Full wwPDB X-ray Structure Validation Report ⓘ

Oct 12, 2021 – 01:44 PM EDT

PDB ID	:	1YHQ
Title	:	Crystal Structure Of Azithromycin Bound To The G2099A Mutant 50S Ribosomal Subunit Of Haloarcula Marismortui
Authors	:	Tu, D.; Blaha, G.; Moore, P.B.; Steitz, T.A.
Deposited on	:	2005-01-10
Resolution	:	2.40 Å(reported)

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

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

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

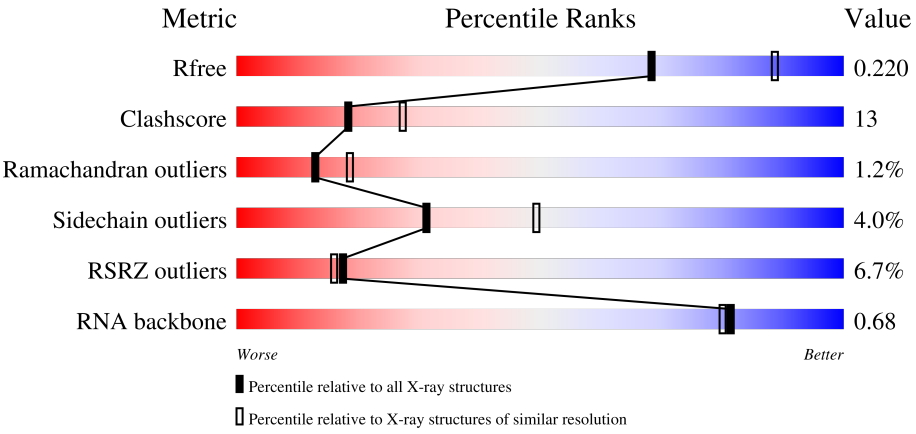
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.23.2
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.23.2

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 2.40 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3907 (2.40-2.40)
Clashscore	141614	4398 (2.40-2.40)
Ramachandran outliers	138981	4318 (2.40-2.40)
Sidechain outliers	138945	4319 (2.40-2.40)
RSRZ outliers	127900	3811 (2.40-2.40)
RNA backbone	3102	1174 (2.80-2.00)

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

Mol	Chain	Length	Quality of chain
1	0	2922	3% 65% 24% · 6%
2	9	122	5% 60% 30% 9% ·
3	A	240	5% 63% 30% 5% ·
4	B	338	3% 60% 36% ·

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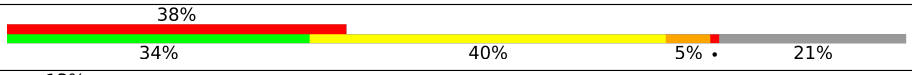
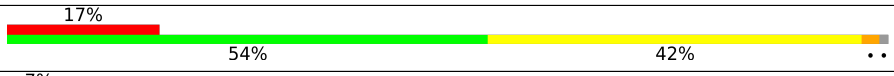
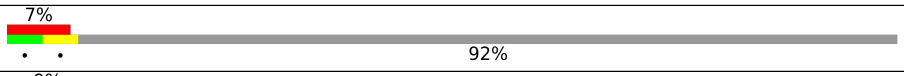
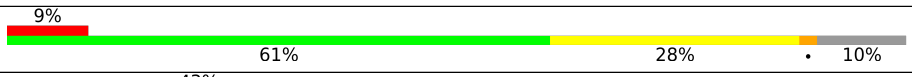
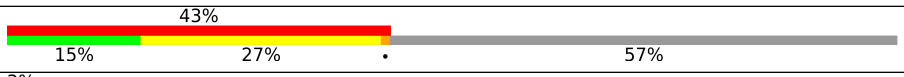
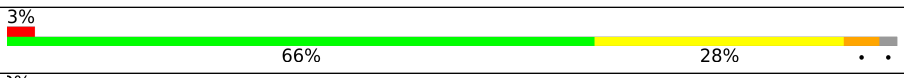
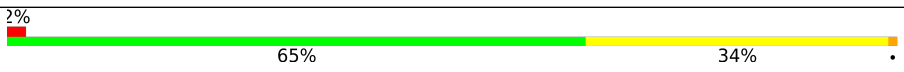
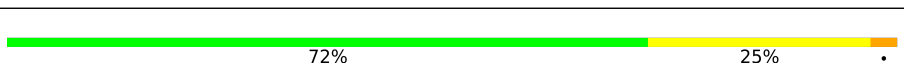
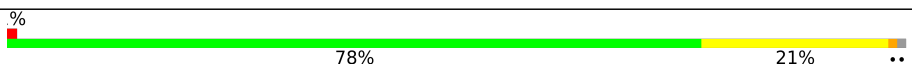
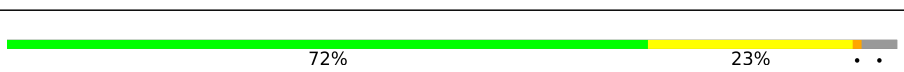
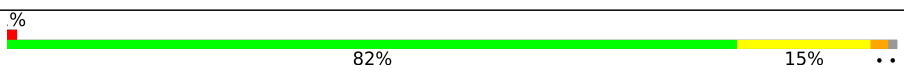
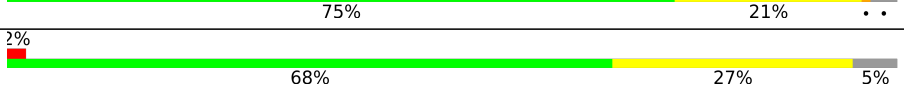
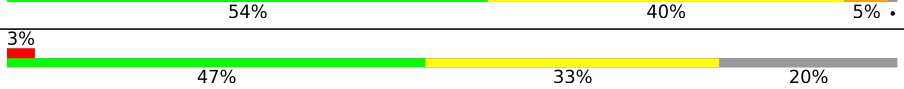
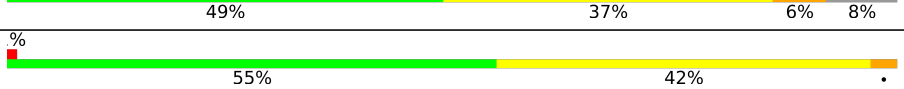
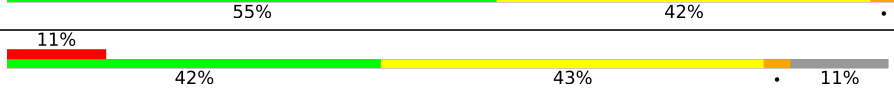
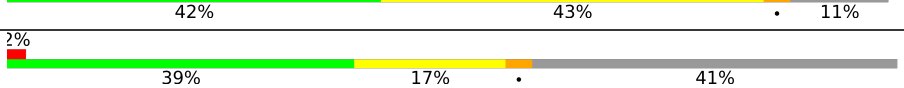
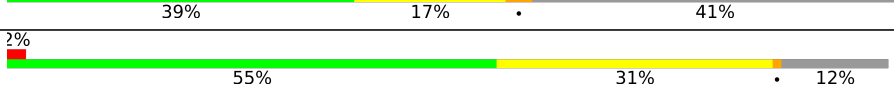
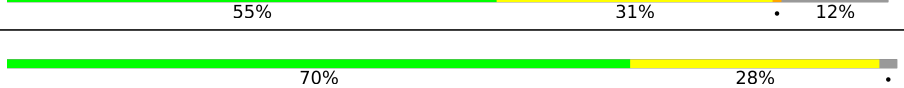
Mol	Chain	Length	Quality of chain
5	C	246	
6	D	177	
7	E	178	
8	F	120	
9	G	348	
10	H	177	
11	I	162	
12	J	145	
13	K	132	
14	L	165	
15	M	194	
16	N	187	
17	O	116	
18	P	149	
19	Q	96	
20	R	155	
21	S	85	
22	T	120	
23	U	66	
24	V	71	
25	W	154	
26	X	92	
27	Y	241	
28	Z	83	
29	1	57	

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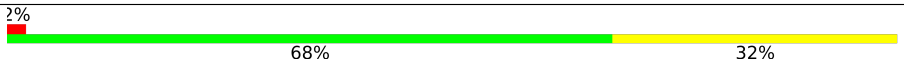
Mol	Chain	Length	Quality of chain
30	2	50	
31	3	92	

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
37	SR	0	8986	-	-	-	X
37	SR	0	8996	-	-	-	X
37	SR	0	9006	-	-	-	X
37	SR	B	8987	-	-	-	X

2 Entry composition (i)

There are 39 unique types of molecules in this entry. The entry contains 99116 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	0	2754	59020	26349	10873	19053	2745	0	0	0

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
0	628	1MA	A	modified residue	GB 55229667
0	2099	A	G	engineered mutation	GB 55229667
0	2587	OMU	U	modified residue	GB 55229667
0	2588	OMG	G	modified residue	GB 55229667
0	2619	UR3	U	modified residue	GB 55229667
0	2621	PSU	U	modified residue	GB 55229667

- Molecule 2 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	9	122	2599	1160	471	847	121	0	0	0

- Molecule 3 is a protein called 50S ribosomal protein L2P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	A	237	1753	1072	352	324	5	0	0	0

- Molecule 4 is a protein called 50S ribosomal protein L3P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	B	337	2625	1616	493	511	5	0	0	0

- Molecule 5 is a protein called 50S ribosomal protein L4E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	C	246	Total	C	N	O	S	0	0	0
			1859	1131	344	383	1			

- Molecule 6 is a protein called 50S ribosomal protein L5P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	D	140	Total	C	N	O	S	0	0	0
			1094	685	195	210	4			

- Molecule 7 is a protein called 50S ribosomal protein L6P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	172	Total	C	N	O	S	0	0	0
			1357	840	224	289	4			

- Molecule 8 is a protein called 50S ribosomal protein L7AE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	F	119	Total	C	N	O	S	0	0	0
			890	551	141	197	1			

- Molecule 9 is a protein called ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG.

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

- Molecule 10 is a protein called 50S RIBOSOMAL PROTEIN L10E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	H	160	Total	C	N	O	S	0	0	0
			1282	798	240	238	6			

- Molecule 11 is a protein called 50S RIBOSOMAL PROTEIN L11P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	I	70	Total	C	N	O	S	0	0	0
			519	323	81	114	1			

- Molecule 12 is a protein called 50S ribosomal protein L13P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	J	142	Total	C	N	O	S	0	0	0
			1120	696	199	222	3			

- Molecule 13 is a protein called 50S ribosomal protein L14P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	K	132	Total	C	N	O	S	0	0	0
			992	609	187	192	4			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
K	44	LEU	HIS	conflict	UNP P22450

- Molecule 14 is a protein called 50S ribosomal protein L15P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
14	L	145	Total	C	N	O	0	0	0
			1118	670	222	226			

- Molecule 15 is a protein called 50S Ribosomal Protein L15E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	M	194	Total	C	N	O	S	0	0	0
			1558	942	332	283	1			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
M	13	GLU	LYS	conflict	GB 55231501

- Molecule 16 is a protein called 50S ribosomal protein L18P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	N	186	Total	C	N	O	S	0	0	0
			1445	895	262	286	2			

- Molecule 17 is a protein called 50S ribosomal protein L18e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	O	115	Total	C	N	O	0	0	0
			865	529	161	175			

- Molecule 18 is a protein called 50S ribosomal protein L19E.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	P	143	Total	C	N	O	0	0	0
			1136	683	229	224			

- Molecule 19 is a protein called 50S ribosomal protein L21e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	Q	95	Total	C	N	O	0	0	0
			735	450	141	144			

- Molecule 20 is a protein called 50S ribosomal protein L22P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	R	150	Total	C	N	O	S	0	0	0
			1149	713	209	223	4			

- Molecule 21 is a protein called 50S ribosomal protein L23P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	81	Total	C	N	O	S	0	0	0
			641	389	111	138	3			

- Molecule 22 is a protein called 50S ribosomal protein L24P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
22	T	119	Total	C	N	O	0	0	0
			950	568	180	202			

- Molecule 23 is a protein called 50S ribosomal protein L24E.

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

- Molecule 24 is a protein called 50S ribosomal protein L29P.

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

- Molecule 25 is a protein called 50S ribosomal protein L30P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	W	154	Total	C	N	O	S	0	0	0
			1196	737	209	244	6			

- Molecule 26 is a protein called 50S ribosomal protein L31e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	X	82	Total	C	N	O	S	0	0	0
			654	402	129	122	1			

- Molecule 27 is a protein called 50S ribosomal protein L32E.

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

- Molecule 28 is a protein called 50S ribosomal protein L37Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	Z	73	Total	C	N	O	S	0	0	0
			578	346	116	111	5			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Z	10	ARG	SER	conflict	GB 55231162

- Molecule 29 is a protein called 50S ribosomal protein L37e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	1	56	Total	C	N	O	S	0	0	0
			431	258	86	83	4			

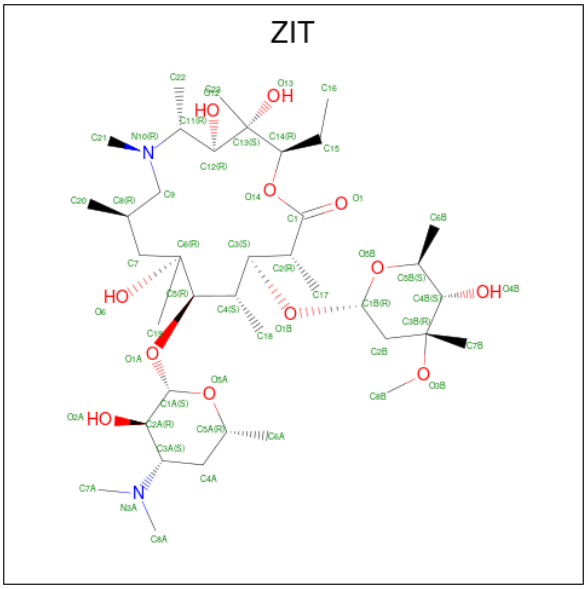
- Molecule 30 is a protein called 50S ribosomal protein L39e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	2	46	Total	C	N	O	S	0	0	0
			396	239	89	67	1			

- Molecule 31 is a protein called 50S ribosomal protein L44E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	3	92	Total	C	N	O	S	0	0	0
			755	458	153	137	7			

- Molecule 32 is AZITHROMYCIN (three-letter code: ZIT) (formula: $C_{38}H_{72}N_2O_{12}$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
32	0	1	Total	C	N	O	0	0
			52	38	2	12		

- Molecule 33 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	0	86	Total	Mg	0	0
			86	86		
33	9	1	Total	Mg	0	0
			1	1		
33	A	2	Total	Mg	0	0
			2	2		
33	B	1	Total	Mg	0	0
			1	1		
33	K	1	Total	Mg	0	0
			1	1		
33	T	1	Total	Mg	0	0
			1	1		
33	Y	1	Total	Mg	0	0
			1	1		

- Molecule 34 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	0	2	Total K 2 2	0	0

- Molecule 35 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	0	65	Total Na 65 65	0	0
35	9	2	Total Na 2 2	0	0
35	C	1	Total Na 1 1	0	0
35	H	1	Total Na 1 1	0	0
35	J	1	Total Na 1 1	0	0
35	M	1	Total Na 1 1	0	0
35	Q	1	Total Na 1 1	0	0
35	R	2	Total Na 2 2	0	0
35	S	1	Total Na 1 1	0	0

- Molecule 36 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	0	10	Total Cl 10 10	0	0
36	A	1	Total Cl 1 1	0	0
36	B	1	Total Cl 1 1	0	0
36	J	3	Total Cl 3 3	0	0
36	L	1	Total Cl 1 1	0	0
36	M	1	Total Cl 1 1	0	0
36	N	1	Total Cl 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	O	1	Total Cl 1 1	0	0
36	R	1	Total Cl 1 1	0	0
36	Y	1	Total Cl 1 1	0	0
36	3	1	Total Cl 1 1	0	0

- Molecule 37 is STRONTIUM ION (three-letter code: SR) (formula: Sr).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	0	94	Total Sr 94 94	0	0
37	9	2	Total Sr 2 2	0	0
37	A	3	Total Sr 3 3	0	0
37	B	2	Total Sr 2 2	0	0
37	F	1	Total Sr 1 1	0	0
37	H	1	Total Sr 1 1	0	0
37	R	1	Total Sr 1 1	0	0
37	S	1	Total Sr 1 1	0	0
37	1	2	Total Sr 2 2	0	0
37	3	1	Total Sr 1 1	0	0

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

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

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

- Molecule 39 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
39	0	5845	Total O 5845 5845	0	0
39	9	145	Total O 145 145	0	0
39	A	118	Total O 118 118	0	0
39	B	151	Total O 151 151	0	0
39	C	176	Total O 176 176	0	0
39	D	49	Total O 49 49	0	0
39	E	40	Total O 40 40	0	0
39	F	26	Total O 26 26	0	0
39	G	18	Total O 18 18	0	0
39	H	72	Total O 72 72	0	0
39	I	8	Total O 8 8	0	0
39	J	59	Total O 59 59	0	0
39	K	58	Total O 58 58	0	0
39	L	72	Total O 72 72	0	0
39	M	124	Total O 124 124	0	0
39	N	61	Total O 61 61	0	0
39	O	38	Total O 38 38	0	0

Continued on next page...

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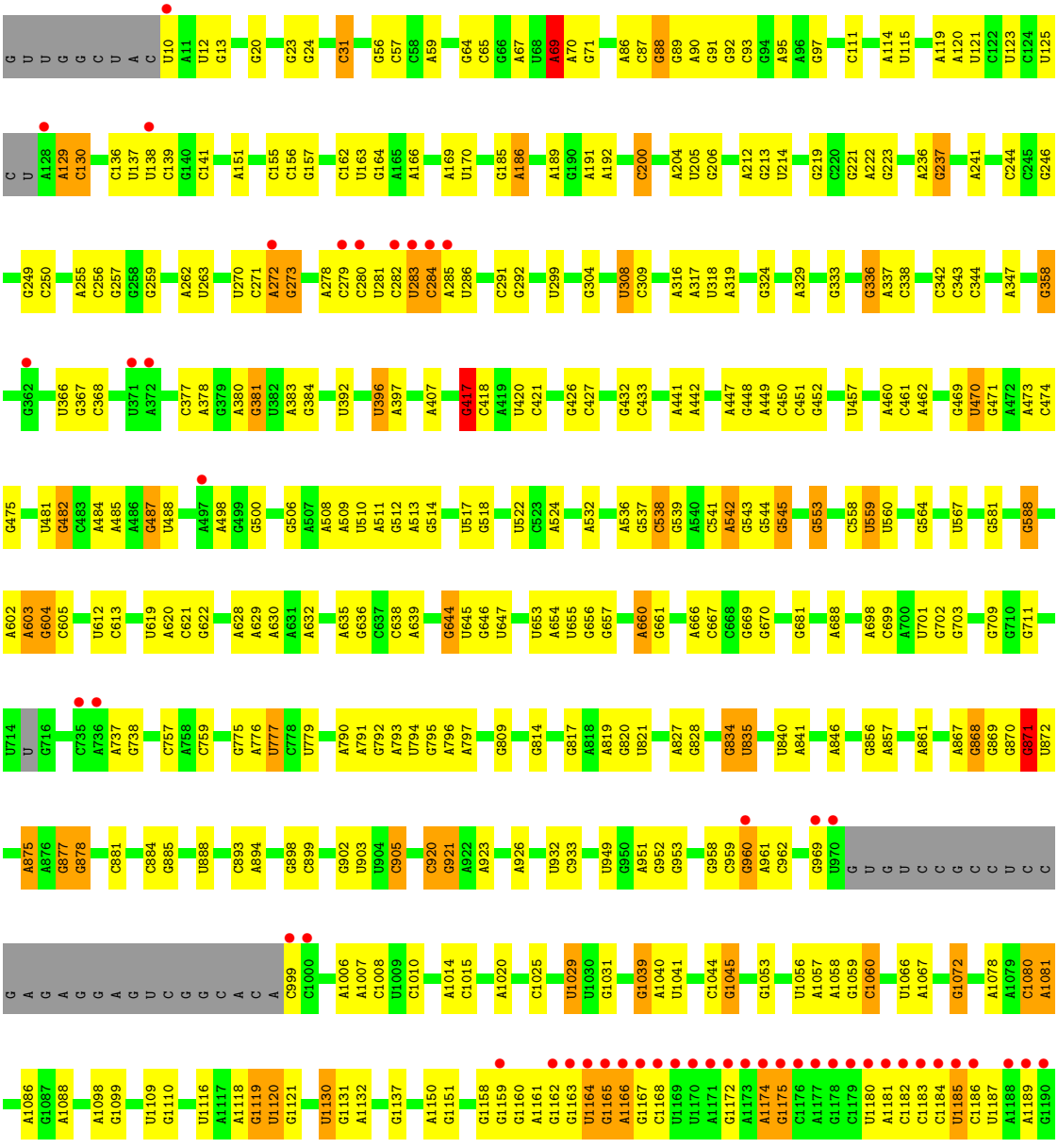
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
39	P	66	Total O 66 66	0	0
39	Q	53	Total O 53 53	0	0
39	R	87	Total O 87 87	0	0
39	S	32	Total O 32 32	0	0
39	T	41	Total O 41 41	0	0
39	U	28	Total O 28 28	0	0
39	V	12	Total O 12 12	0	0
39	W	68	Total O 68 68	0	0
39	X	24	Total O 24 24	0	0
39	Y	95	Total O 95 95	0	0
39	Z	32	Total O 32 32	0	0
39	1	50	Total O 50 50	0	0
39	2	44	Total O 44 44	0	0
39	3	71	Total O 71 71	0	0

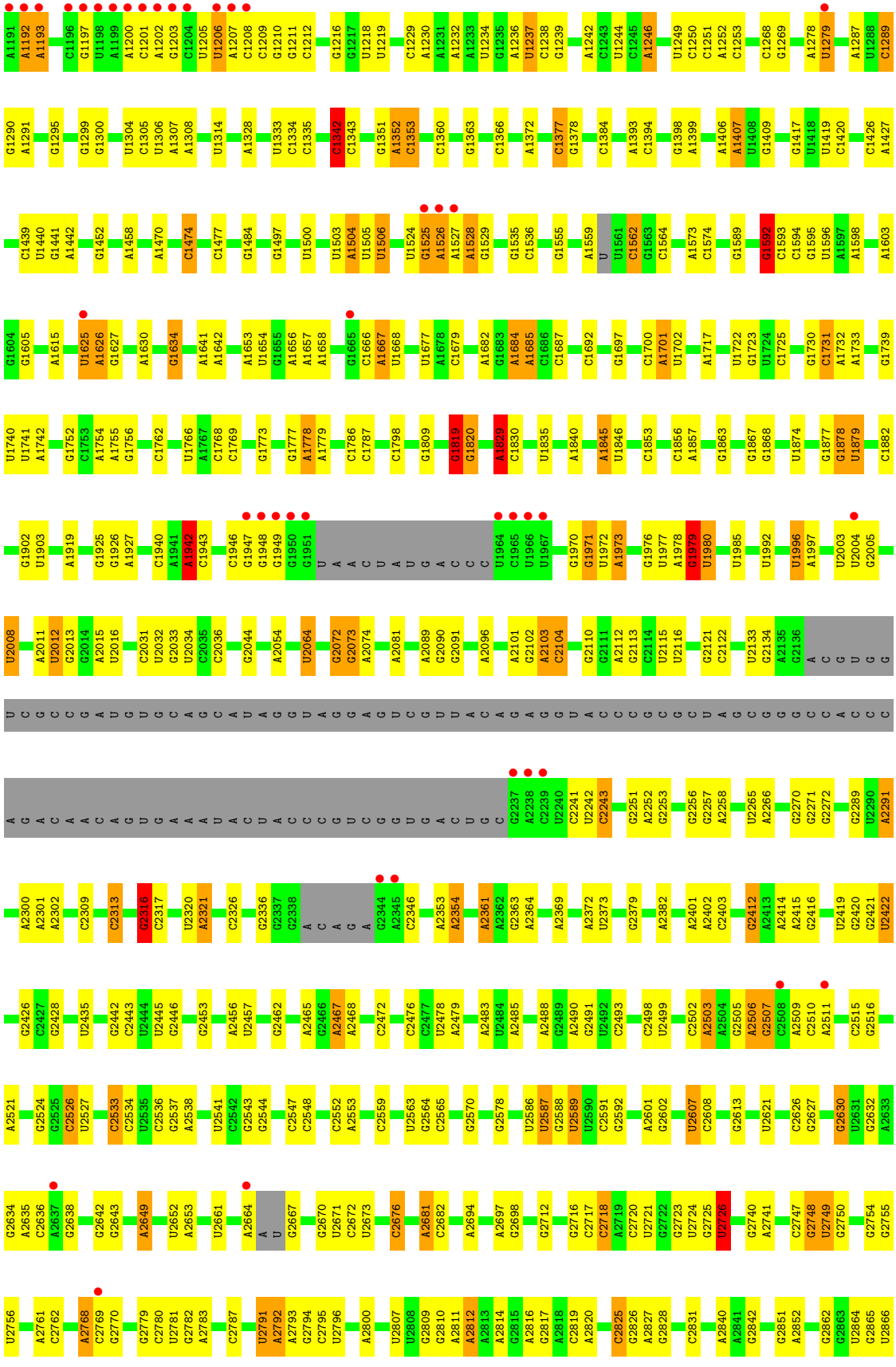
3 Residue-property plots (i)

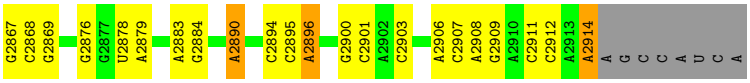
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

- Molecule 1: 23S Ribosomal RNA

Chain 0:

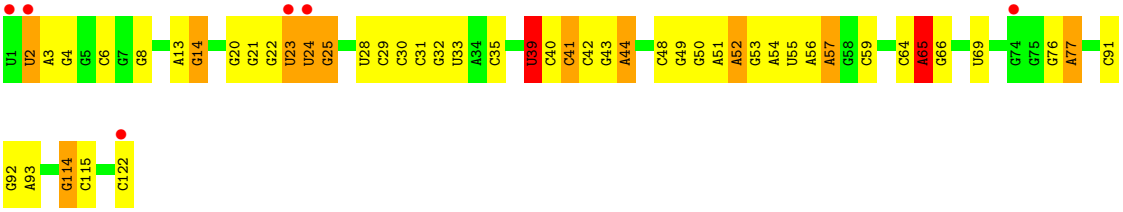






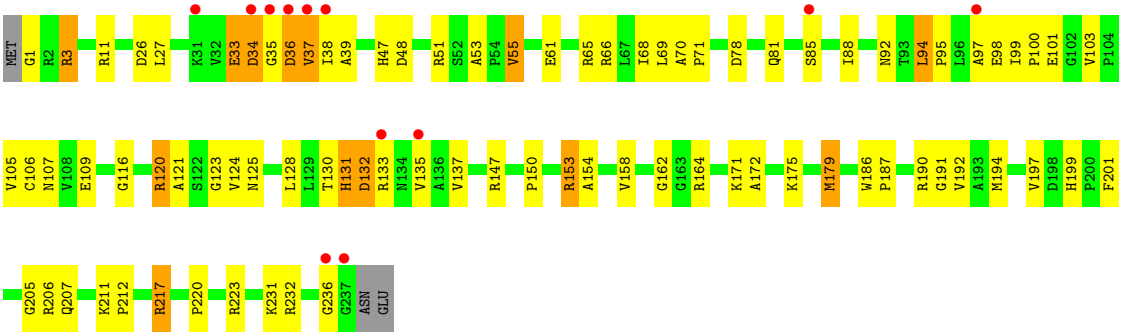
• Molecule 2: 5S Ribosomal RNA

Chain 9:



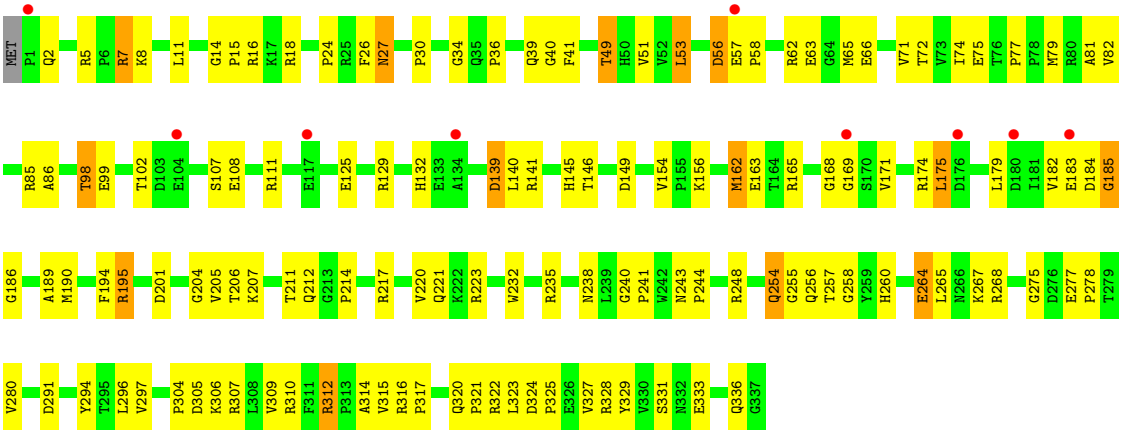
• Molecule 3: 50S ribosomal protein L2P

Chain A:



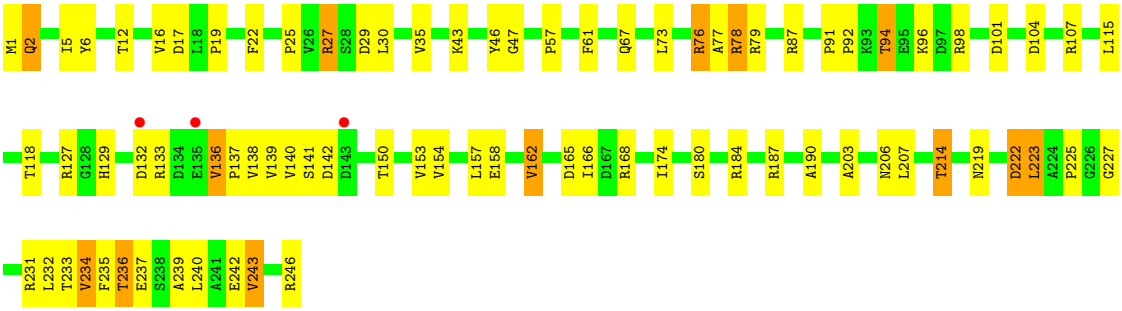
• Molecule 4: 50S ribosomal protein L3P

Chain B:

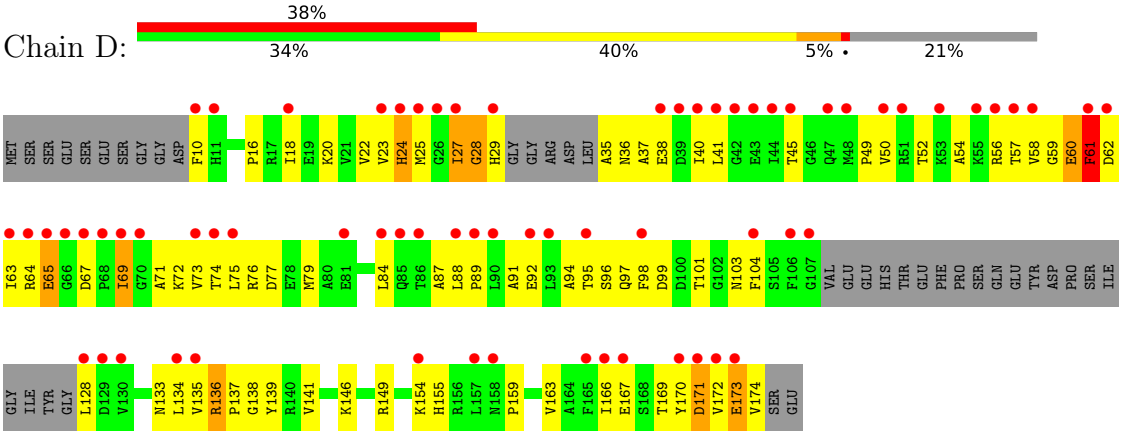


• Molecule 5: 50S ribosomal protein L4E

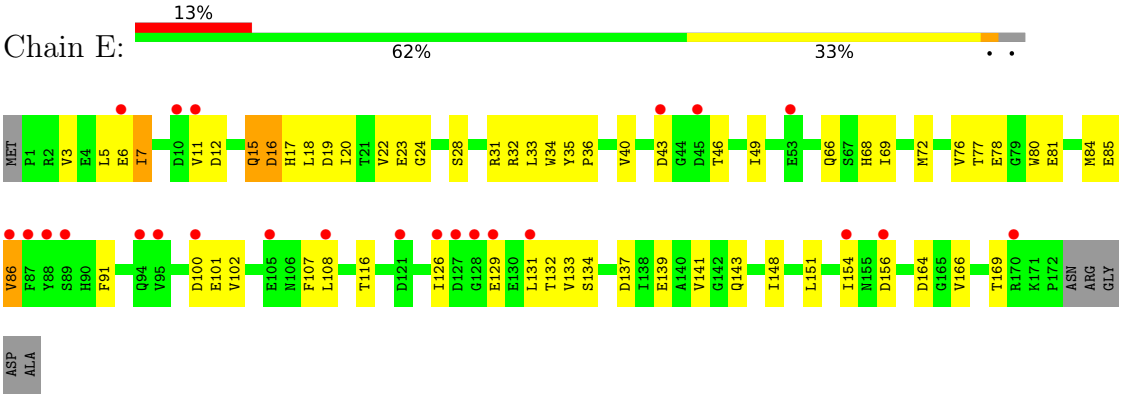
Chain C:



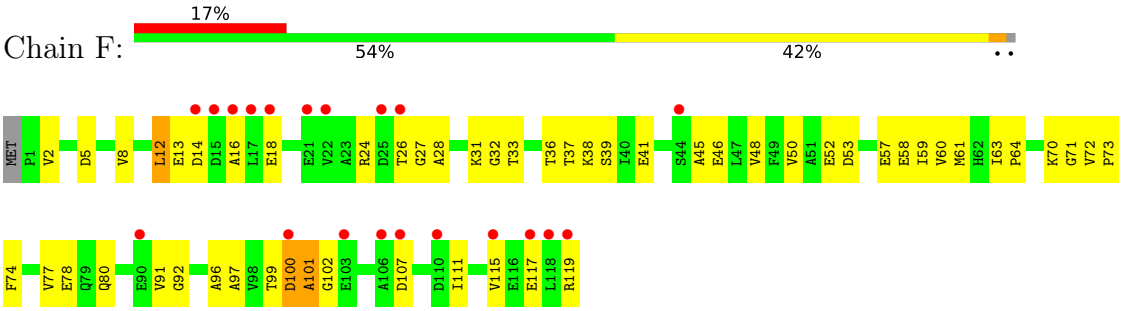
• Molecule 6: 50S ribosomal protein L5P



• Molecule 7: 50S ribosomal protein L6P

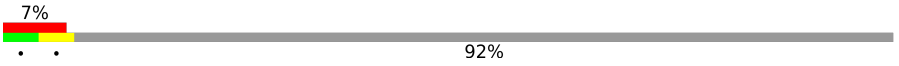


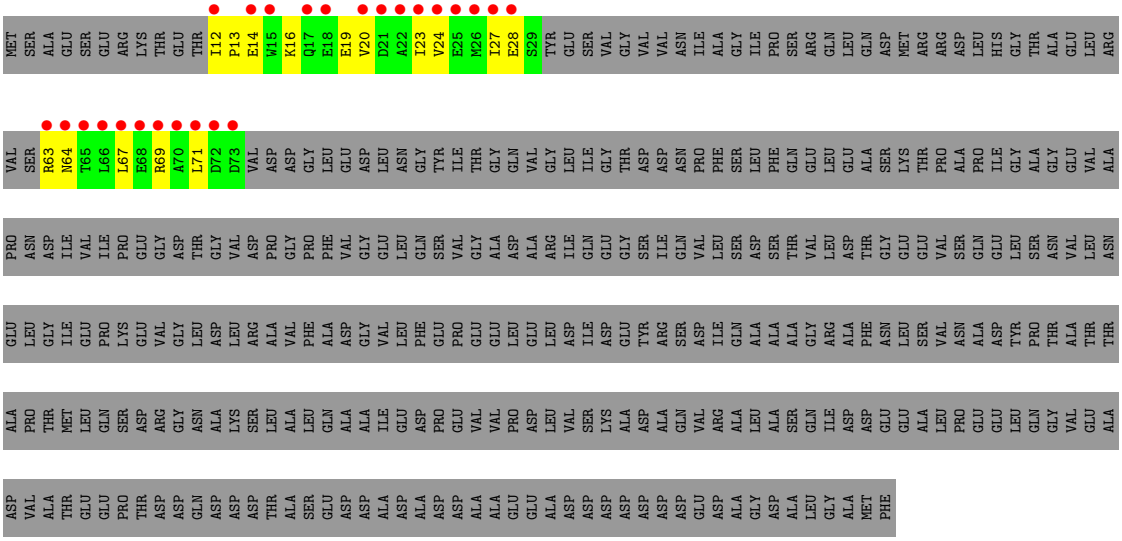
• Molecule 8: 50S ribosomal protein L7AE



