



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 02:48 AM UTC

PDB ID : 3G6E / pdb_00003g6e
Title : Co-crystal structure of Homoharringtonine bound to the large ribosomal subunit
Authors : Gurel, G.; Blaha, G.; Moore, P.B.; Steitz, T.A.
Deposited on : 2009-02-06
Resolution : 2.70 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

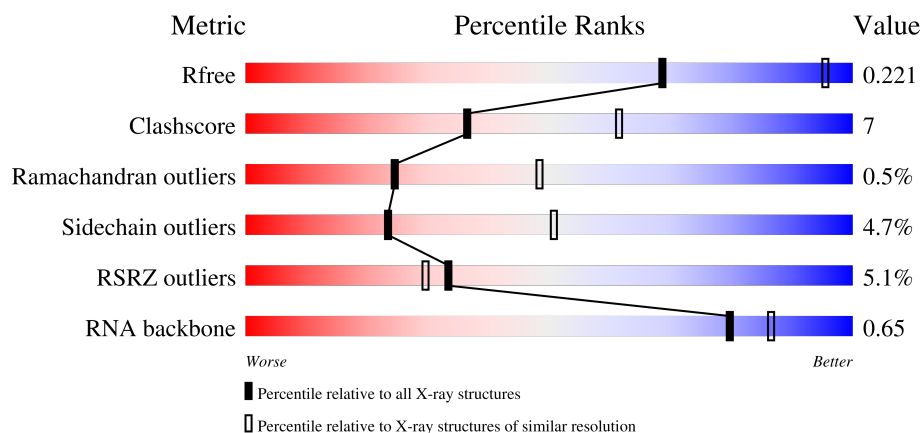
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 Å.

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



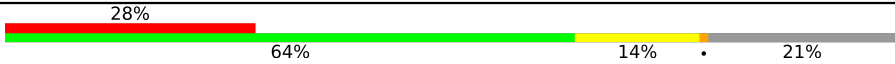
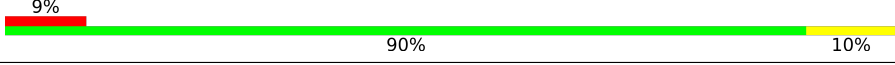
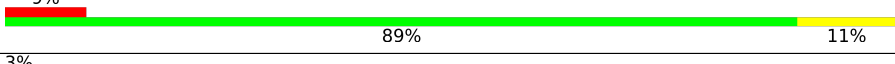
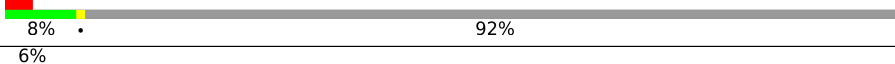
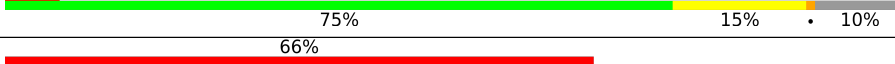
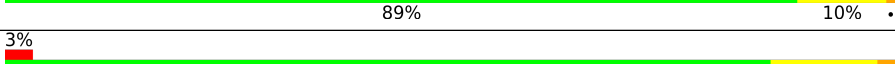
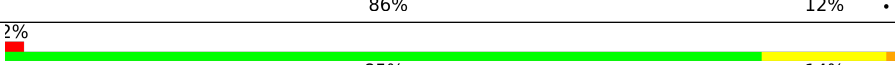
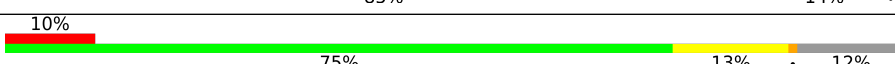
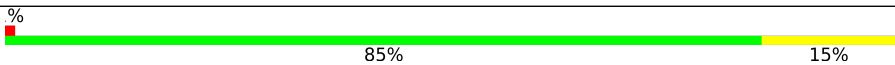
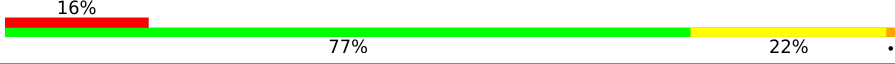
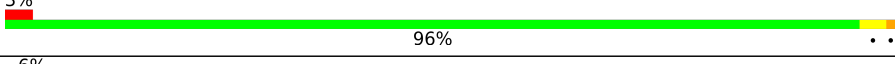
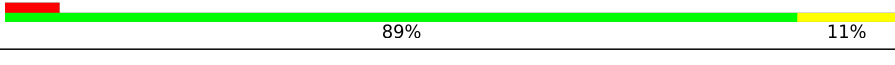
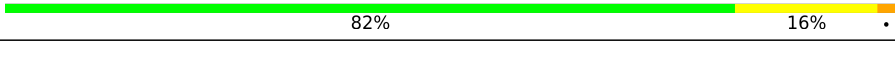
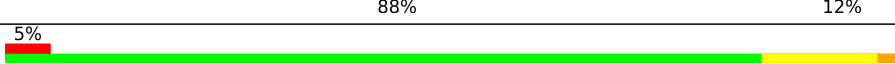
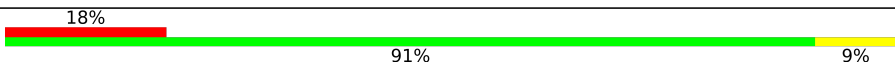
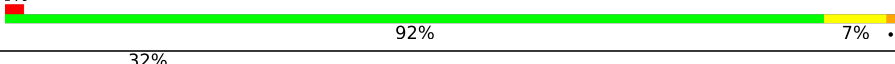
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3538 (2.70-2.70)
Clashscore	190562	3843 (2.70-2.70)
Ramachandran outliers	187476	3778 (2.70-2.70)
Sidechain outliers	187428	3778 (2.70-2.70)
RSRZ outliers	180081	3538 (2.70-2.70)
RNA backbone	3983	1044 (2.90-2.50)

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 $\leq 5\%$. 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	2923	2% 59% 30% 5% 6%
2	A	237	5% 83% 16%
3	B	337	2% 82% 16%
4	C	246	2% 78% 18%

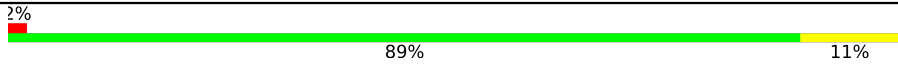
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Mol	Chain	Length	Quality of chain
5	D	177	
6	E	172	
7	F	119	
8	G	348	
9	H	177	
10	I	70	
11	J	142	
12	K	132	
13	L	165	
14	M	194	
15	N	186	
16	O	115	
17	P	143	
18	Q	95	
19	R	150	
20	S	81	
21	T	119	
22	U	53	
23	V	65	
24	W	154	
25	X	82	
26	Y	142	
27	Z	73	
28	1	56	
29	2	50	

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Mol	Chain	Length	Quality of chain
30	3	92	
31	9	122	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
34	NA	0	8518	-	-	-	X
34	NA	0	8522	-	-	-	X
34	NA	0	8546	-	-	-	X
34	NA	0	8557	-	-	-	X
34	NA	0	8559	-	-	-	X
34	NA	0	8561	-	-	-	X
34	NA	0	8567	-	-	-	X
34	NA	0	8573	-	-	-	X
34	NA	0	8574	-	-	-	X

2 Entry composition

There are 39 unique types of molecules in this entry. The entry contains 99174 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
1	0	2754	Total	C	N	O	P	0	0	0
			59021	26349	10873	19054	2745			

- Molecule 2 is a protein called 50S ribosomal protein L2P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	A	237	Total	C	N	O	S	0	0	0
			1754	1072	352	325	5			

- Molecule 3 is a protein called 50S ribosomal protein L3P.

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

- Molecule 4 is a protein called 50S ribosomal protein L4P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	C	246	Total	C	N	O	S	0	0	0
			1860	1130	345	384	1			

- Molecule 5 is a protein called 50S ribosomal protein L5P.

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

- Molecule 6 is a protein called 50S ribosomal protein L6P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	E	172	Total	C	N	O	S	0	0	0
			1358	840	224	290	4			

- Molecule 7 is a protein called 50S ribosomal protein L7Ae.

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

- Molecule 8 is a protein called 50S ribosomal protein L10E.

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

- Molecule 9 is a protein called 50S ribosomal protein L10e.

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

- Molecule 10 is a protein called 50S ribosomal protein L11P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	I	70	Total	C	N	O	S	0	0	0
			520	323	81	115	1			

- Molecule 11 is a protein called 50S ribosomal protein L13P.

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

- Molecule 12 is a protein called 50S ribosomal protein L14P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	K	132	Total	C	N	O	S	0	0	0
			994	609	189	192	4			

- Molecule 13 is a protein called 50S ribosomal protein L15P.

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

- Molecule 14 is a protein called 50S ribosomal protein L15e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	M	194	Total	C	N	O	S	0	0	0
			1559	943	333	282	1			

- Molecule 15 is a protein called 50S ribosomal protein L18P.

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

- Molecule 16 is a protein called 50S ribosomal protein L18e.

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

- Molecule 17 is a protein called 50S ribosomal protein L19e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	P	143	Total	C	N	O		0	0	0
			1137	683	229	225				

- Molecule 18 is a protein called 50S ribosomal protein L21e.

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

- Molecule 19 is a protein called 50S ribosomal protein L22P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	R	150	Total	C	N	O	S	0	0	0
			1150	713	209	224	4			

- Molecule 20 is a protein called 50S ribosomal protein L23P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	S	81	Total	C	N	O	S	0	0	0
			642	389	111	139	3			

- Molecule 21 is a protein called 50S ribosomal protein L24P.

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

- Molecule 22 is a protein called 50S ribosomal protein L24e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	U	53	Total	C	N	O	S	0	0	0
			411	244	75	87	5			

- Molecule 23 is a protein called 50S ribosomal protein L29P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	V	65	Total	C	N	O	S	0	0	0
			500	304	94	101	1			

- Molecule 24 is a protein called 50S ribosomal protein L30P.

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

- Molecule 25 is a protein called 50S ribosomal protein L31e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	X	82	Total	C	N	O	S	0	0	0
			655	402	129	123	1			

- Molecule 26 is a protein called 50S ribosomal protein L32e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	Y	142	Total	C	N	O	0	0	0
			1131	686	228	217			

- Molecule 27 is a protein called 50S ribosomal protein L37Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	Z	73	Total	C	N	O	S	0	0	0
			574	343	113	113	5			

- Molecule 28 is a protein called 50S ribosomal protein L37e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	1	56	Total	C	N	O	S	0	0	0
			431	258	86	83	4			

- Molecule 29 is a protein called 50S ribosomal protein L39e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	2	46	Total	C	N	O	S	0	0	0
			396	239	89	67	1			

- Molecule 30 is a protein called 50S ribosomal protein L44E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	3	92	Total	C	N	O	S	0	0	0
			755	458	153	137	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	9	122	Total	C	N	O	P	0	0	0
			2599	1160	471	847	121			

- Molecule 32 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

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

- Molecule 33 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
33	0	2	Total K 2 2	0	0

- Molecule 34 is SODIUM ION (CCD ID: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	0	66	Total Na 66 66	0	0
34	C	1	Total Na 1 1	0	0
34	J	1	Total Na 1 1	0	0
34	M	1	Total Na 1 1	0	0
34	Q	1	Total Na 1 1	0	0
34	R	1	Total Na 1 1	0	0
34	S	1	Total Na 1 1	0	0
34	9	3	Total Na 3 3	0	0

- Molecule 35 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	0	10	Total Cl 10 10	0	0
35	A	1	Total Cl 1 1	0	0
35	B	1	Total Cl 1 1	0	0
35	J	3	Total Cl 3 3	0	0
35	L	1	Total Cl 1 1	0	0
35	M	1	Total Cl 1 1	0	0
35	N	1	Total Cl 1 1	0	0
35	O	1	Total Cl 1 1	0	0
35	R	1	Total Cl 1 1	0	0

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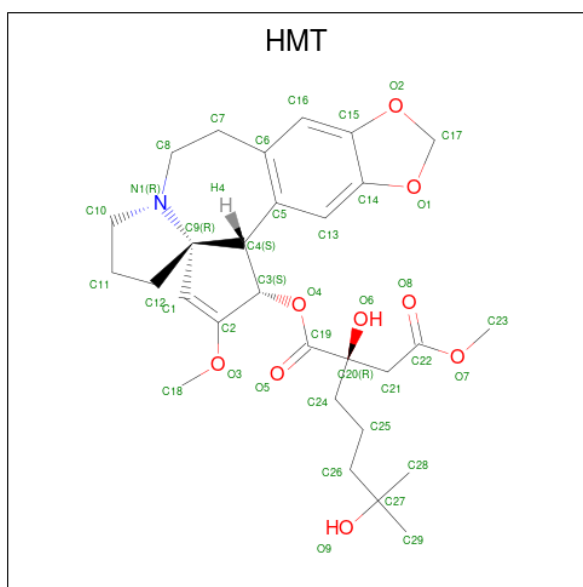
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	Y	1	Total	Cl	0	0
			1	1		
35	3	1	Total	Cl	0	0
			1	1		

- Molecule 36 is STRONTIUM ION (CCD ID: SR) (formula: Sr).

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

- Molecule 37 is (3beta)-O 3 -[(2R)-2,6-dihydroxy-2-(2-methoxy-2-oxoethyl)-6-methylheptano yl]cephalotaxine (CCD ID: HMT) (formula: C₂₉H₃₉NO₉).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
37	0	1	Total	C	N	O	0	0
			39	29	1	9		

- Molecule 38 is CADMIUM ION (CCD ID: CD) (formula: Cd).

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

- Molecule 39 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
39	0	5969	Total	O	0	0
			5969	5969		
39	A	111	Total	O	0	0
			111	111		
39	B	138	Total	O	0	0
			138	138		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
39	C	169	Total 169	O 169	0	0
39	D	44	Total 44	O 44	0	0
39	E	45	Total 45	O 45	0	0
39	F	26	Total 26	O 26	0	0
39	G	17	Total 17	O 17	0	0
39	H	65	Total 65	O 65	0	0
39	I	6	Total 6	O 6	0	0
39	J	51	Total 51	O 51	0	0
39	K	59	Total 59	O 59	0	0
39	L	84	Total 84	O 84	0	0
39	M	119	Total 119	O 119	0	0
39	N	60	Total 60	O 60	0	0
39	O	37	Total 37	O 37	0	0
39	P	67	Total 67	O 67	0	0
39	Q	42	Total 42	O 42	0	0
39	R	81	Total 81	O 81	0	0
39	S	30	Total 30	O 30	0	0
39	T	34	Total 34	O 34	0	0
39	U	26	Total 26	O 26	0	0
39	V	10	Total 10	O 10	0	0
39	W	67	Total 67	O 67	0	0

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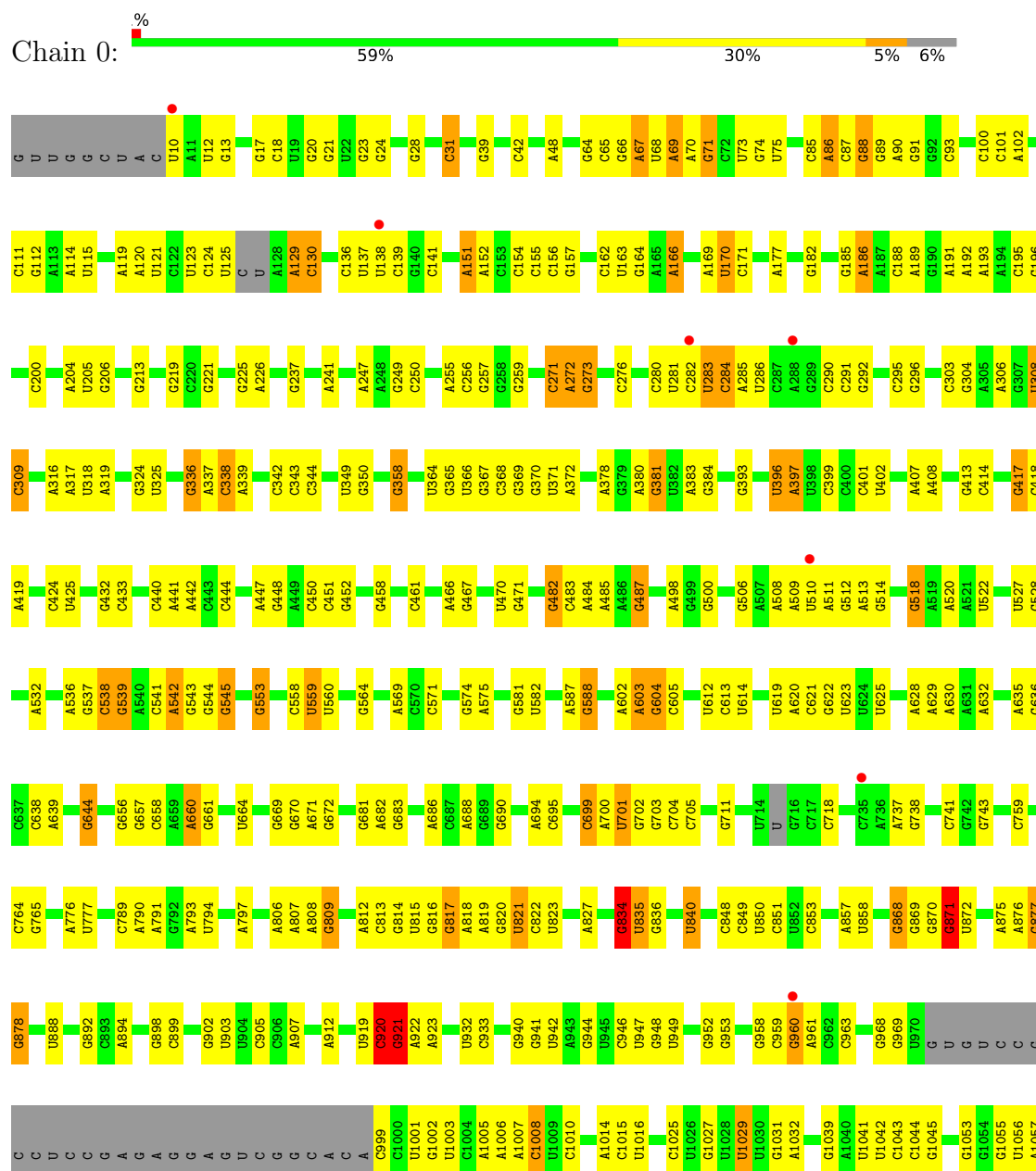
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
39	X	25	Total 25	O 25	0	0
39	Y	96	Total 96	O 96	0	0
39	Z	32	Total 32	O 32	0	0
39	1	52	Total 52	O 52	0	0
39	2	44	Total 44	O 44	0	0
39	3	66	Total 66	O 66	0	0
39	9	151	Total 151	O 151	0	0

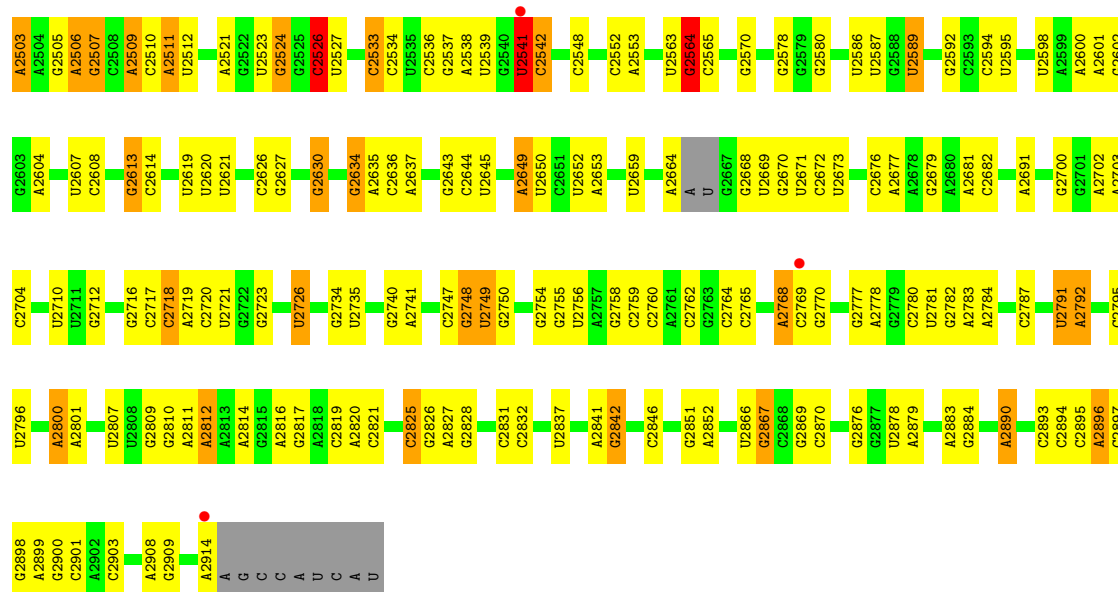
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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.

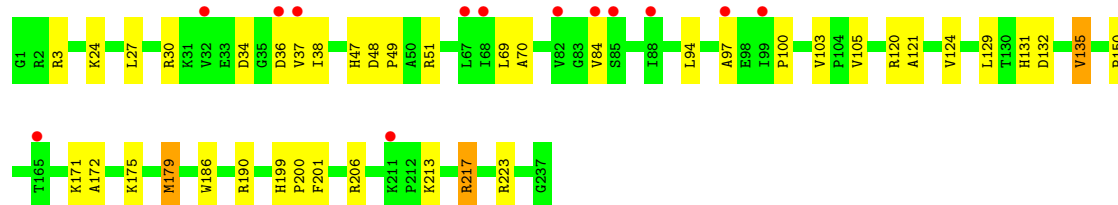
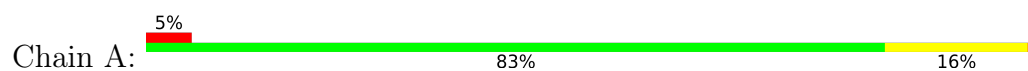
• Molecule 1: 23S ribosomal RNA



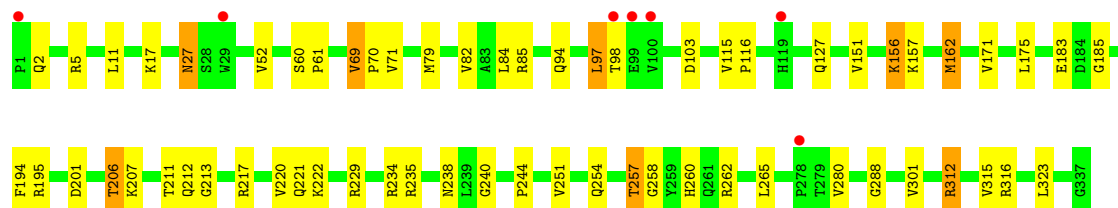
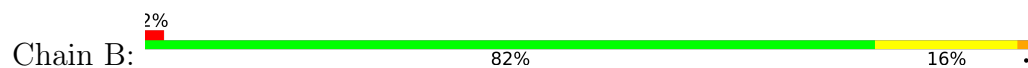




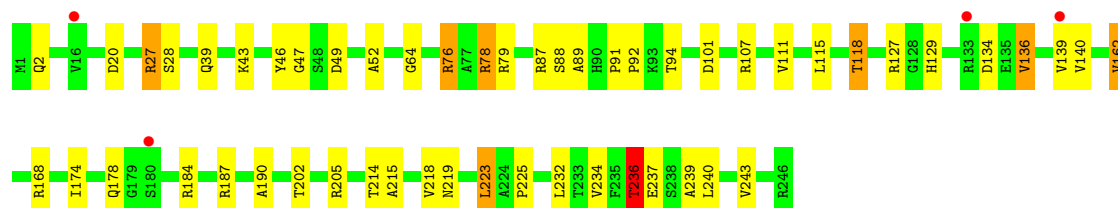
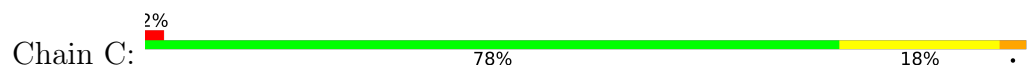
• Molecule 2: 50S ribosomal protein L2P



