	2.11	0.50
25:Y:136:LYS:HB2	38:0:9314:HOH:O	2.12	0.50
30:0:544:G:H2'	30:0:545:G:C5'	2.42	0.50
30:0:559:U:O2'	30:0:560:U:H5'	2.12	0.50
30:0:820:G:H5'	30:0:821:U:H5'	1.93	0.50
30:0:685:C:O2'	30:0:748:C:H5"	2.11	0.50
30:0:1481:G:O2'	30:0:1482:A:H5'	2.12	0.50
30:0:2768:A:C3'	30:0:2768:A:N3	2.72	0.50
30:0:347:A:C2'	30:0:348:C:H5'	2.41	0.50
30:0:2851:G:C5	30:0:2902:A:C2	3.00	0.50
30:0:1386:G:O2'	30:0:1387:G:H5'	2.12	0.50
30:0:77:G:H2'	30:0:78:G:C5'	2.42	0.50
30:0:1023:C:H2'	30:0:1024:G:H8	1.77	0.50
30:0:256:C:H2'	30:0:257:G:C5'	2.41	0.50
18:R:60:LYS:HG2	18:R:75:TRP:CD1	2.47	0.50
30:0:1337:G:C6	30:0:1338:U:C4	2.99	0.50
26:Z:98:PRO:HA	26:Z:101:LYS:HD2	1.93	0.50
30:0:2277:U:H5	38:0:4871:HOH:O	1.95	0.50
30:0:2855:G:C2	30:0:2904:U:C2	2.99	0.50
30:0:2774:U:O2'	30:0:2775:A:H5'	2.12	0.50
30:0:1102:C:H1'	30:0:1109:U:C4	2.47	0.50
13:M:149:TRP:HZ3	13:M:155:GLN:OE1	1.95	0.50
2:B:236:ILE:HG23	38:B:9080:HOH:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:10:SER:O	2:B:16:ARG:NH1	2.44	0.50
14:N:35:VAL:O	14:N:45:ALA:HA	2.11	0.49
30:0:2511:A:H2'	30:0:2512:U:C6	2.47	0.49
30:0:2517:A:H2'	30:0:2518:C:O4'	2.12	0.49
30:0:370:G:O2'	30:0:371:U:H5'	2.12	0.49
30:0:669:G:C2'	30:0:670:G:H5'	2.42	0.49
29:3:22:VAL:HG12	29:3:67:LEU:HD22	1.94	0.49
30:0:65:C:H2'	30:0:66:G:C8	2.46	0.49
21:U:56:ARG:HB2	30:0:2890:A:C8	2.45	0.49
30:0:1424:A:C2	30:0:1441:G:N1	2.80	0.49
30:0:2869:G:H2'	30:0:2870:C:C6	2.47	0.49
2:B:36:PRO:HA	2:B:167:GLY:O	2.12	0.49
30:0:415:A:N3	30:0:426:G:C2	2.80	0.49
30:0:481:U:C4	30:0:487:G:O6	2.65	0.49
30:0:2541:U:H2'	30:0:2542:C:H6	1.77	0.49
30:0:1373:G:C6	30:0:1374:C:C4	2.99	0.49
15:O:105:ASN:HD21	15:O:109:SER:H	1.59	0.49
30:0:1718:G:O2'	30:0:1719:G:H5'	2.11	0.49
20:T:23:VAL:O	20:T:42:VAL:HG23	2.12	0.49
30:0:1170:U:H2'	30:0:1172:G:OP2	2.13	0.49
30:0:2503:A:H2'	30:0:2511:A:C6	2.46	0.49
30:0:1678:A:C4	30:0:1679:C:C6	3.00	0.49
30:0:561:G:N3	30:0:562:A:C8	2.81	0.49
30:0:1119:G:N2	30:0:1246:A:H2	2.03	0.49
30:0:707:C:N3	30:0:708:A:C8	2.80	0.49
12:L:14:GLY:O	30:0:1295:G:H5"	2.12	0.49
30:0:1592:G:C2	30:0:1593:C:C2	3.00	0.49
30:0:1947:G:C8	30:0:1947:G:H3'	2.47	0.49
23:W:6:GLN:HB2	23:W:26:ILE:HD11	1.94	0.49
30:0:194:A:N7	30:0:427:C:H5'	2.27	0.49
30:0:1681:G:H4'	30:0:1682:A:N3	2.26	0.49
31:9:9:C:OP2	31:9:10:C:C5	2.65	0.49
31:9:61:C:H2'	31:9:62:A:C8	2.46	0.49
23:W:118:LEU:HD12	23:W:153:MET:HE3	1.93	0.49
19:S:77:VAL:O	19:S:80:ARG:HG2	2.11	0.49
30:0:1038:G:C2'	30:0:1039:G:H5'	2.42	0.49
21:U:7:ASP:HB2	21:U:30:HIS:N	2.27	0.49
30:0:202:U:C2'	30:0:203:G:H5'	2.42	0.49
30:0:1992:U:O2	30:0:1994:A:H8	1.95	0.49
30:0:1603:A:C5'	30:0:1605:G:H5'	2.41	0.49
29:3:87:ARG:HG2	29:3:88:LEU:H	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1617:C:C4	30:0:1643:C:H4'	2.46	0.49
29:3:33:MET:HG2	30:0:1922:A:O2'	2.11	0.49
1:A:192:VAL:O	1:A:207:GLN:HG2	2.12	0.49
30:0:2444:U:C4	30:0:2445:U:C5	3.00	0.49
16:P:3:LEU:HD12	30:0:1397:C:H5'	1.95	0.49
30:0:1589:G:C5'	38:0:6772:HOH:O	2.60	0.49
30:0:1611:G:H2'	30:0:1612:A:H8	1.77	0.49
31:9:19:G:C2	31:9:20:G:C8	3.00	0.49
30:0:2845:G:C6	30:0:2846:C:C4	3.00	0.49
30:0:802:G:H2'	30:0:803:C:H6	1.76	0.49
2:B:44:TYR:OH	2:B:148:PRO:HG3	2.12	0.49
11:K:74:VAL:HG21	11:K:96:VAL:HG23	1.94	0.49
30:0:1013:A:C2	30:0:1014:A:H1'	2.46	0.49
30:0:566:A:H2'	30:0:567:U:O4'	2.12	0.49
20:T:41:ARG:HG2	20:T:41:ARG:HH11	1.77	0.49
11:K:66:ARG:NH2	30:0:1994:A:OP1	2.40	0.49
2:B:55:ASN:HB3	2:B:63:GLU:HA	1.93	0.49
24:X:18:ARG:HG2	24:X:25:ARG:NH2	2.27	0.49
8:H:91:ARG:O	30:0:1003:U:H4'	2.11	0.49
30:0:2035:C:O2'	30:0:2036:C:H5'	2.12	0.49
30:0:295:C:O2'	30:0:296:G:H5'	2.12	0.49
30:0:259:G:N2	30:0:260:C:H1'	2.27	0.49
30:0:1166:A:C6	30:0:1181:A:C2	3.00	0.49
30:0:243:A:N6	30:0:269:G:H1'	2.27	0.49
30:0:242:A:N6	30:0:269:G:H1'	2.27	0.49
30:0:1574:C:C6	30:0:1575:C:H5	2.30	0.49
2:B:212:GLN:HB2	2:B:257:THR:CG2	2.41	0.49
30:0:1594:C:O2'	30:0:1595:G:H5'	2.12	0.49
23:W:88:THR:C	23:W:90:TYR:H	2.15	0.49
30:0:1420:C:H2'	30:0:1420:C:O2	2.10	0.49
8:H:39:LYS:HD2	30:0:968:G:O2'	2.13	0.49
11:K:29:LEU:HB3	11:K:55:VAL:HG21	1.94	0.49
30:0:1128:U:H1'	38:0:6010:HOH:O	2.13	0.49
2:B:43:GLY:HA3	2:B:76:THR:HG22	1.93	0.49
30:0:727:G:N2	30:0:728:C:H1'	2.27	0.49
30:0:177:A:C8	30:0:178:U:C5	3.01	0.49
2:B:256:GLN:HB2	30:0:2656:G:O2'	2.13	0.49
30:0:221:G:H2'	30:0:222:A:C8	2.48	0.49
30:0:2842:G:H2'	30:0:2843:A:H5'	1.95	0.49
8:H:76:LEU:HD21	8:H:149:VAL:HA	1.93	0.49
30:0:295:C:C2'	30:0:296:G:H5'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:923:A:H2'	38:0:5612:HOH:O	2.11	0.49
14:N:104:ILE:HD12	14:N:107:ASN:O	2.11	0.49
14:N:171:HIS:CE1	38:N:8855:HOH:O	2.65	0.49
30:0:2295:G:N3	30:0:2361:A:H2	2.10	0.49
31:9:29:C:C5	31:9:30:C:C5	3.00	0.49
31:9:57:A:C2'	31:9:58:G:H5'	2.41	0.49
30:0:1180:U:O2'	30:0:1181:A:H5'	2.13	0.49
30:0:1194:A:O2'	30:0:1195:G:H5'	2.12	0.49
30:0:2533:C:H2'	30:0:2534:U:O5'	2.13	0.49
30:0:614:U:H2'	30:0:615:G:C8	2.46	0.49
30:0:1734:C:H6	30:0:1734:C:O5'	1.95	0.49
30:0:2135:A:O4'	30:0:2243:C:N4	2.46	0.49
30:0:660:A:C8	30:0:746:A:C6	3.01	0.49
30:0:746:A:H4'	30:0:747:G:OP1	2.11	0.49
30:0:1593:C:H2'	30:0:1594:C:H6	1.75	0.49
8:H:12:ILE:HG23	8:H:129:ARG:CZ	2.43	0.49
30:0:116:G:H1'	30:0:129:A:C2	2.47	0.49
30:0:1024:G:H2'	30:0:1025:C:H6	1.78	0.49
30:0:581:G:O2'	30:0:582:U:H5'	2.13	0.49
30:0:2731:G:H2'	30:0:2732:U:O4'	2.13	0.49
2:B:41:PHE:HA	2:B:79:MET:HE1	1.93	0.49
2:B:41:PHE:CZ	2:B:79:MET:HG3	2.47	0.49
30:0:1540:G:C4	30:0:1541:G:C8	3.01	0.49
30:0:1427:A:H61	30:0:1440:U:H1'	1.76	0.49
30:0:1427:A:O2'	30:0:1428:C:H5'	2.13	0.49
12:L:21:ARG:HA	12:L:26:HIS:HD2	1.76	0.49
13:M:111:ASN:HB2	38:M:8854:HOH:O	2.11	0.49
31:9:30:C:O2	31:9:51:A:C2	2.65	0.49
30:0:735:C:C4	30:0:736:A:C4	3.00	0.49
30:0:2336:G:HO2'	30:0:2337:G:H5'	1.77	0.49
30:0:1346:U:C2	30:0:1347:U:C6	3.01	0.49
30:0:2794:G:C6	30:0:2795:C:C5	3.01	0.49
30:0:2791:U:C4	30:0:2794:G:O6	2.65	0.49
20:T:9:LYS:HE3	20:T:13:ARG:CZ	2.43	0.49
30:0:1859:A:H8	30:0:1859:A:O5'	1.95	0.49
29:3:17:HIS:HB2	30:0:2409:C:H4'	1.94	0.49
30:0:375:G:N1	30:0:411:A:C2	2.81	0.49
30:0:2807:U:O2'	30:0:2808:U:H5'	2.12	0.49
14:N:148:ALA:C	14:N:150:TYR:H	2.16	0.49
18:R:40:ALA:O	18:R:44:VAL:HG23	2.13	0.49
30:0:626:U:O4	30:0:627:G:C6	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1523:G:C4	30:0:1524:U:C4	3.01	0.49
30:0:1164:U:O2	30:0:1166:A:H4'	2.12	0.49
13:M:77:HIS:CB	13:M:81:ARG:HH21	2.18	0.49
30:0:377:C:H6	30:0:377:C:O5'	1.96	0.49
30:0:597:A:H2'	30:0:598:C:H6	1.78	0.49
30:0:1942:A:HO2'	30:0:1943:C:H5'	1.77	0.49
10:J:107:ASN:ND2	10:J:109:TYR:HB2	2.27	0.49
30:0:45:A:C2	30:0:113:A:C6	3.01	0.49
30:0:1252:A:C1'	38:0:5158:HOH:O	2.61	0.49
30:0:1315:G:H4'	30:0:1316:G:OP2	2.13	0.49
2:B:13:PHE:O	2:B:16:ARG:HD2	2.12	0.49
30:0:863:G:C6	30:0:864:U:C4	3.01	0.49
13:M:92:THR:HB	30:0:401:C:O2'	2.12	0.49
17:Q:3:SER:HB3	38:0:6444:HOH:O	2.12	0.49
30:0:883:U:C6	30:0:888:U:H5'	2.47	0.49
30:0:1183:C:N3	30:0:1184:C:C5	2.81	0.49
26:Z:70:ARG:HH11	26:Z:83:TYR:HB2	1.78	0.49
30:0:1165:G:H21	30:0:1173:A:H5"	1.75	0.49
25:Y:189:ASN:ND2	25:Y:191:ASP:H	2.09	0.49
30:0:287:C:H3'	30:0:287:C:C6	2.48	0.49
30:0:238:C:H4'	30:0:287:C:OP1	2.13	0.49
30:0:529:G:C6	30:0:530:C:C4	3.01	0.49
31:9:89:C:C2'	31:9:90:G:H5'	2.43	0.49
30:0:1623:C:C5	30:0:1624:A:C4	3.00	0.49
30:0:2416:G:O2'	30:0:2417:C:H5'	2.12	0.49
30:0:2728:C:H5	38:0:6481:HOH:O	1.94	0.49
30:0:1096:U:O2'	30:0:1097:A:H5'	2.12	0.49
30:0:2829:G:O2'	30:0:2830:U:H5'	2.13	0.49
18:R:117:HIS:HD2	30:0:20:G:H21	1.59	0.49
30:0:525:G:H2'	30:0:526:U:O4'	2.12	0.49
2:B:5:ARG:NH1	2:B:8:LYS:HE2	2.27	0.49
12:L:21:ARG:HG2	38:L:8827:HOH:O	2.12	0.49
30:0:917:U:H5	38:0:4490:HOH:O	1.95	0.49
30:0:640:G:C4	30:0:641:G:C8	3.00	0.49
30:0:514:G:H2'	30:0:514:G:OP1	2.13	0.49
2:B:74:ILE:HD13	2:B:309:VAL:HG21	1.94	0.49
13:M:36:ALA:O	13:M:65:VAL:HA	2.12	0.49
30:0:736:A:H3'	38:0:7109:HOH:O	2.12	0.49
25:Y:189:ASN:HA	25:Y:217:ILE:HD11	1.95	0.49
3:C:190:ALA:HB3	30:0:1309:U:OP1	2.13	0.49
30:0:1575:C:C2'	30:0:1576:G:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2327:A:H2'	30:0:2328:U:H6	1.78	0.49
30:0:1477:C:H2'	30:0:1478:U:O4'	2.12	0.49
11:K:27:ARG:NH1	11:K:27:ARG:HG2	2.28	0.49
30:0:181:G:H1'	38:0:3246:HOH:O	2.13	0.49
12:L:55:GLN:HA	12:L:58:GLN:HG3	1.95	0.49
30:0:2607:U:H4'	38:0:9444:HOH:O	2.13	0.49
30:0:2028:U:O2'	30:0:2029:C:H5'	2.12	0.49
30:0:29:C:C2'	30:0:30:U:H5'	2.42	0.49
20:T:21:LYS:HA	20:T:24:ARG:HG3	1.95	0.49
30:0:1217:G:C2	30:0:1218:U:C2	3.01	0.49
1:A:109:GLU:HG2	1:A:116:GLY:H	1.78	0.49
16:P:103:THR:HG23	16:P:106:ARG:HH12	1.78	0.49
31:9:29:C:O5'	31:9:29:C:H6	1.94	0.49
30:0:1477:C:C5'	30:0:1868:G:H5"	2.43	0.49
30:0:1346:U:C2	30:0:1347:U:C5	3.00	0.49
5:E:68:HIS:O	5:E:72:MET:HG3	2.13	0.49
30:0:180:G:C2'	30:0:181:G:H5'	2.43	0.49
30:0:1758:U:H2'	30:0:1759:A:O4'	2.13	0.49
30:0:2726:U:O4'	30:0:2749:U:C2	2.66	0.49
30:0:1730:G:N3	30:0:1730:G:H2'	2.28	0.49
18:R:4:TYR:CE1	18:R:15:LYS:HD3	2.48	0.49
1:A:179:MET:HG2	1:A:186:TRP:CB	2.41	0.49
2:B:223:ARG:NE	2:B:232:TRP:HB3	2.28	0.49
3:C:76:ARG:NH2	30:0:1363:G:OP1	2.46	0.49
30:0:39:G:N2	30:0:444:C:C2	2.81	0.49
30:0:152:A:C2	30:0:153:C:C2	3.01	0.49
30:0:1851:G:O2'	30:0:1852:A:H5'	2.13	0.49
6:F:54:VAL:HA	30:0:263:U:O4	2.12	0.49
30:0:1146:C:O2'	30:0:1147:C:H5'	2.13	0.49
10:J:45:VAL:HG21	10:J:129:PHE:CD1	2.47	0.49
8:H:87:LYS:HB2	8:H:87:LYS:NZ	2.28	0.49
3:C:107:ARG:O	3:C:111:VAL:HG23	2.12	0.49
30:0:1060:C:H5"	38:0:9805:HOH:O	2.13	0.49
30:0:423:A:H2'	30:0:424:C:O4'	2.13	0.48
2:B:262:ARG:HG3	30:0:2716:G:H5'	1.95	0.48
30:0:1744:G:H2'	30:0:1745:G:H5'	1.95	0.48
13:M:47:ASP:CG	13:M:48:LYS:H	2.16	0.48
11:K:28:GLU:HB3	11:K:59:LYS:H	1.78	0.48
30:0:352:A:C2	30:0:353:G:C4	3.01	0.48
20:T:32:ARG:NH1	20:T:38:ARG:NH1	2.61	0.48
10:J:56:LYS:HD2	35:J:8816:CL:CL	2.50	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2713:G:O2'	30:0:2714:U:H5'	2.13	0.48
4:D:52:THR:HB	4:D:70:GLY:CA	2.44	0.48
30:0:2710:U:O5'	30:0:2710:U:H6	1.95	0.48
30:0:1394:C:H5'	38:0:4258:HOH:O	2.12	0.48
30:0:699:C:O2'	30:0:744:G:H1'	2.13	0.48
18:R:69:LYS:HB2	18:R:72:VAL:HG23	1.95	0.48
21:U:20:MET:HG3	21:U:28:THR:HG23	1.95	0.48
31:9:59:C:O5'	31:9:59:C:C6	2.67	0.48
26:Z:63:CYS:HA	26:Z:71:VAL:HG23	1.95	0.48
30:0:2378:U:H4'	38:0:4535:HOH:O	2.14	0.48
30:0:693:A:H2'	30:0:694:A:C8	2.48	0.48
30:0:694:A:H2'	30:0:695:C:C5'	2.41	0.48
30:0:120:A:C2'	30:0:120:A:N3	2.75	0.48
4:D:58:VAL:HG12	4:D:60:GLU:HG2	1.96	0.48
15:O:112:ARG:HA	38:0:3167:HOH:O	2.13	0.48
30:0:1894:C:C5	30:0:1940:C:C4	3.01	0.48
29:3:69:TYR:CE1	29:3:80:ARG:HB2	2.48	0.48
30:0:421:C:H2'	30:0:422:G:C8	2.49	0.48
30:0:1610:G:C2	30:0:1611:G:C4	3.00	0.48
1:A:132:ASP:C	1:A:134:ASN:H	2.15	0.48
30:0:255:A:C4	30:0:256:C:C5	3.01	0.48
30:0:853:C:H2'	30:0:854:G:O4'	2.12	0.48
19:S:28:VAL:HG11	19:S:37:VAL:HG13	1.94	0.48
30:0:1245:C:C3'	30:0:1245:C:C6	2.96	0.48
30:0:2023:G:H1'	38:0:9149:HOH:O	2.13	0.48
30:0:916:A:C2	30:0:928:G:C4	3.02	0.48
30:0:1656:A:H2'	30:0:1657:A:C8	2.47	0.48
23:W:128:VAL:O	23:W:138:LEU:HD11	2.13	0.48
30:0:1458:A:H4'	38:0:9663:HOH:O	2.14	0.48
30:0:1187:U:HO2'	30:0:1188:A:H8	1.59	0.48
30:0:1190:G:C5	38:0:7580:HOH:O	2.67	0.48
26:Z:81:CYS:SG	26:Z:83:TYR:HB3	2.52	0.48
29:3:2:GLN:NE2	29:3:89:GLU:HB2	2.28	0.48
30:0:1623:C:N4	30:0:1624:A:C6	2.81	0.48
30:0:1626:A:H2'	30:0:1627:G:O5'	2.13	0.48
30:0:696:C:O2'	30:0:697:G:H5'	2.13	0.48
15:O:51:TYR:CD1	30:0:721:A:C5'	2.96	0.48
24:X:72:VAL:HG22	24:X:85:VAL:HG12	1.95	0.48
30:0:668:C:O2'	30:0:669:G:H5'	2.12	0.48
7:G:20:VAL:HA	7:G:23:ILE:HD12	1.93	0.48
30:0:1973:A:H5'	30:0:1973:A:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1739:G:O2'	30:0:1740:U:H5'	2.14	0.48
30:0:2445:U:H2'	30:0:2446:G:C8	2.49	0.48
31:9:24:U:H5'	31:9:25:G:H5'	1.94	0.48
26:Z:34:SER:CA	30:0:797:A:H4'	2.40	0.48
3:C:56:THR:HG21	3:C:78:ARG:HB3	1.96	0.48
1:A:76:VAL:HG21	26:Z:87:LYS:HB3	1.95	0.48
23:W:4:LEU:HD11	23:W:45:VAL:HG12	1.94	0.48
30:0:1456:C:H2'	30:0:1457:U:C6	2.48	0.48
23:W:5:VAL:HG11	23:W:153:MET:CE	2.43	0.48
30:0:1794:G:N2	30:0:1796:A:H3'	2.28	0.48
30:0:2619:UR3:H2'	30:0:2620:U:H2'	1.95	0.48
30:0:12:U:H2'	30:0:13:G:H5'	1.93	0.48
30:0:2055:A:H4'	38:0:7348:HOH:O	2.13	0.48
5:E:32:ARG:O	5:E:33:LEU:HD23	2.13	0.48
19:S:40:ALA:O	19:S:44:GLN:HB2	2.13	0.48
23:W:81:ASP:OD1	23:W:92:ASP:HB2	2.14	0.48
2:B:217:ARG:CG	2:B:257:THR:HG22	2.41	0.48
30:0:2017:U:O2'	30:0:2018:A:C8	2.58	0.48
30:0:2374:G:H2'	30:0:2375:A:C8	2.48	0.48
14:N:141:ARG:NH2	31:9:36:C:C2	2.81	0.48
30:0:2471:G:N3	30:0:2472:C:C6	2.82	0.48
30:0:1468:G:O2'	30:0:1865:A:H1'	2.13	0.48
30:0:2794:G:N3	38:0:5810:HOH:O	2.45	0.48
30:0:2672:C:O2	30:0:2672:C:C2'	2.52	0.48
19:S:9:HIS:HE1	30:0:1445:G:OP1	1.96	0.48
23:W:41:TYR:OH	30:0:1024:G:H4'	2.12	0.48
30:0:2596:A:H2	35:0:8812:CL:CL	2.33	0.48
30:0:1432:U:H2'	30:0:1432:U:O2	2.13	0.48
2:B:190:MET:HG3	2:B:194:PHE:HD1	1.79	0.48
30:0:59:A:H5'	38:0:4297:HOH:O	2.11	0.48
30:0:1993:C:C4	30:0:1994:A:C6	3.02	0.48
30:0:933:C:H5"	38:0:3370:HOH:O	2.13	0.48
30:0:2240:U:O2'	30:0:2241:C:H5'	2.14	0.48
30:0:2253:G:O2'	30:0:2254:G:H5'	2.13	0.48
30:0:54:G:N2	30:0:55:U:H1'	2.29	0.48
12:L:113:GLN:HE22	30:0:700:A:H3'	1.78	0.48
30:0:1545:C:C2	30:0:1641:A:N7	2.81	0.48
30:0:2255:A:C2	30:0:2256:G:N9	2.81	0.48
20:T:25:ALA:HB2	20:T:93:THR:HB	1.96	0.48
30:0:2766:A:O2'	30:0:2767:C:H5'	2.13	0.48
30:0:2793:A:H2'	30:0:2794:G:H5'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:107:U:C5	30:0:108:U:C4	3.02	0.48
30:0:2818:A:H2'	30:0:2819:C:C6	2.48	0.48
16:P:114:LEU:HD22	16:P:118:GLN:HB3	1.96	0.48
25:Y:200:THR:HG22	25:Y:201:GLU:HG3	1.94	0.48
30:0:177:A:N7	30:0:178:U:C4	2.82	0.48
18:R:63:ASN:ND2	18:R:75:TRP:HZ2	2.11	0.48
30:0:1400:C:O2'	30:0:1401:G:H5'	2.13	0.48
30:0:2025:G:H1'	38:0:6278:HOH:O	2.13	0.48
1:A:55:VAL:HG23	1:A:68:ILE:O	2.14	0.48
30:0:2047:C:H5'	38:0:9817:HOH:O	2.12	0.48
38:C:8616:HOH:O	30:0:676:C:H4'	2.13	0.48
30:0:139:C:O4'	30:0:140:G:C2	2.66	0.48
27:1:11:LYS:HG2	30:0:777:U:O2'	2.14	0.48
30:0:1160:G:O2'	30:0:1190:G:C8	2.65	0.48
30:0:395:A:H3'	30:0:397:A:N7	2.29	0.48
31:9:49:G:H2'	31:9:50:G:O4'	2.12	0.48
30:0:791:A:H4'	30:0:1709:G:H4'	1.96	0.48
30:0:2761:A:C4	30:0:2763:G:C8	3.02	0.48
30:0:1149:U:C5	30:0:1215:A:C5	3.02	0.48
30:0:65:C:H2'	30:0:66:G:H8	1.78	0.48
21:U:39:ASN:HD21	21:U:51:TRP:HZ2	1.62	0.48
24:X:47:ALA:HB1	24:X:82:GLU:HB2	1.96	0.48
30:0:2831:C:C2'	30:0:2832:C:H5'	2.43	0.48
30:0:1082:A:C2'	30:0:1083:C:OP1	2.62	0.48
16:P:89:ASN:HA	38:P:1926:HOH:O	2.14	0.48
13:M:50:ARG:HB2	38:M:8925:HOH:O	2.13	0.48
30:0:222:A:O5'	30:0:222:A:H8	1.97	0.48
4:D:97:GLN:O	4:D:97:GLN:HG2	2.14	0.48
30:0:1114:A:O2'	30:0:1115:U:H5'	2.13	0.48
1:A:144:GLU:HA	38:A:8955:HOH:O	2.14	0.48
30:0:1872:C:H5'	38:0:9434:HOH:O	2.12	0.48
30:0:1842:A:C4	30:0:1979:G:C6	3.00	0.48
30:0:1170:U:C1'	30:0:1172:G:N7	2.67	0.48
30:0:2509:A:H2'	30:0:2510:C:O4'	2.14	0.48
30:0:1309:U:C4	30:0:1310:U:C4	3.01	0.48
30:0:2419:U:H5"	30:0:2420:G:H5'	1.96	0.48
30:0:1246:A:C5	30:0:1248:A:C5	3.01	0.48
30:0:1783:A:C5	30:0:1784:U:C4	3.02	0.48
7:G:12:ILE:HG21	30:0:1150:A:C8	2.49	0.48
30:0:64:G:C4	30:0:70:A:C8	3.02	0.48
30:0:816:G:C6	30:0:817:G:N1	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1332:C:C2	30:0:1333:U:C6	3.01	0.48
30:0:1739:G:C4	30:0:2041:G:N2	2.82	0.48
30:0:2852:A:C5	30:0:2902:A:C5	3.02	0.48
30:0:1504:A:C5'	38:0:4378:HOH:O	2.60	0.48
30:0:1933:G:N2	30:0:1934:A:C1'	2.77	0.48
1:A:135:VAL:HG11	1:A:147:ARG:HH21	1.78	0.48
11:K:125:ALA:C	11:K:127:ALA:H	2.17	0.48
30:0:1857:A:N1	30:0:2247:C:O4'	2.47	0.48
20:T:112:LEU:HG	20:T:119:ALA:HB3	1.95	0.48
18:R:47:LEU:HB2	18:R:89:LEU:HD21	1.95	0.48
31:9:56:A:C3'	31:9:57:A:H5"	2.44	0.48
30:0:1174:A:H5'	30:0:1176:C:OP2	2.13	0.48
30:0:1179:C:O5'	30:0:1179:C:H6	1.96	0.48
30:0:1668:U:H2'	30:0:1669:G:C8	2.49	0.48
31:9:77:A:C1'	31:9:79:U:C6	2.96	0.48
31:9:114:G:C6	31:9:115:C:C4	3.01	0.48
30:0:1310:U:C2'	30:0:1311:G:O5'	2.61	0.48
30:0:558:C:H2'	30:0:559:U:H5'	1.94	0.48
3:C:16:VAL:HG12	3:C:17:ASP:N	2.28	0.48
30:0:652:G:C5	30:0:754:G:C6	3.02	0.48
13:M:102:GLU:OE1	13:M:164:THR:HG21	2.14	0.48
30:0:2113:G:N2	30:0:2473:U:C2	2.82	0.48
30:0:2722:G:N2	30:0:2760:C:O2	2.45	0.48
30:0:2686:C:O2	30:0:2709:G:C2	2.66	0.48
3:C:236:THR:HG22	3:C:239:ALA:N	2.28	0.48
1:A:94:LEU:HD12	1:A:98:GLU:CB	2.44	0.48
30:0:310:U:N3	30:0:322:G:C2	2.82	0.48
30:0:333:G:O2'	30:0:334:G:H5'	2.13	0.48
30:0:297:U:H6	30:0:297:U:O5'	1.96	0.48
30:0:827:A:H5'	38:0:4093:HOH:O	2.14	0.48
30:0:2681:A:N6	30:0:2714:U:H4'	2.29	0.48
11:K:113:ILE:HD12	11:K:128:ALA:HB2	1.95	0.48
3:C:102:LEU:HA	38:C:8514:HOH:O	2.14	0.48
30:0:1305:C:H1'	38:0:6838:HOH:O	2.13	0.48
30:0:2866:U:C2	30:0:2891:A:C8	3.01	0.48
26:Z:45:VAL:HG13	26:Z:49:ARG:NE	2.29	0.48
1:A:125:ASN:HB3	1:A:158:VAL:HG12	1.96	0.48
30:0:202:U:H2'	30:0:203:G:H5'	1.96	0.48
30:0:261:A:O5'	30:0:261:A:H8	1.96	0.48
17:Q:39:VAL:O	17:Q:60:THR:HA	2.12	0.48
22:V:13:PRO:HA	38:V:874:HOH:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:56:GLU:O	23:W:143:THR:HG23	2.13	0.48
30:0:1980:U:O2'	30:0:1981:A:H5'	2.14	0.48
31:9:22:G:N2	31:9:26:C:H42	2.12	0.48
30:0:1163:G:N2	30:0:1184:C:N3	2.62	0.48
30:0:1211:G:N2	30:0:1212:C:C2	2.81	0.48
30:0:2533:C:C6	30:0:2533:C:C5'	2.81	0.48
30:0:168:C:O2'	30:0:169:A:H5'	2.13	0.48
1:A:47:HIS:HD2	30:0:1654:U:O2'	1.97	0.48
30:0:2871:G:C5	30:0:2872:U:C4	3.02	0.48
30:0:2783:A:N1	30:0:2792:A:C8	2.82	0.48
30:0:2790:C:HO2'	30:0:2791:U:H6	1.61	0.48
30:0:147:G:N3	30:0:147:G:H2'	2.29	0.48
30:0:2614:C:O2'	30:0:2615:U:H5'	2.13	0.48
6:F:30:LYS:HE2	6:F:99:THR:HG21	1.95	0.48
30:0:2714:U:H2'	30:0:2715:G:H8	1.78	0.48
22:V:4:HIS:O	22:V:8:ILE:HG13	2.13	0.48
30:0:441:A:H1'	30:0:442:A:N7	2.29	0.48
5:E:21:THR:HG23	5:E:30:THR:OG1	2.14	0.48
30:0:454:U:H5'	38:0:5906:HOH:O	2.13	0.48
30:0:1698:U:H6	30:0:1698:U:O5'	1.97	0.48
14:N:132:ASN:HD22	30:0:2413:A:H4'	1.79	0.48
10:J:80:LYS:HE3	10:J:101:VAL:O	2.13	0.48
30:0:1029:U:O2'	30:0:1273:C:OP1	2.26	0.48
30:0:1183:C:H42	30:0:1184:C:H41	1.62	0.48
30:0:1603:A:H5'	30:0:1605:G:C4'	2.44	0.48
2:B:206:THR:CG2	30:0:2716:G:H5"	2.39	0.48
31:9:77:A:H1'	31:9:79:U:C5	2.49	0.48
30:0:1562:C:N3	30:0:1563:G:C6	2.82	0.48
30:0:694:A:C2'	30:0:695:C:H5'	2.44	0.48
30:0:2770:G:C4	30:0:2771:G:C8	3.01	0.48
30:0:669:G:H2'	30:0:670:G:O4'	2.13	0.48
30:0:2871:G:C4	30:0:2872:U:C5	3.02	0.48
11:K:87:ARG:NH1	38:K:4066:HOH:O	2.46	0.48
30:0:1149:U:O5'	30:0:1151:G:H5'	2.14	0.48
30:0:56:G:C4	30:0:70:A:C2	3.02	0.48
23:W:125:HIS:HB2	23:W:137:GLN:HG2	1.96	0.48
30:0:1323:G:H1	30:0:1334:C:N4	2.11	0.48
30:0:1015:C:H2'	30:0:1016:U:C6	2.46	0.48
8:H:17:TYR:HD2	8:H:97:VAL:HB	1.77	0.48
30:0:549:A:O2'	30:0:550:C:H5'	2.14	0.48
30:0:451:C:C5	30:0:452:G:C6	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2637:A:H4'	38:0:4332:HOH:O	2.14	0.48
30:0:2011:A:H5'	30:0:2013:G:H1'	1.96	0.48
30:0:223:G:C2	30:0:224:U:C6	3.02	0.48
30:0:2643:G:N2	38:0:9156:HOH:O	2.47	0.48
30:0:2048:C:P	38:0:9234:HOH:O	2.72	0.48
30:0:1228:C:H5	38:0:3440:HOH:O	1.97	0.48
5:E:105:GLU:HG2	5:E:113:PRO:HB3	1.96	0.48
6:F:61:MET:HG2	13:M:19:GLN:OE1	2.13	0.48
23:W:91:ASP:HB2	38:W:5425:HOH:O	2.12	0.48
30:0:425:U:H2'	30:0:425:U:O2	2.13	0.47
30:0:2321:A:C2	30:0:2323:G:C5	3.02	0.47
29:3:34:LYS:O	29:3:38:ARG:HG2	2.13	0.47
10:J:18:ILE:HD13	30:0:1244:U:OP1	2.14	0.47
31:9:39:U:H1'	31:9:44:A:H61	1.79	0.47
31:9:47:A:C2	31:9:48:C:C2	3.02	0.47
21:U:50:GLU:O	21:U:56:ARG:HG2	2.14	0.47
30:0:1592:G:O2'	30:0:1593:C:O5'	2.31	0.47
30:0:228:C:C2'	30:0:229:G:C5'	2.87	0.47
30:0:181:G:C6	30:0:182:G:C5	3.02	0.47
27:1:5:THR:HG23	30:0:1688:G:O2'	2.14	0.47
18:R:113:HIS:O	18:R:145:LEU:HA	2.14	0.47
30:0:731:U:H2'	30:0:732:C:H6	1.78	0.47
23:W:29:VAL:O	23:W:30:ASN:HB2	2.14	0.47
7:G:67:LEU:O	7:G:71:LEU:HG	2.14	0.47
30:0:2030:A:P	38:0:3847:HOH:O	2.72	0.47
23:W:59:GLN:HE22	23:W:97:ALA:CB	2.27	0.47
31:9:81:C:C2'	31:9:82:U:H5'	2.44	0.47
29:3:83:TRP:O	29:3:85:ALA:N	2.48	0.47
31:9:76:G:N2	31:9:106:U:H3	2.11	0.47
30:0:2329:C:HO2'	30:0:2330:U:H5'	1.75	0.47
30:0:52:A:C2	30:0:53:C:C2	3.02	0.47
30:0:215:A:H61	30:0:225:G:H1'	1.79	0.47
30:0:2363:G:C5	30:0:2364:A:C8	3.02	0.47
30:0:181:G:N1	30:0:182:G:C5	2.82	0.47
21:U:33:SER:O	21:U:37:GLU:HG3	2.14	0.47
30:0:1878:G:O2'	30:0:1879:U:C6	2.59	0.47
30:0:940:G:H2'	30:0:941:G:C5'	2.42	0.47
30:0:1683:G:H5'	38:0:9801:HOH:O	2.14	0.47
12:L:143:THR:HG22	12:L:144:ASP:N	2.29	0.47
3:C:34:ALA:HA	3:C:102:LEU:HD21	1.96	0.47
30:0:1998:G:C6	30:0:1999:C:N4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:73:U:O2'	30:0:74:G:H5'	2.14	0.47
30:0:776:A:H1'	30:0:779:U:O4	2.13	0.47
24:X:61:ARG:HB2	24:X:65:ASN:HB2	1.96	0.47
1:A:213:LYS:HB2	38:0:9047:HOH:O	2.14	0.47
3:C:246:ARG:NE	38:C:8627:HOH:O	2.47	0.47
26:Z:56:GLU:HA	26:Z:59:GLU:OE2	2.13	0.47
13:M:159:VAL:HG13	13:M:160:PHE:N	2.29	0.47
29:3:38:ARG:HB2	29:3:42:ARG:NH1	2.29	0.47
30:0:1052:G:O2'	30:0:2300:A:OP2	2.29	0.47
30:0:662:U:H1'	30:0:748:C:H1'	1.97	0.47
15:O:113:VAL:O	30:0:721:A:H1'	2.14	0.47
30:0:1701:A:H4'	30:0:1702:U:C5'	2.42	0.47
30:0:2103:A:C2'	30:0:2104:C:H5'	2.41	0.47
30:0:2826:G:C6	30:0:2913:A:C6	3.02	0.47
30:0:2830:U:H2'	30:0:2831:C:C5'	2.45	0.47
30:0:1041:U:C2'	30:0:1042:U:H5'	2.44	0.47
17:Q:50:GLY:N	38:Q:5297:HOH:O	2.44	0.47
1:A:76:VAL:CG2	26:Z:87:LYS:HB3	2.45	0.47
30:0:1883:U:C2'	30:0:1884:G:H5'	2.43	0.47
8:H:6:ALA:HB3	30:0:2521:A:OP2	2.13	0.47
3:C:170:ASP:HA	3:C:188:ARG:NH2	2.29	0.47
30:0:1093:G:C2	30:0:1264:U:O2	2.67	0.47
2:B:333:GLU:OE1	21:U:14:GLU:HG2	2.14	0.47
5:E:162:PHE:CD1	5:E:162:PHE:N	2.82	0.47
29:3:65:THR:OG1	29:3:82:GLY:HA3	2.14	0.47
29:3:65:THR:CG2	35:3:8804:CL:CL	2.96	0.47
4:D:25:MET:CE	4:D:41:LEU:HG	2.43	0.47
30:0:1561:U:C4	30:0:1562:C:C5	3.02	0.47
30:0:281:U:H5	38:0:7494:HOH:O	1.97	0.47
30:0:52:A:O2'	30:0:53:C:H5'	2.13	0.47
30:0:69:A:C5'	30:0:69:A:C8	2.92	0.47
2:B:162:MET:HG3	2:B:310:ARG:CZ	2.45	0.47
30:0:1477:C:C2'	30:0:1478:U:C5'	2.93	0.47
30:0:2686:C:O2'	30:0:2687:G:H5'	2.14	0.47
30:0:1587:U:H2'	30:0:1588:G:H5'	1.96	0.47
1:A:132:ASP:HB3	1:A:135:VAL:H	1.78	0.47
30:0:2842:G:H2'	30:0:2843:A:O4'	2.15	0.47
30:0:1999:C:H2'	30:0:2000:G:H8	1.78	0.47
10:J:39:VAL:HG12	10:J:40:ASN:HD22	1.78	0.47
2:B:195:ARG:HG2	2:B:323:LEU:CD2	2.44	0.47
2:B:336:GLN:O	30:0:2862:G:H4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2864:U:C2'	30:0:2865:G:H5'	2.45	0.47
30:0:216:A:O2'	30:0:217:C:H5'	2.15	0.47
17:Q:48:PRO:O	17:Q:51:ARG:HD2	2.15	0.47
30:0:867:A:H2	30:0:880:C:O2	1.97	0.47
9:I:83:GLY:N	30:0:1168:C:H5'	2.29	0.47
30:0:1528:A:H61	30:0:1663:G:C1'	2.16	0.47
30:0:2830:U:H2'	30:0:2831:C:H5'	1.95	0.47
4:D:22:VAL:HA	4:D:73:VAL:O	2.14	0.47
30:0:1644:C:C2'	30:0:1645:U:H5'	2.44	0.47
30:0:2527:U:H2'	30:0:2528:U:O4'	2.15	0.47
30:0:2333:G:C6	30:0:2334:C:C4	3.03	0.47
31:9:117:G:H2'	31:9:118:C:C6	2.49	0.47
30:0:2057:U:O5'	30:0:2057:U:H6	1.96	0.47
30:0:2476:C:H2'	30:0:2476:C:O2	2.13	0.47
30:0:647:U:H2'	30:0:648:G:C8	2.50	0.47
30:0:1139:U:O2'	30:0:1140:C:H5'	2.14	0.47
12:L:44:GLU:HA	12:L:45:PRO:HD2	1.71	0.47
30:0:2822:C:H2'	30:0:2823:G:O4'	2.14	0.47
30:0:1201:C:C2'	30:0:1202:A:H5'	2.37	0.47
30:0:2319:C:H2'	30:0:2319:C:O2	2.14	0.47
29:3:87:ARG:HG2	29:3:88:LEU:N	2.30	0.47
13:M:76:ARG:NH2	13:M:77:HIS:NE2	2.63	0.47
3:C:27:ARG:HB2	38:C:8519:HOH:O	2.14	0.47
30:0:1248:A:H2'	30:0:1249:U:C6	2.49	0.47
30:0:1707:G:N2	30:0:1709:G:H3'	2.30	0.47
30:0:667:C:H2'	30:0:668:C:H6	1.79	0.47
30:0:1345:A:C6	30:0:1346:U:O4	2.67	0.47
30:0:2032:U:H2'	30:0:2033:G:H5"	1.95	0.47
30:0:2831:C:O2	30:0:2910:A:C2	2.67	0.47
30:0:1972:U:H2'	30:0:1973:A:C5'	2.43	0.47
25:Y:169:ARG:NH1	30:0:1327:G:O3'	2.46	0.47
30:0:1611:G:N2	30:0:1612:A:C5	2.83	0.47
18:R:104:PHE:HB3	18:R:109:MET:HE1	1.96	0.47
30:0:2332:A:H3'	30:0:2333:G:C8	2.48	0.47
5:E:84:MET:HG2	5:E:168:ILE:HA	1.97	0.47
2:B:58:PRO:HA	2:B:63:GLU:CD	2.34	0.47
30:0:1055:G:N2	30:0:1057:A:H3'	2.29	0.47
23:W:9:GLY:HA3	38:0:9333:HOH:O	2.13	0.47
12:L:50:GLY:C	30:0:2453:G:H4'	2.34	0.47
30:0:2384:U:H5"	38:0:3473:HOH:O	2.14	0.47
30:0:1174:A:H5'	30:0:1176:C:P	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:64:LYS:HE3	29:3:84:ARG:NH1	2.30	0.47
30:0:594:C:H2'	30:0:595:U:C6	2.41	0.47
30:0:370:G:N1	30:0:371:U:C4	2.82	0.47
30:0:1815:A:H4'	30:0:2751:C:O4'	2.15	0.47
30:0:2134:G:H2'	30:0:2135:A:H8	1.79	0.47
30:0:2238:A:C2	30:0:2239:C:C4	3.03	0.47
30:0:2353:A:H4'	30:0:2354:A:O5'	2.13	0.47
30:0:2373:U:H1'	38:0:4722:HOH:O	2.14	0.47
30:0:1050:G:C6	30:0:1051:C:C4	3.03	0.47
30:0:661:G:C6	30:0:686:A:N1	2.83	0.47
30:0:2416:G:H2'	30:0:2417:C:H6	1.80	0.47
30:0:1116:U:C2'	30:0:1118:A:H2	2.28	0.47
30:0:711:G:C2	30:0:718:C:O2	2.67	0.47
15:O:29:VAL:HG21	15:O:59:VAL:HG11	1.96	0.47
13:M:9:ARG:HG3	38:0:3171:HOH:O	2.15	0.47
2:B:267:LYS:HA	38:B:8996:HOH:O	2.13	0.47
30:0:385:C:O5'	30:0:385:C:C6	2.55	0.47
30:0:1474:C:H6	30:0:1474:C:C5'	2.20	0.47
30:0:1743:G:H2'	30:0:1744:G:O4'	2.15	0.47
30:0:106:A:N1	30:0:107:U:C2	2.83	0.47
30:0:1889:C:O2'	30:0:1890:U:H5'	2.15	0.47
30:0:2824:C:O3'	30:0:2825:C:C6	2.64	0.47
30:0:2041:G:HO2'	30:0:2726:U:H5	1.62	0.47
30:0:2445:U:H2'	30:0:2446:G:H8	1.79	0.47
2:B:98:THR:CG2	2:B:99:GLU:N	2.77	0.47
30:0:37:A:C2	30:0:446:G:N3	2.83	0.47
23:W:4:LEU:CD2	23:W:54:PHE:HB3	2.43	0.47
30:0:255:A:C6	30:0:256:C:C4	3.03	0.47
31:9:10:C:H2'	38:9:7164:HOH:O	2.14	0.47
20:T:38:ARG:NH1	38:0:6594:HOH:O	2.46	0.47
4:D:52:THR:HB	4:D:70:GLY:N	2.29	0.47
3:C:170:ASP:O	3:C:171:GLU:HG3	2.15	0.47
30:0:2002:C:H2'	30:0:2003:U:H5'	1.96	0.47
30:0:1486:A:H3'	38:0:4435:HOH:O	2.14	0.47
23:W:59:GLN:O	23:W:63:GLU:HG3	2.15	0.47
30:0:1204:C:H2'	38:0:4403:HOH:O	2.15	0.47
30:0:849:C:H2'	30:0:850:U:O4'	2.14	0.47
30:0:327:A:H3'	38:0:4015:HOH:O	2.15	0.47
16:P:39:ASP:O	16:P:43:LEU:HG	2.14	0.47
8:H:18:THR:HB	38:0:4795:HOH:O	2.14	0.47
30:0:305:A:C2	30:0:329:A:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1188:A:N6	30:0:1189:A:N6	2.63	0.47
9:I:83:GLY:N	30:0:1168:C:C5'	2.74	0.47
10:J:24:SER:HA	10:J:86:MET:SD	2.54	0.47
29:3:48:ASN:HB3	30:0:170:U:H5'	1.97	0.47
30:0:2573:G:C2	30:0:2574:G:C8	3.03	0.47
30:0:719:C:N3	30:0:720:G:H1'	2.30	0.47
30:0:2863:G:C2	30:0:2894:C:O2	2.68	0.47
16:P:94:TRP:CZ2	16:P:98:ILE:HG13	2.50	0.47
30:0:1974:G:C5	30:0:1975:C:C5	3.02	0.47
3:C:184:ARG:NH2	30:0:450:C:OP1	2.35	0.47
30:0:1900:A:C2	30:0:1938:G:C4	3.02	0.47
30:0:10:U:C5	30:0:532:A:N7	2.83	0.47
30:0:939:A:H5"	38:0:5361:HOH:O	2.13	0.47
30:0:1549:C:O2'	30:0:1550:A:H5'	2.14	0.47
30:0:810:G:C4	30:0:811:C:C6	3.02	0.47
30:0:603:A:H4'	30:0:604:G:O5'	2.15	0.47
30:0:463:A:N1	30:0:476:A:H5"	2.30	0.47
14:N:176:ARG:HG3	14:N:176:ARG:HH11	1.80	0.47
10:J:42:GLU:HG3	10:J:145:TRP:CD1	2.50	0.47
12:L:34:GLY:HA3	12:L:38:HIS:CE1	2.50	0.47
30:0:1199:A:N6	30:0:1200:A:C6	2.83	0.47
9:I:82:THR:HG22	9:I:83:GLY:H	1.80	0.47
29:3:1:MET:HE2	29:3:88:LEU:HD11	1.97	0.47
30:0:235:C:O2'	30:0:236:A:H2'	2.15	0.47
4:D:25:MET:HE3	4:D:37:ALA:CB	2.30	0.47
13:M:81:ARG:HB3	13:M:85:ARG:HB2	1.97	0.47
31:9:105:A:C2'	31:9:106:U:H5'	2.45	0.47
30:0:1571:G:H1'	30:0:1627:G:N2	2.30	0.47
30:0:2328:U:C2	30:0:2329:C:C6	3.02	0.47
30:0:951:A:C2'	30:0:952:G:C5'	2.86	0.47
30:0:53:C:H2'	30:0:54:G:O4'	2.15	0.47
4:D:58:VAL:CG1	4:D:60:GLU:HG2	2.45	0.47
30:0:1118:A:H8	30:0:1119:G:C5'	2.28	0.47
31:9:43:G:N2	31:9:46:C:N3	2.54	0.47
16:P:95:GLU:HG2	30:0:1597:A:O4'	2.15	0.47
15:O:63:LYS:NZ	30:0:659:A:N7	2.47	0.47
30:0:2297:U:C2	30:0:2298:C:C6	3.03	0.47
2:B:98:THR:HG22	2:B:99:GLU:N	2.29	0.47
30:0:1444:G:O2'	30:0:1502:A:N1	2.38	0.47
30:0:307:G:H3'	30:0:342:C:OP2	2.15	0.47