• Molecule 9: ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG

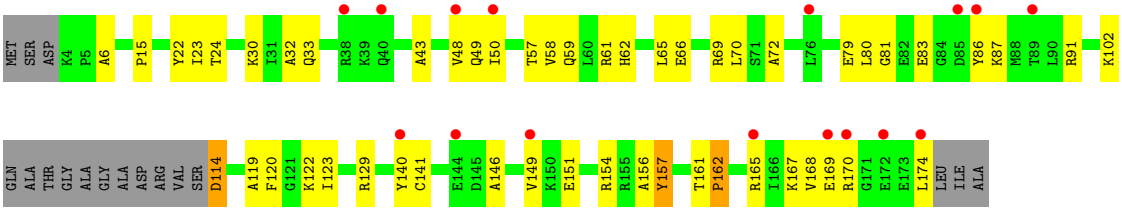
Chain G:





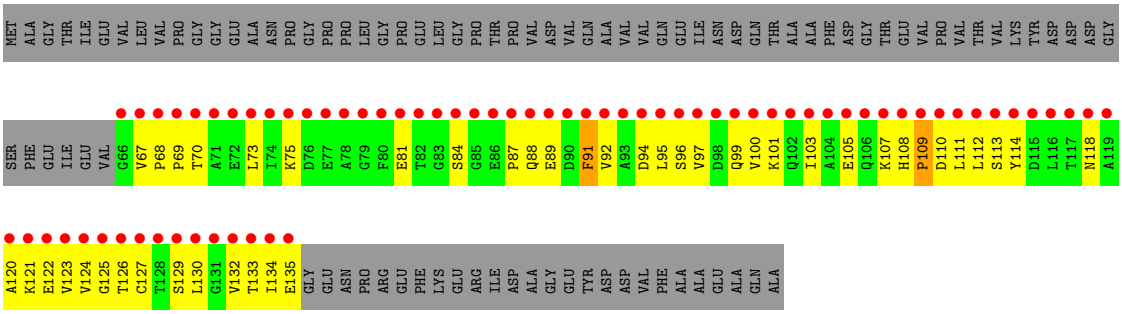
• Molecule 10: 50S RIBOSOMAL PROTEIN L10E

Chain H:



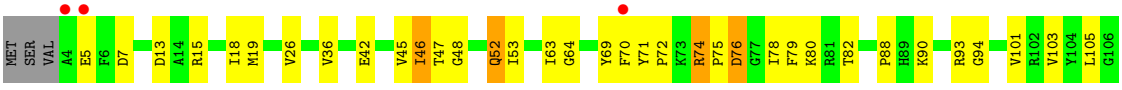
• Molecule 11: 50S RIBOSOMAL PROTEIN L11P

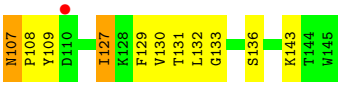
Chain I:



• Molecule 12: 50S ribosomal protein L13P

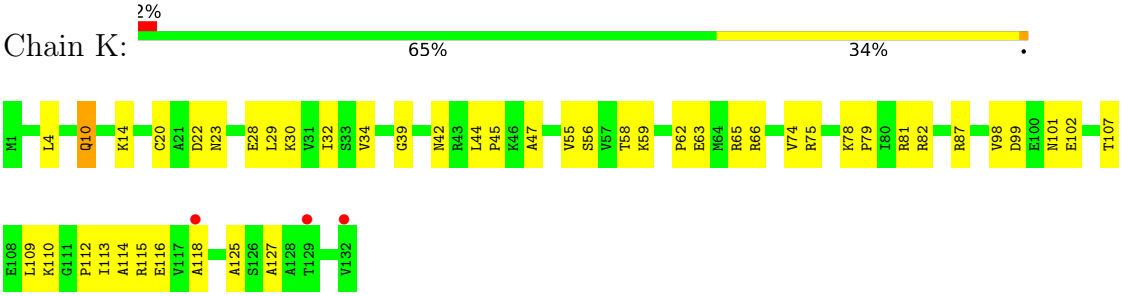
Chain J:





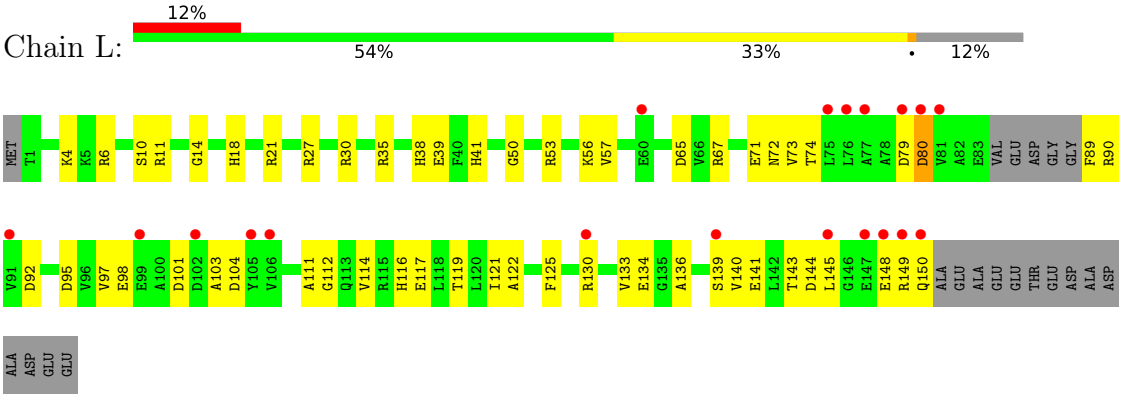
• Molecule 13: 50S ribosomal protein L14P

Chain K:



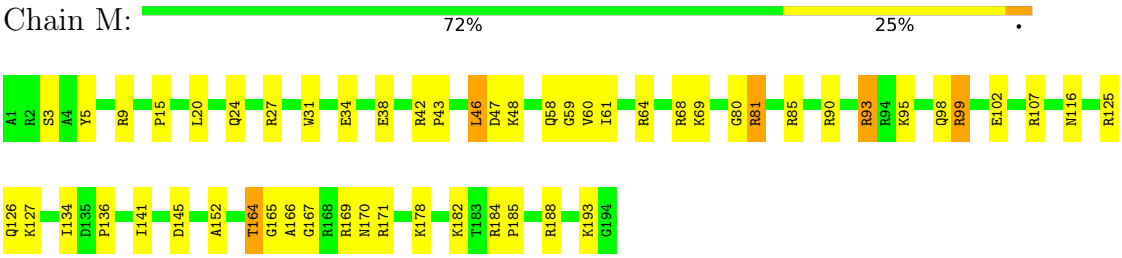
• Molecule 14: 50S ribosomal protein L15P

Chain L:



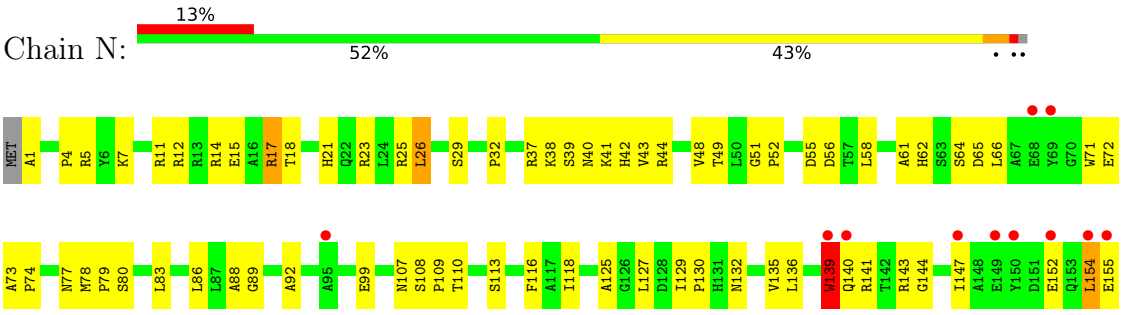
• Molecule 15: 50S Ribosomal Protein L15E

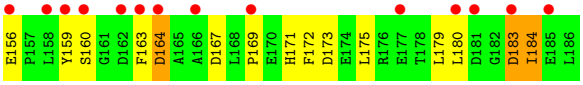
Chain M:



• Molecule 16: 50S ribosomal protein L18P

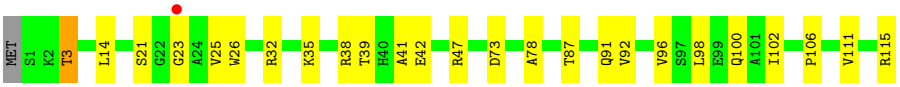
Chain N:





• Molecule 17: 50S ribosomal protein L18e

Chain O:

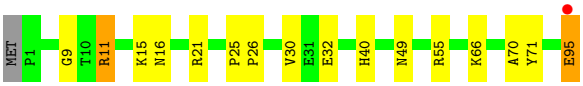


• Molecule 18: 50S ribosomal protein L19E

Chain P:

• Molecule 19: 50S ribosomal protein L21e

Chain Q:

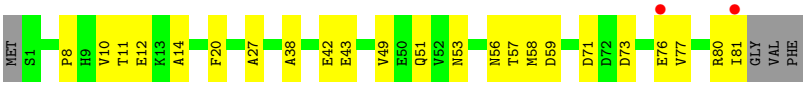


• Molecule 20: 50S ribosomal protein L22P

Chain R:

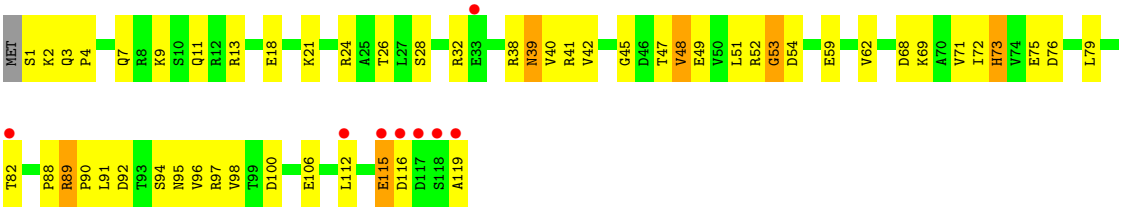
• Molecule 21: 50S ribosomal protein L23P

Chain S:



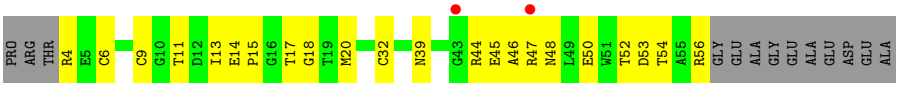
• Molecule 22: 50S ribosomal protein L24P

Chain T:



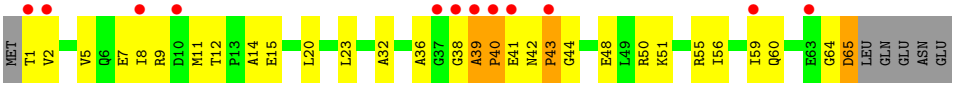
• Molecule 23: 50S ribosomal protein L24E

Chain U:



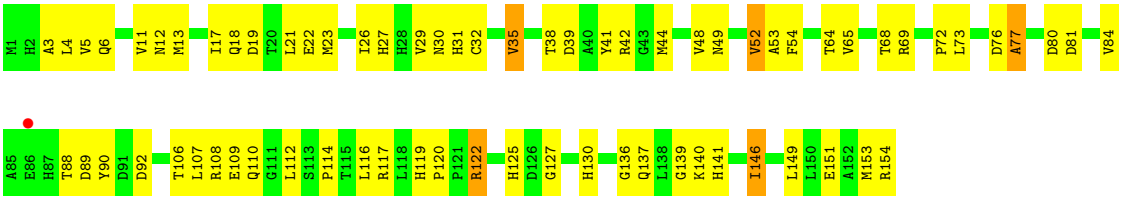
• Molecule 24: 50S ribosomal protein L29P

Chain V:



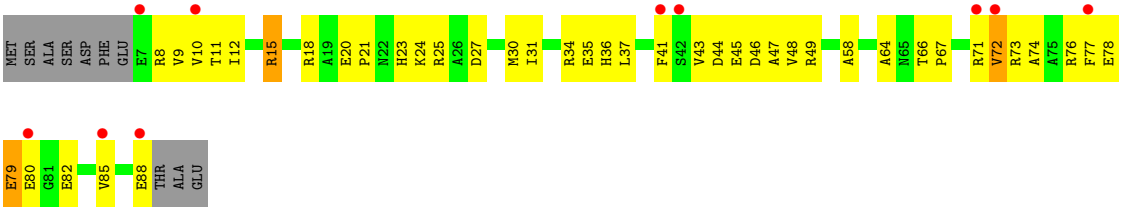
• Molecule 25: 50S ribosomal protein L30P

Chain W:



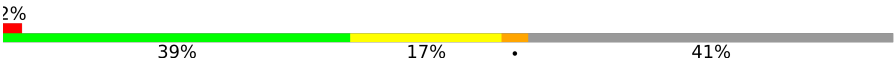
• Molecule 26: 50S ribosomal protein L31e

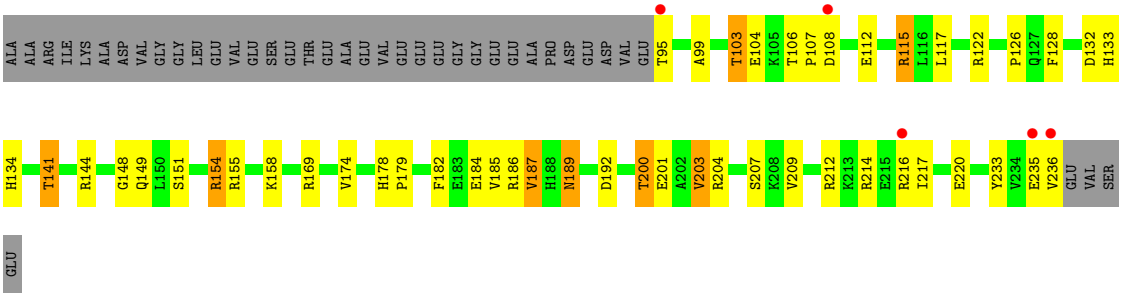
Chain X:



• Molecule 27: 50S ribosomal protein L32E

Chain Y:

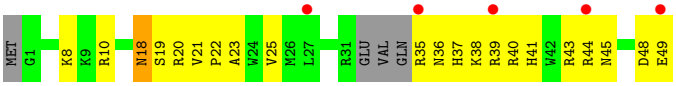




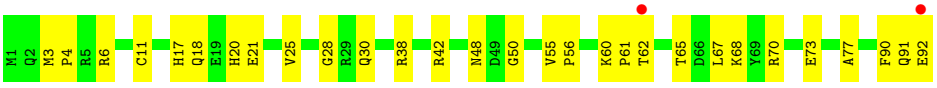
• Molecule 28: 50S ribosomal protein L37Ae

• Molecule 29: 50S ribosomal protein L37e

• Molecule 30: 50S ribosomal protein L39e



• Molecule 31: 50S ribosomal protein L44E



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	212.08Å 298.91Å 574.82Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.96 – 2.40 49.82 – 2.40	Depositor EDS
% Data completeness (in resolution range)	90.2 (29.96-2.40) 90.2 (49.82-2.40)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.01 (at 2.39Å)	Xtriage
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.190 , 0.229 0.182 , 0.220	Depositor DCC
R_{free} test set	6150 reflections (0.97%)	wwPDB-VP
Wilson B-factor (Å^2)	41.0	Xtriage
Anisotropy	0.173	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 48.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	99116	wwPDB-VP
Average B, all atoms (Å^2)	46.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.53% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CL, 1MA, NA, SR, K, ZIT, OMG, CD, UR3, OMU, MG, 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	0	0.35	0/65957	0.69	25/102867 (0.0%)
2	9	0.32	0/2904	0.70	1/4526 (0.0%)
3	A	0.33	0/1786	0.66	0/2408
4	B	0.31	0/2690	0.64	0/3652
5	C	0.37	0/1884	0.64	0/2551
6	D	0.29	0/1111	0.53	0/1498
7	E	0.31	0/1382	0.57	0/1880
8	F	0.31	0/901	0.55	0/1224
9	G	0.27	0/241	0.47	0/324
10	H	0.35	0/1302	0.65	0/1743
11	I	0.28	0/526	0.48	0/716
12	J	0.34	0/1136	0.59	0/1530
13	K	0.33	0/1001	0.65	0/1347
14	L	0.32	0/1130	0.64	0/1509
15	M	0.33	0/1582	0.61	0/2117
16	N	0.28	0/1474	0.60	0/1999
17	O	0.32	0/874	0.59	0/1181
18	P	0.32	0/1147	0.53	0/1528
19	Q	0.34	0/749	0.69	0/1005
20	R	0.34	0/1172	0.64	0/1578
21	S	0.32	0/648	0.58	1/875 (0.1%)
22	T	0.30	0/958	0.62	0/1289
23	U	0.32	0/417	0.53	0/562
24	V	0.29	0/502	0.53	0/675
25	W	0.33	0/1219	0.62	0/1655
26	X	0.31	0/664	0.56	0/895
27	Y	0.34	0/1146	0.62	0/1536
28	Z	0.34	0/589	0.64	0/787
29	1	0.40	0/438	0.64	0/578
30	2	0.33	0/401	0.55	0/529
31	3	0.36	0/771	0.58	0/1024
All	All	0.34	0/98702	0.67	27/147588 (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
1	0	0	53
2	9	0	2
All	All	0	55

There are no bond length outliers.

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	0	1942	A	C5'-C4'-C3'	8.34	129.34	116.00
1	0	871	G	C5'-C4'-O4'	-7.87	99.66	109.10
2	9	39	U	N1-C1'-C2'	6.90	122.97	114.00
1	0	1979	G	C2'-C3'-O3'	6.61	124.27	113.70
1	0	1504	A	C1'-O4'-C4'	-6.48	104.71	109.90
1	0	2316	G	C5'-C4'-C3'	-6.23	106.04	116.00
1	0	1559	A	C2'-C3'-O3'	6.21	123.64	113.70
1	0	1819	G	C5'-C4'-C3'	6.18	125.89	116.00
1	0	1592	G	N9-C1'-C2'	6.17	122.02	114.00
1	0	206	G	C5'-C4'-C3'	-6.11	106.22	116.00
1	0	2291	A	N9-C1'-C2'	6.06	121.88	114.00
1	0	2726	U	N1-C1'-C2'	5.79	121.53	114.00
1	0	2313	C	C5'-C4'-O4'	5.77	116.03	109.10
1	0	2467	A	C1'-O4'-C4'	-5.72	105.32	109.90
1	0	1120	U	C5'-C4'-C3'	-5.62	107.02	116.00
1	0	777	U	O4'-C1'-N1	5.49	112.59	108.20
1	0	1504	A	N9-C1'-C2'	5.42	121.05	114.00
21	S	27	ALA	N-CA-C	-5.38	96.48	111.00
1	0	1942	A	C4'-C3'-C2'	-5.37	97.23	102.60
1	0	1819	G	C1'-O4'-C4'	-5.32	105.65	109.90
1	0	1829	A	N9-C1'-C2'	-5.31	106.16	112.00
1	0	841	A	C1'-O4'-C4'	-5.29	105.67	109.90
1	0	1452	G	C5'-C4'-C3'	-5.17	107.72	116.00
1	0	2607	U	N1-C1'-C2'	5.14	120.68	114.00
1	0	69	A	C5'-C4'-O4'	-5.13	102.95	109.10
1	0	2313	C	C5'-C4'-C3'	5.08	124.13	116.00
1	0	129	A	C2'-C3'-O3'	5.05	121.78	113.70

There are no chirality outliers.

All (55) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1039	G	Sidechain
1	0	1078	A	Sidechain
1	0	1237	U	Sidechain
1	0	1342	C	Sidechain
1	0	1417	G	Sidechain
1	0	1458	A	Sidechain
1	0	1592	G	Sidechain
1	0	1653	A	Sidechain
1	0	1777	G	Sidechain
1	0	1809	G	Sidechain
1	0	1819	G	Sidechain
1	0	1829	A	Sidechain
1	0	1845	A	Sidechain
1	0	1863	G	Sidechain
1	0	1867	G	Sidechain
1	0	1877	G	Sidechain
1	0	1878	G	Sidechain
1	0	1970	G	Sidechain
1	0	1985	U	Sidechain
1	0	221	G	Sidechain
1	0	2316	G	Sidechain
1	0	2412	G	Sidechain
1	0	246	G	Sidechain
1	0	2465	A	Sidechain
1	0	2493	C	Sidechain
1	0	2503	A	Sidechain
1	0	2506	A	Sidechain
1	0	2552	C	Sidechain
1	0	2607	U	Sidechain
1	0	2630	G	Sidechain
1	0	2632	G	Sidechain
1	0	2681	A	Sidechain
1	0	270	U	Sidechain
1	0	2842	G	Sidechain
1	0	324	G	Sidechain
1	0	333	G	Sidechain
1	0	396	U	Sidechain
1	0	417	G	Sidechain
1	0	460	A	Sidechain
1	0	469	G	Sidechain
1	0	470	U	Sidechain
1	0	471	G	Sidechain
1	0	482	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	518	G	Sidechain
1	0	619	U	Sidechain
1	0	792	G	Sidechain
1	0	795	G	Sidechain
1	0	817	G	Sidechain
1	0	867	A	Sidechain
1	0	868	G	Sidechain
1	0	881	C	Sidechain
1	0	888	U	Sidechain
1	0	893	C	Sidechain
2	9	39	U	Sidechain
2	9	65	A	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	0	59020	0	29808	686	0
2	9	2599	0	1325	53	0
3	A	1753	0	1766	109	0
4	B	2625	0	2533	125	0
5	C	1859	0	1816	97	0
6	D	1094	0	1085	91	0
7	E	1357	0	1266	55	0
8	F	890	0	843	51	0
9	G	240	0	231	18	0
10	H	1282	0	1292	53	0
11	I	519	0	500	47	0
12	J	1120	0	1098	58	0
13	K	992	0	1031	56	0
14	L	1118	0	1076	52	0
15	M	1558	0	1566	63	0
16	N	1445	0	1401	100	0
17	O	865	0	873	30	0
18	P	1136	0	1123	34	0
19	Q	735	0	728	14	0
20	R	1149	0	1122	41	0
21	S	641	0	605	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	T	950	0	923	51	0
23	U	410	0	364	24	0
24	V	499	0	511	35	0
25	W	1196	0	1137	88	0
26	X	654	0	653	42	0
27	Y	1130	0	1133	58	0
28	Z	578	0	539	19	0
29	1	431	0	426	22	0
30	2	396	0	413	25	0
31	3	755	0	728	24	0
32	0	52	0	72	0	0
33	0	86	0	0	0	0
33	9	1	0	0	0	0
33	A	2	0	0	0	0
33	B	1	0	0	0	0
33	K	1	0	0	0	0
33	T	1	0	0	0	0
33	Y	1	0	0	0	0
34	0	2	0	0	0	0
35	0	65	0	0	0	0
35	9	2	0	0	0	0
35	C	1	0	0	0	0
35	H	1	0	0	0	0
35	J	1	0	0	0	0
35	M	1	0	0	0	0
35	Q	1	0	0	0	0
35	R	2	0	0	0	0
35	S	1	0	0	0	0
36	0	10	0	0	0	0
36	3	1	0	0	0	0
36	A	1	0	0	0	0
36	B	1	0	0	0	0
36	J	3	0	0	2	0
36	L	1	0	0	0	0
36	M	1	0	0	0	0
36	N	1	0	0	0	0
36	O	1	0	0	0	0
36	R	1	0	0	0	0
36	Y	1	0	0	0	0
37	0	94	0	0	0	0
37	1	2	0	0	0	0
37	3	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	9	2	0	0	0	0
37	A	3	0	0	0	0
37	B	2	0	0	0	0
37	F	1	0	0	0	0
37	H	1	0	0	0	0
37	R	1	0	0	0	0
37	S	1	0	0	0	0
38	1	1	0	0	0	0
38	3	1	0	0	0	0
38	O	1	0	0	0	0
38	U	1	0	0	0	0
38	Z	1	0	0	0	0
39	0	5845	0	0	120	0
39	1	50	0	0	2	0
39	2	44	0	0	3	0
39	3	71	0	0	5	0
39	9	145	0	0	4	0
39	A	118	0	0	19	0
39	B	151	0	0	25	0
39	C	176	0	0	24	0
39	D	49	0	0	19	0
39	E	40	0	0	5	0
39	F	26	0	0	7	0
39	G	18	0	0	2	0
39	H	72	0	0	12	0
39	I	8	0	0	2	0
39	J	59	0	0	2	0
39	K	58	0	0	7	0
39	L	72	0	0	15	0
39	M	124	0	0	8	0
39	N	61	0	0	12	0
39	O	38	0	0	6	0
39	P	66	0	0	4	0
39	Q	53	0	0	4	0
39	R	87	0	0	7	0
39	S	32	0	0	3	0
39	T	41	0	0	4	0
39	U	28	0	0	3	0
39	V	12	0	0	2	0
39	W	68	0	0	7	0
39	X	24	0	0	8	0
39	Y	95	0	0	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	Z	32	0	0	2	0
All	All	99116	0	59987	2007	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 13.