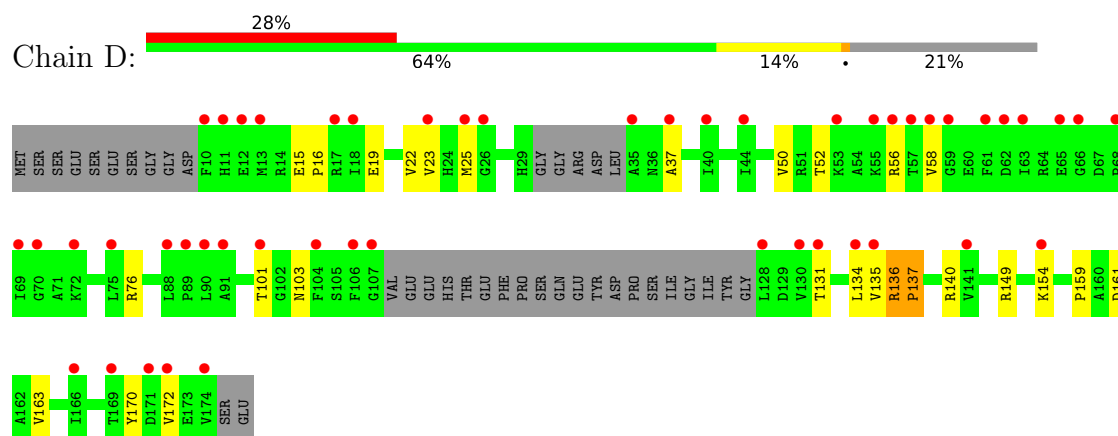
• Molecule 3: 50S ribosomal protein L3P



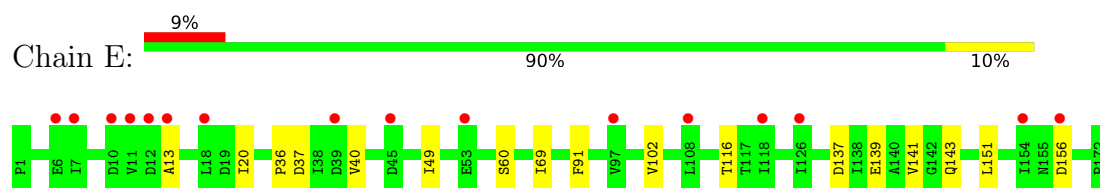
• Molecule 4: 50S ribosomal protein L4P



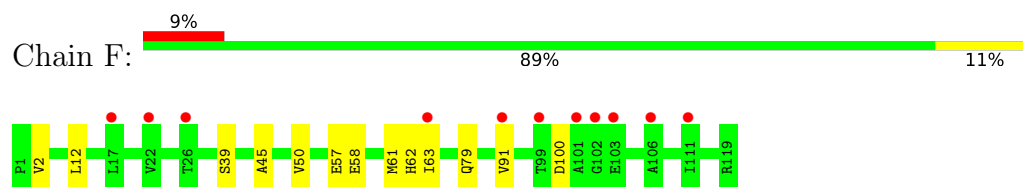
- Molecule 5: 50S ribosomal protein L5P



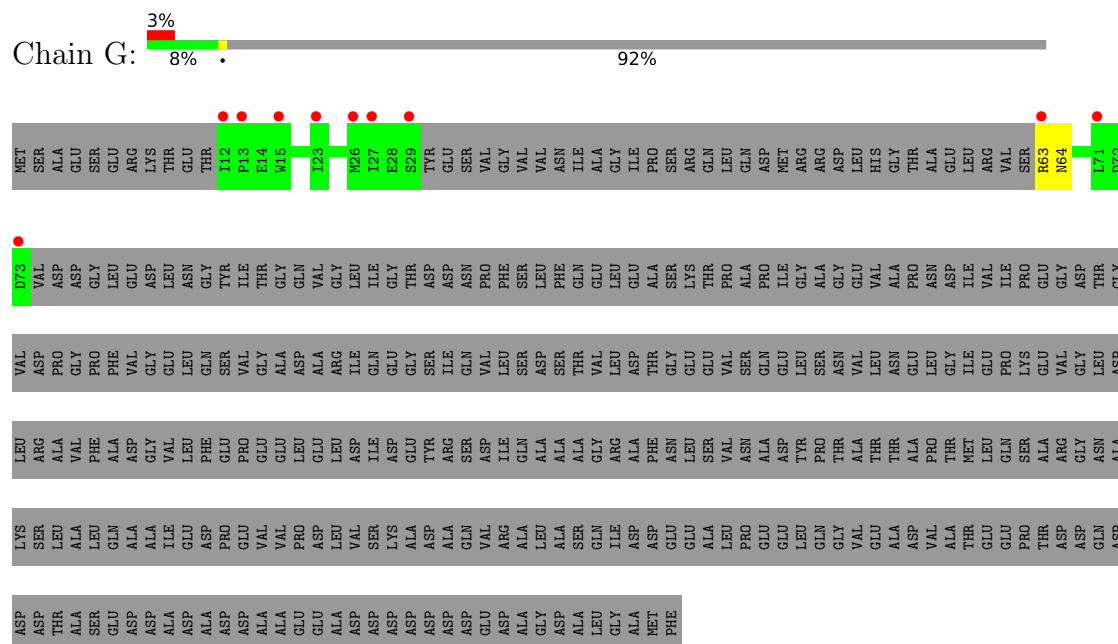
- Molecule 6: 50S ribosomal protein L6P



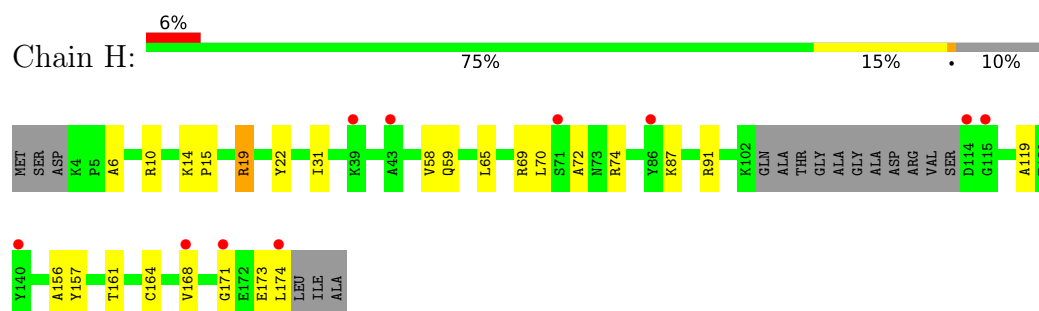
- Molecule 7: 50S ribosomal protein L7Ae



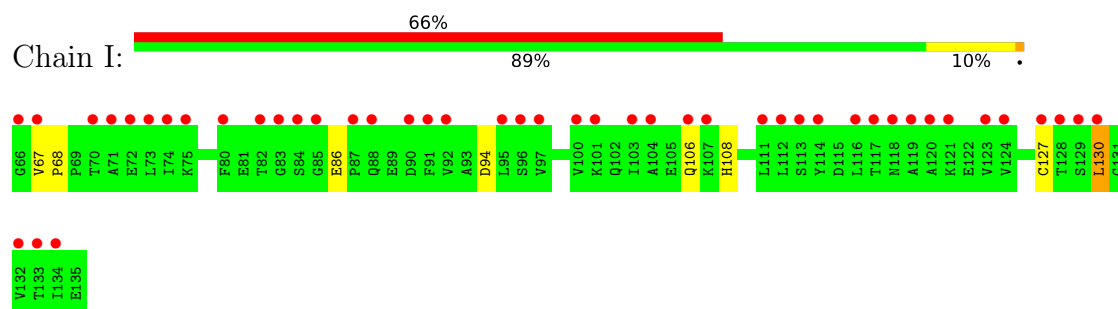
- Molecule 8: 50S ribosomal protein L10E



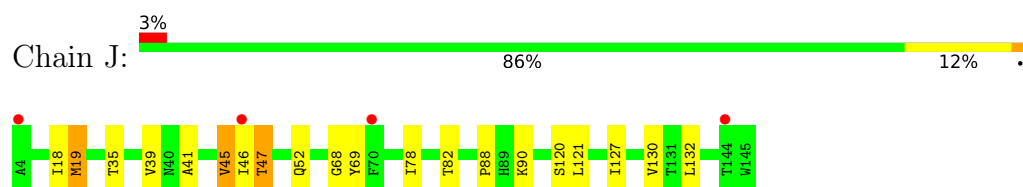
- Molecule 9: 50S ribosomal protein L10e



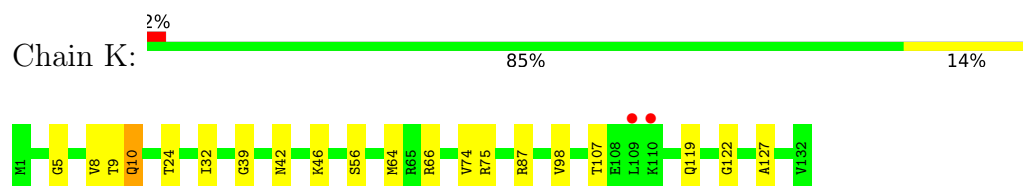
- Molecule 10: 50S ribosomal protein L11P



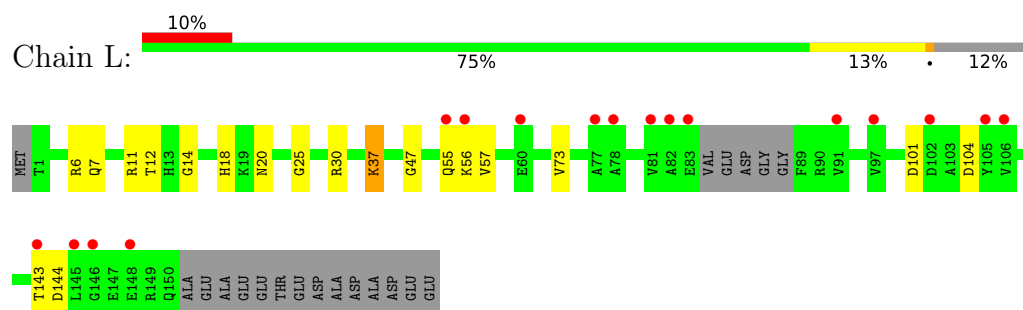
- Molecule 11: 50S ribosomal protein L13P



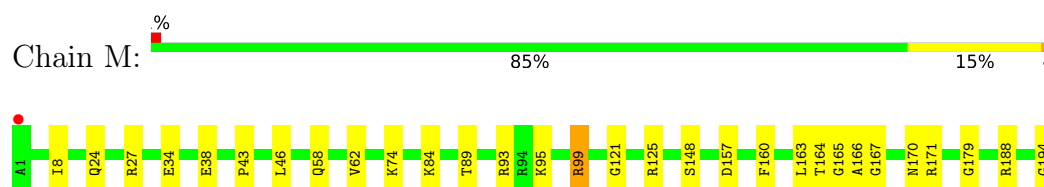
- Molecule 12: 50S ribosomal protein L14P



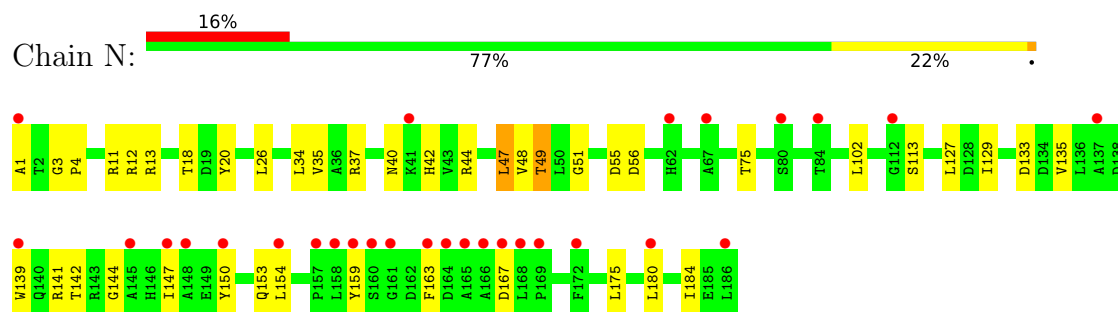
- Molecule 13: 50S ribosomal protein L15P



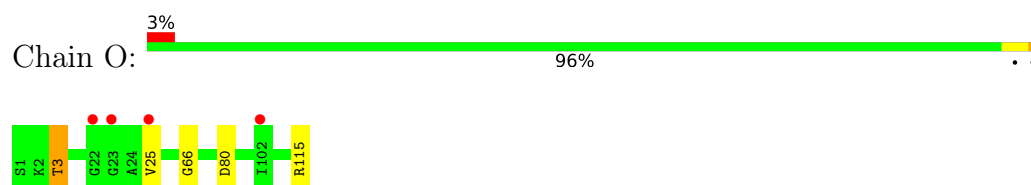
- Molecule 14: 50S ribosomal protein L15e



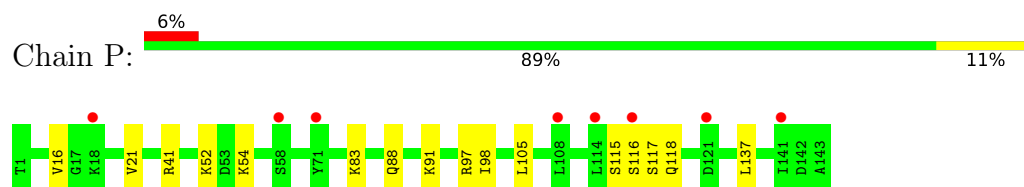
• Molecule 15: 50S ribosomal protein L18P



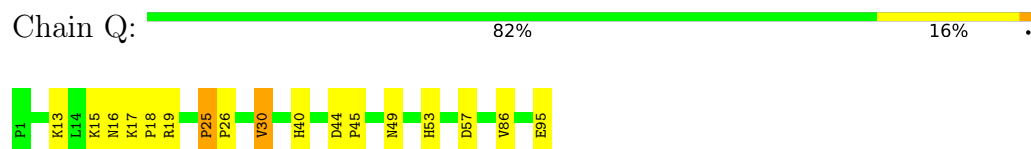
• Molecule 16: 50S ribosomal protein L18e



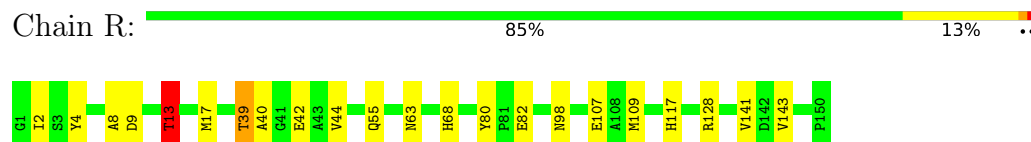
• Molecule 17: 50S ribosomal protein L19e



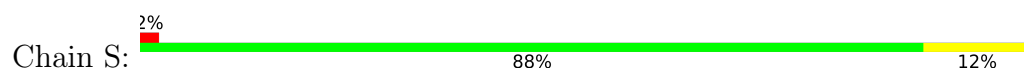
• Molecule 18: 50S ribosomal protein L21e

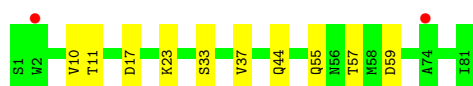


• Molecule 19: 50S ribosomal protein L22P

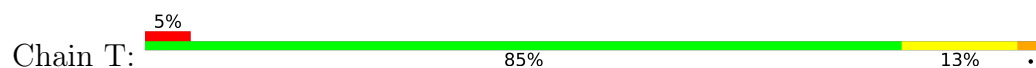


• Molecule 20: 50S ribosomal protein L23P

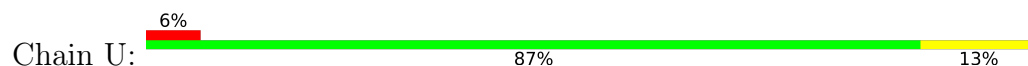




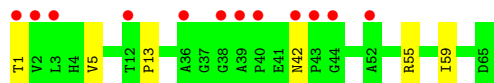
- Molecule 21: 50S ribosomal protein L24P



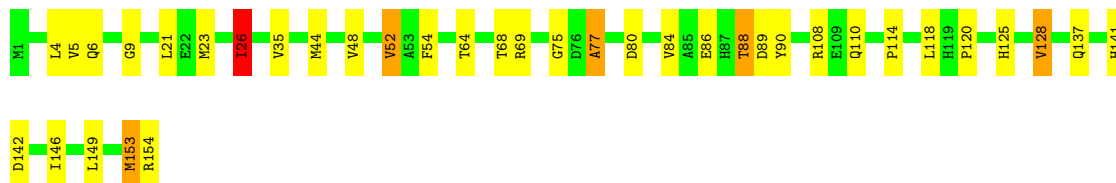
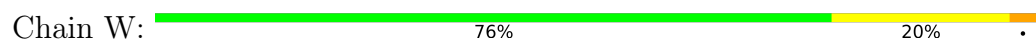
- Molecule 22: 50S ribosomal protein L24e



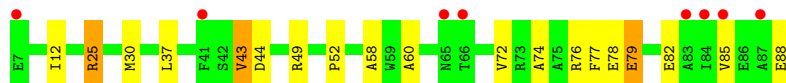
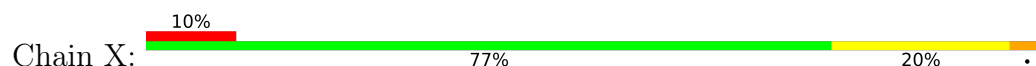
- Molecule 23: 50S ribosomal protein L29P



- Molecule 24: 50S ribosomal protein L30P



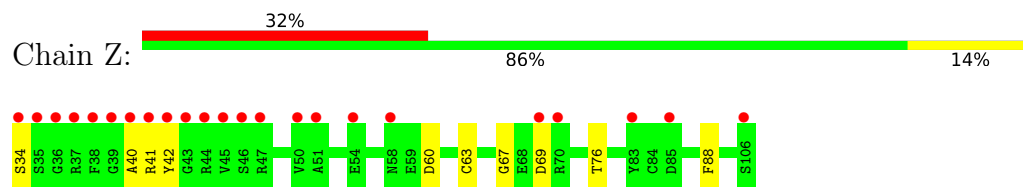
- Molecule 25: 50S ribosomal protein L31e



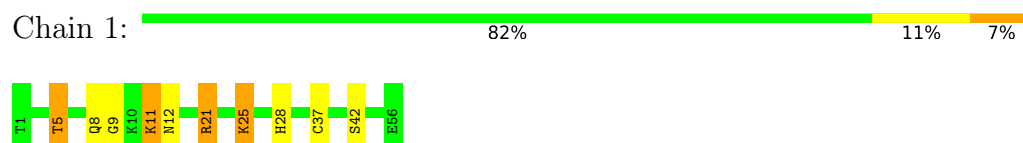
- Molecule 26: 50S ribosomal protein L32e



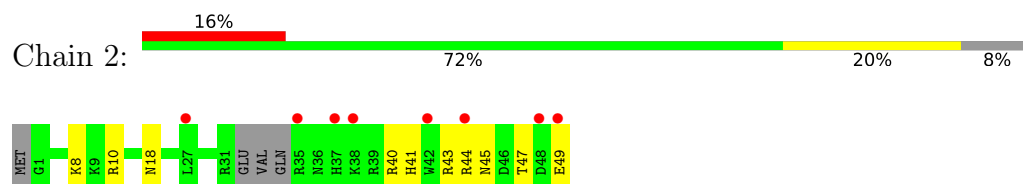
- Molecule 27: 50S ribosomal protein L37Ae



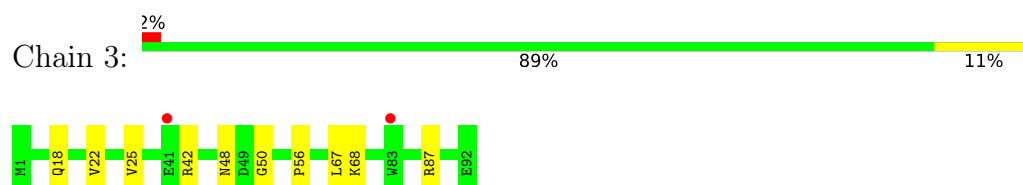
- Molecule 28: 50S ribosomal protein L37e



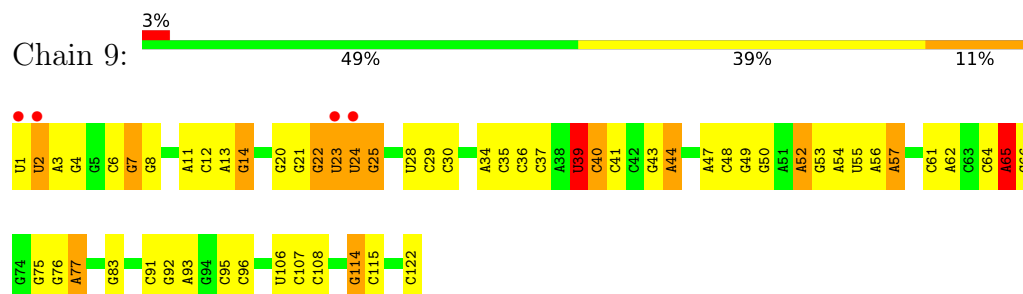
- Molecule 29: 50S ribosomal protein L39e



- Molecule 30: 50S ribosomal protein L44E



- Molecule 31: 5S ribosomal RNA



4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	211.86Å 299.42Å 574.09Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.90 – 2.70 49.90 – 2.70	Depositor EDS
% Data completeness (in resolution range)	94.0 (49.90-2.70) 94.0 (49.90-2.70)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.00 (at 2.40Å)	Xtriage
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.190 , 0.229 0.184 , 0.221	Depositor DCC
R_{free} test set	6547 reflections (0.98%)	wwPDB-VP
Wilson B-factor (Å ²)	52.8	Xtriage
Anisotropy	0.146	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 73.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	99174	wwPDB-VP
Average B, all atoms (Å ²)	60.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.64% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ 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: 1MA, OMG, UR3, SR, CD, NA, K, OMU, HMT, PSU, CL, MG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	0	0.37	0/65958	0.60	19/102869 (0.0%)
2	A	0.64	0/1787	1.10	6/2408 (0.2%)
3	B	0.64	3/2690 (0.1%)	1.09	14/3652 (0.4%)
4	C	0.64	0/1885	1.12	8/2552 (0.3%)
5	D	0.71	0/1111	1.03	4/1498 (0.3%)
6	E	0.67	0/1383	0.99	3/1880 (0.2%)
7	F	0.71	1/901 (0.1%)	1.10	2/1224 (0.2%)
8	G	0.61	0/241	1.01	0/324
9	H	0.64	0/1302	1.05	6/1743 (0.3%)
10	I	0.78	1/527 (0.2%)	1.12	5/716 (0.7%)
11	J	0.64	1/1136 (0.1%)	1.11	3/1530 (0.2%)
12	K	0.62	0/1004	1.12	5/1351 (0.4%)
13	L	0.58	0/1130	1.08	7/1509 (0.5%)
14	M	0.56	0/1583	1.06	4/2116 (0.2%)
15	N	0.61	0/1474	1.19	15/1999 (0.8%)
16	O	0.60	0/874	1.08	1/1181 (0.1%)
17	P	0.55	0/1148	1.04	1/1528 (0.1%)
18	Q	0.59	0/749	1.13	7/1005 (0.7%)
19	R	0.65	1/1173 (0.1%)	1.08	4/1578 (0.3%)
20	S	0.60	0/649	0.96	0/875
21	T	0.57	0/958	1.10	4/1289 (0.3%)
22	U	0.60	0/418	1.09	3/562 (0.5%)
23	V	0.60	0/503	1.11	2/675 (0.3%)
24	W	0.68	1/1219 (0.1%)	1.17	9/1655 (0.5%)
25	X	0.67	0/665	1.18	6/895 (0.7%)
26	Y	0.61	0/1147	1.05	2/1536 (0.1%)
27	Z	0.66	0/585	1.11	3/781 (0.4%)
28	1	0.57	0/438	1.07	5/578 (0.9%)
29	2	0.53	0/401	0.98	1/529 (0.2%)
30	3	0.57	0/771	0.93	1/1024 (0.1%)
31	9	0.37	0/2904	0.58	1/4526 (0.0%)
All	All	0.47	8/98714 (0.0%)	0.76	151/147588 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	42
24	W	0	1
31	9	0	2
All	All	0	45

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	F	63	ILE	CA-CB	9.59	1.58	1.54
19	R	109	MET	SD-CE	-8.29	1.58	1.79
3	B	162	MET	SD-CE	-6.54	1.63	1.79
10	I	68	PRO	CA-C	5.95	1.55	1.51
24	W	153	MET	SD-CE	-5.88	1.64	1.79
11	J	19	MET	SD-CE	-5.69	1.65	1.79
3	B	69	VAL	CA-CB	5.62	1.58	1.54
3	B	79	MET	SD-CE	-5.04	1.67	1.79