6:F:48:VAL:HG12	6:F:97:ALA:CB	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:88:GLN:NE2	30:0:1800:G:H1'	2.30	0.47
30:0:2673:U:C5	30:0:2674:G:C6	3.03	0.47
24:X:12:ILE:HB	24:X:70:ILE:CG2	2.44	0.47
30:0:627:G:H1'	38:0:4390:HOH:O	2.14	0.47
30:0:645:U:O2	30:0:761:A:H2	1.98	0.47
27:1:22:CYS:HA	38:1:2086:HOH:O	2.15	0.47
30:0:793:A:C5	30:0:794:U:C5	3.03	0.47
30:0:920:C:H4'	30:0:921:G:C2	2.50	0.47
30:0:1069:C:H2'	30:0:1070:A:O4'	2.14	0.47
11:K:82:ARG:NH2	11:K:115:ARG:HG2	2.30	0.47
11:K:89:LYS:HA	38:K:7064:HOH:O	2.15	0.47
30:0:594:C:C6	30:0:595:U:H5	2.33	0.47
13:M:86:GLN:NE2	38:M:8888:HOH:O	2.48	0.47
30:0:396:U:O2'	30:0:397:A:P	2.73	0.47
30:0:686:A:N7	30:0:687:C:C5	2.82	0.47
30:0:54:G:C4	30:0:55:U:C5	3.03	0.47
30:0:88:G:C6	30:0:89:G:C6	3.03	0.47
5:E:122:THR:CG2	5:E:133:VAL:HG13	2.45	0.47
2:B:83:ALA:HB3	2:B:143:ILE:HB	1.96	0.47
18:R:114:VAL:HB	18:R:145:LEU:CD1	2.43	0.47
30:0:1392:A:C6	30:0:1395:C:C2	3.03	0.47
4:D:52:THR:CG2	30:0:2346:C:H4'	2.44	0.47
30:0:1987:C:O2'	30:0:1988:C:H5'	2.14	0.47
30:0:2523:U:O5'	30:0:2523:U:H6	1.98	0.47
30:0:800:G:H2'	30:0:801:U:C6	2.50	0.47
30:0:278:A:N6	30:0:372:A:N6	2.63	0.47
13:M:106:SER:HB2	13:M:114:VAL:HG23	1.97	0.47
2:B:119:HIS:CD2	2:B:121:PRO:HG3	2.50	0.47
3:C:214:THR:HG23	38:C:8638:HOH:O	2.15	0.47
38:S:8972:HOH:O	30:0:1507:C:H4'	2.15	0.47
29:3:15:ASN:O	30:0:2408:A:H4'	2.15	0.46
30:0:2716:G:C5	30:0:2717:C:C5	3.03	0.46
30:0:1511:U:O2	30:0:1573:A:H2	1.98	0.46
30:0:820:G:O2'	30:0:856:G:H4'	2.14	0.46
21:U:38:ASN:HA	21:U:41:ASP:OD2	2.14	0.46
30:0:1477:C:H2'	30:0:1478:U:C5'	2.44	0.46
30:0:2780:C:C4	30:0:2781:U:C4	3.03	0.46
30:0:2826:G:C6	30:0:2913:A:N6	2.83	0.46
17:Q:25:PRO:HD2	17:Q:28:ARG:HH21	1.80	0.46
30:0:2689:A:H2'	30:0:2690:U:C5'	2.43	0.46
30:0:1639:U:H2'	30:0:1640:C:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:123:U:O2'	30:0:124:C:H5'	2.14	0.46
19:S:17:ASP:O	19:S:21:GLN:HB2	2.14	0.46
13:M:28:GLN:HA	13:M:31:TRP:HB2	1.97	0.46
30:0:2015:A:C5	30:0:2016:U:C5	3.03	0.46
13:M:155:GLN:HA	13:M:155:GLN:NE2	2.30	0.46
15:O:33:LEU:HD21	15:O:79:VAL:HG21	1.96	0.46
24:X:30:MET:HE1	24:X:58:ALA:HB3	1.96	0.46
30:0:1183:C:C2	30:0:1184:C:H5	2.33	0.46
26:Z:63:CYS:SG	26:Z:71:VAL:CG2	3.03	0.46
30:0:1194:A:O5'	30:0:1194:A:H8	1.97	0.46
29:3:61:PRO:HG3	30:0:2316:G:O2'	2.15	0.46
29:3:64:LYS:HA	29:3:83:TRP:O	2.14	0.46
29:3:46:ILE:HG13	30:0:390:G:OP1	2.14	0.46
30:0:1483:C:HO2'	30:0:1484:G:H5'	1.77	0.46
30:0:292:G:C3'	30:0:358:G:H22	2.27	0.46
30:0:1579:C:N4	30:0:1618:G:N1	2.63	0.46
30:0:2634:G:N2	30:0:2635:A:C4	2.83	0.46
30:0:2871:G:C6	30:0:2872:U:C4	3.03	0.46
30:0:2792:A:C2	30:0:2793:A:C8	3.03	0.46
30:0:229:G:C2'	30:0:230:C:H5'	2.44	0.46
30:0:2828:G:H8	30:0:2828:G:O5'	1.99	0.46
30:0:2912:C:C2'	30:0:2913:A:H5'	2.45	0.46
30:0:1739:G:C4	30:0:2041:G:C2	3.03	0.46
30:0:1041:U:H2'	30:0:1042:U:H5'	1.97	0.46
30:0:252:C:C2'	30:0:252:C:O2	2.60	0.46
30:0:1640:C:C5	38:0:6032:HOH:O	2.55	0.46
30:0:2496:C:H1'	30:0:2527:U:N3	2.29	0.46
12:L:11:ARG:NH1	30:0:903:U:OP2	2.47	0.46
4:D:87:ALA:HA	4:D:90:LEU:HD12	1.97	0.46
30:0:2775:A:C6	30:0:2776:A:C6	3.04	0.46
30:0:400:C:O2'	30:0:401:C:H5'	2.14	0.46
30:0:861:A:H4'	30:0:1697:G:H4'	1.97	0.46
30:0:861:A:H8	30:0:861:A:O5'	1.98	0.46
6:F:38:LYS:HE3	30:0:244:C:OP2	2.15	0.46
29:3:71:CYS:HB3	29:3:75:GLY:N	2.30	0.46
26:Z:40:ALA:HA	30:0:1773:G:C8	2.50	0.46
26:Z:38:PHE:HD1	26:Z:47:ARG:HB3	1.80	0.46
30:0:686:A:H1'	30:0:747:G:O2'	2.16	0.46
30:0:1894:C:C2	30:0:1939:U:C4	3.03	0.46
30:0:2072:G:H3'	30:0:2073:G:C5'	2.46	0.46
4:D:48:MET:SD	31:9:41:C:H5"	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:76:G:O2'	30:0:77:G:H5'	2.15	0.46
21:U:23:HIS:HB3	38:U:151:HOH:O	2.14	0.46
31:9:60:C:H2'	31:9:61:C:O5'	2.15	0.46
30:0:1432:U:C5	30:0:1725:C:O4'	2.69	0.46
13:M:115:LEU:HB3	13:M:132:ILE:HG22	1.97	0.46
30:0:1648:G:C2	30:0:1649:G:C8	3.03	0.46
30:0:920:C:H5'	30:0:921:G:C4	2.50	0.46
30:0:134:U:C2	30:0:145:A:C2	3.04	0.46
4:D:104:PHE:HE2	4:D:132:VAL:HB	1.81	0.46
31:9:1:U:O3'	31:9:3:A:H5"	2.16	0.46
30:0:1161:A:H1'	38:0:3946:HOH:O	2.15	0.46
30:0:1205:U:C2'	30:0:1206:U:H5"	2.45	0.46
30:0:161:A:H3'	38:0:9337:HOH:O	2.14	0.46
30:0:1562:C:C4	30:0:1563:G:C6	3.03	0.46
30:0:695:C:H2'	30:0:696:C:C6	2.50	0.46
26:Z:35:SER:HB3	26:Z:38:PHE:CD1	2.50	0.46
11:K:76:GLN:HA	11:K:93:ASN:CA	2.44	0.46
30:0:658:C:O2'	30:0:662:U:OP1	2.30	0.46
15:O:24:ALA:HB3	30:0:710:G:P	2.56	0.46
31:9:37:C:H2'	31:9:38:A:O4'	2.15	0.46
30:0:1741:U:HO2'	30:0:2723:G:H4'	1.76	0.46
30:0:1324:G:C4	30:0:1325:G:C8	3.03	0.46
30:0:1421:C:C2	30:0:1444:G:N2	2.83	0.46
30:0:1022:A:C6	30:0:1023:C:C4	3.04	0.46
30:0:2095:A:OP1	30:0:2096:A:H4'	2.15	0.46
30:0:1765:G:N1	30:0:1766:U:C4	2.84	0.46
11:K:41:LYS:HA	30:0:2582:G:O3'	2.14	0.46
28:2:25:VAL:HG21	30:0:60:A:N6	2.30	0.46
30:0:2528:U:C2	30:0:2529:G:C8	3.03	0.46
30:0:2836:G:H2'	38:0:5114:HOH:O	2.14	0.46
30:0:1400:C:H2'	30:0:1401:G:C5'	2.45	0.46
30:0:1154:A:H2'	30:0:1155:G:C8	2.50	0.46
30:0:1211:G:H2'	30:0:1212:C:H6	1.81	0.46
26:Z:63:CYS:HA	26:Z:71:VAL:CG2	2.46	0.46
29:3:1:MET:CE	30:0:2320:U:H5	2.28	0.46
30:0:2561:C:O2'	30:0:2562:G:H5'	2.16	0.46
30:0:1311:G:C2	30:0:1312:G:C8	3.02	0.46
21:U:36:CYS:O	21:U:39:ASN:HB2	2.16	0.46
16:P:91:LYS:NZ	30:0:817:G:OP2	2.49	0.46
8:H:96:GLN:NE2	8:H:129:ARG:NH2	2.64	0.46
30:0:1779:A:C2'	30:0:1780:G:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:6:ALA:HA	8:H:61:ARG:HH12	1.79	0.46
2:B:79:MET:HE3	38:B:9106:HOH:O	2.14	0.46
30:0:1749:U:C2	30:0:1751:G:OP2	2.68	0.46
23:W:119:HIS:CG	23:W:120:PRO:HD2	2.51	0.46
30:0:1887:U:N3	30:0:1888:C:C5	2.84	0.46
30:0:1152:A:C2	30:0:1216:G:N3	2.84	0.46
30:0:1719:G:H2'	30:0:1720:C:O4'	2.16	0.46
9:I:124:VAL:C	9:I:126:THR:H	2.19	0.46
30:0:144:A:H8	38:0:3164:HOH:O	1.98	0.46
30:0:735:C:C5	30:0:736:A:C5	3.03	0.46
30:0:735:C:C6	30:0:736:A:C8	3.03	0.46
30:0:1200:A:H2'	38:0:5689:HOH:O	2.14	0.46
29:3:5:ARG:NH1	29:3:90:PHE:HB3	2.30	0.46
25:Y:205:ILE:HG22	25:Y:209:VAL:HG21	1.96	0.46
30:0:2505:G:H3'	38:0:5576:HOH:O	2.16	0.46
30:0:1451:C:H2'	30:0:1452:G:H8	1.80	0.46
30:0:561:G:C6	30:0:597:A:N6	2.83	0.46
29:3:38:ARG:NH1	30:0:396:U:OP2	2.48	0.46
30:0:2133:U:H4'	30:0:2134:G:C5'	2.45	0.46
30:0:2630:G:N2	30:0:2634:G:C4	2.84	0.46
30:0:2256:G:C2'	30:0:2257:G:C5'	2.88	0.46
18:R:65:GLY:N	30:0:2088:C:OP1	2.32	0.46
30:0:1595:G:N3	30:0:1600:G:C2	2.84	0.46
30:0:2783:A:H2'	30:0:2784:A:C8	2.51	0.46
30:0:1804:A:H2'	30:0:1805:G:C8	2.50	0.46
23:W:11:VAL:HB	38:0:9588:HOH:O	2.15	0.46
8:H:120:PHE:CD1	30:0:2311:A:C5'	2.94	0.46
30:0:1421:C:C2	30:0:1444:G:C2	3.04	0.46
30:0:251:C:H2'	30:0:252:C:H6	1.80	0.46
30:0:2846:C:H2'	30:0:2847:G:H8	1.79	0.46
30:0:466:A:H2'	30:0:467:G:O4'	2.16	0.46
30:0:2731:G:C2'	30:0:2732:U:H5'	2.46	0.46
22:V:8:ILE:CG2	22:V:59:ILE:HG13	2.46	0.46
30:0:1002:G:H2'	30:0:1003:U:O5'	2.15	0.46
30:0:33:G:C2	30:0:34:C:C2	3.04	0.46
30:0:705:C:OP2	30:0:705:C:H6	1.99	0.46
23:W:108:ARG:HG3	23:W:114:PRO:HG3	1.96	0.46
1:A:45:ILE:CG2	26:Z:78:ILE:HG23	2.45	0.46
29:3:14:CYS:HB3	29:3:16:GLU:HG2	1.97	0.46
30:0:1518:A:N6	30:0:1667:A:N6	2.64	0.46
30:0:2506:A:O2'	30:0:2507:G:O5'	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:272:A:N1	30:0:369:G:H5"	2.31	0.46
30:0:2438:G:H2'	30:0:2439:C:O4'	2.16	0.46
30:0:2873:C:O2	30:0:2873:C:H2'	2.15	0.46
30:0:1787:C:H2'	30:0:1788:U:H6	1.81	0.46
30:0:2543:G:H2'	30:0:2544:G:O4'	2.16	0.46
30:0:2587:OMU:CM2	30:0:2589:U:C5	2.99	0.46
30:0:2588:OMG:H3'	30:0:2589:U:H5"	1.98	0.46
4:D:20:LYS:HG2	4:D:133:ASN:HB3	1.98	0.46
30:0:2838:A:H1'	30:0:2844:C:O2	2.15	0.46
30:0:2541:U:H2'	30:0:2542:C:C6	2.51	0.46
22:V:59:ILE:HG22	22:V:63:GLU:HG2	1.98	0.46
13:M:193:LYS:HB3	30:0:392:U:H5"	1.97	0.46
30:0:1914:C:O2'	30:0:1915:U:H5'	2.14	0.46
30:0:1981:A:H3'	38:0:6549:HOH:O	2.15	0.46
30:0:2494:G:N7	38:0:9521:HOH:O	2.46	0.46
14:N:49:THR:HG22	14:N:56:ASP:O	2.16	0.46
30:0:1472:C:H6	30:0:1472:C:O5'	1.98	0.46
18:R:8:ALA:HB1	18:R:13:THR:HG21	1.97	0.46
3:C:37:ALA:O	3:C:41:ASN:ND2	2.48	0.46
30:0:1360:C:H4'	38:0:9187:HOH:O	2.15	0.46
3:C:21:VAL:HG13	38:C:8594:HOH:O	2.16	0.46
29:3:3:MET:SD	29:3:83:TRP:CZ2	3.08	0.46
30:0:154:C:N3	30:0:155:C:C5	2.83	0.46
1:A:47:HIS:CD2	30:0:1654:U:C2'	2.88	0.46
30:0:2871:G:C5	30:0:2872:U:C5	3.04	0.46
30:0:2758:G:H2'	30:0:2759:C:H6	1.81	0.46
5:E:137:ASP:HA	38:E:4098:HOH:O	2.15	0.46
11:K:8:VAL:CG1	11:K:9:THR:H	2.27	0.46
30:0:2668:G:O2'	30:0:2828:G:H4'	2.15	0.46
20:T:2:LYS:O	30:0:332:G:H4'	2.15	0.46
30:0:1904:A:C8	30:0:1905:U:C5	3.03	0.46
2:B:145:HIS:HD2	2:B:159:PRO:HB3	1.81	0.46
30:0:1463:U:H6	30:0:1463:U:O5'	1.99	0.46
30:0:1540:G:C5	30:0:1541:G:N7	2.83	0.46
23:W:29:VAL:O	30:0:1262:C:H4'	2.16	0.46
14:N:13:ARG:HG2	38:0:3438:HOH:O	2.15	0.46
3:C:191:SER:OG	3:C:192:ILE:N	2.49	0.46
1:A:195:ASN:HB3	38:A:8935:HOH:O	2.15	0.46
9:I:118:ASN:HB3	30:0:1185:U:H5"	1.97	0.46
30:0:1735:C:HO2'	30:0:1736:A:H5'	1.80	0.46
7:G:20:VAL:HG21	30:0:1150:A:C2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2778:A:H2'	30:0:2779:G:O4'	2.16	0.46
12:L:55:GLN:HA	12:L:58:GLN:NE2	2.26	0.46
30:0:553:G:O4'	30:0:1325:G:H5'	2.16	0.46
30:0:2646:G:C4	30:0:2647:C:C5	3.04	0.46
30:0:2250:G:C5	30:0:2251:G:C6	3.04	0.46
30:0:1583:U:H2'	30:0:1584:C:O4'	2.16	0.46
13:M:127:LYS:HD3	38:M:8876:HOH:O	2.16	0.46
4:D:99:ASP:HB3	4:D:103:ASN:HB2	1.98	0.46
8:H:15:PRO:HB3	38:0:6399:HOH:O	2.15	0.46
30:0:2450:C:H2'	30:0:2451:G:O5'	2.15	0.46
5:E:101:GLU:HG3	5:E:101:GLU:O	2.16	0.46
22:V:60:GLN:HG2	38:V:874:HOH:O	2.16	0.46
30:0:1139:U:H2'	30:0:1140:C:H6	1.80	0.46
2:B:269:LEU:HD22	2:B:295:THR:HG21	1.98	0.46
16:P:120:ARG:HD2	16:P:120:ARG:HA	1.59	0.46
1:A:235:ARG:HB2	38:A:9000:HOH:O	2.15	0.46
14:N:138:ASP:O	14:N:140:GLN:N	2.49	0.46
30:0:1425:G:C6	30:0:1426:C:N4	2.84	0.46
30:0:2533:C:C6	30:0:2533:C:C4'	2.99	0.46
30:0:191:A:OP1	30:0:191:A:H4'	2.16	0.46
30:0:2560:C:O2	30:0:2560:C:H2'	2.16	0.46
30:0:432:G:N3	30:0:433:C:C5	2.84	0.46
30:0:433:C:O2'	30:0:434:U:H5'	2.15	0.46
13:M:165:GLY:HA3	30:0:432:G:OP1	2.16	0.46
30:0:2330:U:H4'	30:0:2331:C:OP1	2.16	0.46
30:0:2369:A:C4	30:0:2371:G:N7	2.84	0.46
30:0:293:A:C5	30:0:360:A:C2	3.03	0.46
25:Y:148:GLY:HA3	30:0:622:G:OP1	2.16	0.46
30:0:2825:C:H4'	30:0:2826:G:O4'	2.15	0.46
30:0:892:G:C6	30:0:893:C:C4	3.04	0.46
8:H:17:TYR:HE1	30:0:1006:A:N6	2.10	0.46
30:0:1387:G:C5	30:0:1388:U:C5	3.04	0.46
30:0:1586:G:C2'	30:0:1587:U:H5'	2.46	0.46
30:0:574:G:C2'	30:0:575:A:H5'	2.46	0.46
30:0:1359:U:C5	30:0:2101:A:N7	2.84	0.46
30:0:1581:A:C4	30:0:1582:C:C6	3.03	0.46
30:0:239:C:C2'	30:0:240:C:O5'	2.64	0.46
16:P:16:VAL:CG1	16:P:20:ARG:HB2	2.45	0.46
9:I:114:TYR:N	9:I:114:TYR:HD1	2.14	0.46
13:M:58:GLN:NE2	30:0:259:G:H21	2.14	0.46
30:0:25:A:O2'	30:0:640:G:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:73:LEU:HA	23:W:73:LEU:HD12	1.80	0.46
5:E:5:LEU:HB2	5:E:47:VAL:HB	1.96	0.46
16:P:135:ALA:O	16:P:139:ARG:HG3	2.16	0.46
30:0:1773:G:C2'	30:0:1774:G:H5'	2.45	0.45
30:0:292:G:H3'	30:0:358:G:H22	1.81	0.45
29:3:7:PHE:HZ	29:3:80:ARG:HH12	1.64	0.45
30:0:2759:C:O2	30:0:2760:C:H1'	2.16	0.45
30:0:1970:G:H4'	38:0:7283:HOH:O	2.16	0.45
16:P:41:ARG:HH22	30:0:1500:U:P	2.39	0.45
25:Y:177:LYS:HD3	25:Y:181:GLY:O	2.16	0.45
30:0:2582:G:C5	30:0:2601:A:C5	3.05	0.45
30:0:629:A:H2'	30:0:630:A:O4'	2.16	0.45
30:0:1819:G:H2'	30:0:1820:G:C4'	2.45	0.45
25:Y:126:PRO:HG2	25:Y:128:PHE:CZ	2.51	0.45
30:0:2731:G:H8	30:0:2731:G:O5'	1.99	0.45
2:B:229:ARG:NH2	30:0:1753:C:O2	2.39	0.45
30:0:593:A:H1'	38:0:3786:HOH:O	2.14	0.45
30:0:2048:C:H3'	38:0:9234:HOH:O	2.16	0.45
30:0:2366:C:O5'	30:0:2366:C:H6	2.00	0.45
30:0:2285:G:H2'	30:0:2286:G:H8	1.81	0.45
21:U:13:ILE:HG23	38:U:3194:HOH:O	2.16	0.45
2:B:177:HIS:O	2:B:181:ILE:HG13	2.16	0.45
26:Z:70:ARG:HB3	26:Z:82:SER:H	1.81	0.45
30:0:2406:U:C4	30:0:2407:G:N7	2.84	0.45
30:0:1196:C:H2'	30:0:1197:G:H5'	1.98	0.45
30:0:2318:C:O5'	30:0:2318:C:H6	2.00	0.45
26:Z:41:ARG:NH2	30:0:820:G:OP1	2.49	0.45
30:0:952:G:H8	38:0:6547:HOH:O	1.99	0.45
15:O:50:ARG:HG3	30:0:701:U:OP2	2.16	0.45
30:0:1889:C:C2	30:0:1890:U:C6	3.04	0.45
8:H:30:LYS:H	8:H:62:HIS:CD2	2.34	0.45
30:0:1898:G:H2'	30:0:1899:C:C6	2.51	0.45
30:0:2691:A:N1	30:0:2702:A:H5"	2.31	0.45
30:0:445:U:O2'	30:0:446:G:H5'	2.16	0.45
10:J:26:VAL:HG13	10:J:36:VAL:CG1	2.45	0.45
31:9:28:U:C2'	31:9:28:U:O2	2.64	0.45
30:0:1634:G:C6	30:0:1635:U:C4	3.04	0.45
30:0:1910:A:O2'	30:0:1911:C:H5'	2.16	0.45
30:0:722:G:C2'	30:0:723:G:H5'	2.46	0.45
6:F:108:VAL:HA	6:F:111:ILE:HD12	1.98	0.45
2:B:279:THR:HG22	2:B:280:VAL:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:463:A:H5"	38:0:3793:HOH:O	2.17	0.45
18:R:13:THR:HG23	18:R:14:ALA:N	2.30	0.45
2:B:62:ARG:HA	2:B:65:MET:CE	2.46	0.45
30:0:1676:G:C6	30:0:1677:U:N3	2.84	0.45
6:F:10:ALA:O	6:F:14:ASP:HB2	2.16	0.45
4:D:51:ARG:NH1	4:D:68:PRO:HB3	2.31	0.45
14:N:64:SER:HB2	38:9:6669:HOH:O	2.16	0.45
14:N:38:LYS:HA	14:N:43:VAL:HG22	1.98	0.45
30:0:1512:G:C5	30:0:1513:C:C5	3.04	0.45
30:0:1942:A:H2'	30:0:1943:C:O5'	2.17	0.45
7:G:16:LYS:O	7:G:20:VAL:HG23	2.16	0.45
30:0:2779:G:N2	30:0:2796:U:C2	2.84	0.45
30:0:1891:G:H1'	30:0:1972:U:O2	2.17	0.45
30:0:1759:A:C2	30:0:1818:C:C4	3.05	0.45
13:M:23:LEU:HD13	13:M:27:ARG:HH21	1.81	0.45
27:1:21:ARG:HD2	27:1:37:CYS:SG	2.56	0.45
18:R:104:PHE:CB	18:R:109:MET:HE1	2.46	0.45
38:B:8989:HOH:O	30:0:2614:C:H4'	2.15	0.45
4:D:54:ALA:HB2	4:D:69:ILE:HD12	1.97	0.45
30:0:2892:G:C6	30:0:2893:C:N3	2.85	0.45
30:0:565:A:N1	30:0:1093:G:H1'	2.32	0.45
31:9:7:G:C5'	38:9:5071:HOH:O	2.65	0.45
3:C:233:THR:HG22	3:C:234:VAL:N	2.30	0.45
30:0:1801:A:C2	30:0:1802:G:C4	3.04	0.45
30:0:1188:A:N6	30:0:1189:A:C6	2.84	0.45
1:A:75:GLY:HA3	26:Z:86:TYR:CZ	2.51	0.45
25:Y:208:LYS:HD2	38:0:4269:HOH:O	2.17	0.45
30:0:708:A:H61	30:0:720:G:C2'	2.28	0.45
30:0:716:G:N1	30:0:717:C:C4	2.85	0.45
30:0:2635:A:C2'	30:0:2636:C:H5'	2.45	0.45
21:U:42:LEU:HB3	30:0:1810:C:O4'	2.16	0.45
30:0:1737:A:N6	30:0:1738:C:C4	2.84	0.45
3:C:93:LYS:HB3	3:C:95:GLU:OE2	2.16	0.45
30:0:2563:U:O2'	30:0:2564:G:C8	2.68	0.45
30:0:39:G:H2'	30:0:40:C:O4'	2.16	0.45
30:0:940:G:C6	30:0:941:G:C5	3.04	0.45
30:0:957:A:O5'	30:0:957:A:C8	2.67	0.45
30:0:1476:A:C2'	30:0:1867:G:O2'	2.64	0.45
30:0:1337:G:H2'	30:0:1338:U:H6	1.80	0.45
30:0:1287:A:C6	30:0:1288:U:C4	3.03	0.45
5:E:22:VAL:HG12	5:E:76:VAL:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:172:ALA:HB2	30:0:1846:U:O2'	2.16	0.45
31:9:5:G:C2'	31:9:6:C:H5'	2.46	0.45
31:9:55:U:H4'	31:9:56:A:H8	1.80	0.45
30:0:1606:A:N3	30:0:1606:A:H2'	2.30	0.45
9:I:86:GLU:HG2	30:0:1180:U:H4'	1.98	0.45
30:0:1342:C:H2'	30:0:1343:C:C5'	2.45	0.45
30:0:1343:C:C2'	30:0:1344:G:O5'	2.64	0.45
30:0:598:C:C2	30:0:599:G:C8	3.04	0.45
30:0:1641:A:H2'	30:0:1642:A:C4'	2.46	0.45
4:D:76:ARG:NH1	31:9:42:C:O2	2.50	0.45
30:0:815:U:O2'	30:0:1598:A:H4'	2.17	0.45
30:0:2780:C:C4	30:0:2781:U:O4	2.70	0.45
23:W:6:GLN:CB	23:W:26:ILE:HD11	2.46	0.45
30:0:1015:C:O5'	30:0:1015:C:H6	1.99	0.45
30:0:2788:A:C6	30:0:2789:U:N3	2.85	0.45
30:0:324:G:N1	30:0:325:U:C5	2.85	0.45
30:0:1076:G:C2	30:0:1084:C:C2	3.04	0.45
30:0:2450:C:C2'	30:0:2451:G:O5'	2.64	0.45
16:P:103:THR:HG23	16:P:106:ARG:NH1	2.31	0.45
8:H:18:THR:O	8:H:20:ARG:N	2.49	0.45
30:0:861:A:C4'	30:0:1697:G:H4'	2.47	0.45
1:A:195:ASN:HB3	1:A:197:VAL:HG12	1.99	0.45
19:S:55:GLN:OE1	30:0:1446:U:H2'	2.16	0.45
30:0:1189:A:C3'	38:0:7580:HOH:O	2.55	0.45
29:3:11:CYS:HB2	29:3:20:HIS:CE1	2.51	0.45
30:0:1167:G:N2	30:0:1180:U:C2	2.85	0.45
30:0:1241:G:H2'	30:0:1242:A:O4'	2.17	0.45
30:0:1630:A:N6	30:0:1631:A:N1	2.65	0.45
29:3:60:LYS:HD3	30:0:2461:U:OP2	2.16	0.45
30:0:661:G:C5	30:0:662:U:C4	3.04	0.45
30:0:2538:A:H3'	38:0:9174:HOH:O	2.17	0.45
31:9:44:A:N6	31:9:45:A:C6	2.85	0.45
30:0:533:U:H2'	30:0:2814:A:C6	2.52	0.45
1:A:88:ILE:HG22	1:A:88:ILE:O	2.17	0.45
8:H:29:SER:HA	8:H:62:HIS:CD2	2.42	0.45
30:0:556:C:O2	30:0:602:A:C2	2.69	0.45
30:0:251:C:C5	30:0:252:C:H5	2.34	0.45
30:0:254:C:O2	30:0:254:C:H2'	2.17	0.45
30:0:1359:U:C5	30:0:2101:A:H8	2.32	0.45
30:0:805:G:N2	30:0:807:A:H3'	2.31	0.45
30:0:844:A:H2'	38:0:9567:HOH:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:907:A:C2	30:0:1299:G:C5	3.05	0.45
12:L:129:ALA:O	12:L:133:VAL:HG23	2.16	0.45
28:2:8:LYS:NZ	30:0:1677:U:OP2	2.47	0.45
30:0:1757:U:H5	38:0:3207:HOH:O	1.99	0.45
30:0:955:A:H2'	30:0:956:G:H5'	1.97	0.45
27:1:9:GLY:HA2	30:0:1687:C:O2	2.16	0.45
30:0:1213:C:C2'	30:0:1214:G:H5'	2.46	0.45
30:0:1164:U:H3	30:0:1166:A:H4'	1.78	0.45
30:0:1178:G:H2'	30:0:1179:C:C6	2.51	0.45
30:0:236:A:N3	30:0:237:G:H1'	2.31	0.45
3:C:162:VAL:CG2	3:C:232:LEU:HD21	2.47	0.45
30:0:1051:C:H1'	38:0:3918:HOH:O	2.17	0.45
30:0:293:A:C8	30:0:359:U:O4	2.69	0.45
12:L:113:GLN:NE2	30:0:700:A:H3'	2.32	0.45
7:G:63:ARG:NH1	30:0:1151:G:OP1	2.50	0.45
30:0:1871:U:C6	30:0:1873:G:C4	3.04	0.45
30:0:1966:U:H6	30:0:1966:U:O5'	1.99	0.45
30:0:2686:C:C2	30:0:2709:G:C2	3.05	0.45
30:0:304:G:H1'	30:0:347:A:H61	1.82	0.45
30:0:2898:G:H2'	30:0:2899:A:H8	1.82	0.45
30:0:1016:U:C2	30:0:1017:U:C5	3.04	0.45
2:B:232:TRP:CD1	2:B:235:ARG:HD2	2.51	0.45
30:0:1934:A:N7	30:0:1935:C:C5	2.85	0.45
30:0:2692:G:N2	30:0:2701:G:C4	2.84	0.45
30:0:1082:A:H2'	30:0:1083:C:OP1	2.16	0.45
18:R:2:ILE:HG22	30:0:21:G:C4'	2.46	0.45
30:0:1849:G:C5	30:0:1850:U:C5	3.05	0.45
4:D:101:THR:O	4:D:157:LEU:HB3	2.17	0.45
30:0:1274:A:C6	30:0:1275:C:C4	3.05	0.45
30:0:2891:A:N3	30:0:2891:A:H2'	2.30	0.45
30:0:2497:A:C2	30:0:2524:G:C2	3.04	0.45
14:N:7:LYS:HE3	17:Q:21:ARG:O	2.16	0.45
30:0:1945:G:H2'	30:0:1946:C:H6	1.82	0.45
30:0:402:U:H2'	30:0:403:C:C6	2.51	0.45
20:T:30:ASP:O	20:T:33:GLU:HB3	2.17	0.45
26:Z:71:VAL:HG22	26:Z:88:PHE:CE2	2.51	0.45
29:3:5:ARG:HD3	29:3:21:GLU:OE2	2.17	0.45
13:M:83:SER:HA	38:M:8888:HOH:O	2.17	0.45
30:0:558:C:C2'	30:0:559:U:C5'	2.84	0.45
14:N:29:SER:HB3	30:0:2415:A:O2'	2.16	0.45
31:9:36:C:H2'	31:9:37:C:C5'	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2650:U:H6	30:0:2650:U:O5'	1.98	0.45
30:0:1969:A:N7	30:0:1970:G:C6	2.85	0.45
14:N:154:LEU:C	14:N:156:GLU:H	2.20	0.45
30:0:2740:G:O2'	30:0:2741:A:H5'	2.16	0.45
23:W:149:LEU:HG	23:W:153:MET:HE1	1.99	0.45
30:0:2681:A:C6	30:0:2714:U:H4'	2.51	0.45
30:0:13:G:C4	30:0:14:C:C5	3.04	0.45
30:0:139:C:H6	30:0:139:C:O5'	1.99	0.45
30:0:1056:U:H2'	30:0:1057:A:O4'	2.16	0.45
30:0:1057:A:H1'	30:0:2492:U:O2'	2.17	0.45
8:H:58:VAL:HG21	8:H:60:LEU:HD21	1.99	0.45
30:0:2505:G:C2'	30:0:2506:A:C5'	2.92	0.45
30:0:557:C:H42	30:0:600:G:H1	1.65	0.45
30:0:2372:A:H2'	30:0:2373:U:H6	1.80	0.45
30:0:2299:G:N1	30:0:2300:A:N6	2.65	0.45
30:0:952:G:N3	30:0:2302:A:H2'	2.32	0.45
30:0:1762:C:C2	30:0:1783:A:C2	3.04	0.45
7:G:23:ILE:O	7:G:27:ILE:HG13	2.17	0.45
35:0:8813:CL:CL	38:0:4929:HOH:O	2.58	0.45
30:0:1592:G:O2'	30:0:1593:C:O4'	2.31	0.45
30:0:2794:G:N3	30:0:2795:C:C6	2.84	0.45
30:0:1947:G:C4	30:0:1948:G:N7	2.85	0.45
30:0:2854:A:C6	30:0:2905:A:C6	3.05	0.45
30:0:414:C:H2'	30:0:415:A:O4'	2.17	0.45
30:0:311:C:N3	30:0:321:A:C2	2.85	0.45
30:0:943:A:N6	30:0:1025:C:O2	2.48	0.45
30:0:248:A:H3'	30:0:248:A:N3	2.32	0.45
10:J:75:PRO:HG2	10:J:105:LEU:HD21	1.99	0.45
30:0:2269:C:C2'	30:0:2270:G:H5'	2.47	0.45
2:B:145:HIS:HD2	2:B:146:THR:O	2.00	0.45
25:Y:235:GLU:CD	25:Y:235:GLU:H	2.21	0.45
16:P:55:LYS:HG3	16:P:56:GLY:N	2.31	0.45
1:A:23:TYR:HH	1:A:182:ARG:HA	1.82	0.45
30:0:1201:C:C5	38:0:6157:HOH:O	2.56	0.45
17:Q:27:GLN:NE2	31:9:8:G:C5'	2.77	0.45
30:0:1511:U:H2'	30:0:1512:G:O4'	2.17	0.45
30:0:1829:A:H2	30:0:2018:A:N1	2.15	0.45
30:0:945:U:H2'	30:0:946:C:C6	2.52	0.45
30:0:707:C:OP2	30:0:720:G:N1	2.38	0.45
30:0:716:G:C2	30:0:717:C:C2	3.04	0.45
30:0:2634:G:H5"	38:0:3991:HOH:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2634:G:O2'	30:0:2635:A:H5'	2.17	0.45
30:0:2291:A:N9	30:0:2309:C:H5'	2.31	0.45
25:Y:148:GLY:O	25:Y:154:ARG:HD3	2.17	0.45
30:0:2315:C:H4'	30:0:2425:A:C6	2.52	0.45
30:0:2070:G:H4'	38:0:4310:HOH:O	2.17	0.45
30:0:1086:A:H4'	30:0:1259:A:C2	2.52	0.45
23:W:44:MET:HE2	30:0:944:G:N2	2.28	0.45
30:0:2799:A:N7	30:0:2801:A:C6	2.84	0.45
30:0:152:A:H2'	30:0:153:C:C6	2.52	0.45
11:K:20:CYS:HB2	11:K:29:LEU:CG	2.43	0.45
30:0:195:C:C2'	30:0:196:G:H5'	2.46	0.45
30:0:1915:U:H2'	30:0:1916:C:H6	1.82	0.45
19:S:42:GLU:C	19:S:44:GLN:H	2.20	0.45
3:C:197:SER:HA	38:C:8638:HOH:O	2.16	0.45
3:C:61:PHE:CD1	3:C:65:ARG:HD2	2.52	0.45
30:0:2264:A:H4'	38:0:5143:HOH:O	2.14	0.45
30:0:482:G:H4'	30:0:508:A:N1	2.32	0.45
2:B:24:PRO:HG2	2:B:204:GLY:HA2	1.98	0.45
24:X:80:GLU:HB3	38:X:5564:HOH:O	2.17	0.45
31:9:5:G:C2	31:9:119:C:O2	2.70	0.44
30:0:1195:G:C6	30:0:1196:C:C5	3.05	0.44
30:0:1199:A:C6	30:0:1200:A:C6	3.05	0.44
30:0:2502:C:N3	30:0:2518:C:N4	2.65	0.44
30:0:1576:G:H2'	30:0:1577:U:O4'	2.17	0.44
30:0:2746:A:N6	30:0:2750:G:C8	2.85	0.44
30:0:69:A:C5'	30:0:69:A:H8	2.21	0.44
30:0:2416:G:H2'	30:0:2417:C:O4'	2.17	0.44
31:9:36:C:C5	31:9:37:C:C4	3.05	0.44
20:T:72:ILE:HD13	20:T:93:THR:HG22	1.99	0.44
30:0:2761:A:H1'	30:0:2762:C:H2'	1.99	0.44
23:W:38:THR:O	23:W:42:ARG:HB2	2.16	0.44
1:A:100:PRO:HG2	1:A:103:VAL:CG2	2.41	0.44
30:0:816:G:C6	30:0:817:G:C6	3.05	0.44
30:0:1424:A:C2	30:0:1441:G:C5	3.05	0.44
2:B:84:LEU:O	2:B:99:GLU:HA	2.16	0.44
30:0:580:A:N1	30:0:1253:C:O2'	2.50	0.44
30:0:583:C:C2	30:0:584:U:C5	3.05	0.44
30:0:2096:A:C8	30:0:2539:U:C2	3.05	0.44
30:0:1675:C:H1'	38:0:4712:HOH:O	2.16	0.44
23:W:68:THR:HG23	23:W:69:ARG:H	1.82	0.44
2:B:41:PHE:HB3	2:B:190:MET:HE2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1658:A:H2'	30:0:1659:A:C8	2.52	0.44
30:0:2523:U:O2'	30:0:2524:G:H5'	2.17	0.44
30:0:1915:U:O5'	30:0:1915:U:H6	1.99	0.44
30:0:1553:C:H2'	30:0:1554:C:H6	1.81	0.44
30:0:665:A:H2'	30:0:666:A:O4'	2.17	0.44
30:0:1673:U:H5"	38:0:3233:HOH:O	2.16	0.44
13:M:74:LYS:HG2	38:M:8947:HOH:O	2.17	0.44
17:Q:27:GLN:HB2	38:9:466:HOH:O	2.17	0.44
30:0:287:C:C3'	30:0:287:C:C6	3.00	0.44
12:L:53:ARG:CD	30:0:2441:U:H4'	2.42	0.44
30:0:2328:U:C4	30:0:2329:C:C5	3.06	0.44
30:0:707:C:N3	30:0:708:A:N7	2.64	0.44
30:0:2102:G:N2	30:0:2103:A:N1	2.64	0.44
28:2:40:ARG:HD2	28:2:47:THR:HG22	1.99	0.44
30:0:2896:A:H2'	30:0:2896:A:N3	2.32	0.44
25:Y:144:ARG:NE	38:Y:8920:HOH:O	2.46	0.44
30:0:1787:C:H4'	30:0:2883:A:O4'	2.16	0.44
30:0:1015:C:C2	30:0:1016:U:C5	3.05	0.44
2:B:223:ARG:HG3	2:B:232:TRP:C	2.37	0.44
30:0:1447:U:C3'	30:0:1506:U:O2	2.64	0.44
1:A:101:GLU:OE2	1:A:131:HIS:HB2	2.17	0.44
30:0:1609:C:H2'	30:0:1610:G:C8	2.45	0.44
30:0:324:G:C6	30:0:325:U:C5	3.05	0.44
10:J:36:VAL:HG12	10:J:37:ALA:N	2.31	0.44
30:0:940:G:O2'	30:0:1032:A:N1	2.44	0.44
30:0:1253:C:H2'	30:0:1254:C:C6	2.51	0.44
30:0:1790:C:H2'	30:0:1791:U:C6	2.49	0.44
30:0:632:A:H2'	30:0:633:C:H6	1.83	0.44
23:W:122:ARG:NH2	38:0:5240:HOH:O	2.50	0.44
30:0:565:A:H4'	38:0:3932:HOH:O	2.17	0.44
2:B:77:PRO:HA	2:B:293:PRO:HB2	1.99	0.44
2:B:6:PRO:HD3	38:0:9962:HOH:O	2.17	0.44
14:N:77:ASN:N	14:N:77:ASN:OD1	2.50	0.44
19:S:12:GLU:HB3	38:S:8988:HOH:O	2.16	0.44
30:0:2385:G:H2'	30:0:2386:U:H6	1.82	0.44
14:N:71:TRP:HZ2	38:N:8830:HOH:O	2.01	0.44
30:0:1181:A:O2'	30:0:1182:C:H5'	2.17	0.44
30:0:1205:U:H2'	30:0:1206:U:H5"	1.95	0.44
30:0:2507:G:H5'	38:0:3726:HOH:O	2.17	0.44
30:0:1309:U:C2	30:0:1310:U:C6	3.05	0.44
30:0:1564:C:H1'	30:0:2738:G:N2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2367:A:C4	30:0:2369:A:N6	2.85	0.44
30:0:1782:G:O2'	30:0:1783:A:H5'	2.16	0.44
30:0:2908:A:H8	30:0:2908:A:O5'	2.00	0.44
30:0:1688:G:C6	30:0:1692:C:C5	3.05	0.44
30:0:2251:G:C6	30:0:2252:A:C5	3.05	0.44
30:0:1934:A:N7	30:0:1935:C:C4	2.86	0.44
22:V:44:GLY:O	22:V:48:GLU:HG2	2.16	0.44
30:0:99:A:N7	30:0:100:C:C2	2.84	0.44
30:0:10:U:O4	30:0:532:A:OP2	2.36	0.44
30:0:1639:U:C2'	30:0:1640:C:O5'	2.66	0.44
30:0:1538:C:C2'	30:0:1539:U:H5'	2.47	0.44
2:B:18:ARG:HE	2:B:256:GLN:HE21	1.64	0.44
30:0:1337:G:C4	30:0:1338:U:C5	3.05	0.44
30:0:1945:G:C5	30:0:1946:C:C5	3.05	0.44
30:0:1167:G:N2	30:0:1179:C:O2	2.51	0.44
30:0:1179:C:H2'	38:0:3219:HOH:O	2.17	0.44
13:M:76:ARG:HG2	38:M:8825:HOH:O	2.16	0.44
13:M:74:LYS:HD3	13:M:87:GLY:O	2.17	0.44
30:0:1576:G:C5	30:0:1577:U:C4	3.06	0.44
30:0:1773:G:N2	30:0:1774:G:C8	2.85	0.44
30:0:2300:A:H4'	30:0:2301:A:N3	2.33	0.44
30:0:716:G:C6	30:0:717:C:C4	3.05	0.44
30:0:23:G:C6	30:0:24:G:C6	3.06	0.44
30:0:2065:C:C2'	30:0:2066:C:H5'	2.46	0.44
30:0:64:G:N3	30:0:70:A:C8	2.86	0.44
3:C:76:ARG:HH21	30:0:1363:G:P	2.41	0.44
30:0:1024:G:C5	30:0:1025:C:C4	3.05	0.44
18:R:1:GLY:HA2	18:R:119:VAL:CG2	2.48	0.44
30:0:1084:C:O5'	30:0:1084:C:H6	2.01	0.44
30:0:1998:G:C6	30:0:1999:C:C4	3.05	0.44
16:P:124:ASP:O	30:0:801:U:H4'	2.17	0.44
30:0:1755:A:H2'	30:0:1756:G:O4'	2.16	0.44
5:E:119:HIS:O	5:E:140:ALA:HB1	2.18	0.44
13:M:111:ASN:N	13:M:111:ASN:OD1	2.51	0.44
30:0:2286:G:H2'	30:0:2287:C:O4'	2.18	0.44
30:0:644:G:N3	30:0:644:G:H5'	2.33	0.44
16:P:127:GLY:HA3	38:P:584:HOH:O	2.18	0.44
17:Q:66:LYS:HB2	17:Q:70:ALA:O	2.17	0.44
30:0:1182:C:C1'	30:0:1192:A:C8	2.98	0.44
30:0:1572:A:OP2	30:0:1624:A:N6	2.46	0.44
30:0:652:G:C5'	38:0:3006:HOH:O	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:39:ASN:HD22	21:U:44:ARG:CD	2.30	0.44
30:0:799:C:H1'	30:0:1599:U:H5"	1.99	0.44
30:0:2723:G:H2'	30:0:2724:U:C6	2.53	0.44
30:0:1969:A:H3'	30:0:1970:G:C2	2.52	0.44
8:H:59:GLN:HE21	8:H:129:ARG:CG	2.30	0.44
30:0:1759:A:N3	30:0:1818:C:C2	2.86	0.44
30:0:2040:C:C2'	30:0:2041:G:H5'	2.46	0.44
16:P:37:ARG:HG3	30:0:1501:A:OP2	2.17	0.44
30:0:421:C:H2'	30:0:422:G:H8	1.82	0.44
30:0:321:A:O2'	30:0:322:G:H5'	2.18	0.44
31:9:64:C:H2'	31:9:65:A:H5'	1.98	0.44
18:R:1:GLY:O	30:0:21:G:H5'	2.17	0.44
30:0:968:G:O2'	30:0:969:G:H5'	2.18	0.44
11:K:29:LEU:HB3	11:K:55:VAL:CG2	2.48	0.44
3:C:181:ALA:HB2	30:0:30:U:OP2	2.17	0.44
30:0:2596:A:C2	35:0:8812:CL:CL	3.07	0.44
30:0:1911:C:H2'	30:0:1912:A:O4'	2.18	0.44
30:0:629:A:C2	30:0:2074:A:C2	3.06	0.44
2:B:144:THR:HG22	2:B:145:HIS:N	2.31	0.44
20:T:101:LEU:HD13	20:T:112:LEU:HD11	1.99	0.44
4:D:52:THR:HB	4:D:70:GLY:H	1.83	0.44
26:Z:54:GLU:HG2	38:Z:8715:HOH:O	2.17	0.44
30:0:2497:A:C2	30:0:2524:G:N3	2.85	0.44
30:0:1488:U:H4'	30:0:1489:G:OP1	2.18	0.44
30:0:955:A:C2'	30:0:956:G:H5'	2.47	0.44
25:Y:97:LEU:HA	25:Y:235:GLU:HA	2.00	0.44
16:P:107:GLU:C	16:P:109:ARG:H	2.21	0.44
8:H:157:TYR:CD1	8:H:157:TYR:C	2.90	0.44
30:0:1515:A:C2	30:0:1672:G:C2	3.06	0.44
13:M:85:ARG:N	13:M:85:ARG:HD2	2.33	0.44
30:0:2377:U:N3	30:0:2378:U:C5	2.84	0.44
30:0:529:G:H1'	30:0:611:U:O2'	2.18	0.44
30:0:947:U:C2'	30:0:948:G:H5'	2.47	0.44
30:0:291:C:H2'	30:0:292:G:H5'	1.99	0.44
30:0:711:G:C2'	30:0:712:C:H5'	2.48	0.44
3:C:2:GLN:HA	3:C:17:ASP:HA	1.98	0.44
30:0:2102:G:O4'	30:0:2538:A:C5	2.70	0.44
11:K:27:ARG:HG2	11:K:27:ARG:HH11	1.83	0.44
30:0:2289:G:O2'	30:0:2291:A:N6	2.50	0.44
7:G:16:LYS:HE2	7:G:63:ARG:HH12	1.82	0.44
21:U:56:ARG:HD2	30:0:2890:A:H1'	1.97	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2852:A:O4'	30:0:2902:A:N6	2.51	0.44
30:0:2448:U:O2'	30:0:2449:G:H5'	2.18	0.44
30:0:100:C:C4	30:0:101:C:C5	3.06	0.44
30:0:2700:G:C5	30:0:2701:G:C5	3.06	0.44
30:0:810:G:H2'	30:0:811:C:H6	1.83	0.44
30:0:1883:U:O2'	30:0:1884:G:H5'	2.17	0.44
30:0:933:C:H4'	30:0:1297:U:H4'	2.00	0.44
30:0:1138:G:C6	30:0:1139:U:N3	2.86	0.44
2:B:56:ASP:HB3	2:B:322:ARG:HG2	2.00	0.44
30:0:961:A:C6	30:0:1010:C:C5	3.05	0.44
18:R:30:ALA:HA	18:R:33:ARG:HH11	1.83	0.44
13:M:8:ILE:HD13	38:M:8920:HOH:O	2.17	0.44
13:M:109:PHE:HB3	13:M:112:LEU:HD12	2.00	0.44
9:I:112:LEU:HD11	30:0:1162:G:C1'	2.45	0.44
26:Z:83:TYR:OH	30:0:1604:G:C4	2.70	0.44
30:0:734:U:H1'	30:0:737:A:H62	1.82	0.44
30:0:1202:A:N7	30:0:1203:G:C5	2.86	0.44
2:B:300:SER:CB	30:0:2716:G:H21	2.31	0.44
30:0:165:A:H61	30:0:168:C:H3'	1.83	0.44