All (2007) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1160:G:H5'	1:0:1161:A:H5'	1.18	1.10
26:X:37:LEU:HD13	26:X:85:VAL:HG21	1.32	1.09
5:C:236:THR:HG22	5:C:239:ALA:H	1.10	1.06
6:D:25:MET:HE3	6:D:37:ALA:HB1	1.34	1.04
1:0:1242:A:H5'	12:J:82:THR:HG23	1.39	1.04
2:9:6:C:H5"	16:N:37:ARG:NH1	1.74	1.03
22:T:71:VAL:HG11	22:T:90:PRO:HB3	1.41	1.01
4:B:212:GLN:HB2	4:B:257:THR:HG21	1.45	0.99
1:0:156:C:H5"	15:M:171:ARG:HD3	1.43	0.99
18:P:115:SER:H	18:P:118:GLN:HE21	1.09	0.99
6:D:154:LYS:H	6:D:154:LYS:HD2	1.27	0.98
1:0:871:G:C8	1:0:871:G:H5'	1.97	0.98
5:C:78:ARG:HH11	5:C:78:ARG:HG3	1.28	0.97
2:9:76:G:H3'	2:9:77:A:H5"	1.47	0.95
13:K:74:VAL:HG11	13:K:113:ILE:HG12	1.46	0.95
2:9:56:A:H2'	2:9:57:A:H5"	1.46	0.95
15:M:164:THR:HG22	15:M:167:GLY:H	1.32	0.95
4:B:140:LEU:HA	39:B:9048:HOH:O	1.65	0.95
5:C:127:ARG:NH2	5:C:225:PRO:HG2	1.82	0.94
25:W:137:GLN:HE21	25:W:141:HIS:HE1	1.07	0.94
4:B:86:ALA:HA	39:B:9048:HOH:O	1.68	0.93
27:Y:200:THR:HG22	27:Y:201:GLU:HG3	1.50	0.93
1:0:871:G:H5'	1:0:871:G:H8	1.30	0.93
12:J:19:MET:HE3	12:J:132:LEU:HD21	1.50	0.92
16:N:144:GLY:O	16:N:147:ILE:HG22	1.68	0.92
15:M:102:GLU:OE1	15:M:164:THR:HG21	1.69	0.92
20:R:99:ALA:HB1	20:R:109:MET:HE1	1.50	0.92
25:W:88:THR:HB	39:W:6679:HOH:O	1.70	0.92
1:0:541:C:H2'	1:0:542:A:H5"	1.52	0.92
13:K:10:GLN:H	13:K:10:GLN:NE2	1.67	0.91
30:2:41:HIS:H	30:2:45:ASN:HD22	1.12	0.91
6:D:57:THR:HG23	6:D:63:ILE:HA	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:162:MET:HE2	4:B:310:ARG:HD3	1.51	0.91
25:W:6:GLN:HB2	25:W:26:ILE:HD12	1.52	0.91
1:0:542:A:H5'	1:0:542:A:H8	1.34	0.91
21:S:57:THR:HG22	21:S:59:ASP:H	1.36	0.90
1:0:870:G:H2'	1:0:871:G:H5"	1.51	0.90
28:Z:46:ARG:HD2	28:Z:59:TYR:HB2	1.51	0.90
1:0:2717:C:C2'	1:0:2718:C:H5"	2.02	0.90
13:K:10:GLN:HE21	13:K:10:GLN:N	1.70	0.89
1:0:2717:C:H2'	1:0:2718:C:H5"	1.54	0.89
4:B:238:ASN:HD22	4:B:240:GLY:H	1.18	0.89
13:K:39:GLY:HA2	39:K:4183:HOH:O	1.73	0.89
16:N:83:LEU:HD13	16:N:175:LEU:HD23	1.53	0.89
1:0:2812:A:H2	1:0:2814:A:H62	1.19	0.89
1:0:2270:G:H4'	3:A:223:ARG:HH12	1.36	0.88
6:D:28:GLY:HA2	6:D:69:ILE:HG23	1.56	0.88
22:T:9:LYS:HE3	22:T:13:ARG:NH1	1.88	0.88
3:A:35:GLY:O	3:A:36:ASP:HB3	1.71	0.88
4:B:307:ARG:HH11	4:B:307:ARG:HG3	1.38	0.88
1:0:1160:G:C5'	1:0:1161:A:H5'	2.03	0.88
7:E:20:ILE:HD11	7:E:40:VAL:HG11	1.54	0.88
1:0:1160:G:H5'	1:0:1161:A:C5'	2.04	0.87
13:K:29:LEU:HB3	13:K:55:VAL:HG11	1.54	0.87
25:W:122:ARG:NH2	25:W:154:ARG:HB3	1.90	0.87
1:0:2506:A:HO2'	1:0:2507:G:H8	0.89	0.87
2:9:6:C:H5"	16:N:37:ARG:HH12	1.37	0.87
10:H:49:GLN:HE21	10:H:140:TYR:HE2	1.21	0.87
1:0:1835:U:H5	1:0:1840:A:N7	1.73	0.86
24:V:1:THR:HG23	24:V:2:VAL:H	1.40	0.86
25:W:21:LEU:HD21	25:W:48:VAL:HG11	1.57	0.86
11:I:127:CYS:HB3	11:I:132:VAL:HB	1.58	0.86
13:K:98:VAL:CG1	13:K:102:GLU:HA	2.04	0.85
26:X:71:ARG:HD3	39:X:2171:HOH:O	1.75	0.85
1:0:960:G:H4'	39:0:7859:HOH:O	1.75	0.85
18:P:115:SER:OG	18:P:118:GLN:HG3	1.77	0.85
31:3:65:THR:HG22	31:3:67:LEU:HG	1.59	0.85
3:A:199:HIS:HD2	3:A:201:PHE:H	1.23	0.85
13:K:81:ARG:HB2	13:K:87:ARG:HH11	1.39	0.84
1:0:282:C:H1'	1:0:368:C:N4	1.92	0.84
5:C:236:THR:HG22	5:C:239:ALA:N	1.92	0.84
25:W:137:GLN:HE21	25:W:141:HIS:CE1	1.95	0.84
10:H:170:ARG:HD2	39:H:8989:HOH:O	1.78	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:10:GLN:H	13:K:10:GLN:HE21	0.88	0.84
1:0:1116:U:HO2'	1:0:1118:A:H2	0.83	0.83
1:0:2716:G:H5"	4:B:206:THR:HG21	1.60	0.83
8:F:58:GLU:HA	8:F:61:MET:HE2	1.58	0.83
25:W:4:LEU:HD22	25:W:52:VAL:HG21	1.60	0.83
25:W:122:ARG:HG2	25:W:122:ARG:HH11	1.41	0.83
3:A:192:VAL:HG22	39:A:9095:HOH:O	1.77	0.83
17:O:42:GLU:HB2	39:O:2176:HOH:O	1.78	0.83
1:0:1667:A:H8	1:0:1667:A:H5'	1.41	0.83
1:0:1701:A:H4'	1:0:1702:U:H5"	1.60	0.83
1:0:1041:U:H5'	39:L:8881:HOH:O	1.77	0.82
1:0:506:G:H22	1:0:509:A:H5"	1.42	0.82
3:A:211:LYS:HB2	39:A:9081:HOH:O	1.78	0.82
24:V:12:THR:HG22	24:V:15:GLU:HG3	1.60	0.82
1:0:1474:C:H6	1:0:1474:C:H5'	1.43	0.82
1:0:541:C:C2'	1:0:542:A:H5"	2.09	0.81
11:I:97:VAL:HG12	11:I:101:LYS:HE3	1.59	0.81
16:N:113:SER:HB2	39:N:8856:HOH:O	1.78	0.81
25:W:88:THR:HG23	25:W:110:GLN:HE21	1.46	0.81
1:0:1300:G:H1'	39:0:5149:HOH:O	1.79	0.81
27:Y:187:VAL:HG23	39:Y:8869:HOH:O	1.79	0.81
3:A:153:ARG:HB2	3:A:153:ARG:HH11	1.45	0.81
11:I:73:LEU:HD12	11:I:107:LYS:HZ2	1.46	0.81
1:0:2890:A:H1'	23:U:56:ARG:NH2	1.96	0.80
1:0:1973:A:H5'	1:0:1973:A:H8	1.45	0.80
39:9:9098:HOH:O	16:N:23:ARG:HD3	1.80	0.80
28:Z:10:ARG:HA	39:Z:8714:HOH:O	1.79	0.80
1:0:2054:A:N3	20:R:128:ARG:NH2	2.30	0.80
1:0:2840:A:OP1	4:B:211:THR:HG23	1.82	0.80
12:J:74:ARG:HB3	12:J:74:ARG:HH11	1.46	0.79
13:K:81:ARG:HB2	13:K:87:ARG:NH1	1.96	0.79
6:D:54:ALA:HB2	6:D:69:ILE:HD12	1.63	0.79
1:0:656:G:H5'	17:O:3:THR:HG22	1.64	0.79
4:B:195:ARG:HG2	4:B:323:LEU:HD22	1.65	0.79
1:0:2586:U:H3	1:0:2592:G:H22	1.28	0.78
1:0:2488:A:H61	1:0:2534:C:H42	1.32	0.78
3:A:192:VAL:HB	39:A:9056:HOH:O	1.82	0.78
5:C:1:MET:HG2	5:C:2:GLN:H	1.46	0.78
5:C:242:GLU:HG3	39:C:8586:HOH:O	1.84	0.78
1:0:1116:U:O2'	1:0:1118:A:H2	1.65	0.78
8:F:91:VAL:HG12	8:F:92:GLY:N	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:133:VAL:HA	39:L:8865:HOH:O	1.84	0.78
29:1:25:LYS:HD2	30:2:49:GLU:H	1.46	0.78
11:I:73:LEU:HD12	11:I:107:LYS:NZ	1.97	0.78
25:W:88:THR:HG23	25:W:110:GLN:NE2	1.97	0.78
10:H:59:GLN:HE21	10:H:129:ARG:HE	1.30	0.77
3:A:51:ARG:HB2	39:A:9068:HOH:O	1.83	0.77
12:J:76:ASP:HA	39:J:5907:HOH:O	1.85	0.77
4:B:62:ARG:HA	4:B:65:MET:CE	2.15	0.77
4:B:179:LEU:O	4:B:183:GLU:HG2	1.84	0.77
4:B:190:MET:HE2	4:B:194:PHE:CD1	2.20	0.77
39:0:5298:HOH:O	12:J:47:THR:HB	1.84	0.77
24:V:42:ASN:HB3	39:V:7247:HOH:O	1.85	0.77
1:0:1116:U:H3	1:0:1246:A:H62	1.33	0.76
1:0:2506:A:O2'	1:0:2507:G:H8	1.68	0.76
7:E:100:ASP:HB2	39:E:2789:HOH:O	1.85	0.76
1:0:1878:G:H1'	39:0:6568:HOH:O	1.85	0.76
5:C:236:THR:CG2	5:C:239:ALA:H	1.95	0.76
1:0:381:G:H5"	39:0:4785:HOH:O	1.84	0.76
3:A:105:VAL:CG1	3:A:154:ALA:HB1	2.15	0.76
1:0:544:G:H2'	1:0:545:G:H5"	1.67	0.76
1:0:871:G:H8	1:0:871:G:C5'	1.99	0.76
2:9:14:G:H5'	2:9:14:G:H8	1.51	0.76
5:C:115:LEU:HD21	5:C:243:VAL:HG13	1.67	0.76
8:F:91:VAL:HG12	8:F:92:GLY:H	1.48	0.76
10:H:30:LYS:H	10:H:62:HIS:HD2	1.31	0.76
1:0:559:U:H6	1:0:559:U:H5'	1.51	0.76
10:H:59:GLN:NE2	10:H:129:ARG:HE	1.83	0.75
16:N:48:VAL:CG1	16:N:55:ASP:HB3	2.16	0.75
18:P:59:ARG:NH2	18:P:66:GLN:HE22	1.83	0.75
20:R:39:THR:HB	20:R:42:GLU:HG3	1.68	0.75
4:B:62:ARG:HA	4:B:65:MET:HE2	1.68	0.75
4:B:201:ASP:HB2	4:B:312:ARG:HD2	1.68	0.75
20:R:8:ALA:HB1	20:R:13:THR:HG21	1.67	0.75
3:A:194:MET:HE1	3:A:199:HIS:HB2	1.68	0.75
8:F:50:VAL:HG13	8:F:60:VAL:HG11	1.69	0.75
27:Y:212:ARG:HD2	39:Y:8899:HOH:O	1.86	0.75
1:0:870:G:C2'	1:0:871:G:H5"	2.17	0.74
4:B:162:MET:CE	4:B:310:ARG:HD3	2.17	0.74
1:0:1206:U:H5'	1:0:1206:U:H6	1.52	0.74
1:0:236:A:H4'	1:0:237:G:H5'	1.69	0.74
3:A:199:HIS:CD2	3:A:201:PHE:H	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:36:PRO:HA	4:B:168:GLY:HA3	1.68	0.74
21:S:57:THR:HG22	21:S:59:ASP:N	2.01	0.74
1:0:506:G:H22	1:0:509:A:C5'	2.01	0.74
5:C:140:VAL:HB	39:C:8656:HOH:O	1.88	0.74
1:0:545:G:H5'	1:0:545:G:H8	1.51	0.74
2:9:56:A:C2'	2:9:57:A:H5"	2.18	0.74
5:C:139:VAL:HG13	39:C:8653:HOH:O	1.86	0.74
1:0:1183:C:H2'	39:0:6690:HOH:O	1.87	0.74
3:A:36:ASP:OD2	3:A:85:SER:HB2	1.88	0.74
20:R:18:LEU:HD12	20:R:143:VAL:HG11	1.70	0.74
1:0:1372:A:H3'	39:0:7622:HOH:O	1.88	0.74
4:B:16:ARG:NH1	39:B:9084:HOH:O	2.20	0.74
25:W:13:MET:HE3	25:W:17:ILE:HG22	1.70	0.74
23:U:14:GLU:OE1	23:U:15:PRO:HD2	1.88	0.73
5:C:236:THR:HG21	39:C:8579:HOH:O	1.85	0.73
6:D:25:MET:HE1	6:D:41:LEU:HG	1.69	0.73
5:C:5:ILE:HD11	5:C:16:VAL:CG2	2.18	0.73
7:E:3:VAL:HG22	7:E:49:ILE:HB	1.70	0.73
1:0:1819:G:H2'	1:0:1820:G:H4'	1.71	0.73
3:A:48:ASP:HB3	39:A:9068:HOH:O	1.89	0.73
20:R:18:LEU:HB2	20:R:143:VAL:HG12	1.71	0.73
27:Y:235:GLU:CD	27:Y:235:GLU:H	1.92	0.73
1:0:93:C:H5"	24:V:1:THR:HB	1.69	0.73
39:0:6936:HOH:O	27:Y:141:THR:HG23	1.86	0.73
1:0:2908:A:H2'	1:0:2909:G:O4'	1.89	0.72
4:B:221:GLN:HE22	13:K:42:ASN:HD22	1.33	0.72
13:K:34:VAL:HG22	13:K:47:ALA:HB2	1.71	0.72
12:J:107:ASN:ND2	12:J:109:TYR:H	1.86	0.72
21:S:10:VAL:HG11	24:V:36:ALA:HA	1.72	0.72
1:0:2570:G:H5"	39:0:5371:HOH:O	1.88	0.72
1:0:2291:A:C8	1:0:2309:C:H5'	2.25	0.72
1:0:450:C:OP1	5:C:184:ARG:NH2	2.22	0.72
5:C:5:ILE:HD11	5:C:16:VAL:HG23	1.69	0.72
1:0:1119:G:H2'	12:J:52:GLN:NE2	2.04	0.72
4:B:18:ARG:HG3	4:B:256:GLN:HG3	1.72	0.72
8:F:63:ILE:HB	8:F:64:PRO:HD3	1.71	0.72
25:W:125:HIS:HD2	25:W:127:GLY:H	1.36	0.72
1:0:2896:A:H5"	39:0:6546:HOH:O	1.89	0.71
8:F:96:ALA:HA	39:F:3111:HOH:O	1.89	0.71
13:K:74:VAL:CG1	13:K:113:ILE:HG12	2.21	0.71
17:O:32:ARG:O	17:O:32:ARG:HD3	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:962:C:H1'	16:N:5:ARG:NH1	2.05	0.71
1:0:1603:A:H5'	1:0:1605:G:O4'	1.91	0.71
2:9:29:C:H2'	2:9:30:C:H5'	1.73	0.71
21:S:43:GLU:HB3	39:S:8990:HOH:O	1.90	0.71
1:0:1666:C:O2'	1:0:1667:A:H5"	1.91	0.71
25:W:6:GLN:HB2	25:W:26:ILE:CD1	2.21	0.71
1:0:111:C:O2'	29:1:20:ARG:HG2	1.92	0.70
1:0:481:U:H5"	39:0:6102:HOH:O	1.91	0.70
3:A:223:ARG:HG3	39:A:9064:HOH:O	1.91	0.70
13:K:98:VAL:HG13	13:K:102:GLU:HA	1.73	0.70
1:0:877:G:H5'	1:0:878:G:OP1	1.92	0.70
39:0:4698:HOH:O	30:2:38:LYS:HE3	1.90	0.70
4:B:275:GLY:O	4:B:291:ASP:HA	1.91	0.70
13:K:14:LYS:HB2	13:K:45:PRO:HG2	1.73	0.70
1:0:2364:A:H5"	19:Q:15:LYS:HD3	1.73	0.70
2:9:39:U:H1'	2:9:44:A:H61	1.55	0.70
3:A:164:ARG:NE	39:A:9050:HOH:O	2.24	0.70
4:B:264:GLU:HG2	4:B:267:LYS:HE2	1.73	0.70
16:N:164:ASP:CG	16:N:167:ASP:HA	2.11	0.70
25:W:68:THR:HG23	25:W:69:ARG:HG2	1.74	0.70
28:Z:11:SER:HB3	28:Z:23:ARG:HB2	1.73	0.70
1:0:542:A:H5'	1:0:542:A:C8	2.23	0.70
1:0:1184:C:H1'	39:0:7891:HOH:O	1.90	0.70
3:A:105:VAL:HG11	3:A:154:ALA:HB1	1.74	0.70
1:0:244:C:OP2	8:F:38:LYS:HE3	1.91	0.70
1:0:541:C:H2'	1:0:542:A:C5'	2.21	0.70
12:J:45:VAL:HG23	12:J:130:VAL:O	1.91	0.70
6:D:128:LEU:HB2	39:D:6007:HOH:O	1.90	0.70
13:K:74:VAL:HG13	13:K:113:ILE:HG23	1.72	0.70
1:0:1244:U:OP1	12:J:18:ILE:HD13	1.91	0.70
12:J:74:ARG:HH11	12:J:74:ARG:CB	2.05	0.70
16:N:11:ARG:HG3	16:N:14:ARG:NH1	2.06	0.70
22:T:71:VAL:HG11	22:T:90:PRO:CB	2.20	0.70
1:0:2635:A:O2'	1:0:2636:C:H5'	1.92	0.70
8:F:13:GLU:OE2	8:F:78:GLU:HG2	1.90	0.70
2:9:49:G:H5"	39:N:8845:HOH:O	1.92	0.69
4:B:238:ASN:HD22	4:B:240:GLY:N	1.90	0.69
1:0:281:U:H2'	1:0:282:C:O4'	1.91	0.69
10:H:32:ALA:HB3	10:H:69:ARG:HH12	1.55	0.69
10:H:102:LYS:HD3	10:H:122:LYS:HD3	1.74	0.69
1:0:1701:A:H5'	39:0:6730:HOH:O	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2748:G:H2'	39:0:7963:HOH:O	1.91	0.69
20:R:39:THR:HG23	20:R:107:GLU:O	1.93	0.69
8:F:58:GLU:OE1	15:M:27:ARG:NH2	2.25	0.69
1:0:796:A:HO2'	28:Z:10:ARG:N	1.91	0.69
1:0:1593:C:OP1	18:P:117:SER:HB3	1.93	0.69
1:0:2533:C:H5'	1:0:2533:C:H6	1.58	0.69
1:0:2780:C:H1'	7:E:143:GLN:HE21	1.58	0.69
2:9:6:C:OP1	16:N:37:ARG:NH1	2.25	0.69
16:N:80:SER:HB2	39:N:8835:HOH:O	1.92	0.69
16:N:139:TRP:HA	16:N:139:TRP:CE3	2.28	0.69
27:Y:126:PRO:HG2	27:Y:128:PHE:CE1	2.28	0.69
1:0:1118:A:C8	1:0:1118:A:H3'	2.28	0.68
1:0:1118:A:H3'	1:0:1118:A:H8	1.58	0.68
1:0:2468:A:H61	31:3:48:ASN:HD21	1.40	0.68
1:0:1666:C:H2'	1:0:1667:A:H5'	1.75	0.68
4:B:58:PRO:HA	4:B:63:GLU:OE1	1.92	0.68
14:L:148:GLU:HA	39:L:8864:HOH:O	1.93	0.68
3:A:88:ILE:HD13	3:A:100:PRO:HD3	1.76	0.68
4:B:190:MET:HE2	4:B:194:PHE:HD1	1.59	0.68
6:D:135:VAL:HG21	6:D:139:TYR:CD1	2.29	0.68
6:D:146:LYS:NZ	16:N:107:ASN:HD21	1.92	0.68
8:F:2:VAL:HG22	8:F:57:GLU:OE1	1.94	0.68
10:H:6:ALA:HA	10:H:61:ARG:HH12	1.58	0.68
16:N:17:ARG:HB3	16:N:17:ARG:HH11	1.57	0.68
5:C:78:ARG:HG3	5:C:78:ARG:NH1	2.01	0.67
1:0:272:A:H3'	39:0:7953:HOH:O	1.93	0.67
1:0:1119:G:N2	1:0:1246:A:C2	2.58	0.67
24:V:12:THR:HG22	24:V:15:GLU:CG	2.24	0.67
25:W:21:LEU:HD22	25:W:26:ILE:CD1	2.25	0.67
1:0:657:G:OP1	5:C:27:ARG:NH2	2.27	0.67
1:0:2270:G:H4'	3:A:223:ARG:NH1	2.07	0.67
3:A:100:PRO:HG2	3:A:103:VAL:HG21	1.76	0.67
1:0:2081:A:H4'	12:J:69:TYR:CE1	2.30	0.67
16:N:7:LYS:HE3	19:Q:21:ARG:O	1.95	0.67
1:0:1701:A:H4'	1:0:1702:U:C5'	2.25	0.67
6:D:23:VAL:HG21	6:D:45:THR:HG21	1.74	0.67
25:W:122:ARG:HH11	25:W:122:ARG:CG	2.07	0.67
4:B:51:VAL:CG2	4:B:327:VAL:HG13	2.24	0.67
10:H:6:ALA:HA	10:H:61:ARG:NH1	2.09	0.67
27:Y:115:ARG:NE	39:Y:8853:HOH:O	2.27	0.67
27:Y:185:VAL:HG12	39:Y:8869:HOH:O	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:1:MET:HG2	5:C:2:GLN:N	2.10	0.67
5:C:115:LEU:HD13	5:C:223:LEU:HD21	1.76	0.67
1:0:338:C:H4'	5:C:174:ILE:CD1	2.25	0.66
15:M:164:THR:HG22	15:M:167:GLY:N	2.09	0.66
1:0:794:U:H3	1:0:819:A:H61	1.42	0.66
1:0:1679:C:H5'	39:0:9811:HOH:O	1.95	0.66
1:0:1667:A:H5'	1:0:1667:A:C8	2.29	0.66
25:W:13:MET:CE	25:W:17:ILE:HG22	2.24	0.66
1:0:558:C:C2'	1:0:559:U:H5"	2.26	0.66
1:0:1328:A:OP1	27:Y:169:ARG:HD2	1.96	0.66
4:B:320:GLN:HE21	4:B:321:PRO:HD2	1.61	0.66
5:C:2:GLN:HB3	39:C:8589:HOH:O	1.96	0.66
12:J:74:ARG:NH1	12:J:76:ASP:HB2	2.11	0.66
16:N:139:TRP:HA	16:N:139:TRP:HE3	1.61	0.66
4:B:212:GLN:HB2	4:B:257:THR:CG2	2.24	0.66
27:Y:144:ARG:NE	39:Y:8910:HOH:O	2.27	0.66
13:K:32:ILE:HD11	13:K:56:SER:HB3	1.76	0.66
14:L:136:ALA:HB3	39:L:8865:HOH:O	1.96	0.66
20:R:111:ILE:HG23	20:R:145:LEU:HD11	1.78	0.66
7:E:20:ILE:CD1	7:E:40:VAL:HG11	2.26	0.66
25:W:21:LEU:HD22	25:W:26:ILE:HD11	1.78	0.65
39:0:7208:HOH:O	16:N:4:PRO:HD2	1.95	0.65
7:E:15:GLN:HG2	7:E:19:ASP:O	1.96	0.65
10:H:83:GLU:HA	39:H:9037:HOH:O	1.96	0.65
1:0:2851:G:O2'	1:0:2852:A:H5'	1.96	0.65
25:W:88:THR:HG22	25:W:90:TYR:HD1	1.61	0.65
39:0:5438:HOH:O	15:M:125:ARG:HD3	1.96	0.65
4:B:185:GLY:HA2	39:B:9103:HOH:O	1.96	0.65
13:K:118:ALA:HA	13:K:125:ALA:HB2	1.79	0.65
28:Z:11:SER:CB	28:Z:23:ARG:HB2	2.27	0.65
6:D:166:ILE:HB	39:D:6326:HOH:O	1.97	0.65
15:M:107:ARG:HH11	15:M:107:ARG:HG3	1.61	0.65
25:W:21:LEU:HD21	25:W:48:VAL:CG1	2.27	0.65
1:0:513:A:N3	39:0:4140:HOH:O	2.29	0.65
1:0:1163:G:H5'	11:I:110:ASP:O	1.97	0.65
16:N:132:ASN:O	16:N:135:VAL:HG12	1.97	0.65
25:W:13:MET:HE1	25:W:18:GLN:HA	1.78	0.65
1:0:2505:G:O2'	1:0:2506:A:H5'	1.96	0.65
10:H:114:ASP:HB2	39:H:8996:HOH:O	1.96	0.65
18:P:59:ARG:HH22	18:P:66:GLN:HE22	1.42	0.65
18:P:91:LYS:O	18:P:95:GLU:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:88:THR:HG22	25:W:89:ASP:H	1.59	0.65
25:W:88:THR:HG22	25:W:89:ASP:N	2.11	0.65
1:0:1183:C:N4	1:0:1184:C:H41	1.95	0.65
5:C:236:THR:HA	39:C:8656:HOH:O	1.96	0.65
1:0:282:C:O2'	1:0:283:U:H5'	1.96	0.64
1:0:871:G:C8	1:0:871:G:C5'	2.74	0.64
16:N:38:LYS:HE2	16:N:107:ASN:ND2	2.12	0.64
1:0:470:U:O2'	29:1:16:HIS:HD2	1.80	0.64
1:0:797:A:C4'	28:Z:10:ARG:N	2.61	0.64
1:0:2004:U:H4'	39:0:5759:HOH:O	1.96	0.64
1:0:2783:A:H3'	39:0:5684:HOH:O	1.96	0.64
20:R:99:ALA:HB1	20:R:109:MET:CE	2.26	0.64
25:W:80:ASP:O	25:W:84:VAL:HG23	1.97	0.64
29:1:42:SER:HB2	39:1:8957:HOH:O	1.97	0.64
39:0:6115:HOH:O	22:T:68:ASP:HB2	1.98	0.64
6:D:25:MET:SD	6:D:40:ILE:HD11	2.37	0.64
1:0:1165:G:H4'	1:0:1174:A:O2'	1.97	0.64
1:0:1684:A:H1'	30:2:43:ARG:HH22	1.62	0.64
2:9:39:U:H1'	2:9:44:A:N6	2.11	0.64
14:L:143:THR:HG22	14:L:144:ASP:N	2.12	0.64
1:0:2827:A:H2'	1:0:2828:G:O4'	1.98	0.64
39:0:5912:HOH:O	9:G:12:ILE:HG23	1.98	0.64
21:S:51:GLN:HE21	21:S:53:ASN:HD21	1.44	0.64
25:W:149:LEU:HG	25:W:153:MET:HE2	1.80	0.64
25:W:151:GLU:O	25:W:154:ARG:HB2	1.98	0.64
15:M:99:ARG:HH21	15:M:170:ASN:HD22	1.45	0.64
16:N:49:THR:HG22	16:N:56:ASP:HB2	1.78	0.64
26:X:9:VAL:HG13	26:X:88:GLU:OE1	1.97	0.64
26:X:72:VAL:HG22	26:X:85:VAL:HG12	1.77	0.64
1:0:544:G:C2'	1:0:545:G:H5"	2.27	0.64
1:0:1189:A:H3'	39:0:8185:HOH:O	1.97	0.64
1:0:1641:A:H2'	1:0:1642:A:H5'	1.79	0.64
6:D:170:TYR:O	6:D:171:ASP:HB3	1.98	0.64
9:G:20:VAL:O	9:G:24:VAL:HG23	1.98	0.64
18:P:115:SER:N	18:P:118:GLN:HE21	1.88	0.64
1:0:2721:U:H4'	13:K:87:ARG:HG3	1.80	0.64
3:A:33:GLU:H	3:A:33:GLU:CD	2.01	0.64
4:B:264:GLU:HG2	4:B:267:LYS:CE	2.27	0.64
4:B:305:ASP:O	4:B:306:LYS:HB2	1.98	0.64
24:V:39:ALA:C	24:V:41:GLU:H	1.99	0.64
25:W:81:ASP:OD1	25:W:92:ASP:HB2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:144:ARG:NH1	39:Y:8875:HOH:O	2.26	0.64
13:K:109:LEU:HD13	13:K:113:ILE:HD11	1.79	0.63
30:2:22:PRO:HG2	30:2:25:VAL:HG23	1.79	0.63
11:I:100:VAL:HG11	11:I:124:VAL:HG22	1.80	0.63
1:0:396:U:H1'	39:0:8134:HOH:O	1.99	0.63
39:0:7310:HOH:O	15:M:178:LYS:HB2	1.97	0.63
7:E:116:THR:HG22	7:E:151:LEU:HD22	1.80	0.63
27:Y:186:ARG:HG2	27:Y:186:ARG:HH11	1.64	0.63
28:Z:13:ARG:NH1	39:Z:8719:HOH:O	2.30	0.63
1:0:2816:A:H2'	39:0:8430:HOH:O	1.97	0.63
3:A:153:ARG:HH11	3:A:153:ARG:CB	2.12	0.63
7:E:5:LEU:HD21	7:E:66:GLN:HG3	1.80	0.63
18:P:10:ALA:HA	18:P:13:VAL:HG12	1.79	0.63
2:9:6:C:C5'	16:N:37:ARG:NH1	2.57	0.63
2:9:14:G:H5'	2:9:14:G:C8	2.32	0.63
7:E:69:ILE:HA	7:E:72:MET:HE3	1.80	0.63
7:E:81:GLU:HG2	7:E:134:SER:HB3	1.80	0.63
27:Y:106:THR:HG23	27:Y:107:PRO:HD2	1.80	0.63
1:0:1209:C:H2'	1:0:1210:G:H8	1.64	0.63
13:K:98:VAL:HG11	13:K:102:GLU:HA	1.78	0.63
26:X:66:THR:HG23	26:X:67:PRO:HD2	1.81	0.63
12:J:75:PRO:HG2	12:J:105:LEU:HD21	1.80	0.63
1:0:500:G:H21	20:R:98:ASN:HD21	1.45	0.63
1:0:2781:U:H1'	7:E:139:GLU:OE2	1.99	0.63
7:E:69:ILE:HA	7:E:72:MET:CE	2.29	0.63
23:U:17:THR:HG22	23:U:18:GLY:N	2.14	0.63
25:W:65:VAL:HA	25:W:68:THR:HG22	1.80	0.63
8:F:53:ASP:OD1	8:F:80:GLN:HB2	1.98	0.62
10:H:49:GLN:HG3	10:H:140:TYR:CE2	2.34	0.62
25:W:84:VAL:HG12	39:W:6679:HOH:O	1.98	0.62
1:0:2426:G:H1'	39:0:6539:HOH:O	1.99	0.62
8:F:38:LYS:NZ	15:M:3:SER:HA	2.15	0.62
7:E:68:HIS:O	7:E:72:MET:HG3	1.99	0.62
11:I:101:LYS:O	11:I:105:GLU:HG3	1.99	0.62
3:A:95:PRO:HG2	3:A:98:GLU:HG2	1.81	0.62
4:B:41:PHE:HA	4:B:79:MET:HE2	1.82	0.62
3:A:179:MET:HG2	3:A:186:TRP:CB	2.30	0.62
1:0:2578:G:H5'	1:0:2578:G:H8	1.64	0.62
23:U:14:GLU:O	23:U:17:THR:HB	2.00	0.62
4:B:7:ARG:HG2	4:B:7:ARG:HH11	1.65	0.62
25:W:4:LEU:O	25:W:32:CYS:HA	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:21:LEU:HD13	25:W:26:ILE:HD11	1.81	0.62
1:0:1377:C:H5'	1:0:1377:C:H6	1.65	0.62
6:D:99:ASP:HB3	6:D:103:ASN:H	1.64	0.62
20:R:18:LEU:HD12	20:R:143:VAL:CG1	2.30	0.62
24:V:64:GLY:O	24:V:65:ASP:HB2	2.00	0.62
11:I:108:HIS:N	11:I:109:PRO:HD2	2.14	0.62
1:0:2533:C:H5'	1:0:2533:C:C6	2.34	0.61
3:A:194:MET:CE	3:A:199:HIS:HB2	2.29	0.61
1:0:2694:A:H4'	7:E:91:PHE:HE1	1.65	0.61
3:A:190:ARG:NH2	3:A:207:GLN:OE1	2.32	0.61
24:V:39:ALA:N	24:V:40:PRO:HD2	2.16	0.61
28:Z:36:ASP:HB3	28:Z:45:ASP:HB3	1.80	0.61
1:0:558:C:H2'	1:0:559:U:C5'	2.30	0.61
1:0:656:G:H5'	17:O:3:THR:CG2	2.30	0.61
1:0:2420:G:O2'	1:0:2421:G:H5'	2.00	0.61
5:C:25:PRO:HG2	39:C:8522:HOH:O	1.99	0.61
22:T:53:GLY:HA3	39:T:6384:HOH:O	2.00	0.61
26:X:9:VAL:HG22	26:X:88:GLU:OE2	1.99	0.61
1:0:1819:G:H5'	39:0:5176:HOH:O	2.01	0.61
1:0:1189:A:H1'	1:0:1209:C:C1'	2.30	0.61
4:B:307:ARG:HD2	39:B:9123:HOH:O	2.00	0.61
5:C:236:THR:H	5:C:239:ALA:HB3	1.64	0.61
6:D:91:ALA:HB1	39:D:5198:HOH:O	2.00	0.61
1:0:1168:C:H4'	39:I:5128:HOH:O	2.00	0.61
1:0:1441:G:O2'	1:0:1442:A:H5'	2.00	0.61
1:0:2414:A:H2'	1:0:2415:A:C8	2.36	0.61
1:0:2676:C:H4'	12:J:70:PHE:CE1	2.34	0.61
1:0:2769:C:C2'	1:0:2770:G:H5'	2.31	0.61
10:H:167:LYS:HE2	10:H:169:GLU:OE1	2.01	0.61
12:J:74:ARG:O	12:J:78:ILE:HG12	2.00	0.61
31:3:70:ARG:HG2	31:3:77:ALA:HB2	1.82	0.61
4:B:74:ILE:HD13	4:B:309:VAL:HG21	1.81	0.61
5:C:162:VAL:HG22	5:C:232:LEU:HD21	1.83	0.61
7:E:49:ILE:HD11	7:E:69:ILE:HD12	1.83	0.61
16:N:169:PRO:O	16:N:172:PHE:HB3	2.00	0.61
20:R:106:GLY:HA2	20:R:109:MET:HE3	1.82	0.61
27:Y:144:ARG:NH2	39:Y:8910:HOH:O	2.33	0.61
1:0:259:G:H21	15:M:58:GLN:NE2	1.99	0.61
1:0:709:G:O2'	17:O:25:VAL:HG12	2.00	0.61
1:0:1058:A:H2'	1:0:1060:C:H5"	1.82	0.61
1:0:1189:A:H1'	1:0:1209:C:H1'	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:79:ASP:HB3	39:L:8850:HOH:O	2.01	0.61
29:1:10:LYS:HG3	39:1:8979:HOH:O	2.00	0.61
4:B:312:ARG:HB2	39:B:9118:HOH:O	2.00	0.60
4:B:8:LYS:HG3	4:B:220:VAL:HG12	1.83	0.60
29:1:25:LYS:HD2	30:2:49:GLU:N	2.15	0.60
1:0:757:C:OP1	14:L:27:ARG:HD2	2.01	0.60
1:0:2718:C:H6	1:0:2718:C:H5'	1.67	0.60
3:A:88:ILE:O	3:A:88:ILE:HG22	2.00	0.60
18:P:115:SER:H	18:P:118:GLN:NE2	1.89	0.60
20:R:18:LEU:HB2	20:R:143:VAL:CG1	2.29	0.60
31:3:25:VAL:HG22	31:3:68:LYS:HG3	1.83	0.60
1:0:1119:G:H8	12:J:52:GLN:HE22	1.48	0.60
17:O:32:ARG:HE	17:O:35:LYS:HD2	1.65	0.60
17:O:87:THR:O	17:O:91:GLN:HG3	2.02	0.60
1:0:2064:U:H5'	1:0:2652:U:H4'	1.83	0.60
4:B:102:THR:CG2	4:B:182:VAL:HG12	2.31	0.60
4:B:145:HIS:HD2	4:B:146:THR:O	1.84	0.60
12:J:103:VAL:HG12	39:J:5907:HOH:O	2.01	0.60
31:3:55:VAL:HG22	39:3:8937:HOH:O	2.01	0.60
1:0:69:A:H5'	1:0:69:A:C8	2.36	0.60
22:T:7:GLN:O	22:T:11:GLN:HG3	2.02	0.60
28:Z:37:HIS:HB2	28:Z:47:VAL:HB	1.82	0.60
1:0:90:A:H2'	1:0:91:G:O4'	2.02	0.60
1:0:1701:A:H5"	1:0:1702:U:H3'	1.82	0.60
20:R:39:THR:HG22	20:R:42:GLU:H	1.65	0.60
8:F:37:THR:O	8:F:41:GLU:HG3	2.02	0.60
16:N:12:ARG:HD3	16:N:18:THR:OG1	2.01	0.60
1:0:2005:G:H3'	1:0:2005:G:OP2	2.02	0.60
39:0:3045:HOH:O	25:W:119:HIS:HE1	1.84	0.60
6:D:25:MET:HE3	6:D:37:ALA:CB	2.23	0.60
13:K:62:PRO:HG3	13:K:65:ARG:HH21	1.67	0.60
14:L:145:LEU:O	14:L:148:GLU:HG3	2.02	0.60
15:M:60:VAL:C	15:M:61:ILE:HD12	2.22	0.60
25:W:141:HIS:HB2	25:W:146:ILE:HG12	1.82	0.60
4:B:254:GLN:HG2	4:B:255:GLY:N	2.16	0.60
31:3:17:HIS:O	31:3:18:GLN:HG3	2.02	0.60
1:0:2507:G:H2'	1:0:2510:C:H42	1.66	0.59
1:0:2768:A:H2'	1:0:2769:C:O4'	2.02	0.59
3:A:36:ASP:O	3:A:38:ILE:N	2.27	0.59
4:B:41:PHE:CD1	4:B:79:MET:HE2	2.36	0.59
25:W:72:PRO:HG2	25:W:77:ALA:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:122:ARG:NH2	39:Y:8834:HOH:O	2.35	0.59
11:I:105:GLU:HA	11:I:108:HIS:NE2	2.18	0.59
22:T:9:LYS:CE	22:T:13:ARG:NH1	2.62	0.59
24:V:38:GLY:C	24:V:40:PRO:HD2	2.22	0.59
1:0:2866:U:C4	23:U:50:GLU:HB3	2.37	0.59
2:9:44:A:O4'	6:D:76:ARG:NE	2.35	0.59
1:0:121:U:OP2	30:2:10:ARG:NH2	2.31	0.59
1:0:474:C:O3'	5:C:73:LEU:HD21	2.02	0.59
4:B:51:VAL:HG23	4:B:329:TYR:O	2.00	0.59
6:D:65:GLU:HA	39:D:6752:HOH:O	2.03	0.59
11:I:129:SER:O	11:I:130:LEU:HD23	2.02	0.59
14:L:80:ASP:HB2	14:L:90:ARG:O	2.03	0.59
16:N:37:ARG:NE	39:N:8832:HOH:O	2.35	0.59
21:S:73:ASP:OD1	21:S:76:GLU:HG3	2.02	0.59
26:X:74:ALA:HB2	26:X:85:VAL:HG13	1.83	0.59
6:D:159:PRO:O	6:D:163:VAL:HG23	2.02	0.59
8:F:91:VAL:CG1	8:F:92:GLY:H	2.15	0.59
15:M:34:GLU:HB3	15:M:38:GLU:HG3	1.84	0.59
20:R:39:THR:HB	20:R:42:GLU:CG	2.32	0.59
1:0:558:C:O2'	1:0:559:U:H5"	2.02	0.59
1:0:1474:C:H5'	1:0:1474:C:C6	2.32	0.59
3:A:191:GLY:HA2	3:A:194:MET:CE	2.33	0.59
4:B:312:ARG:HD3	4:B:315:VAL:HG13	1.84	0.59
15:M:24:GLN:NE2	15:M:27:ARG:HH11	2.01	0.59
31:3:62:THR:HB	39:3:8977:HOH:O	2.01	0.59
1:0:316:A:H5'	22:T:54:ASP:OD2	2.03	0.59
6:D:136:ARG:HB2	39:D:7597:HOH:O	2.03	0.59
18:P:80:ARG:HG2	18:P:87:ARG:CZ	2.32	0.59
31:3:6:ARG:NH1	31:3:21:GLU:HG3	2.17	0.59
4:B:102:THR:HG23	4:B:182:VAL:HG12	1.84	0.59
24:V:39:ALA:N	24:V:40:PRO:CD	2.66	0.59
13:K:81:ARG:HD3	13:K:87:ARG:NH1	2.17	0.59
25:W:22:GLU:HG2	25:W:27:HIS:CD2	2.37	0.59
26:X:43:VAL:HG22	26:X:76:ARG:NH1	2.18	0.59
1:0:1080:C:H4'	1:0:1081:A:OP1	2.02	0.58
17:O:39:THR:O	17:O:115:ARG:NH2	2.36	0.58
9:G:23:ILE:O	9:G:27:ILE:HG13	2.03	0.58
1:0:2717:C:H2'	1:0:2718:C:C5'	2.30	0.58
2:9:114:G:O6	16:N:11:ARG:HD3	2.03	0.58
3:A:191:GLY:HA2	3:A:194:MET:HE2	1.85	0.58
7:E:11:VAL:HG12	7:E:12:ASP:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:70:THR:OG1	11:I:107:LYS:HE2	2.03	0.58
12:J:131:THR:HG22	12:J:133:GLY:N	2.18	0.58
15:M:107:ARG:NH1	39:M:8876:HOH:O	2.35	0.58
1:0:603:A:H5"	1:0:604:G:OP1	2.02	0.58
1:0:1119:G:H2'	12:J:52:GLN:HE22	1.66	0.58
39:0:5912:HOH:O	9:G:12:ILE:HA	2.02	0.58
2:9:13:A:O2'	2:9:14:G:H5"	2.03	0.58
5:C:98:ARG:NH1	39:C:8561:HOH:O	2.34	0.58
7:E:166:VAL:HG12	39:E:3134:HOH:O	2.02	0.58
1:0:164:G:H4'	14:L:30:ARG:HD3	1.86	0.58
1:0:1528:A:H2'	1:0:1529:G:O4'	2.02	0.58
3:A:131:HIS:O	3:A:132:ASP:HB2	2.02	0.58
5:C:27:ARG:HG3	5:C:29:ASP:OD1	2.02	0.58
25:W:108:ARG:HE	25:W:114:PRO:HG3	1.69	0.58
6:D:54:ALA:CB	6:D:69:ILE:HD12	2.32	0.58
12:J:47:THR:HG22	12:J:48:GLY:N	2.19	0.58
26:X:25:ARG:HD3	26:X:64:ALA:O	2.04	0.58
1:0:1166:A:H61	1:0:1180:U:H3	1.51	0.58
17:O:47:ARG:HH11	17:O:47:ARG:HG3	1.68	0.58
24:V:12:THR:HG23	24:V:14:ALA:H	1.68	0.58
1:0:1118:A:H62	1:0:1244:U:H3	1.52	0.58
1:0:2779:G:H21	7:E:143:GLN:NE2	2.02	0.58
3:A:55:VAL:HG22	3:A:68:ILE:O	2.04	0.58
3:A:164:ARG:CZ	39:A:9050:HOH:O	2.51	0.58
6:D:50:VAL:O	6:D:71:ALA:HA	2.04	0.58
8:F:50:VAL:CG1	8:F:60:VAL:HG11	2.33	0.58
8:F:91:VAL:CG1	8:F:92:GLY:N	2.67	0.58
14:L:72:ASN:HB2	39:L:8872:HOH:O	2.03	0.58
25:W:125:HIS:CD2	25:W:127:GLY:H	2.20	0.58
1:0:125:U:H2'	39:0:4245:HOH:O	2.03	0.58
1:0:1730:G:H5'	1:0:1731:C:C5	2.38	0.58
6:D:23:VAL:HG21	6:D:45:THR:CG2	2.33	0.58
1:0:396:U:O2'	1:0:418:C:H4'	2.04	0.58
1:0:558:C:H2'	1:0:559:U:H5"	1.85	0.58
1:0:2717:C:O2'	1:0:2718:C:H5"	2.02	0.58
7:E:35:TYR:HA	12:J:127:ILE:HD12	1.86	0.58
12:J:75:PRO:HG2	12:J:105:LEU:CD2	2.34	0.58
25:W:130:HIS:O	25:W:136:GLY:HA3	2.04	0.58
1:0:299:U:H5'	39:0:7766:HOH:O	2.03	0.57
1:0:621:C:H5'	27:Y:132:ASP:OD2	2.04	0.57
4:B:141:ARG:HD2	4:B:163:GLU:OE2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:95:THR:OG1	6:D:174:VAL:HG22	2.04	0.57
6:D:154:LYS:H	6:D:154:LYS:CD	2.06	0.57
15:M:134:ILE:HG23	15:M:141:ILE:HD13	1.86	0.57
23:U:11:THR:HG22	23:U:53:ASP:OD2	2.04	0.57
39:0:7854:HOH:O	22:T:9:LYS:HB2	2.03	0.57
39:9:9062:HOH:O	16:N:41:LYS:HD3	2.05	0.57
16:N:164:ASP:OD1	16:N:167:ASP:HA	2.03	0.57
25:W:38:THR:HG22	25:W:39:ASP:N	2.20	0.57
1:0:119:A:H2'	1:0:120:A:H5"	1.87	0.57
1:0:1634:G:H3'	39:0:4370:HOH:O	2.04	0.57
1:0:1766:U:O2	1:0:1778:A:H5'	2.04	0.57
1:0:2346:C:O2'	6:D:52:THR:HG21	2.04	0.57
14:L:133:VAL:HB	39:L:8849:HOH:O	2.03	0.57
1:0:1615:A:H5'	39:0:4655:HOH:O	2.03	0.57
2:9:20:G:O2'	2:9:21:G:H5'	2.04	0.57
8:F:31:LYS:HE3	39:F:2623:HOH:O	2.04	0.57
16:N:11:ARG:NH2	39:N:8817:HOH:O	2.38	0.57
1:0:588:G:O6	25:W:154:ARG:NH1	2.37	0.57
2:9:92:G:H2'	2:9:93:A:C8	2.40	0.57
5:C:107:ARG:NH1	39:C:8637:HOH:O	2.37	0.57
1:0:1175:G:H1'	1:0:1193:A:H2'	1.86	0.57
2:9:39:U:HO2'	2:9:42:C:H5	1.52	0.57
1:0:2320:U:H4'	1:0:2321:A:O4'	2.05	0.57
39:0:7881:HOH:O	4:B:211:THR:HG21	2.04	0.57
5:C:233:THR:HG22	5:C:234:VAL:N	2.18	0.57
6:D:58:VAL:CG1	6:D:60:GLU:HG2	2.33	0.57
11:I:124:VAL:O	11:I:124:VAL:HG12	2.05	0.57
14:L:148:GLU:HB2	39:L:8877:HOH:O	2.03	0.57
26:X:80:GLU:HB3	39:X:5564:HOH:O	2.04	0.57
31:3:60:LYS:HG3	31:3:61:PRO:HD2	1.85	0.57
26:X:76:ARG:HH11	26:X:76:ARG:HG3	1.70	0.57
1:0:1205:U:H2'	1:0:1206:U:C5'	2.34	0.57
3:A:33:GLU:O	3:A:34:ASP:HB2	2.04	0.57
8:F:101:ALA:HA	39:F:5413:HOH:O	2.04	0.57
10:H:48:VAL:HA	10:H:170:ARG:O	2.04	0.57
1:0:280:C:H2'	1:0:281:U:O4'	2.05	0.57
4:B:214:PRO:HD2	39:B:8990:HOH:O	2.05	0.57
4:B:307:ARG:HG3	4:B:307:ARG:NH1	2.11	0.56
6:D:135:VAL:HG22	6:D:136:ARG:H	1.70	0.56
12:J:19:MET:CE	12:J:132:LEU:HD11	2.35	0.56
27:Y:189:ASN:C	27:Y:189:ASN:HD22	2.07	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:263:U:O4'	8:F:59:ILE:HD13	2.05	0.56
1:0:681:G:N3	1:0:681:G:H5'	2.20	0.56
1:0:1164:U:OP1	11:I:69:PRO:HA	2.05	0.56
4:B:254:GLN:HG3	39:B:9000:HOH:O	2.05	0.56
1:0:545:G:H5'	1:0:545:G:C8	2.37	0.56
1:0:949:U:O2'	19:Q:40:HIS:HE1	1.89	0.56
4:B:125:GLU:O	4:B:129:ARG:HG3	2.05	0.56
5:C:246:ARG:NH1	39:C:8575:HOH:O	2.38	0.56
39:C:8563:HOH:O	17:O:3:THR:HG21	2.05	0.56
10:H:23:ILE:HG23	10:H:123:ILE:HD11	1.88	0.56
20:R:29:LYS:HD3	39:R:8944:HOH:O	2.05	0.56
2:9:91:C:H2'	2:9:92:G:O4'	2.05	0.56
4:B:62:ARG:HA	4:B:65:MET:HE3	1.88	0.56
26:X:15:ARG:HB3	26:X:15:ARG:HH11	1.71	0.56
29:1:28:HIS:CE1	29:1:31:LYS:HE2	2.40	0.56
1:0:1299:G:O6	14:L:6:ARG:HD3	2.05	0.56
9:G:12:ILE:N	9:G:13:PRO:HD3	2.21	0.56
12:J:107:ASN:HD21	12:J:109:TYR:HB2	1.71	0.56
29:1:8:GLN:HE22	29:1:11:LYS:NZ	2.04	0.56
1:0:272:A:H5'	1:0:273:G:OP2	2.06	0.56
11:I:113:SER:HB2	11:I:118:ASN:HB2	1.88	0.56
1:0:1086:A:C6	25:W:11:VAL:HG11	2.40	0.56
1:0:1786:C:OP1	18:P:74:GLN:HG2	2.05	0.56
1:0:2820:A:OP1	4:B:98:THR:HG22	2.06	0.56
4:B:85:ARG:NH1	39:B:9104:HOH:O	2.38	0.56
10:H:30:LYS:N	10:H:62:HIS:HD2	2.00	0.56
17:O:38:ARG:NH1	39:O:7674:HOH:O	2.37	0.56
26:X:30:MET:HE1	26:X:58:ALA:HB3	1.87	0.56
1:0:797:A:H4'	28:Z:10:ARG:N	2.21	0.56
5:C:132:ASP:HB3	39:C:8567:HOH:O	2.06	0.56
14:L:73:VAL:HG23	14:L:74:THR:H	1.70	0.56
16:N:61:ALA:HB3	16:N:88:ALA:HB2	1.87	0.56
16:N:86:LEU:HD21	16:N:180:LEU:CD1	2.36	0.56
22:T:71:VAL:HG12	22:T:72:ILE:N	2.21	0.56
3:A:153:ARG:HB2	3:A:153:ARG:NH1	2.17	0.56
16:N:17:ARG:HB3	16:N:17:ARG:NH1	2.21	0.56
20:R:111:ILE:HG23	20:R:145:LEU:CD1	2.36	0.56
22:T:28:SER:O	22:T:32:ARG:HG3	2.06	0.56
25:W:88:THR:HG23	25:W:110:GLN:HB3	1.88	0.56
1:0:1835:U:C5	1:0:1840:A:N7	2.65	0.55
3:A:192:VAL:CG1	3:A:207:GLN:HB3	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:280:VAL:HG13	4:B:333:GLU:O	2.05	0.55
12:J:107:ASN:C	12:J:107:ASN:HD22	2.09	0.55
17:O:73:ASP:HA	17:O:92:VAL:O	2.06	0.55
25:W:21:LEU:HB3	25:W:26:ILE:HG12	1.87	0.55
27:Y:144:ARG:CZ	39:Y:8910:HOH:O	2.54	0.55
30:2:22:PRO:HG2	30:2:25:VAL:CG2	2.35	0.55
1:0:960:G:N3	1:0:960:G:H2'	2.22	0.55
1:0:1234:U:N3	4:B:244:PRO:HB3	2.21	0.55
3:A:192:VAL:HG12	3:A:207:GLN:HB3	1.86	0.55
8:F:99:THR:HA	39:F:3461:HOH:O	2.05	0.55
1:0:20:G:H21	20:R:117:HIS:HD2	1.53	0.55
1:0:417:G:P	39:0:7848:HOH:O	2.64	0.55
1:0:1120:U:H5"	1:0:1120:U:C6	2.41	0.55
1:0:1182:C:H1'	1:0:1192:A:H8	1.72	0.55
4:B:217:ARG:HG3	4:B:257:THR:HG22	1.87	0.55
16:N:58:LEU:N	16:N:58:LEU:HD12	2.20	0.55
27:Y:189:ASN:HA	27:Y:217:ILE:HD11	1.87	0.55
1:0:380:A:OP2	15:M:9:ARG:HD2	2.07	0.55
1:0:447:A:P	22:T:1:SER:HB2	2.45	0.55
1:0:1363:G:OP1	5:C:76:ARG:NH2	2.39	0.55
1:0:2346:C:H6	1:0:2346:C:O5'	1.89	0.55
2:9:2:U:OP2	2:9:3:A:H5'	2.07	0.55
12:J:45:VAL:HG21	12:J:129:PHE:CD1	2.41	0.55
29:1:25:LYS:CD	30:2:49:GLU:H	2.18	0.55
39:0:4235:HOH:O	22:T:9:LYS:HD3	2.06	0.55
2:9:28:U:H5"	16:N:40:ASN:ND2	2.22	0.55
11:I:97:VAL:O	11:I:101:LYS:HG3	2.06	0.55
12:J:107:ASN:HD22	12:J:109:TYR:H	1.53	0.55
16:N:147:ILE:HD12	39:N:8845:HOH:O	2.06	0.55