All (151) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	D	170	TYR	N-CA-C	10.12	125.20	112.86
21	T	52	ARG	N-CA-C	9.29	125.14	113.43
15	N	163	PHE	N-CA-C	-8.86	100.25	112.12
18	Q	17	LYS	N-CA-C	-8.44	99.47	109.93
24	W	75	GLY	N-CA-C	8.08	120.28	112.04
4	C	205	ARG	N-CA-C	7.66	120.59	111.33
1	0	1942	A	C5'-C4'-C3'	7.58	127.37	116.00
22	U	50	GLU	N-CA-C	7.43	120.26	111.71
14	M	89	THR	N-CA-C	7.32	118.90	111.07
2	A	135	VAL	N-CA-C	7.21	119.12	108.45
3	B	222	LYS	N-CA-C	-7.10	100.01	110.52
9	H	58	VAL	N-CA-C	6.83	116.86	108.53
1	0	2541	U	C2'-C3'-O3'	6.80	119.71	109.50
13	L	55	GLN	N-CA-C	6.78	120.43	111.75
10	I	127	CYS	N-CA-C	6.77	118.54	111.03
13	L	7	GLN	N-CA-C	6.64	120.64	112.54
13	L	47	GLY	N-CA-C	6.63	118.87	111.85
18	Q	25	PRO	CA-C-N	6.61	126.55	119.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	Q	25	PRO	C-N-CA	6.61	126.55	119.28
21	T	3	GLN	CA-C-N	6.57	126.81	119.32
21	T	3	GLN	C-N-CA	6.57	126.81	119.32
3	B	175	LEU	N-CA-C	-6.52	103.67	111.69
19	R	82	GLU	N-CA-C	6.42	118.28	111.28
12	K	122	GLY	N-CA-C	6.42	120.43	112.73
3	B	157	LYS	N-CA-C	-6.41	106.05	114.31
1	0	920	C	C2'-C3'-O3'	-6.37	104.15	113.70
27	Z	88	PHE	N-CA-C	6.33	118.58	109.14
9	H	10	ARG	N-CA-C	6.33	120.10	112.38
1	0	834	G	C2'-C3'-O3'	-6.31	104.23	113.70
18	Q	13	LYS	N-CA-C	6.30	118.95	111.71
9	H	161	THR	N-CA-C	6.28	120.77	112.35
10	I	106	GLN	N-CA-C	6.25	117.89	111.14
10	I	67	VAL	CA-C-N	6.25	124.22	119.66
10	I	67	VAL	C-N-CA	6.25	124.22	119.66
15	N	75	THR	N-CA-C	6.24	121.67	113.30
27	Z	42	TYR	N-CA-C	6.23	124.07	110.80
25	X	79	GLU	N-CA-C	6.23	117.73	111.07
1	0	2726	U	N1-C1'-C2'	6.22	121.34	112.00
1	0	1504	A	N9-C1'-C2'	6.22	121.33	112.00
9	H	119	ALA	N-CA-C	6.22	120.33	112.87
1	0	871	G	C5'-C4'-O4'	-6.19	100.52	109.80
15	N	3	GLY	CA-C-N	6.12	125.84	119.05
15	N	3	GLY	C-N-CA	6.12	125.84	119.05
11	J	47	THR	N-CA-C	6.12	118.61	110.53
15	N	51	GLY	CA-C-N	6.11	125.83	119.05
15	N	51	GLY	C-N-CA	6.11	125.83	119.05
25	X	77	PHE	N-CA-C	6.10	116.14	108.45
2	A	213	LYS	N-CA-C	5.99	118.77	111.82
25	X	60	ALA	N-CA-C	5.95	118.53	111.33
31	9	39	U	N1-C1'-C2'	5.94	120.91	112.00
15	N	13	ARG	N-CA-C	-5.94	106.17	113.41
3	B	323	LEU	N-CA-C	5.93	118.42	110.35
19	R	141	VAL	N-CA-C	5.93	117.13	108.53
28	1	5	THR	CA-C-N	-5.90	113.60	119.56
28	1	5	THR	C-N-CA	-5.90	113.60	119.56
25	X	25	ARG	N-CA-C	5.89	118.46	111.33
4	C	236	THR	N-CA-C	-5.89	100.69	110.17
19	R	13	THR	N-CA-C	5.88	118.34	109.23
15	N	150	TYR	N-CA-C	-5.87	106.25	113.41
15	N	133	ASP	N-CA-C	5.81	117.61	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	D	137	PRO	N-CA-C	5.80	124.42	112.47
15	N	153	GLN	N-CA-C	-5.80	102.62	110.68
24	W	9	GLY	N-CA-C	5.78	120.00	112.25
15	N	48	VAL	N-CA-C	5.76	116.60	108.36
16	O	66	GLY	N-CA-C	5.76	126.83	113.18
4	C	134	ASP	N-CA-C	-5.75	106.31	113.55
18	Q	49	ASN	N-CA-C	5.74	118.29	110.55
1	0	2526	C	N1-C1'-C2'	5.73	120.60	112.00
27	Z	63	CYS	N-CA-C	5.73	117.04	109.93
24	W	26	ILE	CB-CA-C	5.70	118.41	110.99
24	W	35	VAL	N-CA-C	5.68	114.08	107.89
13	L	57	VAL	N-CA-C	-5.68	107.45	112.90
22	U	46	ALA	N-CA-C	5.67	119.01	111.75
15	N	184	ILE	N-CA-C	5.67	116.89	109.58
13	L	73	VAL	N-CA-C	5.66	116.43	110.72
3	B	82	VAL	N-CA-C	5.63	120.32	113.00
26	Y	203	VAL	N-CA-C	5.62	116.57	108.48
2	A	129	LEU	N-CA-C	5.62	119.56	111.02
2	A	70	ALA	N-CA-C	5.59	117.72	109.50
14	M	121	GLY	N-CA-C	5.57	119.97	112.17
28	1	21	ARG	N-CA-C	5.54	118.15	111.40
1	0	1819	G	C5'-C4'-C3'	5.52	124.28	116.00
26	Y	143	TRP	N-CA-C	5.51	118.23	109.96
29	2	44	ARG	N-CA-C	5.48	118.02	111.71
1	0	1120	U	C5'-C4'-C3'	-5.48	107.78	116.00
28	1	11	LYS	N-CA-C	5.47	118.04	108.52
12	K	46	LYS	N-CA-C	5.47	119.15	109.96
14	M	148	SER	N-CA-C	5.44	119.40	112.87
3	B	103	ASP	N-CA-C	-5.42	106.60	113.43
1	0	2301	A	N9-C1'-C2'	5.42	120.13	112.00
1	0	2316	G	C5'-C4'-C3'	-5.41	107.08	115.20
13	L	12	THR	N-CA-C	5.39	119.85	113.16
9	H	164	CYS	N-CA-C	5.37	117.85	109.52
2	A	84	VAL	N-CA-C	5.37	115.58	110.53
22	U	18	GLY	N-CA-C	5.36	120.75	112.81
1	0	922	A	C4'-C3'-O3'	-5.35	104.97	113.00
4	C	178	GLN	N-CA-C	5.35	120.75	113.37
4	C	89	ALA	N-CA-C	5.34	117.53	111.02
6	E	13	ALA	N-CA-C	5.33	117.59	108.90
1	0	206	G	C5'-C4'-C3'	-5.33	108.00	116.00
25	X	78	GLU	N-CA-C	5.32	122.14	110.80
24	W	69	ARG	N-CA-C	5.32	120.64	113.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	J	45	VAL	N-CA-C	5.32	117.04	108.85
3	B	217	ARG	N-CA-C	5.29	117.13	111.36
1	0	2291	A	N9-C1'-C2'	5.29	119.94	112.00
24	W	77	ALA	N-CA-C	5.29	122.06	110.80
14	M	125	ARG	N-CA-C	5.27	120.58	113.72
9	H	121	GLY	N-CA-C	5.26	119.28	112.54
15	N	102	LEU	N-CA-C	5.26	117.33	109.59
15	N	20	TYR	N-CA-C	5.25	117.75	111.71
2	A	24	LYS	N-CA-C	5.24	119.17	111.04
1	0	1592	G	N9-C1'-C2'	5.24	119.86	112.00
13	L	20	ASN	N-CA-C	5.23	119.15	111.04
3	B	52	VAL	N-CA-C	-5.23	101.05	108.58
4	C	28	SER	N-CA-C	5.23	117.72	111.71
4	C	20	ASP	N-CA-C	5.22	118.43	111.75
12	K	9	THR	N-CA-C	-5.22	99.28	108.20
5	D	136	ARG	CA-C-N	5.21	126.36	119.84
5	D	136	ARG	C-N-CA	5.21	126.36	119.84
28	1	42	SER	N-CA-C	5.20	117.71	109.50
24	W	128	VAL	N-CA-C	5.19	116.53	111.91
23	V	42	ASN	CA-C-N	5.19	124.85	119.56
23	V	42	ASN	C-N-CA	5.19	124.85	119.56
7	F	62	HIS	N-CA-C	5.18	118.76	112.23
18	Q	44	ASP	N-CA-C	-5.17	102.05	109.24
1	0	921	G	N9-C1'-C2'	5.17	119.75	112.00
7	F	79	GLN	N-CA-C	5.17	118.17	109.95
17	P	97	ARG	N-CA-C	5.15	116.58	111.07
6	E	37	ASP	N-CA-C	5.14	119.13	112.86
1	0	129	A	C2'-C3'-O3'	5.13	121.39	113.70
3	B	213	GLY	CA-C-N	5.13	124.92	119.28
3	B	213	GLY	C-N-CA	5.13	124.92	119.28
4	C	215	ALA	N-CA-C	5.13	118.64	112.38
12	K	5	GLY	N-CA-C	-5.12	107.75	115.32
3	B	265	LEU	N-CA-C	5.11	117.44	110.55
15	N	42	HIS	N-CA-C	5.10	117.62	109.81
11	J	68	GLY	N-CA-C	5.10	118.66	112.48
24	W	118	LEU	N-CA-C	5.10	117.26	110.53
6	E	91	PHE	N-CA-C	5.09	116.78	109.04
19	R	63	ASN	N-CA-C	5.09	120.12	112.94
24	W	86	GLU	N-CA-C	5.08	119.18	112.89
30	3	67	LEU	N-CA-C	5.08	117.87	109.85
1	0	1504	A	C4'-C3'-O3'	-5.07	105.39	113.00
25	X	12	ILE	N-CA-C	5.07	112.89	107.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	K	8	VAL	N-CA-C	5.05	115.24	108.17
18	Q	86	VAL	N-CA-C	5.04	115.00	108.35
3	B	194	PHE	N-CA-C	5.04	117.96	109.95
3	B	156	LYS	N-CA-C	5.03	117.60	110.50
3	B	183	GLU	N-CA-C	5.03	118.88	112.34
10	I	68	PRO	N-CA-C	5.01	115.28	110.47
21	T	54	ASP	N-CA-C	-5.01	107.12	113.18

There are no chirality outliers.

All (45) 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	1340	G	Sidechain
1	0	1342	C	Sidechain
1	0	1809	G	Sidechain
1	0	1829	A	Sidechain
1	0	1848	G	Sidechain
1	0	1863	G	Sidechain
1	0	1867	G	Sidechain
1	0	1877	G	Sidechain
1	0	1878	G	Sidechain
1	0	1972	U	Sidechain
1	0	1979	G	Sidechain
1	0	221	G	Sidechain
1	0	2308	U	Sidechain
1	0	2316	G	Sidechain
1	0	2412	G	Sidechain
1	0	2465	A	Sidechain
1	0	2493	C	Sidechain
1	0	2503	A	Sidechain
1	0	2506	A	Sidechain
1	0	2524	G	Sidechain
1	0	2526	C	Sidechain
1	0	2552	C	Sidechain
1	0	2564	G	Sidechain
1	0	2607	U	Sidechain
1	0	2630	G	Sidechain
1	0	2679	G	Sidechain
1	0	2842	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	396	U	Sidechain
1	0	458	G	Sidechain
1	0	470	U	Sidechain
1	0	471	G	Sidechain
1	0	48	A	Sidechain
1	0	482	G	Sidechain
1	0	518	G	Sidechain
1	0	619	U	Sidechain
1	0	817	G	Sidechain
1	0	818	A	Sidechain
1	0	868	G	Sidechain
1	0	888	U	Sidechain
31	9	39	U	Sidechain
31	9	65	A	Sidechain
24	W	90	TYR	Sidechain

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59021	0	29812	852	0
2	A	1754	0	1766	21	0
3	B	2625	0	2533	28	0
4	C	1860	0	1813	26	0
5	D	1094	0	1085	11	0
6	E	1358	0	1266	8	0
7	F	890	0	843	4	0
8	G	240	0	231	2	0
9	H	1282	0	1292	15	0
10	I	520	0	500	2	0
11	J	1120	0	1098	16	0
12	K	994	0	1027	10	0
13	L	1118	0	1076	11	0
14	M	1559	0	1573	21	0
15	N	1445	0	1401	21	0
16	O	865	0	873	2	0
17	P	1137	0	1123	10	0
18	Q	735	0	729	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	R	1150	0	1122	13	0
20	S	642	0	605	5	0
21	T	950	0	924	12	0
22	U	411	0	364	2	0
23	V	500	0	511	3	0
24	W	1196	0	1137	20	0
25	X	655	0	653	7	0
26	Y	1131	0	1133	10	0
27	Z	574	0	532	6	0
28	1	431	0	426	8	0
29	2	396	0	413	8	0
30	3	755	0	729	4	0
31	9	2599	0	1325	69	0
32	0	85	0	0	0	0
32	2	1	0	0	0	0
32	9	2	0	0	0	0
32	A	1	0	0	0	0
32	B	1	0	0	0	0
32	K	1	0	0	0	0
32	T	1	0	0	0	0
32	Y	1	0	0	0	0
33	0	2	0	0	0	0
34	0	66	0	0	0	0
34	9	3	0	0	0	0
34	C	1	0	0	0	0
34	J	1	0	0	0	0
34	M	1	0	0	0	0
34	Q	1	0	0	0	0
34	R	1	0	0	0	0
34	S	1	0	0	0	0
35	0	10	0	0	0	0
35	3	1	0	0	0	0
35	A	1	0	0	0	0
35	B	1	0	0	0	0
35	J	3	0	0	1	0
35	L	1	0	0	0	0
35	M	1	0	0	0	0
35	N	1	0	0	0	0
35	O	1	0	0	0	0
35	R	1	0	0	0	0
35	Y	1	0	0	0	0
36	0	93	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	1	1	0	0	0	0
36	3	2	0	0	0	0
36	9	3	0	0	0	0
36	A	3	0	0	0	0
36	B	2	0	0	0	0
36	F	1	0	0	0	0
36	J	1	0	0	0	0
36	R	1	0	0	0	0
36	S	1	0	0	0	0
37	0	39	0	39	11	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	5969	0	0	110	0
39	1	52	0	0	0	0
39	2	44	0	0	0	0
39	3	66	0	0	0	0
39	9	151	0	0	4	0
39	A	111	0	0	2	0
39	B	138	0	0	0	0
39	C	169	0	0	4	0
39	D	44	0	0	0	0
39	E	45	0	0	1	0
39	F	26	0	0	0	0
39	G	17	0	0	0	0
39	H	65	0	0	3	0
39	I	6	0	0	0	0
39	J	51	0	0	1	0
39	K	59	0	0	0	0
39	L	84	0	0	2	0
39	M	119	0	0	0	0
39	N	60	0	0	1	0
39	O	37	0	0	0	0
39	P	67	0	0	0	0
39	Q	42	0	0	0	0
39	R	81	0	0	0	0
39	S	30	0	0	0	0
39	T	34	0	0	0	0
39	U	26	0	0	0	0
39	V	10	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	W	67	0	0	1	0
39	X	25	0	0	1	0
39	Y	96	0	0	0	0
39	Z	32	0	0	1	0
All	All	99174	0	59954	1077	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 7.