30:0:1559:A:HO2'	30:0:1561:U:H5	1.63	0.44
30:0:282:C:O2'	30:0:283:U:C5'	2.50	0.44
30:0:1576:G:C5	30:0:1577:U:C5	3.06	0.44
27:1:20:ARG:HA	30:0:121:U:C6	2.53	0.44
31:9:36:C:C4	31:9:37:C:C2	3.05	0.44
11:K:87:ARG:HG3	30:0:2721:U:H4'	1.99	0.44
30:0:2727:A:C2'	30:0:2728:C:H5'	2.46	0.44
30:0:1328:A:N7	30:0:1329:G:C5	2.85	0.44
30:0:1081:A:C5	30:0:1082:A:C6	3.06	0.44
4:D:134:LEU:HB2	4:D:157:LEU:HD23	1.99	0.44
11:K:74:VAL:CG1	11:K:113:ILE:HG12	2.47	0.44
10:J:63:ILE:HG23	30:0:1235:G:O4'	2.18	0.44
19:S:6:LYS:O	19:S:7:HIS:HB3	2.18	0.44
8:H:173:GLU:O	8:H:174:LEU:HB2	2.18	0.44
30:0:862:U:O2'	30:0:863:G:H5'	2.18	0.44
29:3:71:CYS:HB3	29:3:75:GLY:H	1.82	0.44
30:0:2285:G:H2'	30:0:2286:G:C8	2.53	0.44
5:E:11:VAL:HG12	5:E:12:ASP:N	2.33	0.44
30:0:2350:G:H2'	30:0:2351:C:H6	1.82	0.44
11:K:49:LEU:HA	11:K:73:VAL:CG1	2.48	0.44
31:9:54:A:C2'	31:9:55:U:H5'	2.48	0.44
26:Z:61:HIS:HB3	38:Z:8707:HOH:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:736:A:C2'	30:0:737:A:H5'	2.48	0.44
30:0:2507:G:H22	30:0:2512:U:H5'	1.82	0.44
30:0:876:A:C6	30:0:878:G:C8	3.06	0.44
30:0:23:G:C6	30:0:24:G:N1	2.86	0.44
30:0:795:G:N3	30:0:817:G:C2	2.86	0.44
5:E:69:ILE:HA	5:E:72:MET:HE2	2.00	0.44
30:0:2032:U:H2'	30:0:2033:G:H5'	2.00	0.44
30:0:1738:C:O2'	30:0:1739:G:H5'	2.18	0.44
1:A:7:GLN:O	30:0:1862:C:H5'	2.18	0.44
30:0:1932:G:C4	30:0:1933:G:C8	3.06	0.44
30:0:1764:C:H2'	30:0:1765:G:C5'	2.48	0.44
30:0:1929:G:H3'	30:0:1929:G:N3	2.33	0.44
30:0:908:A:H1'	38:0:7745:HOH:O	2.17	0.44
10:J:70:PHE:CE1	30:0:2676:C:H4'	2.53	0.44
30:0:1749:U:O2	30:0:1751:G:C8	2.71	0.44
10:J:39:VAL:HG12	10:J:40:ASN:ND2	2.33	0.44
5:E:86:VAL:HA	5:E:166:VAL:HA	1.99	0.44
2:B:280:VAL:HG13	2:B:333:GLU:O	2.18	0.44
30:0:400:C:H2'	30:0:401:C:C6	2.53	0.44
30:0:2454:C:H6	30:0:2454:C:O5'	2.00	0.44
30:0:463:A:H3'	38:0:6340:HOH:O	2.17	0.44
2:B:119:HIS:C	2:B:121:PRO:HD3	2.38	0.44
30:0:861:A:H4'	30:0:1697:G:C4'	2.48	0.44
25:Y:234:VAL:HG12	25:Y:235:GLU:N	2.32	0.44
30:0:2119:C:H2'	30:0:2120:U:O4'	2.18	0.44
30:0:830:G:C2'	30:0:831:U:H5'	2.48	0.44
14:N:92:ALA:O	14:N:97:VAL:HB	2.18	0.44
16:P:54:LYS:HB2	30:0:1717:A:H5"	2.00	0.44
30:0:871:G:H4'	38:0:4374:HOH:O	2.17	0.44
30:0:1159:G:H21	30:0:1189:A:H8	1.66	0.44
30:0:1214:G:H4'	38:0:4703:HOH:O	2.18	0.44
26:Z:68:GLU:C	26:Z:70:ARG:H	2.21	0.44
30:0:1517:C:C2	30:0:1670:A:C2	3.05	0.44
30:0:1561:U:C2'	30:0:1562:C:O5'	2.66	0.44
30:0:612:U:H2'	30:0:613:C:C6	2.53	0.44
30:0:370:G:C2	30:0:371:U:C5	3.06	0.44
30:0:1769:C:H2'	30:0:1770:U:C5'	2.48	0.44
30:0:2335:C:H2'	30:0:2336:G:C8	2.52	0.44
31:9:33:U:C2	31:9:43:G:N7	2.86	0.44
7:G:16:LYS:CE	7:G:63:ARG:HH12	2.31	0.44
25:Y:154:ARG:HH21	30:0:1293:U:C5'	2.22	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2723:G:H2'	30:0:2724:U:H6	1.82	0.44
30:0:1947:G:C5	30:0:1970:G:C8	3.06	0.44
30:0:2748:G:OP1	30:0:2749:U:H5"	2.17	0.44
30:0:2851:G:N2	30:0:2905:A:N6	2.65	0.44
27:1:1:THR:HG22	27:1:2:GLY:N	2.33	0.44
30:0:1585:C:C2	30:0:1611:G:N2	2.85	0.44
30:0:81:G:N3	30:0:98:A:C2	2.86	0.44
25:Y:109:LEU:HA	38:Y:8878:HOH:O	2.18	0.44
30:0:2681:A:H2'	38:0:5519:HOH:O	2.16	0.44
25:Y:171:PRO:HG3	30:0:1267:C:O2'	2.17	0.44
23:W:129:LYS:HE3	31:9:87:U:H2'	2.00	0.44
30:0:1992:U:C2	30:0:1994:A:OP2	2.71	0.44
20:T:26:THR:HA	20:T:39:ASN:HB3	2.00	0.44
18:R:27:HIS:O	18:R:31:ILE:HG13	2.18	0.44
2:B:199:TYR:HA	2:B:268:ARG:HA	1.99	0.44
30:0:1187:U:O2'	30:0:1188:A:C8	2.71	0.43
30:0:1210:G:C2	30:0:1211:G:C8	3.06	0.43
30:0:1103:C:N3	30:0:1241:G:N2	2.65	0.43
30:0:169:A:C6	30:0:2469:A:C6	3.06	0.43
30:0:268:U:O4	30:0:269:G:N1	2.51	0.43
30:0:876:A:N7	38:0:4295:HOH:O	2.36	0.43
30:0:1544:U:H5'	30:0:1618:G:O3'	2.18	0.43
30:0:2336:G:H1'	38:0:6218:HOH:O	2.18	0.43
30:0:2291:A:N3	30:0:2291:A:H2'	2.32	0.43
30:0:1713:G:N2	30:0:2735:U:H4'	2.32	0.43
30:0:1744:G:C2'	30:0:1745:G:H5'	2.49	0.43
30:0:2707:C:C2'	30:0:2707:C:O2	2.63	0.43
30:0:2671:U:N3	30:0:2672:C:C6	2.86	0.43
1:A:217:ARG:NH1	1:A:229:ALA:HB3	2.31	0.43
30:0:2853:U:H2'	30:0:2854:A:C8	2.53	0.43
30:0:2004:U:O2	30:0:2004:U:C2'	2.59	0.43
31:9:23:U:H2'	31:9:24:U:OP2	2.18	0.43
30:0:1020:A:H2'	30:0:1021:G:C8	2.53	0.43
30:0:1552:G:N1	30:0:1634:G:C5	2.86	0.43
30:0:807:A:H2'	30:0:808:A:C8	2.53	0.43
30:0:1377:C:C6	30:0:1693:A:N1	2.86	0.43
31:9:95:C:N4	38:9:6156:HOH:O	2.50	0.43
30:0:79:G:N2	30:0:97:G:H1'	2.33	0.43
30:0:862:U:H5'	38:0:7180:HOH:O	2.18	0.43
16:P:36:THR:O	16:P:39:ASP:HB2	2.18	0.43
9:I:120:ALA:O	9:I:124:VAL:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:82:TYR:C	14:N:82:TYR:CD2	2.91	0.43
30:0:1061:C:C4	30:0:1062:U:C5	3.06	0.43
3:C:55:ARG:HB2	38:0:9141:HOH:O	2.17	0.43
14:N:99:GLU:HB3	14:N:128:ASP:HB2	2.00	0.43
2:B:137:LEU:HD21	2:B:140:LEU:HD21	1.99	0.43
2:B:141:ARG:HD2	2:B:163:GLU:OE2	2.18	0.43
5:E:103:VAL:HG12	5:E:104:ILE:N	2.32	0.43
25:Y:138:ARG:HB3	30:0:638:C:OP1	2.18	0.43
30:0:1169:U:C4	30:0:1170:U:C2	3.06	0.43
30:0:1175:G:H4'	38:0:6771:HOH:O	2.18	0.43
30:0:2317:C:C5	30:0:2318:C:N4	2.85	0.43
13:M:83:SER:O	29:3:46:ILE:HG22	2.18	0.43
30:0:1492:A:C6	30:0:1493:A:C6	3.06	0.43
30:0:2374:G:C6	30:0:2375:A:C6	3.05	0.43
3:C:16:VAL:HG12	3:C:17:ASP:H	1.83	0.43
30:0:23:G:H8	30:0:23:G:O5'	2.00	0.43
30:0:2114:C:H2'	30:0:2115:U:H6	1.83	0.43
30:0:1592:G:C2	30:0:1593:C:N3	2.86	0.43
30:0:816:G:C5	30:0:817:G:C6	3.07	0.43
30:0:68:U:O4	30:0:107:U:H4'	2.18	0.43
30:0:1332:C:C4	30:0:1333:U:C5	3.06	0.43
30:0:1947:G:C8	30:0:1947:G:C3'	3.02	0.43
30:0:419:A:H1'	30:0:1921:A:C2	2.53	0.43
2:B:85:ARG:NH1	2:B:143:ILE:HD11	2.33	0.43
30:0:681:G:N3	30:0:681:G:H2'	2.33	0.43
30:0:1901:G:O2'	30:0:1902:G:H5'	2.18	0.43
30:0:1588:G:C6	30:0:1589:G:C6	3.06	0.43
30:0:146:U:C4	30:0:147:G:C6	3.07	0.43
30:0:1925:G:N2	30:0:1926:G:H1'	2.33	0.43
30:0:149:G:H2'	30:0:150:G:H5'	2.00	0.43
30:0:1476:A:H2'	30:0:1867:G:O2'	2.18	0.43
30:0:2456:A:O2'	30:0:2457:U:H5'	2.18	0.43
30:0:1886:A:C5	30:0:1887:U:C5	3.06	0.43
30:0:1886:A:C5	30:0:1887:U:C6	3.06	0.43
30:0:564:G:H2'	30:0:565:A:OP2	2.18	0.43
2:B:320:GLN:HA	2:B:321:PRO:HD3	1.86	0.43
30:0:647:U:H2'	30:0:648:G:O4'	2.17	0.43
4:D:104:PHE:CE2	4:D:132:VAL:HB	2.52	0.43
5:E:11:VAL:HA	5:E:23:GLU:O	2.17	0.43
30:0:830:G:N2	30:0:2022:A:C2	2.86	0.43
30:0:1689:A:OP2	30:0:1689:A:H8	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2555:C:O5'	30:0:2555:C:H6	2.02	0.43
2:B:247:VAL:HB	30:0:2654:C:H1'	1.99	0.43
30:0:1087:G:H4'	30:0:1088:A:OP1	2.17	0.43
30:0:1209:C:C2	30:0:1210:G:C8	3.06	0.43
30:0:2121:G:H5"	38:0:6487:HOH:O	2.17	0.43
31:9:79:U:C2'	31:9:79:U:O2	2.66	0.43
30:0:283:U:O2'	30:0:368:C:C6	2.70	0.43
30:0:54:G:C4	30:0:55:U:C6	3.06	0.43
30:0:712:C:C5	30:0:714:U:C5	3.07	0.43
31:9:33:U:H2'	38:9:3797:HOH:O	2.17	0.43
30:0:669:G:C5	30:0:670:G:N7	2.87	0.43
30:0:1345:A:C4	30:0:1346:U:C5	3.07	0.43
30:0:1279:U:H5'	30:0:1280:A:OP2	2.19	0.43
30:0:2587:OMU:HM22	30:0:2589:U:C6	2.53	0.43
20:T:48:VAL:HG21	20:T:96:VAL:CG1	2.45	0.43
20:T:2:LYS:HG2	30:0:447:A:OP1	2.18	0.43
30:0:210:U:H2'	30:0:211:U:H6	1.83	0.43
30:0:1646:G:C2	30:0:1647:G:C8	3.06	0.43
30:0:13:G:H2'	30:0:14:C:C6	2.52	0.43
2:B:239:LEU:HD12	30:0:2093:G:P	2.58	0.43
28:2:2:LYS:HG3	30:0:1486:A:C4	2.54	0.43
17:Q:47:VAL:HA	17:Q:48:PRO:HD3	1.78	0.43
30:0:343:C:O2'	30:0:344:C:H5'	2.18	0.43
14:N:38:LYS:HE3	14:N:38:LYS:HB2	1.86	0.43
30:0:1018:A:C6	30:0:1019:C:C4	3.07	0.43
30:0:755:G:H5"	38:0:4855:HOH:O	2.18	0.43
10:J:53:ILE:O	10:J:57:TYR:HD1	2.00	0.43
30:0:1319:G:H1'	38:0:4649:HOH:O	2.18	0.43
30:0:1166:A:OP2	30:0:1174:A:H4'	2.17	0.43
38:M:8824:HOH:O	29:3:48:ASN:HB2	2.18	0.43
30:0:2511:A:H3'	30:0:2512:U:H6	1.81	0.43
30:0:562:A:C2	30:0:563:C:C2	3.05	0.43
30:0:2750:G:C5	30:0:2751:C:C4	3.06	0.43
17:Q:58:GLY:HA2	30:0:951:A:O4'	2.17	0.43
13:M:70:GLY:CA	30:0:2263:G:H4'	2.46	0.43
28:2:41:HIS:O	28:2:45:ASN:HB2	2.18	0.43
30:0:2895:C:O2'	30:0:2896:A:H5"	2.18	0.43
30:0:1595:G:C2	30:0:1600:G:C2	3.06	0.43
5:E:82:TYR:CD1	5:E:141:VAL:HG12	2.53	0.43
30:0:2854:A:N1	30:0:2905:A:C5	2.86	0.43
30:0:1688:G:C6	30:0:1692:C:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1502:A:C3'	38:0:9624:HOH:O	2.64	0.43
30:0:1032:A:N3	30:0:1032:A:H2'	2.33	0.43
30:0:1711:A:C6	30:0:1712:A:N7	2.86	0.43
30:0:584:U:N3	30:0:585:C:C5	2.86	0.43
30:0:114:A:H5"	38:0:9745:HOH:O	2.17	0.43
1:A:89:ALA:HB3	1:A:92:ASN:ND2	2.33	0.43
30:0:1270:U:H2'	30:0:1271:A:C8	2.53	0.43
18:R:60:LYS:HA	18:R:75:TRP:NE1	2.33	0.43
30:0:222:A:C4	30:0:223:G:H1'	2.53	0.43
3:C:135:GLU:HB3	38:C:8572:HOH:O	2.18	0.43
30:0:2711:U:H4'	38:0:6212:HOH:O	2.18	0.43
24:X:22:ASN:OD1	24:X:25:ARG:HD2	2.18	0.43
3:C:35:VAL:HG11	3:C:227:GLY:N	2.33	0.43
30:0:842:C:H5'	38:0:6855:HOH:O	2.19	0.43
30:0:2834:G:H2'	30:0:2835:C:O5'	2.17	0.43
20:T:44:ALA:HA	20:T:62:VAL:O	2.18	0.43
30:0:1590:A:C5	30:0:1606:A:N7	2.86	0.43
30:0:2407:G:N2	30:0:2408:A:N3	2.67	0.43
30:0:1666:C:C2	30:0:1667:A:N7	2.85	0.43
30:0:236:A:H1'	30:0:237:G:O4'	2.18	0.43
2:B:302:PRO:HA	30:0:2717:C:H5'	2.01	0.43
30:0:2504:A:H2'	30:0:2505:G:O4'	2.18	0.43
30:0:2507:G:O6	30:0:2511:A:H4'	2.19	0.43
29:3:42:ARG:HH11	30:0:396:U:H5'	1.78	0.43
30:0:1498:G:O2'	30:0:1499:U:H5'	2.18	0.43
30:0:1768:C:C5	30:0:1769:C:C5	3.06	0.43
30:0:2248:C:C2	30:0:2254:G:N2	2.86	0.43
30:0:657:G:H2'	30:0:658:C:C6	2.53	0.43
30:0:660:A:N7	30:0:746:A:C5	2.87	0.43
31:9:49:G:C2'	31:9:50:G:C5'	2.96	0.43
30:0:1478:U:H2'	30:0:1479:G:C8	2.53	0.43
29:3:40:ARG:HG3	29:3:52:PHE:HD2	1.84	0.43
30:0:2784:A:H8	30:0:2784:A:O5'	2.02	0.43
30:0:1331:G:HO2'	30:0:1332:C:H5'	1.82	0.43
30:0:1610:G:N1	30:0:1611:G:C5	2.87	0.43
30:0:77:G:H2'	30:0:78:G:H5'	2.00	0.43
14:N:151:ASP:OD1	14:N:166:ALA:HA	2.19	0.43
30:0:309:C:H42	30:0:322:G:H1	1.66	0.43
30:0:577:G:C2	30:0:581:G:C5	3.06	0.43
2:B:294:TYR:HE2	38:B:9132:HOH:O	2.00	0.43
30:0:1455:C:O2'	30:0:1456:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:41:ARG:HG2	20:T:41:ARG:NH1	2.33	0.43
23:W:60:GLU:O	23:W:63:GLU:HB2	2.18	0.43
30:0:2385:G:C4	30:0:2386:U:C5	3.07	0.43
2:B:1:PRO:O	2:B:2:GLN:HB2	2.19	0.43
15:O:14:LEU:CD2	15:O:102:ILE:HD11	2.48	0.43
20:T:77:VAL:HG12	20:T:89:ARG:HB3	2.01	0.43
4:D:65:GLU:HA	38:D:213:HOH:O	2.18	0.43
3:C:157:LEU:HD11	3:C:194:PHE:HZ	1.84	0.43
30:0:1615:A:H4'	38:0:5813:HOH:O	2.18	0.43
30:0:1185:U:H3'	38:0:5640:HOH:O	2.17	0.43
30:0:241:A:C2	30:0:378:A:H4'	2.54	0.43
2:B:209:LYS:HB2	2:B:257:THR:O	2.19	0.43
30:0:2135:A:C2	30:0:2241:C:C2	3.07	0.43
30:0:745:G:H4'	30:0:746:A:OP1	2.19	0.43
30:0:54:G:C5	30:0:55:U:C5	3.07	0.43
15:O:25:VAL:CG1	30:0:709:G:O2'	2.66	0.43
31:9:39:U:C2'	31:9:40:C:OP1	2.67	0.43
30:0:1595:G:HO2'	30:0:1596:U:H5'	1.83	0.43
30:0:180:G:H2'	30:0:181:G:H5'	1.99	0.43
30:0:2073:G:C6	30:0:2607:U:C2	3.07	0.43
30:0:2687:G:C2'	30:0:2688:U:H5'	2.49	0.43
30:0:2726:U:H5"	30:0:2749:U:H3	1.83	0.43
30:0:1936:C:C2	30:0:1937:U:C5	3.06	0.43
23:W:23:MET:O	30:0:1025:C:H5'	2.18	0.43
30:0:250:C:O2'	30:0:251:C:H5'	2.19	0.43
14:N:154:LEU:CD1	14:N:157:PRO:HA	2.47	0.43
21:U:52:THR:CG2	21:U:54:THR:H	2.29	0.43
30:0:968:G:H2'	30:0:969:G:O4'	2.18	0.43
20:T:32:ARG:NH1	20:T:38:ARG:HH12	2.16	0.43
30:0:567:U:H5"	38:0:5240:HOH:O	2.18	0.43
30:0:1999:C:O2'	30:0:2000:G:H5'	2.19	0.43
2:B:279:THR:OG1	2:B:290:VAL:O	2.34	0.43
4:D:146:LYS:NZ	14:N:107:ASN:HD21	2.17	0.43
30:0:1831:U:O2	30:0:1831:U:H2'	2.18	0.43
23:W:27:HIS:HB2	23:W:28:HIS:HD2	1.84	0.43
30:0:2552:C:C6	30:0:2577:A:N7	2.87	0.43
24:X:60:ALA:HA	38:0:7363:HOH:O	2.17	0.43
27:1:16:HIS:HD2	30:0:470:U:O2'	2.02	0.43
26:Z:71:VAL:HG22	26:Z:88:PHE:HE2	1.84	0.43
30:0:541:C:C2'	30:0:542:A:C5'	2.84	0.43
30:0:1449:G:N3	30:0:1493:A:C2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1513:C:H2'	30:0:1513:C:O2	2.17	0.43
15:O:112:ARG:HH11	30:0:709:G:N2	2.16	0.43
30:0:2538:A:C3'	38:0:9174:HOH:O	2.66	0.43
30:0:2471:G:C2	30:0:2472:C:C6	3.06	0.43
30:0:2887:G:H2'	30:0:2888:U:O4'	2.19	0.43
11:K:81:ARG:HB2	11:K:87:ARG:NH1	2.33	0.43
30:0:2667:G:O2'	30:0:2668:G:H5'	2.19	0.43
16:P:37:ARG:NE	30:0:1500:U:C5	2.87	0.43
1:A:99:ILE:O	1:A:131:HIS:HE1	2.02	0.43
30:0:1020:A:O2'	30:0:1021:G:H5'	2.18	0.43
30:0:1021:G:H2'	30:0:1022:A:H8	1.82	0.43
25:Y:109:LEU:HD11	25:Y:181:GLY:HA3	2.00	0.43
30:0:2679:G:H2'	30:0:2680:A:H3'	1.99	0.43
30:0:1059:G:C6	30:0:1127:C:C2	3.07	0.43
30:0:298:C:C4	30:0:299:U:C5	3.07	0.43
30:0:732:C:H2'	30:0:733:U:C6	2.54	0.43
30:0:392:U:O2	30:0:398:U:C2	2.72	0.43
30:0:26:U:H2'	30:0:27:U:C6	2.53	0.43
30:0:344:C:H2'	30:0:345:G:O4'	2.19	0.43
3:C:214:THR:HG22	3:C:216:SER:OG	2.18	0.43
30:0:1087:G:C8	35:0:8822:CL:CL	3.09	0.43
4:D:12:GLU:O	4:D:15:GLU:HG2	2.18	0.43
30:0:2903:C:O5'	30:0:2903:C:H6	2.02	0.43
1:A:85:SER:HA	38:A:9033:HOH:O	2.17	0.43
30:0:204:A:H2'	30:0:205:U:H5'	2.00	0.43
3:C:165:ASP:O	3:C:168:ARG:HB3	2.18	0.43
31:9:59:C:H1'	38:9:2772:HOH:O	2.17	0.43
29:3:1:MET:HA	30:0:2320:U:P	2.59	0.43
14:N:11:ARG:HD3	31:9:114:G:O6	2.19	0.43
30:0:433:C:H1'	38:0:3008:HOH:O	2.18	0.43
30:0:1308:A:H2'	30:0:1309:U:H6	1.83	0.43
22:V:39:ALA:C	22:V:41:GLU:H	2.21	0.43
30:0:1706:G:H3'	30:0:1707:G:C8	2.54	0.43
31:9:45:A:C8	31:9:46:C:C5	3.07	0.43
30:0:24:G:C4	30:0:518:G:N2	2.86	0.43
13:M:95:LYS:HA	13:M:170:ASN:ND2	2.26	0.43
5:E:68:HIS:CE1	38:E:5919:HOH:O	2.71	0.43
30:0:2869:G:H2'	30:0:2870:C:O4'	2.19	0.43
30:0:2687:G:H1	30:0:2707:C:H42	1.67	0.43
30:0:2702:A:H2'	30:0:2702:A:N3	2.34	0.43
21:U:34:SER:HA	21:U:37:GLU:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:429:A:H8	38:0:3806:HOH:O	1.97	0.43
30:0:1549:C:C2'	30:0:1550:A:H5'	2.48	0.43
30:0:1928:C:C2	30:0:1929:G:C8	3.07	0.43
2:B:278:PRO:HD3	2:B:294:TYR:CZ	2.54	0.43
30:0:2038:A:C2	30:0:2039:A:N7	2.87	0.43
30:0:2855:G:C2	30:0:2904:U:O2	2.72	0.43
30:0:2775:A:H2'	30:0:2776:A:C8	2.53	0.43
20:T:26:THR:HB	30:0:343:C:OP1	2.19	0.43
30:0:1673:U:C5'	38:0:3233:HOH:O	2.66	0.43
6:F:19:ALA:O	6:F:22:VAL:HG22	2.18	0.43
31:9:4:G:C6	31:9:120:A:C2	3.06	0.43
30:0:1668:U:H2'	30:0:1669:G:H8	1.84	0.43
30:0:594:C:C4	30:0:595:U:C4	3.06	0.43
30:0:2506:A:C4	38:0:5977:HOH:O	2.69	0.43
30:0:282:C:H2'	30:0:283:U:C5'	2.49	0.43
30:0:1679:C:N4	38:0:6168:HOH:O	2.51	0.43
30:0:559:U:C6	30:0:559:U:C3'	3.01	0.43
30:0:2237:G:H1'	30:0:2238:A:N7	2.34	0.43
13:M:70:GLY:CA	13:M:73:ARG:HH12	2.32	0.43
15:O:51:TYR:CD1	30:0:721:A:C4'	2.96	0.43
25:Y:154:ARG:NH1	25:Y:154:ARG:HG2	2.34	0.43
30:0:795:G:H1'	30:0:817:G:N2	2.34	0.43
30:0:2803:C:H2'	30:0:2804:C:C5'	2.49	0.43
30:0:2672:C:C2	30:0:2818:A:C2	3.07	0.43
30:0:2854:A:C2	30:0:2905:A:C4	3.06	0.43
30:0:2297:U:C2'	30:0:2298:C:H5'	2.48	0.43
13:M:48:LYS:HE3	13:M:52:GLN:HE21	1.83	0.43
2:B:156:LYS:HE3	30:0:2846:C:H5"	2.01	0.43
30:0:2582:G:C2	30:0:2583:A:C8	3.07	0.43
30:0:2128:G:H1	30:0:2265:U:H3	1.67	0.43
1:A:59:GLU:HA	1:A:64:ASP:O	2.19	0.43
2:B:79:MET:HB3	2:B:145:HIS:O	2.18	0.43
31:9:11:A:C2	31:9:69:U:O4'	2.72	0.43
30:0:441:A:O5'	30:0:441:A:C8	2.70	0.43
30:0:1476:A:HO2'	30:0:1867:G:C2'	2.31	0.43
30:0:1216:G:C2	30:0:1217:G:N9	2.87	0.43
26:Z:72:ASP:HA	38:Z:8728:HOH:O	2.18	0.43
30:0:169:A:O2'	30:0:170:U:H6	2.01	0.43
30:0:1571:G:H2'	30:0:1624:A:H61	1.83	0.43
27:1:18:LYS:HE2	30:0:121:U:O4	2.19	0.43
30:0:54:G:N3	30:0:55:U:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:39:ALA:N	22:V:40:PRO:CD	2.78	0.43
31:9:39:U:H2'	31:9:40:C:OP1	2.18	0.43
30:0:2629:C:C2	30:0:2635:A:C2	3.07	0.43
30:0:2757:A:O2'	30:0:2758:G:H5'	2.19	0.43
30:0:1151:G:H1'	30:0:1215:A:N6	2.34	0.43
30:0:2784:A:C5	30:0:2785:C:C5	3.07	0.43
5:E:60:SER:OG	30:0:2784:A:H1'	2.19	0.43
30:0:301:C:C2'	30:0:301:C:O2	2.67	0.43
1:A:94:LEU:HD12	1:A:98:GLU:HB3	1.99	0.43
30:0:320:G:C6	30:0:321:A:C6	3.07	0.43
30:0:810:G:C4	30:0:811:C:C5	3.07	0.43
30:0:149:G:H2'	30:0:150:G:C5'	2.49	0.43
30:0:834:G:C4'	30:0:835:U:OP2	2.67	0.43
24:X:56:GLU:HG2	30:0:1400:C:H4'	2.01	0.43
16:P:16:VAL:HG12	16:P:17:GLY:N	2.34	0.43
13:M:155:GLN:HA	13:M:155:GLN:HE21	1.83	0.43
30:0:2295:G:N3	30:0:2361:A:C2	2.87	0.43
2:B:101:TRP:H	2:B:119:HIS:CD2	2.37	0.43
30:0:2602:G:H2'	30:0:2603:G:C8	2.54	0.43
18:R:62:HIS:HB3	30:0:1370:G:O5'	2.18	0.43
19:S:57:THR:C	19:S:59:ASP:H	2.22	0.43
14:N:37:ARG:NH1	31:9:6:C:OP1	2.53	0.42
30:0:1209:C:O2'	30:0:1210:G:C5'	2.67	0.42
30:0:1176:C:H6	30:0:1176:C:O5'	2.02	0.42
30:0:1522:A:C2	30:0:1665:G:C6	3.06	0.42
30:0:1568:G:H2'	30:0:1569:U:O4'	2.18	0.42
30:0:2503:A:H2	30:0:2517:A:N7	2.16	0.42
30:0:820:G:C5'	30:0:821:U:H5'	2.49	0.42
30:0:2253:G:C4	30:0:2254:G:C8	3.06	0.42
30:0:23:G:H1'	30:0:520:A:H61	1.84	0.42
30:0:2763:G:C2	30:0:2764:C:C2	3.06	0.42
30:0:1855:G:H4'	30:0:1856:C:C5'	2.49	0.42
5:E:137:ASP:O	5:E:141:VAL:HG23	2.19	0.42
8:H:120:PHE:CE1	30:0:2311:A:H5'	2.54	0.42
8:H:19:ARG:NH2	30:0:1008:C:OP1	2.51	0.42
30:0:1972:U:C2'	30:0:1973:A:H5'	2.45	0.42
19:S:11:THR:HG22	30:0:1444:G:H5"	2.00	0.42
19:S:11:THR:H	19:S:14:ALA:HB3	1.84	0.42
20:T:51:LEU:O	20:T:52:ARG:HD3	2.19	0.42
27:1:26:SER:O	27:1:34:CYS:HA	2.19	0.42
5:E:7:ILE:HG12	5:E:45:ASP:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:160:A:C4	30:0:177:A:C2	3.07	0.42
30:0:245:C:C2'	30:0:246:G:H5'	2.47	0.42
30:0:852:U:O2'	30:0:853:C:H5'	2.18	0.42
13:M:46:LEU:O	13:M:50:ARG:HG3	2.19	0.42
12:L:1:THR:HB	12:L:6:ARG:NH1	2.34	0.42
30:0:2279:G:H2'	30:0:2280:A:O4'	2.19	0.42
30:0:2097:G:C2	30:0:2098:C:C6	3.07	0.42
12:L:26:HIS:O	30:0:925:C:H5'	2.19	0.42
5:E:119:HIS:HB2	5:E:144:THR:OG1	2.19	0.42
30:0:2864:U:C5	30:0:2865:G:C6	3.07	0.42
30:0:1154:A:H2'	30:0:1155:G:H8	1.84	0.42
2:B:75:GLU:C	2:B:77:PRO:HD3	2.39	0.42
5:E:15:GLN:HG2	5:E:16:ASP:N	2.34	0.42
4:D:35:ALA:N	38:D:202:HOH:O	2.51	0.42
13:M:134:ILE:HG23	13:M:141:ILE:HD13	2.00	0.42
22:V:27:LEU:HB2	22:V:49:LEU:HD22	2.01	0.42
23:W:17:ILE:HG21	23:W:51:PHE:CE1	2.54	0.42
31:9:78:G:N2	31:9:102:G:H2'	2.34	0.42
31:9:1:U:H5"	31:9:3:A:OP1	2.19	0.42
30:0:2382:A:H2'	30:0:2383:G:O4'	2.19	0.42
30:0:1310:U:H2'	30:0:1311:G:O5'	2.18	0.42
25:Y:208:LYS:HZ1	30:0:1343:C:H1'	1.78	0.42
30:0:2323:G:H5"	38:0:4740:HOH:O	2.19	0.42
30:0:377:C:O2'	30:0:378:A:H5'	2.19	0.42
13:M:70:GLY:HA3	13:M:73:ARG:NH2	2.34	0.42
30:0:1483:C:C2'	30:0:1484:G:C5'	2.96	0.42
24:X:85:VAL:HG12	24:X:86:GLU:H	1.83	0.42
30:0:2793:A:C2'	30:0:2794:G:H5'	2.48	0.42
30:0:1741:U:C4	30:0:2033:G:N7	2.87	0.42
30:0:1332:C:H6	30:0:1332:C:O5'	2.01	0.42
8:H:123:ILE:CD1	8:H:123:ILE:H	2.25	0.42
30:0:1973:A:C2'	30:0:1974:G:O5'	2.67	0.42
30:0:2587:OMU:H2'	30:0:2589:U:H5"	2.01	0.42
30:0:1365:C:O2'	30:0:1366:C:H5'	2.19	0.42
30:0:2900:G:H2'	30:0:2901:C:O4'	2.19	0.42
3:C:46:TYR:CE2	3:C:98:ARG:NH1	2.87	0.42
10:J:6:PHE:HB3	10:J:109:TYR:OH	2.19	0.42
30:0:317:A:H5'	38:0:3704:HOH:O	2.18	0.42
1:A:76:VAL:HG23	26:Z:87:LYS:O	2.19	0.42
30:0:39:G:C2	30:0:444:C:N3	2.86	0.42
30:0:113:A:P	38:0:9745:HOH:O	2.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1281:C:C5	30:0:1282:U:C5	3.08	0.42
11:K:74:VAL:HG21	11:K:96:VAL:CG2	2.48	0.42
30:0:1462:C:H2'	30:0:1463:U:C6	2.55	0.42
30:0:1540:G:C5	30:0:1541:G:C8	3.08	0.42
30:0:2038:A:C2	30:0:2039:A:C5	3.07	0.42
25:Y:145:LYS:O	25:Y:147:ARG:HG2	2.19	0.42
30:0:1991:A:H2'	30:0:1992:U:C6	2.54	0.42
30:0:640:G:H1'	38:0:9035:HOH:O	2.19	0.42
30:0:1727:G:H1	30:0:2048:C:H42	1.67	0.42
29:3:8:ASN:HA	29:3:19:GLU:HA	2.00	0.42
10:J:116:LEU:HB2	10:J:119:THR:HG21	2.01	0.42
30:0:474:C:H1'	38:0:9542:HOH:O	2.18	0.42
30:0:1265:G:H1'	38:0:4953:HOH:O	2.18	0.42
19:S:49:VAL:HG13	19:S:66:VAL:HG13	2.01	0.42
29:3:60:LYS:C	29:3:62:THR:H	2.22	0.42
29:3:24:LYS:HG2	35:3:8804:CL:CL	2.56	0.42
30:0:191:A:N1	30:0:236:A:O2'	2.43	0.42
30:0:2738:G:O2'	30:0:2739:A:H5'	2.19	0.42
30:0:241:A:OP2	30:0:269:G:N2	2.49	0.42
30:0:272:A:C2	30:0:369:G:H5"	2.54	0.42
12:L:51:PHE:HE1	12:L:53:ARG:HG3	1.85	0.42
30:0:291:C:C2'	30:0:292:G:H5'	2.49	0.42
24:X:51:ASP:HB3	24:X:85:VAL:O	2.18	0.42
30:0:1873:G:H3'	38:0:5163:HOH:O	2.19	0.42
30:0:1592:G:HO2'	30:0:1593:C:C4'	2.32	0.42
30:0:1948:G:C6	30:0:1949:G:C6	3.07	0.42
30:0:1323:G:C2	30:0:1324:G:C8	3.08	0.42
18:R:4:TYR:HA	18:R:144:GLU:OE2	2.19	0.42
1:A:95:PRO:HD3	1:A:153:ARG:HG2	2.00	0.42
30:0:2269:C:H2'	30:0:2270:G:C5'	2.49	0.42
30:0:1084:C:H2'	30:0:1085:C:H6	1.84	0.42
30:0:869:G:OP2	30:0:869:G:C8	2.73	0.42
23:W:5:VAL:HG11	23:W:153:MET:HE1	2.01	0.42
24:X:69:LYS:O	24:X:70:ILE:HB	2.19	0.42
28:2:37:HIS:CE1	30:0:462:A:C8	3.08	0.42
10:J:77:GLY:O	10:J:80:LYS:N	2.53	0.42
30:0:2453:G:O2'	30:0:2454:C:H5'	2.19	0.42
30:0:2881:C:O5'	30:0:2881:C:H6	2.01	0.42
2:B:175:LEU:C	2:B:175:LEU:HD23	2.39	0.42
30:0:713:U:H6	30:0:713:U:O5'	2.01	0.42
30:0:2663:U:C4	30:0:2664:A:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:11:CYS:HA	29:3:12:PRO:HD2	1.90	0.42
30:0:1165:G:N2	30:0:1173:A:H5"	2.32	0.42
30:0:1206:U:C6	30:0:1206:U:C4'	3.02	0.42
25:Y:189:ASN:N	25:Y:192:ASP:OD2	2.53	0.42
4:D:25:MET:HG2	4:D:128:LEU:HA	2.00	0.42
26:Z:35:SER:HB3	26:Z:38:PHE:CE1	2.54	0.42
13:M:73:ARG:HG3	30:0:1864:C:O2'	2.19	0.42
13:M:70:GLY:N	13:M:73:ARG:HH12	2.17	0.42
30:0:2471:G:C2	30:0:2472:C:C5	3.07	0.42
1:A:204:GLY:N	30:0:2634:G:OP2	2.52	0.42
30:0:2113:G:C6	30:0:2114:C:C4	3.08	0.42
29:3:69:TYR:CD1	29:3:78:HIS:O	2.72	0.42
7:G:16:LYS:NZ	30:0:1151:G:OP1	2.49	0.42
23:W:88:THR:HG23	23:W:110:GLN:HE21	1.84	0.42
30:0:2669:U:C2	30:0:2670:G:C8	3.07	0.42
2:B:85:ARG:NH2	30:0:2671:U:O2	2.52	0.42
30:0:1334:C:O2'	30:0:1335:C:H5'	2.19	0.42
30:0:129:A:O2'	30:0:131:A:OP1	2.37	0.42
30:0:500:G:H2'	30:0:501:G:H8	1.84	0.42
18:R:98:ASN:HD21	30:0:500:G:N2	2.12	0.42
30:0:100:C:C6	30:0:101:C:C5	3.06	0.42
30:0:2694:A:H3'	30:0:2695:C:H6	1.83	0.42
2:B:298:LYS:HD3	38:B:9105:HOH:O	2.18	0.42
30:0:2278:U:C5'	38:0:9472:HOH:O	2.65	0.42
30:0:451:C:C5	30:0:452:G:N7	2.88	0.42
3:C:193:LEU:HA	3:C:211:ASP:O	2.19	0.42
30:0:1904:A:H3'	30:0:1905:U:H6	1.84	0.42
6:F:48:VAL:HG12	6:F:97:ALA:HB2	2.01	0.42
31:9:60:C:H6	31:9:60:C:O5'	2.02	0.42
30:0:844:A:C2	30:0:882:A:C4	3.07	0.42
8:H:53:ILE:HD12	8:H:165:ARG:HD2	2.01	0.42
30:0:623:U:H2'	30:0:624:U:H6	1.84	0.42
30:0:2866:U:O2	30:0:2891:A:C8	2.72	0.42
31:9:34:A:H2'	31:9:35:C:O4'	2.19	0.42
30:0:25:A:C2'	30:0:26:U:H5'	2.50	0.42
5:E:24:GLY:N	5:E:76:VAL:HB	2.34	0.42
25:Y:138:ARG:HB3	30:0:638:C:P	2.59	0.42
30:0:2833:C:O2'	30:0:2834:G:H5'	2.19	0.42
15:O:98:LEU:O	15:O:102:ILE:HG13	2.20	0.42
2:B:106:HIS:CE1	2:B:147:VAL:HG13	2.54	0.42
11:K:98:VAL:HG22	11:K:102:GLU:C	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1523:G:H2'	30:0:1524:U:C5	2.43	0.42
29:3:10:TYR:HD1	30:0:2408:A:HO2'	1.61	0.42
29:3:46:ILE:HA	38:0:7804:HOH:O	2.19	0.42
30:0:2321:A:C5	30:0:2323:G:C8	3.08	0.42
30:0:2323:G:N2	38:0:6034:HOH:O	2.51	0.42
31:9:88:G:C2	31:9:96:C:O2	2.72	0.42
30:0:1495:C:C1'	30:0:1573:A:H1'	2.48	0.42
30:0:2414:A:C2	30:0:2415:A:C6	3.07	0.42
31:9:44:A:H2'	31:9:45:A:O4'	2.19	0.42
30:0:2471:G:C5	30:0:2472:C:C5	3.08	0.42
21:U:56:ARG:CB	30:0:2890:A:H8	2.30	0.42
30:0:1278:A:O5'	30:0:1278:A:H8	2.01	0.42
30:0:2898:G:O2'	30:0:2899:A:H5'	2.18	0.42
13:M:118:TYR:CZ	13:M:130:GLU:HB2	2.54	0.42
13:M:120:VAL:CG1	13:M:130:GLU:HG3	2.49	0.42
30:0:499:G:H2'	30:0:500:G:O4'	2.19	0.42
1:A:94:LEU:HG	1:A:99:ILE:CD1	2.50	0.42
30:0:939:A:N1	30:0:1027:G:O2'	2.39	0.42
30:0:1765:G:C6	30:0:1766:U:C4	3.07	0.42
30:0:1750:C:C5'	38:0:3647:HOH:O	2.62	0.42
30:0:2128:G:C4	30:0:2129:U:C6	3.07	0.42
30:0:60:A:N3	30:0:61:G:C8	2.88	0.42
30:0:85:C:H3'	30:0:86:A:H2'	2.02	0.42
30:0:965:A:C2	30:0:1004:C:C2	3.08	0.42
30:0:1266:U:H2'	30:0:1267:C:C6	2.54	0.42
10:J:74:ARG:CB	10:J:74:ARG:HH11	2.32	0.42
30:0:1152:A:H2	30:0:1216:G:N3	2.18	0.42
5:E:131:LEU:HD12	5:E:166:VAL:HG11	2.02	0.42
18:R:69:LYS:NZ	30:0:2049:C:OP1	2.50	0.42
30:0:2048:C:C5'	38:0:9234:HOH:O	2.67	0.42
5:E:112:ALA:HA	5:E:113:PRO:HD3	1.87	0.42
30:0:2861:G:C6	30:0:2862:G:N7	2.88	0.42
13:M:106:SER:HB2	13:M:114:VAL:CG2	2.49	0.42
30:0:1723:G:H2'	38:0:9626:HOH:O	2.19	0.42
30:0:2383:G:N2	30:0:2406:U:C2	2.87	0.42
12:L:109:LEU:HD11	30:0:697:G:C2	2.54	0.42
30:0:1768:C:C5	30:0:1769:C:C4	3.07	0.42
30:0:656:G:H2'	30:0:657:G:H8	1.85	0.42
30:0:1942:A:C2'	30:0:1943:C:O5'	2.68	0.42
21:U:42:LEU:HD22	30:0:1810:C:C1'	2.49	0.42
30:0:667:C:C2	30:0:668:C:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1713:G:N2	30:0:2735:U:H5'	2.35	0.42
24:X:47:ALA:HB1	24:X:82:GLU:HB3	2.02	0.42
3:C:93:LYS:O	3:C:98:ARG:NH2	2.52	0.42
30:0:500:G:C4	30:0:501:G:C8	3.08	0.42
26:Z:57:MET:HG3	26:Z:79:TRP:CH2	2.55	0.42
30:0:796:A:C2	30:0:797:A:C4	3.08	0.42
19:S:11:THR:HA	38:S:8963:HOH:O	2.19	0.42
30:0:1023:C:H2'	30:0:1024:G:C8	2.55	0.42
8:H:49:GLN:NE2	8:H:170:ARG:HE	2.14	0.42
30:0:810:G:H2'	30:0:811:C:O4'	2.20	0.42
30:0:2117:U:O2	30:0:2117:U:H2'	2.19	0.42
24:X:49:ARG:HH21	30:0:1385:G:H4'	1.84	0.42
2:B:17:LYS:HB2	30:0:2657:G:OP1	2.19	0.42
1:A:169:PHE:HB2	30:0:1847:A:H4'	2.02	0.42
3:C:67:GLN:NE2	3:C:72:LYS:NZ	2.68	0.42
30:0:2809:G:H2'	30:0:2810:G:O4'	2.19	0.42
25:Y:130:ARG:HD2	38:Y:8855:HOH:O	2.20	0.42
2:B:265:LEU:HD21	2:B:316:ARG:HD3	2.01	0.42
30:0:1667:A:H5'	30:0:1667:A:C8	2.42	0.42
30:0:2317:C:C4	30:0:2318:C:C4	3.08	0.42
30:0:1679:C:O2	30:0:1679:C:C2'	2.67	0.42
30:0:2243:C:O2'	30:0:2258:A:N6	2.52	0.42
30:0:2415:A:C3'	30:0:2416:G:H5'	2.48	0.42
30:0:710:G:C2'	30:0:711:G:H5'	2.50	0.42
30:0:1545:C:N3	30:0:1641:A:N7	2.68	0.42
30:0:1579:C:H1'	30:0:1580:A:C8	2.54	0.42
18:R:18:LEU:HD23	18:R:18:LEU:HA	1.86	0.42
30:0:2757:A:C4	30:0:2896:A:C2	3.07	0.42
30:0:2764:C:O2'	30:0:2765:C:H5'	2.18	0.42
30:0:2734:G:O2'	30:0:2735:U:H5'	2.20	0.42
30:0:1332:C:O2'	30:0:1333:U:H5'	2.20	0.42
30:0:180:G:O2'	30:0:181:G:H5'	2.19	0.42
30:0:2831:C:C2	30:0:2910:A:C2	3.07	0.42
13:M:47:ASP:CG	13:M:48:LYS:N	2.73	0.42
30:0:2786:G:O2'	30:0:2787:C:H5'	2.19	0.42
30:0:322:G:C2	30:0:323:C:C2	3.07	0.42
2:B:154:VAL:HG12	2:B:156:LYS:HG2	2.02	0.42
30:0:2637:A:C4'	38:0:4332:HOH:O	2.66	0.42
30:0:2010:A:C2'	38:0:5883:HOH:O	2.62	0.42
30:0:536:A:C6	30:0:2076:U:H5'	2.54	0.42
19:S:23:LYS:HE2	38:0:4624:HOH:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:175:G:O2'	30:0:176:U:OP2	2.37	0.42
1:A:35:GLY:O	1:A:36:ASP:HB3	2.20	0.42
30:0:1394:C:H5	38:0:7433:HOH:O	2.02	0.42
1:A:27:LEU:HD21	1:A:55:VAL:HG21	2.02	0.42
10:J:80:LYS:NZ	30:0:2815:G:N7	2.67	0.42
30:0:758:A:H2'	30:0:759:C:O4'	2.20	0.42
2:B:101:TRP:HB2	2:B:119:HIS:CD2	2.55	0.42
30:0:1945:G:C4	30:0:1946:C:C6	3.08	0.42
15:O:14:LEU:HG	15:O:102:ILE:HD11	2.02	0.42
20:T:102:ASP:O	20:T:103:LEU:HD23	2.19	0.42
2:B:211:THR:HG21	38:0:7356:HOH:O	2.18	0.42
2:B:216:LYS:HE2	38:B:9030:HOH:O	2.20	0.42
30:0:2082:G:H2'	30:0:2083:A:C8	2.55	0.42
18:R:25:PHE:HA	18:R:141:VAL:HG21	2.01	0.42
31:9:4:G:C5	31:9:120:A:C2	3.08	0.42
4:D:152:PRO:HG2	31:9:58:G:OP1	2.20	0.42
30:0:1202:A:C8	30:0:1203:G:C5	3.08	0.42
30:0:1669:G:O2'	30:0:1670:A:H5'	2.19	0.42
29:3:1:MET:CA	30:0:2319:C:H3'	2.50	0.42
29:3:1:MET:HE3	30:0:2320:U:H5	1.81	0.42
29:3:60:LYS:O	29:3:62:THR:N	2.52	0.42
30:0:1562:C:N4	38:0:5793:HOH:O	2.51	0.42
30:0:2321:A:H2	30:0:2378:U:C4	2.37	0.42
12:L:57:VAL:HG11	30:0:2442:G:OP1	2.20	0.42
30:0:2372:A:H2'	30:0:2373:U:O4'	2.20	0.42
30:0:2249:G:C6	30:0:2253:G:O6	2.73	0.42
30:0:683:G:O2'	30:0:684:G:H5'	2.19	0.42
30:0:2336:G:C6	30:0:2349:G:C6	3.08	0.42
30:0:533:U:C5	30:0:2812:A:H2	2.37	0.42
30:0:2780:C:H2'	30:0:2781:U:H6	1.83	0.42
30:0:1805:G:C2'	30:0:1806:G:H5'	2.50	0.42
30:0:1325:G:H2'	30:0:1326:C:H6	1.85	0.42
27:1:5:THR:N	27:1:6:PRO:HD2	2.34	0.42
30:0:426:G:O2'	30:0:427:C:H5'	2.20	0.42
20:T:61:GLU:O	20:T:63:ILE:HG12	2.20	0.42
30:0:1930:A:O2'	30:0:1931:A:H5'	2.19	0.42
30:0:210:U:H2'	30:0:211:U:C6	2.55	0.42
30:0:40:C:N4	30:0:41:G:O6	2.53	0.42
30:0:2527:U:O2'	30:0:2528:U:H5'	2.19	0.42
8:H:161:THR:HG23	30:0:2521:A:OP1	2.19	0.42