27:Y:151:SER:HB3	27:Y:154:ARG:HB3	1.89	0.55
27:Y:155:ARG:NH1	39:Y:8855:HOH:O	2.39	0.55
1:0:1972:U:H2'	1:0:1973:A:H5"	1.88	0.55
1:0:1973:A:H5'	1:0:1973:A:C8	2.33	0.55
39:0:9846:HOH:O	29:1:1:THR:HA	2.06	0.55
3:A:69:LEU:HD23	3:A:107:ASN:HB2	1.87	0.55
26:X:25:ARG:HG2	39:X:5356:HOH:O	2.07	0.55
1:0:319:A:H4'	1:0:338:C:C4	2.42	0.55
1:0:645:U:OP2	14:L:4:LYS:HE2	2.06	0.55
1:0:1384:C:H5'	26:X:30:MET:HG2	1.87	0.55
39:0:5193:HOH:O	16:N:21:HIS:HD2	1.90	0.55
6:D:154:LYS:HD2	6:D:154:LYS:N	2.08	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:82:ARG:NH2	13:K:115:ARG:HG2	2.22	0.55
25:W:139:GLY:O	25:W:141:HIS:HD2	1.88	0.55
1:0:447:A:OP2	22:T:1:SER:HB2	2.07	0.55
1:0:1116:U:O2'	1:0:1118:A:C2	2.47	0.55
11:I:120:ALA:O	11:I:124:VAL:HG23	2.06	0.55
22:T:26:THR:HA	22:T:39:ASN:HB3	1.88	0.55
1:0:316:A:N3	1:0:336:G:O2'	2.40	0.55
1:0:2694:A:H4'	7:E:91:PHE:CE1	2.42	0.55
12:J:93:ARG:HB3	12:J:93:ARG:HH11	1.72	0.55
1:0:93:C:H5"	24:V:1:THR:CB	2.37	0.55
2:9:33:U:H2'	39:9:9068:HOH:O	2.07	0.55
2:9:51:A:H5'	16:N:160:SER:HB3	1.88	0.55
4:B:154:VAL:HG12	4:B:156:LYS:HG2	1.89	0.55
6:D:88:LEU:HB2	6:D:89:PRO:HD3	1.88	0.55
10:H:69:ARG:HD3	39:H:9031:HOH:O	2.07	0.55
24:V:42:ASN:O	24:V:44:GLY:N	2.40	0.55
30:2:48:ASP:O	30:2:49:GLU:HB2	2.07	0.55
1:0:475:G:H5'	5:C:73:LEU:HD23	1.88	0.54
1:0:2036:C:O4'	13:K:44:LEU:HG	2.07	0.54
2:9:23:U:O2'	2:9:24:U:H4'	2.07	0.54
4:B:79:MET:HE1	39:B:9094:HOH:O	2.06	0.54
5:C:115:LEU:O	5:C:118:THR:HB	2.06	0.54
16:N:49:THR:CG2	16:N:56:ASP:HB2	2.37	0.54
27:Y:133:HIS:HD2	39:Y:8880:HOH:O	1.90	0.54
1:0:69:A:H5'	1:0:69:A:H8	1.72	0.54
39:0:7121:HOH:O	22:T:38:ARG:NH1	2.39	0.54
2:9:41:C:O4'	6:D:50:VAL:HG22	2.06	0.54
5:C:16:VAL:HG12	5:C:17:ASP:H	1.71	0.54
24:V:55:ARG:O	24:V:59:ILE:HG12	2.08	0.54
25:W:54:PHE:CZ	25:W:140:LYS:HB2	2.42	0.54
1:0:1201:C:H2'	1:0:1202:A:H5'	1.88	0.54
1:0:2676:C:H4'	12:J:70:PHE:HE1	1.72	0.54
15:M:99:ARG:HD2	15:M:167:GLY:HA2	1.88	0.54
16:N:183:ASP:O	16:N:184:ILE:O	2.25	0.54
20:R:132:ARG:CZ	39:R:8991:HOH:O	2.55	0.54
1:0:1278:A:H4'	1:0:1279:U:C4	2.43	0.54
1:0:1677:U:OP2	30:2:8:LYS:NZ	2.40	0.54
5:C:214:THR:HG23	39:C:8643:HOH:O	2.07	0.54
7:E:36:PRO:HD3	12:J:127:ILE:HD12	1.89	0.54
26:X:31:ILE:O	26:X:35:GLU:HG3	2.08	0.54
4:B:66:GLU:OE1	4:B:328:ARG:HD2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1205:U:H2'	1:0:1206:U:H5"	1.89	0.54
5:C:79:ARG:O	5:C:87:ARG:HG2	2.08	0.54
6:D:22:VAL:HG22	6:D:74:THR:HG22	1.88	0.54
18:P:103:THR:O	18:P:107:GLU:HG3	2.07	0.54
1:0:1625:U:H4'	39:0:5132:HOH:O	2.07	0.54
3:A:94:LEU:HD23	3:A:94:LEU:N	2.23	0.54
5:C:129:HIS:HD2	5:C:165:ASP:OD2	1.90	0.54
7:E:31:ARG:NH1	39:E:5919:HOH:O	2.40	0.54
1:0:2769:C:H2'	1:0:2770:G:H5'	1.89	0.54
1:0:2894:C:O2'	1:0:2895:C:H5'	2.08	0.54
10:H:79:GLU:O	10:H:80:LEU:HD23	2.08	0.54
13:K:55:VAL:HG12	13:K:56:SER:N	2.22	0.54
19:Q:25:PRO:HB2	39:Q:4350:HOH:O	2.06	0.54
25:W:108:ARG:HE	25:W:114:PRO:CG	2.20	0.54
27:Y:178:HIS:CG	27:Y:179:PRO:HD2	2.43	0.54
1:0:1189:A:H1'	1:0:1209:C:O4'	2.08	0.54
1:0:1853:C:OP1	3:A:231:LYS:HG3	2.08	0.54
4:B:56:ASP:OD1	4:B:322:ARG:HB3	2.08	0.54
5:C:104:ASP:HA	5:C:107:ARG:HH12	1.71	0.54
7:E:7:ILE:HD11	7:E:11:VAL:C	2.29	0.54
26:X:25:ARG:HD2	39:X:3861:HOH:O	2.07	0.54
1:0:2862:G:H4'	4:B:336:GLN:O	2.07	0.54
3:A:179:MET:HA	3:A:179:MET:CE	2.38	0.54
6:D:58:VAL:HG12	6:D:60:GLU:HG2	1.89	0.54
8:F:14:ASP:O	8:F:18:GLU:HG3	2.08	0.54
13:K:66:ARG:HD3	39:K:2777:HOH:O	2.07	0.54
15:M:80:GLY:O	15:M:81:ARG:HD3	2.08	0.54
1:0:338:C:H4'	5:C:174:ILE:HD11	1.89	0.53
1:0:902:G:N7	14:L:18:HIS:HD2	2.06	0.53
1:0:2878:U:H2'	1:0:2879:A:O4'	2.08	0.53
39:0:3028:HOH:O	18:P:81:LYS:HG2	2.07	0.53
4:B:329:TYR:CE2	23:U:15:PRO:HG2	2.43	0.53
5:C:2:GLN:HB3	39:C:8535:HOH:O	2.08	0.53
6:D:23:VAL:HG22	6:D:73:VAL:HB	1.89	0.53
15:M:107:ARG:HG3	15:M:107:ARG:NH1	2.22	0.53
1:0:200:C:H2'	39:0:3929:HOH:O	2.07	0.53
1:0:485:A:N3	1:0:487:G:H5"	2.23	0.53
1:0:1314:U:H2'	39:0:6326:HOH:O	2.07	0.53
2:9:29:C:C2'	2:9:30:C:H5'	2.38	0.53
3:A:121:ALA:O	3:A:124:VAL:HG22	2.07	0.53
6:D:134:LEU:HD11	6:D:166:ILE:HD11	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:163:VAL:HA	39:D:6326:HOH:O	2.06	0.53
13:K:62:PRO:HG3	13:K:65:ARG:NH2	2.23	0.53
29:1:21:ARG:HD2	29:1:37:CYS:SG	2.48	0.53
1:0:538:C:OP2	27:Y:134:HIS:HE1	1.91	0.53
1:0:2670:G:O2'	1:0:2671:U:H5'	2.08	0.53
4:B:82:VAL:O	4:B:82:VAL:HG12	2.07	0.53
7:E:126:ILE:HB	7:E:131:LEU:CD2	2.38	0.53
11:I:94:ASP:OD1	11:I:133:THR:HB	2.09	0.53
16:N:43:VAL:HG13	16:N:118:ILE:HD11	1.91	0.53
16:N:62:HIS:HB3	16:N:65:ASP:OD1	2.09	0.53
25:W:149:LEU:HG	25:W:153:MET:CE	2.38	0.53
1:0:10:U:O4	1:0:532:A:OP2	2.26	0.53
1:0:1268:C:O2'	27:Y:169:ARG:HB2	2.08	0.53
1:0:1594:C:OP2	18:P:120:ARG:HD2	2.08	0.53
39:0:7836:HOH:O	22:T:2:LYS:HE2	2.07	0.53
3:A:101:GLU:OE2	3:A:131:HIS:HB2	2.07	0.53
13:K:34:VAL:CG2	13:K:47:ALA:HB2	2.38	0.53
16:N:154:LEU:O	16:N:155:GLU:HB3	2.08	0.53
24:V:1:THR:HG23	24:V:2:VAL:N	2.19	0.53
26:X:8:ARG:NH1	39:X:2479:HOH:O	2.40	0.53
30:2:23:ALA:HB3	39:2:6863:HOH:O	2.08	0.53
1:0:905:C:OP1	27:Y:144:ARG:NH1	2.42	0.53
30:2:39:ARG:HG2	39:2:3143:HOH:O	2.09	0.53
30:2:41:HIS:HD2	30:2:44:ARG:H	1.56	0.53
3:A:66:ARG:HH11	3:A:66:ARG:HB2	1.74	0.53
6:D:65:GLU:HG3	39:D:6752:HOH:O	2.07	0.53
22:T:69:LYS:O	22:T:71:VAL:HG23	2.08	0.53
1:0:536:A:H3'	39:0:5504:HOH:O	2.09	0.53
1:0:2243:C:H5"	39:0:4230:HOH:O	2.09	0.53
2:9:69:U:OP1	16:N:4:PRO:HG3	2.09	0.53
16:N:48:VAL:HG11	16:N:55:ASP:HB3	1.90	0.53
23:U:52:THR:HG22	23:U:54:THR:N	2.23	0.53
1:0:156:C:H5"	15:M:171:ARG:CD	2.29	0.53
1:0:1187:U:O2'	1:0:1189:A:H2	1.92	0.53
1:0:1972:U:C2'	1:0:1973:A:H5"	2.39	0.53
3:A:94:LEU:HG	3:A:99:ILE:HD11	1.91	0.53
4:B:321:PRO:HA	39:B:9127:HOH:O	2.09	0.53
6:D:24:HIS:HB2	6:D:72:LYS:CB	2.39	0.53
1:0:1201:C:H5"	39:0:6679:HOH:O	2.09	0.53
1:0:2419:U:H5"	1:0:2420:G:H5'	1.90	0.53
5:C:107:ARG:NE	39:C:8661:HOH:O	2.20	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:38:LYS:HZ3	15:M:3:SER:HA	1.74	0.53
10:H:165:ARG:HD2	39:H:9034:HOH:O	2.08	0.53
26:X:43:VAL:HG12	26:X:44:ASP:N	2.24	0.53
27:Y:112:GLU:OE2	27:Y:115:ARG:NH1	2.42	0.53
1:0:820:G:O2'	1:0:856:G:H4'	2.09	0.52
1:0:2812:A:C2	1:0:2814:A:N6	2.68	0.52
1:0:2817:G:P	39:0:8430:HOH:O	2.67	0.52
2:9:14:G:O2'	16:N:1:ALA:HB2	2.08	0.52
5:C:118:THR:O	5:C:136:VAL:HG13	2.08	0.52
12:J:80:LYS:HE3	12:J:101:VAL:O	2.08	0.52
14:L:134:GLU:HG3	39:L:8849:HOH:O	2.08	0.52
16:N:32:PRO:HD2	16:N:99:GLU:O	2.09	0.52
17:O:25:VAL:HG23	17:O:26:TRP:N	2.23	0.52
1:0:1162:G:H1'	11:I:112:LEU:HD11	1.91	0.52
1:0:2044:G:OP1	26:X:23:HIS:HE1	1.92	0.52
1:0:2712:G:H5'	39:K:4183:HOH:O	2.09	0.52
21:S:81:ILE:HG23	39:S:8984:HOH:O	2.10	0.52
25:W:64:THR:O	25:W:68:THR:HG22	2.09	0.52
26:X:18:ARG:NH1	39:X:4132:HOH:O	2.40	0.52
4:B:265:LEU:HD21	4:B:316:ARG:HD3	1.91	0.52
1:0:870:G:OP2	3:A:3:ARG:HD3	2.09	0.52
1:0:1119:G:H22	1:0:1246:A:H2	1.51	0.52
5:C:162:VAL:CG2	5:C:232:LEU:HD21	2.40	0.52
7:E:154:ILE:HG13	7:E:156:ASP:OD1	2.10	0.52
11:I:96:SER:H	11:I:99:GLN:NE2	2.07	0.52
17:O:96:VAL:HG13	17:O:100:GLN:HB2	1.90	0.52
1:0:711:G:H1'	39:0:7530:HOH:O	2.09	0.52
1:0:1120:U:H5'	1:0:1121:G:OP2	2.08	0.52
1:0:2491:G:H1'	39:0:7304:HOH:O	2.09	0.52
11:I:87:PRO:C	11:I:89:GLU:H	2.12	0.52
14:L:101:ASP:C	14:L:103:ALA:H	2.13	0.52
21:S:77:VAL:O	21:S:80:ARG:HG2	2.09	0.52
1:0:564:G:H1'	39:0:6756:HOH:O	2.08	0.52
1:0:1972:U:H2'	1:0:1973:A:C5'	2.39	0.52
3:A:53:ALA:HB3	39:A:9068:HOH:O	2.10	0.52
15:M:134:ILE:CG2	15:M:141:ILE:HD13	2.39	0.52
17:O:32:ARG:HH21	17:O:35:LYS:NZ	2.07	0.52
26:X:34:ARG:NH1	26:X:48:VAL:O	2.36	0.52
27:Y:154:ARG:NH1	27:Y:155:ARG:HG3	2.24	0.52
31:3:3:MET:HG3	31:3:4:PRO:HD2	1.92	0.52
1:0:1666:C:H2'	1:0:1667:A:C5'	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:0:6731:HOH:O	27:Y:158:LYS:HD3	2.10	0.52
7:E:84:MET:HB2	7:E:131:LEU:HB2	1.91	0.52
11:I:108:HIS:N	11:I:109:PRO:CD	2.72	0.52
14:L:67:ARG:O	14:L:71:GLU:HG3	2.10	0.52
16:N:78:MET:HB2	16:N:79:PRO:HD3	1.90	0.52
23:U:17:THR:CG2	23:U:18:GLY:N	2.73	0.52
24:V:56:ILE:O	24:V:60:GLN:HG3	2.10	0.52
1:0:31:C:H4'	39:0:7854:HOH:O	2.10	0.52
1:0:1119:G:H8	12:J:52:GLN:NE2	2.08	0.52
1:0:1730:G:C5'	1:0:1731:C:C6	2.93	0.52
17:O:26:TRP:N	39:O:3062:HOH:O	2.42	0.52
22:T:24:ARG:HH21	22:T:39:ASN:HD22	1.56	0.52
30:2:41:HIS:H	30:2:45:ASN:ND2	1.95	0.52
1:0:449:A:N7	5:C:43:LYS:HG2	2.25	0.52
1:0:949:U:H4'	19:Q:95:GLU:HA	1.90	0.52
3:A:81:GLN:HB2	3:A:92:ASN:ND2	2.24	0.52
4:B:314:ALA:HB3	4:B:317:PRO:HG3	1.92	0.52
6:D:135:VAL:HG22	6:D:136:ARG:N	2.25	0.52
8:F:27:GLY:HA3	8:F:101:ALA:O	2.10	0.52
11:I:133:THR:HG22	11:I:134:ILE:N	2.24	0.52
13:K:29:LEU:HB3	13:K:55:VAL:CG1	2.35	0.52
1:0:407:A:H5'	39:0:6477:HOH:O	2.10	0.52
1:0:1700:C:H5"	1:0:1701:A:OP2	2.09	0.52
3:A:37:VAL:HG13	39:A:9072:HOH:O	2.10	0.52
5:C:27:ARG:HG2	5:C:30:LEU:HD12	1.91	0.52
5:C:129:HIS:CE1	5:C:231:ARG:HA	2.45	0.52
7:E:15:GLN:NE2	7:E:40:VAL:O	2.43	0.52
9:G:64:ASN:HD22	9:G:64:ASN:N	2.08	0.52
10:H:62:HIS:HA	10:H:65:LEU:HD23	1.92	0.52
13:K:20:CYS:HB2	13:K:29:LEU:HG	1.92	0.52
16:N:49:THR:CG2	16:N:58:LEU:HD11	2.40	0.52
25:W:5:VAL:HG11	25:W:153:MET:HE3	1.92	0.52
25:W:122:ARG:CG	25:W:122:ARG:NH1	2.71	0.52
1:0:1730:G:H5"	1:0:1731:C:H6	1.74	0.51
3:A:232:ARG:NH2	3:A:236:GLY:O	2.34	0.51
10:H:174:LEU:HA	39:H:9021:HOH:O	2.10	0.51
27:Y:187:VAL:HB	27:Y:203:VAL:HG22	1.92	0.51
39:0:6168:HOH:O	13:K:87:ARG:CZ	2.57	0.51
12:J:75:PRO:HD3	12:J:136:SER:OG	2.09	0.51
16:N:110:THR:HB	16:N:113:SER:OG	2.11	0.51
17:O:14:LEU:CD2	17:O:102:ILE:HD11	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:9:CYS:HA	23:U:52:THR:HG23	1.92	0.51
1:0:653:U:H2'	1:0:654:A:C8	2.44	0.51
1:0:2643:G:H5"	39:0:4401:HOH:O	2.09	0.51
20:R:106:GLY:HA2	20:R:109:MET:CE	2.41	0.51
1:0:775:G:OP1	29:1:16:HIS:HE1	1.94	0.51
1:0:2289:G:H21	1:0:2291:A:H2	1.54	0.51
12:J:74:ARG:HH12	12:J:76:ASP:HB2	1.74	0.51
25:W:65:VAL:HG12	25:W:116:LEU:HD13	1.92	0.51
3:A:105:VAL:HG12	3:A:106:CYS:N	2.24	0.51
4:B:72:THR:HB	39:B:9073:HOH:O	2.10	0.51
4:B:141:ARG:HG2	4:B:165:ARG:HA	1.91	0.51
6:D:25:MET:CE	6:D:41:LEU:HG	2.39	0.51
11:I:97:VAL:CG1	11:I:101:LYS:HE3	2.35	0.51
16:N:152:GLU:C	16:N:154:LEU:H	2.14	0.51
22:T:115:GLU:HG3	22:T:116:ASP:N	2.25	0.51
25:W:106:THR:OG1	25:W:109:GLU:HG3	2.11	0.51
27:Y:186:ARG:HG2	27:Y:186:ARG:NH1	2.25	0.51
1:0:136:C:H2'	1:0:137:U:O4'	2.10	0.51
1:0:834:G:H4'	1:0:835:U:OP2	2.11	0.51
1:0:1242:A:C5'	12:J:82:THR:HG23	2.27	0.51
1:0:1947:G:H2'	1:0:1948:G:H8	1.75	0.51
1:0:2661:U:H3	1:0:2812:A:H62	1.59	0.51
2:9:35:C:H5"	39:9:9078:HOH:O	2.09	0.51
3:A:97:ALA:HB2	3:A:150:PRO:HB2	1.93	0.51
3:A:109:GLU:HG2	3:A:116:GLY:N	2.26	0.51
6:D:58:VAL:HB	6:D:62:ASP:HB3	1.93	0.51
6:D:136:ARG:HD2	6:D:155:HIS:O	2.10	0.51
24:V:20:LEU:HD22	24:V:60:GLN:HE22	1.75	0.51
1:0:123:U:H5'	39:0:7091:HOH:O	2.10	0.51
1:0:1159:G:H1	1:0:1208:C:H42	1.58	0.51
1:0:2748:G:H5'	39:0:7963:HOH:O	2.11	0.51
1:0:2795:C:O2'	1:0:2796:U:H5'	2.10	0.51
2:9:54:A:O2'	2:9:55:U:H5'	2.10	0.51
5:C:166:ILE:CD1	5:C:207:LEU:HD13	2.41	0.51
16:N:154:LEU:HG	16:N:155:GLU:H	1.76	0.51
18:P:10:ALA:HA	18:P:13:VAL:CG1	2.40	0.51
1:0:162:C:H2'	1:0:163:U:H5'	1.93	0.51
1:0:1351:G:OP1	5:C:96:LYS:NZ	2.37	0.51
1:0:1595:G:O2'	1:0:1596:U:H5'	2.11	0.51
1:0:2563:U:H2'	1:0:2565:C:O5'	2.11	0.51
16:N:179:LEU:HD23	16:N:184:ILE:HD12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:21:PRO:HG2	26:X:24:LYS:HD3	1.91	0.51
27:Y:184:GLU:OE1	27:Y:204:ARG:NH1	2.44	0.51
28:Z:26:VAL:O	28:Z:30:GLU:HG3	2.11	0.51
1:0:474:C:O3'	5:C:73:LEU:CD2	2.59	0.51
1:0:1118:A:H8	1:0:1119:G:H5"	1.76	0.51
8:F:58:GLU:CD	15:M:27:ARG:HH22	2.14	0.51
10:H:50:ILE:HG21	39:H:9028:HOH:O	2.11	0.51
11:I:84:SER:HB3	11:I:92:VAL:CG2	2.41	0.51
1:0:262:A:OP2	8:F:91:VAL:HG11	2.10	0.51
1:0:392:U:O2'	15:M:182:LYS:HE2	2.11	0.51
1:0:2073:G:OP2	1:0:2490:A:H5'	2.11	0.51
1:0:2301:A:H5"	1:0:2302:A:H5'	1.93	0.51
3:A:125:ASN:HB3	3:A:158:VAL:HG12	1.91	0.51
5:C:61:PHE:HB3	39:C:8650:HOH:O	2.10	0.51
5:C:136:VAL:HG22	5:C:137:PRO:HA	1.93	0.51
16:N:116:PHE:HB3	16:N:136:LEU:HD23	1.93	0.51
22:T:32:ARG:NH1	22:T:38:ARG:HH12	2.09	0.51
23:U:4:ARG:HG2	23:U:4:ARG:HH11	1.74	0.51
1:0:92:G:H4'	24:V:44:GLY:HA3	1.93	0.50
1:0:1244:U:H2'	12:J:47:THR:HG21	1.92	0.50
1:0:2456:A:H5'	39:0:6149:HOH:O	2.10	0.50
2:9:64:C:H2'	2:9:65:A:H5'	1.93	0.50
4:B:258:GLY:H	4:B:260:HIS:CE1	2.29	0.50
4:B:297:VAL:HB	39:B:9073:HOH:O	2.11	0.50
12:J:131:THR:HG22	12:J:133:GLY:H	1.76	0.50
13:K:28:GLU:HB3	13:K:59:LYS:HB2	1.92	0.50
31:3:18:GLN:OE1	31:3:73:GLU:HB3	2.11	0.50
2:9:48:C:H4'	16:N:141:ARG:HH21	1.76	0.50
23:U:39:ASN:ND2	23:U:44:ARG:HH11	2.08	0.50
26:X:37:LEU:CD1	26:X:85:VAL:HG21	2.23	0.50
30:2:20:ARG:HG3	30:2:21:VAL:H	1.77	0.50
1:0:2472:C:O2'	1:0:2634:G:H4'	2.11	0.50
1:0:2502:C:C2'	1:0:2503:A:H5'	2.40	0.50
2:9:76:G:C3'	2:9:77:A:H5"	2.31	0.50
16:N:164:ASP:OD2	16:N:167:ASP:HA	2.10	0.50
20:R:132:ARG:NH2	39:R:8991:HOH:O	2.45	0.50
21:S:10:VAL:HG11	24:V:36:ALA:CA	2.40	0.50
1:0:1289:C:O2'	1:0:1290:G:H5'	2.11	0.50
1:0:1470:A:OP1	15:M:93:ARG:HD2	2.12	0.50
1:0:2089:A:O2'	1:0:2090:G:H5'	2.11	0.50
3:A:105:VAL:HG11	3:A:154:ALA:CB	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:108:LEU:HD11	7:E:164:ASP:HB2	1.94	0.50
25:W:122:ARG:NH2	39:W:5817:HOH:O	2.44	0.50
1:0:558:C:H2'	1:0:559:U:H5'	1.93	0.50
1:0:1118:A:C8	1:0:1118:A:C3'	2.90	0.50
1:0:1181:A:C2'	1:0:1182:C:H5'	2.42	0.50
1:0:1250:C:O2'	1:0:1251:C:H5'	2.12	0.50
4:B:51:VAL:HG21	4:B:327:VAL:HG13	1.92	0.50
6:D:23:VAL:CG2	6:D:73:VAL:HB	2.41	0.50
10:H:30:LYS:H	10:H:62:HIS:CD2	2.21	0.50
17:O:78:ALA:C	17:O:98:LEU:HD13	2.32	0.50
23:U:46:ALA:HB1	23:U:52:THR:HG21	1.92	0.50
24:V:64:GLY:O	24:V:65:ASP:CB	2.59	0.50
1:0:1299:G:H5'	39:0:4547:HOH:O	2.12	0.50
1:0:2638:G:H1'	39:0:8261:HOH:O	2.11	0.50
1:0:2769:C:H2'	1:0:2770:G:C5'	2.41	0.50
6:D:103:ASN:ND2	6:D:134:LEU:H	2.08	0.50
1:0:1163:G:H5"	11:I:110:ASP:HB3	1.94	0.50
1:0:1666:C:C2'	1:0:1667:A:C5'	2.89	0.50
39:0:3115:HOH:O	8:F:38:LYS:HE2	2.11	0.50
39:0:8211:HOH:O	5:C:94:THR:HG21	2.12	0.50
14:L:89:PHE:N	39:L:8863:HOH:O	2.45	0.50
25:W:48:VAL:CG1	25:W:48:VAL:O	2.60	0.50
1:0:2756:U:H3	1:0:2896:A:H2	1.50	0.50
39:0:3724:HOH:O	11:I:87:PRO:HD3	2.11	0.50
39:0:9515:HOH:O	14:L:30:ARG:HD2	2.10	0.50
3:A:65:ARG:C	3:A:66:ARG:HG3	2.32	0.50
5:C:77:ALA:O	5:C:78:ARG:HG3	2.11	0.50
8:F:46:GLU:OE1	8:F:100:ASP:HA	2.12	0.50
21:S:81:ILE:HG12	39:S:8984:HOH:O	2.11	0.50
27:Y:187:VAL:HG22	27:Y:192:ASP:CB	2.42	0.50
2:9:64:C:C2'	2:9:65:A:H5'	2.41	0.49
5:C:246:ARG:NE	39:C:8630:HOH:O	2.26	0.49
11:I:126:THR:HG22	11:I:126:THR:O	2.11	0.49
13:K:115:ARG:HG3	13:K:116:GLU:N	2.26	0.49
25:W:38:THR:HG22	39:W:3580:HOH:O	2.11	0.49
26:X:71:ARG:HB3	26:X:88:GLU:OE1	2.11	0.49
28:Z:57:CYS:SG	28:Z:59:TYR:HB3	2.52	0.49
1:0:776:A:OP1	29:1:28:HIS:HE1	1.95	0.49
1:0:1377:C:H5'	1:0:1377:C:C6	2.45	0.49
1:0:2363:G:O3'	19:Q:11:ARG:NH1	2.45	0.49
1:0:2415:A:H2'	1:0:2416:G:H5'	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:58:GLU:HG3	8:F:61:MET:HE1	1.94	0.49
9:G:16:LYS:O	9:G:20:VAL:HG23	2.13	0.49
22:T:41:ARG:HG2	22:T:41:ARG:HH11	1.76	0.49
25:W:88:THR:CG2	25:W:90:TYR:HD1	2.25	0.49
27:Y:126:PRO:HG2	27:Y:128:PHE:CZ	2.47	0.49
30:2:20:ARG:CG	30:2:21:VAL:N	2.76	0.49
1:0:343:C:O2'	1:0:344:C:H5'	2.11	0.49
1:0:1200:A:H3'	39:0:6208:HOH:O	2.13	0.49
1:0:2791:U:H1'	1:0:2792:A:H5"	1.94	0.49
1:0:2812:A:H1'	39:0:6244:HOH:O	2.12	0.49
1:0:2825:C:H4'	1:0:2826:G:O5'	2.12	0.49
3:A:192:VAL:HG13	39:A:9022:HOH:O	2.12	0.49
4:B:74:ILE:HG13	39:B:9073:HOH:O	2.12	0.49
4:B:149:ASP:HB2	39:B:9049:HOH:O	2.13	0.49
6:D:23:VAL:HG23	6:D:23:VAL:O	2.13	0.49
10:H:6:ALA:CA	10:H:61:ARG:HH12	2.22	0.49
10:H:43:ALA:HB1	10:H:140:TYR:CE2	2.47	0.49
13:K:55:VAL:CG1	13:K:56:SER:N	2.75	0.49
14:L:125:PHE:CE1	14:L:140:VAL:HG13	2.48	0.49
15:M:31:TRP:HA	15:M:34:GLU:HG3	1.93	0.49
25:W:26:ILE:O	25:W:26:ILE:HG13	2.12	0.49
26:X:9:VAL:HG13	26:X:88:GLU:CD	2.32	0.49
27:Y:209:VAL:HG12	27:Y:214:ARG:HG3	1.94	0.49
1:0:920:C:H5"	1:0:921:G:O5'	2.13	0.49
1:0:1306:U:OP1	5:C:184:ARG:HD2	2.13	0.49
3:A:1:GLY:HA2	3:A:197:VAL:HG23	1.95	0.49
4:B:49:THR:HG21	4:B:331:SER:O	2.13	0.49
4:B:223:ARG:HG3	4:B:232:TRP:O	2.11	0.49
5:C:133:ARG:NH1	39:C:8616:HOH:O	2.45	0.49
6:D:29:HIS:HB2	39:D:2768:HOH:O	2.11	0.49
19:Q:26:PRO:O	19:Q:30:VAL:HG23	2.12	0.49
25:W:108:ARG:HG3	25:W:114:PRO:HG3	1.94	0.49
26:X:74:ALA:CB	26:X:85:VAL:HG22	2.42	0.49
31:3:48:ASN:ND2	31:3:50:GLY:H	2.10	0.49
1:0:638:C:H2'	1:0:639:A:C8	2.47	0.49
1:0:899:C:H5'	39:0:3690:HOH:O	2.11	0.49
1:0:1151:G:OP1	9:G:63:ARG:NH1	2.45	0.49
1:0:2270:G:C4'	3:A:223:ARG:HH12	2.18	0.49
6:D:104:PHE:CE2	6:D:166:ILE:HD13	2.47	0.49
8:F:39:SER:HB3	8:F:45:ALA:HB2	1.95	0.49
16:N:147:ILE:HB	39:N:8845:HOH:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:73:HIS:CD2	22:T:88:PRO:HG3	2.48	0.49
25:W:31:HIS:HB3	39:W:5420:HOH:O	2.12	0.49
4:B:268:ARG:NH2	4:B:325:PRO:HG3	2.28	0.49
5:C:19:PRO:HG2	5:C:22:PHE:CE1	2.48	0.49
8:F:16:ALA:HA	8:F:111:ILE:HD13	1.94	0.49
14:L:73:VAL:HG21	14:L:116:HIS:CD2	2.48	0.49
25:W:65:VAL:HA	25:W:68:THR:CG2	2.42	0.49
30:2:35:ARG:HB2	39:2:2691:HOH:O	2.11	0.49
1:0:1181:A:H2'	1:0:1182:C:H5'	1.94	0.49
1:0:1778:A:H2'	1:0:1779:A:H5'	1.95	0.49
6:D:18:ILE:HG12	6:D:134:LEU:CD2	2.43	0.49
22:T:62:VAL:HB	39:T:3851:HOH:O	2.13	0.49
22:T:112:LEU:HD23	22:T:119:ALA:HB3	1.95	0.49
1:0:793:A:H5"	18:P:83:LYS:HG2	1.95	0.49
1:0:1426:C:H2'	39:0:3083:HOH:O	2.11	0.49
3:A:34:ASP:OD1	3:A:35:GLY:N	2.39	0.49
4:B:102:THR:HG21	4:B:182:VAL:O	2.13	0.49
10:H:61:ARG:HH11	10:H:61:ARG:HG3	1.77	0.49
18:P:98:ILE:HD12	18:P:102:ARG:NE	2.28	0.49
1:0:1205:U:C2'	1:0:1206:U:H5"	2.43	0.49
1:0:2521:A:OP2	10:H:6:ALA:HB3	2.13	0.49
1:0:2697:A:H2'	1:0:2698:G:O4'	2.13	0.49
3:A:81:GLN:HG3	3:A:92:ASN:HD21	1.77	0.49
14:L:130:ARG:HA	39:L:8849:HOH:O	2.12	0.49
15:M:99:ARG:HE	15:M:170:ASN:HD22	1.59	0.49
27:Y:103:THR:HG22	27:Y:104:GLU:OE2	2.13	0.49
1:0:291:C:H2'	1:0:292:G:O4'	2.13	0.49
1:0:475:G:C5'	5:C:73:LEU:HD23	2.43	0.49
1:0:602:A:O2'	1:0:605:C:H4'	2.12	0.49
13:K:22:ASP:O	13:K:110:LYS:HE3	2.13	0.49
31:3:56:PRO:N	39:3:8976:HOH:O	2.45	0.49
1:0:1525:G:H5'	1:0:1526:A:OP2	2.13	0.48
1:0:1996:U:O2'	1:0:1997:A:H5'	2.13	0.48
1:0:2667:G:H1'	1:0:2914:A:N3	2.27	0.48
2:9:92:G:H2'	2:9:93:A:H8	1.78	0.48
6:D:36:ASN:HA	39:D:7500:HOH:O	2.12	0.48
12:J:130:VAL:HG12	12:J:131:THR:N	2.28	0.48
15:M:58:GLN:HG3	39:M:8905:HOH:O	2.11	0.48
27:Y:107:PRO:HB3	27:Y:182:PHE:CE2	2.47	0.48
27:Y:216:ARG:HD2	39:Y:8868:HOH:O	2.13	0.48
28:Z:32:GLU:HA	28:Z:35:GLU:HG3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:138:U:H5”	1:0:139:C:OP2	2.14	0.48
1:0:666:A:H2’	1:0:667:C:O4’	2.14	0.48
1:0:2672:C:H1’	39:B:9104:HOH:O	2.12	0.48
39:0:7653:HOH:O	3:A:11:ARG:HA	2.13	0.48
8:F:36:THR:HG23	8:F:97:ALA:HB2	1.94	0.48
20:R:132:ARG:HG2	20:R:133:ALA:N	2.28	0.48
24:V:12:THR:HG23	24:V:14:ALA:N	2.28	0.48
29:1:28:HIS:HD2	29:1:30:LYS:H	1.60	0.48
1:0:304:G:H1’	1:0:347:A:N6	2.28	0.48
1:0:656:G:C5’	17:O:3:THR:HG22	2.40	0.48
1:0:1477:C:H5’	1:0:1868:G:C5’	2.43	0.48
1:0:1741:U:H5’	1:0:1742:A:OP1	2.13	0.48
1:0:1942:A:H3’	39:0:7777:HOH:O	2.13	0.48
6:D:35:ALA:N	39:D:5576:HOH:O	2.46	0.48
7:E:85:GLU:HG3	7:E:169:THR:OG1	2.13	0.48
12:J:19:MET:HE3	12:J:132:LEU:CD2	2.34	0.48
15:M:164:THR:HG23	15:M:165:GLY:N	2.26	0.48
25:W:88:THR:HG22	25:W:90:TYR:CD1	2.46	0.48
27:Y:189:ASN:ND2	27:Y:192:ASP:H	2.11	0.48
1:0:57:C:H5”	39:0:7195:HOH:O	2.12	0.48
1:0:462:A:H2’	39:0:5343:HOH:O	2.14	0.48
1:0:1120:U:H5”	1:0:1120:U:H6	1.78	0.48
1:0:1166:A:H1’	1:0:1192:A:C2	2.48	0.48
1:0:2064:U:H5’	1:0:2652:U:O3’	2.13	0.48
1:0:2769:C:O2’	1:0:2770:G:H5’	2.13	0.48
22:T:49:GLU:HB3	22:T:59:GLU:HG2	1.95	0.48
24:V:23:LEU:HD12	24:V:56:ILE:HD12	1.95	0.48
25:W:48:VAL:O	25:W:48:VAL:HG12	2.13	0.48
28:Z:60:CYS:O	28:Z:61:ASP:HB2	2.12	0.48
1:0:558:C:C2’	1:0:559:U:C5’	2.90	0.48
10:H:66:GLU:HA	39:H:9031:HOH:O	2.13	0.48
18:P:13:VAL:HG21	18:P:41:ARG:HG2	1.94	0.48
25:W:139:GLY:O	25:W:141:HIS:CD2	2.65	0.48
1:0:1053:G:OP1	10:H:15:PRO:HG3	2.13	0.48
2:9:30:C:OP1	6:D:137:PRO:O	2.31	0.48
5:C:168:ARG:NH2	5:C:190:ALA:O	2.47	0.48
5:C:180:SER:HB2	39:C:8651:HOH:O	2.13	0.48
6:D:155:HIS:NE2	39:D:7597:HOH:O	2.31	0.48
7:E:133:VAL:HG12	7:E:141:VAL:HG13	1.96	0.48
9:G:23:ILE:HD13	9:G:67:LEU:HD23	1.96	0.48
10:H:141:CYS:HB2	39:H:8994:HOH:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:13:ASP:OD1	12:J:15:ARG:HB3	2.14	0.48
1:0:292:G:H2'	1:0:358:G:N2	2.29	0.48
1:0:377:C:H5	39:0:3795:HOH:O	1.97	0.48
1:0:447:A:OP1	22:T:2:LYS:HG2	2.13	0.48
1:0:1010:C:H4'	16:N:4:PRO:HB2	1.95	0.48
1:0:1427:A:H61	1:0:1440:U:H1'	1.79	0.48
6:D:149:ARG:NH2	39:D:3066:HOH:O	2.45	0.48
7:E:137:ASP:OD1	7:E:139:GLU:HB2	2.13	0.48
8:F:26:THR:HG21	8:F:102:GLY:C	2.34	0.48
15:M:64:ARG:HD2	39:M:8884:HOH:O	2.14	0.48
22:T:40:VAL:HG22	22:T:41:ARG:N	2.29	0.48
27:Y:149:GLN:NE2	39:Y:8900:HOH:O	2.41	0.48
1:0:1185:U:H2'	1:0:1186:C:C6	2.49	0.48
1:0:1874:U:H2'	3:A:120:ARG:HG3	1.96	0.48
1:0:1878:G:O2'	1:0:1879:U:OP2	2.31	0.48
1:0:2036:C:C1'	13:K:44:LEU:HG	2.43	0.48
6:D:37:ALA:O	6:D:40:ILE:HG12	2.13	0.48
19:Q:32:GLU:HA	19:Q:71:TYR:OH	2.14	0.48
20:R:34:GLU:HG2	20:R:46:TYR:OH	2.14	0.48
21:S:57:THR:CG2	21:S:58:MET:N	2.76	0.48
1:0:814:G:H4'	39:0:3620:HOH:O	2.12	0.48
39:0:5740:HOH:O	25:W:122:ARG:NH2	2.46	0.48
2:9:8:G:O6	16:N:11:ARG:NH1	2.46	0.48
3:A:36:ASP:HB2	3:A:85:SER:H	1.79	0.48
4:B:195:ARG:HD2	4:B:324:ASP:OD1	2.13	0.48
6:D:75:LEU:HD22	6:D:79:MET:HB3	1.96	0.48
7:E:80:TRP:O	7:E:134:SER:HA	2.13	0.48
19:Q:66:LYS:HB2	19:Q:70:ALA:O	2.14	0.48
23:U:52:THR:CG2	23:U:54:THR:HB	2.44	0.48
1:0:644:G:H5'	1:0:644:G:N3	2.29	0.48
1:0:654:A:OP2	17:O:38:ARG:HD3	2.14	0.48
1:0:1132:A:N6	1:0:1229:C:H2'	2.29	0.48
39:0:7437:HOH:O	19:Q:9:GLY:HA2	2.13	0.48
4:B:24:PRO:CG	4:B:204:GLY:HA2	2.44	0.48
5:C:127:ARG:CZ	5:C:225:PRO:HG2	2.42	0.48
13:K:30:LYS:O	13:K:55:VAL:HG13	2.14	0.48
18:P:97:ARG:HD2	39:P:162:HOH:O	2.13	0.48
24:V:5:VAL:CG1	24:V:9:ARG:NH1	2.77	0.48
1:0:1527:A:H1'	1:0:1528:A:C8	2.48	0.47
1:0:2456:A:H2'	1:0:2457:U:C6	2.49	0.47
39:0:7978:HOH:O	31:3:60:LYS:HG3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:49:G:H2'	2:9:50:G:O4'	2.14	0.47
3:A:94:LEU:HD12	3:A:98:GLU:HB2	1.95	0.47
5:C:104:ASP:HA	5:C:107:ARG:NH1	2.29	0.47
6:D:40:ILE:HG13	6:D:41:LEU:N	2.29	0.47
7:E:101:GLU:HB2	7:E:116:THR:O	2.13	0.47
18:P:104:LYS:HE2	18:P:138:GLU:OE2	2.14	0.47
24:V:39:ALA:O	24:V:41:GLU:N	2.47	0.47
1:0:951:A:C2'	1:0:952:G:H5'	2.44	0.47
1:0:1014:A:H2'	1:0:1015:C:H5'	1.95	0.47
1:0:1730:G:C5'	1:0:1731:C:H6	2.27	0.47
1:0:1787:C:OP1	18:P:68:LYS:HE2	2.14	0.47
1:0:1819:G:H2'	1:0:1820:G:C4'	2.41	0.47
1:0:1878:G:O2'	1:0:1879:U:C6	2.63	0.47
1:0:1882:C:OP1	3:A:192:VAL:HG23	2.14	0.47
1:0:2443:C:O3'	14:L:56:LYS:HE3	2.13	0.47
1:0:2809:G:H2'	1:0:2810:G:O4'	2.15	0.47
10:H:169:GLU:C	39:H:8993:HOH:O	2.51	0.47
11:I:105:GLU:HA	11:I:108:HIS:CE1	2.49	0.47
13:K:125:ALA:C	13:K:127:ALA:H	2.17	0.47
22:T:32:ARG:NH1	22:T:38:ARG:NH1	2.62	0.47
29:1:25:LYS:HD2	30:2:48:ASP:HA	1.96	0.47
1:0:396:U:OP2	31:3:38:ARG:HD2	2.15	0.47
1:0:1503:U:H2'	1:0:1504:A:O4'	2.14	0.47
4:B:71:VAL:HG11	4:B:296:LEU:HD22	1.96	0.47
13:K:63:GLU:HG2	39:K:6344:HOH:O	2.14	0.47
39:K:1387:HOH:O	23:U:20:MET:HE3	2.14	0.47
23:U:6:CYS:HB2	23:U:32:CYS:HB3	1.95	0.47
24:V:44:GLY:O	24:V:48:GLU:HG2	2.14	0.47
31:3:3:MET:O	31:3:90:PHE:HA	2.14	0.47
1:0:1056:U:H2'	1:0:1057:A:O4'	2.13	0.47
1:0:1441:G:H1'	39:0:8267:HOH:O	2.15	0.47
1:0:1641:A:C2'	1:0:1642:A:H5'	2.44	0.47
1:0:2787:C:H5	39:0:5098:HOH:O	1.96	0.47
3:A:130:THR:HB	3:A:137:VAL:HB	1.95	0.47
3:A:220:PRO:HD2	3:A:223:ARG:HD3	1.96	0.47
5:C:142:ASP:OD1	5:C:236:THR:HG23	2.14	0.47
6:D:24:HIS:HB2	6:D:72:LYS:HB3	1.97	0.47
16:N:65:ASP:HB3	39:N:8821:HOH:O	2.14	0.47
25:W:5:VAL:HG11	25:W:153:MET:CE	2.44	0.47
26:X:9:VAL:HG13	26:X:88:GLU:OE2	2.14	0.47
27:Y:187:VAL:HG22	27:Y:192:ASP:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:1:28:HIS:CD2	29:1:31:LYS:HG3	2.49	0.47
1:0:185:G:H4'	1:0:186:A:H4'	1.96	0.47
1:0:1342:C:O2'	1:0:1343:C:H5'	2.14	0.47
1:0:1926:G:H2'	1:0:1927:A:C8	2.49	0.47
8:F:48:VAL:CG2	8:F:74:PHE:HB3	2.44	0.47
1:0:1167:G:H2'	1:0:1168:C:O4'	2.15	0.47
1:0:1667:A:H2'	1:0:1668:U:C6	2.50	0.47
1:0:2133:U:H4'	1:0:2134:G:H5'	1.95	0.47
1:0:2896:A:N3	1:0:2896:A:H2'	2.29	0.47
6:D:170:TYR:O	6:D:171:ASP:CB	2.61	0.47
14:L:125:PHE:CZ	14:L:140:VAL:HG13	2.49	0.47
23:U:44:ARG:HB3	39:U:3805:HOH:O	2.15	0.47
1:0:282:C:H1'	1:0:368:C:H42	1.79	0.47
1:0:553:G:P	27:Y:204:ARG:HH22	2.37	0.47
1:0:737:A:H2'	1:0:738:G:O4'	2.15	0.47
1:0:1086:A:N6	25:W:11:VAL:HG11	2.30	0.47
1:0:1206:U:H2'	1:0:1207:A:O4'	2.15	0.47
1:0:1291:A:H2	39:0:5743:HOH:O	1.97	0.47
1:0:1419:U:H5'	1:0:1420:C:OP2	2.14	0.47
1:0:1943:C:O4'	3:A:212:PRO:HA	2.15	0.47
1:0:2251:G:H2'	1:0:2252:A:C8	2.50	0.47
4:B:85:ARG:HB2	4:B:99:GLU:HG2	1.95	0.47
4:B:205:VAL:O	4:B:307:ARG:NE	2.46	0.47
6:D:172:VAL:HG12	6:D:173:GLU:N	2.29	0.47
15:M:59:GLY:HA3	15:M:141:ILE:HD12	1.97	0.47
15:M:98:GLN:O	15:M:102:GLU:HG3	2.14	0.47
15:M:169:ARG:NH1	39:M:8871:HOH:O	2.47	0.47
16:N:171:HIS:CE1	39:N:8863:HOH:O	2.68	0.47
17:O:23:GLY:C	39:O:3062:HOH:O	2.52	0.47
22:T:52:ARG:HB2	22:T:95:ASN:HB3	1.97	0.47
24:V:5:VAL:HG23	39:V:2271:HOH:O	2.14	0.47
26:X:78:GLU:HG2	26:X:79:GLU:H	1.79	0.47
29:1:8:GLN:HE22	29:1:11:LYS:HZ2	1.61	0.47
4:B:81:ALA:O	4:B:186:GLY:HA3	2.14	0.47
6:D:35:ALA:C	6:D:37:ALA:H	2.18	0.47
6:D:84:LEU:HA	6:D:87:ALA:HB3	1.97	0.47
11:I:67:VAL:HG13	11:I:68:PRO:HD2	1.97	0.47
11:I:87:PRO:O	11:I:89:GLU:HG3	2.15	0.47
19:Q:25:PRO:HA	19:Q:26:PRO:HD3	1.80	0.47
1:0:285:A:H2'	1:0:286:U:O4'	2.15	0.47
1:0:553:G:OP2	27:Y:204:ARG:NH2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1593:C:OP1	18:P:117:SER:CB	2.63	0.47
1:0:2587:OMU:H2'	1:0:2589:U:H5"	1.96	0.47
1:0:2672:C:O2'	1:0:2673:U:H5'	2.15	0.47
2:9:51:A:H5'	16:N:160:SER:CB	2.45	0.47
6:D:92:GLU:HB2	39:D:3862:HOH:O	2.14	0.47
25:W:125:HIS:HE1	39:W:3071:HOH:O	1.97	0.47
1:0:157:G:H4'	15:M:95:LYS:HE2	1.97	0.47
1:0:1159:G:H21	1:0:1189:A:H8	1.63	0.47
1:0:1506:U:H6	1:0:1506:U:H5'	1.80	0.47
1:0:2505:G:C2'	1:0:2506:A:H5'	2.44	0.47
1:0:2591:C:H2'	1:0:2592:G:O4'	2.15	0.47
39:0:6693:HOH:O	23:U:56:ARG:HD3	2.15	0.47
5:C:12:THR:HB	39:C:8646:HOH:O	2.14	0.47
5:C:118:THR:CG2	5:C:137:PRO:HB3	2.44	0.47
9:G:14:GLU:HB3	39:G:4173:HOH:O	2.14	0.47
10:H:161:THR:HB	10:H:162:PRO:HD3	1.97	0.47
11:I:75:LYS:HD3	11:I:81:GLU:O	2.15	0.47
25:W:4:LEU:HD23	25:W:54:PHE:HB3	1.97	0.47
1:0:12:U:H2'	1:0:13:G:H5'	1.97	0.46
1:0:255:A:H2'	1:0:256:C:C6	2.50	0.46
1:0:1130:U:H2'	1:0:1131:G:O4'	2.15	0.46
1:0:1535:G:H2'	1:0:1536:C:C6	2.50	0.46
1:0:1992:U:OP2	13:K:66:ARG:HD2	2.15	0.46
1:0:2506:A:O2'	1:0:2507:G:O5'	2.34	0.46
1:0:2507:G:H2'	1:0:2510:C:N4	2.30	0.46
1:0:2769:C:H2'	1:0:2770:G:O4'	2.15	0.46
4:B:238:ASN:ND2	4:B:240:GLY:H	2.00	0.46
5:C:142:ASP:OD1	5:C:237:GLU:HB3	2.15	0.46
10:H:119:ALA:O	10:H:120:PHE:C	2.54	0.46
16:N:152:GLU:OE1	16:N:152:GLU:HA	2.15	0.46
25:W:6:GLN:CB	25:W:26:ILE:HD12	2.34	0.46
1:0:1185:U:OP1	11:I:121:LYS:HD3	2.15	0.46
1:0:1666:C:C2'	1:0:1667:A:H5"	2.44	0.46
1:0:2851:G:C2'	1:0:2852:A:H5'	2.45	0.46
4:B:241:PRO:HD2	39:B:9125:HOH:O	2.15	0.46
7:E:81:GLU:HG2	7:E:134:SER:CB	2.45	0.46
13:K:113:ILE:HG22	13:K:114:ALA:N	2.29	0.46
16:N:143:ARG:NH1	16:N:173:ASP:OD2	2.48	0.46
1:0:2716:G:H5"	4:B:206:THR:CG2	2.41	0.46
3:A:109:GLU:HG2	3:A:116:GLY:H	1.81	0.46
5:C:236:THR:HG22	5:C:239:ALA:CB	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:114:VAL:HG11	39:L:8865:HOH:O	2.14	0.46
15:M:167:GLY:O	15:M:171:ARG:HG3	2.15	0.46
26:X:76:ARG:O	26:X:77:PHE:HB3	2.15	0.46
1:0:317:A:H4'	39:0:4251:HOH:O	2.16	0.46
1:0:2265:U:H2'	1:0:2266:A:C8	2.51	0.46
1:0:2807:U:P	4:B:27:ASN:HD21	2.39	0.46
5:C:153:VAL:O	5:C:157:LEU:HG	2.16	0.46
6:D:94:ALA:HA	6:D:174:VAL:O	2.15	0.46
16:N:179:LEU:HA	16:N:184:ILE:HD12	1.97	0.46
17:O:14:LEU:HD23	17:O:102:ILE:HD11	1.98	0.46
21:S:38:ALA:O	21:S:42:GLU:HG3	2.16	0.46
27:Y:189:ASN:HD22	27:Y:192:ASP:H	1.63	0.46
28:Z:53:GLY:HA2	28:Z:67:GLY:O	2.15	0.46
1:0:1172:G:H1'	39:0:5430:HOH:O	2.15	0.46
1:0:1211:G:O2'	1:0:1212:C:H5'	2.15	0.46
1:0:1333:U:H2'	1:0:1334:C:C6	2.51	0.46
1:0:1500:U:P	18:P:41:ARG:HH22	2.38	0.46
1:0:1687:C:O2	29:1:9:GLY:HA2	2.16	0.46
2:9:6:C:C5'	16:N:37:ARG:HH12	2.19	0.46
5:C:140:VAL:HG12	5:C:141:SER:N	2.31	0.46
14:L:21:ARG:N	39:L:8826:HOH:O	2.47	0.46
14:L:143:THR:HG22	14:L:144:ASP:H	1.76	0.46
15:M:166:ALA:HA	15:M:169:ARG:NH1	2.30	0.46
20:R:82:GLU:HG3	20:R:83:LYS:N	2.30	0.46
1:0:426:G:H2'	1:0:427:C:O4'	2.16	0.46
1:0:2256:G:H2'	1:0:2257:G:C5'	2.46	0.46
1:0:2526:C:O2'	1:0:2527:U:H5'	2.16	0.46
12:J:19:MET:HE3	12:J:132:LEU:HD11	1.97	0.46
22:T:71:VAL:HG13	22:T:91:LEU:O	2.15	0.46
25:W:38:THR:HG22	25:W:39:ASP:H	1.80	0.46
1:0:894:A:C2	5:C:87:ARG:NH2	2.83	0.46
1:0:1419:U:H2'	1:0:1685:A:C2	2.51	0.46
3:A:51:ARG:NH1	3:A:120:ARG:O	2.49	0.46
7:E:34:TRP:O	12:J:127:ILE:HD11	2.15	0.46
10:H:49:GLN:HG3	10:H:140:TYR:CD2	2.51	0.46
25:W:21:LEU:HB3	25:W:26:ILE:CG1	2.46	0.46
1:0:317:A:H5"	22:T:52:ARG:HD2	1.98	0.46
1:0:475:G:OP1	5:C:73:LEU:HD22	2.16	0.46
1:0:1279:U:O2	1:0:1279:U:H2'	2.15	0.46
1:0:1603:A:H5"	1:0:1605:G:H5'	1.96	0.46
8:F:46:GLU:O	8:F:73:PRO:HD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:39:THR:HG22	20:R:41:GLY:N	2.30	0.46
1:0:470:U:O2'	29:1:16:HIS:CD2	2.65	0.46
1:0:484:A:N1	1:0:506:G:H4'	2.31	0.46
1:0:1025:C:H5'	25:W:23:MET:O	2.16	0.46
1:0:1497:G:H4'	1:0:1627:G:O2'	2.16	0.46
1:0:1625:U:H5"	39:0:6473:HOH:O	2.16	0.46
1:0:2300:A:H4'	1:0:2301:A:O5'	2.16	0.46
1:0:2626:C:H2'	1:0:2627:G:C8	2.51	0.46
1:0:2911:C:H2'	1:0:2912:C:C6	2.51	0.46
5:C:19:PRO:HG2	5:C:22:PHE:CD1	2.51	0.46
12:J:88:PRO:O	12:J:94:GLY:HA3	2.16	0.46
15:M:69:LYS:HG2	15:M:127:LYS:HG3	1.98	0.46
17:O:26:TRP:HB2	39:O:3062:HOH:O	2.15	0.46