All (1077) 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'	1.19	1.14
31:9:76:G:H3'	31:9:77:A:H5''	1.38	1.04
1:0:871:G:H5'	1:0:871:G:C8	1.96	0.98
1:0:1242:A:H5'	11:J:82:THR:HG23	1.46	0.98
31:9:56:A:H2'	31:9:57:A:H5''	1.47	0.96
1:0:2717:C:H2'	1:0:2718:C:H5''	1.48	0.96
1:0:156:C:H5''	14:M:171:ARG:HD3	1.45	0.94
1:0:1187:U:HO2'	1:0:1189:A:H2	1.08	0.94
1:0:656:G:H5'	16:O:3:THR:HG22	1.49	0.94
1:0:1701:A:H4'	1:0:1702:U:H5''	1.48	0.93
1:0:871:G:H5'	1:0:871:G:H8	1.30	0.93
15:N:37:ARG:NH1	31:9:6:C:H5''	1.84	0.92
1:0:2717:C:C2'	1:0:2718:C:H5''	2.01	0.90
1:0:542:A:H5'	1:0:542:A:H8	1.36	0.89
1:0:1160:G:H5'	1:0:1161:A:C5'	2.02	0.89
12:K:10:GLN:H	12:K:10:GLN:HE21	1.15	0.89
1:0:1160:G:C5'	1:0:1161:A:H5'	2.02	0.88
1:0:2812:A:H2	1:0:2814:A:H62	1.21	0.88
1:0:1474:C:H5'	1:0:1474:C:H6	1.39	0.88
1:0:506:G:H22	1:0:509:A:H5''	1.38	0.87
1:0:2506:A:HO2'	1:0:2507:G:H8	0.90	0.87
24:W:137:GLN:HE21	24:W:141:HIS:HE1	1.23	0.86
1:0:870:G:H2'	1:0:871:G:H5''	1.57	0.85
1:0:2487:C:O4'	37:0:9101:HMT:H17	1.77	0.85
1:0:381:G:H5''	39:0:2945:HOH:O	1.74	0.85
1:0:1667:A:H5'	1:0:1667:A:H8	1.43	0.84
1:0:545:G:H5'	1:0:545:G:H8	1.41	0.83
1:0:2908:A:H2'	1:0:2909:G:O4'	1.79	0.83
1:0:1603:A:H5'	1:0:1605:G:O4'	1.79	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1835:U:H5	1:0:1840:A:N7	1.77	0.81
1:0:823:U:H3'	39:0:3123:HOH:O	1.80	0.81
1:0:1116:U:HO2'	1:0:1118:A:H2	0.82	0.81
1:0:1116:U:O2'	1:0:1118:A:H2	1.64	0.81
1:0:2586:U:H3	1:0:2592:G:H22	1.28	0.80
1:0:541:C:H2'	1:0:542:A:H5''	1.63	0.80
1:0:506:G:H22	1:0:509:A:C5'	1.95	0.80
17:P:115:SER:H	17:P:118:GLN:HE21	1.27	0.80
1:0:1209:C:H2'	1:0:1210:G:H8	1.46	0.79
1:0:877:G:H5'	1:0:878:G:OP1	1.83	0.79
1:0:2533:C:H6	1:0:2533:C:H5'	1.48	0.79
1:0:1330:A:H4'	39:0:7277:HOH:O	1.81	0.79
1:0:2506:A:O2'	1:0:2507:G:H8	1.67	0.78
1:0:1372:A:H3'	39:0:6923:HOH:O	1.82	0.78
31:9:73:A:H61	31:9:108:C:H42	1.32	0.78
1:0:2291:A:C8	1:0:2309:C:H5'	2.19	0.78
24:W:5:VAL:HG11	24:W:153:MET:HE1	1.64	0.78
1:0:871:G:H8	1:0:871:G:C5'	1.97	0.78
1:0:2270:G:H4'	2:A:223:ARG:HH12	1.48	0.78
1:0:559:U:H6	1:0:559:U:H5'	1.49	0.77
1:0:657:G:OP1	4:C:27:ARG:NH2	2.19	0.76
31:9:29:C:H2'	31:9:30:C:H5'	1.67	0.76
1:0:541:C:C2'	1:0:542:A:H5''	2.16	0.76
1:0:182:G:H5'	39:0:4102:HOH:O	1.85	0.76
1:0:1300:G:H1'	39:0:3448:HOH:O	1.85	0.76
31:9:56:A:C2'	31:9:57:A:H5''	2.16	0.75
1:0:1189:A:H1'	1:0:1209:C:O4'	1.87	0.75
1:0:1119:G:H2'	11:J:52:GLN:NE2	2.02	0.75
1:0:1206:U:H6	1:0:1206:U:H5'	1.53	0.74
1:0:2486:A:H2'	39:0:7215:HOH:O	1.88	0.74
1:0:500:G:H21	19:R:98:ASN:HD21	1.34	0.74
1:0:1164:U:H3	1:0:1192:A:H2	1.32	0.73
1:0:2637:A:H5'	39:0:3790:HOH:O	1.87	0.73
1:0:1008:C:H5''	9:H:19:ARG:HH12	1.54	0.73
1:0:2468:A:H61	30:3:48:ASN:HD21	1.36	0.72
9:H:59:GLN:HE21	9:H:129:ARG:HE	1.34	0.72
19:R:8:ALA:HB1	19:R:13:THR:HG21	1.70	0.72
1:0:1116:U:H3	1:0:1246:A:H62	1.35	0.72
1:0:1666:C:O2'	1:0:1667:A:H5''	1.89	0.72
1:0:2756:U:H3	1:0:2896:A:H2	1.35	0.72
1:0:944:G:H21	24:W:44:MET:HE2	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1474:C:H5'	1:0:1474:C:C6	2.25	0.71
1:0:2270:G:H4'	2:A:223:ARG:NH1	2.06	0.71
1:0:2769:C:C2'	1:0:2770:G:H5'	2.19	0.71
1:0:1183:C:H2'	39:0:5603:HOH:O	1.91	0.71
1:0:871:G:C8	1:0:871:G:C5'	2.71	0.71
3:B:221:GLN:HE22	12:K:42:ASN:HD22	1.38	0.71
21:T:24:ARG:HH21	21:T:39:ASN:HD22	1.37	0.70
1:0:1118:A:H3'	1:0:1118:A:C8	2.26	0.70
1:0:1701:A:H4'	1:0:1702:U:C5'	2.19	0.70
1:0:1118:A:H3'	1:0:1118:A:H8	1.56	0.70
1:0:2073:G:H5''	39:0:8500:HOH:O	1.91	0.70
1:0:282:C:H1'	1:0:368:C:N4	2.07	0.70
1:0:1119:G:N2	1:0:1246:A:C2	2.58	0.69
31:9:7:G:H5'	39:9:5071:HOH:O	1.93	0.69
1:0:1118:A:H62	1:0:1244:U:H3	1.39	0.69
1:0:282:C:O2'	1:0:283:U:H5'	1.93	0.69
1:0:870:G:C2'	1:0:871:G:H5''	2.23	0.69
1:0:2780:C:H1'	6:E:143:GLN:HE21	1.58	0.69
31:9:14:G:H5'	31:9:14:G:H8	1.56	0.69
31:9:75:G:H1	31:9:106:U:H3	1.38	0.69
1:0:542:A:H5'	1:0:542:A:C8	2.25	0.68
1:0:1973:A:H5'	1:0:1973:A:H8	1.58	0.68
29:2:41:HIS:H	29:2:45:ASN:HD22	1.41	0.68
1:0:1878:G:H1'	39:0:5431:HOH:O	1.94	0.68
1:0:2827:A:H2'	1:0:2828:G:O4'	1.94	0.68
1:0:1377:C:H6	1:0:1377:C:H5'	1.57	0.68
1:0:541:C:H2'	1:0:542:A:C5'	2.24	0.68
1:0:1120:U:H5'	1:0:1121:G:OP2	1.94	0.68
1:0:196:G:H2'	39:0:6170:HOH:O	1.95	0.67
1:0:2716:G:H5''	3:B:206:THR:HG21	1.76	0.67
1:0:2426:G:H1'	39:0:5391:HOH:O	1.94	0.67
1:0:2533:C:H5'	1:0:2533:C:C6	2.28	0.67
1:0:853:C:H3'	39:0:3276:HOH:O	1.94	0.66
1:0:544:G:H2'	1:0:545:G:H5''	1.77	0.66
1:0:1209:C:H2'	1:0:1210:G:C8	2.29	0.66
1:0:545:G:H5'	1:0:545:G:C8	2.27	0.66
1:0:281:U:H2'	1:0:282:C:O4'	1.95	0.66
11:J:45:VAL:HG11	11:J:121:LEU:HD22	1.77	0.66
1:0:603:A:H5''	1:0:604:G:OP1	1.95	0.66
1:0:450:C:OP1	4:C:184:ARG:NH2	2.29	0.66
1:0:1667:A:H2'	1:0:1668:U:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1947:G:H2'	1:0:1948:G:H8	1.60	0.66
1:0:2534:C:H1'	39:0:8159:HOH:O	1.95	0.66
1:0:2851:G:O2'	1:0:2852:A:H5'	1.96	0.66
22:U:39:ASN:ND2	22:U:44:ARG:HH11	1.93	0.66
25:X:37:LEU:HD13	25:X:85:VAL:HG21	1.77	0.66
1:0:1641:A:H2'	1:0:1642:A:H5'	1.78	0.66
1:0:188:C:H5''	14:M:163:LEU:HD21	1.78	0.65
9:H:59:GLN:NE2	9:H:129:ARG:HE	1.93	0.65
1:0:1183:C:N4	1:0:1184:C:H41	1.94	0.65
1:0:1819:G:H2'	1:0:1820:G:H4'	1.78	0.65
1:0:1119:G:H8	11:J:52:GLN:HE22	1.43	0.65
14:M:24:GLN:HE21	14:M:27:ARG:HH11	1.45	0.65
1:0:12:U:H2'	1:0:13:G:H5'	1.79	0.65
1:0:553:G:P	26:Y:204:ARG:HH22	2.20	0.64
1:0:1667:A:H5'	1:0:1667:A:C8	2.30	0.64
24:W:6:GLN:HB2	24:W:26:ILE:HD11	1.80	0.64
1:0:2878:U:H2'	1:0:2879:A:O4'	1.97	0.64
14:M:24:GLN:NE2	14:M:27:ARG:HH11	1.96	0.64
1:0:1666:C:H2'	1:0:1667:A:H5'	1.80	0.64
39:0:4183:HOH:O	12:K:39:GLY:HA2	1.98	0.64
24:W:4:LEU:HD23	24:W:54:PHE:HB3	1.80	0.63
1:0:123:U:H5'	39:0:6169:HOH:O	1.97	0.63
1:0:1625:U:H4'	39:0:3427:HOH:O	1.98	0.63
1:0:2769:C:H2'	1:0:2770:G:H5'	1.79	0.63
1:0:1189:A:H3'	39:0:7609:HOH:O	1.96	0.63
1:0:2563:U:H2'	1:0:2565:C:O5'	1.98	0.63
1:0:2670:G:O2'	1:0:2671:U:H5'	1.98	0.63
3:B:238:ASN:HD22	3:B:240:GLY:H	1.45	0.63
1:0:558:C:C2'	1:0:559:U:H5''	2.29	0.63
1:0:2005:G:OP2	1:0:2005:G:H3'	1.99	0.63
1:0:119:A:H2'	1:0:120:A:H5''	1.80	0.63
1:0:130:C:H2'	39:0:7268:HOH:O	1.98	0.63
1:0:711:G:H1'	39:0:6793:HOH:O	1.98	0.63
1:0:814:G:H4'	39:0:7163:HOH:O	1.99	0.63
1:0:1733:A:H4'	3:B:212:GLN:HA	1.79	0.63
1:0:1102:C:H4'	39:0:5065:HOH:O	1.99	0.62
1:0:1684:A:H1'	29:2:43:ARG:HH22	1.64	0.62
1:0:2054:A:N3	19:R:128:ARG:NH2	2.47	0.62
1:0:2578:G:H5'	1:0:2578:G:H8	1.64	0.62
24:W:149:LEU:HG	24:W:153:MET:HE2	1.81	0.62
1:0:2710:U:H1'	39:0:7520:HOH:O	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:621:C:H5'	26:Y:132:ASP:OD2	2.00	0.62
1:0:681:G:N3	1:0:681:G:H5'	2.15	0.61
37:0:9101:HMT:H12A	39:0:3785:HOH:O	2.00	0.61
1:0:1441:G:O2'	1:0:1442:A:H5'	1.99	0.61
1:0:2816:A:H5''	1:0:2817:G:H5'	1.82	0.61
31:9:49:G:O2'	31:9:50:G:H5'	2.00	0.61
1:0:1184:C:H1'	39:0:7308:HOH:O	1.98	0.61
1:0:1205:U:H2'	1:0:1206:U:C5'	2.29	0.61
1:0:1741:U:H5'	1:0:1742:A:OP1	2.00	0.61
1:0:1947:G:H2'	1:0:1948:G:C8	2.34	0.61
1:0:2004:U:H4'	39:0:4302:HOH:O	2.01	0.61
1:0:1701:A:H5''	1:0:1702:U:H3'	1.80	0.61
1:0:2507:G:H2'	1:0:2510:C:H42	1.65	0.61
31:9:92:G:H2'	31:9:93:A:C8	2.35	0.61
31:9:24:U:H3'	31:9:25:G:H5'	1.81	0.61
1:0:1328:A:OP1	26:Y:169:ARG:HD2	2.00	0.61
1:0:2505:G:O2'	1:0:2506:A:H5'	2.01	0.61
1:0:2896:A:H5''	39:0:5399:HOH:O	2.00	0.61
1:0:308:U:H5'	1:0:309:C:OP1	1.99	0.60
1:0:2541:U:H3	1:0:2620:U:H3	1.49	0.60
1:0:2541:U:H4'	1:0:2542:C:OP1	2.00	0.60
1:0:2635:A:O2'	1:0:2636:C:H5'	2.01	0.60
1:0:1528:A:H2'	1:0:1529:G:O4'	2.01	0.60
3:B:212:GLN:HB2	3:B:257:THR:HG21	1.83	0.60
1:0:588:G:O6	24:W:154:ARG:NH1	2.34	0.60
1:0:2502:C:C2'	1:0:2503:A:H5'	2.31	0.60
1:0:272:A:H5'	1:0:273:G:OP2	2.01	0.60
24:W:21:LEU:HD21	24:W:48:VAL:HG11	1.84	0.60
1:0:2320:U:H4'	1:0:2321:A:O4'	2.02	0.60
1:0:1342:C:C2'	1:0:1343:C:H5'	2.31	0.59
11:J:41:ALA:HB3	39:J:5907:HOH:O	2.02	0.59
1:0:1159:G:H21	1:0:1189:A:H8	1.50	0.59
1:0:2717:C:O2'	1:0:2718:C:H5''	2.02	0.59
24:W:137:GLN:HE21	24:W:141:HIS:CE1	2.12	0.59
1:0:271:C:H41	1:0:378:A:H2	1.49	0.59
31:9:29:C:C2'	31:9:30:C:H5'	2.33	0.59
1:0:1790:C:H2'	1:0:1791:U:H6	1.67	0.59
1:0:306:A:P	21:T:38:ARG:HH21	2.26	0.58
4:C:139:VAL:HG13	39:C:6251:HOH:O	2.02	0.58
1:0:544:G:C2'	1:0:545:G:H5''	2.33	0.58
1:0:2064:U:H5'	1:0:2652:U:H4'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2487:C:N3	37:0:9101:HMT:H11	2.18	0.58
31:9:13:A:O2'	31:9:14:G:H5''	2.04	0.58
1:0:249:G:O2'	1:0:250:C:H5'	2.04	0.58
1:0:1132:A:N6	1:0:1229:C:H2'	2.19	0.58
14:M:99:ARG:HD2	14:M:167:GLY:HA2	1.84	0.58
31:9:73:A:N6	31:9:108:C:H42	2.00	0.58
1:0:2769:C:H2'	1:0:2770:G:C5'	2.34	0.58
1:0:2768:A:H2'	1:0:2769:C:O4'	2.03	0.58
15:N:141:ARG:HH21	31:9:48:C:H4'	1.69	0.58
31:9:49:G:H5''	39:9:4707:HOH:O	2.02	0.58
1:0:338:C:H4'	4:C:174:ILE:CD1	2.34	0.58
1:0:482:G:H4'	1:0:508:A:N1	2.19	0.58
1:0:93:C:H5''	23:V:1:THR:HB	1.86	0.58
1:0:558:C:O2'	1:0:559:U:H5''	2.04	0.58
30:3:25:VAL:HG22	30:3:68:LYS:HG3	1.85	0.58
31:9:14:G:H5'	31:9:14:G:C8	2.38	0.57
1:0:794:U:H3	1:0:819:A:H61	1.50	0.57
1:0:2420:G:O2'	1:0:2421:G:H5'	2.05	0.57
39:0:7291:HOH:O	3:B:211:THR:HG21	2.04	0.57
31:9:76:G:C3'	31:9:77:A:H5''	2.25	0.57
1:0:1053:G:OP1	9:H:15:PRO:HG3	2.05	0.57
1:0:2541:U:O2'	1:0:2542:C:H5'	2.04	0.57
1:0:42:C:H1'	39:0:3438:HOH:O	2.05	0.57
1:0:1189:A:H1'	1:0:1209:C:C1'	2.34	0.57
1:0:2613:G:O2'	1:0:2614:C:H5'	2.03	0.57
1:0:2548:C:OP2	3:B:5:ARG:NH2	2.37	0.57
1:0:2783:A:H3'	39:0:4201:HOH:O	2.03	0.57
4:C:127:ARG:NH2	4:C:225:PRO:HG2	2.20	0.57
15:N:144:GLY:O	15:N:147:ILE:HG22	2.03	0.57
1:0:10:U:O4	1:0:532:A:OP2	2.22	0.57
1:0:164:G:H3'	39:0:8309:HOH:O	2.05	0.56
1:0:1299:G:O6	13:L:6:ARG:HD3	2.04	0.56
1:0:1886:A:H4'	39:Z:395:HOH:O	2.05	0.56
1:0:380:A:H2'	39:0:6974:HOH:O	2.05	0.56
1:0:1166:A:H61	1:0:1180:U:H3	1.53	0.56
1:0:1201:C:H5''	39:0:5584:HOH:O	2.04	0.56
1:0:2419:U:H5''	1:0:2420:G:H5'	1.87	0.56
2:A:48:ASP:HB3	39:A:5706:HOH:O	2.05	0.56
1:0:1118:A:H8	1:0:1119:G:H5''	1.69	0.56
1:0:2769:C:H2'	1:0:2770:G:O4'	2.06	0.56
1:0:2414:A:H2'	1:0:2415:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2443:C:H1'	13:L:56:LYS:HE3	1.88	0.56
1:0:1295:G:H5''	13:L:14:GLY:O	2.05	0.56
1:0:1666:C:H2'	1:0:1667:A:C5'	2.35	0.56
1:0:2894:C:O2'	1:0:2895:C:H5'	2.05	0.56
1:0:1741:U:O2'	1:0:2723:G:H4'	2.06	0.56
11:J:19:MET:HE1	11:J:78:ILE:HG22	1.88	0.56
1:0:1205:U:H2'	1:0:1206:U:H5'	1.87	0.56
1:0:1800:G:H1'	17:P:88:GLN:NE2	2.21	0.56
1:0:1835:U:C5	1:0:1840:A:N7	2.67	0.56
1:0:2502:C:H2'	1:0:2503:A:H5'	1.88	0.56
1:0:2712:G:H5'	39:0:4183:HOH:O	2.06	0.56
1:0:2721:U:H4'	12:K:87:ARG:HG3	1.88	0.56
12:K:10:GLN:HE21	12:K:10:GLN:N	1.96	0.56
1:0:836:G:H5''	39:0:3978:HOH:O	2.06	0.56
1:0:2700:G:H3'	39:0:8246:HOH:O	2.06	0.56
1:0:1130:U:H2'	1:0:1131:G:O4'	2.06	0.55
1:0:1855:G:H4'	1:0:1856:C:O5'	2.05	0.55
5:D:154:LYS:H	5:D:154:LYS:HD2	1.71	0.55
1:0:1741:U:HO2'	1:0:2723:G:H4'	1.71	0.55
1:0:2587:OMU:H2'	1:0:2589:U:H5''	1.87	0.55
1:0:20:G:H21	19:R:117:HIS:HD2	1.55	0.55
1:0:90:A:H2'	1:0:91:G:O4'	2.06	0.55
1:0:1527:A:H1'	1:0:1528:A:C8	2.42	0.55
1:0:1666:C:C2'	1:0:1667:A:H5''	2.36	0.55
27:Z:60:ASP:HB3	27:Z:69:ASP:HB3	1.87	0.55
1:0:1187:U:O2'	1:0:1189:A:H2	1.82	0.55
1:0:2064:U:H5'	1:0:2652:U:O3'	2.07	0.55
9:H:59:GLN:HE21	9:H:129:ARG:NE	2.03	0.55
1:0:1386:G:O2'	1:0:1387:G:H5'	2.06	0.55
15:N:113:SER:HB2	39:N:6448:HOH:O	2.07	0.55
31:9:73:A:H61	31:9:108:C:N4	2.03	0.55
1:0:226:A:H1'	1:0:393:G:C5	2.42	0.55
1:0:2100:A:H5'	39:C:7192:HOH:O	2.07	0.55
5:D:140:ARG:HB3	31:9:29:C:H5''	1.89	0.55
1:0:2756:U:N3	1:0:2896:A:H2	2.03	0.55
11:J:19:MET:HE3	11:J:132:LEU:HD11	1.87	0.55
31:9:24:U:H3'	31:9:25:G:C5'	2.37	0.55
1:0:2539:U:H2'	39:0:3785:HOH:O	2.06	0.54
25:X:30:MET:HE1	25:X:58:ALA:HB3	1.88	0.54
1:0:441:A:H1'	1:0:442:A:N7	2.22	0.54
1:0:602:A:O2'	1:0:605:C:H4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2507:G:H2'	1:0:2510:C:N4	2.21	0.54
1:0:2748:G:H2'	39:0:7410:HOH:O	2.06	0.54
1:0:2769:C:O2'	1:0:2770:G:H5'	2.06	0.54
31:9:34:A:H2'	31:9:35:C:O4'	2.07	0.54
1:0:538:C:H5''	1:0:539:G:C8	2.42	0.54
2:A:121:ALA:O	2:A:124:VAL:HG22	2.07	0.54
1:0:558:C:H2'	1:0:559:U:C5'	2.37	0.54
1:0:1211:G:O2'	1:0:1212:C:H5'	2.07	0.54
1:0:1333:U:H2'	1:0:1334:C:C6	2.41	0.54
31:9:64:C:C2'	31:9:65:A:H5'	2.37	0.54
1:0:31:C:H2'	39:0:7619:HOH:O	2.08	0.54
1:0:1189:A:O2'	1:0:1208:C:H2'	2.07	0.54
1:0:2524:G:H21	1:0:2526:C:N4	2.05	0.54
1:0:2703:A:H2'	1:0:2704:C:H6	1.73	0.54
1:0:1180:U:H4'	10:I:86:GLU:HG2	1.90	0.54
15:N:37:ARG:NH1	31:9:6:C:OP1	2.36	0.54
1:0:1427:A:H61	1:0:1440:U:H1'	1.73	0.54
28:1:21:ARG:HD2	28:1:37:CYS:SG	2.48	0.54
31:9:49:G:H2'	31:9:50:G:O4'	2.08	0.54
1:0:1342:C:O2'	1:0:1343:C:H5'	2.07	0.54
1:0:2604:A:H5'	39:0:4959:HOH:O	2.07	0.54
12:K:32:ILE:HD11	12:K:56:SER:HB3	1.89	0.54
1:0:136:C:H2'	1:0:137:U:O4'	2.08	0.54
1:0:1701:A:H5'	39:0:5659:HOH:O	2.08	0.54
1:0:2899:A:O2'	1:0:2900:G:H5'	2.09	0.53
31:9:55:U:H4'	31:9:56:A:H8	1.71	0.53
1:0:1058:A:H2'	1:0:1060:C:H5''	1.89	0.53
1:0:1838:U:O2'	1:0:2644:C:H5'	2.09	0.53
1:0:2851:G:C2'	1:0:2852:A:H5'	2.37	0.53
24:W:48:VAL:HG12	24:W:52:VAL:HB	1.90	0.53
1:0:1681:G:H5''	1:0:1682:A:H5'	1.89	0.53
4:C:88:SER:HB3	4:C:91:PRO:HB3	1.91	0.53
1:0:656:G:H5'	16:O:3:THR:CG2	2.32	0.53
1:0:671:A:O2'	1:0:672:G:H2'	2.08	0.53
1:0:920:C:H5''	1:0:921:G:O5'	2.09	0.53
1:0:2748:G:H5'	39:0:7410:HOH:O	2.07	0.53
1:0:2795:C:O2'	1:0:2796:U:H5'	2.08	0.53
14:M:99:ARG:HE	14:M:170:ASN:ND2	2.06	0.53
1:0:316:A:N3	1:0:336:G:O2'	2.38	0.53
1:0:2787:C:H5	39:0:3383:HOH:O	1.92	0.53
31:9:55:U:H4'	31:9:56:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:65:C:O2'	1:0:66:G:H5'	2.08	0.53
31:9:39:U:H1'	31:9:44:A:H61	1.73	0.53
1:0:1596:U:H2'	1:0:1598:A:OP2	2.09	0.53
1:0:1641:A:C2'	1:0:1642:A:H5'	2.39	0.53
31:9:52:A:H2'	31:9:53:G:O4'	2.09	0.53
1:0:1118:A:C8	1:0:1118:A:C3'	2.89	0.53
1:0:1165:G:H21	1:0:1173:A:H5''	1.73	0.53
1:0:280:C:H2'	1:0:281:U:O4'	2.08	0.53
1:0:669:G:O2'	1:0:670:G:H5'	2.09	0.53
1:0:256:C:H2'	1:0:257:G:O4'	2.09	0.52
1:0:1278:A:H4'	1:0:1279:U:C4	2.44	0.52
14:M:24:GLN:HE21	14:M:27:ARG:NH1	2.06	0.52
15:N:11:ARG:HD3	31:9:114:G:O6	2.08	0.52
1:0:88:G:H2'	1:0:89:G:C8	2.43	0.52
1:0:259:G:H21	14:M:58:GLN:NE2	2.08	0.52
1:0:821:U:H2'	1:0:822:C:H6	1.75	0.52
1:0:694:A:H2'	1:0:695:C:H5'	1.91	0.52
1:0:1183:C:H42	1:0:1184:C:H41	1.56	0.52
1:0:2348:C:H1'	5:D:131:THR:HG21	1.90	0.52
1:0:1595:G:O2'	1:0:1596:U:H5'	2.10	0.52
1:0:1632:A:H2'	1:0:1633:C:H5'	1.91	0.52
1:0:1755:A:H2'	1:0:1756:G:O4'	2.08	0.52
24:W:88:THR:HG23	24:W:110:GLN:HB3	1.91	0.52
1:0:1477:C:H5'	1:0:1868:G:C5'	2.39	0.52
1:0:1994:A:P	12:K:66:ARG:HH22	2.32	0.52
1:0:69:A:H5'	1:0:69:A:C8	2.44	0.52
1:0:407:A:H2'	1:0:408:A:C8	2.44	0.52
1:0:1778:A:H2'	1:0:1779:A:H5'	1.92	0.52
1:0:1244:U:OP1	11:J:18:ILE:HD13	2.09	0.52
1:0:157:G:H4'	14:M:95:LYS:HE2	1.92	0.52
1:0:195:C:H2'	1:0:196:G:H5'	1.92	0.52
1:0:1790:C:H2'	1:0:1791:U:C6	2.44	0.52
1:0:2301:A:H5''	1:0:2302:A:H5'	1.92	0.52
23:V:55:ARG:O	23:V:59:ILE:HG12	2.09	0.52
1:0:848:C:H5'	39:0:7034:HOH:O	2.10	0.52
1:0:1972:U:H2'	1:0:1973:A:C5'	2.39	0.52
1:0:2241:C:O2'	1:0:2242:U:H5'	2.10	0.52
4:C:236:THR:HG22	4:C:239:ALA:H	1.74	0.52
7:F:58:GLU:CD	14:M:27:ARG:HH22	2.18	0.52
14:M:99:ARG:HE	14:M:170:ASN:HD22	1.56	0.52
1:0:371:U:H2'	1:0:372:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:399:C:H5'	14:M:179:GLY:O	2.11	0.51
1:0:1213:C:O2'	1:0:1214:G:H5'	2.10	0.51
1:0:1593:C:OP1	17:P:117:SER:HB3	2.10	0.51
1:0:1856:C:H5'	1:0:1858:A:O4'	2.10	0.51
1:0:522:U:O2'	1:0:1366:C:H5'	2.10	0.51
1:0:2364:A:H5''	18:Q:15:LYS:HD3	1.93	0.51
1:0:2387:U:H2'	1:0:2388:C:C6	2.45	0.51
1:0:485:A:N3	1:0:487:G:H5''	2.25	0.51
1:0:1666:C:C2'	1:0:1667:A:C5'	2.88	0.51
1:0:2445:U:H2'	1:0:2446:G:C8	2.45	0.51
1:0:338:C:H4'	4:C:174:ILE:HD11	1.93	0.51
1:0:1119:G:H2'	11:J:52:GLN:HE22	1.75	0.51
1:0:1333:U:H2'	1:0:1334:C:H6	1.75	0.51
1:0:292:G:H2'	1:0:358:G:N2	2.25	0.51
1:0:1205:U:H2'	1:0:1206:U:H5''	1.93	0.51
1:0:2890:A:H1'	22:U:56:ARG:NH2	2.26	0.51
7:F:2:VAL:HG22	7:F:57:GLU:OE1	2.10	0.51
31:9:39:U:H3'	31:9:40:C:H5''	1.93	0.51
1:0:960:G:N3	1:0:960:G:H2'	2.25	0.51
19:R:39:THR:HG23	19:R:107:GLU:O	2.11	0.51
29:2:40:ARG:HD2	29:2:47:THR:HG22	1.92	0.51
1:0:1795:G:H2'	1:0:1796:A:O4'	2.10	0.51
1:0:1834:C:H2'	1:0:1840:A:N6	2.25	0.51
1:0:2081:A:H4'	11:J:69:TYR:CE1	2.46	0.51
31:9:91:C:H2'	31:9:92:G:O4'	2.10	0.51
1:0:1218:U:H2'	1:0:1219:U:C6	2.45	0.51
8:G:64:ASN:N	8:G:64:ASN:HD22	2.08	0.51
1:0:1845:A:OP2	2:A:190:ARG:NH1	2.44	0.51
1:0:2353:A:H4'	1:0:2354:A:O5'	2.11	0.51
1:0:1419:U:H2'	1:0:1685:A:C2	2.46	0.50
1:0:2073:G:OP2	1:0:2490:A:H5'	2.11	0.50
1:0:2256:G:O2'	1:0:2257:G:H5'	2.11	0.50
9:H:31:ILE:HG23	39:H:6314:HOH:O	2.10	0.50
24:W:64:THR:O	24:W:68:THR:HG22	2.11	0.50
1:0:2365:G:H4'	18:Q:45:PRO:O	2.11	0.50
1:0:1181:A:N1	1:0:1192:A:O2'	2.44	0.50
3:B:201:ASP:HB2	3:B:312:ARG:HD2	1.93	0.50
18:Q:26:PRO:O	18:Q:30:VAL:HG23	2.10	0.50
1:0:944:G:H21	24:W:44:MET:CE	2.22	0.50
1:0:1819:G:H5'	39:0:3491:HOH:O	2.11	0.50
1:0:64:G:H2'	1:0:65:C:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:317:A:OP1	21:T:52:ARG:O	2.28	0.50
2:A:199:HIS:HD2	2:A:201:PHE:H	1.59	0.50
14:M:164:THR:HG22	14:M:165:GLY:N	2.27	0.50
19:R:39:THR:HG22	19:R:42:GLU:H	1.77	0.50
28:1:8:GLN:HE22	28:1:11:LYS:NZ	2.09	0.50
1:0:1603:A:H5''	1:0:1605:G:H5'	1.92	0.50
39:0:6217:HOH:O	21:T:38:ARG:NH1	2.45	0.50
30:3:48:ASN:ND2	30:3:50:GLY:H	2.09	0.50
1:0:255:A:H2'	1:0:256:C:C6	2.46	0.50
1:0:1537:C:H1'	39:0:6076:HOH:O	2.11	0.50
1:0:2050:G:H5''	19:R:80:TYR:O	2.12	0.50
4:C:118:THR:O	4:C:136:VAL:HG13	2.12	0.50
1:0:123:U:H2'	1:0:124:C:C6	2.46	0.50
1:0:396:U:O2'	1:0:418:C:H4'	2.11	0.50
1:0:1307:A:H2'	1:0:1308:A:C8	2.47	0.50
31:9:95:C:O2'	31:9:96:C:H5'	2.12	0.50
1:0:185:G:H4'	1:0:186:A:OP1	2.12	0.50
1:0:1201:C:H2'	1:0:1202:A:H5'	1.92	0.50
1:0:1654:U:H2'	2:A:47:HIS:HD2	1.76	0.50
1:0:2039:A:OP2	3:B:234:ARG:NH2	2.45	0.50
1:0:2749:U:H5'	39:0:7896:HOH:O	2.12	0.50
1:0:364:U:H2'	1:0:365:G:O4'	2.12	0.49
1:0:1677:U:OP2	29:2:8:LYS:NZ	2.36	0.49
6:E:137:ASP:O	6:E:141:VAL:HG23	2.11	0.49
31:9:64:C:H2'	31:9:65:A:H5'	1.93	0.49
1:0:397:A:O2'	1:0:417:G:N3	2.43	0.49
1:0:660:A:H4'	1:0:661:G:O5'	2.13	0.49
1:0:949:U:H4'	18:Q:95:GLU:HA	1.95	0.49
17:P:105:LEU:HD21	17:P:137:LEU:HD11	1.95	0.49
17:P:115:SER:H	17:P:118:GLN:NE2	2.02	0.49
31:9:54:A:O2'	31:9:55:U:H5'	2.12	0.49
1:0:558:C:H2'	1:0:559:U:H5''	1.93	0.49
1:0:960:G:N3	1:0:960:G:C2'	2.76	0.49
1:0:1289:C:O2'	1:0:1290:G:H5'	2.13	0.49
15:N:141:ARG:NH2	31:9:48:C:H4'	2.26	0.49
1:0:625:U:H5''	1:0:1044:C:N4	2.26	0.49
1:0:702:G:O2'	1:0:703:G:H5'	2.13	0.49
1:0:1010:C:H4'	15:N:4:PRO:HB2	1.94	0.49
1:0:1165:G:H4'	1:0:1174:A:O2'	2.12	0.49
1:0:1166:A:H1'	1:0:1192:A:C2	2.47	0.49
1:0:1377:C:H5'	1:0:1377:C:C6	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1426:C:H2'	39:0:5198:HOH:O	2.12	0.49
1:0:2251:G:H2'	1:0:2252:A:C8	2.47	0.49
1:0:2372:A:H2'	1:0:2373:U:C6	2.48	0.49
1:0:319:A:H4'	1:0:338:C:C5	2.47	0.49
1:0:1268:C:O2'	1:0:1269:G:H5'	2.11	0.49
1:0:2470:A:H5''	39:0:7539:HOH:O	2.12	0.49
1:0:2812:A:C2	1:0:2814:A:N6	2.73	0.49
9:H:72:ALA:HB2	9:H:156:ALA:HB2	1.94	0.49
31:9:23:U:O2'	31:9:24:U:H4'	2.12	0.49
1:0:1016:U:H1'	39:0:8324:HOH:O	2.12	0.49
1:0:1682:A:H5''	39:0:4688:HOH:O	2.13	0.49
1:0:2781:U:H1'	6:E:139:GLU:OE2	2.11	0.49
1:0:952:G:N3	1:0:2302:A:H2'	2.28	0.49
1:0:1398:G:H2'	1:0:1399:A:C8	2.47	0.49
1:0:2361:A:H5'	1:0:2361:A:H8	1.77	0.49
1:0:2472:C:O2'	1:0:2634:G:H4'	2.13	0.49
1:0:2740:G:H2'	1:0:2741:A:O4'	2.11	0.49
24:W:108:ARG:HH21	24:W:114:PRO:HG2	1.78	0.49
1:0:821:U:H3'	39:0:8439:HOH:O	2.12	0.49
1:0:1641:A:H2'	1:0:1642:A:C5'	2.43	0.49
1:0:1787:C:H4'	1:0:2883:A:O4'	2.13	0.49
1:0:2672:C:H1'	39:0:6210:HOH:O	2.12	0.49
1:0:2768:A:O2'	1:0:2769:C:H5'	2.13	0.49
5:D:159:PRO:O	5:D:163:VAL:HG23	2.13	0.49
1:0:834:G:H3'	1:0:835:U:H4'	1.95	0.49
1:0:1060:C:H6	1:0:1060:C:H5'	1.77	0.49
1:0:1972:U:H2'	1:0:1973:A:H5''	1.93	0.49
4:C:39:GLN:O	4:C:43:LYS:HD3	2.13	0.49
15:N:40:ASN:ND2	31:9:28:U:H5''	2.28	0.49
20:S:33:SER:O	20:S:37:VAL:HG23	2.13	0.49
31:9:35:C:H5''	39:9:4078:HOH:O	2.13	0.49
1:0:396:U:H1'	39:0:7529:HOH:O	2.11	0.49
1:0:793:A:H5''	17:P:83:LYS:HG2	1.95	0.48
1:0:1131:G:C6	1:0:1230:A:C4	3.02	0.48
1:0:1200:A:H3'	39:0:4912:HOH:O	2.12	0.48
1:0:1206:U:H2'	1:0:1207:A:O4'	2.13	0.48
1:0:316:A:H5'	21:T:54:ASP:OD2	2.12	0.48
1:0:441:A:O5'	1:0:441:A:H8	1.94	0.48
1:0:2344:G:N3	1:0:2344:G:H2'	2.28	0.48
1:0:1220:U:H4'	9:H:174:LEU:HD21	1.95	0.48
1:0:2415:A:H2'	1:0:2416:G:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:67:A:H5''	1:0:69:A:C8	2.49	0.48
1:0:919:U:O3'	13:L:37:LYS:NZ	2.46	0.48
1:0:1342:C:H2'	1:0:1343:C:H5'	1.96	0.48
1:0:1415:G:H5'	28:1:12:ASN:O	2.13	0.48
1:0:2104:C:O2	1:0:2485:A:N1	2.46	0.48
1:0:506:G:N2	1:0:509:A:H5''	2.19	0.48
1:0:1118:A:C8	1:0:1119:G:H5''	2.49	0.48
1:0:1175:G:H1'	1:0:1193:A:H2'	1.95	0.48
1:0:1942:A:H3'	39:0:7130:HOH:O	2.14	0.48
15:N:4:PRO:HG3	31:9:69:U:OP1	2.13	0.48
31:9:20:G:O2'	31:9:21:G:H5'	2.13	0.48
1:0:137:U:H2'	1:0:139:C:C5	2.49	0.48
1:0:512:G:O3'	1:0:513:A:H8	1.96	0.48
1:0:564:G:H1'	39:0:5694:HOH:O	2.14	0.48
1:0:969:G:H1	1:0:999:C:H42	1.61	0.48
1:0:1463:U:H2'	1:0:1464:C:C6	2.49	0.48
1:0:2346:C:H6	1:0:2346:C:O5'	1.96	0.48
1:0:2807:U:P	3:B:27:ASN:HD21	2.36	0.48
5:D:76:ARG:NE	31:9:44:A:O4'	2.41	0.48
26:Y:187:VAL:HG23	26:Y:192:ASP:HB2	1.95	0.48
31:9:12:C:H5'	31:9:70:U:O4'	2.12	0.48
1:0:1881:A:OP1	2:A:199:HIS:HE1	1.96	0.48
1:0:920:C:H5'	1:0:921:G:C4	2.49	0.48
1:0:2505:G:C2'	1:0:2506:A:H5'	2.44	0.48
1:0:806:A:H2'	1:0:807:A:O4'	2.14	0.48
1:0:1819:G:H2'	1:0:1820:G:C4'	2.44	0.48
1:0:2509:A:H2'	1:0:2510:C:O4'	2.14	0.48
6:E:49:ILE:HD11	6:E:69:ILE:HD12	1.96	0.48
1:0:450:C:H4'	4:C:46:TYR:CE1	2.48	0.48
1:0:1279:U:H2'	1:0:1279:U:O2	2.12	0.48
31:9:76:G:H3'	31:9:77:A:C5'	2.27	0.48
1:0:69:A:H5'	1:0:69:A:H8	1.79	0.47
1:0:1384:C:H5'	25:X:30:MET:HG2	1.96	0.47
1:0:2716:G:H5'	3:B:262:ARG:HG3	1.95	0.47
25:X:74:ALA:HB2	25:X:85:VAL:HG13	1.96	0.47
1:0:364:U:H2'	1:0:365:G:C8	2.49	0.47
1:0:776:A:OP1	28:1:28:HIS:HE1	1.97	0.47
1:0:1634:G:H3'	39:0:8633:HOH:O	2.14	0.47
1:0:1973:A:H2'	1:0:1974:G:O4'	2.14	0.47
1:0:125:U:H2'	39:0:8435:HOH:O	2.13	0.47
1:0:622:G:O2'	1:0:623:U:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1007:A:H2'	9:H:22:TYR:CZ	2.49	0.47
1:0:1249:U:H2'	1:0:1250:C:C6	2.49	0.47
1:0:1849:G:H1'	1:0:2011:A:N1	2.30	0.47
1:0:2780:C:C1'	6:E:143:GLN:HE21	2.27	0.47
25:X:25:ARG:HD2	39:X:5356:HOH:O	2.14	0.47
1:0:1406:A:H5'	1:0:1407:A:C8	2.49	0.47
3:B:97:LEU:HD22	3:B:127:GLN:HE21	1.79	0.47
31:9:56:A:C3'	31:9:57:A:H5''	2.43	0.47
1:0:1453:G:H2'	1:0:1454:U:O4'	2.14	0.47
1:0:1482:A:O2'	1:0:1483:C:H5'	2.15	0.47
1:0:1925:G:O2'	1:0:1926:G:H5'	2.14	0.47
37:0:9101:HMT:H7A	37:0:9101:HMT:C1	2.45	0.47
1:0:121:U:OP2	29:2:10:ARG:NH2	2.38	0.47
1:0:317:A:H4'	39:0:8441:HOH:O	2.13	0.47
1:0:559:U:H5'	1:0:559:U:C6	2.40	0.47
1:0:903:U:OP2	13:L:11:ARG:NH1	2.47	0.47
1:0:1041:U:H4'	1:0:1295:G:H5'	1.96	0.47
1:0:1616:A:H5''	1:0:1617:C:OP1	2.15	0.47
1:0:2266:A:H2'	1:0:2267:G:C8	2.50	0.47
1:0:2401:A:H2'	1:0:2402:A:C8	2.50	0.47
4:C:115:LEU:HD13	4:C:223:LEU:HD21	1.97	0.47
1:0:247:A:H2'	39:0:8663:HOH:O	2.13	0.47
1:0:1104:C:H4'	11:J:88:PRO:HD3	1.95	0.47
1:0:1119:G:N2	1:0:1246:A:N1	2.63	0.47
1:0:1364:G:H1'	39:0:3619:HOH:O	2.15	0.47
2:A:51:ARG:HB2	39:A:5706:HOH:O	2.15	0.47
2:A:51:ARG:NH1	2:A:120:ARG:O	2.48	0.47
14:M:34:GLU:HB3	14:M:38:GLU:HG3	1.96	0.47
14:M:43:PRO:HG3	14:M:62:VAL:HG21	1.96	0.47
24:W:88:THR:HG22	24:W:89:ASP:H	1.79	0.47
1:0:816:G:H5'	1:0:1598:A:H4'	1.95	0.47
1:0:1181:A:H2'	1:0:1182:C:H5'	1.97	0.47
1:0:1837:G:H3'	39:0:7745:HOH:O	2.15	0.47
1:0:1940:C:H4'	39:0:7130:HOH:O	2.13	0.47
1:0:2630:G:O6	2:A:206:ARG:NH2	2.48	0.47
1:0:2649:A:H5'	1:0:2649:A:H8	1.80	0.47
1:0:2676:C:H5''	1:0:2676:C:H6	1.78	0.47
1:0:2900:G:H2'	1:0:2901:C:O4'	2.15	0.47
1:0:424:C:H2'	1:0:425:U:C6	2.49	0.47
1:0:447:A:O2'	1:0:448:G:H5'	2.15	0.47
1:0:612:U:H2'	1:0:613:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1123:A:C2	1:0:1129:C:H4'	2.50	0.47
1:0:1234:U:N3	3:B:244:PRO:HB3	2.30	0.47
1:0:2521:A:OP2	9:H:6:ALA:HB3	2.15	0.47
31:9:114:G:H2'	31:9:115:C:C6	2.50	0.47
1:0:958:G:H2'	1:0:959:C:C6	2.49	0.46
1:0:1309:U:O2'	1:0:1310:U:H5'	2.15	0.46
1:0:2883:A:H2'	1:0:2884:G:O4'	2.16	0.46
1:0:17:G:H2'	1:0:18:C:C6	2.51	0.46
1:0:538:C:OP2	26:Y:134:HIS:HE1	1.98	0.46
1:0:1167:G:H4'	10:I:130:LEU:HD21	1.97	0.46
1:0:1768:C:H2'	1:0:1769:C:O4'	2.16	0.46
4:C:76:ARG:HG2	4:C:78:ARG:NH1	2.29	0.46
9:H:70:LEU:O	9:H:74:ARG:HB2	2.15	0.46
21:T:111:ARG:HB3	21:T:119:ALA:HB2	1.97	0.46
1:0:1445:G:N2	1:0:1678:A:H1'	2.31	0.46
1:0:2538:A:H1'	37:0:9101:HMT:C18	2.45	0.46
31:9:61:C:H2'	31:9:62:A:H8	1.79	0.46
1:0:241:A:C2	1:0:378:A:H4'	2.50	0.46
1:0:559:U:H2'	1:0:560:U:O4'	2.14	0.46
1:0:1299:G:N7	13:L:6:ARG:NH1	2.63	0.46
1:0:2421:G:H3'	1:0:2422:U:C5'	2.45	0.46
1:0:2718:C:H5'	1:0:2718:C:H6	1.80	0.46
1:0:1592:G:H2'	1:0:1593:C:C6	2.51	0.46
1:0:1878:G:O2'	1:0:1879:U:OP2	2.33	0.46
1:0:2297:U:H1'	39:0:4127:HOH:O	2.16	0.46
1:0:2649:A:H5'	1:0:2649:A:C8	2.50	0.46
1:0:2720:C:O2	12:K:87:ARG:NH2	2.48	0.46
13:L:136:ALA:HB3	39:L:6166:HOH:O	2.15	0.46
1:0:24:G:N2	1:0:518:G:H1'	2.31	0.46
1:0:638:C:H2'	1:0:639:A:C8	2.51	0.46
1:0:797:A:H4'	27:Z:34:SER:HB3	1.97	0.46
1:0:1116:U:O2'	1:0:1118:A:C2	2.49	0.46
1:0:1562:C:H2'	1:0:1562:C:O2	2.15	0.46
7:F:39:SER:HB3	7:F:45:ALA:HB2	1.98	0.46
1:0:527:U:H2'	1:0:528:G:C8	2.50	0.46
1:0:790:A:H2'	1:0:791:A:O4'	2.15	0.46
1:0:812:A:H2'	1:0:813:C:C6	2.51	0.46
1:0:2691:A:N1	1:0:2702:A:H5''	2.31	0.46
4:C:49:ASP:HB3	4:C:52:ALA:HB2	1.98	0.46
1:0:447:A:OP1	21:T:2:LYS:HG2	2.16	0.46
1:0:613:C:H2'	1:0:614:U:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:644:G:N3	1:0:644:G:H5'	2.31	0.46
1:0:1218:U:H2'	1:0:1219:U:H6	1.81	0.46
1:0:1688:G:O2'	28:1:5:THR:HG23	2.16	0.46
1:0:1783:A:O2'	1:0:1784:U:H5'	2.15	0.46
1:0:812:A:H1'	39:0:8698:HOH:O	2.16	0.46
1:0:2135:A:O2'	1:0:2136:G:H5'	2.14	0.46
1:0:2252:A:C5	1:0:2253:G:H1'	2.50	0.46
1:0:2314:G:C2'	1:0:2315:C:H5'	2.45	0.46
13:L:138:GLY:HA3	39:L:4360:HOH:O	2.15	0.46
1:0:282:C:H1'	1:0:368:C:H41	1.81	0.46
1:0:440:C:H2'	1:0:441:A:C8	2.52	0.46
1:0:920:C:H4'	1:0:921:G:C2	2.51	0.46
1:0:949:U:O2'	18:Q:40:HIS:HE1	1.99	0.46
1:0:1014:A:H2'	1:0:1015:C:H5'	1.97	0.46
1:0:1613:C:H2'	1:0:1614:G:O4'	2.16	0.46
15:N:34:LEU:HD22	15:N:129:ILE:HD13	1.98	0.46
1:0:162:C:H2'	1:0:163:U:H5'	1.98	0.45
1:0:1003:U:H4'	9:H:91:ARG:O	2.16	0.45
1:0:2072:G:H3'	1:0:2073:G:C5'	2.47	0.45
1:0:2121:G:O2'	1:0:2122:C:H5'	2.16	0.45
31:9:1:U:H4'	31:9:3:A:OP1	2.16	0.45
1:0:285:A:H2'	1:0:286:U:O4'	2.16	0.45
1:0:366:U:H2'	1:0:367:G:O4'	2.15	0.45
1:0:1603:A:H5'	1:0:1605:G:C4'	2.46	0.45
1:0:1845:A:P	2:A:190:ARG:HH11	2.40	0.45
1:0:2486:A:H2	37:0:9101:HMT:H23B	1.81	0.45
6:E:116:THR:HG22	6:E:151:LEU:HD22	1.99	0.45
12:K:74:VAL:HG12	12:K:75:ARG:HG3	1.97	0.45
1:0:947:U:O2'	1:0:948:G:H5'	2.16	0.45
1:0:1406:A:H4'	1:0:1407:A:H5''	1.97	0.45
1:0:1762:C:H2'	1:0:1763:C:H6	1.82	0.45
1:0:1972:U:C2'	1:0:1973:A:H5''	2.46	0.45
1:0:2256:G:C2'	1:0:2257:G:H5'	2.47	0.45
1:0:2541:U:O4'	37:0:9101:HMT:H16	2.16	0.45
1:0:553:G:H3'	39:0:8829:HOH:O	2.16	0.45
1:0:1497:G:H4'	1:0:1627:G:O2'	2.16	0.45
1:0:2668:G:H2'	1:0:2669:U:C6	2.51	0.45
1:0:204:A:H2'	1:0:205:U:H5'	1.98	0.45
1:0:821:U:H2'	1:0:822:C:C6	2.52	0.45
1:0:1583:U:H2'	1:0:1584:C:O4'	2.17	0.45
1:0:1687:C:O2	28:1:9:GLY:HA2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2385:G:H2'	1:0:2386:U:C6	2.52	0.45
15:N:44:ARG:NH1	31:9:4:G:H21	2.14	0.45
15:N:49:THR:HG22	15:N:56:ASP:HB2	1.99	0.45
1:0:189:A:OP1	14:M:171:ARG:NH2	2.50	0.45
1:0:958:G:O2'	1:0:959:C:H5'	2.16	0.45
1:0:1603:A:C5'	1:0:1605:G:H5'	2.47	0.45
1:0:1636:G:O2'	1:0:1637:A:H5'	2.16	0.45
1:0:1714:C:O2'	1:0:1715:C:H5'	2.17	0.45
1:0:2089:A:O2'	1:0:2090:G:H5'	2.17	0.45
1:0:2456:A:H2'	1:0:2457:U:C6	2.52	0.45
1:0:2781:U:C2'	1:0:2782:G:H5'	2.47	0.45
1:0:368:C:H2'	1:0:369:G:H5'	1.99	0.45
1:0:506:G:H22	1:0:509:A:H5'	1.79	0.45
1:0:1330:A:H2	39:0:3448:HOH:O	2.00	0.45
1:0:1873:G:H3'	39:0:4169:HOH:O	2.17	0.45
4:C:107:ARG:O	4:C:111:VAL:HG23	2.17	0.45
21:T:9:LYS:NZ	21:T:13:ARG:NH1	2.65	0.45
1:0:308:U:C4	1:0:342:C:H1'	2.51	0.45
1:0:941:G:C5	1:0:942:U:C4	3.05	0.45
1:0:2506:A:O2'	1:0:2507:G:O5'	2.35	0.45
1:0:2783:A:H2'	1:0:2784:A:C8	2.52	0.45
1:0:213:G:N2	1:0:225:G:H2'	2.32	0.45
1:0:284:C:H4'	1:0:285:A:H8	1.82	0.45
1:0:569:A:H5''	1:0:587:A:N1	2.32	0.45
1:0:808:A:C5	1:0:809:G:H1'	2.51	0.45
1:0:816:G:C6	1:0:817:G:N1	2.85	0.45
1:0:1154:A:H2'	1:0:1155:G:C8	2.52	0.45
1:0:1634:G:H2'	1:0:1635:U:C6	2.51	0.45
1:0:1667:A:H2'	1:0:1668:U:H6	1.78	0.45
1:0:2421:G:H3'	1:0:2422:U:H5''	1.99	0.45
1:0:137:U:OP1	1:0:259:G:O2'	2.35	0.45
1:0:2090:G:H2'	1:0:2091:G:C8	2.52	0.45
1:0:2898:G:H4'	3:B:288:GLY:HA2	1.99	0.45
5:D:103:ASN:HD22	5:D:134:LEU:H	1.65	0.45
1:0:255:A:H2'	1:0:256:C:H6	1.82	0.44
1:0:536:A:H3'	39:0:3958:HOH:O	2.16	0.44
1:0:558:C:H2'	1:0:559:U:H5'	1.99	0.44
1:0:1250:C:O2'	1:0:1251:C:H5'	2.17	0.44
1:0:1422:U:H2'	1:0:1423:C:C6	2.52	0.44
1:0:1853:C:O2'	2:A:217:ARG:NH2	2.50	0.44
1:0:2100:A:H4'	4:C:64:GLY:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2842:G:H5'	19:R:68:HIS:O	2.16	0.44
24:W:80:ASP:O	24:W:84:VAL:HG23	2.17	0.44
1:0:877:G:C5'	1:0:878:G:OP1	2.62	0.44
1:0:932:U:H2'	1:0:933:C:C6	2.52	0.44
1:0:1044:C:H5''	39:0:3013:HOH:O	2.18	0.44
1:0:1167:G:H2'	1:0:1168:C:C6	2.51	0.44
1:0:1185:U:H2'	1:0:1186:C:C6	2.52	0.44
1:0:1446:U:H2'	20:S:55:GLN:NE2	2.32	0.44
1:0:1622:G:H2'	1:0:1623:C:H5'	1.99	0.44
1:0:2241:C:H2'	1:0:2242:U:C6	2.53	0.44
1:0:2256:G:H2'	1:0:2257:G:C5'	2.48	0.44
37:0:9101:HMT:C1	37:0:9101:HMT:C7	2.95	0.44
31:9:28:U:H2'	31:9:29:C:C6	2.52	0.44
1:0:138:U:H5''	1:0:139:C:OP2	2.17	0.44
1:0:542:A:H2'	1:0:543:G:O4'	2.17	0.44
1:0:1029:U:O2'	1:0:1273:C:OP1	2.31	0.44
1:0:1158:G:O2'	1:0:1159:G:H5'	2.17	0.44
1:0:1204:C:H2'	1:0:1205:U:O4'	2.17	0.44
1:0:1398:G:O2'	1:0:1399:A:H5'	2.17	0.44
1:0:1477:C:O2'	1:0:1478:U:H5'	2.17	0.44
1:0:1762:C:H2'	1:0:1763:C:C6	2.52	0.44
1:0:1766:U:O2	1:0:1778:A:H5'	2.17	0.44
1:0:1839:A:H5'	1:0:2643:G:H4'	1.99	0.44
4:C:162:VAL:HG22	4:C:232:LEU:HD21	1.97	0.44
18:Q:19:ARG:HH21	31:9:11:A:P	2.40	0.44
1:0:711:G:C2	1:0:718:C:C2	3.06	0.44
1:0:946:C:H2'	1:0:947:U:C6	2.52	0.44
1:0:969:G:H1	1:0:999:C:N4	2.15	0.44
1:0:1427:A:H61	1:0:1440:U:C1'	2.29	0.44
1:0:2382:A:H5'	39:0:3538:HOH:O	2.17	0.44
1:0:2659:U:H5''	39:0:8874:HOH:O	2.16	0.44
1:0:68:U:O2'	1:0:69:A:H5''	2.18	0.44
1:0:661:G:C5	1:0:686:A:C2	3.06	0.44
1:0:703:G:O2'	1:0:704:C:H5'	2.17	0.44
1:0:73:U:O2'	1:0:74:G:H5'	2.18	0.44
1:0:285:A:C2	1:0:368:C:H4'	2.52	0.44
1:0:371:U:H2'	1:0:372:A:C8	2.51	0.44
1:0:407:A:H8	39:0:3145:HOH:O	2.00	0.44
1:0:1119:G:H8	11:J:52:GLN:NE2	2.11	0.44
1:0:1503:U:H2'	1:0:1504:A:O4'	2.17	0.44
1:0:1592:G:H2'	1:0:1593:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2064:U:H4'	1:0:2653:A:OP1	2.16	0.44
1:0:2538:A:O2'	37:0:9101:HMT:H18	2.17	0.44
24:W:4:LEU:HD22	24:W:52:VAL:HG21	1.98	0.44
31:9:92:G:H2'	31:9:93:A:H8	1.79	0.44
1:0:902:G:N7	13:L:18:HIS:HD2	2.15	0.44
1:0:1245:C:H6	1:0:1245:C:O5'	2.00	0.44
1:0:1484:G:H2'	39:0:3274:HOH:O	2.18	0.44
1:0:1535:G:H2'	1:0:1536:C:C6	2.53	0.44
28:1:25:LYS:HG3	29:2:49:GLU:H	1.82	0.44
1:0:737:A:H2'	1:0:738:G:O4'	2.18	0.44
1:0:1375:A:C2'	1:0:1376:G:H5'	2.48	0.44
1:0:2487:C:C1'	37:0:9101:HMT:H17	2.48	0.44
1:0:2781:U:H2'	1:0:2782:G:H5'	1.99	0.44
5:D:25:MET:SD	5:D:37:ALA:HB1	2.58	0.44
1:0:170:U:H2'	1:0:171:C:H5'	1.99	0.44
1:0:318:U:H5'	1:0:339:A:C2	2.53	0.44
1:0:1165:G:C4'	1:0:1174:A:O2'	2.66	0.44
1:0:1236:A:H2'	1:0:1237:U:O4'	2.18	0.44
1:0:1328:A:C8	26:Y:169:ARG:HD3	2.53	0.44
1:0:1500:U:P	17:P:41:ARG:HH22	2.40	0.44
1:0:1617:C:C4	1:0:1643:C:H4'	2.52	0.44
1:0:2072:G:C6	1:0:2533:C:H1'	2.53	0.44
1:0:2134:G:N2	1:0:2242:U:C2	2.86	0.44
1:0:12:U:C2'	1:0:13:G:H5'	2.47	0.43
1:0:1679:C:H5'	39:0:4151:HOH:O	2.18	0.43
1:0:1878:G:O2'	1:0:1879:U:P	2.75	0.43
1:0:2433:A:H2'	1:0:2434:A:C8	2.52	0.43
1:0:2754:G:H2'	1:0:2755:G:O4'	2.18	0.43
3:B:258:GLY:H	3:B:260:HIS:CE1	2.36	0.43
4:C:47:GLY:HA2	4:C:92:PRO:HB2	2.00	0.43
5:D:135:VAL:HG22	5:D:136:ARG:H	1.82	0.43
39:E:2512:HOH:O	11:J:127:ILE:HD11	2.17	0.43
1:0:1119:G:C8	11:J:52:GLN:NE2	2.86	0.43
39:0:6068:HOH:O	31:9:83:G:H4'	2.18	0.43
15:N:12:ARG:HD3	15:N:18:THR:OG1	2.18	0.43
15:N:55:ASP:OD2	31:9:7:G:H4'	2.19	0.43
31:9:107:C:H5	39:9:3167:HOH:O	2.00	0.43
1:0:74:G:H2'	1:0:75:U:C6	2.52	0.43
1:0:1202:A:H2'	1:0:1203:G:O4'	2.19	0.43
1:0:1391:G:H2'	1:0:1392:A:H5'	2.01	0.43
1:0:2758:G:H2'	1:0:2759:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:157:ASP:HB3	14:M:160:PHE:HD1	1.82	0.43
1:0:101:C:H2'	1:0:102:A:C8	2.53	0.43
1:0:1500:U:OP2	17:P:41:ARG:NH2	2.51	0.43
1:0:1504:A:H5'	39:0:3079:HOH:O	2.18	0.43
1:0:2300:A:H4'	1:0:2301:A:O5'	2.19	0.43
1:0:2421:G:H4'	39:0:3592:HOH:O	2.17	0.43
1:0:2570:G:H5''	39:0:3767:HOH:O	2.18	0.43
1:0:2594:C:O2'	1:0:2595:U:H5'	2.18	0.43
2:A:36:ASP:C	2:A:38:ILE:H	2.26	0.43
1:0:28:G:H1'	39:0:3446:HOH:O	2.19	0.43
1:0:151:A:H2'	1:0:152:A:O4'	2.18	0.43
1:0:1244:U:H4'	1:0:1246:A:O4'	2.18	0.43
1:0:1544:U:H2'	1:0:1545:C:C6	2.54	0.43
1:0:1771:U:O2'	1:0:1773:G:N7	2.51	0.43
1:0:2087:C:O2'	1:0:2088:C:H5'	2.19	0.43
1:0:120:A:N3	1:0:120:A:H2'	2.34	0.43
1:0:281:U:O2'	1:0:282:C:H5'	2.19	0.43
1:0:440:C:O2'	1:0:441:A:H5'	2.18	0.43
1:0:1001:U:O2'	1:0:1002:G:H5'	2.18	0.43
1:0:1130:U:O4	1:0:2523:U:H5''	2.19	0.43
1:0:1588:G:C6	1:0:1589:G:N1	2.87	0.43
1:0:2379:G:H5'	1:0:2381:C:O4'	2.19	0.43
1:0:2712:G:P	39:0:4183:HOH:O	2.76	0.43
1:0:2717:C:H2'	1:0:2718:C:C5'	2.32	0.43
2:A:132:ASP:HB3	2:A:135:VAL:H	1.84	0.43
9:H:168:VAL:HG13	39:H:4963:HOH:O	2.18	0.43
1:0:574:G:O2'	1:0:575:A:H5'	2.18	0.43
1:0:1419:U:H5'	1:0:1420:C:OP2	2.18	0.43
1:0:1750:C:H5''	39:0:8333:HOH:O	2.18	0.43
1:0:1845:A:O2'	1:0:1846:U:H5'	2.18	0.43
1:0:2269:C:C2'	1:0:2270:G:H5'	2.49	0.43
1:0:2821:C:H4'	3:B:116:PRO:HG3	2.01	0.43
1:0:85:C:H5''	1:0:86:A:OP2	2.18	0.43
1:0:290:C:O2'	1:0:291:C:H5'	2.18	0.43
1:0:424:C:H2'	1:0:425:U:H6	1.83	0.43
1:0:571:C:H6	1:0:571:C:O5'	2.02	0.43
1:0:700:A:H5''	1:0:701:U:H5'	2.01	0.43
1:0:840:U:H2'	19:R:128:ARG:HH12	1.84	0.43
1:0:1439:C:O5'	1:0:1439:C:H6	2.02	0.43
1:0:1773:G:C8	27:Z:40:ALA:HA	2.54	0.43
1:0:1946:C:H2'	1:0:1971:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2717:C:OP1	3:B:207:LYS:HG3	2.19	0.43
31:9:34:A:O5'	31:9:34:A:H8	2.02	0.43
1:0:295:C:H2'	1:0:296:G:O4'	2.18	0.43
1:0:1069:C:H2'	1:0:1070:A:O4'	2.19	0.43
1:0:1423:C:O2'	1:0:1424:A:H5'	2.19	0.43
1:0:1444:G:H5''	20:S:11:THR:HG22	2.01	0.43
1:0:2800:A:H5'	1:0:2801:A:OP2	2.19	0.43
13:L:143:THR:HG22	13:L:144:ASP:H	1.84	0.43
1:0:834:G:H4'	1:0:835:U:OP2	2.18	0.43
1:0:1071:G:H4'	26:Y:154:ARG:NH2	2.33	0.43
1:0:1773:G:N2	1:0:1774:G:C8	2.86	0.43
1:0:2371:G:H5'	39:0:3898:HOH:O	2.18	0.43
1:0:635:A:H2'	1:0:636:G:H5''	2.00	0.42
1:0:1098:A:H2'	1:0:1099:G:O4'	2.19	0.42
1:0:1242:A:H5'	11:J:82:THR:CG2	2.32	0.42
1:0:1413:A:H2'	1:0:1414:A:O4'	2.19	0.42
1:0:2274:A:O2'	1:0:2275:G:H5'	2.18	0.42
1:0:2825:C:H4'	1:0:2826:G:O5'	2.19	0.42
2:A:97:ALA:HB2	2:A:150:PRO:HB2	2.01	0.42
1:0:343:C:O2'	1:0:344:C:H5'	2.18	0.42
1:0:1505:U:H1'	39:0:7476:HOH:O	2.19	0.42
1:0:1909:A:N1	1:0:2128:G:H1'	2.33	0.42
1:0:2866:U:H4'	1:0:2867:G:H5'	2.01	0.42
1:0:39:G:N2	1:0:444:C:C2	2.87	0.42
1:0:255:A:H2'	1:0:256:C:O4'	2.19	0.42
1:0:1234:U:O2	1:0:2066:C:H5''	2.20	0.42
1:0:1456:C:H2'	1:0:1457:U:C6	2.54	0.42
1:0:1973:A:H5'	1:0:1973:A:C8	2.45	0.42
1:0:2010:A:H2'	39:0:5197:HOH:O	2.18	0.42
1:0:2445:U:H2'	1:0:2446:G:H8	1.82	0.42
4:C:79:ARG:O	4:C:87:ARG:HG2	2.18	0.42
4:C:219:ASN:O	4:C:223:LEU:HB2	2.19	0.42
24:W:125:HIS:HE1	39:W:3071:HOH:O	2.03	0.42
31:9:3:A:OP2	31:9:25:G:N2	2.52	0.42
31:9:29:C:H2'	31:9:30:C:C5'	2.44	0.42
1:0:21:G:H4'	19:R:2:ILE:HG22	2.00	0.42
1:0:451:C:O2'	1:0:452:G:H5'	2.19	0.42
1:0:899:C:H5'	39:0:7400:HOH:O	2.19	0.42
1:0:1166:A:OP1	1:0:1174:A:H4'	2.20	0.42
1:0:2243:C:H5''	39:0:8419:HOH:O	2.20	0.42
1:0:2598:U:O2	1:0:2600:A:H8	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2852:A:H5''	39:0:4206:HOH:O	2.19	0.42
1:0:291:C:H2'	1:0:292:G:O4'	2.19	0.42
1:0:324:G:O2'	1:0:325:U:H5'	2.20	0.42
1:0:432:G:O2'	1:0:433:C:H5'	2.19	0.42
1:0:1626:A:H2'	1:0:1627:G:C5'	2.50	0.42
1:0:2031:C:H2'	1:0:2032:U:O4'	2.20	0.42
1:0:2498:C:O2'	1:0:2499:U:H5'	2.19	0.42
4:C:140:VAL:HB	39:C:6502:HOH:O	2.20	0.42
1:0:101:C:H2'	1:0:102:A:H8	1.85	0.42
1:0:657:G:H2'	1:0:658:C:C6	2.55	0.42
1:0:664:U:O4	1:0:681:G:H5''	2.19	0.42
1:0:807:A:O2'	1:0:808:A:H5'	2.20	0.42
1:0:2777:G:O2'	1:0:2778:A:H5'	2.20	0.42
19:R:4:TYR:CE1	19:R:17:MET:HE2	2.55	0.42
21:T:9:LYS:HZ2	21:T:13:ARG:NH1	2.17	0.42
25:X:43:VAL:HG12	25:X:44:ASP:H	1.84	0.42
1:0:399:C:H1'	14:M:194:GLY:OXT	2.20	0.42
1:0:907:A:H4'	1:0:1328:A:C2	2.54	0.42
1:0:1555:G:H4'	1:0:1630:A:H2	1.84	0.42
1:0:1819:G:H2'	1:0:1820:G:C5'	2.50	0.42
1:0:1921:A:O2'	1:0:1922:A:H5'	2.20	0.42
1:0:1996:U:O2'	1:0:1997:A:H5'	2.19	0.42
1:0:2111:G:H1'	39:0:3082:HOH:O	2.19	0.42
1:0:155:C:OP2	14:M:188:ARG:HD3	2.19	0.42
1:0:303:C:H2'	1:0:304:G:O4'	2.20	0.42
1:0:553:G:P	26:Y:204:ARG:NH2	2.90	0.42
1:0:1829:A:H2'	1:0:1830:C:H5'	2.02	0.42
1:0:2091:G:O3'	3:B:235:ARG:HD3	2.19	0.42
14:M:164:THR:HG22	14:M:166:ALA:H	1.85	0.42
1:0:370:G:O2'	1:0:371:U:H5'	2.20	0.42
1:0:947:U:H2'	1:0:948:G:C8	2.55	0.42
1:0:1044:C:H5	39:0:6095:HOH:O	2.01	0.42
1:0:1705:C:H2'	1:0:1706:G:O4'	2.20	0.42
1:0:1878:G:C1'	39:0:5431:HOH:O	2.62	0.42
4:C:127:ARG:HD3	4:C:129:HIS:HE1	1.85	0.42
1:0:23:G:H1'	1:0:520:A:N6	2.35	0.42
1:0:447:A:P	21:T:1:SER:HB2	2.60	0.42
1:0:699:C:C2	1:0:743:G:N2	2.88	0.42
1:0:1025:C:H5'	24:W:23:MET:O	2.19	0.42
1:0:1174:A:C5	1:0:1201:C:H4'	2.54	0.42
1:0:2379:G:N7	1:0:2408:A:N1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2533:C:H6	1:0:2533:C:C5'	2.26	0.42
1:0:2580:G:N3	1:0:2600:A:H2	2.18	0.42
3:B:238:ASN:HD22	3:B:240:GLY:N	2.16	0.42
26:Y:187:VAL:HG23	26:Y:192:ASP:CB	2.50	0.42
1:0:31:C:H4'	39:0:7242:HOH:O	2.20	0.41
1:0:154:C:H2'	1:0:155:C:H6	1.85	0.41
1:0:204:A:C2'	1:0:205:U:H5'	2.49	0.41
1:0:447:A:OP2	21:T:1:SER:HB2	2.20	0.41
1:0:694:A:C2'	1:0:695:C:H5'	2.50	0.41
1:0:705:C:O2	1:0:705:C:H2'	2.20	0.41
1:0:1042:U:O2'	1:0:1043:C:H5'	2.20	0.41
1:0:1421:C:O2'	1:0:1422:U:H5'	2.19	0.41
1:0:1568:G:O2'	1:0:1569:U:H5'	2.19	0.41
1:0:1626:A:H2'	1:0:1627:G:H5'	2.01	0.41
1:0:1878:G:O2'	1:0:1879:U:C6	2.69	0.41
1:0:1980:U:O2	1:0:2008:U:H4'	2.19	0.41
1:0:2389:U:H4'	18:Q:53:HIS:CD2	2.55	0.41
1:0:2896:A:H2'	1:0:2896:A:N3	2.35	0.41
31:9:39:U:H1'	31:9:44:A:N6	2.35	0.41
1:0:349:U:H2'	1:0:350:G:H8	1.85	0.41
1:0:396:U:H5'	30:3:42:ARG:NH1	2.35	0.41
1:0:820:G:C5	2:A:171:LYS:HB2	2.55	0.41
1:0:821:U:H4'	27:Z:41:ARG:HH12	1.86	0.41
1:0:1525:G:H5'	1:0:1526:A:OP2	2.20	0.41
1:0:1573:A:H2'	1:0:1574:C:O4'	2.20	0.41
1:0:1632:A:C2'	1:0:1633:C:H5'	2.50	0.41
1:0:2281:C:C2'	1:0:2282:U:H5'	2.49	0.41
1:0:2756:U:N3	1:0:2896:A:C2	2.73	0.41
18:Q:25:PRO:HA	18:Q:26:PRO:HD3	1.83	0.41
31:9:47:A:C2	31:9:48:C:C2	3.08	0.41
1:0:629:A:H2'	1:0:630:A:O4'	2.20	0.41
1:0:657:G:H2'	1:0:658:C:H6	1.85	0.41
1:0:815:U:O2'	1:0:1598:A:H4'	2.19	0.41
1:0:963:C:O2	1:0:1005:A:N1	2.53	0.41
1:0:1409:G:C2	1:0:1410:G:C8	3.09	0.41
1:0:1622:G:C2'	1:0:1623:C:H5'	2.50	0.41
1:0:1965:C:H6	1:0:1965:C:O5'	2.02	0.41
1:0:2092:G:H2'	1:0:2613:G:OP1	2.21	0.41
5:D:103:ASN:ND2	5:D:134:LEU:H	2.18	0.41
1:0:466:A:H2'	1:0:467:G:O4'	2.21	0.41
1:0:820:G:H3'	39:0:6830:HOH:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:821:U:H4'	27:Z:41:ARG:NH1	2.35	0.41
1:0:1184:C:O2'	1:0:1185:U:OP2	2.30	0.41
1:0:1548:U:H1'	39:0:6454:HOH:O	2.19	0.41
1:0:1976:G:H1'	1:0:2005:G:N2	2.36	0.41
1:0:2114:C:O2'	1:0:2115:U:H5'	2.20	0.41
1:0:2362:A:H2'	1:0:2363:G:C8	2.56	0.41
1:0:2791:U:H1'	1:0:2792:A:H5''	2.02	0.41
39:0:6210:HOH:O	3:B:85:ARG:NH1	2.53	0.41
2:A:179:MET:HG2	2:A:186:TRP:HB2	2.02	0.41
15:N:37:ARG:NH1	31:9:6:C:C5'	2.69	0.41
1:0:894:A:C2	4:C:87:ARG:NH2	2.89	0.41
1:0:1015:C:H2'	1:0:1016:U:C6	2.55	0.41
1:0:1506:U:H6	1:0:1506:U:H5'	1.84	0.41
1:0:1552:G:H2'	1:0:1553:C:C6	2.56	0.41
1:0:1619:G:H2'	1:0:1620:C:O4'	2.20	0.41
1:0:2102:G:C2	1:0:2104:C:C4	3.08	0.41
1:0:2510:C:H42	1:0:2564:G:H22	1.68	0.41
1:0:2626:C:H2'	1:0:2627:G:C8	2.55	0.41
1:0:2784:A:H1'	6:E:60:SER:OG	2.21	0.41
2:A:100:PRO:HG2	2:A:103:VAL:HG21	2.03	0.41
1:0:401:C:H2'	1:0:402:U:C6	2.55	0.41
1:0:1441:G:H1'	39:0:7717:HOH:O	2.20	0.41
1:0:2121:G:H1'	39:0:3302:HOH:O	2.20	0.41
1:0:2764:C:H2'	1:0:2765:C:C6	2.56	0.41
4:C:218:VAL:HG12	39:C:5065:HOH:O	2.20	0.41
28:1:8:GLN:HE22	28:1:11:LYS:HZ1	1.66	0.41
1:0:166:A:N7	13:L:25:GLY:HA2	2.36	0.41
1:0:413:G:H2'	1:0:414:C:C6	2.55	0.41
1:0:764:C:H2'	1:0:765:G:O4'	2.20	0.41
1:0:827:A:H1'	39:0:5560:HOH:O	2.19	0.41
1:0:1031:G:O3'	1:0:1032:A:H8	2.02	0.41
1:0:1096:U:O2'	1:0:1097:A:H5'	2.21	0.41
1:0:1427:A:N6	1:0:1440:U:H1'	2.33	0.41
1:0:2040:C:H5''	1:0:2759:C:O2'	2.20	0.41
1:0:2348:C:H5'	5:D:22:VAL:HG11	2.01	0.41
1:0:2764:C:H2'	1:0:2765:C:H6	1.85	0.41
3:B:17:LYS:O	3:B:260:HIS:HD2	2.04	0.41
31:9:3:A:N6	31:9:22:G:H1'	2.35	0.41
1:0:111:C:H2'	1:0:112:G:O4'	2.21	0.41
1:0:193:A:N1	1:0:413:G:O2'	2.53	0.41
1:0:690:G:H4'	1:0:741:C:O2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:789:C:H1'	1:0:827:A:C2	2.55	0.41
1:0:849:C:O2'	1:0:850:U:H5'	2.20	0.41
1:0:851:C:O2	1:0:2022:A:H2	2.03	0.41
1:0:870:G:C3'	1:0:871:G:H5''	2.50	0.41
1:0:1056:U:H2'	1:0:1057:A:O4'	2.20	0.41
1:0:1593:C:H5'	17:P:116:SER:O	2.20	0.41
1:0:2039:A:H4'	1:0:2760:C:O2'	2.21	0.41
1:0:2392:C:H4'	39:0:9114:HOH:O	2.20	0.41
1:0:2511:A:H2'	1:0:2512:U:O4'	2.20	0.41
1:0:2734:G:O2'	1:0:2735:U:H5'	2.21	0.41
1:0:318:U:H5'	1:0:339:A:C4	2.56	0.41
1:0:319:A:H4'	1:0:338:C:C4	2.56	0.41
1:0:558:C:C2'	1:0:559:U:C5'	2.94	0.41
1:0:1073:A:H4'	26:Y:155:ARG:O	2.21	0.41
1:0:1151:G:OP1	8:G:63:ARG:NH1	2.54	0.41
1:0:1181:A:C2'	1:0:1182:C:H5'	2.51	0.41
1:0:1205:U:C2'	1:0:1206:U:H5''	2.50	0.41
1:0:1226:G:H5'	39:0:3248:HOH:O	2.21	0.41
1:0:1555:G:O2'	1:0:1556:G:H5'	2.21	0.41
1:0:1753:C:O2	3:B:229:ARG:NH2	2.46	0.41
1:0:1815:A:H2'	1:0:1816:C:O4'	2.21	0.41
1:0:1904:A:H2'	1:0:1905:U:O4'	2.21	0.41
1:0:1926:G:H2'	1:0:1927:A:C8	2.55	0.41
1:0:2473:U:O3'	1:0:2474:A:H3'	2.20	0.41
1:0:2526:C:H5'	1:0:2526:C:C6	2.56	0.41
1:0:2673:U:H4'	3:B:94:GLN:O	2.21	0.41
1:0:2768:A:H5''	39:0:3093:HOH:O	2.21	0.41
1:0:2819:C:H2'	1:0:2820:A:C8	2.55	0.41
1:0:2897:C:O2'	1:0:2898:G:H5'	2.21	0.41
3:B:69:VAL:HA	3:B:70:PRO:HD3	1.93	0.41
4:C:168:ARG:NH2	4:C:190:ALA:O	2.54	0.41
12:K:24:THR:HB	12:K:64:MET:HE2	2.03	0.41
15:N:35:VAL:HG11	31:9:6:C:H4'	2.02	0.41
19:R:40:ALA:O	19:R:44:VAL:HG23	2.21	0.41
25:X:43:VAL:HG22	25:X:76:ARG:NH1	2.35	0.41
31:9:2:U:OP2	31:9:3:A:H5'	2.20	0.41
31:9:36:C:C5	31:9:37:C:C5	3.09	0.41
1:0:276:C:H6	1:0:276:C:O5'	2.04	0.41
1:0:318:U:H5'	1:0:339:A:N3	2.36	0.41
1:0:940:G:C5	1:0:1027:G:C2	3.09	0.41
1:0:1098:A:OP1	24:W:128:VAL:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1652:C:H4'	27:Z:76:THR:HG21	2.02	0.41
1:0:1684:A:H1'	29:2:43:ARG:NH2	2.34	0.41
1:0:1717:A:H5''	17:P:54:LYS:HB2	2.03	0.41
1:0:2265:U:H2'	1:0:2266:A:C8	2.56	0.41
1:0:2846:C:H4'	3:B:156:LYS:HB3	2.02	0.41
11:J:90:LYS:HB2	35:J:8802:CL:CL	2.58	0.41
20:S:17:ASP:HB3	20:S:23:LYS:HB2	2.03	0.41
1:0:71:G:H8	39:0:8650:HOH:O	2.04	0.40
1:0:177:A:O2'	1:0:892:G:H4'	2.21	0.40
1:0:968:G:O2'	1:0:969:G:H5'	2.21	0.40
1:0:2088:C:H1'	1:0:2841:A:N1	2.36	0.40
1:0:2676:C:C2'	1:0:2677:A:H5'	2.50	0.40
1:0:2831:C:H2'	1:0:2832:C:H5'	2.02	0.40
15:N:159:TYR:HE1	31:9:50:G:H5''	1.85	0.40
1:0:120:A:H2	29:2:49:GLU:OE1	2.04	0.40
1:0:483:C:C4	1:0:484:A:C6	3.10	0.40
1:0:876:A:N3	1:0:876:A:H2'	2.36	0.40
1:0:1972:U:H2'	1:0:1973:A:H5'	2.02	0.40
1:0:2538:A:C8	37:0:9101:HMT:H28B	2.56	0.40
1:0:2809:G:H2'	1:0:2810:G:O4'	2.21	0.40
1:0:2869:G:H2'	1:0:2870:C:C6	2.56	0.40
1:0:2893:C:O2'	1:0:2894:C:H5'	2.20	0.40
7:F:58:GLU:HB3	14:M:8:ILE:HG23	2.03	0.40
1:0:154:C:H2'	1:0:155:C:C6	2.56	0.40
1:0:527:U:H2'	1:0:528:G:H8	1.86	0.40
1:0:581:G:O2'	1:0:582:U:H5'	2.20	0.40
1:0:629:A:C2	1:0:2074:A:C2	3.09	0.40
1:0:912:A:C4	1:0:1294:A:C2	3.09	0.40
1:0:1055:G:OP2	9:H:14:LYS:NZ	2.53	0.40
1:0:1306:U:H5''	4:C:184:ARG:HD2	2.02	0.40
1:0:1592:G:N2	1:0:1602:C:O2	2.52	0.40
1:0:1846:U:O2'	2:A:172:ALA:HB2	2.21	0.40
1:0:2000:G:O2'	1:0:2001:G:H5'	2.22	0.40
1:0:2011:A:H4'	1:0:2012:U:O5'	2.22	0.40
1:0:2039:A:H2'	1:0:2040:C:C6	2.55	0.40
1:0:2271:G:H2'	1:0:2271:G:N3	2.36	0.40
1:0:2755:G:H1'	39:0:3447:HOH:O	2.21	0.40
3:B:60:SER:HA	3:B:61:PRO:HD3	1.98	0.40
3:B:115:VAL:HA	3:B:116:PRO:HD3	1.94	0.40
3:B:315:VAL:HG23	3:B:316:ARG:HG2	2.03	0.40
5:D:15:GLU:HA	5:D:16:PRO:HD3	1.92	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:20:ILE:HD11	6:E:40:VAL:HG11	2.03	0.40
9:H:69:ARG:HD3	39:H:6314:HOH:O	2.21	0.40
15:N:47:LEU:HD13	15:N:47:LEU:HA	1.99	0.40
1:0:419:A:H1'	1:0:1921:A:C2	2.56	0.40
1:0:1120:U:C6	1:0:1120:U:H5''	2.57	0.40
1:0:1130:U:H5'	39:0:7596:HOH:O	2.20	0.40
1:0:1299:G:N2	39:0:3448:HOH:O	2.54	0.40
1:0:1684:A:O2'	1:0:1685:A:H5''	2.21	0.40
1:0:2434:A:H2'	1:0:2435:U:O4'	2.22	0.40
2:A:48:ASP:HA	2:A:49:PRO:HD3	1.94	0.40
15:N:1:ALA:HB2	31:9:14:G:O2'	2.21	0.40
15:N:11:ARG:NH1	31:9:8:G:O6	2.55	0.40
19:R:9:ASP:O	19:R:13:THR:HB	2.22	0.40
1:0:100:C:H4'	21:T:16:LEU:HB2	2.04	0.40
1:0:383:A:H2'	1:0:384:G:O4'	2.21	0.40
1:0:484:A:N1	1:0:506:G:H4'	2.37	0.40
1:0:682:A:H2'	1:0:683:G:O4'	2.21	0.40
1:0:1172:G:H1'	39:0:3847:HOH:O	2.20	0.40
1:0:1576:G:H2'	1:0:1577:U:O4'	2.22	0.40
1:0:2781:U:H2'	1:0:2782:G:C5'	2.51	0.40
1:0:2837:U:H2'	39:0:6433:HOH:O	2.22	0.40
20:S:57:THR:C	20:S:59:ASP:H	2.30	0.40
23:V:5:VAL:HG23	39:V:2271:HOH:O	2.20	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	
2	A	235/237 (99%)	219 (93%)	13 (6%)	3 (1%)	9	25
3	B	335/337 (99%)	314 (94%)	18 (5%)	3 (1%)	14	35