30:0:2345:A:H3'	30:0:2346:C:H5	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:136:ALA:HB3	38:L:8886:HOH:O	2.20	0.42
30:0:214:U:H5'	38:0:6061:HOH:O	2.20	0.42
22:V:12:THR:HG23	22:V:14:ALA:H	1.84	0.42
30:0:462:A:N6	30:0:477:A:H2	2.16	0.42
30:0:188:C:H1'	38:0:9585:HOH:O	2.20	0.42
16:P:16:VAL:HG13	16:P:20:ARG:NH1	2.34	0.42
30:0:777:U:OP2	30:0:777:U:H4'	2.19	0.42
31:9:7:G:H5"	38:9:5071:HOH:O	2.20	0.42
30:0:2675:A:H1'	30:0:2813:A:C2	2.54	0.42
12:L:5:LYS:HA	12:L:5:LYS:HD2	1.85	0.42
18:R:136:TRP:CE2	30:0:2053:G:H4'	2.54	0.42
23:W:31:HIS:HB3	38:W:5420:HOH:O	2.19	0.42
30:0:1028:U:H5'	30:0:1031:G:O4'	2.19	0.42
30:0:510:U:H4'	38:0:5151:HOH:O	2.20	0.42
21:U:17:THR:HG23	30:0:2720:C:O3'	2.20	0.42
31:9:22:G:C6	31:9:55:U:C2	3.08	0.42
30:0:1186:C:H2'	30:0:1187:U:H5'	2.02	0.42
30:0:735:C:C2	30:0:736:A:C1'	3.02	0.42
30:0:236:A:C4'	30:0:237:G:OP1	2.65	0.42
30:0:266:G:O2'	30:0:267:G:H5'	2.20	0.42
30:0:1493:A:C2'	30:0:1494:A:H5"	2.50	0.42
1:A:171:LYS:HB2	30:0:820:G:N7	2.34	0.42
30:0:686:A:C5	30:0:687:C:C6	3.08	0.42
30:0:55:U:O2'	30:0:69:A:H2'	2.20	0.42
30:0:700:A:O5'	30:0:701:U:H5'	2.20	0.42
30:0:1641:A:C8	30:0:1702:U:O4	2.73	0.42
2:B:97:LEU:HD21	2:B:127:GLN:HG2	2.02	0.42
30:0:1324:G:C5	30:0:1325:G:N7	2.88	0.42
4:D:48:MET:HE2	31:9:41:C:H5'	2.02	0.42
16:P:41:ARG:NH2	30:0:1500:U:OP2	2.52	0.42
30:0:151:A:H2'	30:0:152:A:O4'	2.20	0.42
30:0:968:G:C2	30:0:1001:U:O2	2.72	0.42
30:0:1765:G:H1'	30:0:1780:G:N2	2.34	0.42
30:0:1849:G:C6	30:0:1850:U:C5	3.08	0.42
30:0:13:G:C2	30:0:14:C:C5	3.07	0.42
26:Z:77:GLY:CA	26:Z:92:SER:HA	2.49	0.42
6:F:54:VAL:HG13	30:0:263:U:C5	2.55	0.42
30:0:788:A:H2'	30:0:789:C:C6	2.55	0.42
2:B:195:ARG:HG2	2:B:323:LEU:HD22	2.00	0.42
8:H:157:TYR:HA	8:H:160:ILE:HG12	2.01	0.42
30:0:1407:A:O2'	30:0:1408:U:H3'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:173:GLY:O	1:A:176:HIS:HB3	2.20	0.42
30:0:870:G:C3'	30:0:871:G:H5"	2.50	0.42
30:0:736:A:O2'	30:0:737:A:H5'	2.19	0.42
30:0:2561:C:H42	30:0:2572:G:H1	1.66	0.42
30:0:1572:A:C2	30:0:1573:A:C4	3.08	0.42
30:0:1771:U:H4'	30:0:1772:C:OP2	2.20	0.42
30:0:822:C:N3	30:0:823:U:C5	2.87	0.42
30:0:708:A:H2'	30:0:709:G:C8	2.54	0.42
30:0:719:C:C2'	30:0:720:G:O5'	2.68	0.42
30:0:824:G:N2	30:0:826:U:C5	2.87	0.42
30:0:2508:C:H3'	38:0:4505:HOH:O	2.20	0.42
30:0:2721:U:O2	30:0:2763:G:H4'	2.19	0.42
30:0:194:A:OP2	30:0:426:G:N2	2.49	0.42
30:0:577:G:C2	30:0:581:G:C6	3.08	0.42
30:0:1552:G:C6	30:0:1634:G:C5	3.08	0.42
31:9:110:G:N2	31:9:111:U:H1'	2.35	0.42
20:T:40:VAL:CG2	20:T:108:ARG:HH21	2.32	0.42
30:0:221:G:C6	30:0:222:A:C6	3.08	0.42
4:D:83:PHE:CE2	4:D:87:ALA:HB2	2.55	0.42
2:B:280:VAL:CG1	2:B:281:ASP:N	2.82	0.42
30:0:967:U:C2	30:0:1002:G:C4	3.08	0.42
30:0:454:U:C2	38:0:9035:HOH:O	2.57	0.42
30:0:1058:A:O4'	30:0:2492:U:H4'	2.20	0.42
30:0:2286:G:H2'	30:0:2287:C:H6	1.85	0.42
16:P:109:ARG:HD3	16:P:119:TYR:CD1	2.55	0.42
16:P:81:LYS:O	30:0:1761:U:H5'	2.19	0.42
30:0:2067:A:C4	30:0:2068:G:C8	3.08	0.42
13:M:49:ALA:C	13:M:54:TYR:HB3	2.40	0.42
6:F:67:ALA:HB1	6:F:72:VAL:O	2.20	0.42
38:N:8817:HOH:O	31:9:51:A:H2'	2.20	0.41
30:0:1246:A:C4	30:0:1248:A:N7	2.88	0.41
31:9:37:C:N3	31:9:43:G:C6	2.88	0.41
2:B:162:MET:CE	2:B:308:LEU:HD21	2.50	0.41
5:E:139:GLU:OE2	30:0:2781:U:C1'	2.65	0.41
5:E:68:HIS:CE1	30:0:2782:G:H4'	2.55	0.41
30:0:2073:G:C6	30:0:2489:G:H4'	2.55	0.41
8:H:12:ILE:HG23	8:H:129:ARG:NE	2.35	0.41
16:P:3:LEU:HD22	16:P:31:ILE:HG22	2.02	0.41
30:0:2694:A:N6	30:0:2701:G:H1'	2.35	0.41
30:0:852:U:H5	38:0:7598:HOH:O	2.02	0.41
1:A:122:SER:O	1:A:124:VAL:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:113:ILE:HG22	11:K:114:ALA:N	2.35	0.41
30:0:1305:C:P	38:0:9049:HOH:O	2.78	0.41
30:0:2002:C:H2'	30:0:2003:U:C5'	2.50	0.41
23:W:119:HIS:CG	38:0:5240:HOH:O	2.73	0.41
23:W:119:HIS:CD2	23:W:120:PRO:O	2.73	0.41
2:B:202:VAL:HG11	2:B:301:VAL:CG2	2.50	0.41
2:B:69:VAL:HA	2:B:70:PRO:HD3	1.80	0.41
30:0:1142:C:C2	30:0:1222:A:C2	3.08	0.41
10:J:45:VAL:HG22	10:J:46:ILE:N	2.34	0.41
8:H:99:ARG:NH1	30:0:1055:G:OP2	2.53	0.41
30:0:1475:G:O2'	30:0:1866:A:N1	2.42	0.41
18:R:30:ALA:HA	18:R:33:ARG:NH1	2.35	0.41
22:V:49:LEU:O	22:V:53:ILE:HG13	2.20	0.41
30:0:489:A:C6	30:0:490:C:C2	3.08	0.41
30:0:1033:C:H2'	30:0:1034:G:O4'	2.20	0.41
6:F:101:ALA:HA	38:F:5413:HOH:O	2.20	0.41
2:B:275:GLY:O	2:B:291:ASP:HA	2.20	0.41
30:0:1569:U:O2'	30:0:1633:C:H4'	2.20	0.41
13:M:188:ARG:HD3	30:0:155:C:OP2	2.20	0.41
30:0:168:C:C2'	30:0:169:A:H5'	2.50	0.41
30:0:2512:U:C4'	30:0:2514:U:O4	2.67	0.41
30:0:529:G:C6	30:0:530:C:C5	3.08	0.41
30:0:685:C:O2'	30:0:748:C:OP1	2.34	0.41
31:9:36:C:H5	31:9:37:C:C4	2.38	0.41
30:0:1478:U:H2'	30:0:1479:G:H8	1.82	0.41
30:0:2255:A:C2'	30:0:2256:G:H5'	2.50	0.41
30:0:2768:A:H2'	30:0:2769:C:C6	2.56	0.41
30:0:1597:A:C4	30:0:1598:A:C8	3.09	0.41
30:0:2686:C:H2'	30:0:2687:G:C8	2.54	0.41
30:0:2852:A:N7	30:0:2902:A:C6	2.88	0.41
25:Y:169:ARG:HH11	30:0:1328:A:P	2.43	0.41
30:0:226:A:H1'	30:0:393:G:C6	2.54	0.41
30:0:1023:C:H4'	38:0:6013:HOH:O	2.20	0.41
30:0:940:G:C5	30:0:1027:G:C2	3.08	0.41
30:0:962:C:C5	30:0:963:C:C5	3.08	0.41
30:0:178:U:H1'	30:0:771:G:O2'	2.20	0.41
13:M:42:ARG:HA	13:M:43:PRO:HD3	1.89	0.41
30:0:84:G:C6	30:0:85:C:C4	3.08	0.41
30:0:1377:C:C5	30:0:1693:A:N6	2.87	0.41
3:C:133:ARG:HD2	38:C:8611:HOH:O	2.21	0.41
29:3:17:HIS:CB	30:0:2409:C:H4'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1337:G:H2'	30:0:1338:U:C6	2.55	0.41
30:0:25:A:H2'	30:0:26:U:C5'	2.50	0.41
21:U:47:ARG:O	21:U:55:ALA:HB2	2.20	0.41
17:Q:76:VAL:HA	17:Q:81:GLU:HA	2.01	0.41
30:0:1667:A:H2'	30:0:1668:U:O4'	2.20	0.41
25:Y:189:ASN:HD21	25:Y:191:ASP:HB2	1.85	0.41
21:U:38:ASN:O	21:U:42:LEU:HG	2.20	0.41
30:0:814:G:H2'	30:0:815:U:H6	1.84	0.41
30:0:1504:A:O2'	30:0:1506:U:OP2	2.38	0.41
30:0:2700:G:C6	30:0:2701:G:C4	3.08	0.41
31:9:17:G:C2	31:9:64:C:N3	2.88	0.41
30:0:404:G:C5	30:0:405:C:C5	3.07	0.41
30:0:1634:G:C4	30:0:1635:U:C5	3.08	0.41
11:K:124:VAL:O	11:K:127:ALA:HB3	2.20	0.41
18:R:39:THR:HG22	18:R:41:GLY:N	2.35	0.41
28:2:22:PRO:HG2	28:2:25:VAL:CG2	2.51	0.41
23:W:69:ARG:HG3	23:W:118:LEU:HA	2.02	0.41
8:H:61:ARG:NH1	8:H:61:ARG:HG3	2.34	0.41
4:D:18:ILE:HG12	4:D:134:LEU:CD2	2.50	0.41
30:0:222:A:C5	30:0:223:G:H1'	2.55	0.41
2:B:254:GLN:HG3	38:0:9701:HOH:O	2.20	0.41
30:0:564:G:C2'	30:0:565:A:OP2	2.68	0.41
30:0:646:G:H2'	30:0:647:U:C6	2.55	0.41
8:H:116:MET:HB3	30:0:2283:G:C5	2.56	0.41
31:9:102:G:O2'	31:9:103:A:O4'	2.35	0.41
30:0:783:C:O5'	30:0:783:C:H6	2.03	0.41
3:C:69:HIS:O	30:0:765:G:H4'	2.21	0.41
9:I:91:PHE:CD2	9:I:131:GLY:HA2	2.56	0.41
29:3:86:GLY:HA2	38:3:9031:HOH:O	2.19	0.41
30:0:1159:G:C8	30:0:1160:G:C8	3.09	0.41
26:Z:66:CYS:O	26:Z:68:GLU:N	2.53	0.41
26:Z:70:ARG:HG2	26:Z:70:ARG:HH11	1.85	0.41
30:0:1206:U:H2'	30:0:1207:A:C1'	2.48	0.41
30:0:154:C:C2	30:0:155:C:C6	3.08	0.41
13:M:188:ARG:HB2	30:0:156:C:OP2	2.21	0.41
30:0:2716:G:H2'	30:0:2717:C:H6	1.84	0.41
3:C:127:ARG:HD3	3:C:129:HIS:HE1	1.85	0.41
30:0:530:C:H4'	30:0:612:U:H4'	2.02	0.41
30:0:1505:U:H6	30:0:1505:U:H2'	1.70	0.41
13:M:68:ARG:CZ	13:M:73:ARG:NH1	2.83	0.41
30:0:291:C:H2'	30:0:292:G:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:72:VAL:HG22	24:X:85:VAL:CG1	2.51	0.41
30:0:1641:A:H8	30:0:1702:U:O4	2.02	0.41
29:3:51:LYS:C	29:3:53:SER:H	2.24	0.41
30:0:2793:A:C5	30:0:2794:G:C8	3.09	0.41
30:0:2869:G:C6	30:0:2870:C:C4	3.08	0.41
23:W:110:GLN:HA	23:W:110:GLN:NE2	2.35	0.41
3:C:95:GLU:H	3:C:95:GLU:CD	2.23	0.41
18:R:114:VAL:HA	18:R:144:GLU:O	2.20	0.41
30:0:1933:G:C2	30:0:1934:A:N9	2.88	0.41
4:D:22:VAL:HG22	4:D:74:THR:HG22	2.02	0.41
30:0:2699:A:H2'	30:0:2700:G:O4'	2.20	0.41
30:0:577:G:N2	30:0:581:G:C5	2.89	0.41
25:Y:107:PRO:HB3	25:Y:182:PHE:CD2	2.56	0.41
25:Y:107:PRO:HB3	25:Y:182:PHE:CE2	2.56	0.41
15:O:70:LEU:O	15:O:92:VAL:HG21	2.20	0.41
30:0:178:U:H2'	30:0:179:C:C6	2.50	0.41
23:W:154:ARG:HD2	38:0:6479:HOH:O	2.19	0.41
3:C:133:ARG:CZ	3:C:135:GLU:HB2	2.51	0.41
30:0:633:C:C2	38:0:9317:HOH:O	2.72	0.41
10:J:70:PHE:HD1	30:0:2676:C:H4'	1.86	0.41
1:A:194:MET:SD	30:0:875:A:C2	3.14	0.41
30:0:2861:G:C5	30:0:2862:G:C8	3.08	0.41
30:0:305:A:C5	30:0:329:A:C2	3.08	0.41
4:D:51:ARG:HH11	4:D:68:PRO:HB3	1.84	0.41
30:0:2119:C:O2'	30:0:2120:U:H5'	2.19	0.41
30:0:1407:A:H4'	38:0:4676:HOH:O	2.21	0.41
21:U:8:TYR:CE1	21:U:40:ALA:HB2	2.56	0.41
30:0:851:C:H4'	38:0:5526:HOH:O	2.20	0.41
3:C:228:ALA:HA	3:C:229:PRO:HD3	1.79	0.41
30:0:2484:U:H4'	38:0:9461:HOH:O	2.19	0.41
30:0:1562:C:N3	30:0:1563:G:C5	2.88	0.41
30:0:542:A:H5'	30:0:542:A:C8	2.50	0.41
29:3:34:LYS:N	29:3:34:LYS:HD2	2.35	0.41
26:Z:41:ARG:HD3	38:Z:8709:HOH:O	2.20	0.41
30:0:2326:C:O2	30:0:2375:A:C2	2.73	0.41
30:0:745:G:C4'	30:0:746:A:OP1	2.69	0.41
30:0:52:A:C4'	30:0:121:U:H3	2.34	0.41
30:0:824:G:H2'	30:0:826:U:OP1	2.19	0.41
14:N:110:THR:CG2	31:9:37:C:H4'	2.51	0.41
30:0:1150:A:H3'	30:0:1151:G:H5'	2.02	0.41
30:0:215:A:N6	30:0:225:G:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:98:ILE:HD12	16:P:102:ARG:CZ	2.49	0.41
30:0:2425:A:H2'	38:0:9237:HOH:O	2.19	0.41
30:0:106:A:C2'	30:0:107:U:C5'	2.92	0.41
30:0:1664:A:OP1	30:0:1664:A:C8	2.60	0.41
30:0:1891:G:H1'	30:0:1972:U:C2	2.55	0.41
30:0:2543:G:O3'	30:0:2590:U:H5'	2.21	0.41
30:0:1739:G:C2'	30:0:1740:U:H5'	2.50	0.41
30:0:2852:A:C2	30:0:2901:C:C4	3.08	0.41
30:0:752:G:H2'	30:0:753:U:O4'	2.21	0.41
30:0:1547:A:C2	30:0:1639:U:O2	2.73	0.41
25:Y:107:PRO:HD3	25:Y:182:PHE:CE1	2.56	0.41
30:0:2599:A:C6	30:0:2600:A:C6	3.08	0.41
30:0:1549:C:H3'	30:0:1549:C:C6	2.56	0.41
16:P:105:LEU:HD21	16:P:137:LEU:HD21	2.02	0.41
30:0:635:A:H2	38:0:9223:HOH:O	2.02	0.41
30:0:1427:A:N6	30:0:1440:U:H1'	2.35	0.41
18:R:134:SER:HB2	30:0:2055:A:H5'	2.00	0.41
1:A:23:TYR:OH	1:A:182:ARG:HA	2.21	0.41
30:0:2350:G:O2'	30:0:2351:C:H5'	2.20	0.41
30:0:1061:C:H1'	30:0:2283:G:O6	2.20	0.41
30:0:510:U:H6	38:0:7340:HOH:O	2.03	0.41
10:J:19:MET:HG3	10:J:79:PHE:CE1	2.55	0.41
30:0:2885:A:H2'	30:0:2886:C:O4'	2.20	0.41
30:0:410:A:O4'	30:0:412:C:C2	2.73	0.41
3:C:164:ALA:HA	3:C:167:ASP:OD1	2.20	0.41
14:N:33:ARG:NH2	31:9:6:C:O2'	2.51	0.41
30:0:1161:A:O5'	30:0:1161:A:C8	2.70	0.41
30:0:1165:G:H4'	30:0:1174:A:O2'	2.20	0.41
30:0:165:A:N7	30:0:167:A:OP1	2.53	0.41
30:0:483:C:N4	30:0:484:A:C6	2.88	0.41
30:0:395:A:H5'	30:0:396:U:H5"	2.01	0.41
29:3:35:TRP:CE3	29:3:36:ILE:HG12	2.55	0.41
30:0:1449:G:H2'	30:0:1449:G:N3	2.36	0.41
30:0:1512:G:C4	30:0:1513:C:C6	3.09	0.41
30:0:1773:G:H2'	30:0:1774:G:H5'	2.01	0.41
30:0:52:A:C6	30:0:53:C:C4	3.08	0.41
15:O:18:ALA:HB2	38:O:3062:HOH:O	2.19	0.41
15:O:25:VAL:O	15:O:29:VAL:HG23	2.21	0.41
24:X:74:ALA:HB1	24:X:85:VAL:HG22	2.02	0.41
30:0:1708:C:H2'	30:0:1709:G:O4'	2.20	0.41
30:0:2088:C:H1'	30:0:2841:A:C2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:40:ARG:HG2	28:2:41:HIS:N	2.36	0.41
30:0:2064:U:O2'	30:0:2065:C:H5'	2.21	0.41
30:0:2106:C:H1'	38:0:9577:HOH:O	2.20	0.41
1:A:103:VAL:HA	1:A:104:PRO:HD3	1.76	0.41
30:0:347:A:H2'	30:0:348:C:O4'	2.20	0.41
30:0:2670:G:C2'	30:0:2671:U:H5'	2.49	0.41
30:0:2900:G:C2'	30:0:2901:C:H5'	2.51	0.41
1:A:149:ASP:HA	1:A:150:PRO:HD2	1.86	0.41
30:0:1907:U:O2	30:0:1933:G:C2	2.73	0.41
30:0:40:C:H6	30:0:40:C:O5'	2.04	0.41
30:0:151:A:C2	30:0:152:A:C4	3.09	0.41
23:W:21:LEU:HD21	23:W:48:VAL:HG11	2.02	0.41
23:W:69:ARG:HA	23:W:69:ARG:HD3	1.76	0.41
24:X:29:ALA:O	24:X:33:ILE:HG13	2.20	0.41
30:0:626:U:C4	30:0:627:G:C6	3.09	0.41
10:J:77:GLY:O	10:J:78:ILE:C	2.58	0.41
14:N:13:ARG:HD2	14:N:13:ARG:HA	1.87	0.41
30:0:2123:A:H3'	30:0:2124:G:H8	1.85	0.41
12:L:148:GLU:HG3	38:L:8856:HOH:O	2.19	0.41
4:D:138:GLY:N	38:D:225:HOH:O	2.54	0.41
30:0:1631:A:C5	30:0:1632:A:C6	3.09	0.41
30:0:165:A:C6	30:0:168:C:C5	3.09	0.41
31:9:77:A:C4	31:9:79:U:C4	3.09	0.41
14:N:11:ARG:NH1	31:9:8:G:O6	2.54	0.41
30:0:2321:A:C2	30:0:2378:U:N3	2.88	0.41
30:0:396:U:O2'	30:0:397:A:O5'	2.37	0.41
30:0:2410:G:C2'	30:0:2411:C:H5'	2.50	0.41
30:0:2300:A:N3	30:0:2306:U:C4	2.88	0.41
30:0:1483:C:H2'	30:0:1484:G:C5'	2.50	0.41
31:9:44:A:C6	31:9:45:A:C5	3.09	0.41
30:0:385:C:C3'	30:0:385:C:C6	3.03	0.41
30:0:1971:G:C5'	38:0:7283:HOH:O	2.64	0.41
23:W:44:MET:CE	30:0:944:G:N2	2.80	0.41
30:0:2588:OMG:H2'	30:0:2589:U:H4'	2.02	0.41
30:0:1898:G:O2'	30:0:1899:C:H5'	2.20	0.41
30:0:1611:G:C2	30:0:1612:A:N7	2.89	0.41
20:T:52:ARG:NH2	30:0:308:U:H2'	2.36	0.41
30:0:1644:C:H2'	30:0:1645:U:O4'	2.21	0.41
13:M:97:ILE:CD1	13:M:127:LYS:HD2	2.49	0.41
30:0:353:G:C6	30:0:354:A:C6	3.09	0.41
25:Y:182:PHE:CG	25:Y:202:ALA:HB2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2639:G:H2'	30:0:2640:U:O5'	2.21	0.41
6:F:28:ALA:C	6:F:99:THR:HG23	2.41	0.41
20:T:43:ASN:C	20:T:45:GLY:H	2.23	0.41
30:0:1281:C:C5	30:0:1282:U:C4	3.08	0.41
3:C:142:ASP:OD2	3:C:238:SER:HB2	2.21	0.41
6:F:59:ILE:HD13	30:0:263:U:O4'	2.21	0.41
15:O:105:ASN:ND2	15:O:109:SER:H	2.19	0.41
20:T:41:ARG:NH1	20:T:42:VAL:O	2.53	0.41
4:D:146:LYS:HD3	14:N:107:ASN:HD21	1.86	0.41
30:0:640:G:O2'	30:0:641:G:H5'	2.21	0.41
30:0:2860:G:C6	30:0:2861:G:C5	3.08	0.41
30:0:2834:G:C2'	30:0:2835:C:O5'	2.68	0.41
4:D:169:THR:HG22	4:D:170:TYR:CD1	2.55	0.41
16:P:24:ASN:HA	16:P:25:PRO:HD3	1.90	0.41
30:0:2876:G:H2'	30:0:2877:G:C8	2.56	0.41
30:0:935:G:O2'	30:0:936:C:H5'	2.21	0.41
14:N:91:ARG:HD2	38:N:8813:HOH:O	2.20	0.41
22:V:32:ALA:O	22:V:35:ALA:HB3	2.20	0.41
14:N:44:ARG:CG	14:N:45:ALA:N	2.84	0.41
14:N:35:VAL:HB	14:N:46:GLN:HB2	2.03	0.41
25:Y:205:ILE:HG13	25:Y:205:ILE:H	1.72	0.41
4:D:40:ILE:HG23	38:D:203:HOH:O	2.19	0.41
30:0:2432:C:O5'	30:0:2432:C:C6	2.73	0.41
30:0:1570:C:H2'	30:0:1571:G:H5'	2.03	0.41
15:O:44:ASN:OD1	15:O:65:LEU:HB2	2.21	0.41
30:0:533:U:C5	30:0:2812:A:C2	3.09	0.41
30:0:1279:U:C5'	30:0:1280:A:OP2	2.68	0.41
30:0:450:C:H1'	38:0:4341:HOH:O	2.19	0.41
10:J:34:GLU:O	10:J:36:VAL:HG23	2.21	0.41
30:0:969:G:C2	30:0:1000:C:N3	2.89	0.41
30:0:1552:G:C2	30:0:1634:G:C4	3.09	0.41
30:0:1357:A:H1'	38:0:4127:HOH:O	2.19	0.41
1:A:81:GLN:O	1:A:92:ASN:HB3	2.21	0.41
1:A:80:LEU:HA	1:A:92:ASN:OD1	2.21	0.41
30:0:1004:C:H4'	38:0:7615:HOH:O	2.20	0.41
30:0:1646:G:N3	30:0:1647:G:C8	2.88	0.41
30:0:2292:C:C2	30:0:2463:A:C4'	3.04	0.41
24:X:30:MET:CE	24:X:58:ALA:HB3	2.50	0.41
30:0:955:A:H2'	30:0:956:G:C5'	2.51	0.41
2:B:293:PRO:HD2	38:B:9050:HOH:O	2.21	0.41
30:0:2551:C:O2'	30:0:2552:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2617:G:H2'	30:0:2617:G:N3	2.35	0.41
30:0:11:A:N3	30:0:11:A:H2'	2.36	0.41
3:C:7:ASP:C	3:C:9:ASP:H	2.24	0.41
30:0:2324:G:H4'	30:0:2418:G:O2'	2.21	0.41
30:0:72:C:H5'	38:0:5822:HOH:O	2.21	0.41
30:0:1680:C:H5'	38:0:7195:HOH:O	2.19	0.41
30:0:2597:U:H2'	30:0:2598:U:H5'	2.02	0.41
23:W:72:PRO:HG2	23:W:77:ALA:HB3	2.02	0.41
17:Q:75:ILE:HG12	17:Q:84:ILE:CD1	2.51	0.41
30:0:455:A:H2'	30:0:456:G:O4'	2.20	0.41
30:0:361:C:H2'	30:0:362:G:O4'	2.21	0.41
14:N:71:TRP:HB2	14:N:175:LEU:HD22	2.02	0.41
30:0:1175:G:N3	30:0:1193:A:C6	2.88	0.41
30:0:1199:A:N6	30:0:1200:A:N6	2.68	0.41
30:0:1561:U:C5	30:0:1562:C:C5	3.07	0.41
30:0:509:A:C6	30:0:511:A:C6	3.09	0.41
30:0:2135:A:C2	30:0:2241:C:O2	2.74	0.41
30:0:2327:A:H2'	30:0:2328:U:C6	2.56	0.41
30:0:119:A:C2'	30:0:120:A:C5'	2.96	0.41
30:0:2683:G:C4	30:0:2712:G:N2	2.89	0.41
30:0:1248:A:H2'	30:0:1249:U:H6	1.84	0.41
30:0:1118:A:N6	30:0:1244:U:H3	2.11	0.41
30:0:292:G:N1	30:0:358:G:H1'	2.35	0.41
30:0:790:A:H2'	30:0:791:A:O4'	2.20	0.41
20:T:71:VAL:HG12	20:T:72:ILE:N	2.36	0.41
30:0:2474:A:H4'	30:0:2475:C:H3'	2.03	0.41
29:3:52:PHE:HB3	38:3:9036:HOH:O	2.21	0.41
30:0:2727:A:C6	30:0:2756:U:N3	2.88	0.41
30:0:2761:A:N3	30:0:2762:C:O2'	2.52	0.41
30:0:157:G:C6	30:0:158:A:N7	2.89	0.41
25:Y:154:ARG:NH2	30:0:1071:G:H4'	2.36	0.41
30:0:1594:C:C2	30:0:1601:G:N2	2.89	0.41
30:0:1713:G:H1'	38:0:5026:HOH:O	2.21	0.41
3:C:43:LYS:HG2	30:0:449:A:C8	2.56	0.41
30:0:1787:C:H2'	30:0:1788:U:C6	2.56	0.41
30:0:1806:G:H1'	30:0:2875:A:N3	2.36	0.41
30:0:303:C:H2'	30:0:304:G:C5'	2.51	0.41
10:J:133:GLY:O	10:J:137:GLU:HG3	2.21	0.41
30:0:300:U:H2'	30:0:301:C:C6	2.43	0.41
1:A:193:ALA:HB2	38:A:9014:HOH:O	2.21	0.41
30:0:1730:G:C5'	30:0:1731:C:C5	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:420:U:H5'	30:0:1920:C:C2	2.56	0.41
30:0:2444:U:C5	30:0:2445:U:C5	3.09	0.41
30:0:1503:U:H2'	30:0:1504:A:C5'	2.51	0.41
30:0:1608:G:O2'	30:0:1609:C:H5'	2.20	0.41
26:Z:53:ILE:O	26:Z:57:MET:HB2	2.20	0.41
30:0:393:G:H5"	38:0:9856:HOH:O	2.21	0.41
19:S:11:THR:O	19:S:15:MET:HG2	2.21	0.41
3:C:76:ARG:HB3	3:C:78:ARG:NH1	2.35	0.41
30:0:939:A:C5'	38:0:5361:HOH:O	2.68	0.41
30:0:254:C:C2	30:0:255:A:C8	3.09	0.41
3:C:63:SER:HB3	30:0:2101:A:H5'	2.03	0.41
2:B:292:GLY:O	2:B:294:TYR:HD2	2.03	0.41
25:Y:149:GLN:HG3	38:0:3330:HOH:O	2.20	0.41
30:0:275:G:N2	30:0:376:C:C2	2.88	0.41
30:0:481:U:C5	30:0:487:G:O6	2.74	0.41
30:0:1925:G:C2	30:0:1926:G:C8	3.09	0.41
17:Q:19:ARG:HH22	31:9:11:A:H3'	1.82	0.41
30:0:2866:U:H5"	38:0:6354:HOH:O	2.20	0.41
30:0:567:U:C5'	38:0:5240:HOH:O	2.69	0.41
26:Z:77:GLY:N	26:Z:92:SER:HA	2.36	0.41
30:0:1252:A:H4'	38:0:9925:HOH:O	2.21	0.41
1:A:70:ALA:HA	1:A:71:PRO:HD3	1.71	0.41
12:L:117:GLU:HG2	38:L:8870:HOH:O	2.20	0.41
30:0:1486:A:H2'	38:0:4435:HOH:O	2.20	0.41
30:0:2055:A:C4'	38:0:7348:HOH:O	2.68	0.41
11:K:49:LEU:HD23	11:K:49:LEU:C	2.41	0.41
30:0:1378:G:H4'	38:0:9224:HOH:O	2.20	0.41
2:B:224:LYS:HA	2:B:224:LYS:HD3	1.83	0.41
9:I:108:HIS:HB2	9:I:109:PRO:HD3	2.03	0.41
3:C:173:LYS:O	3:C:186:TYR:HA	2.20	0.41
1:A:29:HIS:CE1	1:A:107:ASN:HD22	2.39	0.41
8:H:70:LEU:HD12	8:H:70:LEU:HA	1.93	0.41
17:Q:42:LYS:HA	17:Q:42:LYS:HD2	1.92	0.41
12:L:97:VAL:HG12	12:L:98:GLU:O	2.21	0.41
30:0:1158:G:C6	30:0:1159:G:C5	3.08	0.41
29:3:2:GLN:N	30:0:2320:U:H5'	2.35	0.41
13:M:84:LYS:HD3	13:M:85:ARG:NH1	2.34	0.41
30:0:1562:C:C2'	30:0:1562:C:O2	2.67	0.41
30:0:1497:G:C2	30:0:1498:G:C4	3.09	0.41
7:G:63:ARG:N	38:G:2569:HOH:O	2.54	0.41
30:0:816:G:H8	30:0:816:G:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:26:ALA:CB	24:X:63:ARG:HA	2.46	0.41
30:0:92:G:H5'	38:0:7329:HOH:O	2.21	0.41
30:0:1419:U:H3'	30:0:1419:U:O2	2.21	0.41
21:U:34:SER:HA	21:U:37:GLU:CG	2.51	0.41
30:0:47:G:H1'	30:0:114:A:N1	2.35	0.41
30:0:2528:U:H2'	30:0:2529:G:O4'	2.21	0.41
30:0:1792:C:O5'	30:0:1792:C:H6	2.03	0.41
2:B:256:GLN:HG2	38:B:9140:HOH:O	2.19	0.41
30:0:1063:G:O5'	30:0:2307:A:H1'	2.21	0.41
13:M:71:SER:HB3	30:0:2264:A:OP1	2.21	0.41
30:0:1292:G:O5'	30:0:1292:G:H8	2.04	0.41
20:T:78:THR:HB	20:T:86:GLU:HG3	2.03	0.41
13:M:14:ASN:C	13:M:16:GLY:H	2.24	0.41
31:9:3:A:C8	31:9:26:C:N3	2.90	0.40
30:0:1195:G:C2	30:0:1205:U:N3	2.89	0.40
30:0:2502:C:O2'	30:0:2503:A:H5'	2.20	0.40
30:0:559:U:C6	30:0:559:U:C4'	3.04	0.40
26:Z:41:ARG:O	26:Z:47:ARG:NH1	2.53	0.40
23:W:43:GLY:HA3	30:0:945:U:O2'	2.21	0.40
30:0:1249:U:H2'	30:0:1250:C:H6	1.85	0.40
30:0:707:C:C4	30:0:708:A:N7	2.89	0.40
30:0:2255:A:N1	30:0:2256:G:C4	2.88	0.40
30:0:2768:A:H2'	30:0:2769:C:O4'	2.20	0.40
30:0:669:G:C6	30:0:670:G:C5	3.09	0.40
30:0:2759:C:H2'	30:0:2760:C:O4'	2.22	0.40
30:0:2766:A:C5	30:0:2767:C:C5	3.09	0.40
30:0:1597:A:C5	30:0:1598:A:C8	3.10	0.40
1:A:199:HIS:CD2	1:A:201:PHE:HB2	2.56	0.40
30:0:36:C:C2	30:0:447:A:C2	3.09	0.40
30:0:1503:U:C4	30:0:1504:A:C5	3.09	0.40
30:0:1587:U:H2'	30:0:1588:G:C5'	2.51	0.40
30:0:101:C:O2	30:0:102:A:C8	2.74	0.40
30:0:226:A:H1'	30:0:393:G:N7	2.35	0.40
30:0:582:U:H2'	30:0:583:C:H6	1.84	0.40
30:0:2600:A:H2'	30:0:2601:A:O4'	2.22	0.40
30:0:1628:G:C2'	30:0:1629:G:H5'	2.51	0.40
16:P:63:ARG:NE	30:0:1549:C:OP1	2.54	0.40
3:C:193:LEU:HD13	3:C:222:ASP:HB2	2.02	0.40
30:0:2713:G:H2'	30:0:2714:U:H5'	2.02	0.40
2:B:146:THR:O	2:B:148:PRO:HD3	2.21	0.40
30:0:1461:U:O2'	30:0:1462:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:731:U:O2'	30:0:732:C:H5'	2.21	0.40
30:0:1384:C:O5'	30:0:1384:C:H6	2.04	0.40
30:0:834:G:H3'	30:0:835:U:H4'	2.03	0.40
30:0:2015:A:O2'	30:0:2016:U:H5'	2.21	0.40
8:H:91:ARG:HB2	30:0:1003:U:OP1	2.21	0.40
23:W:59:GLN:HE22	23:W:97:ALA:HB3	1.86	0.40
30:0:361:C:H2'	30:0:362:G:C8	2.56	0.40
3:C:178:GLN:C	3:C:180:SER:N	2.74	0.40
10:J:31:LEU:HD23	10:J:31:LEU:HA	1.87	0.40
3:C:131:PHE:N	3:C:131:PHE:CD2	2.89	0.40
30:0:130:C:H3'	30:0:141:C:H5	1.85	0.40
17:Q:7:LEU:HD12	30:0:2424:U:H1'	2.03	0.40
20:T:12:ARG:NH1	38:T:3035:HOH:O	2.54	0.40
30:0:2319:C:C2'	30:0:2319:C:O2	2.69	0.40
31:9:114:G:C6	31:9:115:C:N4	2.89	0.40
30:0:1624:A:H4'	30:0:1626:A:H5"	2.04	0.40
30:0:691:G:N2	30:0:694:A:OP2	2.45	0.40
30:0:2769:C:C5	30:0:2770:G:N7	2.89	0.40
30:0:2769:C:H2'	30:0:2770:G:C4'	2.51	0.40
30:0:2089:A:H2'	30:0:2090:G:C5'	2.52	0.40
30:0:2721:U:H5	38:0:9305:HOH:O	2.04	0.40
30:0:2896:A:C2'	30:0:2896:A:N3	2.84	0.40
16:P:102:ARG:CZ	30:0:1596:U:C5	3.04	0.40
30:0:1601:G:H2'	30:0:1602:C:C6	2.57	0.40
30:0:2588:OMG:HM21	38:0:5634:HOH:O	2.22	0.40
16:P:31:ILE:O	16:P:34:ALA:HB3	2.21	0.40
30:0:1585:C:N3	30:0:1611:G:N2	2.68	0.40
30:0:1419:U:H2'	30:0:1685:A:C2	2.56	0.40
30:0:2582:G:C8	30:0:2601:A:C4	3.09	0.40
30:0:2582:G:H22	30:0:2596:A:H2	1.69	0.40
30:0:316:A:C4	30:0:337:A:C2	3.10	0.40
30:0:2333:G:C2	30:0:2334:C:C2	3.10	0.40
30:0:1726:G:C6	30:0:2050:G:O6	2.75	0.40
30:0:590:A:H2'	30:0:591:A:C5'	2.50	0.40
30:0:2541:U:H5'	30:0:2611:G:O6	2.22	0.40
30:0:2554:U:O4'	30:0:2577:A:N6	2.53	0.40
10:J:14:ALA:O	10:J:44:ALA:HA	2.21	0.40
10:J:38:VAL:HB	10:J:103:VAL:HG22	2.03	0.40
16:P:59:ARG:O	16:P:62:ALA:HB3	2.20	0.40
3:C:202:THR:HG21	30:0:328:U:O2	2.22	0.40
13:M:37:VAL:HG21	13:M:108:THR:OG1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:453:A:C4	30:0:479:G:C8	3.09	0.40
29:3:11:CYS:C	29:3:13:HIS:H	2.21	0.40
30:0:1166:A:H5"	30:0:1167:G:OP2	2.20	0.40
30:0:1168:C:H1'	38:0:7314:HOH:O	2.22	0.40
30:0:1515:A:H2'	30:0:1516:U:O4'	2.21	0.40
30:0:2515:C:C2'	30:0:2516:G:H5'	2.51	0.40
30:0:2377:U:H6	30:0:2377:U:O5'	2.03	0.40
30:0:1623:C:C4	30:0:1624:A:C6	3.10	0.40
30:0:2367:A:H5'	38:0:5062:HOH:O	2.18	0.40
13:M:73:ARG:HB2	30:0:1470:A:OP1	2.21	0.40
30:0:1119:G:N2	30:0:1246:A:N1	2.68	0.40
30:0:2766:A:H2'	30:0:2767:C:H6	1.86	0.40
30:0:1742:A:N6	30:0:2037:C:H42	2.14	0.40
30:0:1096:U:H2'	30:0:1097:A:O5'	2.21	0.40
30:0:302:A:C2'	30:0:303:C:C5'	2.96	0.40
30:0:1972:U:C2'	30:0:1973:A:C5'	2.99	0.40
31:9:74:G:N2	31:9:108:C:H1'	2.36	0.40
30:0:1386:G:C2	30:0:1397:C:N3	2.89	0.40
20:T:52:ARG:O	30:0:317:A:OP1	2.38	0.40
30:0:702:G:C2	30:0:703:G:C8	3.09	0.40
2:B:154:VAL:HA	2:B:155:PRO:HD3	1.82	0.40
1:A:87:GLU:HB3	1:A:92:ASN:ND2	2.36	0.40
30:0:1432:U:C6	30:0:1725:C:H1'	2.56	0.40
20:T:24:ARG:NH2	20:T:40:VAL:HA	2.36	0.40
16:P:88:GLN:HE21	30:0:1800:G:C1'	2.34	0.40
2:B:281:ASP:HB2	2:B:334:SER:HB2	2.01	0.40
30:0:1002:G:C2'	30:0:1003:U:O5'	2.70	0.40
30:0:139:C:H4'	30:0:140:G:O5'	2.21	0.40
30:0:2081:A:C6	30:0:2082:G:C5	3.09	0.40
2:B:52:VAL:O	2:B:53:LEU:HD12	2.22	0.40
30:0:2359:G:C5	30:0:2360:C:C4	3.10	0.40
2:B:29:TRP:CH2	2:B:164:THR:HA	2.55	0.40
2:B:68:THR:HG21	21:U:16:GLY:HA3	2.03	0.40
31:9:58:G:H3'	31:9:59:C:C6	2.57	0.40
1:A:75:GLY:HA2	26:Z:88:PHE:HA	2.03	0.40
30:0:2383:G:C6	30:0:2384:U:C4	3.10	0.40
30:0:2533:C:C2'	30:0:2534:U:O5'	2.69	0.40
30:0:2716:G:C4	30:0:2717:C:C6	3.09	0.40
30:0:1526:A:H4'	30:0:1527:A:O4'	2.20	0.40
30:0:1116:U:C2	30:0:1246:A:N6	2.90	0.40
30:0:1119:G:C6	30:0:1243:C:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:59:VAL:CG2	15:O:111:VAL:HG21	2.50	0.40
15:O:26:TRP:N	38:O:3062:HOH:O	2.54	0.40
30:0:878:G:C5'	38:0:9229:HOH:O	2.67	0.40
30:0:2863:G:H1'	38:0:3258:HOH:O	2.21	0.40
30:0:1592:G:C6	30:0:1593:C:N4	2.89	0.40
30:0:2669:U:N3	30:0:2670:G:N7	2.69	0.40
30:0:2831:C:H2'	30:0:2832:C:H5'	2.03	0.40
30:0:2912:C:H2'	30:0:2913:A:H5'	2.04	0.40
30:0:2591:C:H2'	30:0:2592:G:C5'	2.51	0.40
16:P:38:GLU:HA	16:P:41:ARG:HH11	1.87	0.40
3:C:183:GLY:HA2	20:T:4:PRO:HD3	2.03	0.40
2:B:146:THR:C	2:B:148:PRO:HD3	2.41	0.40
30:0:2570:G:H2'	30:0:2571:C:H6	1.86	0.40
30:0:18:C:H2'	30:0:19:U:C6	2.56	0.40
30:0:462:A:H3'	38:0:4838:HOH:O	2.21	0.40
30:0:1801:A:C2	30:0:1802:G:N9	2.90	0.40
30:0:209:G:O2'	30:0:665:A:H1'	2.22	0.40
2:B:56:ASP:HB2	2:B:322:ARG:HE	1.86	0.40
10:J:19:MET:HG3	10:J:79:PHE:CD1	2.57	0.40
20:T:55:PHE:HB2	38:T:6384:HOH:O	2.22	0.40
30:0:2370:A:O5'	30:0:2370:A:H8	2.03	0.40
30:0:71:G:H1'	38:0:5249:HOH:O	2.21	0.40
16:P:14:LEU:HD13	16:P:51:ALA:HB2	2.02	0.40
11:K:48:GLY:O	11:K:51:ASP:HB2	2.21	0.40
12:L:122:ALA:H	12:L:125:PHE:HZ	1.70	0.40
30:0:1162:G:O2'	30:0:1163:G:H5'	2.20	0.40
30:0:1211:G:C2	30:0:1212:C:C2	3.09	0.40
26:Z:80:GLN:CG	26:Z:81:CYS:N	2.85	0.40
2:B:262:ARG:HG3	30:0:2716:G:C5'	2.52	0.40
2:B:300:SER:HB3	38:0:4626:HOH:O	2.22	0.40
13:M:76:ARG:O	13:M:77:HIS:C	2.60	0.40
30:0:1561:U:C6	30:0:1562:C:H5	2.39	0.40
30:0:1733:A:C2	30:0:1734:C:H1'	2.57	0.40
30:0:2299:G:C6	30:0:2300:A:C6	3.09	0.40
30:0:662:U:O2'	30:0:748:C:O2	2.33	0.40
30:0:1117:A:C2	30:0:1244:U:C2	3.09	0.40
15:O:112:ARG:HD2	38:0:9670:HOH:O	2.21	0.40
3:C:2:GLN:HA	3:C:18:LEU:N	2.33	0.40
31:9:36:C:N4	31:9:37:C:C2	2.89	0.40
30:0:2634:G:C2	30:0:2635:A:C5	3.09	0.40
29:3:40:ARG:HG3	29:3:52:PHE:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1293:U:O2'	30:0:1294:A:H5'	2.22	0.40
30:0:1598:A:C2	30:0:1599:U:C2	3.09	0.40
30:0:2363:G:C5	30:0:2364:A:N7	2.90	0.40
1:A:199:HIS:HD2	1:A:201:PHE:HB2	1.85	0.40
30:0:2851:G:C2'	30:0:2852:A:H5'	2.52	0.40
30:0:499:G:C2'	30:0:500:G:H5'	2.51	0.40
30:0:1585:C:C6	30:0:1585:C:C3'	3.05	0.40
19:S:15:MET:O	19:S:18:MET:HB3	2.21	0.40
30:0:1362:U:C2	30:0:1363:G:C8	3.09	0.40
30:0:487:G:C4	30:0:513:A:N1	2.90	0.40
30:0:31:C:O2'	30:0:32:G:H5'	2.22	0.40
30:0:1849:G:H1'	30:0:2011:A:N1	2.37	0.40
23:W:68:THR:HG23	23:W:69:ARG:N	2.36	0.40
20:T:43:ASN:ND2	20:T:108:ARG:CZ	2.85	0.40
30:0:632:A:C5	30:0:633:C:C5	3.10	0.40
30:0:732:C:H2'	30:0:733:U:H6	1.86	0.40
30:0:1997:A:C6	30:0:1998:G:C5	3.09	0.40
19:S:6:LYS:HB2	19:S:27:ALA:O	2.21	0.40
3:C:84:VAL:O	3:C:85:LYS:HB2	2.22	0.40
30:0:1916:C:C2	30:0:1924:A:C2	3.08	0.40
30:0:1719:G:N3	38:0:3705:HOH:O	2.37	0.40
22:V:27:LEU:HA	22:V:49:LEU:HD13	2.04	0.40
21:U:6:CYS:HB2	21:U:32:CYS:HB3	2.04	0.40
30:0:199:A:H2'	30:0:201:G:C8	2.57	0.40
2:B:22:GLU:HA	2:B:205:VAL:HG21	2.04	0.40
3:C:47:GLY:HA2	3:C:92:PRO:O	2.22	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	235/240 (98%)	198 (84%)	28 (12%)	9 (4%)	4 9
2	B	335/338 (99%)	287 (86%)	42 (12%)	6 (2%)	11 27
3	C	244/246 (99%)	211 (86%)	29 (12%)	4 (2%)	12 30
4	D	134/177 (76%)	109 (81%)	22 (16%)	3 (2%)	8 22
5	E	170/178 (96%)	152 (89%)	16 (9%)	2 (1%)	16 39
6	F	117/120 (98%)	102 (87%)	11 (9%)	4 (3%)	5 10
7	G	25/348 (7%)	23 (92%)	2 (8%)	0	100 100
8	H	156/177 (88%)	139 (89%)	14 (9%)	3 (2%)	10 25
9	I	68/162 (42%)	56 (82%)	10 (15%)	2 (3%)	6 14
10	J	140/145 (97%)	125 (89%)	12 (9%)	3 (2%)	9 23
11	K	130/132 (98%)	107 (82%)	21 (16%)	2 (2%)	13 32
12	L	141/165 (86%)	112 (79%)	25 (18%)	4 (3%)	6 15
13	M	192/196 (98%)	165 (86%)	22 (12%)	5 (3%)	7 16
14	N	184/187 (98%)	156 (85%)	23 (12%)	5 (3%)	6 16
15	O	113/116 (97%)	109 (96%)	4 (4%)	0	100 100
16	P	141/149 (95%)	125 (89%)	13 (9%)	3 (2%)	9 23
17	Q	93/96 (97%)	82 (88%)	7 (8%)	4 (4%)	3 7
18	R	148/155 (96%)	132 (89%)	15 (10%)	1 (1%)	26 55
19	S	79/85 (93%)	67 (85%)	11 (14%)	1 (1%)	15 37
20	T	117/120 (98%)	95 (81%)	18 (15%)	4 (3%)	5 10
21	U	51/67 (76%)	46 (90%)	3 (6%)	2 (4%)	4 8
22	V	63/71 (89%)	57 (90%)	5 (8%)	1 (2%)	12 30
23	W	152/154 (99%)	129 (85%)	21 (14%)	2 (1%)	15 37
24	X	80/92 (87%)	68 (85%)	8 (10%)	4 (5%)	3 5
25	Y	140/241 (58%)	131 (94%)	8 (6%)	1 (1%)	26 55
26	Z	71/116 (61%)	52 (73%)	13 (18%)	6 (8%)	1 1
27	1	54/57 (95%)	48 (89%)	5 (9%)	1 (2%)	10 25
28	2	42/50 (84%)	37 (88%)	4 (10%)	1 (2%)	7 19
29	3	90/92 (98%)	73 (81%)	14 (16%)	3 (3%)	5 11
All	All	3705/4472 (83%)	3193 (86%)	426 (12%)	86 (2%)	8 20