26:X:45:GLU:HG3	39:X:6178:HOH:O	2.15	0.46
27:Y:235:GLU:CD	27:Y:235:GLU:N	2.66	0.46
1:0:420:U:H2'	1:0:421:C:C6	2.51	0.46
1:0:1044:C:H5"	39:0:9520:HOH:O	2.15	0.46
1:0:1295:G:H5"	14:L:14:GLY:O	2.16	0.46
1:0:1717:A:H5"	18:P:54:LYS:HB2	1.97	0.46
1:0:2256:G:H2'	1:0:2257:G:H5'	1.98	0.46
11:I:94:ASP:O	11:I:95:LEU:HD23	2.16	0.46
14:L:73:VAL:HG23	14:L:74:THR:N	2.30	0.46
14:L:97:VAL:HG12	14:L:98:GLU:O	2.16	0.46
15:M:47:ASP:CG	15:M:48:LYS:N	2.69	0.46
16:N:163:PHE:HZ	16:N:171:HIS:HD1	1.64	0.46
17:O:47:ARG:HG3	17:O:47:ARG:NH1	2.31	0.46
1:0:2266:A:OP2	15:M:90:ARG:NH2	2.49	0.45
1:0:2502:C:H2'	1:0:2503:A:H5'	1.98	0.45
1:0:2720:C:O2	13:K:87:ARG:NH2	2.50	0.45
3:A:81:GLN:HB2	3:A:92:ASN:HD22	1.81	0.45
4:B:14:GLY:HA2	4:B:15:PRO:C	2.36	0.45
6:D:101:THR:HG22	39:D:7400:HOH:O	2.15	0.45
7:E:31:ARG:NH1	7:E:68:HIS:CG	2.84	0.45
11:I:124:VAL:HG13	11:I:134:ILE:HD11	1.99	0.45
13:K:87:ARG:NH1	39:K:4066:HOH:O	2.49	0.45
14:L:145:LEU:O	14:L:145:LEU:HD23	2.16	0.45
25:W:38:THR:O	25:W:42:ARG:HB2	2.15	0.45
1:0:629:A:H2'	1:0:630:A:O4'	2.16	0.45
1:0:875:A:C2	3:A:194:MET:SD	3.10	0.45
1:0:1741:U:O2'	1:0:2723:G:H4'	2.16	0.45
2:9:49:G:O2'	2:9:50:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:24:PRO:HG3	4:B:204:GLY:HA2	1.98	0.45
5:C:118:THR:HG23	39:C:8504:HOH:O	2.15	0.45
22:T:32:ARG:HH12	22:T:38:ARG:HH12	1.64	0.45
23:U:47:ARG:HG2	39:U:4381:HOH:O	2.15	0.45
24:V:7:GLU:O	24:V:11:MET:HG3	2.16	0.45
25:W:110:GLN:NE2	25:W:110:GLN:HA	2.31	0.45
1:0:2415:A:O2'	16:N:29:SER:HB3	2.17	0.45
1:0:2421:G:H3'	1:0:2422:U:H5"	1.98	0.45
39:0:6804:HOH:O	3:A:205:GLY:HA3	2.16	0.45
3:A:94:LEU:HG	3:A:99:ILE:CD1	2.47	0.45
4:B:294:TYR:HE2	39:B:9120:HOH:O	1.98	0.45
5:C:47:GLY:HA2	5:C:92:PRO:HB2	1.97	0.45
11:I:134:ILE:HG22	11:I:135:GLU:N	2.31	0.45
14:L:57:VAL:O	14:L:57:VAL:HG12	2.17	0.45
20:R:119:VAL:O	20:R:119:VAL:HG12	2.16	0.45
1:0:1589:G:N2	1:0:1605:G:H1'	2.31	0.45
1:0:2781:U:H2'	1:0:2782:G:H5'	1.99	0.45
6:D:27:ILE:HD11	6:D:37:ALA:HB3	1.99	0.45
6:D:59:GLY:O	6:D:61:PHE:N	2.47	0.45
1:0:1205:U:H2'	1:0:1206:U:H5'	1.99	0.45
1:0:2112:A:H2'	1:0:2113:G:C8	2.52	0.45
2:9:28:U:H2'	2:9:29:C:C6	2.52	0.45
2:9:52:A:H2'	2:9:53:G:O4'	2.17	0.45
3:A:123:GLY:HA3	3:A:162:GLY:HA2	1.99	0.45
3:A:128:LEU:HG	39:A:9038:HOH:O	2.15	0.45
3:A:132:ASP:OD1	3:A:133:ARG:N	2.48	0.45
4:B:277:GLU:N	4:B:278:PRO:HD2	2.31	0.45
7:E:6:GLU:HA	7:E:46:THR:HG22	1.98	0.45
9:G:27:ILE:HD13	9:G:71:LEU:HD23	1.98	0.45
14:L:119:THR:HG23	14:L:139:SER:OG	2.17	0.45
15:M:81:ARG:HG3	15:M:85:ARG:HB2	1.98	0.45
16:N:37:ARG:CZ	39:N:8832:HOH:O	2.64	0.45
19:Q:11:ARG:NH1	39:Q:5620:HOH:O	2.49	0.45
20:R:119:VAL:HG21	20:R:142:ASP:CG	2.37	0.45
24:V:12:THR:CG2	24:V:15:GLU:HG3	2.40	0.45
27:Y:174:VAL:O	27:Y:174:VAL:HG12	2.17	0.45
1:0:558:C:H5'	39:0:5710:HOH:O	2.16	0.45
1:0:820:G:C6	3:A:171:LYS:HB2	2.52	0.45
1:0:2032:U:H5'	39:0:4980:HOH:O	2.16	0.45
1:0:2064:U:H4'	1:0:2653:A:OP1	2.16	0.45
1:0:2421:G:H3'	1:0:2422:U:C5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:139:ASP:HB2	4:B:165:ARG:HE	1.82	0.45
4:B:304:PRO:HD2	4:B:307:ARG:NE	2.32	0.45
4:B:305:ASP:O	4:B:306:LYS:CB	2.62	0.45
6:D:63:ILE:HG13	6:D:64:ARG:N	2.32	0.45
6:D:96:SER:C	6:D:98:PHE:H	2.20	0.45
10:H:50:ILE:HD12	10:H:149:VAL:CG1	2.47	0.45
15:M:99:ARG:HE	15:M:170:ASN:ND2	2.15	0.45
17:O:21:SER:OG	17:O:106:PRO:HB2	2.17	0.45
20:R:114:VAL:HA	20:R:144:GLU:O	2.16	0.45
1:0:932:U:H2'	1:0:933:C:C6	2.52	0.45
1:0:1878:G:O2'	1:0:1879:U:P	2.75	0.45
1:0:1979:G:H2'	39:0:3782:HOH:O	2.16	0.45
1:0:2717:C:OP1	4:B:207:LYS:HG3	2.17	0.45
7:E:3:VAL:CG2	7:E:49:ILE:HB	2.42	0.45
14:L:10:SER:O	14:L:11:ARG:HB3	2.17	0.45
14:L:143:THR:CG2	14:L:144:ASP:N	2.77	0.45
16:N:72:GLU:H	16:N:171:HIS:HE1	1.65	0.45
18:P:16:VAL:CG1	18:P:20:ARG:HB2	2.46	0.45
1:0:1163:G:N2	39:0:5189:HOH:O	2.49	0.45
1:0:1406:A:H4'	1:0:1407:A:H5"	1.98	0.45
1:0:2649:A:H5'	1:0:2649:A:H8	1.81	0.45
1:0:2756:U:N3	1:0:2896:A:C2	2.75	0.45
2:9:24:U:H3'	2:9:25:G:H5'	1.98	0.45
5:C:107:ARG:NH2	39:C:8661:HOH:O	2.47	0.45
10:H:33:GLN:H	10:H:69:ARG:HH11	1.65	0.45
13:K:4:LEU:HD22	13:K:116:GLU:HB3	1.99	0.45
13:K:58:THR:HG22	13:K:59:LYS:HG3	1.99	0.45
14:L:67:ARG:HB2	14:L:112:GLY:HA3	1.98	0.45
16:N:61:ALA:CB	16:N:88:ALA:HB2	2.47	0.45
16:N:143:ARG:HA	16:N:172:PHE:CD2	2.52	0.45
20:R:29:LYS:HD3	39:R:8937:HOH:O	2.17	0.45
21:S:8:PRO:HD2	24:V:32:ALA:HA	1.99	0.45
1:0:951:A:O2'	1:0:952:G:H5'	2.17	0.45
1:0:1174:A:C5	1:0:1201:C:H4'	2.52	0.45
1:0:1943:C:H4'	3:A:211:LYS:O	2.16	0.45
1:0:1947:G:H2'	1:0:1948:G:C8	2.51	0.45
1:0:2852:A:H5"	39:0:5686:HOH:O	2.17	0.45
5:C:27:ARG:HG2	5:C:30:LEU:CD1	2.46	0.45
6:D:76:ARG:O	6:D:77:ASP:HB2	2.17	0.45
7:E:18:LEU:HD13	7:E:34:TRP:CG	2.52	0.45
9:G:67:LEU:O	9:G:71:LEU:HG	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:K:7438:HOH:O	23:U:20:MET:HE1	2.16	0.45
15:M:99:ARG:HH21	15:M:170:ASN:ND2	2.11	0.45
31:3:30:GLN:NE2	39:3:8980:HOH:O	2.45	0.45
31:3:42:ARG:HH11	31:3:42:ARG:HG3	1.81	0.45
1:0:1060:C:H6	1:0:1060:C:H5'	1.82	0.45
1:0:1592:G:O2'	1:0:1593:C:O4'	2.33	0.45
4:B:5:ARG:NH1	4:B:8:LYS:HE2	2.32	0.45
4:B:154:VAL:CG1	4:B:156:LYS:HG2	2.47	0.45
6:D:27:ILE:HD11	6:D:37:ALA:CB	2.47	0.45
7:E:126:ILE:HB	7:E:131:LEU:HD23	1.98	0.45
9:G:69:ARG:NH1	39:G:3513:HOH:O	2.50	0.45
10:H:149:VAL:HG13	39:H:9028:HOH:O	2.16	0.45
18:P:134:VAL:O	18:P:137:LEU:HB3	2.18	0.45
18:P:141:ILE:C	18:P:143:ALA:H	2.19	0.45
30:2:18:ASN:HD21	30:2:40:ARG:H	1.65	0.45
1:0:1007:A:H2'	10:H:22:TYR:CZ	2.52	0.44
1:0:1654:U:H2'	3:A:47:HIS:HD2	1.82	0.44
1:0:2361:A:H5"	39:0:9501:HOH:O	2.17	0.44
4:B:82:VAL:O	4:B:82:VAL:CG1	2.65	0.44
5:C:35:VAL:HG21	5:C:227:GLY:HA2	1.98	0.44
7:E:11:VAL:HG13	7:E:23:GLU:O	2.17	0.44
7:E:116:THR:CG2	7:E:151:LEU:HD22	2.45	0.44
8:F:48:VAL:HG23	8:F:74:PHE:CB	2.47	0.44
1:0:969:G:H1	1:0:999:C:H42	1.65	0.44
1:0:2866:U:H4'	1:0:2867:G:H5'	1.98	0.44
3:A:192:VAL:HG12	3:A:207:GLN:CB	2.47	0.44
14:L:143:THR:HG21	39:L:8833:HOH:O	2.18	0.44
16:N:108:SER:HA	16:N:109:PRO:HD3	1.80	0.44
1:0:380:A:H2'	39:0:7660:HOH:O	2.16	0.44
1:0:960:G:N3	1:0:960:G:C2'	2.80	0.44
1:0:1150:A:C2	9:G:20:VAL:HG21	2.52	0.44
1:0:1555:G:H4'	1:0:1630:A:H2	1.82	0.44
1:0:1755:A:H2'	1:0:1756:G:O4'	2.17	0.44
1:0:2256:G:C2'	1:0:2257:G:H5'	2.47	0.44
5:C:16:VAL:HG12	5:C:17:ASP:N	2.31	0.44
5:C:150:THR:HA	5:C:203:ALA:O	2.17	0.44
16:N:154:LEU:C	16:N:156:GLU:H	2.20	0.44
23:U:9:CYS:O	23:U:52:THR:HG23	2.16	0.44
25:W:52:VAL:HG22	25:W:53:ALA:H	1.82	0.44
1:0:204:A:C2'	1:0:205:U:H5'	2.48	0.44
1:0:524:A:C5'	20:R:29:LYS:HE2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2003:U:H4'	1:0:2004:U:H5	1.82	0.44
25:W:38:THR:HB	39:W:5390:HOH:O	2.17	0.44
1:0:308:U:C4	1:0:342:C:H1'	2.52	0.44
1:0:488:U:H2'	39:0:4480:HOH:O	2.17	0.44
1:0:2548:C:OP2	4:B:5:ARG:NH2	2.50	0.44
4:B:30:PRO:HB2	4:B:39:GLN:NE2	2.32	0.44
4:B:217:ARG:HG3	4:B:257:THR:CG2	2.48	0.44
6:D:167:GLU:C	6:D:169:THR:H	2.21	0.44
25:W:41:TYR:HA	25:W:44:MET:HE3	1.99	0.44
1:0:2104:C:O2	1:0:2485:A:N1	2.51	0.44
1:0:2756:U:N3	1:0:2896:A:H2	2.13	0.44
2:9:50:G:H5"	16:N:159:TYR:HE1	1.83	0.44
4:B:41:PHE:HA	4:B:79:MET:CE	2.46	0.44
4:B:232:TRP:CD1	4:B:235:ARG:HD2	2.53	0.44
5:C:46:TYR:CE2	5:C:98:ARG:NH1	2.86	0.44
6:D:35:ALA:C	6:D:37:ALA:N	2.71	0.44
7:E:84:MET:HE1	7:E:148:ILE:HD12	2.00	0.44
12:J:74:ARG:HH12	12:J:76:ASP:CB	2.30	0.44
14:L:121:ILE:HG12	14:L:141:GLU:HB2	1.98	0.44
16:N:15:GLU:HB2	16:N:17:ARG:HG3	1.98	0.44
17:O:98:LEU:O	17:O:102:ILE:HG13	2.17	0.44
18:P:131:PHE:CD1	18:P:137:LEU:HD13	2.53	0.44
29:1:28:HIS:CD2	29:1:30:LYS:HB2	2.52	0.44
31:3:91:GLN:O	31:3:92:GLU:HB2	2.17	0.44
1:0:559:U:H2'	1:0:560:U:O4'	2.17	0.44
1:0:1131:G:C6	1:0:1230:A:C4	3.06	0.44
1:0:1137:G:H1'	39:0:4354:HOH:O	2.17	0.44
1:0:1882:C:O2'	1:0:2012:U:OP2	2.33	0.44
3:A:153:ARG:HD3	39:A:8995:HOH:O	2.16	0.44
6:D:146:LYS:NZ	16:N:107:ASN:ND2	2.64	0.44
14:L:53:ARG:NH2	14:L:57:VAL:HG12	2.33	0.44
16:N:154:LEU:O	16:N:155:GLU:CB	2.66	0.44
22:T:9:LYS:HE3	22:T:13:ARG:HH11	1.72	0.44
25:W:11:VAL:O	25:W:12:ASN:HB2	2.16	0.44
1:0:138:U:OP2	1:0:139:C:H5	2.00	0.44
1:0:1044:C:H3'	1:0:1045:G:H5"	1.99	0.44
1:0:2642:G:H2'	1:0:2643:G:O4'	2.18	0.44
1:0:2793:A:H2'	1:0:2794:G:H5'	1.99	0.44
2:9:57:A:C8	6:D:141:VAL:HG21	2.53	0.44
3:A:81:GLN:H	3:A:92:ASN:ND2	2.16	0.44
6:D:49:PRO:HA	6:D:73:VAL:HG22	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:46:GLU:N	39:F:3461:HOH:O	2.51	0.44
10:H:81:GLY:C	10:H:83:GLU:H	2.21	0.44
22:T:75:GLU:O	22:T:76:ASP:HB2	2.18	0.44
22:T:79:LEU:HG	22:T:89:ARG:HB2	1.98	0.44
1:0:1307:A:H2'	1:0:1308:A:C8	2.53	0.44
6:D:64:ARG:HG2	6:D:67:ASP:HB3	2.00	0.44
7:E:132:THR:HB	39:E:2227:HOH:O	2.17	0.44
12:J:90:LYS:HB2	36:J:8802:CL:CL	2.54	0.44
21:S:11:THR:H	21:S:14:ALA:HB3	1.81	0.44
26:X:25:ARG:CG	39:X:5356:HOH:O	2.65	0.44
1:0:1119:G:C8	12:J:52:GLN:NE2	2.86	0.43
1:0:1181:A:N1	1:0:1192:A:O2'	2.50	0.43
1:0:1946:C:H2'	1:0:1971:G:C8	2.53	0.43
1:0:2524:G:H21	1:0:2526:C:N4	2.16	0.43
4:B:108:GLU:HB3	4:B:111:ARG:HD2	2.00	0.43
9:G:19:GLU:O	9:G:23:ILE:HG13	2.18	0.43
12:J:19:MET:HE2	12:J:132:LEU:HD11	1.99	0.43
23:U:17:THR:HG21	39:U:3194:HOH:O	2.17	0.43
25:W:119:HIS:HD2	25:W:120:PRO:O	2.01	0.43
27:Y:95:THR:N	27:Y:236:VAL:O	2.51	0.43
1:0:392:U:C5'	15:M:193:LYS:HB3	2.49	0.43
1:0:432:G:O2'	1:0:433:C:H5'	2.18	0.43
1:0:559:U:H5'	1:0:559:U:C6	2.41	0.43
1:0:1252:A:H2'	1:0:1253:C:O4'	2.19	0.43
1:0:1393:A:H2'	1:0:1394:C:C6	2.53	0.43
3:A:223:ARG:NE	39:A:9037:HOH:O	2.51	0.43
4:B:51:VAL:HG23	4:B:327:VAL:HG13	1.98	0.43
27:Y:115:ARG:HB3	27:Y:115:ARG:HH11	1.83	0.43
1:0:1119:G:C6	1:0:1244:U:C5	3.06	0.43
1:0:1730:G:H5'	1:0:1731:C:H5	1.81	0.43
1:0:1733:A:H4'	4:B:212:GLN:HA	1.99	0.43
1:0:2864:U:O2'	1:0:2865:G:H5'	2.18	0.43
10:H:168:VAL:HG13	39:H:9009:HOH:O	2.17	0.43
12:J:107:ASN:HD22	12:J:108:PRO:N	2.16	0.43
26:X:73:ARG:HB2	26:X:88:GLU:OE2	2.19	0.43
28:Z:19:GLY:O	28:Z:23:ARG:HG2	2.18	0.43
1:0:517:U:H1'	39:0:7997:HOH:O	2.18	0.43
1:0:542:A:H2'	1:0:543:G:O4'	2.18	0.43
1:0:2115:U:H2'	1:0:2116:U:C6	2.53	0.43
1:0:2526:C:C6	1:0:2526:C:H5'	2.53	0.43
3:A:70:ALA:HA	3:A:71:PRO:HD3	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:57:THR:O	10:H:58:VAL:HG13	2.19	0.43
11:I:67:VAL:CG1	11:I:68:PRO:HD2	2.48	0.43
13:K:113:ILE:CG2	13:K:114:ALA:N	2.81	0.43
15:M:59:GLY:HA3	15:M:141:ILE:CD1	2.49	0.43
20:R:119:VAL:O	20:R:119:VAL:CG1	2.65	0.43
21:S:20:PHE:N	21:S:20:PHE:CD2	2.85	0.43
1:0:284:C:H4'	1:0:285:A:H8	1.83	0.43
1:0:790:A:H2'	1:0:791:A:O4'	2.18	0.43
1:0:920:C:H5'	1:0:921:G:C4	2.53	0.43
1:0:2090:G:H2'	1:0:2091:G:C8	2.53	0.43
1:0:2326:C:H4'	1:0:2412:G:C4'	2.49	0.43
1:0:2649:A:H5'	1:0:2649:A:C8	2.54	0.43
12:J:45:VAL:HG22	12:J:46:ILE:N	2.33	0.43
14:L:122:ALA:HB3	14:L:125:PHE:CZ	2.54	0.43
16:N:73:ALA:N	39:N:8863:HOH:O	2.48	0.43
31:3:70:ARG:CG	31:3:77:ALA:HB2	2.47	0.43
1:0:130:C:H5'	39:0:5666:HOH:O	2.18	0.43
1:0:1484:G:H2'	39:0:9594:HOH:O	2.17	0.43
1:0:2121:G:O2'	1:0:2122:C:H5'	2.19	0.43
1:0:2819:C:H2'	1:0:2820:A:C8	2.53	0.43
1:0:2831:C:O3'	20:R:71:LYS:HE2	2.18	0.43
1:0:2868:C:H2'	1:0:2869:G:O4'	2.19	0.43
3:A:39:ALA:O	3:A:61:GLU:HG3	2.18	0.43
4:B:175:LEU:O	4:B:175:LEU:HD23	2.19	0.43
7:E:77:THR:OG1	7:E:78:GLU:N	2.51	0.43
13:K:28:GLU:HG2	13:K:58:THR:HB	2.00	0.43
16:N:77:ASN:OD1	16:N:80:SER:HB2	2.18	0.43
22:T:71:VAL:CG1	22:T:72:ILE:N	2.81	0.43
25:W:29:VAL:O	25:W:30:ASN:HB2	2.18	0.43
27:Y:107:PRO:HB3	27:Y:182:PHE:CD2	2.54	0.43
1:0:189:A:OP1	15:M:171:ARG:NH2	2.51	0.43
1:0:622:G:P	27:Y:148:GLY:HA3	2.58	0.43
1:0:920:C:H4'	1:0:921:G:C2	2.54	0.43
5:C:235:PHE:HE2	5:C:243:VAL:HG21	1.84	0.43
13:K:75:ARG:HD3	13:K:112:PRO:O	2.19	0.43
16:N:71:TRP:CE3	16:N:175:LEU:HD22	2.53	0.43
22:T:92:ASP:OD1	22:T:94:SER:HB3	2.19	0.43
1:0:137:U:OP1	1:0:259:G:O2'	2.35	0.43
1:0:512:G:O3'	1:0:513:A:H8	2.02	0.43
1:0:2031:C:H2'	1:0:2032:U:O4'	2.19	0.43
1:0:2256:G:O2'	1:0:2257:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2372:A:H2'	1:0:2373:U:C6	2.54	0.43
3:A:125:ASN:CB	3:A:158:VAL:HG12	2.49	0.43
6:D:149:ARG:HH12	16:N:15:GLU:HA	1.84	0.43
8:F:70:LYS:C	8:F:72:VAL:H	2.21	0.43
8:F:117:GLU:C	8:F:119:ARG:H	2.22	0.43
15:M:164:THR:CG2	15:M:165:GLY:N	2.82	0.43
20:R:15:LYS:HE3	39:R:8984:HOH:O	2.18	0.43
1:0:1335:C:OP2	27:Y:207:SER:HB3	2.18	0.43
1:0:1853:C:O2'	3:A:217:ARG:NH2	2.52	0.43
1:0:2133:U:H4'	1:0:2134:G:C5'	2.48	0.43
1:0:2326:C:H4'	1:0:2412:G:H4'	2.01	0.43
1:0:2403:C:OP1	19:Q:49:ASN:HB3	2.19	0.43
4:B:40:GLY:HA3	39:B:9118:HOH:O	2.19	0.43
4:B:41:PHE:CZ	4:B:79:MET:HG3	2.54	0.43
4:B:53:LEU:HD11	4:B:327:VAL:HG22	2.01	0.43
5:C:166:ILE:HD11	5:C:207:LEU:HD13	2.01	0.43
7:E:86:VAL:CG1	7:E:129:GLU:HA	2.49	0.43
13:K:66:ARG:HG2	13:K:66:ARG:HH11	1.84	0.43
16:N:89:GLY:O	16:N:92:ALA:HB3	2.18	0.43
1:0:1158:G:O2'	1:0:1159:G:H5'	2.19	0.43
1:0:1185:U:H5'	39:0:7891:HOH:O	2.18	0.43
1:0:2103:A:O2'	1:0:2104:C:H5'	2.19	0.43
3:A:186:TRP:CG	3:A:187:PRO:HA	2.54	0.43
4:B:314:ALA:CB	4:B:317:PRO:HG3	2.49	0.43
6:D:20:LYS:HA	6:D:75:LEU:O	2.19	0.43
8:F:60:VAL:O	8:F:60:VAL:HG12	2.19	0.43
15:M:99:ARG:CD	15:M:167:GLY:HA2	2.49	0.43
19:Q:55:ARG:HD2	39:Q:2875:HOH:O	2.19	0.43
21:S:57:THR:HG22	21:S:59:ASP:HB2	2.01	0.43
22:T:18:GLU:O	22:T:21:LYS:HG2	2.19	0.43
1:0:56:G:H5"	24:V:50:ARG:NH1	2.33	0.42
1:0:263:U:C2	8:F:59:ILE:CD1	3.02	0.42
1:0:451:C:O2'	1:0:452:G:H5'	2.19	0.42
1:0:524:A:H5'	20:R:29:LYS:HE2	2.01	0.42
1:0:1218:U:H2'	1:0:1219:U:C6	2.53	0.42
1:0:1768:C:H2'	1:0:1769:C:O4'	2.19	0.42
1:0:2316:G:H4'	39:0:6539:HOH:O	2.18	0.42
1:0:2768:A:O2'	1:0:2769:C:H5'	2.19	0.42
2:9:56:A:C3'	2:9:57:A:H5"	2.48	0.42
7:E:15:GLN:HG3	7:E:20:ILE:HG12	2.00	0.42
7:E:22:VAL:O	7:E:28:SER:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:111:ILE:O	8:F:115:VAL:HG23	2.18	0.42
11:I:88:GLN:HA	11:I:91:PHE:HE2	1.84	0.42
11:I:123:VAL:C	11:I:125:GLY:H	2.22	0.42
1:0:241:A:C2	1:0:378:A:H4'	2.54	0.42
1:0:567:U:H5"	39:0:5740:HOH:O	2.19	0.42
1:0:1202:A:H2'	1:0:1203:G:O4'	2.19	0.42
1:0:2630:G:O6	3:A:206:ARG:NH2	2.49	0.42
3:A:37:VAL:HG22	39:A:9059:HOH:O	2.19	0.42
3:A:107:ASN:OD1	3:A:120:ARG:HD2	2.19	0.42
3:A:135:VAL:N	39:A:9058:HOH:O	2.51	0.42
6:D:37:ALA:HA	39:D:5583:HOH:O	2.19	0.42
8:F:32:GLY:N	39:F:3111:HOH:O	2.52	0.42
17:O:32:ARG:HH21	17:O:35:LYS:HD2	1.84	0.42
18:P:59:ARG:HD3	39:P:191:HOH:O	2.19	0.42
18:P:64:GLU:HG2	39:P:167:HOH:O	2.18	0.42
22:T:112:LEU:CD2	22:T:119:ALA:HB3	2.49	0.42
28:Z:22:SER:O	28:Z:26:VAL:HG23	2.19	0.42
1:0:1287:A:O4'	25:W:117:ARG:HD3	2.20	0.42
1:0:1439:C:OP1	30:2:41:HIS:HE1	2.03	0.42
1:0:1573:A:H2'	1:0:1574:C:O4'	2.19	0.42
1:0:1846:U:O2'	3:A:172:ALA:HB2	2.19	0.42
1:0:2718:C:H5'	1:0:2718:C:C6	2.51	0.42
15:M:15:PRO:HA	15:M:20:LEU:HD23	2.01	0.42
16:N:37:ARG:NH2	39:N:8832:HOH:O	2.52	0.42
20:R:61:GLN:NE2	39:R:8944:HOH:O	2.53	0.42
25:W:3:ALA:O	25:W:54:PHE:HA	2.19	0.42
25:W:35:VAL:HG23	25:W:41:TYR:CD2	2.54	0.42
26:X:43:VAL:HG12	26:X:44:ASP:H	1.84	0.42
1:0:903:U:OP2	14:L:11:ARG:NH1	2.50	0.42
1:0:926:A:O2'	14:L:41:HIS:HD2	2.01	0.42
1:0:1029:U:H5'	1:0:1031:G:N7	2.34	0.42
1:0:1066:U:H2'	1:0:1067:A:C8	2.54	0.42
1:0:1562:C:N4	39:0:6317:HOH:O	2.34	0.42
1:0:1948:G:H2'	1:0:1949:G:O4'	2.20	0.42
1:0:2353:A:H4'	1:0:2354:A:O5'	2.18	0.42
39:0:6168:HOH:O	13:K:87:ARG:NE	2.52	0.42
3:A:175:LYS:HE2	39:A:9040:HOH:O	2.19	0.42
5:C:246:ARG:NH2	39:C:8630:HOH:O	2.46	0.42
7:E:107:PHE:CZ	7:E:108:LEU:HD13	2.54	0.42
1:0:392:U:H5"	15:M:193:LYS:HB3	2.01	0.42
1:0:646:G:H2'	1:0:647:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:669:G:O2'	1:0:670:G:H5'	2.19	0.42
1:0:1845:A:O3'	3:A:187:PRO:HB2	2.19	0.42
1:0:1940:C:H4'	39:0:7777:HOH:O	2.18	0.42
1:0:2478:U:O2'	1:0:2479:A:H5'	2.19	0.42
1:0:2676:C:H4'	12:J:70:PHE:CD1	2.54	0.42
3:A:217:ARG:HH11	3:A:217:ARG:CG	2.33	0.42
4:B:36:PRO:CA	4:B:168:GLY:HA3	2.43	0.42
4:B:139:ASP:HB2	39:B:8998:HOH:O	2.18	0.42
4:B:162:MET:HG3	4:B:310:ARG:HD3	2.01	0.42
5:C:133:ARG:NE	5:C:138:VAL:HG22	2.34	0.42
10:H:66:GLU:O	10:H:70:LEU:HB2	2.20	0.42
15:M:152:ALA:HB1	39:M:8934:HOH:O	2.20	0.42
20:R:104:PHE:HB2	20:R:109:MET:HE1	2.01	0.42
27:Y:99:ALA:HB2	27:Y:233:TYR:CE2	2.55	0.42
1:0:1406:A:H4'	1:0:1407:A:C5'	2.50	0.42
1:0:1500:U:OP2	18:P:41:ARG:NH2	2.53	0.42
1:0:1626:A:H2'	1:0:1627:G:O4'	2.19	0.42
1:0:1925:G:O2'	1:0:1926:G:H5'	2.20	0.42
1:0:2781:U:C2'	1:0:2782:G:H5'	2.49	0.42
2:9:59:C:O5'	2:9:59:C:H6	2.02	0.42
4:B:243:ASN:HA	4:B:244:PRO:C	2.39	0.42
7:E:43:ASP:HA	39:E:5864:HOH:O	2.18	0.42
8:F:99:THR:HG23	8:F:99:THR:O	2.20	0.42
9:G:64:ASN:N	9:G:64:ASN:ND2	2.68	0.42
12:J:26:VAL:HG13	12:J:36:VAL:HG11	2.01	0.42
14:L:92:ASP:HB3	14:L:95:ASP:OD2	2.19	0.42
21:S:57:THR:CG2	21:S:59:ASP:HB2	2.50	0.42
23:U:13:ILE:HG12	23:U:32:CYS:HB3	2.00	0.42
26:X:41:PHE:O	26:X:43:VAL:HG23	2.19	0.42
31:3:20:HIS:HA	31:3:70:ARG:O	2.19	0.42
1:0:2442:G:H3'	39:0:7065:HOH:O	2.19	0.42
1:0:2754:G:H2'	1:0:2755:G:O4'	2.19	0.42
6:D:146:LYS:HZ3	16:N:107:ASN:HD21	1.65	0.42
12:J:71:TYR:CD1	12:J:72:PRO:HD2	2.54	0.42
21:S:56:ASN:O	30:2:8:LYS:NZ	2.47	0.42
22:T:47:THR:HB	22:T:100:ASP:HB3	2.02	0.42
25:W:107:LEU:O	25:W:112:LEU:HB2	2.18	0.42
31:3:11:CYS:HB2	31:3:20:HIS:CE1	2.55	0.42
1:0:926:A:O2'	14:L:41:HIS:CD2	2.73	0.42
1:0:962:C:H1'	16:N:5:ARG:HH12	1.79	0.42
1:0:1902:G:H2'	1:0:1903:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2401:A:H2'	1:0:2402:A:C8	2.55	0.42
13:K:23:ASN:HD21	13:K:107:THR:HB	1.83	0.42
14:L:6:ARG:NH2	39:L:8842:HOH:O	2.47	0.42
17:O:41:ALA:HA	39:O:5104:HOH:O	2.19	0.42
23:U:45:GLU:HB2	23:U:48:ASN:ND2	2.35	0.42
24:V:60:GLN:O	24:V:65:ASP:N	2.52	0.42
25:W:19:ASP:O	25:W:23:MET:HG3	2.20	0.42
27:Y:99:ALA:HB2	27:Y:233:TYR:CZ	2.54	0.42
28:Z:30:GLU:HA	28:Z:33:MET:HE3	2.01	0.42
1:0:441:A:H1'	1:0:442:A:N7	2.35	0.42
1:0:635:A:H2'	1:0:636:G:H5"	2.01	0.42
1:0:1162:G:H1'	11:I:112:LEU:CD1	2.49	0.42
1:0:2072:G:H3'	1:0:2073:G:C5'	2.50	0.42
1:0:2578:G:H5'	1:0:2578:G:C8	2.51	0.42
2:9:42:C:O2	6:D:76:ARG:NH1	2.53	0.42
3:A:135:VAL:HG11	3:A:147:ARG:NH1	2.35	0.42
5:C:78:ARG:NH1	5:C:78:ARG:CG	2.74	0.42
5:C:219:ASN:N	5:C:222:ASP:OD1	2.52	0.42
5:C:219:ASN:O	5:C:222:ASP:OD1	2.37	0.42
6:D:60:GLU:O	6:D:61:PHE:C	2.57	0.42
16:N:140:GLN:O	16:N:143:ARG:HB2	2.19	0.42
22:T:96:VAL:HG13	22:T:97:ARG:N	2.35	0.42
25:W:76:ASP:O	25:W:77:ALA:C	2.57	0.42
27:Y:117:LEU:HD12	27:Y:174:VAL:HG11	2.02	0.42
1:0:214:U:H5'	39:0:6586:HOH:O	2.19	0.42
1:0:1209:C:H2'	1:0:1210:G:C8	2.51	0.42
1:0:1684:A:O2'	1:0:1685:A:H5"	2.19	0.42
3:A:97:ALA:C	3:A:131:HIS:HE2	2.22	0.42
4:B:248:ARG:NH2	39:B:8993:HOH:O	2.50	0.42
7:E:24:GLY:HA3	7:E:76:VAL:HB	2.02	0.42
8:F:24:ARG:NH2	39:F:6800:HOH:O	2.48	0.42
12:J:46:ILE:HD11	12:J:53:ILE:HG23	2.01	0.42
15:M:5:TYR:HE2	15:M:46:LEU:HD13	1.84	0.42
15:M:145:ASP:HA	39:M:8909:HOH:O	2.19	0.42
16:N:64:SER:C	16:N:66:LEU:H	2.22	0.42
18:P:10:ALA:CA	18:P:13:VAL:HG12	2.46	0.42
1:0:304:G:H1'	1:0:347:A:H61	1.85	0.41
1:0:482:G:H4'	1:0:508:A:N1	2.35	0.41
1:0:776:A:H1'	1:0:779:U:O4	2.20	0.41
1:0:1754:A:H2'	1:0:1755:A:O4'	2.20	0.41
3:A:105:VAL:CG1	3:A:106:CYS:N	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:206:ARG:NH1	39:A:8979:HOH:O	2.53	0.41
4:B:132:HIS:CE1	4:B:171:VAL:HG21	2.55	0.41
5:C:138:VAL:O	5:C:234:VAL:HA	2.20	0.41
9:G:24:VAL:O	9:G:28:GLU:HB2	2.19	0.41
11:I:109:PRO:HG2	11:I:110:ASP:H	1.84	0.41
21:S:42:GLU:HG2	21:S:49:VAL:HG23	2.01	0.41
30:2:36:ASN:HB3	30:2:39:ARG:HG3	2.00	0.41
1:0:383:A:H2'	1:0:384:G:O4'	2.20	0.41
1:0:1197:G:N2	39:0:6679:HOH:O	2.52	0.41
1:0:1236:A:C8	12:J:63:ILE:HD11	2.55	0.41
1:0:1762:C:H4'	39:0:5120:HOH:O	2.21	0.41
1:0:2252:A:C5	1:0:2253:G:H1'	2.54	0.41
1:0:2336:G:H1'	39:D:5675:HOH:O	2.19	0.41
1:0:2453:G:H4'	14:L:50:GLY:C	2.40	0.41
1:0:2503:A:OP1	10:H:154:ARG:NH2	2.47	0.41
1:0:2756:U:C2	1:0:2896:A:H2	2.37	0.41
5:C:127:ARG:HG2	5:C:127:ARG:HH11	1.84	0.41
5:C:246:ARG:NH1	5:C:246:ARG:HB3	2.35	0.41
10:H:72:ALA:HB2	10:H:156:ALA:HB2	2.02	0.41
10:H:154:ARG:HA	10:H:157:TYR:CE2	2.55	0.41
15:M:99:ARG:NH2	15:M:170:ASN:HD22	2.15	0.41
18:P:63:ARG:NH2	39:P:191:HOH:O	2.51	0.41
20:R:114:VAL:HG13	20:R:114:VAL:O	2.20	0.41
25:W:146:ILE:HD13	25:W:146:ILE:HA	1.89	0.41
1:0:1657:A:H2'	1:0:1658:A:C8	2.55	0.41
1:0:1730:G:H5"	1:0:1731:C:C6	2.54	0.41
1:0:1980:U:O2	1:0:2008:U:H4'	2.20	0.41
1:0:2726:U:O2	1:0:2749:U:O5'	2.38	0.41
3:A:211:LYS:HD2	39:A:9081:HOH:O	2.21	0.41
4:B:189:ALA:HB1	39:B:9033:HOH:O	2.19	0.41
6:D:146:LYS:HZ1	16:N:107:ASN:HD21	1.64	0.41
10:H:24:THR:O	10:H:123:ILE:HD12	2.20	0.41
10:H:146:ALA:O	10:H:149:VAL:HG12	2.20	0.41
11:I:129:SER:N	39:I:7330:HOH:O	2.47	0.41
12:J:42:GLU:O	12:J:131:THR:HG23	2.19	0.41
16:N:154:LEU:HG	16:N:155:GLU:N	2.35	0.41
1:0:827:A:H2'	1:0:828:G:O4'	2.19	0.41
1:0:1118:A:C8	1:0:1119:G:H5"	2.54	0.41
1:0:1181:A:H2'	1:0:1182:C:C5'	2.50	0.41
1:0:2415:A:N3	16:N:26:LEU:HD13	2.36	0.41
1:0:2547:C:OP2	4:B:5:ARG:NH1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:118:THR:HG22	5:C:137:PRO:HB3	2.03	0.41
7:E:81:GLU:HA	7:E:133:VAL:O	2.20	0.41
8:F:38:LYS:HZ1	15:M:3:SER:HA	1.85	0.41
13:K:78:LYS:HA	13:K:79:PRO:HD3	1.90	0.41
26:X:66:THR:CG2	26:X:67:PRO:HD2	2.48	0.41
1:0:1654:U:H2'	3:A:47:HIS:CD2	2.56	0.41
1:0:1739:G:O2'	1:0:1740:U:H5'	2.20	0.41
1:0:2241:C:O2'	1:0:2242:U:H5'	2.20	0.41
1:0:2416:G:O2'	16:N:25:ARG:HG2	2.19	0.41
3:A:194:MET:CE	3:A:199:HIS:CB	2.98	0.41
6:D:10:PHE:N	39:D:7345:HOH:O	2.53	0.41
8:F:28:ALA:CB	8:F:99:THR:HG23	2.50	0.41
10:H:86:TYR:CD1	10:H:86:TYR:C	2.93	0.41
11:I:87:PRO:HB3	11:I:129:SER:C	2.41	0.41
11:I:111:LEU:HD22	11:I:122:GLU:OE1	2.21	0.41
14:L:65:ASP:CG	14:L:111:ALA:HB3	2.40	0.41
15:M:169:ARG:NH2	39:M:8852:HOH:O	2.47	0.41
16:N:39:SER:HB3	16:N:42:HIS:H	1.86	0.41
20:R:18:LEU:HG	20:R:91:LEU:HD13	2.03	0.41
21:S:51:GLN:NE2	21:S:53:ASN:HD21	2.13	0.41
1:0:88:G:H2'	1:0:89:G:C8	2.55	0.41
1:0:249:G:O2'	1:0:250:C:H5'	2.21	0.41
1:0:329:A:OP2	5:C:206:ASN:HB2	2.20	0.41
1:0:660:A:H4'	1:0:661:G:O5'	2.20	0.41
1:0:702:G:O2'	1:0:703:G:H5'	2.21	0.41
1:0:2543:G:H2'	1:0:2544:G:O4'	2.20	0.41
4:B:57:GLU:HA	4:B:58:PRO:HD2	1.96	0.41
4:B:75:GLU:C	4:B:77:PRO:HD3	2.41	0.41
5:C:154:VAL:O	5:C:158:GLU:HG3	2.21	0.41
6:D:173:GLU:O	6:D:174:VAL:C	2.59	0.41
7:E:16:ASP:O	7:E:17:HIS:HB2	2.19	0.41
10:H:151:GLU:OE1	10:H:151:GLU:HA	2.21	0.41
24:V:12:THR:CG2	24:V:15:GLU:H	2.34	0.41
30:2:19:SER:O	30:2:36:ASN:ND2	2.54	0.41
1:0:256:C:H2'	1:0:257:G:O4'	2.21	0.41
1:0:1352:A:H4'	1:0:1353:C:OP2	2.20	0.41
1:0:1596:U:H2'	1:0:1598:A:OP2	2.20	0.41
1:0:2054:A:H2	20:R:128:ARG:HH22	1.56	0.41
1:0:2498:C:O2'	1:0:2499:U:H5'	2.20	0.41
1:0:2724:U:H2'	1:0:2725:G:O4'	2.20	0.41
4:B:14:GLY:HA3	39:B:9076:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:57:PRO:HG2	5:C:73:LEU:HD13	2.02	0.41
10:H:49:GLN:OE1	10:H:169:GLU:HB3	2.21	0.41
11:I:87:PRO:C	11:I:89:GLU:N	2.74	0.41
11:I:103:ILE:O	11:I:103:ILE:HG22	2.20	0.41
12:J:64:GLY:HA3	36:J:8821:CL:CL	2.58	0.41
14:L:38:HIS:CD2	14:L:39:GLU:HG3	2.55	0.41
15:M:134:ILE:O	15:M:136:PRO:HD3	2.21	0.41
22:T:3:GLN:HA	22:T:4:PRO:HD3	1.82	0.41
22:T:41:ARG:NH1	22:T:42:VAL:O	2.53	0.41
26:X:20:GLU:CD	26:X:21:PRO:HD2	2.41	0.41
1:0:23:G:C6	1:0:24:G:N1	2.89	0.41
1:0:95:A:H5"	1:0:97:G:O4'	2.21	0.41
1:0:1165:G:H1'	1:0:1174:A:H1'	2.03	0.41
1:0:2906:A:H5'	1:0:2907:C:O4'	2.21	0.41
8:F:5:ASP:O	8:F:119:ARG:NH1	2.53	0.41
15:M:184:ARG:HG3	15:M:185:PRO:HA	2.03	0.41
22:T:71:VAL:CG1	22:T:90:PRO:HB3	2.30	0.41
22:T:106:GLU:HG3	39:T:4913:HOH:O	2.21	0.41
1:0:64:G:H2'	1:0:65:C:O4'	2.21	0.41
1:0:222:A:H2'	1:0:223:G:O4'	2.20	0.41
1:0:366:U:H2'	1:0:367:G:O4'	2.20	0.41
1:0:522:U:O2'	1:0:1366:C:H5'	2.20	0.41
1:0:553:G:O2'	27:Y:179:PRO:HG3	2.21	0.41
1:0:958:G:H2'	1:0:959:C:C6	2.55	0.41
1:0:1098:A:H2'	1:0:1099:G:O4'	2.21	0.41
1:0:1976:G:O2'	1:0:1977:U:H5'	2.21	0.41
1:0:2089:A:C2'	1:0:2090:G:H5'	2.51	0.41
1:0:2515:C:H2'	1:0:2516:G:O4'	2.20	0.41
1:0:2559:C:H4'	39:0:7688:HOH:O	2.20	0.41
1:0:2740:G:H2'	1:0:2741:A:O4'	2.21	0.41
1:0:2883:A:H2'	1:0:2884:G:O4'	2.21	0.41
1:0:2884:G:H5'	39:0:4600:HOH:O	2.20	0.41
39:0:4461:HOH:O	22:T:82:THR:HA	2.21	0.41
39:0:5740:HOH:O	25:W:122:ARG:CZ	2.68	0.41
2:9:4:G:H21	16:N:44:ARG:NH1	2.19	0.41
3:A:36:ASP:CB	3:A:85:SER:H	2.34	0.41
6:D:170:TYR:CD1	6:D:170:TYR:N	2.89	0.41
6:D:173:GLU:HG3	6:D:174:VAL:N	2.35	0.41
8:F:33:THR:HG21	8:F:59:ILE:O	2.20	0.41
12:J:75:PRO:HB3	12:J:132:LEU:HB3	2.02	0.41
13:K:28:GLU:OE2	13:K:58:THR:HG21	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:109:LEU:CD1	13:K:113:ILE:HD11	2.48	0.41
15:M:42:ARG:HA	15:M:43:PRO:HD3	1.91	0.41
15:M:46:LEU:HG	39:M:8917:HOH:O	2.19	0.41
15:M:61:ILE:HD12	15:M:61:ILE:N	2.35	0.41
15:M:69:LYS:HG3	15:M:126:GLN:CA	2.51	0.41
16:N:49:THR:HG22	16:N:56:ASP:CB	2.49	0.41
17:O:14:LEU:HG	17:O:102:ILE:HD11	2.03	0.41
20:R:33:ARG:NH1	39:R:8947:HOH:O	2.37	0.41
22:T:48:VAL:CG2	22:T:96:VAL:HG13	2.51	0.41
26:X:10:VAL:HG12	26:X:11:THR:N	2.35	0.41
26:X:23:HIS:CD2	26:X:24:LYS:HG3	2.56	0.41
26:X:74:ALA:HB1	26:X:85:VAL:HG22	2.03	0.41
29:1:28:HIS:O	29:1:32:LYS:N	2.47	0.41
1:0:155:C:OP2	15:M:188:ARG:HD3	2.20	0.41
1:0:612:U:H2'	1:0:613:C:C6	2.56	0.41
1:0:1249:U:H2'	1:0:1250:C:C6	2.56	0.41
1:0:1299:G:N2	39:0:5149:HOH:O	2.54	0.41
1:0:2015:A:H2'	1:0:2016:U:O4'	2.20	0.41
1:0:2428:G:N7	31:3:60:LYS:NZ	2.67	0.41
3:A:81:GLN:CB	3:A:92:ASN:ND2	2.84	0.41
4:B:26:PHE:CE1	4:B:310:ARG:HB3	2.56	0.41
6:D:49:PRO:HB3	39:D:5828:HOH:O	2.21	0.41
14:L:67:ARG:HG2	14:L:67:ARG:HH11	1.86	0.41
16:N:73:ALA:HB1	16:N:74:PRO:CD	2.50	0.41
20:R:96:VAL:HG13	20:R:106:GLY:HA3	2.03	0.41
24:V:51:LYS:O	24:V:55:ARG:HG3	2.21	0.41
26:X:43:VAL:HG12	26:X:47:ALA:HB3	2.02	0.41
1:0:213:G:O2'	1:0:214:U:OP2	2.40	0.40
1:0:447:A:O2'	1:0:448:G:H5'	2.22	0.40
1:0:1268:C:O2'	1:0:1269:G:H5'	2.20	0.40
1:0:1328:A:C8	27:Y:169:ARG:HD3	2.56	0.40
1:0:1773:G:C8	28:Z:16:ALA:HA	2.55	0.40
1:0:2382:A:H5'	39:3:8962:HOH:O	2.21	0.40
3:A:179:MET:HG2	3:A:186:TRP:HB2	2.01	0.40
6:D:99:ASP:N	6:D:103:ASN:O	2.30	0.40
10:H:61:ARG:NH1	10:H:61:ARG:HG3	2.36	0.40
11:I:95:LEU:HG	11:I:132:VAL:CG1	2.51	0.40
13:K:98:VAL:HG13	13:K:102:GLU:CA	2.46	0.40
18:P:40:VAL:O	18:P:44:VAL:HG23	2.21	0.40
22:T:48:VAL:HG23	22:T:98:VAL:HA	2.03	0.40
26:X:12:ILE:HD12	26:X:36:HIS:ND1	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:655:U:O2'	17:O:3:THR:HB	2.21	0.40
4:B:254:GLN:NE2	39:B:9058:HOH:O	2.54	0.40
4:B:310:ARG:HD2	39:B:9057:HOH:O	2.20	0.40
5:C:236:THR:C	39:C:8653:HOH:O	2.60	0.40
7:E:32:ARG:O	7:E:33:LEU:HD23	2.21	0.40
8:F:8:VAL:HG13	8:F:12:LEU:HD13	2.02	0.40
9:G:12:ILE:N	9:G:13:PRO:CD	2.84	0.40
10:H:6:ALA:CB	10:H:61:ARG:HH12	2.33	0.40
12:J:46:ILE:HD11	12:J:53:ILE:CG2	2.51	0.40
22:T:45:GLY:C	39:T:3851:HOH:O	2.59	0.40
22:T:49:GLU:OE2	22:T:51:LEU:HD21	2.21	0.40
29:1:37:CYS:SG	29:1:39:PHE:HB2	2.61	0.40
30:2:18:ASN:ND2	30:2:40:ARG:H	2.19	0.40
1:0:59:A:H5'	39:0:4798:HOH:O	2.20	0.40
1:0:1072:G:OP2	27:Y:154:ARG:NH2	2.54	0.40
1:0:1304:U:H2'	1:0:1305:C:C6	2.56	0.40
1:0:1398:G:H2'	1:0:1399:A:C8	2.56	0.40
8:F:52:GLU:HG3	8:F:77:VAL:O	2.21	0.40
16:N:51:GLY:HA2	16:N:52:PRO:HD3	1.94	0.40
16:N:129:ILE:HA	16:N:130:PRO:HD3	1.98	0.40
24:V:8:ILE:HG21	24:V:59:ILE:HG13	2.02	0.40
27:Y:108:ASP:OD1	27:Y:108:ASP:N	2.53	0.40
1:0:861:A:H4'	1:0:1697:G:H4'	2.03	0.40
1:0:1020:A:H1'	39:Q:6976:HOH:O	2.22	0.40
1:0:1186:C:H4'	11:I:114:TYR:HE1	1.87	0.40
1:0:2445:U:H2'	1:0:2446:G:C8	2.56	0.40
4:B:62:ARG:HG2	4:B:65:MET:HE3	2.03	0.40
6:D:38:GLU:HB3	6:D:49:PRO:HG3	2.02	0.40
6:D:138:GLY:N	39:D:7597:HOH:O	2.29	0.40
8:F:107:ASP:O	8:F:111:ILE:HG13	2.21	0.40
13:K:99:ASP:OD1	13:K:101:ASN:N	2.53	0.40
16:N:72:GLU:H	16:N:171:HIS:CE1	2.39	0.40
16:N:86:LEU:HD12	16:N:125:ALA:HB2	2.04	0.40
1:0:212:A:O4'	1:0:214:U:C6	2.75	0.40
1:0:278:A:H2'	1:0:279:C:O4'	2.21	0.40
1:0:820:G:C5	3:A:171:LYS:HB2	2.57	0.40
1:0:1039:G:H2'	1:0:1040:A:O4'	2.22	0.40
1:0:1829:A:H2'	1:0:1830:C:H5'	2.04	0.40
1:0:2435:U:OP1	31:3:28:GLY:HA3	2.20	0.40
1:0:2900:G:H2'	1:0:2901:C:O4'	2.22	0.40
39:0:4832:HOH:O	3:A:212:PRO:HB2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:31:C:H2'	2:9:32:G:O4'	2.22	0.40
2:9:114:G:H2'	2:9:115:C:C6	2.57	0.40
5:C:6:TYR:HE1	5:C:133:ARG:HH22	1.68	0.40
7:E:69:ILE:HA	7:E:72:MET:HE2	2.01	0.40
10:H:33:GLN:H	10:H:69:ARG:NH1	2.19	0.40
14:L:149:ARG:O	14:L:150:GLN:HB2	2.21	0.40
16:N:38:LYS:HE3	16:N:38:LYS:HB2	1.80	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
3	A	235/240 (98%)	218 (93%)	13 (6%)	4 (2%)	9 11
4	B	335/338 (99%)	314 (94%)	14 (4%)	7 (2%)	7 8
5	C	244/246 (99%)	226 (93%)	18 (7%)	0	100 100
6	D	134/177 (76%)	103 (77%)	20 (15%)	11 (8%)	1 0
7	E	170/178 (96%)	163 (96%)	7 (4%)	0	100 100
8	F	117/120 (98%)	104 (89%)	10 (8%)	3 (3%)	5 5
9	G	25/348 (7%)	25 (100%)	0	0	100 100
10	H	156/177 (88%)	143 (92%)	13 (8%)	0	100 100
11	I	68/162 (42%)	49 (72%)	17 (25%)	2 (3%)	4 4
12	J	140/145 (97%)	130 (93%)	8 (6%)	2 (1%)	11 15
13	K	130/132 (98%)	122 (94%)	8 (6%)	0	100 100
14	L	141/165 (86%)	124 (88%)	16 (11%)	1 (1%)	22 32
15	M	192/194 (99%)	181 (94%)	11 (6%)	0	100 100
16	N	184/187 (98%)	166 (90%)	13 (7%)	5 (3%)	5 5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	O	113/116 (97%)	110 (97%)	3 (3%)	0	100	100
18	P	141/149 (95%)	139 (99%)	2 (1%)	0	100	100
19	Q	93/96 (97%)	89 (96%)	4 (4%)	0	100	100
20	R	148/155 (96%)	142 (96%)	6 (4%)	0	100	100
21	S	79/85 (93%)	74 (94%)	5 (6%)	0	100	100
22	T	117/120 (98%)	111 (95%)	5 (4%)	1 (1%)	17	25
23	U	51/66 (77%)	49 (96%)	2 (4%)	0	100	100
24	V	63/71 (89%)	58 (92%)	2 (3%)	3 (5%)	2	1
25	W	152/154 (99%)	147 (97%)	3 (2%)	2 (1%)	12	17
26	X	80/92 (87%)	73 (91%)	7 (9%)	0	100	100
27	Y	140/241 (58%)	139 (99%)	1 (1%)	0	100	100
28	Z	71/83 (86%)	61 (86%)	7 (10%)	3 (4%)	3	2
29	1	54/57 (95%)	52 (96%)	2 (4%)	0	100	100
30	2	42/50 (84%)	40 (95%)	1 (2%)	1 (2%)	6	6
31	3	90/92 (98%)	85 (94%)	5 (6%)	0	100	100
All	All	3705/4436 (84%)	3437 (93%)	223 (6%)	45 (1%)	13	19