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	C	244/246 (99%)	227 (93%)	17 (7%)	0	100	100
5	D	134/177 (76%)	121 (90%)	11 (8%)	2 (2%)	8	22
6	E	170/172 (99%)	161 (95%)	9 (5%)	0	100	100
7	F	117/119 (98%)	112 (96%)	3 (3%)	2 (2%)	7	19
8	G	25/348 (7%)	25 (100%)	0	0	100	100
9	H	156/177 (88%)	149 (96%)	5 (3%)	2 (1%)	9	25
10	I	68/70 (97%)	56 (82%)	11 (16%)	1 (2%)	8	22
11	J	140/142 (99%)	135 (96%)	5 (4%)	0	100	100
12	K	130/132 (98%)	124 (95%)	5 (4%)	1 (1%)	16	37
13	L	141/165 (86%)	132 (94%)	9 (6%)	0	100	100
14	M	192/194 (99%)	188 (98%)	4 (2%)	0	100	100
15	N	184/186 (99%)	173 (94%)	8 (4%)	3 (2%)	7	20
16	O	113/115 (98%)	111 (98%)	2 (2%)	0	100	100
17	P	141/143 (99%)	141 (100%)	0	0	100	100
18	Q	93/95 (98%)	89 (96%)	4 (4%)	0	100	100
19	R	148/150 (99%)	143 (97%)	5 (3%)	0	100	100
20	S	79/81 (98%)	77 (98%)	2 (2%)	0	100	100
21	T	117/119 (98%)	112 (96%)	5 (4%)	0	100	100
22	U	51/53 (96%)	48 (94%)	3 (6%)	0	100	100
23	V	63/65 (97%)	60 (95%)	3 (5%)	0	100	100
24	W	152/154 (99%)	148 (97%)	3 (2%)	1 (1%)	18	41
25	X	80/82 (98%)	77 (96%)	3 (4%)	0	100	100
26	Y	140/142 (99%)	137 (98%)	3 (2%)	0	100	100
27	Z	71/73 (97%)	65 (92%)	5 (7%)	1 (1%)	9	23
28	1	54/56 (96%)	52 (96%)	2 (4%)	0	100	100
29	2	42/50 (84%)	42 (100%)	0	0	100	100
30	3	90/92 (98%)	89 (99%)	1 (1%)	0	100	100
All	All	3705/4172 (89%)	3527 (95%)	159 (4%)	19 (0%)	24	48