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	123	GLY
4	D	65	GLU
4	D	137	PRO
6	F	61	MET
6	F	101	ALA
8	H	19	ARG
12	L	21	ARG
13	M	79	ALA
14	N	139	TRP
14	N	184	ILE
20	T	16	LEU
24	X	70	ILE
29	3	64	LYS
1	A	170	VAL
2	B	225	GLY
10	J	143	LYS
12	L	45	PRO
14	N	162	ASP
19	S	30	ASP
23	W	72	PRO
26	Z	85	ASP
26	Z	89	THR
28	2	18	ASN
29	3	84	ARG
1	A	24	LYS
1	A	33	GLU
2	B	183	GLU
3	C	215	ALA
6	F	69	GLU
11	K	10	GLN
11	K	83	PRO
12	L	32	ASP
14	N	165	ALA
14	N	183	ASP
17	Q	63	VAL
20	T	44	ALA
20	T	53	GLY
21	U	51	TRP
24	X	23	HIS
25	Y	193	LEU
26	Z	67	GLY
26	Z	83	TYR
27	1	54	ALA

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Mol	Chain	Res	Type
29	3	61	PRO
1	A	35	GLY
1	A	37	VAL
1	A	150	PRO
2	B	2	GLN
3	C	8	LEU
3	C	89	ALA
4	D	56	ARG
6	F	100	ASP
12	L	35	ARG
16	P	112	GLY
17	Q	48	PRO
24	X	52	PRO
24	X	78	GLU
26	Z	65	ASN
26	Z	76	THR
1	A	119	ALA
2	B	158	LYS
2	B	171	VAL
5	E	17	HIS
8	H	70	LEU
13	M	73	ARG
13	M	154	ASP
16	P	58	SER
22	V	39	ALA
23	W	49	ASN
3	C	136	VAL
5	E	122	THR
8	H	171	GLY
9	I	108	HIS
9	I	131	GLY
10	J	78	ILE
13	M	15	PRO
13	M	88	VAL
16	P	132	ASP
20	T	42	VAL
1	A	74	VAL
21	U	13	ILE
2	B	185	GLY
17	Q	18	PRO
17	Q	54	PRO
10	J	18	ILE