All (45) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	27	LEU
3	A	37	VAL
6	D	171	ASP
8	F	101	ALA
12	J	5	GLU
14	L	80	ASP
16	N	154	LEU
16	N	183	ASP
16	N	184	ILE
24	V	43	PRO
28	Z	81	ARG
4	B	139	ASP
6	D	27	ILE
6	D	56	ARG
6	D	65	GLU
6	D	173	GLU
12	J	143	LYS

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Mol	Chain	Res	Type
22	T	53	GLY
25	W	77	ALA
28	Z	42	CYS
3	A	34	ASP
4	B	34	GLY
4	B	169	GLY
4	B	185	GLY
6	D	61	PHE
6	D	97	GLN
11	I	91	PHE
16	N	164	ASP
6	D	16	PRO
6	D	60	GLU
8	F	100	ASP
16	N	139	TRP
4	B	2	GLN
4	B	107	SER
4	B	184	ASP
6	D	28	GLY
25	W	49	ASN
28	Z	41	ASN
30	2	37	HIS
3	A	132	ASP
8	F	71	GLY
11	I	109	PRO
24	V	40	PRO
6	D	69	ILE
24	V	39	ALA

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
3	A	179/182 (98%)	167 (93%)	12 (7%)	16 26
4	B	282/283 (100%)	268 (95%)	14 (5%)	24 40
5	C	193/193 (100%)	175 (91%)	18 (9%)	9 13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	D	117/148 (79%)	113 (97%)	4 (3%)	37 56
7	E	152/156 (97%)	147 (97%)	5 (3%)	38 57
8	F	93/94 (99%)	92 (99%)	1 (1%)	73 87
9	G	27/283 (10%)	27 (100%)	0	100 100
10	H	134/145 (92%)	129 (96%)	5 (4%)	34 53
11	I	58/130 (45%)	58 (100%)	0	100 100
12	J	118/121 (98%)	110 (93%)	8 (7%)	16 25
13	K	106/106 (100%)	105 (99%)	1 (1%)	78 90
14	L	113/127 (89%)	110 (97%)	3 (3%)	44 65
15	M	158/158 (100%)	151 (96%)	7 (4%)	28 45
16	N	149/150 (99%)	145 (97%)	4 (3%)	44 65
17	O	93/94 (99%)	91 (98%)	2 (2%)	52 71
18	P	113/117 (97%)	112 (99%)	1 (1%)	78 90
19	Q	79/80 (99%)	76 (96%)	3 (4%)	33 51
20	R	117/122 (96%)	115 (98%)	2 (2%)	60 78
21	S	71/74 (96%)	69 (97%)	2 (3%)	43 63
22	T	105/106 (99%)	100 (95%)	5 (5%)	25 41
23	U	44/52 (85%)	44 (100%)	0	100 100
24	V	51/57 (90%)	49 (96%)	2 (4%)	32 50
25	W	130/130 (100%)	125 (96%)	5 (4%)	33 51
26	X	66/74 (89%)	59 (89%)	7 (11%)	6 9
27	Y	120/196 (61%)	111 (92%)	9 (8%)	13 21
28	Z	60/68 (88%)	58 (97%)	2 (3%)	38 57
29	1	46/47 (98%)	46 (100%)	0	100 100
30	2	42/46 (91%)	41 (98%)	1 (2%)	49 68
31	3	79/79 (100%)	79 (100%)	0	100 100
All	All	3095/3618 (86%)	2972 (96%)	123 (4%)	31 49

