



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 11, 2024 – 12:05 PM EST

PDB ID : 3CCL
Title : Structure of Anisomycin resistant 50S Ribosomal Subunit: 23S rRNA mutation U2535C. Density for Anisomycin is visible but not included in model.
Authors : Blaha, G.; Gurel, G.
Deposited on : 2008-02-26
Resolution : 2.90 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

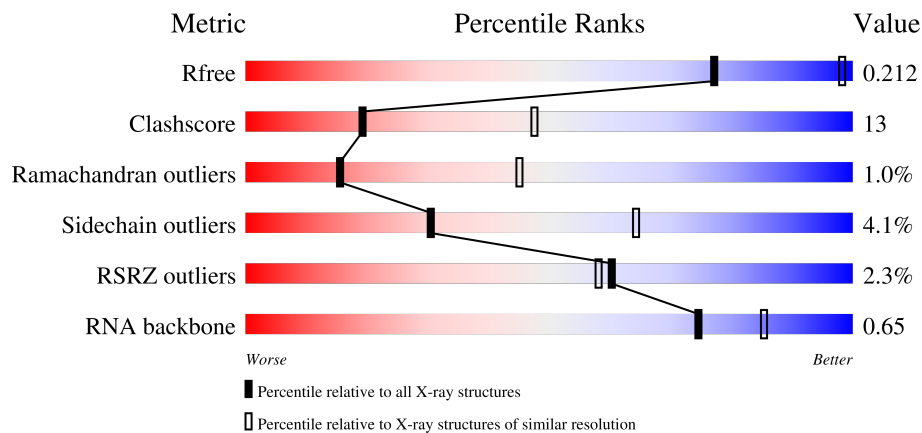
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.90 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1957 (2.90-2.90)
Clashscore	141614	2172 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)
RNA backbone	3102	1007 (3.16-2.64)

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	A	240	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 72%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 23%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">2% 72% 23% • •</p>
2	B	338	<div style="display: flex; align-items: center;"> <div style="width: 66%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 31%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">66% 31% •</p>
3	C	246	<div style="display: flex; align-items: center;"> <div style="width: 72%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 24%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">72% 24% •</p>
4	D	177	<div style="display: flex; align-items: center;"> <div style="width: 16%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 45%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 32%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 21%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">16% 45% 32% • 21%</p>

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Mol	Chain	Length	Quality of chain
5	E	178	% 73% 23% ..
6	F	120	4% 68% 31% ..
7	G	348	% 5% . 92%
8	H	177	5% 68% 19% . 10%
9	I	162	28% 29% 14% . 57%
10	J	145	% 75% 20% ..
11	K	132	75% 24% .
12	L	165	4% 66% 21% . 12%
13	M	196	76% 22% ..
14	N	187	3% 66% 30% ..
15	O	116	82% 16% ..
16	P	149	77% 17% ..
17	Q	96	78% 20% ..
18	R	155	75% 18% . .
19	S	85	% 78% 18% 5%
20	T	120	4% 74% 23% ..
21	U	67	61% 18% 21%
22	V	71	11% 65% 27% 8%
23	W	154	% 64% 33% .
24	X	92	3% 61% 27% . 11%
25	Y	241	48% 11% 41%
26	Z	116	10% 43% 20% 37%
27	1	57	61% 37% .
28	2	50	6% 62% 30% 8%
29	3	92	77% 22% .

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

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
34	SR	0	8982	-	-	-	X
34	SR	0	8994	-	-	-	X
34	SR	0	8997	-	-	-	X
34	SR	0	9006	-	-	-	X
34	SR	B	8987	-	-	-	X
35	NA	0	8505	-	-	-	X
35	NA	0	8518	-	-	-	X
35	NA	0	8546	-	-	-	X
35	NA	0	8555	-	-	-	X
35	NA	0	8562	-	-	-	X

2 Entry composition [i](#)

There are 38 unique types of molecules in this entry. The entry contains 99122 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	M	194	1558	943	333	281	1	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Z	73	Total	C	N	O	S	0	0	0
			573	343	113	112	5			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	3	92	Total	C	N	O	S	0	0	0
			755	458	153	137	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	0	2754	Total	C	N	O	P	0	0	0
			59020	26349	10874	19052	2745			

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	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	0	87	Total	Mg	0	0
			87	87		
32	9	1	Total	Mg	0	0
			1	1		

- Molecule 33 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
33	A	1	Total Cl 1 1	0	0
33	B	1	Total Cl 1 1	0	0
33	J	3	Total Cl 3 3	0	0
33	L	1	Total Cl 1 1	0	0
33	M	1	Total Cl 1 1	0	0
33	N	1	Total Cl 1 1	0	0
33	O	1	Total Cl 1 1	0	0
33	R	1	Total Cl 1 1	0	0
33	Y	1	Total Cl 1 1	0	0
33	3	1	Total Cl 1 1	0	0
33	0	10	Total Cl 10 10	0	0

- Molecule 34 is STRONTIUM ION (three-letter code: SR) (formula: Sr).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	A	3	Total Sr 3 3	0	0
34	B	2	Total Sr 2 2	0	0
34	F	1	Total Sr 1 1	0	0
34	R	1	Total Sr 1 1	0	0
34	S	1	Total Sr 1 1	0	0
34	1	2	Total Sr 2 2	0	0
34	3	2	Total Sr 2 2	0	0
34	0	93	Total Sr 93 93	0	0
34	9	3	Total Sr 3 3	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	C	1	Total Na 1 1	0	0
35	J	1	Total Na 1 1	0	0
35	M	1	Total Na 1 1	0	0
35	Q	1	Total Na 1 1	0	0
35	R	1	Total Na 1 1	0	0
35	S	1	Total Na 1 1	0	0
35	0	67	Total Na 67 67	0	0
35	9	2	Total Na 2 2	0	0

- Molecule 36 is CADMIUM ION (three-letter code: CD) (formula: Cd).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	O	1	Total Cd 1 1	0	0
36	U	1	Total Cd 1 1	0	0
36	Z	1	Total Cd 1 1	0	0
36	1	1	Total Cd 1 1	0	0
36	3	1	Total Cd 1 1	0	0

- Molecule 37 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	0	2	Total K 2 2	0	0

- Molecule 38 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	A	116	Total O 116 116	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	B	141	Total 141	O 141	0	0
38	C	170	Total 170	O 170	0	0
38	D	44	Total 44	O 44	0	0
38	E	45	Total 45	O 45	0	0
38	F	27	Total 27	O 27	0	0
38	G	19	Total 19	O 19	0	0
38	H	63	Total 63	O 63	0	0
38	I	8	Total 8	O 8	0	0
38	J	53	Total 53	O 53	0	0
38	K	56	Total 56	O 56	0	0
38	L	85	Total 85	O 85	0	0
38	M	123	Total 123	O 123	0	0
38	N	55	Total 55	O 55	0	0
38	O	43	Total 43	O 43	0	0
38	P	67	Total 67	O 67	0	0
38	Q	50	Total 50	O 50	0	0
38	R	85	Total 85	O 85	0	0
38	S	33	Total 33	O 33	0	0
38	T	34	Total 34	O 34	0	0
38	U	27	Total 27	O 27	0	0
38	V	13	Total 13	O 13	0	0

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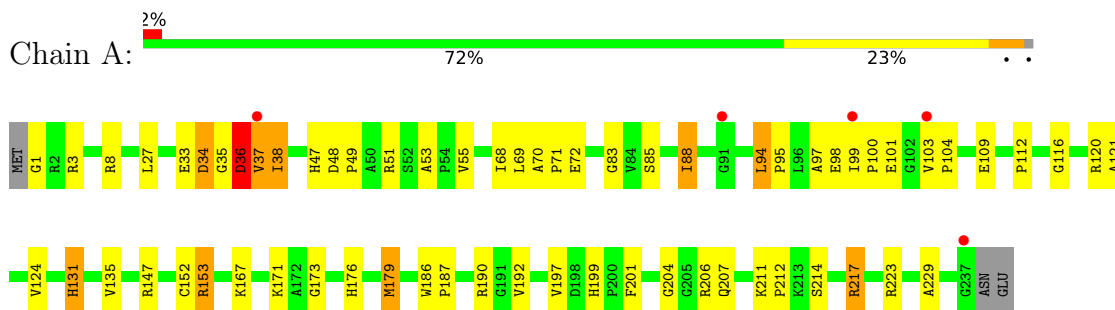
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	W	69	Total O 69 69	0	0
38	X	25	Total O 25 25	0	0
38	Y	95	Total O 95 95	0	0
38	Z	26	Total O 26 26	0	0
38	1	63	Total O 63 63	0	0
38	2	50	Total O 50 50	0	0
38	3	62	Total O 62 62	0	0
38	0	5929	Total O 5929 5929	0	0
38	9	147	Total O 147 147	0	0

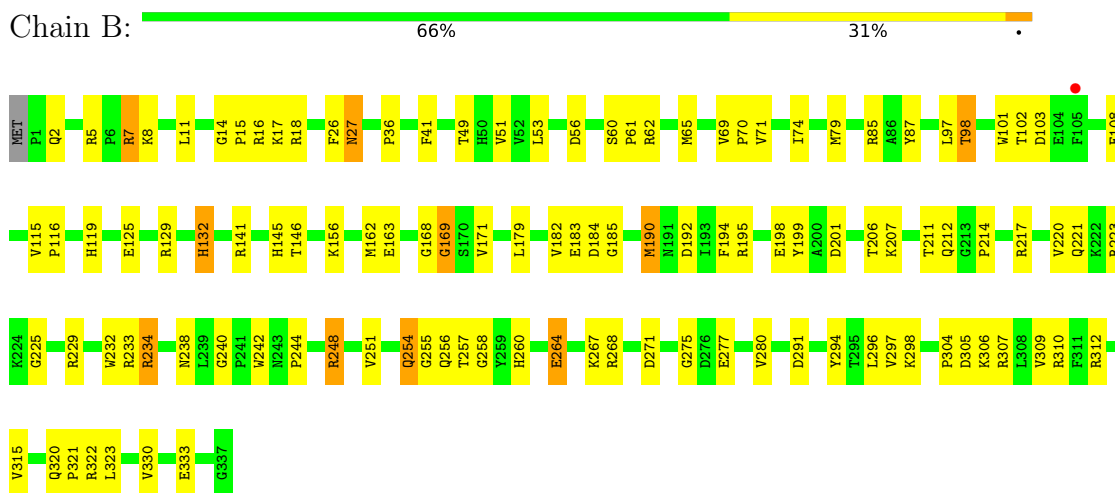
3 Residue-property plots [i](#)

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

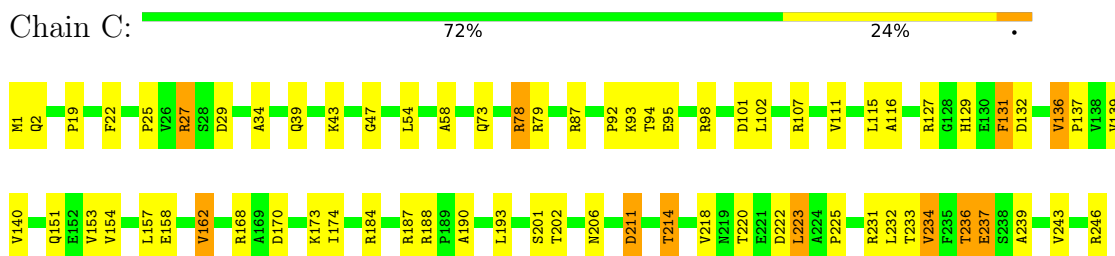
- Molecule 1: 50S ribosomal protein L2P



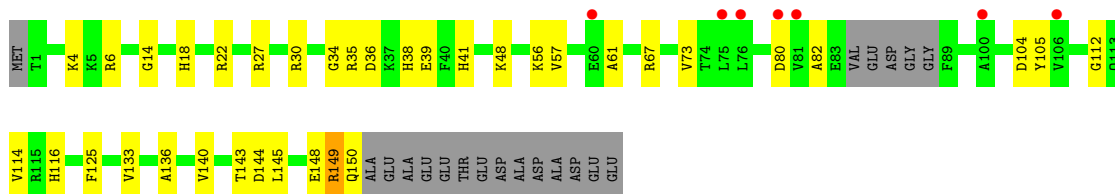
- Molecule 2: 50S ribosomal protein L3P



- Molecule 3: 50S ribosomal protein L4P

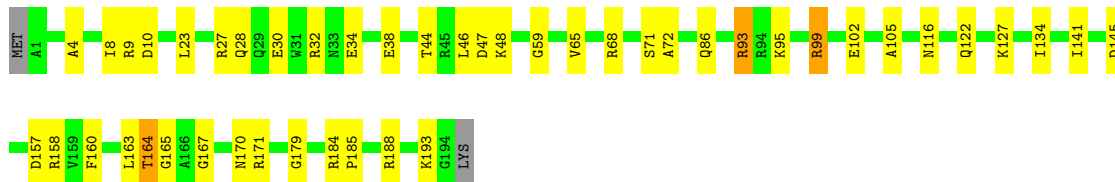


- Molecule 4: 50S ribosomal protein L5P



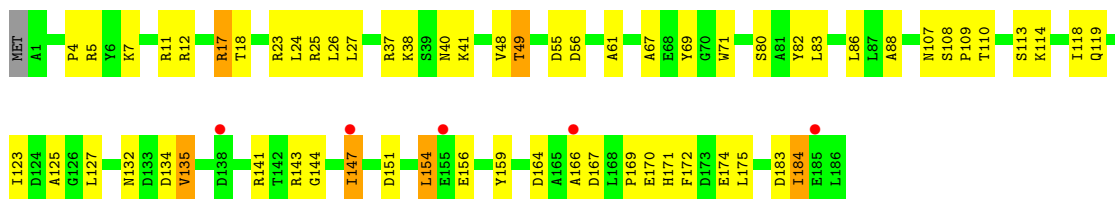
- Molecule 13: 50S ribosomal protein L15e

Chain M: 76% 22% ..



- Molecule 14: 50S ribosomal protein L18P

Chain N: 3% 66% 30% ..



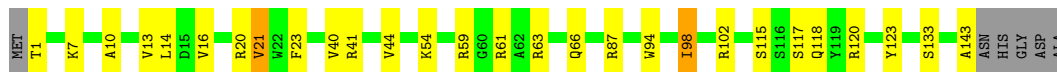
- Molecule 15: 50S ribosomal protein L18e

Chain O: 82% 16% ..



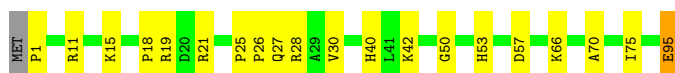
- Molecule 16: 50S ribosomal protein L19e

Chain P: 77% 17% ..




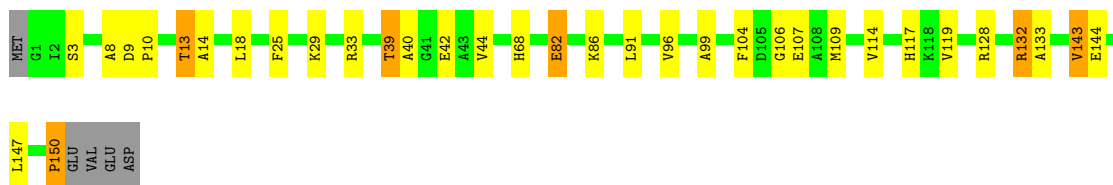
- Molecule 17: 50S ribosomal protein L21e

Chain Q: 78% 20% ..