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Mol	Chain	Res	Type
18	R	106	GLY

5.3.2 Protein sidechains

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	179/182 (98%)	172 (96%)	7 (4%)	39	70
2	B	282/283 (100%)	261 (93%)	21 (7%)	17	39
3	C	193/193 (100%)	178 (92%)	15 (8%)	16	35
4	D	117/148 (79%)	109 (93%)	8 (7%)	20	43
5	E	152/156 (97%)	146 (96%)	6 (4%)	39	70
6	F	93/94 (99%)	89 (96%)	4 (4%)	35	66
7	G	27/282 (10%)	25 (93%)	2 (7%)	17	39
8	H	134/145 (92%)	125 (93%)	9 (7%)	20	44
9	I	58/130 (45%)	55 (95%)	3 (5%)	29	58
10	J	118/121 (98%)	112 (95%)	6 (5%)	29	59
11	K	106/106 (100%)	98 (92%)	8 (8%)	17	38
12	L	113/127 (89%)	105 (93%)	8 (7%)	18	41
13	M	158/160 (99%)	148 (94%)	10 (6%)	22	48
14	N	149/150 (99%)	143 (96%)	6 (4%)	38	69
15	O	93/94 (99%)	90 (97%)	3 (3%)	46	77
16	P	113/117 (97%)	111 (98%)	2 (2%)	66	89
17	Q	79/80 (99%)	75 (95%)	4 (5%)	29	59
18	R	117/122 (96%)	110 (94%)	7 (6%)	24	50
19	S	71/74 (96%)	67 (94%)	4 (6%)	26	54
20	T	105/106 (99%)	97 (92%)	8 (8%)	16	37
21	U	44/53 (83%)	42 (96%)	2 (4%)	34	65
22	V	51/57 (90%)	48 (94%)	3 (6%)	24	51
23	W	130/130 (100%)	124 (95%)	6 (5%)	33	64

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
24	X	66/74 (89%)	57 (86%)	9 (14%)	5 11
25	Y	120/196 (61%)	115 (96%)	5 (4%)	36 68
26	Z	60/94 (64%)	54 (90%)	6 (10%)	9 22
27	1	46/47 (98%)	45 (98%)	1 (2%)	60 86
28	2	42/46 (91%)	41 (98%)	1 (2%)	57 85
29	3	79/79 (100%)	75 (95%)	4 (5%)	29 59
All	All	3095/3646 (85%)	2917 (94%)	178 (6%)	25 52

All (178) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	51	ARG
1	A	78	ASP
1	A	122	SER
1	A	131	HIS
1	A	179	MET
1	A	182	ARG
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	114	ASP
2	B	115	VAL
2	B	132	HIS
2	B	139	ASP
2	B	162	MET
2	B	180	ASP
2	B	192	ASP
2	B	193	ILE
2	B	211	THR
2	B	234	ARG
2	B	254	GLN
2	B	277	GLU
2	B	301	VAL
2	B	309	VAL
2	B	312	ARG
2	B	319	ASP
3	C	2	GLN