All (19) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A	37	VAL

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Mol	Chain	Res	Type
15	N	154	LEU
2	A	27	LEU
9	H	19	ARG
24	W	77	ALA
2	A	34	ASP
5	D	56	ARG
7	F	61	MET
15	N	139	TRP
15	N	167	ASP
3	B	2	GLN
5	D	137	PRO
7	F	100	ASP
12	K	127	ALA
3	B	185	GLY
3	B	206	THR
10	I	108	HIS
27	Z	67	GLY
9	H	171	GLY

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	A	179/179 (100%)	169 (94%)	10 (6%)	19	44
3	B	282/282 (100%)	265 (94%)	17 (6%)	17	41
4	C	193/193 (100%)	175 (91%)	18 (9%)	8	21
5	D	117/148 (79%)	108 (92%)	9 (8%)	12	30
6	E	152/152 (100%)	149 (98%)	3 (2%)	48	76
7	F	93/93 (100%)	90 (97%)	3 (3%)	34	64
8	G	27/282 (10%)	27 (100%)	0	100	100
9	H	134/145 (92%)	130 (97%)	4 (3%)	36	66
10	I	58/58 (100%)	56 (97%)	2 (3%)	32	62
11	J	118/118 (100%)	112 (95%)	6 (5%)	21	48

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	K	106/106 (100%)	102 (96%)	4 (4%)	29	58
13	L	113/127 (89%)	108 (96%)	5 (4%)	25	53
14	M	158/158 (100%)	153 (97%)	5 (3%)	34	64
15	N	149/149 (100%)	141 (95%)	8 (5%)	20	45
16	O	93/93 (100%)	89 (96%)	4 (4%)	26	54
17	P	113/113 (100%)	108 (96%)	5 (4%)	25	53
18	Q	79/79 (100%)	75 (95%)	4 (5%)	21	48
19	R	117/117 (100%)	113 (97%)	4 (3%)	32	62
20	S	71/71 (100%)	69 (97%)	2 (3%)	38	68
21	T	105/105 (100%)	99 (94%)	6 (6%)	18	43
22	U	44/44 (100%)	43 (98%)	1 (2%)	44	73
23	V	51/51 (100%)	50 (98%)	1 (2%)	48	76
24	W	130/130 (100%)	124 (95%)	6 (5%)	24	51
25	X	66/66 (100%)	59 (89%)	7 (11%)	6	17
26	Y	120/120 (100%)	116 (97%)	4 (3%)	33	63
27	Z	60/60 (100%)	60 (100%)	0	100	100
28	1	46/46 (100%)	45 (98%)	1 (2%)	45	74
29	2	42/46 (91%)	41 (98%)	1 (2%)	43	72
30	3	79/79 (100%)	75 (95%)	4 (5%)	21	48
All	All	3095/3410 (91%)	2951 (95%)	144 (5%)	23	51

All (144) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	A	3	ARG
2	A	30	ARG
2	A	69	LEU
2	A	94	LEU
2	A	105	VAL
2	A	131	HIS
2	A	175	LYS
2	A	179	MET
2	A	200	PRO
2	A	217	ARG
3	B	11	LEU

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Mol	Chain	Res	Type
3	B	27	ASN
3	B	71	VAL
3	B	84	LEU
3	B	97	LEU
3	B	98	THR
3	B	151	VAL
3	B	162	MET
3	B	171	VAL
3	B	195	ARG
3	B	220	VAL
3	B	251	VAL
3	B	254	GLN
3	B	257	THR
3	B	280	VAL
3	B	301	VAL
3	B	312	ARG
4	C	2	GLN
4	C	27	ARG
4	C	76	ARG
4	C	78	ARG
4	C	94	THR
4	C	101	ASP
4	C	118	THR
4	C	136	VAL
4	C	162	VAL
4	C	187	ARG
4	C	202	THR
4	C	214	THR
4	C	223	LEU
4	C	234	VAL
4	C	236	THR
4	C	237	GLU
4	C	240	LEU
4	C	243	VAL
5	D	19	GLU
5	D	23	VAL
5	D	50	VAL
5	D	52	THR
5	D	58	VAL
5	D	101	THR
5	D	149	ARG
5	D	161	ASP

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Mol	Chain	Res	Type
5	D	172	VAL
6	E	36	PRO
6	E	102	VAL
6	E	156	ASP
7	F	12	LEU
7	F	50	VAL
7	F	91	VAL
9	H	65	LEU
9	H	87	LYS
9	H	157	TYR
9	H	173	GLU
10	I	94	ASP
10	I	130	LEU
11	J	35	THR
11	J	39	VAL
11	J	46	ILE
11	J	47	THR
11	J	120	SER
11	J	130	VAL
12	K	10	GLN
12	K	98	VAL
12	K	107	THR
12	K	119	GLN
13	L	30	ARG
13	L	37	LYS
13	L	101	ASP
13	L	104	ASP
13	L	140	VAL
14	M	46	LEU
14	M	74	LYS
14	M	84	LYS
14	M	93	ARG
14	M	99	ARG
15	N	26	LEU
15	N	47	LEU
15	N	49	THR
15	N	127	LEU
15	N	135	VAL
15	N	142	THR
15	N	175	LEU
15	N	180	LEU
16	O	3	THR

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Mol	Chain	Res	Type
16	O	25	VAL
16	O	80	ASP
16	O	115	ARG
17	P	16	VAL
17	P	21	VAL
17	P	52	LYS
17	P	91	LYS
17	P	98	ILE
18	Q	16	ASN
18	Q	18	PRO
18	Q	30	VAL
18	Q	57	ASP
19	R	13	THR
19	R	39	THR
19	R	55	GLN
19	R	143	VAL
20	S	10	VAL
20	S	44	GLN
21	T	39	ASN
21	T	48	VAL
21	T	82	THR
21	T	89	ARG
21	T	96	VAL
21	T	115	GLU
22	U	52	THR
23	V	13	PRO
24	W	26	ILE
24	W	52	VAL
24	W	88	THR
24	W	120	PRO
24	W	142	ASP
24	W	146	ILE
25	X	43	VAL
25	X	49	ARG
25	X	52	PRO
25	X	72	VAL
25	X	79	GLU
25	X	82	GLU
25	X	88	GLU
26	Y	154	ARG
26	Y	157	ILE
26	Y	189	ASN

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Mol	Chain	Res	Type
26	Y	203	VAL
28	1	25	LYS
29	2	18	ASN
30	3	18	GLN
30	3	22	VAL
30	3	56	PRO
30	3	87	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (88) such sidechains are listed below:

Mol	Chain	Res	Type
2	A	47	HIS
2	A	199	HIS
2	A	218	ASN
3	B	2	GLN
3	B	27	ASN
3	B	55	ASN
3	B	127	GLN
3	B	145	HIS
3	B	221	GLN
3	B	238	ASN
3	B	243	ASN
3	B	260	HIS
3	B	266	ASN
3	B	320	GLN
3	B	332	ASN
4	C	67	GLN
4	C	73	GLN
4	C	129	HIS
4	C	163	HIS
5	D	103	ASN
6	E	55	ASN
6	E	106	ASN
6	E	143	GLN
8	G	64	ASN
9	H	40	GLN
9	H	59	GLN
9	H	75	HIS
10	I	99	GLN
10	I	102	GLN
10	I	118	ASN
11	J	25	GLN

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Mol	Chain	Res	Type
11	J	52	GLN
11	J	107	ASN
11	J	142	ASN
12	K	10	GLN
12	K	119	GLN
13	L	18	HIS
13	L	41	HIS
14	M	24	GLN
14	M	58	GLN
14	M	142	GLN
14	M	170	ASN
15	N	22	GLN
15	N	107	ASN
15	N	132	ASN
15	N	140	GLN
17	P	50	GLN
17	P	66	GLN
17	P	73	HIS
17	P	74	GLN
17	P	89	ASN
17	P	101	GLN
17	P	118	GLN
18	Q	16	ASN
18	Q	40	HIS
19	R	22	GLN
19	R	94	ASN
19	R	98	ASN
19	R	117	HIS
19	R	122	GLN
20	S	7	HIS
20	S	9	HIS
20	S	44	GLN
20	S	53	ASN
20	S	55	GLN
20	S	56	ASN
21	T	11	GLN
21	T	39	ASN
22	U	39	ASN
22	U	48	ASN
23	V	60	GLN
24	W	27	HIS
24	W	110	GLN

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Mol	Chain	Res	Type
24	W	119	HIS
24	W	141	HIS
25	X	22	ASN
25	X	23	HIS
26	Y	119	GLN
26	Y	133	HIS
26	Y	134	HIS
26	Y	149	GLN
26	Y	189	ASN
28	1	8	GLN
28	1	16	HIS
28	1	28	HIS
29	2	45	ASN
30	3	2	GLN
30	3	48	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2745/2923 (93%)	232 (8%)	30 (1%)
31	9	121/122 (99%)	18 (14%)	1 (0%)
All	All	2866/3045 (94%)	250 (8%)	31 (1%)

All (250) 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	169	A

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Mol	Chain	Res	Type
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
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	461	C
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	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	701	U
1	0	759	C

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Mol	Chain	Res	Type
1	0	777	U
1	0	809	G
1	0	821	U
1	0	835	U
1	0	840	U
1	0	857	A
1	0	858	U
1	0	868	G
1	0	869	G
1	0	871	G
1	0	872	U
1	0	875	A
1	0	877	G
1	0	878	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	1137	G
1	0	1151	G
1	0	1164	U
1	0	1165	G
1	0	1166	A
1	0	1174	A
1	0	1175	G

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Mol	Chain	Res	Type
1	0	1185	U
1	0	1192	A
1	0	1193	A
1	0	1206	U
1	0	1208	C
1	0	1216	G
1	0	1237	U
1	0	1238	C
1	0	1239	G
1	0	1242	A
1	0	1279	U
1	0	1289	C
1	0	1331	G
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	1485	A
1	0	1505	U
1	0	1506	U
1	0	1524	U
1	0	1525	G
1	0	1526	A
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	1730	G

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Mol	Chain	Res	Type
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	1879	U
1	0	1919	A
1	0	1942	A
1	0	1971	G
1	0	1973	A
1	0	1978	A
1	0	1979	G
1	0	1996	U
1	0	2004	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	2110	G
1	0	2133	U
1	0	2243	C
1	0	2258	A
1	0	2271	G
1	0	2272	G
1	0	2291	A
1	0	2317	C
1	0	2321	A
1	0	2354	A

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Mol	Chain	Res	Type
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	2526	C
1	0	2527	U
1	0	2533	C
1	0	2537	G
1	0	2542	C
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	2634	G
1	0	2645	U
1	0	2649	A
1	0	2650	U
1	0	2664	A
1	0	2681	A
1	0	2682	C
1	0	2718	C
1	0	2719	A
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

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Mol	Chain	Res	Type
1	0	2825	C
1	0	2867	G
1	0	2876	G
1	0	2890	A
1	0	2896	A
1	0	2903	C
1	0	2914	A
31	9	2	U
31	9	7	G
31	9	14	G
31	9	22	G
31	9	23	U
31	9	24	U
31	9	25	G
31	9	39	U
31	9	40	C
31	9	41	C
31	9	43	G
31	9	44	A
31	9	52	A
31	9	57	A
31	9	66	G
31	9	77	A
31	9	114	G
31	9	122	C

All (31) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	69	A
1	0	129	A
1	0	169	A
1	0	338	C
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	898	G
1	0	1237	U

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Mol	Chain	Res	Type
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	1942	A
1	0	2313	C
1	0	2467	A
1	0	2526	C
1	0	2536	C
1	0	2541	U
1	0	2649	A
1	0	2681	A
1	0	2718	C
1	0	2726	U
1	0	2791	U
31	9	65	A

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

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	18,21,22	1.42	2 (11%)	21,30,33	1.27	3 (14%)
1	OMG	0	2588	1	23,26,27	0.30	0	32,38,41	0.37	0
1	UR3	0	2619	1	19,22,23	0.55	0	26,32,35	0.67	1 (3%)
1	1MA	0	628	34,1	21,25,26	0.69	1 (4%)	30,37,40	0.74	1 (3%)
1	OMU	0	2587	34,1	19,22,23	0.32	0	25,31,34	0.43	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns.

'-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	PSU	0	2621	1	-	0/7/25/26	0/2/2/2
1	OMG	0	2588	1	-	0/9/27/28	0/3/3/3
1	UR3	0	2619	1	-	0/7/25/26	0/2/2/2
1	1MA	0	628	34,1	-	2/7/25/26	0/3/3/3
1	OMU	0	2587	34,1	-	0/9/27/28	0/2/2/2

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	2621	PSU	C2-N1	4.66	1.42	1.36
1	0	2621	PSU	C6-C5	2.73	1.38	1.35
1	0	628	1MA	C6-N6	2.41	1.33	1.28

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2621	PSU	C6-C5-C4	3.13	120.29	118.17
1	0	2621	PSU	C6-N1-C2	-2.87	120.03	122.69
1	0	628	1MA	N1-C2-N3	2.79	129.31	126.00
1	0	2621	PSU	O2-C2-N1	2.63	125.49	122.79
1	0	2619	UR3	C4-N3-C2	2.61	126.68	124.58

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	0	628	1MA	C2'-C1'-N9-C8
1	0	628	1MA	C2'-C1'-N9-C4

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 ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry

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
37	HMT	0	9101	-	41,43,43	0.69	0	43,66,66	2.05	12 (27%)

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
37	HMT	0	9101	-	-	4/27/74/74	0/5/5/5

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	0	9101	HMT	O7-C22-C21	4.87	119.71	111.16
37	0	9101	HMT	O4-C19-C20	4.29	119.11	111.24
37	0	9101	HMT	O1-C17-O2	-4.21	101.49	108.09
37	0	9101	HMT	C18-O3-C2	-3.61	110.58	116.53
37	0	9101	HMT	O1-C14-C13	3.19	132.10	127.86
37	0	9101	HMT	C11-C10-N1	-3.01	99.63	103.94
37	0	9101	HMT	C3-O4-C19	-3.01	112.51	117.24
37	0	9101	HMT	O2-C15-C16	3.00	131.85	127.86
37	0	9101	HMT	C12-C11-C10	-2.63	99.30	104.20
37	0	9101	HMT	C7-C6-C16	-2.60	113.71	119.35
37	0	9101	HMT	C9-C4-C5	-2.53	111.84	115.96
37	0	9101	HMT	O4-C19-O5	-2.17	120.11	123.95

There are no chirality outliers.

All (4) torsion outliers are listed below:

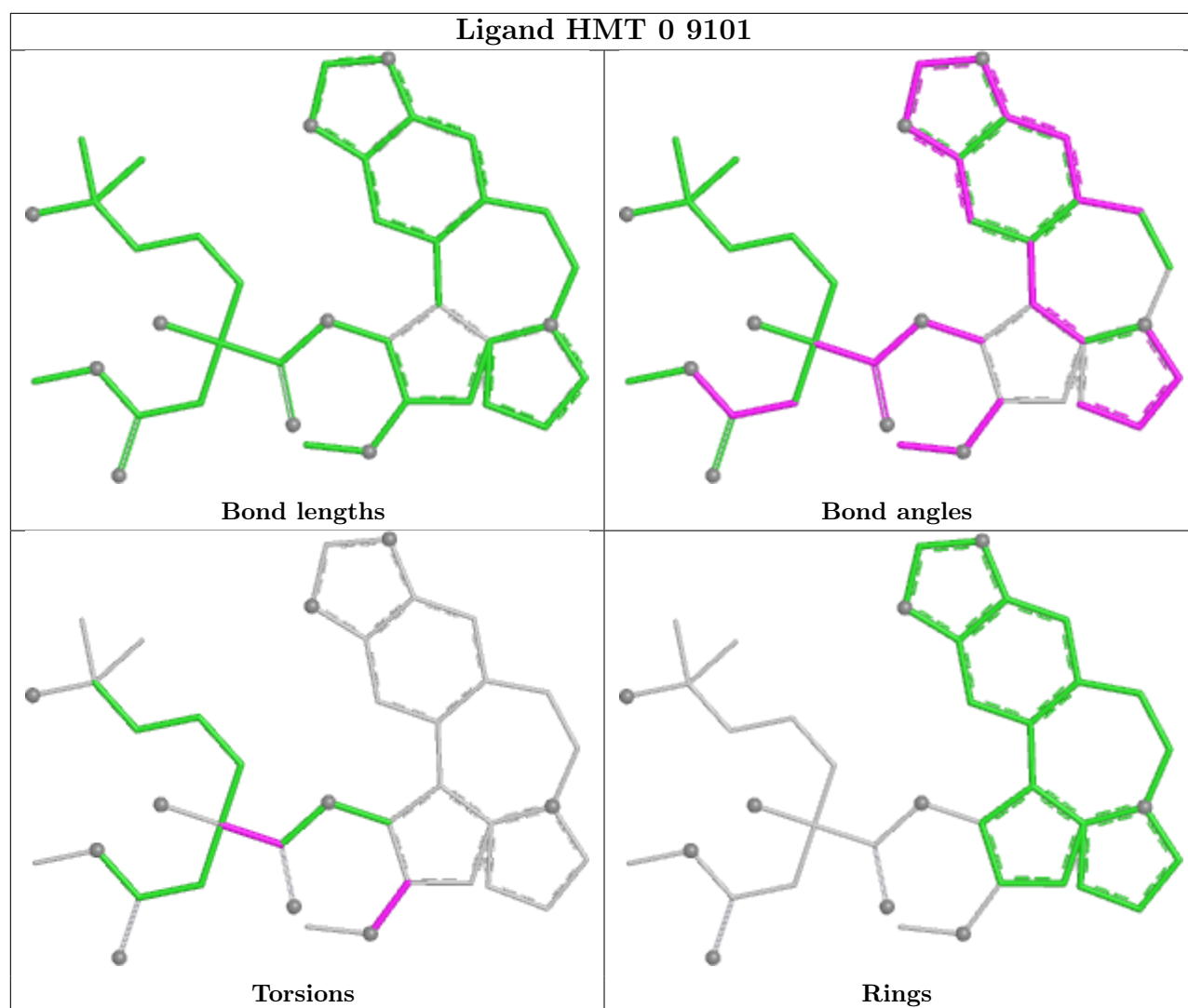
Mol	Chain	Res	Type	Atoms
37	0	9101	HMT	C1-C2-O3-C18
37	0	9101	HMT	C3-C2-O3-C18
37	0	9101	HMT	O5-C19-C20-C24
37	0	9101	HMT	O4-C19-C20-C24

There are no ring outliers.

1 monomer is involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
37	0	9101	HMT	11	0

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



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 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, 95th 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	2749/2923 (94%)	-0.45	37 (1%) 75 73	22, 50, 99, 170	0
2	A	237/237 (100%)	0.46	13 (5%) 30 27	30, 62, 104, 124	0
3	B	337/337 (100%)	0.39	7 (2%) 63 61	30, 59, 88, 105	0
4	C	246/246 (100%)	0.29	4 (1%) 70 68	25, 51, 78, 88	0
5	D	140/177 (79%)	1.82	49 (35%) 1 1	70, 112, 138, 148	0
6	E	172/172 (100%)	0.80	16 (9%) 14 12	51, 76, 98, 104	0
7	F	119/119 (100%)	1.03	11 (9%) 14 12	58, 83, 116, 132	0
8	G	29/348 (8%)	1.55	10 (34%) 1 1	78, 102, 109, 111	0
9	H	160/177 (90%)	0.61	10 (6%) 26 23	49, 73, 112, 120	0
10	I	70/70 (100%)	2.67	46 (65%) 0 0	140, 157, 176, 177	0
11	J	142/142 (100%)	0.29	4 (2%) 55 51	39, 56, 79, 98	0
12	K	132/132 (100%)	0.27	2 (1%) 72 70	39, 56, 81, 85	0
13	L	145/165 (87%)	0.84	17 (11%) 9 7	30, 76, 128, 140	0
14	M	194/194 (100%)	0.13	1 (0%) 87 86	35, 49, 67, 73	0
15	N	186/186 (100%)	1.00	29 (15%) 5 4	48, 75, 130, 137	0
16	O	115/115 (100%)	0.60	4 (3%) 47 43	42, 61, 79, 88	0
17	P	143/143 (100%)	0.64	8 (5%) 30 26	43, 63, 80, 87	0
18	Q	95/95 (100%)	0.09	0 100 100	40, 53, 67, 79	0
19	R	150/150 (100%)	-0.08	0 100 100	33, 51, 71, 82	0
20	S	81/81 (100%)	0.43	2 (2%) 58 55	49, 68, 90, 99	0
21	T	119/119 (100%)	0.62	6 (5%) 34 30	42, 66, 92, 119	0
22	U	53/53 (100%)	0.51	3 (5%) 29 26	46, 63, 84, 89	0
23	V	65/65 (100%)	1.36	12 (18%) 3 3	62, 87, 128, 136	0
24	W	154/154 (100%)	0.36	0 100 100	38, 56, 73, 83	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	X	82/82 (100%)	0.64	8 (9%) 13 11	50, 68, 93, 107	0
26	Y	142/142 (100%)	0.15	3 (2%) 63 61	26, 50, 75, 96	0
27	Z	73/73 (100%)	1.58	23 (31%) 1 1	69, 94, 110, 115	0
28	1	56/56 (100%)	-0.36	0 100 100	30, 36, 44, 54	0
29	2	46/50 (92%)	0.78	8 (17%) 4 3	41, 70, 100, 111	0
30	3	92/92 (100%)	0.40	2 (2%) 62 59	42, 70, 83, 95	0
31	9	122/122 (100%)	0.06	4 (3%) 49 45	42, 72, 98, 150	0
All	All	6646/7217 (92%)	0.15	339 (5%) 33 29	22, 58, 112, 177	0

All (339) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
23	V	1	THR	10.8
10	I	128	THR	7.8
5	D	10	PHE	7.1
31	9	1	U	6.1
23	V	39	ALA	6.0
10	I	74	ILE	5.9
10	I	113	SER	5.8
23	V	2	VAL	5.4
5	D	40	ILE	5.3
23	V	43	PRO	5.2
10	I	120	ALA	5.1
7	F	101	ALA	5.0
15	N	168	LEU	5.0
10	I	112	LEU	4.8
13	L	82	ALA	4.7
11	J	70	PHE	4.6
15	N	166	ALA	4.6
27	Z	46	SER	4.5
31	9	2	U	4.5
15	N	154	LEU	4.5
23	V	40	PRO	4.5
5	D	35	ALA	4.4
10	I	95	LEU	4.4
27	Z	43	GLY	4.4
10	I	104	ALA	4.4
27	Z	34	SER	4.4
10	I	127	CYS	4.4
10	I	71	ALA	4.4

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Mol	Chain	Res	Type	RSRZ
10	I	70	THR	4.4
6	E	45	ASP	4.3
5	D	107	GLY	4.2
1	0	1161	A	4.2
8	G	71	LEU	4.2
10	I	132	VAL	4.1
15	N	159	TYR	4.1
15	N	169	PRO	4.1
1	0	138	U	4.1
15	N	158	LEU	4.1
5	D	63	ILE	4.0
5	D	90	LEU	4.0
29	2	49	GLU	4.0
1	0	10	U	4.0
27	Z	35	SER	4.0
5	D	55	LYS	3.9
9	H	171	GLY	3.9
9	H	43	ALA	3.9
5	D	174	VAL	3.9
5	D	134	LEU	3.9
9	H	174	LEU	3.9
10	I	124	VAL	3.8
3	B	1	PRO	3.8
1	0	1160	G	3.8
1	0	1162	G	3.8
6	E	154	ILE	3.8
10	I	130	LEU	3.8
2	A	32	VAL	3.8
8	G	12	ILE	3.7
5	D	69	ILE	3.7
10	I	83	GLY	3.7
16	O	22	GLY	3.7
27	Z	58	ASN	3.6
10	I	85	GLY	3.6
13	L	146	GLY	3.6
5	D	66	GLY	3.6
10	I	119	ALA	3.6
10	I	116	LEU	3.5
25	X	85	VAL	3.5
25	X	87	ALA	3.5
9	H	140	TYR	3.5
5	D	104	PHE	3.5

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Mol	Chain	Res	Type	RSRZ
9	H	115	GLY	3.4
27	Z	36	GLY	3.4
10	I	97	VAL	3.4
10	I	134	ILE	3.4
15	N	147	ILE	3.4
5	D	128	LEU	3.4
15	N	167	ASP	3.4
27	Z	42	TYR	3.4
1	O	1175	G	3.4
2	A	37	VAL	3.3
10	I	123	VAL	3.3
13	L	148	GLU	3.3
23	V	36	ALA	3.3
4	C	139	VAL	3.3
27	Z	106	SER	3.2
15	N	164	ASP	3.2
10	I	111	LEU	3.2
7	F	102	GLY	3.2
6	E	7	ILE	3.2
13	L	102	ASP	3.2
15	N	145	ALA	3.2
8	G	23	ILE	3.2
27	Z	50	VAL	3.2
13	L	60	GLU	3.1
30	3	83	TRP	3.1
9	H	114	ASP	3.1
10	I	88	GLN	3.1
5	D	44	ILE	3.1
29	2	35	ARG	3.1
6	E	10	ASP	3.1
10	I	72	GLU	3.1
1	O	2769	C	3.1
2	A	82	VAL	3.1
5	D	172	VAL	3.1
1	O	1279	U	3.0
10	I	107	LYS	3.0
5	D	18	ILE	3.0
7	F	26	THR	3.0
5	D	37	ALA	3.0
13	L	81	VAL	3.0
17	P	116	SER	3.0
23	V	38	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
11	J	4	ALA	3.0
13	L	97	VAL	3.0
10	I	91	PHE	3.0
2	A	211	LYS	2.9
13	L	91	VAL	2.9
26	Y	235	GLU	2.9
10	I	82	THR	2.9
10	I	117	THR	2.9
7	F	91	VAL	2.9
10	I	67	VAL	2.9
27	Z	45	VAL	2.9
5	D	89	PRO	2.9
27	Z	41	ARG	2.9
1	O	2541	U	2.9
15	N	1	ALA	2.9
9	H	71	SER	2.8
10	I	75	LYS	2.8
5	D	57	THR	2.8
27	Z	44	ARG	2.8
1	O	1171	A	2.8
10	I	84	SER	2.8
5	D	135	VAL	2.8
6	E	6	GLU	2.8
15	N	163	PHE	2.8
17	P	71	TYR	2.8
5	D	68	PRO	2.8
2	A	68	ILE	2.8
10	I	100	VAL	2.8
20	S	74	ALA	2.8
10	I	101	LYS	2.7
31	9	24	U	2.7
5	D	70	GLY	2.7
5	D	62	ASP	2.7
5	D	171	ASP	2.7
13	L	78	ALA	2.7
21	T	119	ALA	2.7
27	Z	40	ALA	2.7
29	2	48	ASP	2.7
5	D	61	PHE	2.7
5	D	11	HIS	2.7
8	G	73	ASP	2.7
25	X	83	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
1	0	2345	A	2.7
15	N	157	PRO	2.7
10	I	114	TYR	2.7
2	A	88	ILE	2.7
17	P	114	LEU	2.7
8	G	63	ARG	2.7
7	F	22	VAL	2.7
22	U	52	THR	2.7
27	Z	85	ASP	2.7
27	Z	51	ALA	2.7
1	0	2344	G	2.6
6	E	126	ILE	2.6
3	B	119	HIS	2.6
29	2	38	LYS	2.6
6	E	97	VAL	2.6
5	D	166	ILE	2.6
1	0	1169	U	2.6
5	D	53	LYS	2.6
6	E	13	ALA	2.6
25	X	65	ASN	2.6
1	0	282	C	2.6
1	0	735	C	2.6
1	0	1176	C	2.6
6	E	108	LEU	2.6
13	L	145	LEU	2.6
15	N	186	LEU	2.6
2	A	97	ALA	2.6
5	D	130	VAL	2.6
10	I	118	ASN	2.6
22	U	51	TRP	2.6
2	A	36	ASP	2.6
10	I	73	LEU	2.6
15	N	62	HIS	2.6
5	D	26	GLY	2.6
5	D	106	PHE	2.6
1	0	1173	A	2.5
4	C	16	VAL	2.5
1	0	1524	U	2.5
10	I	103	ILE	2.5
22	U	49	LEU	2.5
27	Z	70	ARG	2.5
1	0	1190	G	2.5

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Mol	Chain	Res	Type	RSRZ
21	T	117	ASP	2.5
1	0	1561	U	2.5
9	H	86	TYR	2.5
10	I	80	PHE	2.5
21	T	118	SER	2.5
27	Z	37	ARG	2.5
6	E	12	ASP	2.5
1	0	2004	U	2.5
16	O	25	VAL	2.5
14	M	1	ALA	2.5
15	N	137	ALA	2.5
10	I	133	THR	2.4
1	0	1163	G	2.4
17	P	58	SER	2.4
6	E	53	GLU	2.4
15	N	161	GLY	2.4
5	D	72	LYS	2.4
6	E	11	VAL	2.4
15	N	41	LYS	2.4
15	N	148	ALA	2.4
7	F	17	LEU	2.4
12	K	109	LEU	2.4
17	P	141	ILE	2.4
2	A	85	SER	2.4
29	2	37	HIS	2.4
1	0	2237	G	2.4
25	X	41	PHE	2.4
5	D	13	MET	2.4
5	D	59	GLY	2.4
1	0	1172	G	2.4
15	N	150	TYR	2.4
13	L	143	THR	2.4
13	L	77	ALA	2.4
17	P	108	LEU	2.3
27	Z	54	GLU	2.3
6	E	156	ASP	2.3
10	I	129	SER	2.3
5	D	58	VAL	2.3
5	D	75	LEU	2.3
15	N	165	ALA	2.3
3	B	99	GLU	2.3
5	D	25	MET	2.3

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Mol	Chain	Res	Type	RSRZ
13	L	56	LYS	2.3
13	L	83	GLU	2.3
16	O	23	GLY	2.3
5	D	101	THR	2.3
25	X	66	THR	2.3
1	0	1181	A	2.3
1	0	1192	A	2.3
15	N	80	SER	2.3
29	2	42	TRP	2.3
31	9	23	U	2.3
2	A	67	LEU	2.3
25	X	84	ILE	2.3
9	H	39	LYS	2.3
2	A	84	VAL	2.3
5	D	141	VAL	2.3
7	F	111	ILE	2.2
11	J	46	ILE	2.2
7	F	99	THR	2.2
11	J	144	THR	2.2
25	X	7	GLU	2.2
29	2	44	ARG	2.2
10	I	90	ASP	2.2
15	N	160	SER	2.2
5	D	23	VAL	2.2
1	0	1199	A	2.2
27	Z	38	PHE	2.2
8	G	26	MET	2.2
5	D	12	GLU	2.2
7	F	103	GLU	2.2
10	I	66	GLY	2.2
17	P	121	ASP	2.2
3	B	29	TRP	2.2
3	B	100	VAL	2.2
8	G	15	TRP	2.2
15	N	139	TRP	2.2
1	0	288	A	2.2
23	V	12	THR	2.2
5	D	17	ARG	2.2
10	I	87	PRO	2.2
10	I	92	VAL	2.2
7	F	106	ALA	2.2
1	0	960	G	2.2

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Mol	Chain	Res	Type	RSRZ
2	A	165	THR	2.2
13	L	55	GLN	2.2
5	D	154	LYS	2.2
23	V	44	GLY	2.2
5	D	91	ALA	2.1
5	D	65	GLU	2.1
5	D	169	THR	2.1
26	Y	216	ARG	2.1
1	0	1165	G	2.1
1	0	1525	G	2.1
1	0	1929	G	2.1
3	B	278	PRO	2.1
8	G	13	PRO	2.1
27	Z	83	TYR	2.1
27	Z	39	GLY	2.1
15	N	84	THR	2.1
10	I	121	LYS	2.1
21	T	112	LEU	2.1
29	2	27	LEU	2.1
8	G	27	ILE	2.1
21	T	40	VAL	2.1
10	I	96	SER	2.1
1	0	2914	A	2.1
5	D	131	THR	2.1
17	P	18	LYS	2.1
6	E	18	LEU	2.1
15	N	180	LEU	2.1
13	L	105	TYR	2.1
9	H	168	VAL	2.1
26	Y	187	VAL	2.1
6	E	39	ASP	2.1
5	D	56	ARG	2.1
23	V	52	ALA	2.1
10	I	106	GLN	2.1
5	D	88	LEU	2.1
7	F	63	ILE	2.1
15	N	172	PHE	2.1
27	Z	69	ASP	2.0
15	N	67	ALA	2.0
30	3	41	GLU	2.0
1	0	1184	C	2.0
1	0	1186	C	2.0

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Mol	Chain	Res	Type	RSRZ
12	K	110	LYS	2.0
20	S	2	TRP	2.0
1	0	510	U	2.0
23	V	3	LEU	2.0
6	E	118	ILE	2.0
16	O	102	ILE	2.0
4	C	133	ARG	2.0
4	C	180	SER	2.0
8	G	29	SER	2.0
3	B	98	THR	2.0
21	T	26	THR	2.0
1	0	1198	U	2.0
2	A	99	ILE	2.0
15	N	112	GLY	2.0
23	V	42	ASN	2.0
13	L	106	VAL	2.0
27	Z	47	ARG	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, 95th 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($\text{\AA}^2$)	Q<0.9
1	UR3	0	2619	21/22	0.97	0.07	40,43,45,50	0
1	OMU	0	2587	21/22	0.98	0.06	35,38,41,42	0
1	OMG	0	2588	24/25	0.98	0.06	35,38,39,41	0
1	1MA	0	628	23/24	0.98	0.06	31,34,35,38	0
1	PSU	0	2621	20/21	0.98	0.06	26,30,42,42	0