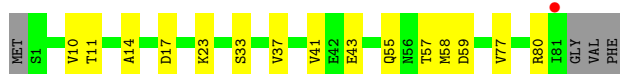
- Molecule 18: 50S ribosomal protein L22P

Chain R:  75% 18%



- Molecule 19: 50S ribosomal protein L23P

Chain S:  78% 18% 5%



- Molecule 20: 50S ribosomal protein L24P

Chain T:  74% 23% 4%



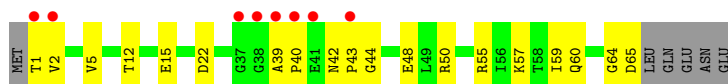
- Molecule 21: 50S ribosomal protein L24e

Chain U:  61% 18% 21%



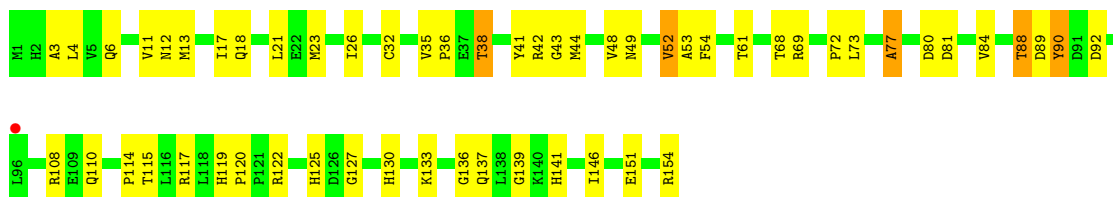
- Molecule 22: 50S ribosomal protein L29P

Chain V:  65% 27% 8% 11%

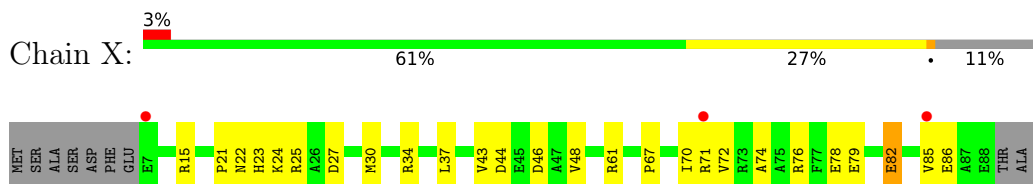


- Molecule 23: 50S ribosomal protein L30P

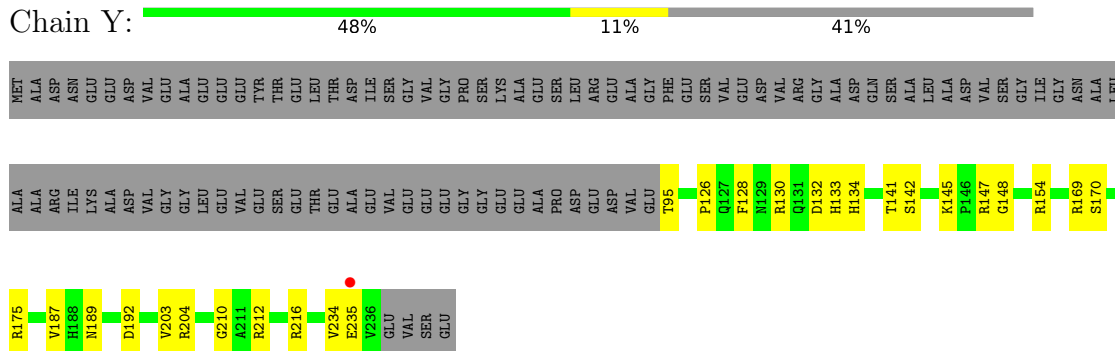
Chain W:  64% 33% 1%



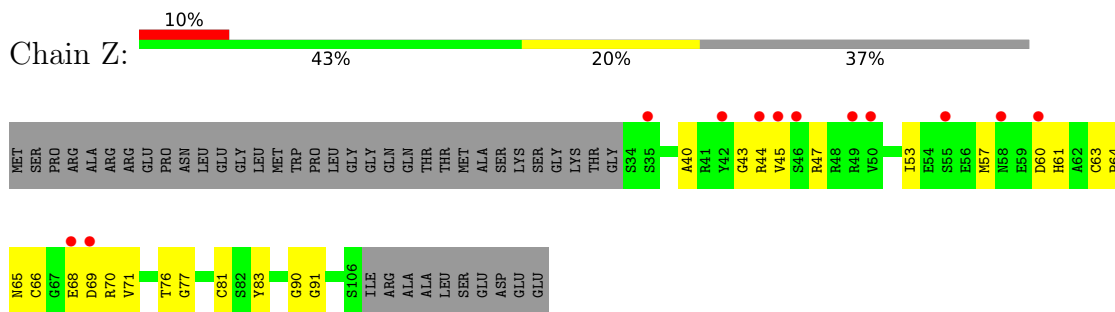
- Molecule 24: 50S ribosomal protein L31e



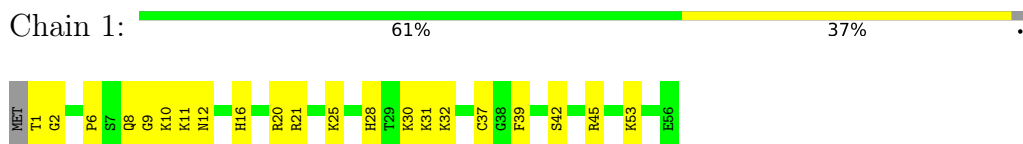
• Molecule 25: 50S ribosomal protein L32e



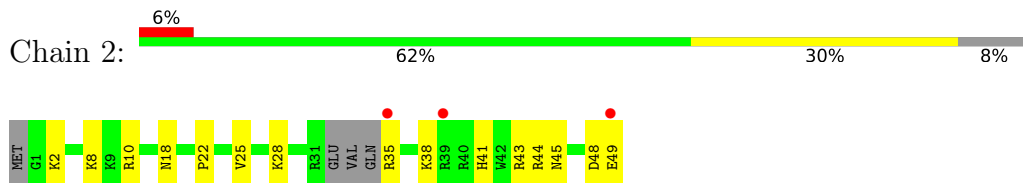
• Molecule 26: 50S ribosomal protein L37Ae



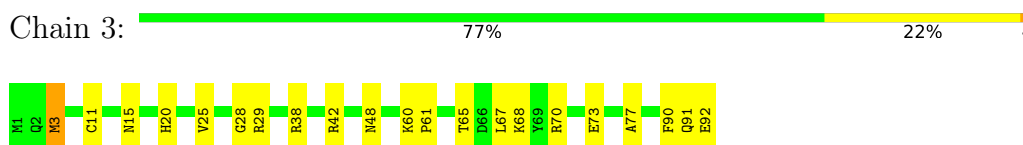
• Molecule 27: 50S ribosomal protein L37e

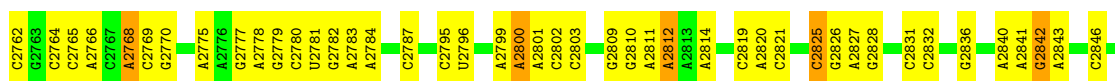


• Molecule 28: 50S ribosomal protein L39e

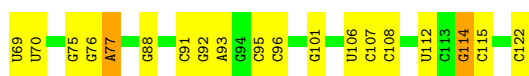
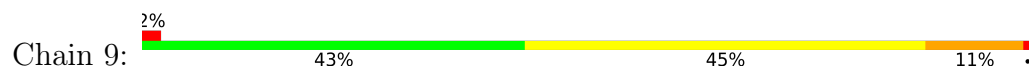


• Molecule 29: 50S ribosomal protein L44E





• 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	213.16Å 300.03Å 576.13Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.98 – 2.90 85.91 – 2.41	Depositor EDS
% Data completeness (in resolution range)	92.2 (49.98-2.90) 92.3 (85.91-2.41)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.00 (at 2.40Å)	Xtrriage
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.171 , 0.220 0.165 , 0.212	Depositor DCC
R_{free} test set	6547 reflections (0.98%)	wwPDB-VP
Wilson B-factor (Å ²)	57.0	Xtrriage
Anisotropy	0.314	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.31 , 81.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	99122	wwPDB-VP
Average B, all atoms (Å ²)	61.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.55% 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: UR3, PSU, OMU, K, CL, MG, OMG, NA, 1MA, CD, SR

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.32	0/1786	0.64	0/2408
2	B	0.32	0/2690	0.64	0/3652
3	C	0.36	0/1885	0.63	0/2552
4	D	0.32	0/1111	0.56	0/1498
5	E	0.33	0/1382	0.56	0/1880
6	F	0.34	0/901	0.58	0/1224
7	G	0.31	0/241	0.49	0/324
8	H	0.33	0/1302	0.63	0/1743
9	I	0.29	0/526	0.51	0/716
10	J	0.36	0/1136	0.60	0/1530
11	K	0.35	0/1004	0.67	0/1351
12	L	0.33	0/1130	0.63	0/1509
13	M	0.35	0/1582	0.61	0/2116
14	N	0.30	0/1474	0.62	0/1999
15	O	0.34	0/874	0.59	0/1181
16	P	0.32	0/1147	0.51	0/1528
17	Q	0.33	0/749	0.65	0/1005
18	R	1.26	7/1172 (0.6%)	1.10	6/1578 (0.4%)
19	S	0.32	0/648	0.55	0/875
20	T	0.33	0/958	0.64	0/1289
21	U	0.33	0/417	0.59	0/562
22	V	0.33	0/502	0.52	0/675
23	W	0.34	0/1219	0.63	0/1655
24	X	0.35	0/664	0.60	0/895
25	Y	0.36	0/1146	0.62	0/1536
26	Z	0.37	0/584	0.60	0/781
27	1	0.39	0/438	0.59	0/578
28	2	0.34	0/401	0.60	0/529
29	3	0.36	0/771	0.55	0/1024
30	0	0.37	0/65957	0.68	13/102867 (0.0%)
31	9	0.32	0/2904	0.68	1/4526 (0.0%)
All	All	0.38	7/98701 (0.0%)	0.67	20/147586 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
18	R	1	0
23	W	0	1
30	0	0	28
31	9	0	1
All	All	1	30

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	150	PRO	CB-CG	27.29	2.86	1.50
18	R	150	PRO	CA-C	-18.25	1.16	1.52
18	R	150	PRO	CG-CD	13.93	1.96	1.50
18	R	150	PRO	C-O	11.88	1.47	1.23
18	R	150	PRO	N-CA	11.37	1.66	1.47
18	R	150	PRO	N-CD	10.73	1.62	1.47
18	R	150	PRO	CA-CB	7.62	1.68	1.53

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	150	PRO	CB-CA-C	-22.47	55.83	112.00
18	R	150	PRO	N-CA-C	-19.40	61.65	112.10
18	R	150	PRO	CA-N-CD	12.30	128.92	111.70
18	R	150	PRO	N-CA-CB	10.97	116.46	103.30
18	R	150	PRO	CA-C-O	-8.51	99.79	120.20
30	0	1120	U	C5'-C4'-C3'	-6.39	105.78	116.00
30	0	1942	A	C5'-C4'-C3'	6.16	125.85	116.00
18	R	150	PRO	CA-CB-CG	-6.09	92.42	104.00
30	0	1592	G	N9-C1'-C2'	5.90	121.67	114.00
30	0	1504	A	C1'-O4'-C4'	-5.90	105.18	109.90
31	9	39	U	N1-C1'-C2'	5.83	121.57	114.00
30	0	871	G	C5'-C4'-O4'	-5.67	102.30	109.10
30	0	2316	G	C5'-C4'-C3'	-5.59	107.06	116.00
30	0	1504	A	N9-C1'-C2'	5.50	121.15	114.00
30	0	841	A	C1'-O4'-C4'	-5.46	105.53	109.90
30	0	2313	C	C5'-C4'-O4'	5.29	115.45	109.10
30	0	2726	U	N1-C1'-C2'	5.25	120.83	114.00
30	0	1165	G	C1'-O4'-C4'	-5.21	105.73	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	0	2291	A	N9-C1'-C2'	5.20	120.75	114.00
30	0	2301	A	N9-C1'-C2'	5.11	120.65	114.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
18	R	150	PRO	CA

All (30) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	0	1078	A	Sidechain
30	0	131	A	Sidechain
30	0	1430	G	Sidechain
30	0	1592	G	Sidechain
30	0	1829	A	Sidechain
30	0	1848	G	Sidechain
30	0	1863	G	Sidechain
30	0	1877	G	Sidechain
30	0	1878	G	Sidechain
30	0	1970	G	Sidechain
30	0	220	C	Sidechain
30	0	2301	A	Sidechain
30	0	2412	G	Sidechain
30	0	2465	A	Sidechain
30	0	2493	C	Sidechain
30	0	2503	A	Sidechain
30	0	2524	G	Sidechain
30	0	2552	C	Sidechain
30	0	2607	U	Sidechain
30	0	2673	U	Sidechain
30	0	2842	G	Sidechain
30	0	333	G	Sidechain
30	0	396	U	Sidechain
30	0	458	G	Sidechain
30	0	48	A	Sidechain
30	0	518	G	Sidechain
30	0	619	U	Sidechain
30	0	888	U	Sidechain
31	9	39	U	Sidechain
23	W	90	TYR	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1753	0	1766	63	0
2	B	2625	0	2533	89	0
3	C	1860	0	1813	59	0
4	D	1094	0	1085	45	0
5	E	1357	0	1266	29	0
6	F	890	0	843	26	0
7	G	240	0	231	8	0
8	H	1282	0	1292	33	0
9	I	519	0	500	23	0
10	J	1120	0	1098	32	0
11	K	994	0	1027	32	0
12	L	1118	0	1076	29	0
13	M	1558	0	1573	42	0
14	N	1445	0	1401	51	0
15	O	865	0	873	18	0
16	P	1136	0	1123	24	0
17	Q	735	0	729	21	0
18	R	1149	0	1122	37	0
19	S	641	0	605	10	0
20	T	950	0	924	21	0
21	U	410	0	364	8	0
22	V	499	0	511	17	0
23	W	1196	0	1137	56	0
24	X	654	0	653	18	0
25	Y	1130	0	1133	23	0
26	Z	573	0	532	15	0
27	1	431	0	426	23	0
28	2	396	0	413	15	0
29	3	755	0	728	18	0
30	0	59020	0	29811	1159	0
31	9	2599	0	1325	100	0
32	0	87	0	0	0	0
32	9	1	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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	Y	1	0	0	0	0
33	0	10	0	0	4	0
33	3	1	0	0	0	0
33	A	1	0	0	0	0
33	B	1	0	0	0	0
33	J	3	0	0	2	0
33	L	1	0	0	0	0
33	M	1	0	0	0	0
33	N	1	0	0	1	0
33	O	1	0	0	0	0
33	R	1	0	0	0	0
33	Y	1	0	0	0	0
34	0	93	0	0	0	0
34	1	2	0	0	0	0
34	3	2	0	0	0	0
34	9	3	0	0	0	0
34	A	3	0	0	0	0
34	B	2	0	0	0	0
34	F	1	0	0	0	0
34	R	1	0	0	0	0
34	S	1	0	0	0	0
35	0	67	0	0	0	0
35	9	2	0	0	0	0
35	C	1	0	0	0	0
35	J	1	0	0	0	0
35	M	1	0	0	0	0
35	Q	1	0	0	0	0
35	R	1	0	0	0	0
35	S	1	0	0	0	0
36	1	1	0	0	0	0
36	3	1	0	0	0	0
36	O	1	0	0	0	0
36	U	1	0	0	0	0
36	Z	1	0	0	0	0
37	0	2	0	0	0	0
38	0	5929	0	0	185	0
38	1	63	0	0	4	0
38	2	50	0	0	1	0
38	3	62	0	0	3	0
38	9	147	0	0	7	0
38	A	116	0	0	5	0
38	B	141	0	0	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	C	170	0	0	13	0
38	D	44	0	0	3	0
38	E	45	0	0	2	0
38	F	27	0	0	2	0
38	G	19	0	0	1	0
38	H	63	0	0	7	0
38	I	8	0	0	3	0
38	J	53	0	0	1	0
38	K	56	0	0	5	0
38	L	85	0	0	6	0
38	M	123	0	0	2	0
38	N	55	0	0	5	0
38	O	43	0	0	3	0
38	P	67	0	0	2	0
38	Q	50	0	0	3	0
38	R	85	0	0	1	0
38	S	33	0	0	2	0
38	T	34	0	0	2	0
38	U	27	0	0	2	0
38	V	13	0	0	2	0
38	W	69	0	0	4	0
38	X	25	0	0	2	0
38	Y	95	0	0	5	0
38	Z	26	0	0	3	0
All	All	99122	0	59913	1941	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 13.