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Mol	Chain	Res	Type
3	C	29	ASP
3	C	74	ASP
3	C	76	ARG
3	C	94	THR
3	C	115	LEU
3	C	131	PHE
3	C	142	ASP
3	C	187	ARG
3	C	211	ASP
3	C	223	LEU
3	C	234	VAL
3	C	236	THR
3	C	240	LEU
3	C	243	VAL
4	D	10	PHE
4	D	24	HIS
4	D	29	HIS
4	D	48	MET
4	D	50	VAL
4	D	104	PHE
4	D	149	ARG
4	D	169	THR
5	E	58	THR
5	E	116	THR
5	E	126	ILE
5	E	156	ASP
5	E	162	PHE
5	E	164	ASP
6	F	3	TYR
6	F	14	ASP
6	F	81	ASP
6	F	99	THR
7	G	64	ASN
7	G	73	ASP
8	H	62	HIS
8	H	65	LEU
8	H	69	ARG
8	H	87	LYS
8	H	91	ARG
8	H	99	ARG
8	H	126	THR
8	H	149	VAL

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Mol	Chain	Res	Type
8	H	157	TYR
9	I	82	THR
9	I	114	TYR
9	I	126	THR
10	J	46	ILE
10	J	52	GLN
10	J	74	ARG
10	J	107	ASN
10	J	120	SER
10	J	132	LEU
11	K	10	GLN
11	K	12	LEU
11	K	27	ARG
11	K	83	PRO
11	K	91	GLU
11	K	93	ASN
11	K	98	VAL
11	K	115	ARG
12	L	7	GLN
12	L	18	HIS
12	L	26	HIS
12	L	35	ARG
12	L	79	ASP
12	L	101	ASP
12	L	102	ASP
12	L	104	ASP
13	M	46	LEU
13	M	68	ARG
13	M	76	ARG
13	M	84	LYS
13	M	99	ARG
13	M	116	ASN
13	M	123	ASP
13	M	125	ARG
13	M	133	LEU
13	M	158	ARG
14	N	5	ARG
14	N	17	ARG
14	N	26	LEU
14	N	43	VAL
14	N	143	ARG
14	N	177	GLU

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Mol	Chain	Res	Type
15	O	38	ARG
15	O	47	ARG
15	O	53	GLN
16	P	91	LYS
16	P	98	ILE
17	Q	16	ASN
17	Q	54	PRO
17	Q	57	ASP
17	Q	95	GLU
18	R	13	THR
18	R	45	ASP
18	R	55	GLN
18	R	61	GLN
18	R	138	SER
18	R	142	ASP
18	R	143	VAL
19	S	7	HIS
19	S	17	ASP
19	S	44	GLN
19	S	57	THR
20	T	5	ASP
20	T	39	ASN
20	T	42	VAL
20	T	73	HIS
20	T	96	VAL
20	T	115	GLU
20	T	116	ASP
20	T	117	ASP
21	U	25	ASP
21	U	52	THR
22	V	1	THR
22	V	13	PRO
22	V	49	LEU
23	W	1	MET
23	W	78	ASP
23	W	88	THR
23	W	125	HIS
23	W	126	ASP
23	W	146	ILE
24	X	8	ARG
24	X	15	ARG
24	X	27	ASP

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Mol	Chain	Res	Type
24	X	49	ARG
24	X	51	ASP
24	X	52	PRO
24	X	72	VAL
24	X	79	GLU
24	X	88	GLU
25	Y	169	ARG
25	Y	203	VAL
25	Y	204	ARG
25	Y	220	GLU
25	Y	235	GLU
26	Z	41	ARG
26	Z	63	CYS
26	Z	66	CYS
26	Z	68	GLU
26	Z	70	ARG
26	Z	74	GLN
27	1	21	ARG
28	2	18	ASN
29	3	21	GLU
29	3	49	ASP
29	3	65	THR
29	3	89	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (80) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	29	HIS
1	A	47	HIS
1	A	176	HIS
1	A	199	HIS
2	B	27	ASN
2	B	145	HIS
2	B	188	HIS
2	B	238	ASN
2	B	260	HIS
2	B	286	ASN
2	B	320	GLN
3	C	2	GLN
3	C	67	GLN
3	C	73	GLN
3	C	129	HIS

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Mol	Chain	Res	Type
3	C	151	GLN
4	D	47	GLN
4	D	103	ASN
4	D	133	ASN
5	E	74	HIS
5	E	143	GLN
7	G	64	ASN
8	H	34	HIS
8	H	49	GLN
8	H	59	GLN
8	H	62	HIS
10	J	52	GLN
10	J	107	ASN
10	J	142	ASN
11	K	10	GLN
11	K	44	HIS
11	K	67	GLN
11	K	93	ASN
12	L	7	GLN
12	L	18	HIS
12	L	41	HIS
12	L	58	GLN
13	M	24	GLN
13	M	58	GLN
13	M	86	GLN
13	M	170	ASN
14	N	21	HIS
14	N	53	ASN
14	N	93	GLN
14	N	107	ASN
14	N	132	ASN
16	P	88	GLN
16	P	118	GLN
17	Q	16	ASN
17	Q	27	GLN
17	Q	40	HIS
18	R	94	ASN
18	R	98	ASN
18	R	123	GLN
19	S	7	HIS
19	S	9	HIS
19	S	25	GLN

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Mol	Chain	Res	Type
19	S	44	GLN
20	T	39	ASN
21	U	23	HIS
21	U	30	HIS
21	U	39	ASN
22	V	29	ASN
22	V	34	GLN
22	V	60	GLN
23	W	2	HIS
23	W	28	HIS
23	W	110	GLN
23	W	119	HIS
24	X	23	HIS
25	Y	189	ASN
26	Z	61	HIS
27	1	16	HIS
28	2	36	ASN
28	2	41	HIS
29	3	2	GLN
29	3	13	HIS
29	3	39	GLN
29	3	48	ASN
29	3	78	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
30	0	2745/2923 (93%)	263 (9%)	14 (0%)
31	9	121/122 (99%)	18 (14%)	1 (0%)
All	All	2866/3045 (94%)	281 (9%)	15 (0%)

All (281) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
30	0	11	A
30	0	31	C
30	0	67	A
30	0	69	A
30	0	70	A
30	0	71	G
30	0	86	A

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Mol	Chain	Res	Type
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	169	A
30	0	185	G
30	0	186	A
30	0	191	A
30	0	192	A
30	0	198	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
30	0	337	A
30	0	358	G
30	0	368	C
30	0	381	G
30	0	397	A
30	0	417	G
30	0	418	C
30	0	461	C
30	0	487	G
30	0	497	A
30	0	510	U
30	0	511	A
30	0	514	G

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Mol	Chain	Res	Type
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	581	G
30	0	588	G
30	0	604	G
30	0	605	C
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	699	C
30	0	701	U
30	0	705	C
30	0	746	A
30	0	759	C
30	0	776	A
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	868	G
30	0	869	G
30	0	871	G
30	0	872	U
30	0	875	A
30	0	877	G
30	0	878	G
30	0	882	A
30	0	884	C
30	0	885	G
30	0	898	G
30	0	905	C
30	0	921	G

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Mol	Chain	Res	Type
30	0	923	A
30	0	953	G
30	0	960	G
30	0	1006	A
30	0	1008	C
30	0	1029	U
30	0	1044	C
30	0	1045	G
30	0	1059	G
30	0	1060	C
30	0	1072	G
30	0	1081	A
30	0	1083	C
30	0	1088	A
30	0	1109	U
30	0	1110	G
30	0	1119	G
30	0	1121	G
30	0	1130	U
30	0	1137	G
30	0	1151	G
30	0	1161	A
30	0	1164	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	1202	A
30	0	1206	U
30	0	1207	A
30	0	1216	G
30	0	1234	U
30	0	1238	C
30	0	1239	G
30	0	1279	U
30	0	1280	A
30	0	1287	A
30	0	1289	C
30	0	1331	G

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Mol	Chain	Res	Type
30	0	1342	C
30	0	1351	G
30	0	1353	C
30	0	1354	G
30	0	1360	C
30	0	1377	C
30	0	1378	G
30	0	1380	U
30	0	1407	A
30	0	1409	G
30	0	1474	C
30	0	1488	U
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	1535	G
30	0	1559	A
30	0	1562	C
30	0	1592	G
30	0	1617	C
30	0	1625	U
30	0	1626	A
30	0	1627	G
30	0	1634	G
30	0	1656	A
30	0	1667	A
30	0	1682	A
30	0	1684	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	1730	G
30	0	1731	C
30	0	1732	A
30	0	1752	G
30	0	1778	A

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Mol	Chain	Res	Type
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	1875	A
30	0	1879	U
30	0	1885	A
30	0	1919	A
30	0	1968	A
30	0	1971	G
30	0	1973	A
30	0	1978	A
30	0	1979	G
30	0	1996	U
30	0	2004	U
30	0	2006	C
30	0	2007	A
30	0	2008	U
30	0	2012	U
30	0	2013	G
30	0	2033	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	2110	G
30	0	2134	G
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	2320	U
30	0	2321	A

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Mol	Chain	Res	Type
30	0	2354	A
30	0	2361	A
30	0	2369	A
30	0	2379	G
30	0	2419	U
30	0	2422	U
30	0	2434	A
30	0	2462	G
30	0	2466	G
30	0	2467	A
30	0	2476	C
30	0	2483	A
30	0	2507	G
30	0	2511	A
30	0	2513	A
30	0	2533	C
30	0	2537	G
30	0	2541	U
30	0	2553	A
30	0	2589	U
30	0	2601	A
30	0	2602	G
30	0	2607	U
30	0	2608	C
30	0	2613	G
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	2800	A
30	0	2811	A
30	0	2812	A
30	0	2825	C
30	0	2876	G
30	0	2890	A

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Mol	Chain	Res	Type
30	0	2896	A
30	0	2903	C
30	0	2909	G
30	0	2914	A
31	9	2	U
31	9	3	A
31	9	7	G
31	9	14	G
31	9	23	U
31	9	24	U
31	9	25	G
31	9	34	A
31	9	40	C
31	9	41	C
31	9	43	G
31	9	44	A
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 (15) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
30	0	69	A
30	0	129	A
30	0	604	G
30	0	644	G
30	0	834	G
30	0	871	G
30	0	1237	U
30	0	1352	A
30	0	1377	C
30	0	1504	A
30	0	2011	A
30	0	2466	G
30	0	2526	C
30	0	2718	C
31	9	65	A

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

5 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	OMU	0	2587	30	12,22,23	0.94	2 (16%)	19,31,34	3.13	2 (10%)
30	OMG	0	2588	30	17,26,27	1.04	1 (5%)	21,38,41	2.55	3 (14%)
30	UR3	0	2619	30	12,22,23	0.78	1 (8%)	16,32,35	0.71	0
30	PSU	0	2621	30	13,21,22	1.72	2 (15%)	18,30,33	6.15	4 (22%)
30	1MA	0	628	30,34	14,25,26	0.95	1 (7%)	15,37,40	1.16	1 (6%)

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	OMU	0	2587	30	-	0/5/27/28	0/2/2/2
30	OMG	0	2588	30	-	0/5/27/28	0/3/3/3
30	UR3	0	2619	30	-	0/3/25/26	0/2/2/2
30	PSU	0	2621	30	-	0/7/25/26	0/2/2/2
30	1MA	0	628	30,34	-	0/3/25/26	0/3/3/3

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	2621	PSU	C5-C1'	-5.24	1.47	1.52
30	0	2619	UR3	C6-C5	-2.07	1.33	1.38
30	0	2587	OMU	C6-C5	-2.01	1.33	1.38
30	0	2587	OMU	C4-N3	2.09	1.37	1.33
30	0	628	1MA	C6-N6	2.57	1.33	1.29
30	0	2621	PSU	C4-N3	2.61	1.38	1.33
30	0	2588	OMG	C6-N1	3.29	1.39	1.33

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	0	2621	PSU	N1-C2-N3	-21.60	114.55	128.33
30	0	2588	OMG	C5-C6-N1	-8.87	111.46	123.59
30	0	628	1MA	C2-N3-C4	-3.60	110.82	116.40
30	0	2587	OMU	C5-C4-N3	-3.32	114.59	123.12
30	0	2588	OMG	N3-C2-N1	-2.26	124.00	127.44
30	0	2621	PSU	O4'-C1'-C2'	2.12	106.89	104.73
30	0	2621	PSU	C6-N1-C2	2.60	119.66	115.47
30	0	2588	OMG	C6-N1-C2	6.66	125.19	115.94
30	0	2587	OMU	C4-N3-C2	13.05	127.07	114.14
30	0	2621	PSU	C4-N3-C2	13.92	127.28	115.25

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	0	2587	OMU	5	0
30	0	2588	OMG	3	0
30	0	2619	UR3	2	0
30	0	2621	PSU	2	0

5.5 Carbohydrates (i)

There are no carbohydrates in this entry.

5.6 Ligand geometry (i)

Of 305 ligands modelled in this entry, 305 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 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%)	0.39	33 (13%) 4 3	36, 78, 117, 135	0
2	B	337/338 (99%)	0.22	29 (8%) 13 10	36, 72, 106, 116	0
3	C	246/246 (100%)	0.12	16 (6%) 22 20	31, 60, 87, 97	0
4	D	140/177 (79%)	2.14	66 (47%) 0 0	91, 126, 152, 162	0
5	E	172/178 (96%)	0.43	19 (11%) 7 5	62, 89, 116, 123	0
6	F	119/120 (99%)	1.03	30 (25%) 1 1	68, 96, 130, 142	0
7	G	29/348 (8%)	1.14	7 (24%) 1 1	104, 117, 126, 127	0
8	H	160/177 (90%)	0.91	31 (19%) 1 1	57, 81, 125, 130	0
9	I	70/162 (43%)	3.42	44 (62%) 0 0	149, 172, 188, 190	0
10	J	142/145 (97%)	0.43	12 (8%) 13 10	48, 67, 90, 114	0
11	K	132/132 (100%)	0.28	9 (6%) 20 19	38, 69, 98, 107	0
12	L	145/165 (87%)	1.24	38 (26%) 1 1	50, 96, 141, 147	0
13	M	194/196 (98%)	0.81	25 (12%) 5 4	41, 61, 109, 119	0
14	N	186/187 (99%)	1.09	44 (23%) 1 1	72, 94, 145, 152	0
15	O	115/116 (99%)	0.04	7 (6%) 25 23	57, 72, 93, 98	0
16	P	143/149 (95%)	0.43	19 (13%) 4 3	52, 74, 92, 103	0
17	Q	95/96 (98%)	0.68	14 (14%) 3 2	55, 71, 88, 103	0
18	R	150/155 (96%)	0.08	4 (2%) 58 58	45, 61, 87, 109	0
19	S	81/85 (95%)	0.25	7 (8%) 13 10	61, 80, 103, 113	0
20	T	119/120 (99%)	0.87	20 (16%) 2 2	51, 74, 105, 132	0
21	U	53/67 (79%)	6.47	51 (96%) 0 0	119, 128, 137, 138	0
22	V	65/71 (91%)	1.55	24 (36%) 0 0	68, 97, 141, 146	0
23	W	154/154 (100%)	0.65	28 (18%) 2 1	49, 66, 88, 103	0
24	X	82/92 (89%)	1.09	21 (25%) 1 1	57, 81, 104, 121	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
25	Y	142/241 (58%)	0.07	8 (5%) 28 26	39, 59, 87, 116	0
26	Z	73/116 (62%)	9.05	68 (93%) 0 0	109, 128, 137, 141	0
27	1	56/57 (98%)	0.10	0 100 100	34, 47, 56, 60	0
28	2	46/50 (92%)	0.87	8 (17%) 2 1	43, 84, 116, 122	0
29	3	92/92 (100%)	9.13	90 (97%) 0 0	112, 132, 141, 144	0
30	0	2749/2923 (94%)	-0.64	9 (0%) 94 95	31, 64, 118, 195	0
31	9	122/122 (100%)	-0.85	1 (0%) 87 88	53, 94, 121, 167	0
All	All	6646/7517 (88%)	0.35	782 (11%) 6 5	31, 72, 133, 195	0

All (782) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	3	41	GLU	30.5
29	3	35	TRP	24.3
29	3	38	ARG	24.1
26	Z	45	VAL	23.9
29	3	45	GLY	23.6
29	3	34	LYS	22.0
26	Z	35	SER	21.4
29	3	42	ARG	21.2
26	Z	50	VAL	20.3
26	Z	34	SER	19.4
29	3	39	GLN	18.1
26	Z	46	SER	17.8
26	Z	56	GLU	17.7
26	Z	78	ILE	16.8
26	Z	77	GLY	16.8
26	Z	44	ARG	16.7
26	Z	58	ASN	16.6
29	3	36	ILE	16.5
29	3	44	SER	16.4
26	Z	55	SER	15.2
26	Z	43	GLY	14.9
29	3	33	MET	14.8
26	Z	38	PHE	14.8
29	3	43	ASN	14.6
29	3	11	CYS	14.6
26	Z	79	TRP	14.2
29	3	40	ARG	14.1
29	3	31	THR	13.8

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Mol	Chain	Res	Type	RSRZ
26	Z	53	ILE	13.6
29	3	13	HIS	13.5
29	3	57	GLY	13.5
26	Z	69	ASP	13.3
29	3	37	ASP	13.2
29	3	62	THR	13.1
26	Z	71	VAL	13.1
26	Z	42	TYR	13.1
13	M	80	GLY	12.9
29	3	32	GLY	12.9
21	U	9	CYS	12.8
26	Z	61	HIS	12.6
26	Z	68	GLU	12.4
29	3	22	VAL	12.3
26	Z	49	ARG	12.2
9	I	74	ILE	12.0
26	Z	62	ALA	11.8
29	3	14	CYS	11.7
29	3	71	CYS	11.7
26	Z	89	THR	11.7
29	3	75	GLY	11.4
26	Z	88	PHE	11.3
13	M	73	ARG	11.2
21	U	28	THR	11.2
26	Z	57	MET	11.1
29	3	82	GLY	11.0
13	M	90	ARG	10.8
29	3	30	GLN	10.7
21	U	54	THR	10.7
29	3	48	ASN	10.7
26	Z	36	GLY	10.6
26	Z	63	CYS	10.6
29	3	68	LYS	10.6
29	3	61	PRO	10.6
29	3	10	TYR	10.4
26	Z	59	GLU	10.3
26	Z	47	ARG	10.3
29	3	76	LYS	10.2
29	3	59	ASP	10.2
21	U	52	THR	10.2
21	U	13	ILE	10.1
29	3	49	ASP	10.0

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Mol	Chain	Res	Type	RSRZ
29	3	27	SER	9.9
26	Z	39	GLY	9.9
29	3	47	GLY	9.7
26	Z	70	ARG	9.7
21	U	10	GLY	9.5
12	L	106	VAL	9.5
26	Z	81	CYS	9.5
26	Z	80	GLN	9.4
29	3	25	VAL	9.4
29	3	56	PRO	9.3
29	3	60	LYS	9.3
29	3	74	CYS	9.1
21	U	39	ASN	9.1
20	T	112	LEU	9.1
9	I	108	HIS	9.1
29	3	19	GLU	9.0
29	3	53	SER	9.0
9	I	117	THR	8.9
29	3	83	TRP	8.9
26	Z	54	GLU	8.8
9	I	104	ALA	8.8
29	3	78	HIS	8.7
21	U	31	PHE	8.6
29	3	12	PRO	8.6
29	3	15	ASN	8.6
21	U	40	ALA	8.6
21	U	6	CYS	8.5
21	U	53	ASP	8.5
21	U	46	ALA	8.5
21	U	20	MET	8.5
21	U	30	HIS	8.4
13	M	81	ARG	8.3
13	M	89	THR	8.3
21	U	4	ARG	8.2
26	Z	76	THR	8.2
26	Z	37	ARG	8.2
26	Z	66	CYS	8.1
4	D	166	ILE	8.1
24	X	10	VAL	8.1
20	T	119	ALA	8.0
9	I	70	THR	8.0
9	I	103	ILE	8.0

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Mol	Chain	Res	Type	RSRZ
26	Z	51	ALA	7.9
29	3	23	GLU	7.9
29	3	63	LYS	7.9
21	U	8	TYR	7.8
26	Z	86	TYR	7.8
21	U	5	GLU	7.8
21	U	29	THR	7.8
29	3	77	ALA	7.7
4	D	18	ILE	7.7
26	Z	74	GLN	7.7
22	V	39	ALA	7.7
19	S	81	ILE	7.7
21	U	19	THR	7.7
21	U	15	PRO	7.6
26	Z	82	SER	7.6
29	3	69	TYR	7.6
29	3	51	LYS	7.6
29	3	72	GLY	7.6
26	Z	60	ASP	7.5
21	U	11	THR	7.5
4	D	44	ILE	7.4
4	D	69	ILE	7.4
29	3	20	HIS	7.4
21	U	25	ASP	7.4
4	D	88	LEU	7.4
21	U	23	HIS	7.3
26	Z	90	GLY	7.3
26	Z	93	TYR	7.1
28	2	36	ASN	7.1
29	3	18	GLN	7.1
9	I	97	VAL	7.1
14	N	58	LEU	7.0
26	Z	48	ARG	7.0
4	D	63	ILE	7.0
29	3	52	PHE	7.0
21	U	36	CYS	6.9
17	Q	71	TYR	6.9
26	Z	67	GLY	6.9
29	3	65	THR	6.9
4	D	70	GLY	6.8
21	U	22	VAL	6.8
21	U	48	ASN	6.7

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Mol	Chain	Res	Type	RSRZ
20	T	42	VAL	6.7
16	P	49	ILE	6.7
4	D	45	THR	6.7
9	I	66	GLY	6.6
21	U	14	GLU	6.6
29	3	16	GLU	6.6
29	3	67	LEU	6.6
29	3	80	ARG	6.5
6	F	75	ILE	6.5
21	U	7	ASP	6.5
29	3	1	MET	6.5
4	D	27	ILE	6.4
26	Z	72	ASP	6.4
4	D	157	LEU	6.4
4	D	40	ILE	6.4
9	I	112	LEU	6.3
29	3	64	LYS	6.3
26	Z	41	ARG	6.3
29	3	21	GLU	6.2
21	U	55	ALA	6.2
9	I	100	VAL	6.2
14	N	48	VAL	6.2
26	Z	92	SER	6.2
9	I	101	LYS	6.2
9	I	72	GLU	6.2
4	D	75	LEU	6.1
21	U	24	LYS	6.1
29	3	28	GLY	6.1
1	A	99	ILE	6.1
29	3	17	HIS	6.1
9	I	106	GLN	6.1
21	U	51	TRP	6.1
23	W	4	LEU	6.0
15	O	89	ILE	6.0
29	3	55	VAL	6.0
14	N	47	LEU	6.0
14	N	50	LEU	5.9
26	Z	87	LYS	5.9
23	W	34	LEU	5.9
26	Z	40	ALA	5.9
9	I	73	LEU	5.9
21	U	44	ARG	5.8

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Mol	Chain	Res	Type	RSRZ
9	I	111	LEU	5.8
29	3	46	ILE	5.8
12	L	96	VAL	5.8
29	3	84	ARG	5.7
12	L	140	VAL	5.7
9	I	132	VAL	5.7
29	3	29	ARG	5.7
12	L	120	LEU	5.7
9	I	109	PRO	5.7
4	D	87	ALA	5.6
14	N	179	LEU	5.6
21	U	32	CYS	5.6
13	M	87	GLY	5.6
6	F	98	VAL	5.6
9	I	67	VAL	5.6
31	9	1	U	5.6
26	Z	103	VAL	5.5
22	V	38	GLY	5.5
24	X	72	VAL	5.5
9	I	71	ALA	5.5
13	M	86	GLN	5.5
21	U	41	ASP	5.5
9	I	93	ALA	5.4
5	E	128	GLY	5.4
29	3	85	ALA	5.4
4	D	25	MET	5.4
29	3	91	GLN	5.3
6	F	17	LEU	5.3
1	A	58	VAL	5.3
4	D	165	PHE	5.3
21	U	47	ARG	5.3
21	U	26	GLY	5.3
4	D	84	LEU	5.2
21	U	12	ASP	5.2
29	3	50	GLY	5.2
29	3	81	GLU	5.2
20	T	101	LEU	5.2
26	Z	104	ARG	5.2
29	3	70	ARG	5.2
6	F	83	LEU	5.1
29	3	3	MET	5.1
4	D	50	VAL	5.1

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Mol	Chain	Res	Type	RSRZ
29	3	8	ASN	5.1
9	I	105	GLU	5.1
9	I	98	ASP	5.1
12	L	100	ALA	5.1
22	V	46	ILE	5.0
29	3	58	GLY	5.0
6	F	49	PHE	5.0
4	D	106	PHE	5.0
2	B	128	ILE	4.9
13	M	79	ALA	4.9
24	X	71	ARG	4.9
21	U	45	GLU	4.8
29	3	54	LYS	4.8
20	T	118	SER	4.8
29	3	66	ASP	4.8
4	D	61	PHE	4.8
9	I	78	ALA	4.8
4	D	93	LEU	4.7
8	H	48	VAL	4.7
13	M	76	ARG	4.7
14	N	92	ALA	4.7
28	2	20	ARG	4.7
29	3	90	PHE	4.7
12	L	122	ALA	4.7
20	T	35	TYR	4.6
11	K	4	LEU	4.6
29	3	24	LYS	4.6
4	D	135	VAL	4.6
17	Q	75	ILE	4.6
2	B	278	PRO	4.6
29	3	5	ARG	4.6
29	3	26	ARG	4.6
4	D	134	LEU	4.6
21	U	43	GLY	4.6
9	I	116	LEU	4.5
4	D	16	PRO	4.5
4	D	128	LEU	4.5
29	3	9	THR	4.5
3	C	5	ILE	4.5
26	Z	73	ARG	4.5
12	L	60	GLU	4.5
4	D	101	THR	4.5

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Mol	Chain	Res	Type	RSRZ
10	J	79	PHE	4.5
3	C	144	PHE	4.4
21	U	56	ARG	4.4
21	U	27	ALA	4.4
30	0	1198	U	4.4
11	K	67	GLN	4.4
26	Z	83	TYR	4.4
23	W	55	GLY	4.4
22	V	40	PRO	4.3
8	H	76	LEU	4.3
4	D	104	PHE	4.3
20	T	50	VAL	4.3
9	I	102	GLN	4.3
26	Z	85	ASP	4.3
8	H	149	VAL	4.3
23	W	5	VAL	4.3
16	P	77	ALA	4.2
4	D	83	PHE	4.2
28	2	39	ARG	4.2
4	D	10	PHE	4.2
14	N	35	VAL	4.2
29	3	2	GLN	4.2
6	F	16	ALA	4.2
22	V	56	ILE	4.1
23	W	149	LEU	4.1
22	V	31	ARG	4.1
12	L	130	ARG	4.1
13	M	77	HIS	4.1
4	D	89	PRO	4.1
12	L	91	VAL	4.1
14	N	60	SER	4.1
26	Z	52	GLU	4.1
10	J	27	ALA	4.1
21	U	17	THR	4.1
14	N	59	ALA	4.0
16	P	48	ALA	4.0
10	J	83	ILE	4.0
25	Y	193	LEU	4.0
2	B	204	GLY	4.0
24	X	41	PHE	4.0
14	N	129	ILE	4.0
6	F	97	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
23	W	96	LEU	4.0
4	D	57	THR	4.0
14	N	87	LEU	4.0
8	H	31	ILE	4.0
4	D	90	LEU	3.9
6	F	31	LYS	3.9
23	W	100	LEU	3.9
12	L	125	PHE	3.9
1	A	110	SER	3.9
4	D	130	VAL	3.9
16	P	23	PHE	3.9
16	P	80	ARG	3.9
11	K	131	ILE	3.9
26	Z	75	GLY	3.9
12	L	105	TYR	3.9
17	Q	66	LYS	3.9
20	T	74	VAL	3.9
29	3	79	LEU	3.8
8	H	94	PRO	3.8
22	V	30	ALA	3.8
21	U	18	GLY	3.8
29	3	4	PRO	3.8
17	Q	95	GLU	3.8
12	L	81	VAL	3.8
16	P	126	ALA	3.8
22	V	32	ALA	3.8
8	H	98	LEU	3.8
20	T	40	VAL	3.8
12	L	129	ALA	3.8
23	W	45	VAL	3.8
14	N	84	THR	3.7
17	Q	67	GLN	3.7
3	C	14	GLY	3.7
21	U	49	LEU	3.7
28	2	49	GLU	3.7
22	V	27	LEU	3.7
23	W	24	LEU	3.7
26	Z	65	ASN	3.7
8	H	93	PHE	3.7
9	I	127	CYS	3.7
13	M	74	LYS	3.6
21	U	16	GLY	3.6

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Mol	Chain	Res	Type	RSRZ
1	A	37	VAL	3.6
13	M	82	ARG	3.6
4	D	92	GLU	3.6
21	U	37	GLU	3.6
23	W	3	ALA	3.6
5	E	124	VAL	3.6
16	P	114	LEU	3.6
21	U	33	SER	3.6
4	D	67	ASP	3.6
24	X	85	VAL	3.6
12	L	48	LYS	3.6
10	J	70	PHE	3.6
24	X	12	ILE	3.6
9	I	119	ALA	3.6
4	D	23	VAL	3.6
2	B	181	ILE	3.5
12	L	90	ARG	3.6
9	I	88	GLN	3.5
14	N	102	LEU	3.5
4	D	172	VAL	3.5
12	L	93	VAL	3.5
4	D	64	ARG	3.5
3	C	139	VAL	3.5
4	D	43	GLU	3.5
9	I	79	GLY	3.5
14	N	127	LEU	3.5
13	M	88	VAL	3.5
20	T	62	VAL	3.5
1	A	38	ILE	3.5
9	I	110	ASP	3.5
12	L	108	VAL	3.5
5	E	118	ILE	3.5
5	E	5	LEU	3.5
12	L	75	LEU	3.5
1	A	88	ILE	3.5
25	Y	235	GLU	3.4
4	D	26	GLY	3.4
21	U	42	LEU	3.4
14	N	123	ILE	3.4
26	Z	84	CYS	3.4
8	H	38	ARG	3.4
9	I	68	PRO	3.4