6.3 Carbohydrates [i](#)

There are no oligosaccharides 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, 95th 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
34	NA	0	8573	1/1	0.42	0.54	92,92,92,92	0
36	SR	0	8983	1/1	0.51	0.28	191,191,191,191	0
34	NA	0	8571	1/1	0.52	0.38	96,96,96,96	0
36	SR	9	9003	1/1	0.53	0.23	194,194,194,194	0
36	SR	0	8976	1/1	0.60	0.22	199,199,199,199	0
34	NA	0	8557	1/1	0.63	0.40	77,77,77,77	0
34	NA	0	8561	1/1	0.63	0.95	99,99,99,99	0
36	SR	0	8956	1/1	0.63	0.15	183,183,183,183	0
34	NA	0	8525	1/1	0.64	0.23	70,70,70,70	0
36	SR	0	8959	1/1	0.67	0.17	189,189,189,189	0
32	MG	0	8049	1/1	0.67	0.32	95,95,95,95	0
36	SR	0	9004	1/1	0.69	0.20	200,200,200,200	0
36	SR	0	9001	1/1	0.69	0.18	187,187,187,187	0
36	SR	J	8986	1/1	0.70	0.37	200,200,200,200	0
34	NA	0	8522	1/1	0.71	0.58	96,96,96,96	0
36	SR	0	8923	1/1	0.71	0.25	192,192,192,192	0
36	SR	0	8982	1/1	0.73	0.36	200,200,200,200	0
36	SR	0	8933	1/1	0.73	0.28	159,159,159,159	0
36	SR	0	8944	1/1	0.73	0.18	187,187,187,187	0
36	SR	0	8919	1/1	0.73	0.22	168,168,168,168	0
36	SR	0	8922	1/1	0.73	0.21	158,158,158,158	0
34	NA	0	8570	1/1	0.73	0.28	59,59,59,59	0
36	SR	9	8980	1/1	0.74	0.15	188,188,188,188	0
36	SR	0	8993	1/1	0.74	0.18	186,186,186,186	0
36	SR	0	8947	1/1	0.75	0.23	199,199,199,199	0
36	SR	0	8913	1/1	0.75	0.39	169,169,169,169	0
34	NA	0	8560	1/1	0.75	0.25	73,73,73,73	0
32	MG	0	8063	1/1	0.76	0.30	79,79,79,79	0
36	SR	A	8977	1/1	0.76	0.10	182,182,182,182	0
34	NA	0	8559	1/1	0.76	0.54	98,98,98,98	0
36	SR	9	8978	1/1	0.76	0.21	165,165,165,165	0
36	SR	0	9000	1/1	0.76	0.25	180,180,180,180	0
34	NA	0	8518	1/1	0.76	0.50	96,96,96,96	0
34	NA	0	8546	1/1	0.77	0.47	107,107,107,107	0
36	SR	0	8997	1/1	0.77	0.37	200,200,200,200	0
34	NA	0	8509	1/1	0.77	0.31	71,71,71,71	0
34	NA	0	8574	1/1	0.77	0.51	75,75,75,75	0
36	SR	0	8989	1/1	0.77	0.26	191,191,191,191	0
34	NA	0	8567	1/1	0.78	0.57	81,81,81,81	0
34	NA	0	8511	1/1	0.78	0.35	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
32	MG	A	8051	1/1	0.78	0.13	92,92,92,92	0
36	SR	0	8920	1/1	0.78	0.25	200,200,200,200	0
32	MG	0	8083	1/1	0.78	0.16	68,68,68,68	0
36	SR	0	9006	1/1	0.79	0.28	200,200,200,200	0
34	NA	0	8555	1/1	0.79	0.38	59,59,59,59	0
36	SR	0	8996	1/1	0.79	0.27	200,200,200,200	0
36	SR	B	8987	1/1	0.80	0.44	200,200,200,200	0
34	NA	S	8510	1/1	0.80	0.13	51,51,51,51	0
34	NA	0	8548	1/1	0.80	0.33	61,61,61,61	0
36	SR	0	8979	1/1	0.80	0.16	196,196,196,196	0
36	SR	0	8991	1/1	0.80	0.18	199,199,199,199	0
32	MG	0	8092	1/1	0.81	0.31	80,80,80,80	0
36	SR	B	8950	1/1	0.81	0.20	123,123,123,123	0
34	NA	0	8575	1/1	0.81	0.56	100,100,100,100	0
36	SR	0	8924	1/1	0.81	0.22	166,166,166,166	0
33	K	0	8401	1/1	0.81	0.39	130,130,130,130	0
36	SR	0	8975	1/1	0.81	0.19	150,150,150,150	0
36	SR	0	8942	1/1	0.81	0.15	138,138,138,138	0
34	NA	0	8520	1/1	0.82	0.30	60,60,60,60	0
34	NA	0	8501	1/1	0.83	0.16	43,43,43,43	0
36	SR	0	8988	1/1	0.83	0.09	182,182,182,182	0
34	NA	0	8554	1/1	0.83	0.30	72,72,72,72	0
36	SR	0	8927	1/1	0.83	0.18	172,172,172,172	0
36	SR	0	8968	1/1	0.83	0.17	168,168,168,168	0
34	NA	0	8533	1/1	0.83	0.38	73,73,73,73	0
36	SR	0	8938	1/1	0.83	0.17	198,198,198,198	0
34	NA	0	8564	1/1	0.83	0.17	74,74,74,74	0
32	MG	0	8056	1/1	0.83	0.22	67,67,67,67	0
34	NA	0	8523	1/1	0.84	0.15	54,54,54,54	0
36	SR	0	9002	1/1	0.84	0.15	176,176,176,176	0
36	SR	0	8957	1/1	0.84	0.22	200,200,200,200	0
34	NA	0	8541	1/1	0.84	0.19	59,59,59,59	0
36	SR	0	8960	1/1	0.84	0.12	162,162,162,162	0
36	SR	0	8990	1/1	0.84	0.23	161,161,161,161	0
34	NA	9	8572	1/1	0.84	0.12	82,82,82,82	0
36	SR	0	8974	1/1	0.84	0.17	183,183,183,183	0
32	MG	0	8090	1/1	0.84	0.26	96,96,96,96	0
34	NA	0	8531	1/1	0.84	0.25	56,56,56,56	0
36	SR	0	8953	1/1	0.84	0.20	179,179,179,179	0
34	NA	0	8502	1/1	0.85	0.21	69,69,69,69	0
36	SR	0	8951	1/1	0.85	0.10	144,144,144,144	0
36	SR	0	8916	1/1	0.85	0.19	118,118,118,118	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
36	SR	0	8965	1/1	0.85	0.15	145,145,145,145	0
32	MG	0	8069	1/1	0.85	0.43	82,82,82,82	0
36	SR	0	8971	1/1	0.85	0.21	181,181,181,181	0
36	SR	A	8930	1/1	0.85	0.16	147,147,147,147	0
37	HMT	0	9101	39/39	0.85	0.21	69,75,86,87	0
32	MG	0	8085	1/1	0.86	0.44	89,89,89,89	0
36	SR	0	8995	1/1	0.86	0.17	148,148,148,148	0
36	SR	0	8949	1/1	0.86	0.17	134,134,134,134	0
34	NA	0	8536	1/1	0.86	0.13	56,56,56,56	0
36	SR	F	9005	1/1	0.86	0.11	138,138,138,138	0
36	SR	0	8984	1/1	0.86	0.16	157,157,157,157	0
32	MG	0	8037	1/1	0.86	0.37	83,83,83,83	0
34	NA	Q	8540	1/1	0.86	0.26	67,67,67,67	0
32	MG	9	8040	1/1	0.86	0.35	103,103,103,103	0
34	NA	0	8506	1/1	0.86	0.12	65,65,65,65	0
34	NA	0	8552	1/1	0.87	0.27	73,73,73,73	0
32	MG	9	8074	1/1	0.87	0.20	71,71,71,71	0
36	SR	0	8994	1/1	0.87	0.31	200,200,200,200	0
36	SR	0	8917	1/1	0.88	0.13	117,117,117,117	0
32	MG	0	8053	1/1	0.88	0.25	79,79,79,79	0
34	NA	0	8568	1/1	0.88	0.17	60,60,60,60	0
34	NA	0	8542	1/1	0.88	0.21	52,52,52,52	0
32	MG	0	8031	1/1	0.88	0.17	83,83,83,83	0
34	NA	0	8562	1/1	0.88	0.34	63,63,63,63	0
36	SR	0	8915	1/1	0.88	0.14	128,128,128,128	0
32	MG	0	8080	1/1	0.88	0.11	75,75,75,75	0
36	SR	0	8936	1/1	0.88	0.12	106,106,106,106	0
32	MG	0	8071	1/1	0.89	0.35	72,72,72,72	0
36	SR	0	8967	1/1	0.89	0.15	132,132,132,132	0
32	MG	0	8035	1/1	0.89	0.26	63,63,63,63	0
34	NA	0	8529	1/1	0.89	0.20	46,46,46,46	0
36	SR	0	8928	1/1	0.89	0.18	140,140,140,140	0
34	NA	0	8569	1/1	0.89	0.21	70,70,70,70	0
36	SR	0	8955	1/1	0.89	0.24	200,200,200,200	0
36	SR	0	8934	1/1	0.89	0.23	172,172,172,172	0
34	NA	R	8532	1/1	0.89	0.25	59,59,59,59	0
34	NA	0	8547	1/1	0.89	0.26	49,49,49,49	0
34	NA	0	8556	1/1	0.89	0.24	47,47,47,47	0
36	SR	0	8985	1/1	0.89	0.14	122,122,122,122	0
32	MG	0	8077	1/1	0.90	0.08	38,38,38,38	0
36	SR	0	8992	1/1	0.90	0.37	132,132,132,132	0
36	SR	0	8931	1/1	0.90	0.11	114,114,114,114	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
36	SR	0	8939	1/1	0.90	0.14	147,147,147,147	0
36	SR	0	8941	1/1	0.90	0.11	113,113,113,113	0
36	SR	0	9007	1/1	0.90	0.37	200,200,200,200	0
36	SR	0	8910	1/1	0.90	0.14	108,108,108,108	0
32	MG	0	8039	1/1	0.90	0.17	56,56,56,56	0
32	MG	0	8030	1/1	0.91	0.29	91,91,91,91	0
36	SR	0	8958	1/1	0.91	0.09	105,105,105,105	0
32	MG	0	8066	1/1	0.91	0.21	62,62,62,62	0
34	NA	0	8519	1/1	0.91	0.11	42,42,42,42	0
36	SR	0	8964	1/1	0.91	0.09	130,130,130,130	0
36	SR	0	8981	1/1	0.91	0.16	159,159,159,159	0
34	NA	0	8507	1/1	0.91	0.15	49,49,49,49	0
34	NA	M	8539	1/1	0.91	0.13	42,42,42,42	0
32	MG	0	8033	1/1	0.91	0.15	54,54,54,54	0
32	MG	T	8057	1/1	0.92	0.18	70,70,70,70	0
36	SR	0	8998	1/1	0.92	0.21	155,155,155,155	0
34	NA	0	8549	1/1	0.92	0.32	64,64,64,64	0
34	NA	0	8551	1/1	0.92	0.16	49,49,49,49	0
32	MG	0	8064	1/1	0.92	0.13	46,46,46,46	0
34	NA	0	8534	1/1	0.92	0.11	44,44,44,44	0
34	NA	9	8543	1/1	0.92	0.26	50,50,50,50	0
36	SR	0	8926	1/1	0.92	0.11	132,132,132,132	0
34	NA	9	8544	1/1	0.92	0.25	68,68,68,68	0
32	MG	0	8078	1/1	0.92	0.13	49,49,49,49	0
35	CL	0	8816	1/1	0.92	0.17	63,63,63,63	0
35	CL	J	8801	1/1	0.92	0.14	70,70,70,70	0
35	CL	J	8802	1/1	0.92	0.12	72,72,72,72	0
36	SR	0	8901	1/1	0.92	0.09	93,93,93,93	0
36	SR	S	8961	1/1	0.92	0.09	141,141,141,141	0
32	MG	0	8020	1/1	0.92	0.30	66,66,66,66	0
32	MG	0	8073	1/1	0.92	0.42	96,96,96,96	0
34	NA	0	8513	1/1	0.92	0.17	53,53,53,53	0
34	NA	0	8514	1/1	0.92	0.10	47,47,47,47	0
32	MG	0	8034	1/1	0.93	0.06	48,48,48,48	0
32	MG	0	8089	1/1	0.93	0.09	45,45,45,45	0
34	NA	0	8537	1/1	0.93	0.06	45,45,45,45	0
34	NA	0	8563	1/1	0.93	0.32	70,70,70,70	0
34	NA	C	8503	1/1	0.93	0.10	40,40,40,40	0
36	SR	0	8962	1/1	0.93	0.21	168,168,168,168	0
36	SR	A	8929	1/1	0.93	0.22	134,134,134,134	0
36	SR	0	8963	1/1	0.93	0.07	132,132,132,132	0
34	NA	J	8538	1/1	0.93	0.14	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
36	SR	0	8945	1/1	0.93	0.11	117,117,117,117	0
34	NA	0	8524	1/1	0.93	0.10	57,57,57,57	0
36	SR	0	8948	1/1	0.93	0.10	107,107,107,107	0
36	SR	0	8970	1/1	0.93	0.08	131,131,131,131	0
34	NA	0	8516	1/1	0.93	0.15	39,39,39,39	0
36	SR	1	8952	1/1	0.93	0.09	85,85,85,85	0
36	SR	3	8999	1/1	0.93	0.07	110,110,110,110	0
36	SR	0	8973	1/1	0.93	0.11	139,139,139,139	0
32	MG	0	8024	1/1	0.93	0.10	47,47,47,47	0
32	MG	0	8072	1/1	0.93	0.12	62,62,62,62	0
32	MG	0	8067	1/1	0.93	0.07	35,35,35,35	0
35	CL	A	8809	1/1	0.94	0.21	72,72,72,72	0
36	SR	0	8969	1/1	0.94	0.27	149,149,149,149	0
36	SR	0	8954	1/1	0.94	0.08	109,109,109,109	0
34	NA	0	8508	1/1	0.94	0.10	46,46,46,46	0
34	NA	0	8528	1/1	0.94	0.07	50,50,50,50	0
35	CL	Y	8820	1/1	0.94	0.07	45,45,45,45	0
32	MG	0	8010	1/1	0.94	0.08	52,52,52,52	0
32	MG	0	8059	1/1	0.94	0.13	50,50,50,50	0
36	SR	0	8911	1/1	0.94	0.07	92,92,92,92	0
36	SR	0	8946	1/1	0.94	0.09	117,117,117,117	0
32	MG	0	8075	1/1	0.94	0.13	58,58,58,58	0
34	NA	0	8565	1/1	0.94	0.17	73,73,73,73	0
32	MG	0	8036	1/1	0.94	0.12	50,50,50,50	0
36	SR	0	8966	1/1	0.94	0.10	113,113,113,113	0
32	MG	0	8017	1/1	0.94	0.09	39,39,39,39	0
32	MG	B	8042	1/1	0.95	0.20	60,60,60,60	0
36	SR	0	8914	1/1	0.95	0.10	113,113,113,113	0
32	MG	0	8038	1/1	0.95	0.07	63,63,63,63	0
34	NA	0	8515	1/1	0.95	0.09	43,43,43,43	0
36	SR	0	8972	1/1	0.95	0.22	135,135,135,135	0
32	MG	Y	8086	1/1	0.95	0.06	46,46,46,46	0
36	SR	0	8918	1/1	0.95	0.08	87,87,87,87	0
34	NA	0	8530	1/1	0.95	0.17	56,56,56,56	0
34	NA	0	8550	1/1	0.95	0.19	59,59,59,59	0
36	SR	0	8921	1/1	0.95	0.07	94,94,94,94	0
34	NA	0	8566	1/1	0.95	0.28	47,47,47,47	0
32	MG	2	8060	1/1	0.95	0.12	56,56,56,56	0
35	CL	0	8815	1/1	0.95	0.12	66,66,66,66	0
32	MG	0	8082	1/1	0.95	0.12	70,70,70,70	0
34	NA	0	8553	1/1	0.95	0.21	75,75,75,75	0
32	MG	0	8032	1/1	0.95	0.05	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
34	NA	0	8535	1/1	0.95	0.15	52,52,52,52	0
35	CL	L	8810	1/1	0.95	0.12	54,54,54,54	0
34	NA	0	8521	1/1	0.95	0.08	67,67,67,67	0
32	MG	0	8044	1/1	0.95	0.06	55,55,55,55	0
36	SR	0	8908	1/1	0.95	0.07	100,100,100,100	0
34	NA	0	8558	1/1	0.95	0.16	50,50,50,50	0
34	NA	0	8512	1/1	0.95	0.23	48,48,48,48	0
34	NA	0	8526	1/1	0.96	0.10	47,47,47,47	0
36	SR	0	8909	1/1	0.96	0.10	100,100,100,100	0
34	NA	0	8545	1/1	0.96	0.09	35,35,35,35	0
34	NA	0	8504	1/1	0.96	0.11	34,34,34,34	0
34	NA	0	8505	1/1	0.96	0.25	42,42,42,42	0
36	SR	0	8935	1/1	0.96	0.07	89,89,89,89	0
36	SR	0	9008	1/1	0.96	0.06	96,96,96,96	0
35	CL	0	8805	1/1	0.96	0.09	70,70,70,70	0
36	SR	0	8937	1/1	0.96	0.07	104,104,104,104	0
32	MG	0	8008	1/1	0.96	0.10	29,29,29,29	0
32	MG	0	8018	1/1	0.96	0.14	39,39,39,39	0
35	CL	0	8817	1/1	0.96	0.06	64,64,64,64	0
35	CL	0	8822	1/1	0.96	0.26	74,74,74,74	0
36	SR	0	8943	1/1	0.96	0.08	97,97,97,97	0
32	MG	0	8055	1/1	0.96	0.10	44,44,44,44	0
32	MG	0	8019	1/1	0.96	0.18	28,28,28,28	0
36	SR	3	8932	1/1	0.96	0.05	84,84,84,84	0
32	MG	0	8070	1/1	0.96	0.12	58,58,58,58	0
33	K	0	8402	1/1	0.96	0.12	65,65,65,65	0
35	CL	O	8808	1/1	0.96	0.12	69,69,69,69	0
32	MG	0	8001	1/1	0.96	0.07	32,32,32,32	0
32	MG	0	8047	1/1	0.96	0.18	61,61,61,61	0
32	MG	0	8079	1/1	0.97	0.16	60,60,60,60	0
32	MG	0	8046	1/1	0.97	0.08	39,39,39,39	0
32	MG	0	8081	1/1	0.97	0.13	63,63,63,63	0
35	CL	B	8819	1/1	0.97	0.09	52,52,52,52	0
32	MG	0	8027	1/1	0.97	0.09	41,41,41,41	0
32	MG	0	8048	1/1	0.97	0.12	28,28,28,28	0
32	MG	0	8062	1/1	0.97	0.18	55,55,55,55	0
36	SR	0	8925	1/1	0.97	0.06	97,97,97,97	0
35	CL	N	8807	1/1	0.97	0.06	68,68,68,68	0
32	MG	0	8087	1/1	0.97	0.06	38,38,38,38	0
32	MG	0	8088	1/1	0.97	0.09	42,42,42,42	0
32	MG	0	8016	1/1	0.97	0.15	50,50,50,50	0
36	SR	0	8902	1/1	0.97	0.05	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
32	MG	0	8050	1/1	0.97	0.09	48,48,48,48	0
32	MG	0	8091	1/1	0.97	0.15	60,60,60,60	0
32	MG	0	8076	1/1	0.97	0.04	41,41,41,41	0
32	MG	0	8093	1/1	0.97	0.06	42,42,42,42	0
32	MG	0	8052	1/1	0.97	0.08	54,54,54,54	0
34	NA	0	8527	1/1	0.97	0.08	55,55,55,55	0
36	SR	0	8940	1/1	0.97	0.05	84,84,84,84	0
35	CL	0	8813	1/1	0.97	0.06	53,53,53,53	0
32	MG	0	8045	1/1	0.97	0.09	36,36,36,36	0
32	MG	K	8054	1/1	0.97	0.12	44,44,44,44	0
38	CD	Z	8703	1/1	0.97	0.04	98,98,98,98	0
32	MG	0	8012	1/1	0.98	0.09	22,22,22,22	0
32	MG	0	8013	1/1	0.98	0.09	35,35,35,35	0
32	MG	0	8009	1/1	0.98	0.15	31,31,31,31	0
35	CL	J	8821	1/1	0.98	0.04	57,57,57,57	0
32	MG	0	8021	1/1	0.98	0.18	40,40,40,40	0
34	NA	0	8517	1/1	0.98	0.08	38,38,38,38	0
35	CL	0	8803	1/1	0.98	0.10	53,53,53,53	0
32	MG	0	8084	1/1	0.98	0.14	40,40,40,40	0
35	CL	3	8804	1/1	0.98	0.05	65,65,65,65	0
35	CL	0	8811	1/1	0.98	0.06	65,65,65,65	0
36	SR	R	8912	1/1	0.98	0.05	90,90,90,90	0
35	CL	0	8812	1/1	0.98	0.03	46,46,46,46	0
36	SR	0	8904	1/1	0.98	0.06	56,56,56,56	0
32	MG	0	8022	1/1	0.98	0.14	38,38,38,38	0
35	CL	0	8814	1/1	0.98	0.14	49,49,49,49	0
32	MG	0	8041	1/1	0.98	0.13	26,26,26,26	0
32	MG	0	8065	1/1	0.98	0.13	45,45,45,45	0
32	MG	0	8043	1/1	0.98	0.10	45,45,45,45	0
32	MG	0	8011	1/1	0.98	0.12	31,31,31,31	0
38	CD	O	8705	1/1	0.98	0.07	99,99,99,99	0
32	MG	0	8068	1/1	0.98	0.09	57,57,57,57	0
36	SR	0	8907	1/1	0.99	0.04	57,57,57,57	0
32	MG	0	8004	1/1	0.99	0.10	29,29,29,29	0
32	MG	0	8005	1/1	0.99	0.11	34,34,34,34	0
32	MG	0	8006	1/1	0.99	0.11	30,30,30,30	0
32	MG	0	8007	1/1	0.99	0.10	31,31,31,31	0
32	MG	0	8014	1/1	0.99	0.15	30,30,30,30	0
32	MG	0	8023	1/1	0.99	0.10	28,28,28,28	0
32	MG	0	8015	1/1	0.99	0.11	36,36,36,36	0
32	MG	0	8025	1/1	0.99	0.03	28,28,28,28	0
35	CL	M	8818	1/1	0.99	0.04	46,46,46,46	0

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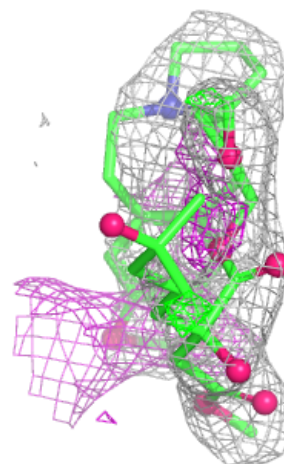
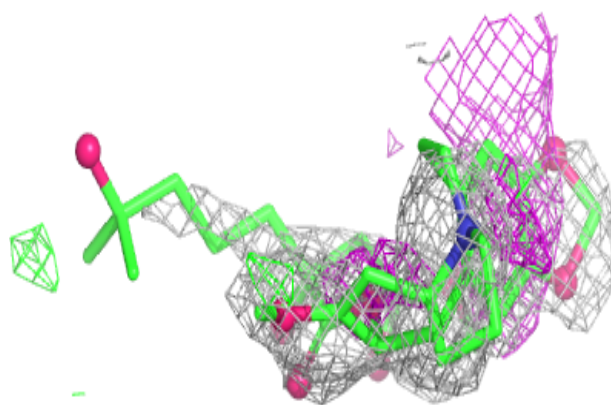
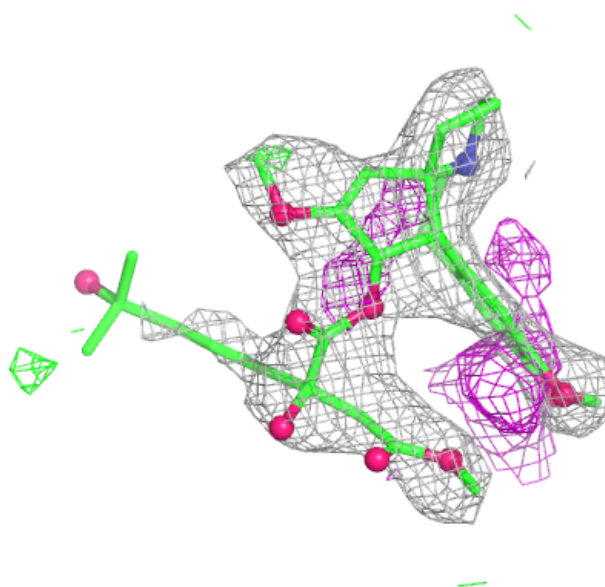
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
32	MG	0	8026	1/1	0.99	0.07	36,36,36,36	0
32	MG	0	8058	1/1	0.99	0.10	30,30,30,30	0
35	CL	R	8806	1/1	0.99	0.03	47,47,47,47	0
32	MG	0	8002	1/1	0.99	0.05	25,25,25,25	0
32	MG	0	8061	1/1	0.99	0.10	30,30,30,30	0
32	MG	0	8028	1/1	0.99	0.14	33,33,33,33	0
32	MG	0	8029	1/1	0.99	0.18	49,49,49,49	0
36	SR	0	8903	1/1	0.99	0.10	58,58,58,58	0
32	MG	0	8003	1/1	0.99	0.08	34,34,34,34	0
36	SR	0	8905	1/1	0.99	0.14	68,68,68,68	0
36	SR	0	8906	1/1	0.99	0.07	59,59,59,59	0
38	CD	1	8702	1/1	0.99	0.06	57,57,57,57	0
38	CD	3	8704	1/1	0.99	0.02	76,76,76,76	0
38	CD	U	8701	1/1	1.00	0.07	72,72,72,72	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 HMT 0 9101:

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



6.5 Other polymers [i](#)

There are no such residues in this entry.