All (1941) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:150:PRO:CG	18:R:150:PRO:CD	1.96	1.43
30:0:1160:G:C5'	30:0:1161:A:H5'	1.77	1.12
30:0:871:G:C8	30:0:871:G:H5'	1.84	1.11
30:0:871:G:H5'	30:0:871:G:H8	1.09	1.10
31:9:56:A:H2'	31:9:57:A:H5''	1.31	1.10
14:N:37:ARG:NH1	31:9:6:C:H5''	1.63	1.09
13:M:171:ARG:HD3	30:0:156:C:H5''	1.33	1.09
30:0:1160:G:H5'	30:0:1161:A:C5'	1.82	1.09
18:R:150:PRO:CG	18:R:150:PRO:C	2.22	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:76:G:H3'	31:9:77:A:H5''	1.36	1.06
30:0:545:G:H5'	30:0:545:G:H8	1.19	1.06
30:0:1205:U:H2'	30:0:1206:U:H5''	1.32	1.04
30:0:1160:G:H5'	30:0:1161:A:H5'	1.03	1.02
30:0:1701:A:H4'	30:0:1702:U:H5''	1.42	1.01
10:J:82:THR:HG23	30:0:1242:A:H5'	1.39	1.01
15:O:3:THR:HG22	30:0:656:G:H5'	1.41	1.01
30:0:2717:C:C2'	30:0:2718:C:H5''	1.92	0.99
30:0:1979:G:H2'	38:0:3301:HOH:O	1.61	0.98
31:9:29:C:H2'	31:9:30:C:H5'	1.44	0.98
20:T:71:VAL:HG11	20:T:90:PRO:HB3	1.46	0.97
11:K:10:GLN:HE21	11:K:10:GLN:H	0.95	0.95
30:0:182:G:H5'	38:0:5168:HOH:O	1.67	0.95
30:0:1666:C:O2'	30:0:1667:A:H5''	1.67	0.94
30:0:1118:A:H8	30:0:1118:A:H3'	1.30	0.94
30:0:2717:C:H2'	30:0:2718:C:H5''	1.50	0.94
30:0:381:G:H5''	38:0:4330:HOH:O	1.67	0.93
30:0:1187:U:HO2'	30:0:1189:A:H2	1.01	0.93
30:0:1205:U:H2'	30:0:1206:U:C5'	1.99	0.93
30:0:1118:A:H3'	30:0:1118:A:C8	2.03	0.93
30:0:1603:A:H5'	30:0:1605:G:O4'	1.67	0.92
30:0:1634:G:H3'	38:0:3907:HOH:O	1.70	0.91
30:0:282:C:H1'	30:0:368:C:N4	1.84	0.91
16:P:115:SER:H	16:P:118:GLN:HE21	1.03	0.91
10:J:52:GLN:NE2	30:0:1119:G:H2'	1.85	0.91
30:0:271:C:H41	30:0:378:A:H2	1.17	0.90
2:B:162:MET:SD	2:B:310:ARG:HD3	2.11	0.90
30:0:559:U:H6	30:0:559:U:H5'	1.35	0.90
30:0:545:G:H5'	30:0:545:G:C8	2.05	0.90
23:W:137:GLN:HE21	23:W:141:HIS:HE1	1.20	0.90
30:0:871:G:H8	30:0:871:G:C5'	1.85	0.90
30:0:542:A:H5'	30:0:542:A:H8	1.36	0.90
31:9:14:G:H5'	31:9:14:G:H8	1.37	0.90
26:Z:70:ARG:HD3	26:Z:83:TYR:HB2	1.55	0.89
31:9:56:A:C2'	31:9:57:A:H5''	2.03	0.89
30:0:1119:G:H22	30:0:1246:A:H2	1.20	0.89
30:0:870:G:H2'	30:0:871:G:H5''	1.53	0.89
8:H:59:GLN:HE21	8:H:129:ARG:HE	1.17	0.88
30:0:1632:A:H2'	30:0:1633:C:H5'	1.56	0.88
30:0:2508:C:H2'	38:0:6764:HOH:O	1.73	0.87
30:0:1835:U:H5	30:0:1840:A:N7	1.72	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:558:C:C2'	30:0:559:U:H5''	2.05	0.86
30:0:506:G:H22	30:0:509:A:H5'	1.40	0.86
30:0:1205:U:C2'	30:0:1206:U:H5''	2.05	0.86
8:H:59:GLN:NE2	8:H:129:ARG:HE	1.73	0.86
30:0:1184:C:H1'	38:0:7480:HOH:O	1.74	0.86
30:0:2507:G:H2'	30:0:2510:C:H42	1.41	0.86
30:0:541:C:C2'	30:0:542:A:H5''	2.06	0.86
30:0:2908:A:H2'	30:0:2909:G:O4'	1.76	0.86
30:0:1189:A:H1'	30:0:1209:C:O4'	1.76	0.85
4:D:25:MET:HE3	4:D:37:ALA:HB1	1.58	0.85
24:X:37:LEU:HD13	24:X:85:VAL:HG21	1.58	0.85
30:0:1183:C:H2'	38:0:6249:HOH:O	1.76	0.85
16:P:117:SER:HB3	30:0:1593:C:OP1	1.75	0.85
30:0:1667:A:H8	30:0:1667:A:H5'	1.41	0.85
30:0:541:C:H2'	30:0:542:A:H5''	1.58	0.85
30:0:2717:C:O2'	30:0:2718:C:H5''	1.77	0.85
30:0:2586:U:H3	30:0:2592:G:H22	1.22	0.84
30:0:2291:A:C8	30:0:2309:C:H5'	2.12	0.84
2:B:238:ASN:HD22	2:B:240:GLY:H	1.24	0.84
38:O:7674:HOH:O	30:0:653:U:H5''	1.77	0.84
30:0:1206:U:H5'	30:0:1206:U:H6	1.41	0.84
30:0:2710:U:H1'	38:0:7632:HOH:O	1.77	0.84
30:0:2506:A:HO2'	30:0:2507:G:H8	1.21	0.84
31:9:2:U:OP2	31:9:3:A:H5'	1.78	0.84
30:0:1474:C:H6	30:0:1474:C:H5'	1.43	0.83
4:D:154:LYS:H	4:D:154:LYS:HD2	1.43	0.83
18:R:29:LYS:HE2	30:0:524:A:C5'	2.08	0.83
30:0:558:C:O2'	30:0:559:U:H5''	1.78	0.83
30:0:1474:C:H5'	30:0:1474:C:C6	2.13	0.83
30:0:506:G:H22	30:0:509:A:C5'	1.92	0.83
30:0:877:G:H5'	30:0:878:G:OP1	1.79	0.83
30:0:1119:G:N2	30:0:1246:A:C2	2.46	0.82
30:0:1116:U:O2'	30:0:1118:A:H2	1.62	0.82
14:N:37:ARG:HH12	31:9:6:C:H5''	1.43	0.82
18:R:29:LYS:HE2	30:0:524:A:H5''	1.59	0.82
30:0:1116:U:H3	30:0:1246:A:H62	1.24	0.82
30:0:283:U:H5	30:0:284:C:N3	1.78	0.81
2:B:221:GLN:HE22	11:K:42:ASN:HD22	1.27	0.81
23:W:4:LEU:HD23	23:W:54:PHE:HB3	1.62	0.81
30:0:69:A:H5'	30:0:69:A:C8	2.15	0.81
30:0:1878:G:H1'	38:0:6126:HOH:O	1.77	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2852:A:H5'	38:0:5244:HOH:O	1.80	0.81
15:O:3:THR:CG2	30:0:656:G:H5'	2.10	0.81
2:B:74:ILE:HD13	2:B:309:VAL:HG21	1.63	0.81
30:0:541:C:H2'	30:0:542:A:C5'	2.11	0.81
30:0:2529:G:H3'	38:0:7197:HOH:O	1.80	0.80
22:V:12:THR:HG22	22:V:15:GLU:HG3	1.62	0.79
30:0:2506:A:O2'	30:0:2507:G:H8	1.64	0.79
10:J:75:PRO:HG2	10:J:105:LEU:HD21	1.63	0.79
11:K:10:GLN:H	11:K:10:GLN:NE2	1.79	0.79
30:0:2502:C:C2'	30:0:2503:A:H5'	2.13	0.78
2:B:217:ARG:HG3	2:B:257:THR:HG22	1.65	0.78
14:N:83:LEU:HD13	14:N:175:LEU:HD23	1.64	0.78
11:K:39:GLY:HA2	38:0:5232:HOH:O	1.83	0.78
30:0:2578:G:H5'	30:0:2578:G:H8	1.48	0.78
30:0:1632:A:C2'	30:0:1633:C:H5'	2.13	0.78
3:C:236:THR:HG22	3:C:239:ALA:H	1.46	0.78
30:0:2256:G:O2'	30:0:2257:G:H5'	1.82	0.78
18:R:8:ALA:HB1	18:R:13:THR:HG21	1.66	0.78
30:0:282:C:O2'	30:0:283:U:H5'	1.84	0.78
14:N:113:SER:HB2	38:N:8849:HOH:O	1.84	0.77
23:W:6:GLN:HB2	23:W:26:ILE:HD11	1.67	0.77
30:0:2526:C:C6	30:0:2526:C:H5'	2.19	0.77
2:B:195:ARG:HG2	2:B:323:LEU:HD22	1.65	0.77
30:0:1300:G:H1'	38:0:4694:HOH:O	1.83	0.77
30:0:2635:A:O2'	30:0:2636:C:H5'	1.84	0.77
13:M:164:THR:HG22	13:M:167:GLY:H	1.50	0.77
30:0:272:A:H3'	38:0:7542:HOH:O	1.84	0.77
30:0:396:U:H1'	38:0:7640:HOH:O	1.85	0.77
30:0:2502:C:H2'	30:0:2503:A:H5'	1.65	0.77
30:0:2608:C:H3'	38:0:7824:HOH:O	1.85	0.77
31:9:14:G:H5'	31:9:14:G:C8	2.19	0.77
2:B:36:PRO:HA	2:B:168:GLY:HA3	1.67	0.76
2:B:179:LEU:O	2:B:183:GLU:HG2	1.84	0.76
30:0:69:A:H5'	30:0:69:A:H8	1.50	0.76
30:0:1118:A:H62	30:0:1244:U:H3	1.31	0.76
30:0:1701:A:H5'	38:0:6290:HOH:O	1.83	0.76
30:0:2783:A:H3'	38:0:5242:HOH:O	1.83	0.76
30:0:2812:A:H2	30:0:2814:A:H62	1.31	0.76
30:0:2679:G:H2'	30:0:2681:A:OP2	1.86	0.76
31:9:54:A:O2'	31:9:55:U:H5'	1.85	0.76
30:0:1372:A:H3'	38:0:7202:HOH:O	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2403:C:H5'	38:0:6033:HOH:O	1.84	0.76
22:V:1:THR:HB	30:0:93:C:H5''	1.68	0.76
30:0:192:A:H5'	38:0:7655:HOH:O	1.85	0.76
30:0:1603:A:H5''	30:0:1605:G:H5'	1.68	0.75
26:Z:61:HIS:HB2	26:Z:71:VAL:HB	1.69	0.75
6:F:91:VAL:HG12	6:F:92:GLY:H	1.52	0.75
10:J:74:ARG:HB3	10:J:74:ARG:HH11	1.51	0.75
30:0:1172:G:H5''	38:0:7271:HOH:O	1.85	0.75
30:0:558:C:H2'	30:0:559:U:C5'	2.17	0.74
30:0:1116:U:HO2'	30:0:1118:A:H2	0.79	0.74
30:0:1701:A:H4'	30:0:1702:U:C5'	2.15	0.74
3:C:1:MET:HG2	3:C:2:GLN:H	1.51	0.74
30:0:2748:G:H5'	38:0:7554:HOH:O	1.87	0.74
30:0:2768:A:O2'	30:0:2769:C:H5'	1.87	0.74
6:F:63:ILE:HB	6:F:64:PRO:HD3	1.69	0.74
30:0:2420:G:O2'	30:0:2421:G:H5'	1.86	0.74
13:M:99:ARG:HD2	13:M:167:GLY:HA2	1.70	0.74
30:0:2717:C:H2'	30:0:2718:C:C5'	2.18	0.74
3:C:127:ARG:NH2	3:C:225:PRO:HG2	2.03	0.74
30:0:2404:G:H5''	38:0:5222:HOH:O	1.88	0.74
18:R:25:PHE:CE2	18:R:29:LYS:HE3	2.23	0.73
11:K:10:GLN:HE21	11:K:10:GLN:N	1.79	0.73
33:0:8812:CL:CL	38:0:5135:HOH:O	2.41	0.73
22:V:1:THR:HG23	22:V:2:VAL:H	1.53	0.73
30:0:1666:C:H2'	30:0:1667:A:H5'	1.70	0.73
1:A:211:LYS:HB2	38:A:9082:HOH:O	1.87	0.73
5:E:143:GLN:HE21	30:0:2780:C:H1'	1.54	0.73
29:3:65:THR:HG22	29:3:67:LEU:HG	1.69	0.73
30:0:2004:U:H4'	38:0:5316:HOH:O	1.88	0.73
15:O:42:GLU:HB2	38:O:2176:HOH:O	1.87	0.73
30:0:138:U:H5''	30:0:139:C:OP2	1.88	0.73
15:O:47:ARG:HH11	15:O:47:ARG:HG3	1.53	0.73
30:0:2896:A:H5''	38:0:6105:HOH:O	1.87	0.73
38:Z:8707:HOH:O	30:0:1886:A:H4'	1.89	0.73
3:C:139:VAL:HG13	38:C:8644:HOH:O	1.88	0.73
18:R:99:ALA:HB1	18:R:109:MET:HE1	1.71	0.73
30:0:1666:C:C2'	30:0:1667:A:H5''	2.19	0.72
30:0:1641:A:H2'	30:0:1642:A:H5'	1.71	0.72
5:E:100:ASP:HB2	38:E:2789:HOH:O	1.88	0.72
30:0:2765:C:H4'	38:0:5531:HOH:O	1.88	0.72
22:V:50:ARG:NH1	30:0:56:G:H5''	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:870:G:C2'	30:0:871:G:H5''	2.18	0.72
28:2:41:HIS:H	28:2:45:ASN:HD22	1.35	0.72
30:0:1118:A:C8	30:0:1118:A:C3'	2.69	0.72
30:0:2256:G:C2'	30:0:2257:G:H5'	2.18	0.72
30:0:468:U:H3'	38:0:7580:HOH:O	1.89	0.72
30:0:827:A:H1'	38:0:6220:HOH:O	1.88	0.72
30:0:871:G:C8	30:0:871:G:C5'	2.64	0.72
10:J:70:PHE:CE1	30:0:2676:C:H4'	2.24	0.72
20:T:9:LYS:HE2	20:T:13:ARG:NH1	2.04	0.72
22:V:50:ARG:HH12	30:0:56:G:H5''	1.55	0.72
30:0:1187:U:O2'	30:0:1189:A:H2	1.71	0.72
30:0:1201:C:H5''	38:0:6238:HOH:O	1.89	0.72
30:0:2769:C:C2'	30:0:2770:G:H5'	2.20	0.72