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Mol	Chain	Res	Type	RSRZ
1	A	135	VAL	3.4
1	A	161	GLY	3.4
26	Z	91	GLY	3.4
9	I	76	ASP	3.4
12	L	124	ASP	3.4
12	L	121	ILE	3.4
3	C	138	VAL	3.4
3	C	6	TYR	3.4
20	T	103	LEU	3.4
8	H	160	ILE	3.4
9	I	80	PHE	3.4
12	L	76	LEU	3.4
14	N	166	ALA	3.4
9	I	131	GLY	3.3
17	Q	70	ALA	3.3
22	V	37	GLY	3.3
24	X	81	GLY	3.3
2	B	57	GLU	3.3
8	H	32	ALA	3.3
17	Q	93	ARG	3.3
8	H	97	VAL	3.3
17	Q	63	VAL	3.3
22	V	41	GLU	3.3
6	F	50	VAL	3.3
16	P	16	VAL	3.3
26	Z	100	GLY	3.3
14	N	175	LEU	3.3
6	F	99	THR	3.3
13	M	56	ALA	3.3
8	H	133	GLY	3.3
14	N	112	GLY	3.2
2	B	178	ALA	3.2
22	V	49	LEU	3.2
1	A	30	ARG	3.2
12	L	107	LYS	3.2
16	P	98	ILE	3.2
23	W	65	VAL	3.2
21	U	38	ASN	3.2
6	F	44	SER	3.2
23	W	150	LEU	3.2
25	Y	229	LEU	3.2
2	B	115	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
9	I	75	LYS	3.2
4	D	162	ALA	3.2
8	H	77	ILE	3.2
29	3	88	LEU	3.2
29	3	6	ARG	3.2
20	T	108	ARG	3.2
6	F	91	VAL	3.2
1	A	66	ARG	3.1
16	P	22	TRP	3.1
20	T	72	ILE	3.1
4	D	47	GLN	3.1
6	F	51	ALA	3.1
6	F	96	ALA	3.1
9	I	107	LYS	3.1
23	W	116	LEU	3.1
5	E	133	VAL	3.1
12	L	123	ASP	3.1
24	X	7	GLU	3.1
14	N	185	GLU	3.1
1	A	60	PHE	3.1
11	K	59	LYS	3.1
28	2	35	ARG	3.1
5	E	86	VAL	3.1
30	0	735	C	3.1
14	N	53	ASN	3.1
30	0	10	U	3.1
14	N	158	LEU	3.0
2	B	202	VAL	3.0
22	V	36	ALA	3.0
22	V	52	ALA	3.0
1	A	45	ILE	3.0
14	N	115	VAL	3.0
1	A	53	ALA	3.0
3	C	4	THR	3.0
4	D	41	LEU	3.0
14	N	186	LEU	3.0
20	T	23	VAL	3.0
13	M	54	TYR	3.0
9	I	118	ASN	3.0
14	N	27	LEU	3.0
16	P	9	LEU	3.0
23	W	66	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
23	W	79	VAL	3.0
4	D	158	ASN	3.0
13	M	118	TYR	3.0
9	I	99	GLN	3.0
14	N	24	LEU	3.0
7	G	14	GLU	3.0
10	J	71	TYR	3.0
24	X	65	ASN	3.0
4	D	62	ASP	3.0
21	U	21	PHE	3.0
24	X	80	GLU	3.0
12	L	133	VAL	3.0
28	2	21	VAL	2.9
4	D	95	THR	2.9
6	F	87	ALA	2.9
8	H	40	GLN	2.9
13	M	75	ARG	2.9
14	N	97	VAL	2.9
24	X	9	VAL	2.9
4	D	71	ALA	2.9
26	Z	101	LYS	2.9
16	P	127	GLY	2.9
29	3	73	GLU	2.9
8	H	26	ILE	2.9
1	A	128	LEU	2.9
15	O	92	VAL	2.9
24	X	37	LEU	2.9
20	T	87	VAL	2.9
25	Y	236	VAL	2.9
23	W	32	CYS	2.9
12	L	141	GLU	2.9
4	D	48	MET	2.9
14	N	8	VAL	2.8
24	X	74	ALA	2.8
19	S	20	PHE	2.8
2	B	140	LEU	2.8
21	U	50	GLU	2.8
5	E	42	VAL	2.8
4	D	52	THR	2.8
6	F	63	ILE	2.8
12	L	109	LEU	2.8
12	L	97	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
22	V	63	GLU	2.8
6	F	20	LEU	2.8
2	B	86	ALA	2.8
29	3	92	GLU	2.8
5	E	82	TYR	2.8
10	J	87	LEU	2.8
13	M	194	GLY	2.8
18	R	88	PHE	2.8
3	C	141	SER	2.8
13	M	70	GLY	2.8
3	C	140	VAL	2.8
16	P	20	ARG	2.8
19	S	80	ARG	2.8
30	0	1199	A	2.8
5	E	108	LEU	2.8
10	J	5	GLU	2.8
19	S	77	VAL	2.8
12	L	62	ALA	2.8
1	A	16	PHE	2.8
22	V	1	THR	2.8
5	E	98	GLU	2.7
12	L	3	LYS	2.7
8	H	9	TYR	2.7
14	N	172	PHE	2.7
23	W	7	LEU	2.7
8	H	86	TYR	2.7
6	F	39	SER	2.7
24	X	33	ILE	2.7
4	D	86	THR	2.7
26	Z	64	PRO	2.7
8	H	80	LEU	2.7
8	H	143	VAL	2.7
8	H	87	LYS	2.7
6	F	115	VAL	2.7
14	N	101	VAL	2.7
2	B	262	ARG	2.7
4	D	156	ARG	2.7
8	H	69	ARG	2.7
29	3	86	GLY	2.7
5	E	131	LEU	2.7
23	W	118	LEU	2.7
7	G	27	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
4	D	73	VAL	2.7
10	J	57	TYR	2.7
22	V	53	ILE	2.7
26	Z	99	GLY	2.7
23	W	53	ALA	2.7
12	L	118	LEU	2.7
28	2	44	ARG	2.7
1	A	65	ARG	2.6
16	P	27	ARG	2.6
2	B	270	ILE	2.6
7	G	23	ILE	2.6
20	T	77	VAL	2.6
26	Z	95	PRO	2.6
30	0	1202	A	2.6
11	K	88	VAL	2.6
12	L	114	VAL	2.6
28	2	25	VAL	2.6
4	D	51	ARG	2.6
4	D	94	ALA	2.6
23	W	115	THR	2.6
1	A	83	GLY	2.6
22	V	59	ILE	2.6
13	M	85	ARG	2.6
19	S	2	TRP	2.6
4	D	58	VAL	2.6
25	Y	234	VAL	2.6
9	I	113	SER	2.6
1	A	118	PHE	2.6
8	H	53	ILE	2.6
25	Y	226	ILE	2.6
4	D	91	ALA	2.5
12	L	110	GLY	2.5
19	S	68	LEU	2.5
1	A	145	MET	2.5
12	L	80	ASP	2.5
6	F	32	GLY	2.5
3	C	75	GLY	2.5
23	W	139	GLY	2.5
6	F	106	ALA	2.5
14	N	160	SER	2.5
23	W	140	LYS	2.5
1	A	42	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
18	R	46	TYR	2.5
17	Q	73	VAL	2.5
5	E	1	PRO	2.5
30	0	1195	G	2.5
16	P	21	VAL	2.5
20	T	98	VAL	2.5
24	X	69	LYS	2.5
26	Z	102	THR	2.5
17	Q	2	SER	2.5
23	W	1	MET	2.5
17	Q	84	ILE	2.4
23	W	35	VAL	2.4
2	B	62	ARG	2.4
1	A	111	SER	2.4
1	A	222	GLY	2.4
4	D	85	GLN	2.4
1	A	96	LEU	2.4
16	P	108	LEU	2.4
4	D	167	GLU	2.4
11	K	47	ALA	2.4
2	B	261	GLN	2.4
12	L	9	GLY	2.4
5	E	127	ASP	2.4
12	L	89	PHE	2.4
24	X	77	PHE	2.4
7	G	18	GLU	2.4
9	I	69	PRO	2.4
24	X	8	ARG	2.4
10	J	116	LEU	2.4
3	C	63	SER	2.4
9	I	128	THR	2.4
13	M	22	GLU	2.4
1	A	148	LEU	2.4
1	A	103	VAL	2.4
22	V	8	ILE	2.4
5	E	100	ASP	2.4
25	Y	186	ARG	2.4
3	C	8	LEU	2.4
25	Y	182	PHE	2.4
19	S	45	TYR	2.4
12	L	50	GLY	2.4
1	A	82	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
5	E	11	VAL	2.4
5	E	170	ARG	2.4
18	R	56	PRO	2.4
23	W	57	PRO	2.4
2	B	87	TYR	2.4
10	J	38	VAL	2.4
14	N	45	ALA	2.4
14	N	149	GLU	2.4
24	X	88	GLU	2.4
6	F	36	THR	2.4
2	B	142	LEU	2.3
8	H	37	GLY	2.3
14	N	137	ALA	2.3
30	0	2637	A	2.3
14	N	55	ASP	2.3
2	B	109	LEU	2.3
14	N	1	ALA	2.3
4	D	141	VAL	2.3
9	I	94	ASP	2.3
1	A	93	THR	2.3
14	N	49	THR	2.3
11	K	110	LYS	2.3
13	M	91	ILE	2.3
5	E	81	GLU	2.3
9	I	81	GLU	2.3
23	W	42	ARG	2.3
4	D	80	ALA	2.3
1	A	152	CYS	2.3
1	A	57	ALA	2.3
4	D	173	GLU	2.3
5	E	161	VAL	2.3
15	O	45	LEU	2.3
8	H	35	LYS	2.3
12	L	139	SER	2.3
18	R	14	ALA	2.3
1	A	94	LEU	2.3
2	B	269	LEU	2.3
17	Q	41	LEU	2.3
6	F	86	ALA	2.3
13	M	72	ALA	2.3
1	A	74	VAL	2.3
6	F	6	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
6	F	74	PHE	2.2
26	Z	105	ARG	2.2
14	N	139	TRP	2.2
4	D	49	PRO	2.2
14	N	88	ALA	2.2
30	0	2825	C	2.2
15	O	88	LYS	2.2
20	T	31	LEU	2.2
4	D	98	PHE	2.2
22	V	33	VAL	2.2
12	L	145	LEU	2.2
29	3	7	PHE	2.2
14	N	51	GLY	2.2
8	H	54	VAL	2.2
20	T	67	LEU	2.2
8	H	82	GLU	2.2
30	0	1203	G	2.2
2	B	45	LYS	2.2
11	K	82	ARG	2.2
2	B	290	VAL	2.2
5	E	102	VAL	2.2
8	H	169	GLU	2.2
2	B	26	PHE	2.2
2	B	209	LYS	2.2
8	H	123	ILE	2.1
14	N	34	LEU	2.1
22	V	62	GLU	2.1
2	B	205	VAL	2.1
4	D	74	THR	2.1
10	J	26	VAL	2.1
2	B	101	TRP	2.1
15	O	54	GLU	2.1
15	O	76	VAL	2.1
14	N	156	GLU	2.1
22	V	60	GLN	2.1
6	F	95	ALA	2.1
16	P	3	LEU	2.1
24	X	14	LEU	2.1
7	G	15	TRP	2.1
2	B	148	PRO	2.1
15	O	91	GLN	2.1
3	C	204	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
6	F	119	ARG	2.1
6	F	40	ILE	2.1
17	Q	85	ILE	2.1
4	D	68	PRO	2.1
4	D	160	ALA	2.1
14	N	23	ARG	2.1
22	V	9	ARG	2.1
14	N	66	LEU	2.1
22	V	24	LYS	2.1
14	N	75	THR	2.1
2	B	74	ILE	2.1
3	C	157	LEU	2.1
23	W	107	LEU	2.1
6	F	108	VAL	2.1
7	G	65	THR	2.1
8	H	158	ASN	2.1
16	P	40	VAL	2.1
1	A	54	PRO	2.1
1	A	112	PRO	2.1
16	P	25	PRO	2.1
7	G	63	ARG	2.1
8	H	16	ALA	2.1
24	X	29	ALA	2.1
24	X	58	ALA	2.1
6	F	47	LEU	2.0
2	B	330	VAL	2.0
11	K	132	VAL	2.0
3	C	192	ILE	2.0
3	C	62	GLY	2.0
8	H	91	ARG	2.0
9	I	134	ILE	2.0
10	J	78	ILE	2.0
13	M	68	ARG	2.0
17	Q	25	PRO	2.0
20	T	55	PHE	2.0
13	M	55	LYS	2.0
23	W	51	PHE	2.0
4	D	66	GLY	2.0
2	B	73	VAL	2.0
2	B	311	PHE	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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(Å^2)	Q<0.9
30	UR3	0	2619	21/22	0.98	0.14	-	56,57,60,60	0
30	OMU	0	2587	21/22	0.98	0.13	-	51,52,54,56	0
30	1MA	0	628	23/24	0.98	0.17	-	37,44,45,46	0
30	PSU	0	2621	20/21	0.96	0.20	-	49,51,60,60	0
30	OMG	0	2588	24/25	0.97	0.13	-	48,51,54,55	0

6.3 Carbohydrates (i)

There are no carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(Å^2)	Q<0.9
35	CL	B	8819	1/1	0.89	1.19	76.98	83,83,83,83	0
36	SR	0	9007	1/1	0.98	1.35	65.08	200,200,200,200	0
33	K	0	8401	1/1	0.98	0.62	51.87	145,145,145,145	0
36	SR	0	8957	1/1	0.71	1.77	47.66	200,200,200,200	0
36	SR	0	8982	1/1	0.55	0.77	44.48	200,200,200,200	0
34	NA	0	8547	1/1	0.95	0.49	36.94	115,115,115,115	0
34	NA	0	8564	1/1	0.95	0.68	32.23	87,87,87,87	0
34	NA	0	8562	1/1	0.70	1.00	31.44	83,83,83,83	0
34	NA	0	8559	1/1	0.98	0.50	22.25	96,96,96,96	0
34	NA	L	8568	1/1	0.00	0.63	15.97	59,59,59,59	0
34	NA	0	8546	1/1	0.96	1.02	12.01	108,108,108,108	0
36	SR	0	8969	1/1	0.90	1.49	11.87	200,200,200,200	0
34	NA	B	8552	1/1	0.81	0.53	11.05	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
35	CL	0	8805	1/1	0.93	0.37	11.00	105,105,105,105	0
34	NA	0	8542	1/1	0.97	0.41	10.82	79,79,79,79	0
34	NA	0	8567	1/1	0.99	0.43	10.35	83,83,83,83	0
34	NA	0	8528	1/1	0.69	0.40	9.22	113,113,113,113	0
32	MG	0	8008	1/1	0.86	0.20	7.40	26,26,26,26	0
34	NA	0	8535	1/1	0.96	0.24	7.14	58,58,58,58	0
36	SR	B	8987	1/1	0.74	0.79	6.87	200,200,200,200	0
32	MG	0	8079	1/1	0.94	0.30	6.61	57,57,57,57	0
32	MG	0	8083	1/1	0.99	0.36	6.10	58,58,58,58	0
34	NA	R	8575	1/1	0.77	0.49	4.99	97,97,97,97	0
34	NA	0	8522	1/1	0.88	0.26	4.48	130,130,130,130	0
34	NA	0	8523	1/1	0.94	0.22	4.44	51,51,51,51	0
34	NA	0	8517	1/1	0.93	0.22	4.42	69,69,69,69	0
32	MG	0	8043	1/1	0.96	0.22	4.37	62,62,62,62	0
36	SR	0	8903	1/1	0.99	0.23	4.35	63,63,63,63	0
34	NA	0	8504	1/1	0.97	0.33	4.24	41,41,41,41	0
34	NA	0	8521	1/1	0.99	0.27	4.10	40,40,40,40	0
32	MG	0	8009	1/1	0.98	0.24	3.89	24,24,24,24	0
34	NA	0	8563	1/1	0.95	0.25	3.48	66,66,66,66	0
32	MG	Y	8086	1/1	0.99	0.26	3.22	52,52,52,52	0
36	SR	0	8970	1/1	0.91	0.15	3.16	158,158,158,158	0
36	SR	0	8992	1/1	0.97	0.23	2.84	141,141,141,141	0
35	CL	M	8818	1/1	0.94	0.29	2.74	58,58,58,58	0
34	NA	0	8555	1/1	0.93	0.26	2.60	80,80,80,80	0
34	NA	0	8556	1/1	0.89	0.38	2.52	94,94,94,94	0
35	CL	J	8821	1/1	0.74	0.26	2.46	99,99,99,99	0
32	MG	0	8003	1/1	0.94	0.20	2.24	27,27,27,27	0
34	NA	0	8565	1/1	0.99	0.16	2.20	85,85,85,85	0
32	MG	0	8011	1/1	0.93	0.21	2.12	33,33,33,33	0
32	MG	0	8067	1/1	0.92	0.27	1.92	47,47,47,47	0
34	NA	0	8534	1/1	0.97	0.27	1.88	53,53,53,53	0
32	MG	0	8070	1/1	0.99	0.16	1.54	39,39,39,39	0
36	SR	0	8904	1/1	0.99	0.23	1.53	73,73,73,73	0
32	MG	0	8012	1/1	1.00	0.22	1.50	26,26,26,26	0
34	NA	0	8507	1/1	0.81	0.20	1.10	38,38,38,38	0
36	SR	0	8935	1/1	0.97	0.15	0.89	101,101,101,101	0
32	MG	0	8084	1/1	0.99	0.13	0.70	37,37,37,37	0
34	NA	0	8537	1/1	0.94	0.12	0.46	46,46,46,46	0
32	MG	A	8051	1/1	0.95	0.23	0.34	95,95,95,95	0
34	NA	0	8551	1/1	0.99	0.16	0.33	75,75,75,75	0
36	SR	0	9001	1/1	0.73	0.13	0.33	200,200,200,200	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
32	MG	0	8041	1/1	0.98	0.19	0.32	25,25,25,25	0
34	NA	0	8560	1/1	0.56	0.43	-0.03	80,80,80,80	0
34	NA	0	8519	1/1	0.88	0.19	-0.06	51,51,51,51	0
34	NA	0	8513	1/1	0.99	0.18	-0.12	67,67,67,67	0
36	SR	0	8972	1/1	0.92	0.18	-0.18	138,138,138,138	0
33	K	M	8402	1/1	0.97	0.21	-0.24	96,96,96,96	0
34	NA	0	8530	1/1	0.98	0.17	-0.37	53,53,53,53	0
34	NA	Q	8540	1/1	0.59	0.12	-0.44	74,74,74,74	0
32	MG	0	8062	1/1	0.99	0.18	-0.44	66,66,66,66	0
32	MG	0	8052	1/1	0.95	0.13	-0.81	63,63,63,63	0
37	CD	Z	8703	1/1	0.96	0.43	-0.82	188,188,188,188	0
32	MG	A	8050	1/1	0.97	0.12	-0.89	69,69,69,69	0
36	SR	A	8930	1/1	0.91	0.11	-0.96	131,131,131,131	0
34	NA	9	8572	1/1	0.92	0.08	-0.98	71,71,71,71	0
34	NA	M	8539	1/1	0.97	0.12	-1.08	38,38,38,38	0
37	CD	1	8702	1/1	0.98	0.11	-1.10	78,78,78,78	0
32	MG	T	8057	1/1	0.80	0.08	-1.14	80,80,80,80	0
36	SR	0	8910	1/1	0.98	0.13	-1.23	118,118,118,118	0
36	SR	A	8929	1/1	0.96	0.09	-1.27	139,139,139,139	0
32	MG	0	8002	1/1	0.99	0.14	-1.36	31,31,31,31	0
34	NA	J	8538	1/1	0.92	0.12	-1.39	84,84,84,84	0
36	SR	0	8985	1/1	0.97	0.09	-1.43	168,168,168,168	0
36	SR	3	8932	1/1	0.74	0.11	-1.46	148,148,148,148	0
35	CL	L	8810	1/1	0.85	0.12	-1.47	91,91,91,91	0
36	SR	2	8947	1/1	0.96	0.12	-1.49	195,195,195,195	0
32	MG	0	8058	1/1	0.96	0.07	-1.50	7,7,7,7	0
32	MG	0	8044	1/1	0.98	0.10	-1.57	59,59,59,59	0
37	CD	U	8701	1/1	0.69	0.39	-1.61	180,180,180,180	0
37	CD	3	8704	1/1	0.81	0.58	-1.65	183,183,183,183	0
32	MG	0	8029	1/1	0.97	0.10	-1.78	62,62,62,62	0
34	NA	R	8533	1/1	0.96	0.07	-1.78	94,94,94,94	0
36	SR	0	8943	1/1	0.97	0.10	-1.83	89,89,89,89	0
32	MG	0	8004	1/1	0.99	0.11	-1.90	19,19,19,19	0
32	MG	0	8010	1/1	0.96	0.13	-1.90	46,46,46,46	0
35	CL	0	8812	1/1	0.97	0.08	-1.97	70,70,70,70	0
36	SR	0	8936	1/1	0.94	0.10	-2.01	114,114,114,114	0
32	MG	0	8001	1/1	0.98	0.14	-2.04	42,42,42,42	0
34	NA	0	8515	1/1	0.96	0.09	-2.06	35,35,35,35	0
36	SR	1	8913	1/1	1.00	0.10	-2.12	108,108,108,108	0
32	MG	0	8028	1/1	0.99	0.08	-2.13	13,13,13,13	0
32	MG	0	8016	1/1	0.98	0.15	-2.17	41,41,41,41	0
36	SR	0	8948	1/1	0.99	0.09	-2.18	110,110,110,110	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
32	MG	0	8034	1/1	0.98	0.06	-2.28	50,50,50,50	0
34	NA	0	8557	1/1	0.90	0.06	-2.28	70,70,70,70	0
32	MG	0	8013	1/1	0.99	0.06	-2.40	19,19,19,19	0
32	MG	0	8045	1/1	0.99	0.09	-2.59	28,28,28,28	0
32	MG	0	8014	1/1	0.99	0.08	-3.07	25,25,25,25	0
32	MG	0	8021	1/1	0.97	0.07	-3.09	31,31,31,31	0
32	MG	0	8006	1/1	0.98	0.10	-3.11	44,44,44,44	0
34	NA	0	8520	1/1	0.99	0.06	-3.23	44,44,44,44	0
32	MG	0	8065	1/1	0.86	0.10	-3.51	66,66,66,66	0
36	SR	0	8975	1/1	0.84	0.06	-3.61	189,189,189,189	0
36	SR	0	8945	1/1	0.98	0.07	-3.64	119,119,119,119	0
32	MG	0	8025	1/1	1.00	0.04	-3.66	23,23,23,23	0
32	MG	0	8075	1/1	0.97	0.06	-3.94	50,50,50,50	0
35	CL	3	8804	1/1	0.79	0.11	-4.49	98,98,98,98	0
36	SR	0	8944	1/1	0.99	0.05	-5.00	168,168,168,168	0
36	SR	0	8902	1/1	1.00	0.07	-5.05	72,72,72,72	0
36	SR	0	8949	1/1	0.99	0.07	-6.72	128,128,128,128	0
36	SR	0	8923	1/1	0.97	0.09	-6.87	108,108,108,108	0
32	MG	0	8007	1/1	0.97	0.07	-8.18	21,21,21,21	0
34	NA	0	8550	1/1	0.95	0.12	-8.88	129,129,129,129	0
36	SR	0	8940	1/1	0.99	0.10	-	93,93,93,93	0
32	MG	0	8068	1/1	0.85	0.08	-	44,44,44,44	0
35	CL	0	8815	1/1	0.80	0.24	-	130,130,130,130	0
34	NA	S	8510	1/1	0.96	0.06	-	41,41,41,41	0
36	SR	0	8959	1/1	0.87	0.06	-	190,190,190,190	0
36	SR	0	8937	1/1	0.98	0.26	-	126,126,126,126	0
36	SR	0	8942	1/1	0.96	0.05	-	123,123,123,123	0
36	SR	0	8939	1/1	0.97	0.08	-	155,155,155,155	0
32	MG	0	8076	1/1	1.00	0.33	-	76,76,76,76	0
34	NA	0	8544	1/1	0.82	0.44	-	76,76,76,76	0
34	NA	0	8536	1/1	0.88	0.13	-	64,64,64,64	0
36	SR	0	8964	1/1	0.84	0.25	-	176,176,176,176	0
32	MG	0	8078	1/1	0.98	0.35	-	72,72,72,72	0
36	SR	0	8907	1/1	1.00	0.17	-	60,60,60,60	0
36	SR	0	8984	1/1	0.90	0.03	-	124,124,124,124	0
36	SR	0	9008	1/1	0.98	0.10	-	94,94,94,94	0
32	MG	0	8038	1/1	0.92	0.12	-	94,94,94,94	0
35	CL	0	8817	1/1	0.96	0.10	-	84,84,84,84	0
32	MG	0	8056	1/1	0.96	0.14	-	47,47,47,47	0
32	MG	0	8046	1/1	0.91	0.07	-	44,44,44,44	0
36	SR	0	8956	1/1	0.91	0.23	-	200,200,200,200	0
32	MG	0	8042	1/1	0.92	0.05	-	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
36	SR	0	8920	1/1	0.97	0.08	-	145,145,145,145	0
32	MG	0	8022	1/1	0.98	0.20	-	25,25,25,25	0
36	SR	0	8918	1/1	0.99	0.10	-	88,88,88,88	0
36	SR	0	8988	1/1	0.89	0.05	-	200,200,200,200	0
35	CL	0	8803	1/1	0.92	0.14	-	82,82,82,82	0
34	NA	0	8512	1/1	0.99	0.24	-	40,40,40,40	0
36	SR	0	8971	1/1	0.73	0.16	-	200,200,200,200	0
32	MG	0	8019	1/1	0.96	0.18	-	19,19,19,19	0
36	SR	0	8979	1/1	0.43	0.70	-	200,200,200,200	0
36	SR	0	8998	1/1	0.95	0.65	-	200,200,200,200	0
34	NA	0	8506	1/1	0.89	0.55	-	91,91,91,91	0
32	MG	0	8018	1/1	0.96	0.08	-	34,34,34,34	0
34	NA	0	8502	1/1	0.90	0.18	-	66,66,66,66	0
34	NA	0	8541	1/1	0.98	0.18	-	60,60,60,60	0
32	MG	0	8088	1/1	0.97	0.17	-	53,53,53,53	0
32	MG	0	8023	1/1	0.92	0.22	-	38,38,38,38	0
36	SR	F	9005	1/1	0.88	0.15	-	170,170,170,170	0
34	NA	0	8548	1/1	0.99	0.05	-	44,44,44,44	0
37	CD	O	8705	1/1	0.99	0.04	-	105,105,105,105	0
32	MG	0	8033	1/1	0.96	0.20	-	69,69,69,69	0
36	SR	1	8952	1/1	0.97	0.12	-	92,92,92,92	0
35	CL	O	8808	1/1	0.89	0.39	-	114,114,114,114	0
32	MG	0	8090	1/1	0.99	0.11	-	57,57,57,57	0
36	SR	0	8991	1/1	0.57	0.09	-	188,188,188,188	0
36	SR	0	8924	1/1	0.97	0.23	-	131,131,131,131	0
36	SR	0	8966	1/1	0.99	0.07	-	101,101,101,101	0
36	SR	0	8990	1/1	0.98	0.14	-	113,113,113,113	0
36	SR	R	8912	1/1	0.99	0.24	-	107,107,107,107	0
32	MG	0	8035	1/1	0.99	0.16	-	76,76,76,76	0
36	SR	0	8914	1/1	0.98	0.22	-	133,133,133,133	0
35	CL	0	8814	1/1	0.97	0.28	-	51,51,51,51	0
34	NA	0	8571	1/1	0.86	0.36	-	99,99,99,99	0
36	SR	0	8981	1/1	0.98	0.13	-	198,198,198,198	0
32	MG	0	8092	1/1	0.90	0.10	-	53,53,53,53	0
32	MG	0	8048	1/1	0.99	0.31	-	26,26,26,26	0
32	MG	K	8054	1/1	0.93	0.15	-	42,42,42,42	0
35	CL	Y	8820	1/1	0.96	0.13	-	58,58,58,58	0
34	NA	0	8558	1/1	0.97	0.24	-	82,82,82,82	0
32	MG	0	8020	1/1	0.94	0.19	-	50,50,50,50	0
32	MG	0	8089	1/1	0.96	0.27	-	56,56,56,56	0
34	NA	0	8526	1/1	0.95	0.12	-	67,67,67,67	0
36	SR	0	8906	1/1	1.00	0.14	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
36	SR	0	8934	1/1	0.98	0.10	-	138,138,138,138	0
36	SR	9	9003	1/1	0.86	0.04	-	200,200,200,200	0
32	MG	0	8032	1/1	0.87	0.05	-	47,47,47,47	0
34	NA	0	8573	1/1	0.94	0.24	-	89,89,89,89	0
36	SR	0	8983	1/1	0.83	0.30	-	200,200,200,200	0
34	NA	0	8525	1/1	0.90	0.55	-	113,113,113,113	0
32	MG	0	8060	1/1	0.98	0.04	-	58,58,58,58	0
36	SR	0	8954	1/1	0.98	0.15	-	115,115,115,115	0
36	SR	0	8978	1/1	0.96	0.07	-	132,132,132,132	0
32	MG	0	8073	1/1	0.97	0.09	-	89,89,89,89	0
32	MG	0	8087	1/1	0.81	0.06	-	22,22,22,22	0
34	NA	0	8554	1/1	0.95	0.38	-	124,124,124,124	0
36	SR	0	8922	1/1	0.94	0.27	-	181,181,181,181	0
35	CL	R	8806	1/1	0.98	0.15	-	66,66,66,66	0
36	SR	0	8974	1/1	0.85	0.41	-	196,196,196,196	0
36	SR	0	8931	1/1	0.98	0.15	-	120,120,120,120	0
32	MG	0	8031	1/1	0.76	0.12	-	68,68,68,68	0
34	NA	0	8566	1/1	0.95	0.25	-	86,86,86,86	0
36	SR	0	8976	1/1	0.92	0.26	-	195,195,195,195	0
32	MG	0	8085	1/1	0.94	0.11	-	67,67,67,67	0
36	SR	0	8901	1/1	1.00	0.14	-	73,73,73,73	0
36	SR	0	8993	1/1	0.81	0.05	-	200,200,200,200	0
36	SR	0	8921	1/1	0.99	0.09	-	88,88,88,88	0
36	SR	0	8953	1/1	0.89	0.33	-	179,179,179,179	0
32	MG	0	8026	1/1	0.94	0.14	-	37,37,37,37	0
36	SR	9	8980	1/1	0.98	0.15	-	191,191,191,191	0
36	SR	0	8926	1/1	0.95	0.23	-	131,131,131,131	0
35	CL	N	8807	1/1	0.82	0.50	-	99,99,99,99	0
34	NA	R	8532	1/1	0.87	0.21	-	68,68,68,68	0
32	MG	0	8080	1/1	0.98	0.27	-	65,65,65,65	0
34	NA	9	8543	1/1	0.97	0.26	-	51,51,51,51	0
36	SR	B	8950	1/1	0.92	0.15	-	123,123,123,123	0
32	MG	Y	8077	1/1	0.85	0.41	-	58,58,58,58	0
34	NA	0	8501	1/1	0.84	0.26	-	53,53,53,53	0
34	NA	0	8570	1/1	0.81	0.18	-	57,57,57,57	0
36	SR	0	8916	1/1	0.99	0.05	-	110,110,110,110	0
32	MG	0	8063	1/1	0.99	0.12	-	60,60,60,60	0
32	MG	0	8064	1/1	0.94	0.23	-	51,51,51,51	0
34	NA	0	8553	1/1	0.56	0.22	-	81,81,81,81	0
32	MG	0	8024	1/1	0.97	0.03	-	39,39,39,39	0
34	NA	0	8545	1/1	0.74	0.42	-	74,74,74,74	0
32	MG	0	8069	1/1	0.99	0.13	-	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
34	NA	0	8529	1/1	0.91	0.15	-	61,61,61,61	0
36	SR	0	8977	1/1	0.92	0.05	-	200,200,200,200	0
34	NA	0	8549	1/1	0.82	0.28	-	96,96,96,96	0
32	MG	0	8082	1/1	0.95	0.20	-	62,62,62,62	0
32	MG	0	8036	1/1	0.99	0.10	-	62,62,62,62	0
36	SR	0	8989	1/1	0.88	0.13	-	174,174,174,174	0
36	SR	0	9000	1/1	0.86	0.16	-	200,200,200,200	0
36	SR	0	8960	1/1	0.73	0.06	-	156,156,156,156	0
35	CL	0	8813	1/1	0.97	0.21	-	64,64,64,64	0
35	CL	J	8801	1/1	0.75	0.22	-	85,85,85,85	0
36	SR	0	8911	1/1	0.95	0.14	-	100,100,100,100	0
32	MG	0	8061	1/1	0.96	0.30	-	47,47,47,47	0
34	NA	0	8561	1/1	0.97	0.15	-	53,53,53,53	0
36	SR	0	8917	1/1	0.98	0.10	-	111,111,111,111	0
32	MG	0	8030	1/1	0.95	0.91	-	75,75,75,75	0
35	CL	0	8822	1/1	0.61	0.92	-	140,140,140,140	0
34	NA	0	8531	1/1	0.98	0.18	-	54,54,54,54	0
36	SR	0	8933	1/1	0.99	0.16	-	126,126,126,126	0
34	NA	0	8516	1/1	0.92	0.22	-	27,27,27,27	0
34	NA	0	8569	1/1	0.97	0.12	-	71,71,71,71	0
34	NA	0	8514	1/1	0.96	0.39	-	74,74,74,74	0
32	MG	0	8055	1/1	0.97	0.30	-	60,60,60,60	0
36	SR	0	8951	1/1	0.95	0.17	-	183,183,183,183	0
36	SR	0	8915	1/1	0.96	0.12	-	123,123,123,123	0
36	SR	0	8968	1/1	0.84	0.18	-	175,175,175,175	0
32	MG	0	8093	1/1	0.91	0.16	-	48,48,48,48	0
36	SR	J	8986	1/1	0.91	0.33	-	200,200,200,200	0
32	MG	0	8053	1/1	0.92	0.13	-	88,88,88,88	0
36	SR	0	9006	1/1	0.64	0.52	-	200,200,200,200	0
32	MG	0	8039	1/1	0.96	0.20	-	94,94,94,94	0
36	SR	0	8958	1/1	1.00	0.13	-	126,126,126,126	0
34	NA	0	8527	1/1	0.99	0.31	-	92,92,92,92	0
32	MG	0	8066	1/1	0.75	0.45	-	71,71,71,71	0
36	SR	0	8994	1/1	0.98	0.12	-	200,200,200,200	0
36	SR	0	8997	1/1	0.94	0.90	-	200,200,200,200	0
36	SR	0	8928	1/1	0.80	0.12	-	156,156,156,156	0
36	SR	0	8955	1/1	0.82	0.11	-	200,200,200,200	0
34	NA	C	8503	1/1	0.99	0.12	-	36,36,36,36	0
32	MG	0	8049	1/1	0.94	0.26	-	82,82,82,82	0
32	MG	0	8047	1/1	0.99	0.40	-	90,90,90,90	0
36	SR	0	8996	1/1	0.98	0.48	-	200,200,200,200	0
36	SR	0	9004	1/1	0.78	1.33	-	200,200,200,200	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
32	MG	9	8040	1/1	0.96	0.18	-	101,101,101,101	0
36	SR	0	8995	1/1	0.98	0.16	-	123,123,123,123	0
32	MG	0	8027	1/1	1.00	0.10	-	44,44,44,44	0
35	CL	J	8802	1/1	0.86	0.11	-	86,86,86,86	0
32	MG	0	8017	1/1	0.99	0.15	-	28,28,28,28	0
35	CL	Q	8811	1/1	0.96	0.68	-	124,124,124,124	0
34	NA	0	8518	1/1	0.80	0.85	-	91,91,91,91	0
34	NA	0	8508	1/1	0.89	0.35	-	118,118,118,118	0
36	SR	0	8963	1/1	0.94	0.12	-	117,117,117,117	0
32	MG	0	8091	1/1	0.96	0.31	-	67,67,67,67	0
36	SR	0	8962	1/1	0.94	0.06	-	168,168,168,168	0
34	NA	0	8574	1/1	0.94	1.44	-	92,92,92,92	0
32	MG	9	8074	1/1	0.85	0.23	-	97,97,97,97	0
32	MG	0	8037	1/1	0.98	0.31	-	92,92,92,92	0
36	SR	0	8973	1/1	0.99	0.16	-	142,142,142,142	0
36	SR	S	8961	1/1	0.98	0.10	-	130,130,130,130	0
36	SR	0	8965	1/1	0.95	0.22	-	160,160,160,160	0
36	SR	0	8927	1/1	0.94	0.10	-	171,171,171,171	0
32	MG	0	8059	1/1	0.98	0.06	-	55,55,55,55	0
34	NA	0	8505	1/1	0.99	0.23	-	37,37,37,37	0
32	MG	0	8072	1/1	0.99	0.09	-	45,45,45,45	0
32	MG	0	8005	1/1	0.98	0.22	-	24,24,24,24	0
36	SR	0	9002	1/1	0.96	0.14	-	200,200,200,200	0
35	CL	J	8816	1/1	0.94	2.10	-	99,99,99,99	0
36	SR	0	8946	1/1	0.97	0.24	-	144,144,144,144	0
32	MG	0	8081	1/1	0.90	0.38	-	116,116,116,116	0
32	MG	0	8071	1/1	0.99	0.13	-	78,78,78,78	0
35	CL	A	8809	1/1	0.97	0.35	-	116,116,116,116	0
36	SR	0	8941	1/1	0.99	0.25	-	141,141,141,141	0
36	SR	0	8908	1/1	0.92	0.10	-	99,99,99,99	0
36	SR	0	8967	1/1	0.99	0.06	-	163,163,163,163	0
32	MG	0	8015	1/1	0.95	0.13	-	30,30,30,30	0
34	NA	0	8511	1/1	0.93	0.09	-	53,53,53,53	0
36	SR	0	8919	1/1	0.89	0.09	-	185,185,185,185	0
36	SR	0	8905	1/1	0.99	0.28	-	68,68,68,68	0
36	SR	0	8925	1/1	0.95	0.14	-	98,98,98,98	0
36	SR	0	8938	1/1	0.92	0.06	-	200,200,200,200	0
34	NA	0	8524	1/1	0.81	0.42	-	53,53,53,53	0
36	SR	3	8999	1/1	0.69	0.42	-	200,200,200,200	0
34	NA	0	8509	1/1	0.66	0.43	-	84,84,84,84	0
36	SR	0	8909	1/1	0.99	0.08	-	100,100,100,100	0

6.5 Other polymers (i)

There are no such residues in this entry.