All (123) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	3	ARG
3	A	26	ASP

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Mol	Chain	Res	Type
3	A	33	GLU
3	A	36	ASP
3	A	55	VAL
3	A	78	ASP
3	A	94	LEU
3	A	120	ARG
3	A	131	HIS
3	A	153	ARG
3	A	179	MET
3	A	217	ARG
4	B	7	ARG
4	B	11	LEU
4	B	27	ASN
4	B	49	THR
4	B	53	LEU
4	B	56	ASP
4	B	98	THR
4	B	162	MET
4	B	174	ARG
4	B	175	LEU
4	B	195	ARG
4	B	254	GLN
4	B	264	GLU
4	B	312	ARG
5	C	2	GLN
5	C	27	ARG
5	C	67	GLN
5	C	76	ARG
5	C	78	ARG
5	C	91	PRO
5	C	94	THR
5	C	101	ASP
5	C	136	VAL
5	C	162	VAL
5	C	187	ARG
5	C	214	THR
5	C	222	ASP
5	C	223	LEU
5	C	234	VAL
5	C	236	THR
5	C	240	LEU
5	C	243	VAL

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Mol	Chain	Res	Type
6	D	24	HIS
6	D	61	PHE
6	D	133	ASN
6	D	136	ARG
7	E	7	ILE
7	E	15	GLN
7	E	16	ASP
7	E	86	VAL
7	E	102	VAL
8	F	12	LEU
10	H	87	LYS
10	H	91	ARG
10	H	114	ASP
10	H	157	TYR
10	H	162	PRO
12	J	7	ASP
12	J	46	ILE
12	J	52	GLN
12	J	74	ARG
12	J	76	ASP
12	J	79	PHE
12	J	107	ASN
12	J	127	ILE
13	K	10	GLN
14	L	35	ARG
14	L	104	ASP
14	L	117	GLU
15	M	46	LEU
15	M	68	ARG
15	M	81	ARG
15	M	93	ARG
15	M	99	ARG
15	M	116	ASN
15	M	164	THR
16	N	17	ARG
16	N	26	LEU
16	N	127	LEU
16	N	139	TRP
17	O	3	THR
17	O	111	VAL
18	P	98	ILE
19	Q	11	ARG

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Mol	Chain	Res	Type
19	Q	16	ASN
19	Q	95	GLU
20	R	13	THR
20	R	39	THR
21	S	12	GLU
21	S	71	ASP
22	T	39	ASN
22	T	48	VAL
22	T	73	HIS
22	T	89	ARG
22	T	115	GLU
24	V	43	PRO
24	V	65	ASP
25	W	35	VAL
25	W	52	VAL
25	W	73	LEU
25	W	122	ARG
25	W	146	ILE
26	X	15	ARG
26	X	27	ASP
26	X	46	ASP
26	X	49	ARG
26	X	72	VAL
26	X	79	GLU
26	X	82	GLU
27	Y	103	THR
27	Y	115	ARG
27	Y	141	THR
27	Y	154	ARG
27	Y	187	VAL
27	Y	189	ASN
27	Y	200	THR
27	Y	203	VAL
27	Y	220	GLU
28	Z	33	MET
28	Z	44	GLU
30	2	18	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (87) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	92	ASN

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Mol	Chain	Res	Type
3	A	199	HIS
4	B	27	ASN
4	B	145	HIS
4	B	191	ASN
4	B	221	GLN
4	B	238	ASN
4	B	260	HIS
4	B	320	GLN
4	B	332	ASN
5	C	2	GLN
5	C	39	GLN
5	C	129	HIS
6	D	47	GLN
6	D	97	GLN
6	D	103	ASN
6	D	133	ASN
7	E	15	GLN
7	E	90	HIS
7	E	106	ASN
7	E	119	HIS
7	E	143	GLN
9	G	17	GLN
9	G	64	ASN
10	H	34	HIS
10	H	59	GLN
10	H	62	HIS
10	H	73	ASN
11	I	88	GLN
11	I	99	GLN
12	J	25	GLN
12	J	52	GLN
12	J	107	ASN
12	J	126	ASN
13	K	10	GLN
14	L	18	HIS
14	L	41	HIS
14	L	42	ASN
15	M	24	GLN
15	M	26	GLN
15	M	58	GLN
15	M	137	ASN
15	M	170	ASN

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Mol	Chain	Res	Type
16	N	40	ASN
16	N	93	GLN
16	N	107	ASN
16	N	153	GLN
18	P	50	GLN
18	P	66	GLN
18	P	73	HIS
18	P	118	GLN
19	Q	16	ASN
19	Q	40	HIS
20	R	61	GLN
20	R	94	ASN
20	R	98	ASN
20	R	113	HIS
20	R	117	HIS
21	S	25	GLN
21	S	51	GLN
22	T	39	ASN
22	T	73	HIS
23	U	39	ASN
23	U	48	ASN
24	V	60	GLN
25	W	27	HIS
25	W	28	HIS
25	W	59	GLN
25	W	110	GLN
25	W	119	HIS
25	W	125	HIS
25	W	141	HIS
26	X	23	HIS
27	Y	133	HIS
27	Y	134	HIS
27	Y	149	GLN
27	Y	189	ASN
29	1	8	GLN
29	1	16	HIS
29	1	28	HIS
30	2	16	ASN
30	2	18	ASN
30	2	41	HIS
30	2	45	ASN
31	3	15	ASN

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Mol	Chain	Res	Type
31	3	30	GLN
31	3	48	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2745/2922 (93%)	226 (8%)	34 (1%)
2	9	121/122 (99%)	16 (13%)	1 (0%)
All	All	2866/3044 (94%)	242 (8%)	35 (1%)

All (242) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	31	C
1	0	67	A
1	0	69	A
1	0	70	A
1	0	71	G
1	0	86	A
1	0	87	C
1	0	88	G
1	0	114	A
1	0	115	U
1	0	130	C
1	0	141	C
1	0	151	A
1	0	166	A
1	0	170	U
1	0	186	A
1	0	191	A
1	0	192	A
1	0	200	C
1	0	219	G
1	0	237	G
1	0	271	C
1	0	272	A
1	0	273	G
1	0	283	U
1	0	284	C
1	0	308	U
1	0	309	C

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Mol	Chain	Res	Type
1	0	318	U
1	0	336	G
1	0	337	A
1	0	358	G
1	0	381	G
1	0	397	A
1	0	417	G
1	0	457	U
1	0	461	C
1	0	473	A
1	0	487	G
1	0	498	A
1	0	510	U
1	0	511	A
1	0	514	G
1	0	537	G
1	0	538	C
1	0	539	G
1	0	542	A
1	0	545	G
1	0	553	G
1	0	559	U
1	0	581	G
1	0	588	G
1	0	604	G
1	0	620	A
1	0	632	A
1	0	644	G
1	0	660	A
1	0	688	A
1	0	698	A
1	0	701	U
1	0	759	C
1	0	777	U
1	0	809	G
1	0	821	U
1	0	835	U
1	0	840	U
1	0	846	A
1	0	868	G
1	0	869	G
1	0	871	G

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Mol	Chain	Res	Type
1	0	872	U
1	0	875	A
1	0	877	G
1	0	878	G
1	0	884	C
1	0	885	G
1	0	898	G
1	0	905	C
1	0	920	C
1	0	921	G
1	0	923	A
1	0	953	G
1	0	960	G
1	0	961	A
1	0	1006	A
1	0	1008	C
1	0	1029	U
1	0	1045	G
1	0	1059	G
1	0	1060	C
1	0	1072	G
1	0	1081	A
1	0	1088	A
1	0	1109	U
1	0	1110	G
1	0	1119	G
1	0	1130	U
1	0	1164	U
1	0	1165	G
1	0	1166	A
1	0	1174	A
1	0	1175	G
1	0	1185	U
1	0	1192	A
1	0	1193	A
1	0	1206	U
1	0	1216	G
1	0	1237	U
1	0	1238	C
1	0	1239	G
1	0	1279	U
1	0	1289	C

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Mol	Chain	Res	Type
1	0	1342	C
1	0	1353	C
1	0	1360	C
1	0	1377	C
1	0	1378	G
1	0	1407	A
1	0	1409	G
1	0	1474	C
1	0	1505	U
1	0	1506	U
1	0	1524	U
1	0	1525	G
1	0	1526	A
1	0	1528	A
1	0	1562	C
1	0	1564	C
1	0	1592	G
1	0	1625	U
1	0	1626	A
1	0	1634	G
1	0	1656	A
1	0	1667	A
1	0	1682	A
1	0	1684	A
1	0	1685	A
1	0	1692	C
1	0	1701	A
1	0	1722	U
1	0	1723	G
1	0	1725	C
1	0	1731	C
1	0	1732	A
1	0	1752	G
1	0	1778	A
1	0	1798	C
1	0	1819	G
1	0	1820	G
1	0	1829	A
1	0	1856	C
1	0	1857	A
1	0	1879	U
1	0	1919	A

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Mol	Chain	Res	Type
1	0	1942	A
1	0	1971	G
1	0	1973	A
1	0	1978	A
1	0	1979	G
1	0	1980	U
1	0	1996	U
1	0	2008	U
1	0	2011	A
1	0	2012	U
1	0	2013	G
1	0	2033	G
1	0	2034	U
1	0	2064	U
1	0	2072	G
1	0	2073	G
1	0	2074	A
1	0	2096	A
1	0	2101	A
1	0	2102	G
1	0	2103	A
1	0	2104	C
1	0	2110	G
1	0	2243	C
1	0	2258	A
1	0	2271	G
1	0	2272	G
1	0	2317	C
1	0	2321	A
1	0	2354	A
1	0	2361	A
1	0	2369	A
1	0	2379	G
1	0	2422	U
1	0	2462	G
1	0	2476	C
1	0	2483	A
1	0	2507	G
1	0	2509	A
1	0	2511	A
1	0	2533	C
1	0	2537	G

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Mol	Chain	Res	Type
1	0	2541	U
1	0	2553	A
1	0	2564	G
1	0	2589	U
1	0	2601	A
1	0	2602	G
1	0	2608	C
1	0	2613	G
1	0	2649	A
1	0	2664	A
1	0	2676	C
1	0	2681	A
1	0	2682	C
1	0	2726	U
1	0	2747	C
1	0	2748	G
1	0	2749	U
1	0	2750	G
1	0	2762	C
1	0	2768	A
1	0	2792	A
1	0	2800	A
1	0	2811	A
1	0	2812	A
1	0	2825	C
1	0	2876	G
1	0	2890	A
1	0	2896	A
1	0	2903	C
1	0	2914	A
2	9	2	U
2	9	14	G
2	9	22	G
2	9	23	U
2	9	24	U
2	9	25	G
2	9	40	C
2	9	41	C
2	9	43	G
2	9	44	A
2	9	52	A
2	9	57	A

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Mol	Chain	Res	Type
2	9	66	G
2	9	77	A
2	9	114	G
2	9	122	C

All (35) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	69	A
1	0	129	A
1	0	169	A
1	0	603	A
1	0	644	G
1	0	699	C
1	0	834	G
1	0	857	A
1	0	871	G
1	0	877	G
1	0	1080	C
1	0	1232	A
1	0	1237	U
1	0	1246	A
1	0	1352	A
1	0	1377	C
1	0	1684	A
1	0	1685	A
1	0	1692	C
1	0	1856	C
1	0	1942	A
1	0	1979	G
1	0	2011	A
1	0	2103	A
1	0	2313	C
1	0	2467	A
1	0	2526	C
1	0	2536	C
1	0	2538	A
1	0	2649	A
1	0	2718	C
1	0	2726	U
1	0	2761	A
1	0	2791	U

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Mol	Chain	Res	Type
2	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	$\#\|Z\| > 2$
1	PSU	0	2621	1	17,21,22	1.56	3 (17%)	20,30,33	5.43	4 (20%)
1	UR3	0	2619	1	14,22,23	0.79	0	15,32,35	0.63	0
1	1MA	0	628	1	15,25,26	0.76	0	15,37,40	1.38	1 (6%)
1	OMG	0	2588	1	18,26,27	1.10	2 (11%)	20,38,41	2.62	4 (20%)
1	OMU	0	2587	1	14,22,23	1.05	1 (7%)	14,31,34	1.14	1 (7%)

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

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	2621	PSU	C5-C1'	-4.80	1.48	1.52
1	0	2588	OMG	C6-N1	3.47	1.39	1.33
1	0	2621	PSU	C4-N3	2.84	1.38	1.33
1	0	2587	OMU	C4-N3	2.71	1.37	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	2621	PSU	C2-N1	2.65	1.43	1.38
1	0	2588	OMG	C8-N7	-2.10	1.30	1.34

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	0	2621	PSU	N1-C2-N3	-17.31	114.67	128.43
1	0	2621	PSU	C4-N3-C2	14.27	127.19	115.14
1	0	2588	OMG	C5-C6-N1	-8.77	111.44	123.43
1	0	2621	PSU	C5-C4-N3	-8.16	114.85	125.36
1	0	2588	OMG	C6-N1-C2	5.91	125.33	115.93
1	0	628	1MA	C2-N3-C4	-4.61	110.81	116.58
1	0	2587	OMU	C5-C4-N3	-3.85	114.84	123.31
1	0	2588	OMG	C2-N3-C4	-3.04	111.88	115.36
1	0	2621	PSU	C6-N1-C2	2.84	120.04	115.36
1	0	2588	OMG	N3-C2-N1	-2.44	123.97	127.22

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	0	2587	OMU	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 306 ligands modelled in this entry, 305 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
32	ZIT	0	9500	-	54,54,54	1.38	6 (11%)	82,83,83	1.08	4 (4%)

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
32	ZIT	0	9500	-	-	3/72/107/107	0/3/3/3

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	9500	ZIT	C22-C11	3.33	1.58	1.52
32	0	9500	ZIT	C13-C14	3.16	1.60	1.54
32	0	9500	ZIT	O13-C13	2.62	1.48	1.44
32	0	9500	ZIT	C6-C5	2.53	1.60	1.55
32	0	9500	ZIT	C13-C12	2.35	1.61	1.55
32	0	9500	ZIT	O6-C6	2.10	1.48	1.44

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	0	9500	ZIT	C9-N10-C11	-3.00	106.97	112.05
32	0	9500	ZIT	C7-C8-C9	2.86	116.14	112.06
32	0	9500	ZIT	C4A-C3A-C2A	-2.13	106.90	109.97
32	0	9500	ZIT	O6-C6-C7	2.12	113.87	108.40

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
32	0	9500	ZIT	C12-C11-N10-C21
32	0	9500	ZIT	C22-C11-N10-C21
32	0	9500	ZIT	C12-C11-N10-C9

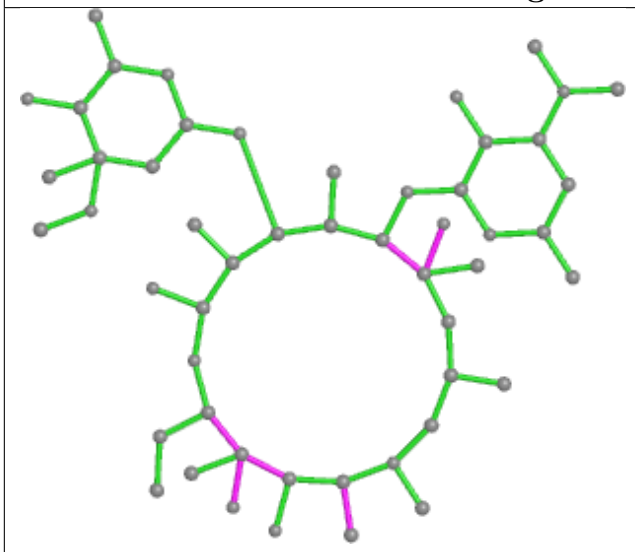
There are no ring outliers.

No monomer is involved in short contacts.

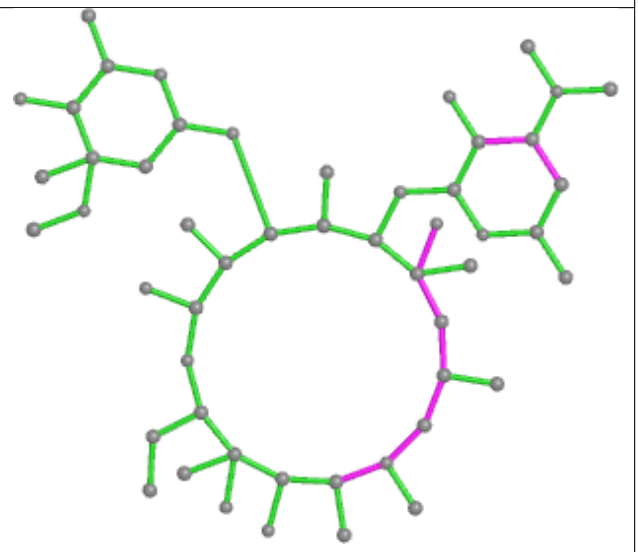
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In

addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

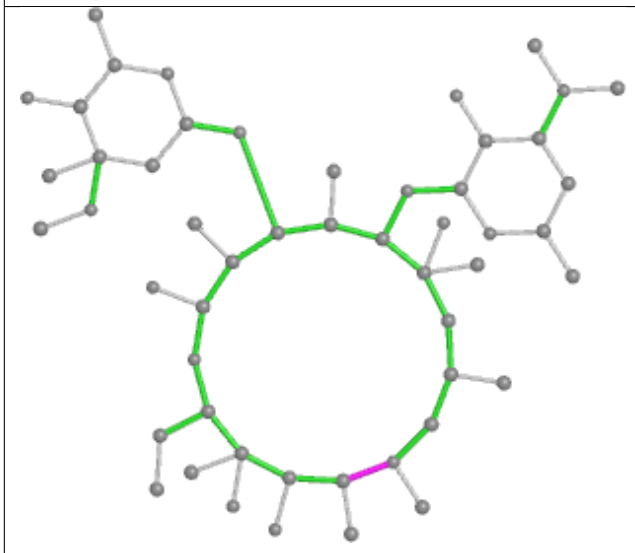
Ligand ZIT 0 9500



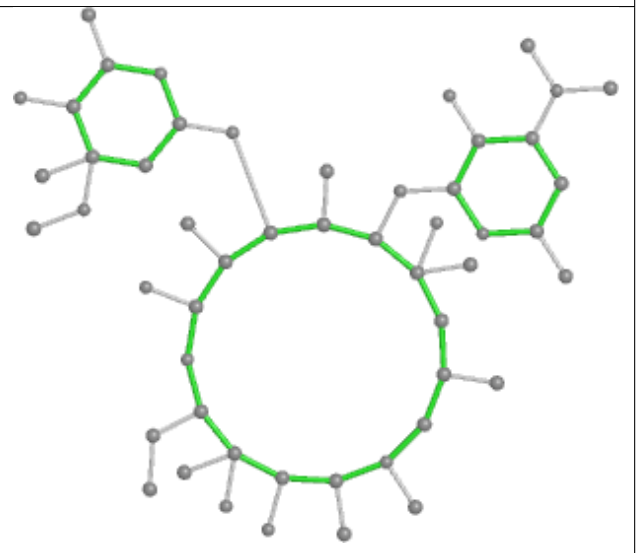
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	0	2749/2922 (94%)	-0.46	91 (3%) 46 45	15, 38, 82, 157	0
2	9	122/122 (100%)	-0.13	6 (4%) 29 28	32, 58, 80, 139	0
3	A	237/240 (98%)	0.24	12 (5%) 28 26	19, 40, 75, 96	0
4	B	337/338 (99%)	0.18	9 (2%) 54 52	21, 46, 73, 84	0
5	C	246/246 (100%)	-0.14	3 (1%) 79 77	17, 36, 60, 69	0
6	D	140/177 (79%)	2.13	68 (48%) 0 0	51, 88, 114, 122	0
7	E	172/178 (96%)	0.86	24 (13%) 2 2	39, 61, 80, 84	0
8	F	119/120 (99%)	0.81	20 (16%) 1 1	38, 62, 88, 103	0
9	G	29/348 (8%)	3.22	25 (86%) 0 0	71, 87, 93, 95	0
10	H	160/177 (90%)	0.43	16 (10%) 7 6	31, 50, 83, 91	0
11	I	70/162 (43%)	6.91	70 (100%) 0 0	122, 135, 154, 155	0
12	J	142/145 (97%)	0.06	4 (2%) 53 51	29, 44, 65, 88	0
13	K	132/132 (100%)	-0.10	3 (2%) 60 58	24, 43, 65, 77	0
14	L	145/165 (87%)	0.60	19 (13%) 3 3	18, 56, 101, 115	0
15	M	194/194 (100%)	0.02	0 100 100	21, 33, 49, 56	0
16	N	186/187 (99%)	0.72	25 (13%) 3 2	34, 55, 102, 112	0
17	O	115/116 (99%)	0.03	1 (0%) 84 82	30, 45, 61, 69	0
18	P	143/149 (95%)	-0.05	0 100 100	30, 44, 57, 68	0
19	Q	95/96 (98%)	-0.04	1 (1%) 80 79	30, 37, 54, 68	0
20	R	150/155 (96%)	-0.15	0 100 100	25, 38, 58, 66	0
21	S	81/85 (95%)	0.11	2 (2%) 57 55	34, 50, 71, 80	0
22	T	119/120 (99%)	0.40	8 (6%) 17 16	29, 47, 76, 103	0
23	U	53/66 (80%)	0.28	2 (3%) 40 39	35, 48, 66, 78	0
24	V	65/71 (91%)	1.45	12 (18%) 1 1	43, 62, 107, 113	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
25	W	154/154 (100%)	-0.03	1 (0%) 89 88	29, 43, 58, 69	0
26	X	82/92 (89%)	0.54	10 (12%) 4 3	37, 50, 78, 94	0
27	Y	142/241 (58%)	0.13	5 (3%) 44 43	21, 36, 59, 80	0
28	Z	73/83 (87%)	0.07	2 (2%) 54 52	35, 51, 68, 86	0
29	1	56/57 (98%)	-0.44	0 100 100	18, 24, 32, 43	0
30	2	46/50 (92%)	0.48	5 (10%) 5 5	26, 51, 75, 89	0
31	3	92/92 (100%)	0.22	2 (2%) 62 60	26, 48, 62, 77	0
All	All	6646/7480 (88%)	0.06	446 (6%) 17 16	15, 43, 89, 157	0

All (446) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	I	74	ILE	15.4
11	I	91	PHE	15.3
11	I	66	GLY	14.6
11	I	128	THR	14.4
11	I	88	GLN	14.0
24	V	1	THR	13.3
11	I	71	ALA	13.3
11	I	80	PHE	12.7
2	9	1	U	11.3
6	D	63	ILE	11.3
11	I	132	VAL	11.3
11	I	97	VAL	10.9
11	I	100	VAL	10.6
11	I	104	ALA	9.8
6	D	10	PHE	9.7
11	I	131	GLY	9.4
11	I	70	THR	9.1
16	N	166	ALA	9.0
24	V	39	ALA	8.9
11	I	92	VAL	8.9
11	I	86	GLU	8.8
11	I	103	ILE	8.4
11	I	93	ALA	8.4
11	I	111	LEU	8.1
11	I	127	CYS	8.0
11	I	108	HIS	7.9
1	0	1198	U	7.7
11	I	78	ALA	7.6

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Mol	Chain	Res	Type	RSRZ
3	A	37	VAL	7.6
11	I	84	SER	7.5
24	V	40	PRO	7.4
11	I	116	LEU	7.4
11	I	83	GLY	7.4
11	I	106	GLN	7.4
11	I	109	PRO	7.4
11	I	113	SER	7.4
11	I	82	THR	7.3
11	I	99	GLN	7.0
6	D	61	PHE	6.9
11	I	76	ASP	6.8
11	I	72	GLU	6.8
11	I	79	GLY	6.8
11	I	118	ASN	6.5
1	0	1177	A	6.5
11	I	112	LEU	6.5
26	X	88	GLU	6.4
1	0	1951	G	6.3
6	D	57	THR	6.3
6	D	170	TYR	6.3
11	I	89	GLU	6.3
1	0	2237	G	6.1
11	I	98	ASP	6.1
1	0	1172	G	6.0
11	I	87	PRO	6.0
9	G	23	ILE	6.0
11	I	129	SER	6.0
11	I	124	VAL	5.9
6	D	11	HIS	5.9
6	D	26	GLY	5.8
11	I	130	LEU	5.8
10	H	174	LEU	5.8
6	D	69	ILE	5.7
11	I	133	THR	5.7
1	0	1169	U	5.6
11	I	102	GLN	5.6
1	0	1199	A	5.6
11	I	90	ASP	5.6
11	I	73	LEU	5.6
11	I	120	ALA	5.5
3	A	237	GLY	5.5

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Mol	Chain	Res	Type	RSRZ
11	I	121	LYS	5.5
1	0	1202	A	5.5
24	V	38	GLY	5.5
1	0	1192	A	5.4
6	D	64	ARG	5.3
9	G	24	VAL	5.2
11	I	117	THR	5.2
11	I	68	PRO	5.1
1	0	1181	A	5.1
6	D	90	LEU	5.1
1	0	1176	C	5.0
11	I	81	GLU	5.0
1	0	1168	C	5.0
1	0	1163	G	4.9
1	0	1178	G	4.9
11	I	67	VAL	4.9
11	I	75	LYS	4.9
1	0	970	U	4.8
1	0	1173	A	4.8
14	L	80	ASP	4.8
11	I	94	ASP	4.8
2	9	2	U	4.7
9	G	71	LEU	4.7
2	9	24	U	4.6
9	G	27	ILE	4.6
1	0	2238	A	4.5
21	S	81	ILE	4.5
11	I	69	PRO	4.4
1	0	1525	G	4.4
22	T	116	ASP	4.4
6	D	40	ILE	4.4
11	I	107	LYS	4.4
1	0	960	G	4.4
24	V	43	PRO	4.4
1	0	1179	C	4.3
9	G	26	MET	4.3
22	T	118	SER	4.3
22	T	119	ALA	4.3
11	I	110	ASP	4.3
9	G	66	LEU	4.2
11	I	95	LEU	4.2
1	0	2004	U	4.2