1:A:135:VAL:HG11	1:A:147:ARG:NH2	2.04	0.71
33:0:8813:CL:CL	38:0:4694:HOH:O	2.45	0.71
10:J:52:GLN:HE22	30:0:1119:G:H2'	1.55	0.71
30:0:1183:C:N4	30:0:1184:C:H41	1.87	0.71
30:0:1525:G:H5'	30:0:1526:A:OP2	1.91	0.71
30:0:2491:G:H1'	38:0:6878:HOH:O	1.89	0.71
31:9:29:C:C2'	31:9:30:C:H5'	2.18	0.71
30:0:1189:A:H3'	38:0:7693:HOH:O	1.90	0.71
30:0:1741:U:H5'	30:0:1742:A:OP1	1.90	0.71
30:0:2372:A:H2'	30:0:2373:U:H6	1.56	0.70
25:Y:187:VAL:HG23	25:Y:192:ASP:CB	2.21	0.70
25:Y:169:ARG:HD2	30:0:1328:A:OP1	1.92	0.70
2:B:206:THR:HG21	30:0:2716:G:H5''	1.73	0.70
2:B:307:ARG:HH11	2:B:307:ARG:HG3	1.57	0.70
28:2:43:ARG:HH22	30:0:1684:A:H1'	1.57	0.70
30:0:2659:U:H5''	38:0:4138:HOH:O	1.92	0.70
31:9:20:G:O2'	31:9:21:G:H5'	1.91	0.70
30:0:2637:A:H5'	38:0:9281:HOH:O	1.92	0.70
31:9:92:G:H2'	31:9:93:A:C8	2.27	0.70
30:0:567:U:H5''	38:0:5297:HOH:O	1.92	0.70
30:0:1973:A:H5'	30:0:1973:A:H8	1.57	0.69
30:0:1835:U:C5	30:0:1840:A:N7	2.59	0.69
30:0:1750:C:H5''	38:0:3676:HOH:O	1.91	0.69
10:J:19:MET:HE3	10:J:132:LEU:HD21	1.75	0.69
24:X:71:ARG:HD3	38:X:2171:HOH:O	1.91	0.69
30:0:380:A:H2'	38:0:7240:HOH:O	1.92	0.69
30:0:544:G:H2'	30:0:545:G:H5''	1.74	0.69
30:0:2010:A:H2'	38:0:5965:HOH:O	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:12:ILE:HG23	38:0:5468:HOH:O	1.93	0.69
30:0:281:U:O2'	30:0:282:C:H5'	1.93	0.69
11:K:98:VAL:CG1	11:K:102:GLU:HA	2.23	0.69
16:P:115:SER:H	16:P:118:GLN:NE2	1.85	0.69
1:A:51:ARG:HB2	38:A:9066:HOH:O	1.91	0.69
11:K:14:LYS:HB2	11:K:45:PRO:HG2	1.75	0.69
23:W:72:PRO:HG2	23:W:77:ALA:HB3	1.73	0.69
30:0:1441:G:O2'	30:0:1442:A:H5'	1.91	0.69
30:0:1377:C:H5'	30:0:1377:C:H6	1.58	0.69
30:0:2251:G:H2'	30:0:2252:A:C8	2.28	0.69
27:1:25:LYS:HD2	28:2:49:GLU:H	1.58	0.68
8:H:59:GLN:HE21	8:H:129:ARG:NE	1.91	0.68
30:0:1666:C:H2'	30:0:1667:A:C5'	2.22	0.68
30:0:2111:G:H1'	38:0:9053:HOH:O	1.92	0.68
30:0:2768:A:H2'	30:0:2769:C:O4'	1.93	0.68
30:0:2563:U:H2'	30:0:2565:C:O5'	1.94	0.68
3:C:174:ILE:HD11	30:0:338:C:H4'	1.75	0.68
13:M:23:LEU:HD13	13:M:27:ARG:HH21	1.57	0.68
23:W:88:THR:HG23	23:W:110:GLN:HB3	1.75	0.68
30:0:1183:C:H42	30:0:1184:C:H41	1.42	0.68
12:L:133:VAL:HA	38:L:8874:HOH:O	1.92	0.68
30:0:1603:A:C5'	30:0:1605:G:H5'	2.23	0.68
6:F:91:VAL:HG12	6:F:92:GLY:N	2.09	0.68
14:N:141:ARG:HH21	31:9:48:C:H4'	1.58	0.68
30:0:2453:G:H3'	38:0:5927:HOH:O	1.94	0.68
14:N:80:SER:HB2	38:N:8830:HOH:O	1.93	0.68
18:R:106:GLY:HA2	18:R:109:MET:HE3	1.76	0.67
30:0:558:C:H2'	30:0:559:U:H5''	1.72	0.67
30:0:2256:G:H2'	30:0:2257:G:C5'	2.23	0.67
31:9:39:U:H1'	31:9:44:A:H61	1.59	0.67
29:3:25:VAL:HG22	29:3:68:LYS:HG3	1.75	0.67
31:9:23:U:O2'	31:9:24:U:H4'	1.94	0.67
22:V:57:LYS:HA	22:V:60:GLN:HE21	1.60	0.67
1:A:36:ASP:HB2	1:A:85:SER:H	1.60	0.67
18:R:150:PRO:CG	18:R:150:PRO:O	2.41	0.67
3:C:27:ARG:NH2	30:0:657:G:OP1	2.28	0.67
30:0:285:A:H2'	30:0:286:U:O4'	1.95	0.67
30:0:1730:G:H5'	30:0:1731:C:C5	2.30	0.67
23:W:4:LEU:HD22	23:W:52:VAL:HG21	1.77	0.66
23:W:88:THR:HG22	23:W:89:ASP:H	1.60	0.66
30:0:1834:C:H2'	30:0:1840:A:N6	2.09	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:111:LEU:HD23	30:0:1163:G:H4'	1.76	0.66
30:0:125:U:H2'	38:0:3776:HOH:O	1.94	0.66
30:0:853:C:H3'	38:0:4563:HOH:O	1.95	0.66
30:0:2237:G:H1'	38:0:4866:HOH:O	1.94	0.66
30:0:2509:A:OP2	30:0:2510:C:H5	1.78	0.66
30:0:1524:U:OP1	30:0:1524:U:H4'	1.95	0.66
30:0:2256:G:H2'	30:0:2257:G:H5'	1.77	0.66
30:0:2372:A:H2'	30:0:2373:U:C6	2.30	0.66
14:N:67:ALA:HA	14:N:71:TRP:HB3	1.76	0.66
21:U:14:GLU:O	21:U:17:THR:HB	1.95	0.66
30:0:1120:U:H5'	30:0:1121:G:OP2	1.95	0.66
30:0:1159:G:H21	30:0:1189:A:H8	1.42	0.66
31:9:22:G:H5'	31:9:23:U:OP1	1.94	0.66
30:0:31:C:H2'	38:0:7702:HOH:O	1.95	0.66
30:0:1667:A:H5'	30:0:1667:A:C8	2.29	0.66
30:0:2498:C:O2'	30:0:2499:U:H5'	1.94	0.66
30:0:2836:G:H1'	38:0:6850:HOH:O	1.95	0.66
23:W:21:LEU:HD21	23:W:48:VAL:HG11	1.76	0.66
8:H:29:SER:HA	8:H:62:HIS:HD2	1.60	0.66
10:J:69:TYR:CE1	30:0:2081:A:H4'	2.31	0.66
10:J:82:THR:CG2	30:0:1242:A:H5'	2.21	0.66
23:W:26:ILE:HB	38:W:5420:HOH:O	1.95	0.66
30:0:2320:U:H4'	30:0:2321:A:O4'	1.95	0.66
30:0:283:U:C5	30:0:284:C:N3	2.63	0.66
30:0:544:G:C2'	30:0:545:G:H5''	2.26	0.66
30:0:1562:C:O2	30:0:1562:C:H2'	1.95	0.66
30:0:1819:G:H2'	30:0:1820:G:H4'	1.76	0.66
30:0:2505:G:C2'	30:0:2506:A:H5'	2.25	0.66
30:0:2505:G:O2'	30:0:2506:A:H5'	1.95	0.66
30:0:485:A:N3	30:0:487:G:H5''	2.10	0.65
30:0:2748:G:H1'	38:0:7914:HOH:O	1.95	0.65
30:0:2795:C:O2'	30:0:2796:U:H5'	1.96	0.65
1:A:35:GLY:O	1:A:36:ASP:HB3	1.96	0.65
2:B:320:GLN:HE21	2:B:321:PRO:HD2	1.62	0.65
13:M:171:ARG:CD	30:0:156:C:H5''	2.18	0.65
29:3:70:ARG:HG2	29:3:77:ALA:HB2	1.78	0.65
13:M:102:GLU:OE1	13:M:164:THR:HG21	1.96	0.65
30:0:1477:C:H5'	30:0:1868:G:C5'	2.26	0.65
30:0:1666:C:C2'	30:0:1667:A:C5'	2.74	0.65
30:0:836:G:H5''	38:0:9288:HOH:O	1.95	0.65
30:0:2766:A:H5'	38:0:9565:HOH:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:74:ARG:O	10:J:78:ILE:HG12	1.97	0.65
29:3:48:ASN:HD21	30:0:2468:A:H61	1.43	0.65
30:0:558:C:C2'	30:0:559:U:C5'	2.75	0.64
30:0:960:G:H3'	30:0:960:G:N3	2.12	0.64
30:0:1741:U:O2'	30:0:2723:G:H4'	1.97	0.64
30:0:1183:C:H2'	30:0:1183:C:O2	1.95	0.64
30:0:1279:U:O2	30:0:1279:U:H2'	1.95	0.64
30:0:281:U:H2'	30:0:282:C:O4'	1.96	0.64
31:9:31:C:H1'	38:9:9014:HOH:O	1.96	0.64
18:R:29:LYS:HE2	30:0:524:A:H5'	1.79	0.64
19:S:43:GLU:HB3	38:S:8991:HOH:O	1.97	0.64
2:B:51:VAL:HG13	2:B:53:LEU:HD13	1.80	0.64
10:J:107:ASN:ND2	10:J:109:TYR:H	1.96	0.64
23:W:137:GLN:HE21	23:W:141:HIS:CE1	2.10	0.64
23:W:108:ARG:HH21	23:W:114:PRO:HG2	1.63	0.64
30:0:814:G:H4'	38:0:3141:HOH:O	1.98	0.64
11:K:98:VAL:HG13	11:K:102:GLU:HA	1.79	0.64
29:3:73:GLU:HB3	38:3:9049:HOH:O	1.97	0.64
30:0:564:G:H1'	38:0:6317:HOH:O	1.97	0.64
2:B:212:GLN:HB2	2:B:257:THR:HG21	1.80	0.64
30:0:2481:G:H5''	38:0:4558:HOH:O	1.97	0.64
30:0:1701:A:H5''	30:0:1702:U:H3'	1.80	0.64
30:0:2827:A:H2'	30:0:2828:G:O4'	1.98	0.64
14:N:37:ARG:NH1	31:9:6:C:C5'	2.52	0.63
18:R:9:ASP:O	18:R:13:THR:HB	1.98	0.63
20:T:71:VAL:CG1	20:T:90:PRO:HB3	2.27	0.63
3:C:184:ARG:NH2	30:0:450:C:OP1	2.32	0.63
14:N:11:ARG:HD3	31:9:114:G:O6	1.99	0.63
30:0:12:U:H2'	30:0:13:G:H5'	1.80	0.63
30:0:1058:A:H2'	30:0:1060:C:H5''	1.78	0.63
12:L:41:HIS:HD2	30:0:926:A:O2'	1.80	0.63
38:I:1549:HOH:O	30:0:1180:U:H1'	1.97	0.63
18:R:117:HIS:HD2	30:0:20:G:H21	1.45	0.63
3:C:140:VAL:HB	38:C:8647:HOH:O	1.99	0.63
23:W:6:GLN:CB	23:W:26:ILE:HD11	2.28	0.63
30:0:2768:A:H5''	38:0:4438:HOH:O	1.98	0.63
30:0:1243:C:H3'	38:0:4848:HOH:O	1.99	0.63
30:0:1166:A:OP1	30:0:1174:A:H4'	1.99	0.62
30:0:2509:A:H2'	30:0:2510:C:O4'	1.99	0.62
30:0:671:A:O2'	30:0:672:G:H2'	1.99	0.62
30:0:1185:U:H5'	38:0:7480:HOH:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2426:G:H1'	38:0:6098:HOH:O	1.99	0.62
30:0:2781:U:H2'	30:0:2782:G:H5'	1.79	0.62
27:1:8:GLN:HE22	27:1:11:LYS:NZ	1.97	0.62
30:0:371:U:H2'	30:0:372:A:H8	1.65	0.62
30:0:848:C:H5'	38:0:7283:HOH:O	1.99	0.62
30:0:1527:A:H1'	30:0:1528:A:C8	2.34	0.62
31:9:49:G:O2'	31:9:50:G:H5'	1.99	0.62
31:9:114:G:H2'	31:9:115:C:C6	2.35	0.62
25:Y:187:VAL:HG23	25:Y:192:ASP:HB2	1.80	0.62
11:K:32:ILE:HD11	11:K:56:SER:HB3	1.82	0.62
12:L:136:ALA:HB3	38:L:8874:HOH:O	2.00	0.62
30:0:559:U:H5'	30:0:559:U:C6	2.26	0.62
31:9:39:U:H3'	31:9:40:C:H5''	1.82	0.62
26:Z:66:CYS:SG	26:Z:68:GLU:HB2	2.39	0.62
30:0:2316:G:H4'	38:0:6098:HOH:O	2.00	0.62
2:B:156:LYS:HB3	30:0:2846:C:H4'	1.81	0.62
27:1:28:HIS:HE1	30:0:776:A:OP1	1.83	0.62
30:0:1398:G:O2'	30:0:1399:A:H5'	2.00	0.62
30:0:378:A:H1'	38:0:3510:HOH:O	1.98	0.62
30:0:542:A:H5'	30:0:542:A:C8	2.25	0.62
30:0:681:G:N3	30:0:681:G:H5'	2.15	0.62
30:0:1278:A:H4'	30:0:1279:U:C4	2.34	0.62
30:0:2748:G:H2'	38:0:7554:HOH:O	1.98	0.62
38:B:9095:HOH:O	30:0:2672:C:H1'	2.00	0.61
11:K:87:ARG:HG3	30:0:2721:U:H4'	1.81	0.61
30:0:1603:A:H5'	30:0:1605:G:C4'	2.30	0.61
30:0:2597:U:H2'	30:0:2598:U:H5'	1.81	0.61
30:0:1185:U:H2'	30:0:1186:C:C6	2.35	0.61
30:0:2781:U:C2'	30:0:2782:G:H5'	2.30	0.61
30:0:128:A:O2'	30:0:129:A:H5'	2.00	0.61
30:0:2300:A:H4'	30:0:2301:A:O5'	2.01	0.61
10:J:70:PHE:HE1	30:0:2676:C:H4'	1.65	0.61
30:0:1342:C:C2'	30:0:1343:C:H5'	2.30	0.61
30:0:2252:A:C5	30:0:2253:G:H1'	2.34	0.61
30:0:2769:C:H2'	30:0:2770:G:H5'	1.82	0.61
30:0:2851:G:O2'	30:0:2852:A:H5'	2.00	0.61
9:I:110:ASP:O	30:0:1163:G:H5'	2.01	0.61
23:W:81:ASP:OD1	23:W:92:ASP:HB2	1.99	0.61
30:0:138:U:OP2	30:0:139:C:H5	1.83	0.61
30:0:1166:A:H61	30:0:1180:U:H3	1.46	0.61
21:U:39:ASN:ND2	21:U:44:ARG:HH11	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:308:U:H5'	30:0:309:C:OP1	1.99	0.61
30:0:558:C:H2'	30:0:559:U:H5'	1.82	0.61
5:E:116:THR:HG22	5:E:151:LEU:HD22	1.83	0.61
20:T:61:GLU:HG2	38:T:3851:HOH:O	2.00	0.61
30:0:255:A:H2'	30:0:256:C:H6	1.64	0.61
30:0:2507:G:H2'	30:0:2510:C:N4	2.12	0.61
23:W:61:THR:HG23	23:W:151:GLU:HG3	1.83	0.61
30:0:2894:C:O2'	30:0:2895:C:H5'	2.01	0.61
13:M:164:THR:HG22	13:M:167:GLY:N	2.15	0.61
30:0:1171:A:H2'	30:0:1172:G:H5'	1.81	0.61
30:0:2419:U:H5''	30:0:2420:G:H5'	1.83	0.61
31:9:1:U:O3'	31:9:3:A:H5''	2.01	0.61
28:2:41:HIS:HD2	28:2:44:ARG:H	1.49	0.60
30:0:1878:G:O2'	30:0:1879:U:C6	2.52	0.60
2:B:294:TYR:HE2	38:B:9111:HOH:O	1.84	0.60
5:E:8:PRO:HB2	5:E:11:VAL:HG23	1.81	0.60
13:M:145:ASP:HB2	38:M:8862:HOH:O	1.99	0.60
30:0:2344:G:H2'	30:0:2344:G:N3	2.16	0.60
30:0:2718:C:H6	30:0:2718:C:H5'	1.66	0.60
2:B:264:GLU:HG2	2:B:267:LYS:HE2	1.83	0.60
18:R:128:ARG:NH2	30:0:2054:A:N3	2.49	0.60
30:0:2616:G:H1'	38:0:9433:HOH:O	2.00	0.60
31:9:49:G:H2'	31:9:50:G:O4'	2.01	0.60
30:0:1080:C:H4'	30:0:1081:A:OP1	2.01	0.60
30:0:1174:A:C5	30:0:1201:C:H4'	2.36	0.60
30:0:1192:A:H3'	30:0:1193:A:H5'	1.83	0.60
1:A:199:HIS:CD2	1:A:201:PHE:H	2.19	0.60
4:D:58:VAL:HB	4:D:62:ASP:HB2	1.83	0.60
4:D:103:ASN:ND2	4:D:134:LEU:H	1.99	0.60
11:K:74:VAL:HG11	11:K:113:ILE:HG12	1.83	0.60
23:W:48:VAL:HG12	23:W:52:VAL:HB	1.83	0.60
23:W:137:GLN:NE2	23:W:141:HIS:HE1	1.94	0.60
30:0:1730:G:H5''	30:0:1731:C:H6	1.65	0.60
30:0:1766:U:O2	30:0:1778:A:H5'	2.01	0.60
30:0:1972:U:H2'	30:0:1973:A:C5'	2.31	0.60
18:R:39:THR:HG22	18:R:42:GLU:H	1.67	0.60
27:1:10:LYS:HG3	38:1:8981:HOH:O	2.01	0.60
30:0:2900:G:H2'	30:0:2901:C:O4'	2.01	0.60
2:B:62:ARG:HA	2:B:65:MET:CE	2.32	0.60
8:H:6:ALA:HA	8:H:61:ARG:HH12	1.67	0.60
17:Q:25:PRO:HB2	38:Q:4350:HOH:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1182:C:H1'	30:0:1192:A:H8	1.67	0.60
1:A:48:ASP:HB3	38:A:9066:HOH:O	2.02	0.60
2:B:41:PHE:HB3	2:B:190:MET:HE1	1.83	0.60
26:Z:81:CYS:SG	26:Z:83:TYR:HB3	2.42	0.60
30:0:1119:G:N2	30:0:1246:A:H2	1.92	0.60
30:0:1730:G:H5''	30:0:1731:C:C6	2.37	0.60
20:T:24:ARG:HH21	20:T:39:ASN:HD22	1.50	0.59
30:0:515:C:H5''	38:0:5654:HOH:O	2.01	0.59
30:0:1116:U:O2'	30:0:1118:A:C2	2.46	0.59
30:0:1528:A:H2'	30:0:1529:G:O4'	2.02	0.59
31:9:64:C:C2'	31:9:65:A:H5'	2.32	0.59
5:E:139:GLU:OE2	30:0:2781:U:H1'	2.02	0.59
9:I:112:LEU:HD11	30:0:1162:G:H1'	1.83	0.59
30:0:2505:G:H2'	30:0:2506:A:H5'	1.84	0.59
30:0:659:A:H5''	38:0:7111:HOH:O	2.03	0.59
30:0:1641:A:C2'	30:0:1642:A:H5'	2.32	0.59
30:0:2472:C:O2'	30:0:2634:G:H4'	2.03	0.59
30:0:2637:A:H4'	38:0:6071:HOH:O	2.02	0.59
30:0:1189:A:O2'	30:0:1208:C:H2'	2.03	0.59
31:9:49:G:H5''	38:9:9092:HOH:O	2.02	0.59
31:9:64:C:H2'	31:9:65:A:H5'	1.84	0.59
1:A:36:ASP:CB	1:A:85:SER:H	2.16	0.59
12:L:41:HIS:CD2	30:0:926:A:O2'	2.56	0.59
22:V:39:ALA:N	22:V:40:PRO:HD2	2.17	0.59
30:0:1189:A:H1'	30:0:1209:C:C1'	2.32	0.59
30:0:2613:G:O2'	30:0:2614:C:H5'	2.03	0.59
31:9:54:A:C2'	31:9:55:U:H5'	2.32	0.59
24:X:43:VAL:HG12	24:X:44:ASP:H	1.66	0.59
5:E:84:MET:HG2	5:E:168:ILE:HA	1.85	0.59
8:H:6:ALA:HA	8:H:61:ARG:NH1	2.18	0.59
27:1:9:GLY:HA2	30:0:1687:C:O2	2.03	0.59
5:E:143:GLN:NE2	30:0:2779:G:H21	2.00	0.59
30:0:960:G:N3	30:0:960:G:C2'	2.65	0.59
30:0:2089:A:O2'	30:0:2090:G:H5'	2.03	0.59
4:D:22:VAL:HG22	4:D:74:THR:HG22	1.84	0.59
25:Y:187:VAL:HG23	25:Y:192:ASP:HB3	1.84	0.59
30:0:583:C:H2'	30:0:584:U:H6	1.68	0.59
30:0:2802:C:H2'	30:0:2803:C:H6	1.68	0.59
30:0:1200:A:H3'	38:0:5763:HOH:O	2.03	0.58
23:W:13:MET:HE1	23:W:18:GLN:HA	1.83	0.58
23:W:139:GLY:O	23:W:141:HIS:HD2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:76:G:C3'	31:9:77:A:H5''	2.24	0.58
4:D:135:VAL:HG21	4:D:139:TYR:CD1	2.38	0.58
30:0:807:A:O2'	30:0:808:A:H5'	2.03	0.58
30:0:2526:C:H5'	30:0:2526:C:H6	1.64	0.58
31:9:1:U:H4'	31:9:3:A:OP1	2.03	0.58
30:0:1730:G:C5'	30:0:1731:C:C6	2.86	0.58
30:0:1942:A:O2'	30:0:1943:C:H5'	2.02	0.58
31:9:2:U:H4'	38:9:9104:HOH:O	2.02	0.58
1:A:192:VAL:HG12	1:A:207:GLN:HB3	1.85	0.58
2:B:304:PRO:HD2	2:B:307:ARG:NE	2.18	0.58
8:H:168:VAL:HG13	38:H:210:HOH:O	2.03	0.58
17:Q:21:ARG:HH12	30:0:2353:A:H1'	1.68	0.58
23:W:44:MET:CE	30:0:944:G:H21	2.16	0.58
30:0:1183:C:N3	30:0:1184:C:C5	2.72	0.58
30:0:2421:G:H1'	38:0:7033:HOH:O	2.03	0.58
1:A:100:PRO:HG2	1:A:103:VAL:HG21	1.84	0.58
13:M:134:ILE:HG23	13:M:141:ILE:HD13	1.84	0.58
30:0:90:A:H2'	30:0:91:G:O4'	2.02	0.58
3:C:115:LEU:HD13	3:C:223:LEU:HD21	1.85	0.58
6:F:2:VAL:HG22	6:F:57:GLU:OE1	2.04	0.58
30:0:644:G:H5'	30:0:644:G:N3	2.19	0.58
30:0:1175:G:H1'	30:0:1193:A:H2'	1.84	0.58
30:0:1187:U:H2'	38:0:6907:HOH:O	2.04	0.58
1:A:94:LEU:HD12	1:A:98:GLU:HB2	1.84	0.58
3:C:174:ILE:CD1	30:0:338:C:H4'	2.33	0.58
14:N:37:ARG:HH11	31:9:6:C:H5''	1.65	0.58
8:H:174:LEU:HA	38:H:220:HOH:O	2.02	0.58
21:U:17:THR:HG22	21:U:18:GLY:N	2.19	0.58
30:0:1174:A:C6	30:0:1201:C:H4'	2.39	0.58
2:B:258:GLY:H	2:B:260:HIS:CE1	2.21	0.58
9:I:126:THR:O	9:I:130:LEU:HG	2.03	0.58
21:U:6:CYS:HB2	21:U:32:CYS:HB3	1.85	0.57
31:9:107:C:O2'	31:9:108:C:H5'	2.04	0.57
2:B:98:THR:HG22	30:0:2820:A:OP1	2.04	0.57
30:0:952:G:N3	30:0:2302:A:H2'	2.19	0.57
30:0:2589:U:H2'	30:0:2590:U:C6	2.39	0.57
30:0:2712:G:H5'	38:0:5232:HOH:O	2.03	0.57
30:0:2769:C:O2'	30:0:2770:G:H5'	2.04	0.57
9:I:73:LEU:HD12	9:I:107:LYS:NZ	2.20	0.57
30:0:420:U:H2'	30:0:421:C:C6	2.39	0.57
30:0:2756:U:H3	30:0:2896:A:H2	1.48	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:29:C:H2'	31:9:30:C:C5'	2.28	0.57
4:D:52:THR:HG21	30:0:2346:C:O2'	2.04	0.57
9:I:112:LEU:CD1	30:0:1162:G:H1'	2.34	0.57
13:M:23:LEU:HD13	13:M:27:ARG:NH2	2.19	0.57
14:N:7:LYS:HE3	17:Q:21:ARG:O	2.04	0.57
24:X:76:ARG:HH11	24:X:76:ARG:HG3	1.68	0.57
30:0:185:G:H4'	30:0:186:A:OP1	2.05	0.57
30:0:272:A:H5'	30:0:273:G:OP2	2.03	0.57
30:0:541:C:H2'	30:0:542:A:H5'	1.86	0.57
14:N:25:ARG:HG2	30:0:2416:G:O2'	2.04	0.57
17:Q:18:PRO:O	17:Q:21:ARG:HB2	2.03	0.57
17:Q:27:GLN:HE21	31:9:8:G:H4'	1.70	0.57
30:0:280:C:H2'	30:0:281:U:O4'	2.04	0.57
30:0:559:U:H6	30:0:559:U:C5'	2.12	0.57
30:0:2135:A:O2'	30:0:2136:G:H5'	2.04	0.57
13:M:28:GLN:O	13:M:32:ARG:HG3	2.04	0.57
18:R:39:THR:HG23	18:R:107:GLU:O	2.04	0.57
30:0:10:U:O4	30:0:532:A:OP2	2.23	0.57
30:0:2604:A:H5'	38:0:5798:HOH:O	2.04	0.57
30:0:2787:C:H5	38:0:4643:HOH:O	1.86	0.57
1:A:36:ASP:O	1:A:38:ILE:N	2.38	0.57
12:L:4:LYS:HE2	30:0:645:U:OP2	2.05	0.57
30:0:1171:A:C2'	30:0:1172:G:H5'	2.35	0.57
30:0:1377:C:H5'	30:0:1377:C:C6	2.40	0.57
30:0:1942:A:H3'	38:0:7360:HOH:O	2.03	0.57
13:M:72:ALA:HB2	13:M:93:ARG:HG2	1.86	0.57
30:0:1016:U:H1'	38:0:3667:HOH:O	2.04	0.57
31:9:75:G:H1	31:9:106:U:H3	1.53	0.57
2:B:201:ASP:HB2	2:B:312:ARG:HD2	1.87	0.57
3:C:188:ARG:HD3	38:C:8559:HOH:O	2.04	0.57
31:9:39:U:H1'	31:9:44:A:N6	2.19	0.57
2:B:264:GLU:HG2	2:B:267:LYS:CE	2.35	0.57
10:J:127:ILE:HG22	33:J:8801:CL:CL	2.42	0.57
30:0:228:C:H2'	30:0:229:G:H5'	1.86	0.57
30:0:960:G:N3	30:0:960:G:H2'	2.20	0.57
30:0:2005:G:H3'	30:0:2005:G:OP2	2.05	0.57
30:0:2488:A:H1'	38:0:9096:HOH:O	2.03	0.57
30:0:2559:C:H4'	38:0:7268:HOH:O	2.05	0.57
1:A:99:ILE:O	1:A:131:HIS:HE1	1.88	0.56
3:C:1:MET:HG2	3:C:2:GLN:N	2.19	0.56
14:N:48:VAL:CG1	14:N:55:ASP:HB3	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:711:G:H1'	38:0:7108:HOH:O	2.04	0.56
30:0:941:G:C5	30:0:942:U:C4	2.93	0.56
30:0:1304:U:H2'	30:0:1305:C:C6	2.40	0.56
30:0:1838:U:O2'	30:0:2644:C:H5'	2.05	0.56
30:0:2578:G:H5'	30:0:2578:G:C8	2.36	0.56
12:L:143:THR:HG22	12:L:144:ASP:N	2.20	0.56
29:3:70:ARG:HB3	38:3:9059:HOH:O	2.04	0.56
30:0:734:U:O2'	30:0:736:A:N7	2.39	0.56
30:0:1632:A:C3'	30:0:1633:C:H5'	2.35	0.56
1:A:88:ILE:HD13	1:A:100:PRO:HD3	1.86	0.56
10:J:18:ILE:HD13	30:0:1244:U:OP1	2.05	0.56
11:K:66:ARG:HH22	30:0:1994:A:P	2.29	0.56
30:0:1474:C:H6	30:0:1474:C:C5'	2.15	0.56
30:0:1947:G:N2	30:0:1966:U:C2	2.73	0.56
2:B:125:GLU:O	2:B:129:ARG:HG3	2.06	0.56
14:N:143:ARG:HH21	14:N:169:PRO:HB2	1.69	0.56
20:T:2:LYS:HG2	30:0:447:A:OP1	2.05	0.56
16:P:143:ALA:HA	38:P:192:HOH:O	2.04	0.56
27:1:42:SER:HB2	38:1:8956:HOH:O	2.05	0.56
30:0:31:C:H4'	38:0:7437:HOH:O	2.06	0.56