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Mol	Chain	Res	Type	RSRZ
9	G	20	VAL	4.2
7	E	127	ASP	4.2
6	D	166	ILE	4.1
11	I	85	GLY	4.1
6	D	93	LEU	4.1
11	I	119	ALA	4.1
6	D	66	GLY	4.1
6	D	44	ILE	4.1
6	D	85	GLN	4.1
4	B	57	GLU	4.1
26	X	85	VAL	4.1
1	0	1950	G	4.1
1	0	1948	G	4.0
7	E	45	ASP	4.0
7	E	87	PHE	4.0
11	I	126	THR	4.0
6	D	106	PHE	4.0
3	A	35	GLY	4.0
11	I	125	GLY	4.0
1	0	1200	A	4.0
6	D	58	VAL	4.0
11	I	105	GLU	4.0
1	0	1170	U	3.9
8	F	119	ARG	3.9
16	N	152	GLU	3.9
6	D	88	LEU	3.9
16	N	181	ASP	3.9
1	0	284	C	3.9
10	H	169	GLU	3.9
9	G	72	ASP	3.9
1	0	1180	U	3.9
1	0	999	C	3.8
14	L	81	VAL	3.8
9	G	73	ASP	3.8
11	I	114	TYR	3.8
1	0	10	U	3.8
1	0	1175	G	3.8
30	2	49	GLU	3.7
6	D	62	ASP	3.7
14	L	77	ALA	3.7
4	B	183	GLU	3.7
6	D	92	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
26	X	80	GLU	3.7
31	3	92	GLU	3.7
1	0	735	C	3.7
1	0	1182	C	3.7
9	G	69	ARG	3.7
10	H	40	GLN	3.7
11	I	122	GLU	3.6
27	Y	235	GLU	3.6
6	D	56	ARG	3.6
6	D	68	PRO	3.6
9	G	21	ASP	3.6
14	L	60	GLU	3.5
6	D	86	THR	3.5
6	D	172	VAL	3.5
6	D	27	ILE	3.5
14	L	75	LEU	3.5
1	0	1171	A	3.5
3	A	85	SER	3.5
10	H	172	GLU	3.5
30	2	39	ARG	3.5
7	E	86	VAL	3.5
11	I	101	LYS	3.4
1	0	282	C	3.4
16	N	158	LEU	3.4
9	G	67	LEU	3.4
19	Q	95	GLU	3.4
26	X	7	GLU	3.4
2	9	23	U	3.4
9	G	18	GLU	3.4
8	F	106	ALA	3.4
11	I	77	GLU	3.4
27	Y	95	THR	3.4
1	0	2344	G	3.4
6	D	18	ILE	3.3
14	L	149	ARG	3.3
16	N	177	GLU	3.3
7	E	10	ASP	3.3
9	G	70	ALA	3.3
11	I	115	ASP	3.3
1	0	1949	G	3.3
6	D	165	PHE	3.3
22	T	117	ASP	3.3

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Mol	Chain	Res	Type	RSRZ
8	F	118	LEU	3.3
6	D	41	LEU	3.2
6	D	104	PHE	3.2
9	G	65	THR	3.2
1	0	1190	G	3.2
6	D	135	VAL	3.2
11	I	123	VAL	3.2
16	N	68	GLU	3.2
1	0	138	U	3.2
1	0	1167	G	3.2
1	0	285	A	3.2
9	G	22	ALA	3.2
23	U	47	ARG	3.2
8	F	25	ASP	3.2
5	C	135	GLU	3.2
1	0	1162	G	3.2
1	0	1625	U	3.2
9	G	68	GLU	3.2
16	N	183	ASP	3.2
1	0	2508	C	3.1
1	0	1165	G	3.1
3	A	133	ARG	3.1
9	G	28	GLU	3.1
24	V	41	GLU	3.1
3	A	36	ASP	3.1
11	I	96	SER	3.1
6	D	89	PRO	3.1
6	D	107	GLY	3.1
1	0	1191	A	3.0
1	0	1964	U	3.0
6	D	157	LEU	3.0
16	N	180	LEU	3.0
6	D	75	LEU	3.0
1	0	1183	C	3.0
7	E	100	ASP	3.0
16	N	155	GLU	3.0
1	0	283	U	3.0
8	F	15	ASP	3.0
14	L	91	VAL	3.0
1	0	2769	C	3.0
1	0	1193	A	3.0
8	F	22	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
1	0	1184	C	3.0
14	L	147	GLU	3.0
14	L	148	GLU	3.0
16	N	150	TYR	3.0
1	0	497	A	2.9
1	0	1174	A	2.9
6	D	38	GLU	2.9
22	T	115	GLU	2.9
14	L	150	GLN	2.9
3	A	97	ALA	2.9
1	0	272	A	2.9
16	N	162	ASP	2.9
4	B	1	PRO	2.9
27	Y	108	ASP	2.9
1	0	1164	U	2.9
1	0	280	C	2.8
9	G	25	GLU	2.8
6	D	43	GLU	2.8
7	E	6	GLU	2.8
9	G	15	TRP	2.8
16	N	139	TRP	2.8
6	D	74	THR	2.8
16	N	164	ASP	2.8
16	N	154	LEU	2.8
6	D	67	ASP	2.8
2	9	122	C	2.8
6	D	173	GLU	2.8
21	S	76	GLU	2.8
22	T	82	THR	2.8
1	0	1197	G	2.8
30	2	35	ARG	2.8
1	0	1279	U	2.7
7	E	88	TYR	2.7
10	H	170	ARG	2.7
7	E	43	ASP	2.7
7	E	121	ASP	2.7
13	K	132	VAL	2.7
6	D	98	PHE	2.7
7	E	126	ILE	2.7
10	H	86	TYR	2.7
27	Y	216	ARG	2.7
6	D	55	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
6	D	23	VAL	2.7
8	F	103	GLU	2.7
1	0	1196	C	2.7
7	E	129	GLU	2.7
3	A	236	GLY	2.7
7	E	95	VAL	2.6
4	B	180	ASP	2.6
27	Y	236	VAL	2.6
1	0	1204	C	2.6
1	0	1203	G	2.6
1	0	1965	C	2.6
7	E	94	GLN	2.6
7	E	131	LEU	2.6
8	F	107	ASP	2.6
1	0	2239	C	2.6
6	D	65	GLU	2.6
9	G	17	GLN	2.6
3	A	135	VAL	2.6
6	D	171	ASP	2.6
10	H	149	VAL	2.6
1	0	1186	C	2.6
7	E	108	LEU	2.6
1	0	1527	A	2.6
1	0	1947	G	2.6
1	0	1208	C	2.6
14	L	76	LEU	2.5
7	E	154	ILE	2.5
14	L	102	ASP	2.5
8	F	18	GLU	2.5
12	J	5	GLU	2.5
16	N	140	GLN	2.5
24	V	59	ILE	2.5
1	0	1526	A	2.5
1	0	2637	A	2.5
8	F	16	ALA	2.5
8	F	14	ASP	2.5
26	X	77	PHE	2.5
8	F	90	GLU	2.5
14	L	105	TYR	2.5
16	N	163	PHE	2.5
6	D	25	MET	2.5
12	J	4	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
16	N	149	GLU	2.5
3	A	34	ASP	2.5
6	D	29	HIS	2.4
6	D	154	LYS	2.4
1	0	372	A	2.4
8	F	100	ASP	2.4
1	0	1000	C	2.4
1	0	1201	C	2.4
10	H	165	ARG	2.4
6	D	134	LEU	2.4
10	H	50	ILE	2.4
16	N	160	SER	2.4
1	0	1967	U	2.4
13	K	118	ALA	2.4
1	0	736	A	2.4
1	0	1185	U	2.4
3	A	31	LYS	2.4
1	0	362	G	2.4
28	Z	11	SER	2.4
10	H	48	VAL	2.4
14	L	99	GLU	2.4
7	E	128	GLY	2.3
6	D	130	VAL	2.3
1	0	1166	A	2.3
6	D	48	MET	2.3
9	G	14	GLU	2.3
6	D	45	THR	2.3
6	D	50	VAL	2.3
14	L	106	VAL	2.3
1	0	1207	A	2.3
26	X	41	PHE	2.3
24	V	37	GLY	2.3
16	N	147	ILE	2.3
6	D	81	GLU	2.3
5	C	132	ASP	2.3
10	H	85	ASP	2.3
14	L	79	ASP	2.3
1	0	1206	U	2.3
1	0	279	C	2.3
10	H	144	GLU	2.3
26	X	71	ARG	2.3
3	A	38	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
6	D	95	THR	2.3
1	0	128	A	2.3
10	H	76	LEU	2.3
24	V	8	ILE	2.3
6	D	128	LEU	2.3
16	N	185	GLU	2.3
12	J	70	PHE	2.2
24	V	10	ASP	2.2
1	0	1966	U	2.2
4	B	134	ALA	2.2
6	D	158	ASN	2.2
12	J	110	ASP	2.2
26	X	72	VAL	2.2
1	0	371	U	2.2
1	0	2511	A	2.2
9	G	12	ILE	2.2
24	V	63	GLU	2.2
17	O	23	GLY	2.2
16	N	159	TYR	2.2
7	E	11	VAL	2.2
24	V	2	VAL	2.2
11	I	134	ILE	2.2
31	3	62	THR	2.2
4	B	104	GLU	2.2
8	F	117	GLU	2.2
10	H	140	TYR	2.2
30	2	44	ARG	2.2
16	N	95	ALA	2.2
9	G	64	ASN	2.2
4	B	169	GLY	2.2
6	D	42	GLY	2.2
6	D	70	GLY	2.2
9	G	63	ARG	2.2
4	B	117	GLU	2.2
7	E	89	SER	2.2
11	I	135	GLU	2.2
1	0	1189	A	2.2
1	0	969	G	2.1
1	0	1665	G	2.1
10	H	89	THR	2.1
6	D	24	HIS	2.1
30	2	27	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
6	D	129	ASP	2.1
14	L	130	ARG	2.1
28	Z	80	ARG	2.1
8	F	17	LEU	2.1
1	0	1159	G	2.1
6	D	167	GLU	2.1
7	E	53	GLU	2.1
7	E	105	GLU	2.1
8	F	44	SER	2.1
25	W	86	GLU	2.1
6	D	39	ASP	2.1
6	D	84	LEU	2.1
16	N	156	GLU	2.1
14	L	139	SER	2.1
2	9	74	G	2.1
23	U	43	GLY	2.1
6	D	51	ARG	2.1
5	C	143	ASP	2.1
22	T	112	LEU	2.1
1	0	1188	A	2.1
16	N	69	TYR	2.1
14	L	145	LEU	2.1
26	X	42	SER	2.1
7	E	170	ARG	2.1
7	E	156	ASP	2.0
16	N	169	PRO	2.0
8	F	26	THR	2.0
13	K	129	THR	2.0
22	T	33	GLU	2.0
10	H	38	ARG	2.0
8	F	110	ASP	2.0
6	D	73	VAL	2.0
8	F	21	GLU	2.0
26	X	10	VAL	2.0
1	0	2345	A	2.0
4	B	176	ASP	2.0
6	D	47	GLN	2.0
6	D	53	LYS	2.0
8	F	115	VAL	2.0
1	0	2664	A	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	1MA	0	628	23/24	0.98	0.15	22,24,25,28	0
1	OMU	0	2587	21/22	0.98	0.12	26,28,29,32	0
1	OMG	0	2588	24/25	0.98	0.12	23,27,29,30	0
1	UR3	0	2619	21/22	0.98	0.13	29,33,35,41	0
1	PSU	0	2621	20/21	0.98	0.13	22,25,33,33	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
37	SR	0	9006	1/1	-0.02	1.01	200,200,200,200	0
37	SR	B	8987	1/1	0.14	0.47	189,189,189,189	0
37	SR	0	8996	1/1	0.17	0.58	185,185,185,185	0
37	SR	0	9001	1/1	0.36	0.27	160,160,160,160	0
37	SR	0	8976	1/1	0.43	0.25	159,159,159,159	0
37	SR	0	8979	1/1	0.50	0.28	184,184,184,184	0
35	NA	0	8571	1/1	0.55	0.25	79,79,79,79	0
37	SR	0	8922	1/1	0.55	0.12	161,161,161,161	0
37	SR	0	8974	1/1	0.56	0.20	159,159,159,159	0
37	SR	0	8955	1/1	0.58	0.38	169,169,169,169	0
37	SR	0	8986	1/1	0.59	0.82	169,169,169,169	0
37	SR	0	9004	1/1	0.61	0.23	176,176,176,176	0
37	SR	0	9002	1/1	0.63	0.17	162,162,162,162	0
37	SR	9	8980	1/1	0.66	0.20	162,162,162,162	0
37	SR	0	8957	1/1	0.67	0.33	176,176,176,176	0
35	NA	0	8525	1/1	0.67	0.21	65,65,65,65	0
37	SR	A	8929	1/1	0.68	0.25	123,123,123,123	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
37	SR	0	8993	1/1	0.69	0.10	143,143,143,143	0
33	MG	0	8081	1/1	0.70	0.20	55,55,55,55	0
35	NA	0	8562	1/1	0.72	0.26	59,59,59,59	0
37	SR	0	8983	1/1	0.72	0.14	149,149,149,149	0
37	SR	0	8928	1/1	0.72	0.11	112,112,112,112	0
35	NA	0	8536	1/1	0.72	0.14	46,46,46,46	0
35	NA	H	8518	1/1	0.73	0.23	66,66,66,66	0
37	SR	0	8960	1/1	0.73	0.09	128,128,128,128	0
37	SR	0	8944	1/1	0.73	0.16	146,146,146,146	0
33	MG	0	8085	1/1	0.73	0.12	90,90,90,90	0
33	MG	9	8074	1/1	0.75	0.10	64,64,64,64	0
37	SR	0	8971	1/1	0.75	0.09	158,158,158,158	0
37	SR	0	8968	1/1	0.76	0.09	142,142,142,142	0
35	NA	0	8554	1/1	0.76	0.31	52,52,52,52	0
37	SR	0	8919	1/1	0.77	0.16	169,169,169,169	0
37	SR	0	8991	1/1	0.78	0.15	167,167,167,167	0
35	NA	0	8548	1/1	0.78	0.09	50,50,50,50	0
37	SR	0	9000	1/1	0.79	0.18	150,150,150,150	0
33	MG	0	8069	1/1	0.79	0.17	58,58,58,58	0
33	MG	0	8037	1/1	0.79	0.23	77,77,77,77	0
35	NA	0	8506	1/1	0.79	0.18	50,50,50,50	0
37	SR	0	8927	1/1	0.80	0.12	133,133,133,133	0
37	SR	0	8962	1/1	0.80	0.19	139,139,139,139	0
37	SR	0	8970	1/1	0.81	0.09	109,109,109,109	0
37	SR	0	8988	1/1	0.82	0.10	149,149,149,149	0
35	NA	0	8555	1/1	0.82	0.49	43,43,43,43	0
33	MG	0	8066	1/1	0.83	0.11	47,47,47,47	0
37	SR	0	8947	1/1	0.83	0.10	148,148,148,148	0
35	NA	0	8563	1/1	0.84	0.39	56,56,56,56	0
37	SR	0	8998	1/1	0.84	0.13	133,133,133,133	0
37	SR	H	8972	1/1	0.84	0.12	112,112,112,112	0
37	SR	0	8951	1/1	0.85	0.05	137,137,137,137	0
35	NA	0	8574	1/1	0.85	0.44	48,48,48,48	0
35	NA	0	8542	1/1	0.85	0.43	51,51,51,51	0
35	NA	0	8564	1/1	0.86	0.37	55,55,55,55	0
33	MG	0	8030	1/1	0.86	0.24	48,48,48,48	0
33	MG	0	8071	1/1	0.86	0.36	54,54,54,54	0
33	MG	0	8073	1/1	0.86	0.19	76,76,76,76	0
37	SR	0	8943	1/1	0.86	0.09	108,108,108,108	0
37	SR	0	8959	1/1	0.86	0.17	132,132,132,132	0
33	MG	0	8080	1/1	0.87	0.08	53,53,53,53	0
37	SR	0	8989	1/1	0.87	0.18	148,148,148,148	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
35	NA	0	8521	1/1	0.87	0.25	55,55,55,55	0
35	NA	0	8561	1/1	0.87	0.55	62,62,62,62	0
35	NA	0	8567	1/1	0.87	0.31	53,53,53,53	0
33	MG	0	8031	1/1	0.88	0.09	41,41,41,41	0
37	SR	0	8924	1/1	0.88	0.13	123,123,123,123	0
35	NA	0	8541	1/1	0.88	0.15	41,41,41,41	0
35	NA	0	8573	1/1	0.88	0.09	55,55,55,55	0
35	NA	0	8544	1/1	0.89	0.20	49,49,49,49	0
33	MG	0	8062	1/1	0.89	0.08	46,46,46,46	0
33	MG	0	8079	1/1	0.89	0.08	40,40,40,40	0
37	SR	0	8997	1/1	0.89	0.56	171,171,171,171	0
33	MG	0	8039	1/1	0.89	0.13	60,60,60,60	0
37	SR	A	8977	1/1	0.89	0.07	143,143,143,143	0
35	NA	9	8572	1/1	0.89	0.29	59,59,59,59	0
35	NA	0	8565	1/1	0.89	0.29	46,46,46,46	0
37	SR	S	8961	1/1	0.89	0.09	113,113,113,113	0
37	SR	0	8973	1/1	0.90	0.11	113,113,113,113	0
33	MG	0	8082	1/1	0.90	0.23	44,44,44,44	0
33	MG	0	8063	1/1	0.90	0.19	71,71,71,71	0
37	SR	9	9003	1/1	0.90	0.08	141,141,141,141	0
37	SR	0	8963	1/1	0.90	0.06	103,103,103,103	0
37	SR	0	8964	1/1	0.90	0.09	109,109,109,109	0
37	SR	B	8950	1/1	0.90	0.06	90,90,90,90	0
35	NA	R	8575	1/1	0.90	0.21	73,73,73,73	0
35	NA	0	8509	1/1	0.90	0.15	47,47,47,47	0
35	NA	9	8543	1/1	0.90	0.24	41,41,41,41	0
35	NA	0	8522	1/1	0.91	0.28	46,46,46,46	0
37	SR	0	8916	1/1	0.91	0.06	95,95,95,95	0
37	SR	0	8982	1/1	0.91	0.19	152,152,152,152	0
35	NA	0	8568	1/1	0.91	0.24	42,42,42,42	0
37	SR	0	8939	1/1	0.91	0.09	108,108,108,108	0
37	SR	F	9005	1/1	0.91	0.05	106,106,106,106	0
37	SR	0	9007	1/1	0.91	0.26	154,154,154,154	0
35	NA	0	8569	1/1	0.91	0.13	61,61,61,61	0
33	MG	0	8038	1/1	0.92	0.13	65,65,65,65	0
35	NA	C	8503	1/1	0.92	0.14	29,29,29,29	0
35	NA	0	8514	1/1	0.92	0.17	41,41,41,41	0
37	SR	0	8965	1/1	0.92	0.05	109,109,109,109	0
35	NA	0	8557	1/1	0.92	0.12	54,54,54,54	0
36	CL	J	8821	1/1	0.92	0.16	52,52,52,52	0
35	NA	0	8559	1/1	0.92	0.15	51,51,51,51	0
33	MG	0	8029	1/1	0.92	0.08	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
37	SR	0	8956	1/1	0.92	0.06	127,127,127,127	0
33	MG	0	8024	1/1	0.92	0.09	53,53,53,53	0
35	NA	0	8508	1/1	0.92	0.13	40,40,40,40	0
35	NA	0	8550	1/1	0.92	0.21	41,41,41,41	0
35	NA	0	8553	1/1	0.93	0.24	48,48,48,48	0
35	NA	0	8507	1/1	0.93	0.10	27,27,27,27	0
33	MG	0	8040	1/1	0.93	0.09	78,78,78,78	0
33	MG	0	8046	1/1	0.93	0.10	25,25,25,25	0
33	MG	0	8053	1/1	0.93	0.09	58,58,58,58	0
34	K	0	8401	1/1	0.93	0.11	58,58,58,58	0
37	SR	0	8926	1/1	0.93	0.06	95,95,95,95	0
35	NA	0	8546	1/1	0.93	0.25	63,63,63,63	0
33	MG	0	8022	1/1	0.93	0.15	30,30,30,30	0
37	SR	0	8990	1/1	0.93	0.10	106,106,106,106	0
35	NA	0	8523	1/1	0.93	0.16	31,31,31,31	0
37	SR	0	8941	1/1	0.93	0.05	90,90,90,90	0
35	NA	0	8551	1/1	0.93	0.20	39,39,39,39	0
35	NA	R	8532	1/1	0.93	0.09	37,37,37,37	0
37	SR	0	8946	1/1	0.93	0.09	87,87,87,87	0
35	NA	0	8517	1/1	0.94	0.21	36,36,36,36	0
33	MG	0	8076	1/1	0.94	0.07	28,28,28,28	0
33	MG	T	8057	1/1	0.94	0.08	51,51,51,51	0
37	SR	0	8994	1/1	0.94	0.27	168,168,168,168	0
37	SR	0	8995	1/1	0.94	0.07	112,112,112,112	0
33	MG	0	8017	1/1	0.94	0.21	26,26,26,26	0
33	MG	0	8036	1/1	0.94	0.10	36,36,36,36	0
35	NA	0	8531	1/1	0.94	0.06	29,29,29,29	0
37	SR	0	8999	1/1	0.94	0.04	78,78,78,78	0
37	SR	0	8933	1/1	0.94	0.14	108,108,108,108	0
35	NA	0	8556	1/1	0.94	0.23	37,37,37,37	0
35	NA	0	8535	1/1	0.94	0.26	40,40,40,40	0
33	MG	0	8056	1/1	0.94	0.17	49,49,49,49	0
33	MG	0	8060	1/1	0.94	0.07	45,45,45,45	0
37	SR	0	8975	1/1	0.94	0.13	99,99,99,99	0
33	MG	0	8025	1/1	0.94	0.08	24,24,24,24	0
35	NA	0	8513	1/1	0.94	0.13	33,33,33,33	0
37	SR	0	8981	1/1	0.94	0.12	141,141,141,141	0
37	SR	0	8949	1/1	0.94	0.05	93,93,93,93	0
35	NA	S	8510	1/1	0.94	0.17	24,24,24,24	0
37	SR	0	8985	1/1	0.94	0.11	104,104,104,104	0
36	CL	J	8801	1/1	0.94	0.11	49,49,49,49	0
33	MG	0	8093	1/1	0.94	0.09	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
35	NA	0	8547	1/1	0.94	0.19	42,42,42,42	0
33	MG	0	8052	1/1	0.95	0.09	23,23,23,23	0
33	MG	0	8027	1/1	0.95	0.04	32,32,32,32	0
35	NA	0	8502	1/1	0.95	0.18	43,43,43,43	0
36	CL	0	8815	1/1	0.95	0.11	47,47,47,47	0
35	NA	0	8504	1/1	0.95	0.13	26,26,26,26	0
37	SR	0	8954	1/1	0.95	0.11	88,88,88,88	0
35	NA	0	8549	1/1	0.95	0.48	74,74,74,74	0
33	MG	0	8083	1/1	0.95	0.08	41,41,41,41	0
35	NA	0	8526	1/1	0.95	0.10	36,36,36,36	0
37	SR	0	9008	1/1	0.95	0.07	83,83,83,83	0
35	NA	0	8527	1/1	0.95	0.17	31,31,31,31	0
33	MG	0	8084	1/1	0.95	0.04	36,36,36,36	0
35	NA	0	8534	1/1	0.95	0.15	29,29,29,29	0
33	MG	0	8065	1/1	0.95	0.07	45,45,45,45	0
33	MG	0	8089	1/1	0.95	0.19	37,37,37,37	0
32	ZIT	0	9500	52/52	0.95	0.14	28,38,42,44	0
33	MG	0	8035	1/1	0.95	0.07	52,52,52,52	0
35	NA	J	8538	1/1	0.95	0.10	48,48,48,48	0
37	SR	R	8912	1/1	0.95	0.12	77,77,77,77	0
35	NA	M	8539	1/1	0.95	0.18	28,28,28,28	0
33	MG	0	8049	1/1	0.96	0.11	64,64,64,64	0
37	SR	0	8958	1/1	0.96	0.07	83,83,83,83	0
33	MG	0	8070	1/1	0.96	0.10	36,36,36,36	0
33	MG	0	8092	1/1	0.96	0.09	47,47,47,47	0
33	MG	0	8016	1/1	0.96	0.06	35,35,35,35	0
33	MG	0	8019	1/1	0.96	0.07	22,22,22,22	0
37	SR	0	8931	1/1	0.96	0.06	86,86,86,86	0
33	MG	A	8050	1/1	0.96	0.13	33,33,33,33	0
37	SR	0	8966	1/1	0.96	0.03	89,89,89,89	0
37	SR	0	8934	1/1	0.96	0.12	116,116,116,116	0
37	SR	0	8937	1/1	0.96	0.09	94,94,94,94	0
35	NA	0	8511	1/1	0.96	0.11	59,59,59,59	0
35	NA	0	8552	1/1	0.96	0.14	48,48,48,48	0
37	SR	0	8942	1/1	0.96	0.06	110,110,110,110	0
35	NA	0	8512	1/1	0.96	0.11	36,36,36,36	0
33	MG	K	8054	1/1	0.96	0.10	34,34,34,34	0
37	SR	0	8978	1/1	0.96	0.05	82,82,82,82	0
33	MG	0	8067	1/1	0.96	0.09	29,29,29,29	0
36	CL	L	8810	1/1	0.96	0.08	43,43,43,43	0
37	SR	A	8930	1/1	0.96	0.05	82,82,82,82	0
37	SR	0	8910	1/1	0.96	0.04	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
37	SR	0	8915	1/1	0.96	0.06	85,85,85,85	0
37	SR	0	8984	1/1	0.96	0.10	98,98,98,98	0
37	SR	0	8953	1/1	0.96	0.07	121,121,121,121	0
35	NA	0	8516	1/1	0.96	0.14	44,44,44,44	0
33	MG	0	8077	1/1	0.96	0.08	26,26,26,26	0
37	SR	0	8920	1/1	0.96	0.08	96,96,96,96	0
35	NA	0	8566	1/1	0.97	0.15	44,44,44,44	0
37	SR	0	8917	1/1	0.97	0.09	90,90,90,90	0
33	MG	0	8007	1/1	0.97	0.10	24,24,24,24	0
33	MG	0	8020	1/1	0.97	0.12	37,37,37,37	0
33	MG	0	8072	1/1	0.97	0.09	37,37,37,37	0
35	NA	0	8570	1/1	0.97	0.09	35,35,35,35	0
33	MG	0	8021	1/1	0.97	0.09	28,28,28,28	0
33	MG	0	8075	1/1	0.97	0.07	31,31,31,31	0
35	NA	0	8515	1/1	0.97	0.17	30,30,30,30	0
33	MG	0	8061	1/1	0.97	0.12	23,23,23,23	0
33	MG	A	8051	1/1	0.97	0.17	55,55,55,55	0
33	MG	B	8042	1/1	0.97	0.05	52,52,52,52	0
33	MG	0	8008	1/1	0.97	0.12	26,26,26,26	0
37	SR	0	8938	1/1	0.97	0.05	147,147,147,147	0
33	MG	0	8078	1/1	0.97	0.09	40,40,40,40	0
37	SR	0	8940	1/1	0.97	0.05	66,66,66,66	0
33	MG	Y	8086	1/1	0.97	0.11	35,35,35,35	0
37	SR	0	8992	1/1	0.97	0.22	111,111,111,111	0
33	MG	0	8044	1/1	0.97	0.15	40,40,40,40	0
33	MG	0	8045	1/1	0.97	0.09	29,29,29,29	0
35	NA	0	8529	1/1	0.97	0.09	32,32,32,32	0
36	CL	0	8805	1/1	0.97	0.09	45,45,45,45	0
36	CL	0	8811	1/1	0.97	0.11	45,45,45,45	0
37	SR	0	8948	1/1	0.97	0.07	69,69,69,69	0
36	CL	0	8814	1/1	0.97	0.11	40,40,40,40	0
35	NA	0	8530	1/1	0.97	0.16	37,37,37,37	0
36	CL	A	8809	1/1	0.97	0.23	52,52,52,52	0
33	MG	0	8033	1/1	0.97	0.07	32,32,32,32	0
36	CL	J	8802	1/1	0.97	0.09	51,51,51,51	0
35	NA	0	8533	1/1	0.97	0.09	50,50,50,50	0
33	MG	0	8002	1/1	0.97	0.08	27,27,27,27	0
36	CL	M	8818	1/1	0.97	0.23	36,36,36,36	0
36	CL	O	8808	1/1	0.97	0.10	54,54,54,54	0
36	CL	R	8806	1/1	0.97	0.16	40,40,40,40	0
36	CL	Y	8820	1/1	0.97	0.16	35,35,35,35	0
36	CL	3	8804	1/1	0.97	0.09	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
37	SR	0	8908	1/1	0.97	0.09	71,71,71,71	0
33	MG	0	8068	1/1	0.97	0.16	48,48,48,48	0
37	SR	0	8911	1/1	0.97	0.08	65,65,65,65	0
37	SR	0	8967	1/1	0.97	0.04	116,116,116,116	0
37	SR	0	8914	1/1	0.97	0.10	88,88,88,88	0
37	SR	0	8969	1/1	0.97	0.25	115,115,115,115	0
33	MG	0	8003	1/1	0.97	0.11	23,23,23,23	0
35	NA	0	8528	1/1	0.98	0.20	32,32,32,32	0
33	MG	0	8088	1/1	0.98	0.05	29,29,29,29	0
33	MG	0	8055	1/1	0.98	0.11	29,29,29,29	0
35	NA	Q	8540	1/1	0.98	0.17	39,39,39,39	0
35	NA	0	8558	1/1	0.98	0.08	46,46,46,46	0
33	MG	0	8090	1/1	0.98	0.09	49,49,49,49	0
35	NA	0	8560	1/1	0.98	0.37	54,54,54,54	0
37	SR	0	8921	1/1	0.98	0.07	66,66,66,66	0
33	MG	0	8091	1/1	0.98	0.12	42,42,42,42	0
37	SR	0	8923	1/1	0.98	0.08	78,78,78,78	0
33	MG	0	8028	1/1	0.98	0.11	19,19,19,19	0
36	CL	0	8813	1/1	0.98	0.15	45,45,45,45	0
33	MG	0	8010	1/1	0.98	0.09	29,29,29,29	0
33	MG	0	8012	1/1	0.98	0.07	13,13,13,13	0
36	CL	0	8816	1/1	0.98	0.11	53,53,53,53	0
36	CL	0	8822	1/1	0.98	0.15	48,48,48,48	0
33	MG	0	8041	1/1	0.98	0.10	18,18,18,18	0
36	CL	B	8819	1/1	0.98	0.09	46,46,46,46	0
33	MG	0	8043	1/1	0.98	0.09	46,46,46,46	0
33	MG	0	8015	1/1	0.98	0.09	31,31,31,31	0
33	MG	0	8023	1/1	0.98	0.06	24,24,24,24	0
35	NA	0	8520	1/1	0.98	0.09	50,50,50,50	0
33	MG	0	8034	1/1	0.98	0.08	35,35,35,35	0
36	CL	N	8807	1/1	0.98	0.12	46,46,46,46	0
33	MG	0	8047	1/1	0.98	0.14	46,46,46,46	0
33	MG	0	8004	1/1	0.98	0.05	22,22,22,22	0
35	NA	0	8524	1/1	0.98	0.19	31,31,31,31	0
33	MG	0	8005	1/1	0.98	0.10	23,23,23,23	0
33	MG	0	8009	1/1	0.98	0.13	26,26,26,26	0
35	NA	0	8505	1/1	0.98	0.14	33,33,33,33	0
37	SR	1	8913	1/1	0.98	0.07	70,70,70,70	0
38	CD	Z	8703	1/1	0.98	0.08	44,44,44,44	0
33	MG	0	8032	1/1	0.99	0.08	36,36,36,36	0
33	MG	0	8013	1/1	0.99	0.04	24,24,24,24	0
36	CL	0	8812	1/1	0.99	0.13	39,39,39,39	0

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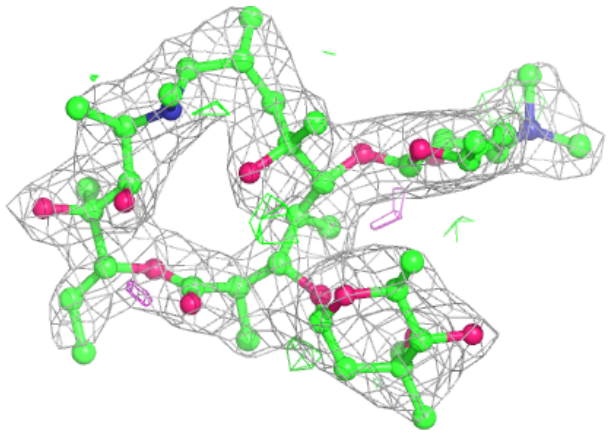
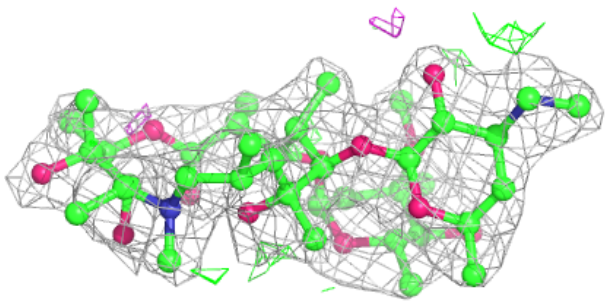
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
33	MG	0	8026	1/1	0.99	0.07	28,28,28,28	0
33	MG	0	8014	1/1	0.99	0.09	25,25,25,25	0
33	MG	0	8058	1/1	0.99	0.08	26,26,26,26	0
33	MG	0	8059	1/1	0.99	0.04	27,27,27,27	0
37	SR	0	8918	1/1	0.99	0.12	66,66,66,66	0
36	CL	0	8817	1/1	0.99	0.08	46,46,46,46	0
33	MG	0	8006	1/1	0.99	0.06	30,30,30,30	0
33	MG	0	8087	1/1	0.99	0.08	26,26,26,26	0
33	MG	0	8011	1/1	0.99	0.09	24,24,24,24	0
34	K	0	8402	1/1	0.99	0.09	46,46,46,46	0
35	NA	0	8519	1/1	0.99	0.15	36,36,36,36	0
37	SR	0	8925	1/1	0.99	0.06	75,75,75,75	0
35	NA	0	8537	1/1	0.99	0.13	32,32,32,32	0
35	NA	0	8501	1/1	0.99	0.18	26,26,26,26	0
33	MG	0	8001	1/1	0.99	0.08	25,25,25,25	0
33	MG	0	8048	1/1	0.99	0.08	33,33,33,33	0
35	NA	0	8545	1/1	0.99	0.13	29,29,29,29	0
33	MG	0	8064	1/1	0.99	0.04	34,34,34,34	0
37	SR	0	8935	1/1	0.99	0.13	60,60,60,60	0
37	SR	0	8936	1/1	0.99	0.09	67,67,67,67	0
33	MG	0	8018	1/1	0.99	0.13	38,38,38,38	0
36	CL	0	8803	1/1	0.99	0.16	41,41,41,41	0
37	SR	0	8901	1/1	0.99	0.05	71,71,71,71	0
37	SR	0	8902	1/1	0.99	0.07	49,49,49,49	0
37	SR	0	8903	1/1	0.99	0.17	41,41,41,41	0
37	SR	0	8904	1/1	0.99	0.08	34,34,34,34	0
37	SR	0	8905	1/1	0.99	0.23	48,48,48,48	0
37	SR	0	8906	1/1	0.99	0.10	40,40,40,40	0
37	SR	0	8945	1/1	0.99	0.04	92,92,92,92	0
37	SR	1	8952	1/1	0.99	0.06	62,62,62,62	0
37	SR	3	8932	1/1	0.99	0.07	58,58,58,58	0
38	CD	O	8705	1/1	0.99	0.06	58,58,58,58	0
38	CD	U	8701	1/1	0.99	0.09	55,55,55,55	0
37	SR	0	8907	1/1	0.99	0.11	33,33,33,33	0
38	CD	1	8702	1/1	0.99	0.06	44,44,44,44	0
38	CD	3	8704	1/1	0.99	0.07	53,53,53,53	0
37	SR	0	8909	1/1	1.00	0.08	70,70,70,70	0

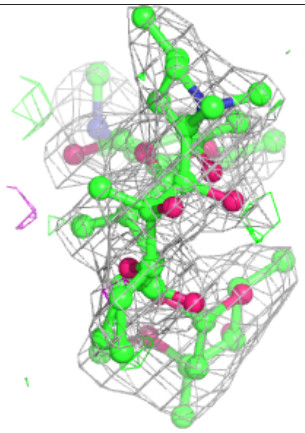
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around ZIT 0 9500:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)







6.5 Other polymers

There are no such residues in this entry.