30:0:506:G:N2	30:0:509:A:H5'	2.18	0.56
30:0:1209:C:H2'	30:0:1210:G:H8	1.70	0.56
30:0:2032:U:H2'	30:0:2033:G:C5'	2.36	0.56
31:9:13:A:O2'	31:9:14:G:H5''	2.06	0.56
30:0:363:C:O2'	30:0:364:U:H5'	2.06	0.56
30:0:368:C:H2'	30:0:369:G:H5'	1.88	0.56
30:0:876:A:H2'	30:0:876:A:N3	2.21	0.56
1:A:199:HIS:HD2	1:A:201:PHE:H	1.54	0.56
10:J:107:ASN:HD21	10:J:109:TYR:HB2	1.71	0.56
27:1:16:HIS:HD2	30:0:470:U:O2'	1.88	0.56
1:A:153:ARG:HB2	1:A:153:ARG:HH11	1.70	0.55
9:I:120:ALA:O	9:I:124:VAL:HG23	2.06	0.55
30:0:119:A:H2'	30:0:120:A:H5''	1.87	0.55
30:0:1904:A:H2'	30:0:1905:U:O4'	2.05	0.55
30:0:1972:U:H2'	30:0:1973:A:H5''	1.87	0.55
3:C:58:ALA:HA	3:C:73:GLN:HE21	1.69	0.55
4:D:25:MET:CE	4:D:37:ALA:HB1	2.35	0.55
10:J:107:ASN:C	10:J:107:ASN:HD22	2.09	0.55
10:J:107:ASN:HD22	10:J:109:TYR:H	1.54	0.55
25:Y:212:ARG:HD2	38:Y:8900:HOH:O	2.07	0.55
30:0:2064:U:H5'	30:0:2652:U:H4'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:50:VAL:HG13	6:F:60:VAL:HG11	1.89	0.55
8:H:15:PRO:HG3	30:0:1053:G:OP1	2.06	0.55
28:2:10:ARG:NH2	30:0:121:U:OP2	2.35	0.55
30:0:821:U:H3'	38:0:3780:HOH:O	2.07	0.55
4:D:159:PRO:O	4:D:163:VAL:HG23	2.05	0.55
30:0:2781:U:H2'	30:0:2782:G:C5'	2.36	0.55
14:N:132:ASN:HD22	30:0:2413:A:H4'	1.72	0.55
16:P:7:LYS:HD3	16:P:21:VAL:HG22	1.87	0.55
30:0:168:C:O5'	30:0:168:C:H6	1.89	0.55
30:0:396:U:O2'	30:0:418:C:H4'	2.07	0.55
30:0:407:A:H5'	38:0:6032:HOH:O	2.06	0.55
30:0:2254:G:H1'	38:0:5546:HOH:O	2.07	0.55
30:0:2840:A:H3'	38:0:7659:HOH:O	2.05	0.55
2:B:51:VAL:HG23	2:B:330:VAL:HG22	1.88	0.55
4:D:54:ALA:HB2	4:D:69:ILE:HD12	1.88	0.55
8:H:6:ALA:HB3	30:0:2521:A:OP2	2.06	0.55
9:I:130:LEU:HD22	30:0:1167:G:H4'	1.89	0.55
29:3:15:ASN:O	30:0:2408:A:H4'	2.06	0.55
30:0:660:A:H4'	30:0:661:G:O5'	2.07	0.55
30:0:711:G:C2	30:0:718:C:C2	2.95	0.55
30:0:1060:C:H6	30:0:1060:C:H5'	1.72	0.55
3:C:132:ASP:HB3	38:C:8560:HOH:O	2.06	0.55
5:E:23:GLU:HG2	5:E:28:SER:HB3	1.89	0.55
30:0:1132:A:N6	30:0:1229:C:H2'	2.22	0.55
30:0:1596:U:H2'	30:0:1598:A:OP2	2.07	0.55
4:D:65:GLU:HA	38:D:6752:HOH:O	2.05	0.55
4:D:173:GLU:HG3	4:D:174:VAL:HG23	1.89	0.55
7:G:64:ASN:HD22	7:G:64:ASN:N	2.04	0.55
23:W:68:THR:HG23	23:W:69:ARG:HG2	1.89	0.55
27:1:1:THR:HA	38:1:8958:HOH:O	2.06	0.55
30:0:2510:C:H5'	30:0:2511:A:OP2	2.07	0.55
31:9:24:U:H3'	31:9:25:G:C5'	2.37	0.55
31:9:55:U:H4'	31:9:56:A:C8	2.42	0.55
30:0:1538:C:O2'	30:0:1539:U:H5'	2.06	0.55
2:B:145:HIS:HD2	2:B:146:THR:O	1.90	0.55
7:G:23:ILE:O	7:G:27:ILE:HG13	2.06	0.55
13:M:95:LYS:HE2	30:0:157:G:H4'	1.89	0.55
1:A:121:ALA:O	1:A:124:VAL:HG22	2.07	0.54
2:B:102:THR:HG23	2:B:182:VAL:HG12	1.90	0.54
12:L:150:GLN:HB3	38:L:8869:HOH:O	2.06	0.54
30:0:2577:A:H8	38:0:9602:HOH:O	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:192:VAL:CG1	1:A:207:GLN:HB3	2.38	0.54
30:0:2083:A:H3'	38:0:7590:HOH:O	2.07	0.54
2:B:27:ASN:HD22	2:B:27:ASN:H	1.56	0.54
30:0:1154:A:H2'	30:0:1155:G:C8	2.42	0.54
30:0:1291:A:H2	38:0:5300:HOH:O	1.89	0.54
30:0:1523:G:C5	30:0:1524:U:C4	2.96	0.54
30:0:2878:U:H2'	30:0:2879:A:O4'	2.06	0.54
31:9:59:C:O5'	31:9:59:C:H6	1.90	0.54
26:Z:40:ALA:HA	30:0:1773:G:C8	2.42	0.54
30:0:292:G:H2'	30:0:358:G:N2	2.23	0.54
30:0:812:A:H1'	38:0:3969:HOH:O	2.06	0.54
30:0:1202:A:H2'	30:0:1203:G:O4'	2.07	0.54
30:0:2256:G:C2'	30:0:2257:G:C5'	2.84	0.54
11:K:74:VAL:CG1	11:K:113:ILE:HG12	2.38	0.54
24:X:23:HIS:HE1	30:0:2044:G:OP1	1.89	0.54
31:9:52:A:O2'	31:9:53:G:H5'	2.08	0.54
3:C:154:VAL:O	3:C:158:GLU:HG3	2.07	0.54
5:E:143:GLN:NE2	30:0:2780:C:H1'	2.22	0.54
30:0:241:A:C2	30:0:378:A:H4'	2.42	0.54
30:0:1477:C:H5'	30:0:1868:G:H5'	1.89	0.54
17:Q:27:GLN:HE21	31:9:8:G:C5'	2.20	0.54
30:0:282:C:H1'	30:0:368:C:H41	1.72	0.54
30:0:441:A:H1'	30:0:442:A:N7	2.23	0.54
30:0:1342:C:O2'	30:0:1343:C:H5'	2.07	0.54
6:F:53:ASP:OD1	6:F:80:GLN:HB2	2.08	0.54
12:L:73:VAL:HG21	12:L:116:HIS:CE1	2.42	0.54
25:Y:204:ARG:HH22	30:0:553:G:P	2.31	0.54
31:9:3:A:H2	31:9:21:G:N3	2.06	0.54
3:C:218:VAL:HG12	38:C:8620:HOH:O	2.07	0.54
7:G:16:LYS:O	7:G:20:VAL:HG23	2.08	0.54
18:R:68:HIS:O	30:0:2842:G:H5'	2.08	0.54
1:A:112:PRO:HD3	1:A:152:CYS:SG	2.48	0.54
4:D:41:LEU:HA	4:D:44:ILE:HG22	1.88	0.54
5:E:49:ILE:HD11	5:E:69:ILE:HD12	1.90	0.54
12:L:143:THR:HG22	12:L:144:ASP:H	1.71	0.54
19:S:33:SER:O	19:S:37:VAL:HG23	2.07	0.54
4:D:105:SER:OG	30:0:2338:G:H1'	2.07	0.53
18:R:132:ARG:HG2	18:R:133:ALA:N	2.23	0.53
3:C:236:THR:HA	38:C:8647:HOH:O	2.08	0.53
8:H:26:ILE:HA	8:H:123:ILE:HG21	1.90	0.53
10:J:39:VAL:HG13	10:J:106:GLY:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:30:GLU:O	13:M:34:GLU:HG3	2.09	0.53
15:O:73:ASP:HA	15:O:92:VAL:O	2.08	0.53
18:R:150:PRO:CG	18:R:150:PRO:CB	2.86	0.53
30:0:2670:G:O2'	30:0:2671:U:H5'	2.07	0.53
6:F:34:ASN:HA	13:M:4:ALA:HB2	1.91	0.53
30:0:1586:G:O2'	30:0:1587:U:H5'	2.08	0.53
30:0:1819:G:H2'	30:0:1820:G:C4'	2.39	0.53
2:B:307:ARG:HG3	2:B:307:ARG:NH1	2.23	0.53
30:0:136:C:H2'	30:0:137:U:O4'	2.08	0.53
30:0:488:U:H2'	38:0:4019:HOH:O	2.08	0.53
30:0:1373:G:H1'	38:0:6143:HOH:O	2.08	0.53
30:0:1919:A:H4'	38:0:4862:HOH:O	2.07	0.53
30:0:2064:U:H5'	30:0:2652:U:O3'	2.08	0.53
30:0:2842:G:H2'	30:0:2843:A:H5'	1.90	0.53
30:0:1339:G:C6	30:0:1340:G:N1	2.77	0.53
30:0:1592:G:H2'	30:0:1593:C:H6	1.72	0.53
14:N:144:GLY:O	14:N:147:ILE:HG23	2.08	0.53
23:W:125:HIS:HE1	38:W:3071:HOH:O	1.91	0.53
30:0:1205:U:C2'	30:0:1206:U:C5'	2.76	0.53
30:0:1451:C:H5'	30:0:1505:U:C5	2.43	0.53
10:J:70:PHE:CD1	30:0:2676:C:H4'	2.43	0.53
18:R:99:ALA:HB1	18:R:109:MET:CE	2.37	0.53
30:0:2502:C:H2'	30:0:2503:A:C5'	2.37	0.53
31:9:24:U:H3'	31:9:25:G:H5'	1.91	0.53
1:A:135:VAL:HG21	1:A:147:ARG:HB3	1.91	0.53
3:C:129:HIS:CE1	3:C:231:ARG:HA	2.44	0.53
4:D:51:ARG:HH11	4:D:68:PRO:HB3	1.74	0.53
4:D:154:LYS:HD2	4:D:154:LYS:N	2.16	0.53
22:V:55:ARG:O	22:V:59:ILE:HG12	2.09	0.53
30:0:544:G:C3'	30:0:545:G:H5''	2.39	0.53
30:0:920:C:H5''	30:0:921:G:O5'	2.09	0.53
30:0:1135:G:H5'	38:0:5935:HOH:O	2.07	0.53
30:0:2250:G:H2'	30:0:2251:G:O4'	2.09	0.53
30:0:2769:C:H2'	30:0:2770:G:C5'	2.39	0.53
3:C:47:GLY:HA2	3:C:92:PRO:HB2	1.91	0.53
9:I:91:PHE:HD2	9:I:131:GLY:HA2	1.74	0.53
30:0:299:U:H5'	38:0:7349:HOH:O	2.08	0.53
30:0:510:U:H6	38:0:7450:HOH:O	1.92	0.53
30:0:635:A:H2'	30:0:636:G:H5''	1.90	0.53
9:I:108:HIS:H	9:I:109:PRO:HD2	1.74	0.53
16:P:59:ARG:HH22	16:P:66:GLN:HE22	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:154:ARG:NH1	30:0:588:G:O6	2.42	0.53
30:0:282:C:O2'	30:0:283:U:C5'	2.56	0.53
30:0:513:A:N3	38:0:3668:HOH:O	2.34	0.53
30:0:820:G:H3'	38:0:3058:HOH:O	2.08	0.53
30:0:1066:U:H2'	30:0:1067:A:C8	2.42	0.53
30:0:1166:A:P	30:0:1174:A:H4'	2.49	0.53
13:M:34:GLU:HB3	13:M:38:GLU:HG3	1.91	0.52
27:1:16:HIS:HE1	30:0:775:G:OP1	1.92	0.52
30:0:284:C:OP2	30:0:284:C:C6	2.62	0.52
30:0:958:G:H2'	30:0:959:C:C6	2.43	0.52
2:B:254:GLN:HG2	2:B:255:GLY:N	2.24	0.52
5:E:3:VAL:HG22	5:E:49:ILE:HB	1.90	0.52
5:E:11:VAL:HG12	5:E:12:ASP:N	2.24	0.52
30:0:1819:G:H2'	30:0:1820:G:C5'	2.39	0.52
2:B:312:ARG:HD3	2:B:315:VAL:HG13	1.91	0.52
10:J:41:ALA:HB3	38:J:5907:HOH:O	2.09	0.52
25:Y:216:ARG:HD2	38:Y:8870:HOH:O	2.08	0.52
30:0:1787:C:H4'	30:0:2883:A:O4'	2.09	0.52
30:0:2356:A:H5'	38:0:5644:HOH:O	2.09	0.52
31:9:91:C:H2'	31:9:92:G:O4'	2.09	0.52
5:E:6:GLU:HG2	5:E:46:THR:HG22	1.92	0.52
14:N:5:ARG:NH1	30:0:1010:C:OP1	2.42	0.52
14:N:12:ARG:HD3	14:N:18:THR:OG1	2.09	0.52
30:0:255:A:H2'	30:0:256:C:C6	2.45	0.52
30:0:920:C:H4'	30:0:921:G:C2	2.44	0.52
30:0:1268:C:O2'	30:0:1269:G:H5'	2.08	0.52
2:B:36:PRO:HG3	2:B:169:GLY:H	1.75	0.52
13:M:158:ARG:HB2	13:M:163:LEU:HB2	1.91	0.52
15:O:32:ARG:O	15:O:32:ARG:HD3	2.09	0.52
25:Y:126:PRO:HG2	25:Y:128:PHE:CZ	2.44	0.52
30:0:1181:A:N1	30:0:1192:A:O2'	2.43	0.52
30:0:1515:A:H2'	30:0:1516:U:C6	2.44	0.52
30:0:1624:A:H5'	30:0:1626:A:O4'	2.09	0.52
30:0:2263:G:H1'	38:0:6631:HOH:O	2.09	0.52
30:0:2291:A:N9	30:0:2309:C:H5'	2.25	0.52
30:0:2478:U:O2'	30:0:2479:A:H5'	2.09	0.52
8:H:72:ALA:HB2	8:H:156:ALA:HB2	1.91	0.52
14:N:86:LEU:HD12	14:N:125:ALA:HB2	1.91	0.52
30:0:120:A:H2'	30:0:120:A:N3	2.25	0.52
30:0:1314:U:H2'	38:0:5880:HOH:O	2.09	0.52
12:L:56:LYS:HE3	30:0:2443:C:H1'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1342:C:H2'	30:0:1343:C:H5'	1.92	0.52
30:0:2103:A:H2'	30:0:2104:C:H5'	1.92	0.52
30:0:2445:U:H2'	30:0:2446:G:H8	1.75	0.52
2:B:141:ARG:HD2	2:B:163:GLU:OE2	2.10	0.52
25:Y:169:ARG:HD3	30:0:1328:A:C8	2.44	0.52
30:0:1679:C:H5'	38:0:9331:HOH:O	2.10	0.52
30:0:1972:U:C2'	30:0:1973:A:H5''	2.39	0.52
30:0:2359:G:H3'	38:0:5698:HOH:O	2.10	0.52
30:0:2756:U:N3	30:0:2896:A:H2	2.08	0.52
31:9:45:A:H2'	31:9:46:C:H6	1.75	0.52
6:F:21:GLU:O	6:F:24:ARG:HG2	2.09	0.52
17:Q:19:ARG:HH21	31:9:11:A:P	2.33	0.52
22:V:64:GLY:O	22:V:65:ASP:HB2	2.09	0.52
30:0:694:A:H2'	30:0:695:C:H5'	1.90	0.52
30:0:1170:U:H2'	30:0:1172:G:OP2	2.09	0.52
30:0:1730:G:C5'	30:0:1731:C:C5	2.93	0.52
30:0:2326:C:H4'	30:0:2412:G:H4'	1.92	0.52
30:0:2756:U:N3	30:0:2896:A:C2	2.74	0.52
30:0:2769:C:H2'	30:0:2770:G:O4'	2.09	0.52
1:A:72:GLU:HG3	26:Z:90:GLY:HA2	1.91	0.52
1:A:217:ARG:HG2	1:A:229:ALA:HB2	1.91	0.52
2:B:79:MET:HE1	38:B:9089:HOH:O	2.09	0.52
3:C:43:LYS:HG2	30:0:449:A:N7	2.25	0.52
30:0:567:U:H5''	38:0:6408:HOH:O	2.08	0.52
30:0:2764:C:O2'	30:0:2765:C:H5'	2.09	0.52
2:B:207:LYS:HG3	30:0:2717:C:OP1	2.10	0.51
13:M:188:ARG:NH1	30:0:154:C:H3'	2.24	0.51
14:N:37:ARG:HD3	33:N:8807:CL:CL	2.47	0.51
18:R:18:LEU:HB2	18:R:143:VAL:CG1	2.40	0.51
30:0:497:A:H2'	30:0:498:A:C5'	2.40	0.51
30:0:541:C:O2'	30:0:542:A:H5''	2.10	0.51
30:0:613:C:H2'	30:0:614:U:H6	1.74	0.51
30:0:619:U:H3'	38:0:3289:HOH:O	2.09	0.51
30:0:1477:C:O2'	30:0:1478:U:H5'	2.10	0.51
30:0:2105:C:H2'	30:0:2106:C:C6	2.45	0.51
30:0:2524:G:H21	30:0:2526:C:N4	2.08	0.51
13:M:188:ARG:HD3	30:0:155:C:OP2	2.09	0.51
16:P:115:SER:OG	16:P:118:GLN:HG3	2.10	0.51
18:R:18:LEU:HD12	18:R:143:VAL:CG1	2.40	0.51
30:0:65:C:O2'	30:0:66:G:H5'	2.10	0.51
30:0:2269:C:C2'	30:0:2270:G:H5'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2768:A:H3'	30:0:2768:A:N3	2.25	0.51
31:9:2:U:C4'	38:9:9104:HOH:O	2.57	0.51
12:L:61:ALA:HB2	12:L:105:TYR:CE2	2.45	0.51
13:M:179:GLY:O	30:0:399:C:H5'	2.10	0.51
14:N:61:ALA:HB3	14:N:88:ALA:HB2	1.91	0.51
26:Z:57:MET:HE3	38:0:6288:HOH:O	2.09	0.51
30:0:506:G:H22	30:0:509:A:H5''	1.73	0.51
30:0:812:A:H2'	30:0:813:C:C6	2.45	0.51
30:0:1131:G:C6	30:0:1230:A:C4	2.99	0.51
30:0:1592:G:H2'	30:0:1593:C:C6	2.45	0.51
30:0:1878:G:C1'	38:0:6126:HOH:O	2.44	0.51
3:C:153:VAL:O	3:C:157:LEU:HG	2.10	0.51
14:N:38:LYS:HE2	14:N:107:ASN:ND2	2.26	0.51
19:S:11:THR:H	19:S:14:ALA:HB3	1.75	0.51
30:0:447:A:O2'	30:0:448:G:H5'	2.11	0.51
30:0:1029:U:O2'	30:0:1273:C:OP1	2.25	0.51
30:0:1447:U:H3'	30:0:1506:U:O2	2.11	0.51
2:B:7:ARG:HG2	2:B:7:ARG:HH11	1.76	0.51
30:0:256:C:H2'	30:0:257:G:O4'	2.10	0.51
30:0:445:U:H2'	30:0:446:G:H8	1.75	0.51
30:0:512:G:O3'	30:0:513:A:H8	1.92	0.51
30:0:1080:C:O5'	30:0:1080:C:H6	1.94	0.51
30:0:1730:G:H5'	30:0:1731:C:H5	1.74	0.51
30:0:2445:U:H2'	30:0:2446:G:C8	2.46	0.51
30:0:2717:C:C2'	30:0:2718:C:C5'	2.75	0.51
31:9:12:C:H5'	31:9:70:U:O4'	2.11	0.51
4:D:75:LEU:HD22	4:D:79:MET:HB3	1.93	0.51
12:L:14:GLY:O	30:0:1295:G:H5''	2.10	0.51
12:L:149:ARG:O	12:L:150:GLN:HB2	2.10	0.51
23:W:125:HIS:CD2	23:W:127:GLY:H	2.29	0.51
30:0:228:C:C2'	30:0:229:G:H5'	2.41	0.51
30:0:318:U:H5'	30:0:339:A:C2	2.46	0.51
30:0:690:G:H4'	30:0:741:C:O2	2.11	0.51
30:0:1535:G:H2'	30:0:1536:C:C6	2.46	0.51
4:D:25:MET:HE2	4:D:41:LEU:HG	1.92	0.51
18:R:18:LEU:HB2	18:R:143:VAL:HG13	1.91	0.51
23:W:139:GLY:O	23:W:141:HIS:CD2	2.64	0.51
30:0:545:G:H8	30:0:545:G:C5'	2.06	0.51
30:0:1015:C:H2'	30:0:1016:U:H6	1.75	0.51
30:0:1422:U:H2'	30:0:1423:C:C6	2.45	0.51
30:0:1973:A:H2'	30:0:1974:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2401:A:H2'	30:0:2402:A:C8	2.46	0.51
2:B:234:ARG:HG3	30:0:1735:C:OP2	2.11	0.51
6:F:101:ALA:HA	38:F:5413:HOH:O	2.10	0.51
28:2:35:ARG:HB2	38:2:2691:HOH:O	2.09	0.51
30:0:968:G:C2	30:0:1001:U:O2	2.63	0.51
31:9:1:U:O3'	31:9:3:A:C5'	2.58	0.51
2:B:85:ARG:NH1	38:B:9095:HOH:O	2.44	0.51
16:P:1:THR:O	30:0:1396:C:H1'	2.11	0.51
19:S:17:ASP:HB3	19:S:23:LYS:HB2	1.93	0.51
27:1:25:LYS:HD2	28:2:49:GLU:N	2.23	0.51
30:0:483:C:C4	30:0:484:A:C6	2.99	0.51
30:0:1160:G:H5''	30:0:1161:A:H5'	1.84	0.51
30:0:1183:C:C2	30:0:1184:C:C5	2.99	0.51
2:B:41:PHE:CD1	2:B:79:MET:HE2	2.45	0.51
2:B:41:PHE:HA	2:B:79:MET:HE2	1.91	0.51
30:0:2326:C:H4'	30:0:2412:G:C4'	2.41	0.51
3:C:95:GLU:HG3	38:C:8672:HOH:O	2.12	0.50
14:N:4:PRO:HG3	31:9:69:U:OP1	2.11	0.50
29:3:60:LYS:HG3	29:3:61:PRO:HD2	1.92	0.50
30:0:101:C:H2'	30:0:102:A:H8	1.76	0.50
30:0:407:A:H3'	38:0:4473:HOH:O	2.10	0.50
30:0:1139:U:H2'	30:0:1140:C:C6	2.46	0.50
30:0:1268:C:H2'	30:0:1269:G:H8	1.76	0.50
30:0:2754:G:H2'	30:0:2755:G:O4'	2.11	0.50
1:A:51:ARG:NH1	1:A:120:ARG:O	2.44	0.50
3:C:236:THR:HG22	3:C:239:ALA:N	2.20	0.50
8:H:69:ARG:HD3	38:H:229:HOH:O	2.11	0.50
9:I:95:LEU:HD22	9:I:99:GLN:HB3	1.93	0.50
27:1:8:GLN:HE22	27:1:11:LYS:HZ2	1.58	0.50
30:0:951:A:C2'	30:0:952:G:H5'	2.41	0.50
30:0:1193:A:C2	30:0:1194:A:N6	2.79	0.50
30:0:1739:G:O2'	30:0:1740:U:H5'	2.11	0.50
2:B:62:ARG:HA	2:B:65:MET:HE2	1.93	0.50
2:B:214:PRO:HD2	38:B:8990:HOH:O	2.11	0.50
10:J:26:VAL:HG13	10:J:36:VAL:HG11	1.93	0.50
16:P:59:ARG:HH22	16:P:66:GLN:NE2	2.08	0.50
27:1:2:GLY:O	27:1:6:PRO:HG2	2.11	0.50
30:0:899:C:H5'	38:0:3209:HOH:O	2.12	0.50
30:0:1160:G:H5'	30:0:1161:A:C4'	2.40	0.50
30:0:1878:G:O2'	30:0:1879:U:H6	1.95	0.50
31:9:76:G:H3'	31:9:77:A:C5'	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:305:ASP:O	2:B:306:LYS:HB2	2.12	0.50
12:L:143:THR:HG21	38:L:8838:HOH:O	2.10	0.50
29:3:29:ARG:NH2	30:0:1925:G:H5'	2.26	0.50
30:0:185:G:H4'	30:0:186:A:H4'	1.93	0.50
30:0:271:C:C2	30:0:273:G:O4'	2.64	0.50
30:0:700:A:H5''	30:0:701:U:H5'	1.93	0.50
30:0:737:A:H2'	30:0:738:G:O4'	2.10	0.50
30:0:960:G:N3	30:0:960:G:C3'	2.74	0.50
30:0:1118:A:H8	30:0:1119:G:H5''	1.75	0.50
30:0:1183:C:O2	30:0:1183:C:C2'	2.60	0.50
30:0:1878:G:O2'	30:0:1879:U:P	2.70	0.50
30:0:2269:C:H2'	30:0:2270:G:H5'	1.93	0.50
2:B:217:ARG:CG	2:B:257:THR:HG22	2.38	0.50
2:B:310:ARG:HB3	38:B:9109:HOH:O	2.11	0.50
3:C:214:THR:HG23	38:C:8633:HOH:O	2.11	0.50
8:H:170:ARG:HD2	38:H:190:HOH:O	2.11	0.50
12:L:27:ARG:HH21	12:L:30:ARG:HG2	1.77	0.50
14:N:37:ARG:NH1	31:9:6:C:OP1	2.44	0.50
20:T:54:ASP:OD2	30:0:316:A:H5'	2.11	0.50
30:0:661:G:C5	30:0:686:A:C2	3.00	0.50
30:0:1289:C:O2'	30:0:1290:G:H5'	2.12	0.50
4:D:28:GLY:HA2	4:D:69:ILE:HG23	1.93	0.50
7:G:20:VAL:O	7:G:24:VAL:HG23	2.12	0.50
11:K:87:ARG:NH1	38:K:4066:HOH:O	2.45	0.50
19:S:77:VAL:O	19:S:80:ARG:HG2	2.12	0.50
30:0:440:C:H2'	30:0:441:A:C8	2.47	0.50
30:0:947:U:H2'	30:0:948:G:C8	2.47	0.50
30:0:1181:A:H2'	30:0:1182:C:H5'	1.94	0.50
30:0:1244:U:H4'	30:0:1246:A:O4'	2.11	0.50
30:0:2276:U:H2'	30:0:2277:U:C6	2.46	0.50
31:9:5:G:O2'	31:9:6:C:H5'	2.11	0.50
31:9:95:C:O2'	31:9:96:C:H5'	2.12	0.50
4:D:58:VAL:CG1	4:D:60:GLU:HG2	2.42	0.50
18:R:33:ARG:NH1	38:R:8950:HOH:O	2.45	0.50
20:T:28:SER:O	20:T:32:ARG:HG3	2.11	0.50
30:0:137:U:OP1	30:0:259:G:O2'	2.30	0.50
30:0:1166:A:C6	30:0:1181:A:C2	2.99	0.50
1:A:171:LYS:HB2	30:0:820:G:C5	2.47	0.50
2:B:275:GLY:O	2:B:291:ASP:HA	2.12	0.50
9:I:97:VAL:HG12	9:I:101:LYS:HE3	1.92	0.50
30:0:1056:U:H2'	30:0:1057:A:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2511:A:H4'	38:0:5478:HOH:O	2.12	0.50
15:O:37:ARG:HD2	30:0:656:G:OP2	2.12	0.50
23:W:80:ASP:O	23:W:84:VAL:HG23	2.10	0.50
24:X:61:ARG:HH12	24:X:67:PRO:HD3	1.77	0.50
30:0:182:G:H5''	38:0:3733:HOH:O	2.12	0.50
30:0:541:C:C2'	30:0:542:A:C5'	2.78	0.50
30:0:816:G:C6	30:0:817:G:N1	2.80	0.50
30:0:877:G:C5'	30:0:878:G:OP1	2.57	0.50
30:0:1185:U:H2'	30:0:1186:C:H6	1.77	0.50
30:0:2010:A:C2'	38:0:5965:HOH:O	2.55	0.50
14:N:110:THR:HB	14:N:113:SER:OG	2.12	0.49
30:0:1211:G:H2'	30:0:1212:C:H6	1.77	0.49
30:0:1743:G:N7	38:0:9265:HOH:O	2.35	0.49
2:B:212:GLN:HA	30:0:1733:A:H4'	1.93	0.49
30:0:364:U:H2'	30:0:365:G:O4'	2.12	0.49
30:0:509:A:H2'	38:0:7099:HOH:O	2.11	0.49
30:0:1588:G:C6	30:0:1589:G:N1	2.81	0.49
30:0:1657:A:H2'	30:0:1658:A:C8	2.47	0.49
30:0:1972:U:H2'	30:0:1973:A:H5'	1.93	0.49
30:0:2414:A:H2'	30:0:2415:A:C8	2.47	0.49
3:C:34:ALA:HB3	3:C:220:THR:HG21	1.93	0.49
22:V:1:THR:CB	30:0:93:C:H5''	2.40	0.49
22:V:42:ASN:HB3	38:V:7247:HOH:O	2.11	0.49
28:2:38:LYS:HE3	38:0:4239:HOH:O	2.12	0.49
30:0:2851:G:C2'	30:0:2852:A:H5'	2.43	0.49
31:9:59:C:H2'	31:9:60:C:C6	2.47	0.49
5:E:5:LEU:HD21	5:E:66:GLN:HG3	1.93	0.49
5:E:133:VAL:HG12	5:E:141:VAL:HG13	1.94	0.49
14:N:154:LEU:C	14:N:156:GLU:H	2.14	0.49
20:T:5:ASP:O	20:T:9:LYS:HB2	2.13	0.49
24:X:43:VAL:HG11	24:X:82:GLU:HA	1.93	0.49
30:0:1625:U:H6	30:0:1625:U:H3'	1.75	0.49
30:0:1856:C:H5'	30:0:1858:A:O4'	2.12	0.49
30:0:1903:U:O2'	30:0:1904:A:N7	2.42	0.49
11:K:27:ARG:HD2	38:K:3442:HOH:O	2.11	0.49
11:K:63:GLU:HG2	38:K:6344:HOH:O	2.11	0.49
18:R:40:ALA:O	18:R:44:VAL:HG23	2.12	0.49
28:2:8:LYS:NZ	30:0:1677:U:OP2	2.45	0.49
30:0:669:G:O2'	30:0:670:G:H5'	2.12	0.49
30:0:1762:C:H2'	30:0:1763:C:H6	1.77	0.49
30:0:1790:C:H2'	30:0:1791:U:H6	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1838:U:H3'	38:0:5533:HOH:O	2.12	0.49
6:F:58:GLU:HB3	13:M:8:ILE:HG23	1.95	0.49
30:0:407:A:H2'	30:0:408:A:C8	2.48	0.49
30:0:1503:U:H2'	30:0:1504:A:O4'	2.11	0.49
30:0:1545:C:H2'	30:0:1546:G:O4'	2.12	0.49
30:0:1940:C:H4'	38:0:7360:HOH:O	2.12	0.49
30:0:2493:C:O2	30:0:2493:C:H2'	2.11	0.49
30:0:2709:G:N2	38:0:7632:HOH:O	2.46	0.49
1:A:33:GLU:H	1:A:33:GLU:CD	2.15	0.49
2:B:238:ASN:HD22	2:B:240:GLY:N	2.02	0.49
14:N:169:PRO:O	14:N:172:PHE:HB3	2.13	0.49
30:0:876:A:N3	30:0:876:A:C2'	2.76	0.49
30:0:2271:G:N3	30:0:2271:G:H2'	2.27	0.49
30:0:2345:A:H3'	30:0:2346:C:C6	2.47	0.49
30:0:2435:U:H1'	38:0:5440:HOH:O	2.13	0.49
3:C:78:ARG:HH11	3:C:78:ARG:HG3	1.78	0.49
4:D:103:ASN:ND2	4:D:133:ASN:HA	2.27	0.49
30:0:702:G:O2'	30:0:703:G:H5'	2.13	0.49
30:0:1391:G:H2'	30:0:1392:A:H5'	1.95	0.49
31:9:3:A:N6	31:9:22:G:H1'	2.28	0.49
31:9:3:A:C2	31:9:21:G:N3	2.81	0.49
1:A:186:TRP:CG	1:A:187:PRO:HA	2.48	0.49
2:B:244:PRO:HB3	30:0:1234:U:N3	2.27	0.49
3:C:162:VAL:HG22	3:C:232:LEU:HD21	1.94	0.49
8:H:30:LYS:H	8:H:62:HIS:CD2	2.30	0.49
15:O:25:VAL:HG12	30:0:709:G:O2'	2.11	0.49
24:X:30:MET:HG2	30:0:1384:C:H5'	1.94	0.49
30:0:951:A:O2'	30:0:952:G:H5'	2.13	0.49
30:0:1149:U:H5''	30:0:1151:G:O4'	2.13	0.49
30:0:2649:A:H5'	30:0:2649:A:H8	1.77	0.49
30:0:2880:A:H2'	30:0:2881:C:H5'	1.95	0.49
2:B:8:LYS:HG3	2:B:220:VAL:HG12	1.94	0.49
2:B:41:PHE:HB3	2:B:190:MET:CE	2.43	0.49
8:H:27:PRO:HD3	8:H:123:ILE:HG22	1.95	0.49
15:O:47:ARG:HG3	15:O:47:ARG:NH1	2.23	0.49
17:Q:66:LYS:HB2	17:Q:70:ALA:O	2.12	0.49
30:0:297:U:H2'	30:0:298:C:C6	2.48	0.49
30:0:815:U:O2'	30:0:1598:A:H4'	2.12	0.49
30:0:2387:U:H2'	30:0:2388:C:C6	2.48	0.49
30:0:2802:C:H2'	30:0:2803:C:C6	2.46	0.49
30:0:2908:A:O5'	30:0:2908:A:H8	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:85:VAL:HG12	24:X:86:GLU:N	2.28	0.48
30:0:1118:A:C8	30:0:1119:G:H5''	2.47	0.48
30:0:2353:A:H4'	30:0:2354:A:O5'	2.13	0.48
31:9:56:A:C3'	31:9:57:A:H5''	2.43	0.48
31:9:63:C:O2'	31:9:64:C:H5'	2.13	0.48
4:D:62:ASP:HA	38:D:4233:HOH:O	2.14	0.48
6:F:39:SER:HB3	6:F:45:ALA:HB2	1.95	0.48
26:Z:60:ASP:HB3	26:Z:69:ASP:HB3	1.95	0.48
30:0:1159:G:H1	30:0:1208:C:H42	1.61	0.48
30:0:2335:C:H2'	30:0:2336:G:C8	2.48	0.48
30:0:2420:G:H2'	30:0:2421:G:C8	2.48	0.48
30:0:2697:A:H2'	30:0:2698:G:O4'	2.13	0.48
31:9:2:U:P	31:9:3:A:H5'	2.53	0.48
9:I:78:ALA:HB1	9:I:93:ALA:HB1	1.95	0.48
11:K:81:ARG:HB2	11:K:87:ARG:NH1	2.28	0.48
23:W:38:THR:O	23:W:42:ARG:HB2	2.13	0.48
30:0:1181:A:C2'	30:0:1182:C:H5'	2.43	0.48
30:0:1477:C:H5'	30:0:1868:G:H5''	1.94	0.48
30:0:2781:U:O2'	30:0:2782:G:H5'	2.13	0.48
17:Q:1:PRO:HA	30:0:2299:G:O6	2.13	0.48
17:Q:50:GLY:HA2	38:0:6033:HOH:O	2.12	0.48
22:V:12:THR:HG22	22:V:15:GLU:CG	2.39	0.48
30:0:947:U:H2'	30:0:948:G:H8	1.78	0.48
30:0:1119:G:N2	30:0:1246:A:N1	2.61	0.48
30:0:1419:U:H2'	30:0:1685:A:C2	2.48	0.48
2:B:18:ARG:HE	2:B:256:GLN:NE2	2.11	0.48
4:D:170:TYR:CD1	4:D:170:TYR:N	2.81	0.48
8:H:34:HIS:HD2	8:H:90:LEU:O	1.96	0.48
9:I:87:PRO:HB3	38:I:6825:HOH:O	2.13	0.48
10:J:130:VAL:HG12	10:J:131:THR:N	2.28	0.48
11:K:74:VAL:HG12	11:K:75:ARG:HG3	1.95	0.48
23:W:90:TYR:N	23:W:90:TYR:CD1	2.80	0.48
30:0:1221:G:C8	38:0:5995:HOH:O	2.55	0.48
30:0:1523:G:H2'	30:0:1524:U:C6	2.48	0.48
30:0:2134:G:C6	30:0:2258:A:C8	3.02	0.48
30:0:2419:U:H5''	30:0:2420:G:C5'	2.42	0.48
30:0:2825:C:H4'	30:0:2826:G:O5'	2.13	0.48
30:0:2842:G:C2'	30:0:2843:A:H5'	2.43	0.48
2:B:17:LYS:O	2:B:260:HIS:HD2	1.96	0.48
3:C:87:ARG:HD3	38:0:3517:HOH:O	2.14	0.48
10:J:75:PRO:HG2	10:J:105:LEU:CD2	2.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:15:LYS:HD3	30:0:2364:A:H5''	1.95	0.48
30:0:482:G:H4'	30:0:508:A:N1	2.29	0.48
30:0:1206:U:C5'	30:0:1206:U:H6	2.18	0.48
30:0:1513:C:O2'	30:0:1514:C:H5'	2.13	0.48
13:M:167:GLY:O	13:M:171:ARG:HG3	2.13	0.48
17:Q:40:HIS:HE1	30:0:949:U:O2'	1.95	0.48
20:T:68:ASP:HB2	38:0:5667:HOH:O	2.12	0.48
30:0:2335:C:H2'	30:0:2336:G:H8	1.77	0.48
30:0:2896:A:N3	30:0:2896:A:H2'	2.29	0.48
1:A:36:ASP:HA	1:A:83:GLY:HA3	1.96	0.48
7:G:19:GLU:O	7:G:23:ILE:HG13	2.14	0.48
8:H:61:ARG:HH11	8:H:61:ARG:HG3	1.78	0.48
10:J:74:ARG:HH11	10:J:74:ARG:CB	2.25	0.48
16:P:13:VAL:HG21	16:P:41:ARG:HG2	1.96	0.48
30:0:535:G:C6	30:0:2064:U:C5	3.01	0.48
30:0:2001:G:O2'	30:0:2002:C:H5'	2.13	0.48
30:0:2598:U:O2	30:0:2600:A:H8	1.97	0.48
6:F:91:VAL:CG1	6:F:92:GLY:H	2.25	0.48
13:M:164:THR:HG23	13:M:165:GLY:N	2.29	0.48
29:3:91:GLN:O	29:3:92:GLU:HB2	2.14	0.48
30:0:130:C:H2'	38:0:3167:HOH:O	2.14	0.48
30:0:2415:A:H2'	30:0:2416:G:H5'	1.96	0.48
30:0:2506:A:N6	30:0:2511:A:O2'	2.46	0.48
30:0:2587:OMU:H5	38:0:7497:HOH:O	2.12	0.48
30:0:2649:A:H5'	30:0:2649:A:C8	2.49	0.48
4:D:15:GLU:HA	4:D:16:PRO:HD3	1.73	0.48
8:H:19:ARG:HH12	30:0:1008:C:H5''	1.78	0.48
13:M:163:LEU:HD21	30:0:188:C:H5''	1.96	0.48
14:N:119:GLN:O	14:N:123:ILE:HG13	2.14	0.48
18:R:14:ALA:HB3	18:R:147:LEU:HB2	1.96	0.48
23:W:23:MET:O	30:0:1025:C:H5'	2.14	0.48
28:2:22:PRO:HG2	28:2:25:VAL:HG23	1.95	0.48
30:0:834:G:H4'	30:0:835:U:OP2	2.13	0.48
30:0:1562:C:O2	30:0:1562:C:C2'	2.62	0.48
1:A:212:PRO:HA	30:0:1943:C:O4'	2.14	0.47
4:D:23:VAL:HG21	4:D:45:THR:HG21	1.95	0.47
11:K:118:ALA:HA	11:K:125:ALA:HB2	1.95	0.47
12:L:22:ARG:HG2	38:0:9996:HOH:O	2.14	0.47
14:N:11:ARG:NH1	31:9:8:G:O6	2.47	0.47
14:N:49:THR:HG22	14:N:56:ASP:HB2	1.95	0.47
11:K:20:CYS:HB2	11:K:29:LEU:HG	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:4:LEU:HD22	23:W:52:VAL:CG2	2.44	0.47
25:Y:210:GLY:N	30:0:1313:A:H5''	2.29	0.47
30:0:821:U:H2'	30:0:822:C:H6	1.79	0.47
30:0:1130:U:H2'	30:0:1131:G:O4'	2.13	0.47
30:0:1209:C:O2'	30:0:1210:G:H5'	2.13	0.47
30:0:1947:G:N2	30:0:1966:U:N3	2.61	0.47
2:B:5:ARG:HD2	2:B:8:LYS:NZ	2.30	0.47
2:B:62:ARG:HA	2:B:65:MET:HE3	1.95	0.47
3:C:19:PRO:HG2	3:C:22:PHE:CE1	2.49	0.47
3:C:246:ARG:NE	38:C:8620:HOH:O	2.40	0.47
6:F:13:GLU:OE2	6:F:78:GLU:HG2	2.14	0.47
18:R:114:VAL:HA	18:R:144:GLU:O	2.14	0.47
23:W:119:HIS:HE1	38:0:9557:HOH:O	1.97	0.47
26:Z:43:GLY:O	26:Z:47:ARG:HG2	2.14	0.47
30:0:407:A:H8	38:0:4473:HOH:O	1.98	0.47
30:0:523:C:H2'	30:0:524:A:C8	2.50	0.47
30:0:1161:A:O5'	30:0:1161:A:H8	1.96	0.47
30:0:2334:C:O2'	30:0:2335:C:H5'	2.14	0.47
1:A:33:GLU:O	1:A:34:ASP:HB2	2.14	0.47
3:C:22:PHE:HA	3:C:116:ALA:HA	1.96	0.47
3:C:233:THR:HG22	3:C:234:VAL:N	2.29	0.47
4:D:146:LYS:NZ	14:N:107:ASN:HD21	2.11	0.47
5:E:21:THR:HG23	5:E:30:THR:OG1	2.14	0.47
23:W:4:LEU:CD2	23:W:54:PHE:HB3	2.39	0.47
30:0:567:U:C5'	38:0:6408:HOH:O	2.63	0.47
30:0:823:U:H3'	38:0:4459:HOH:O	2.14	0.47
30:0:920:C:H5'	30:0:921:G:C4	2.49	0.47
30:0:1762:C:H2'	30:0:1763:C:C6	2.50	0.47
30:0:1768:C:H2'	30:0:1769:C:O4'	2.14	0.47
30:0:2112:A:H2'	30:0:2113:G:C8	2.49	0.47
30:0:2589:U:H2'	30:0:2590:U:H6	1.77	0.47
31:9:47:A:C2	31:9:48:C:C2	3.02	0.47
3:C:136:VAL:HG22	3:C:137:PRO:HA	1.97	0.47
5:E:91:PHE:CE1	30:0:2694:A:H4'	2.48	0.47
30:0:1343:C:H2'	30:0:1344:G:O5'	2.15	0.47
30:0:2420:G:H2'	30:0:2421:G:H8	1.79	0.47
31:9:114:G:H2'	31:9:115:C:H6	1.78	0.47
1:A:47:HIS:HD2	30:0:1654:U:H2'	1.80	0.47
1:A:171:LYS:HB2	30:0:820:G:C6	2.50	0.47
8:H:66:GLU:HA	38:H:229:HOH:O	2.13	0.47
10:J:90:LYS:HB2	33:J:8802:CL:CL	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:125:PHE:CE1	12:L:140:VAL:HG13	2.49	0.47
14:N:132:ASN:O	14:N:135:VAL:HG12	2.15	0.47
23:W:52:VAL:HG22	23:W:53:ALA:H	1.80	0.47
23:W:115:THR:HG23	38:W:5420:HOH:O	2.15	0.47
27:1:16:HIS:CD2	30:0:470:U:O2'	2.67	0.47
30:0:523:C:H2'	30:0:524:A:H8	1.80	0.47
30:0:1450:C:H5''	38:0:9621:HOH:O	2.15	0.47
30:0:1589:G:N2	30:0:1605:G:H1'	2.29	0.47
30:0:1615:A:H5'	38:0:4194:HOH:O	2.14	0.47
30:0:2587:OMU:O5'	30:0:2587:OMU:H6	2.14	0.47
1:A:8:ARG:HG2	38:A:9016:HOH:O	2.14	0.47
10:J:131:THR:HB	10:J:134:GLU:HG3	1.96	0.47
23:W:125:HIS:HD2	23:W:127:GLY:H	1.62	0.47
29:3:3:MET:O	29:3:90:PHE:HA	2.15	0.47
30:0:101:C:H2'	30:0:102:A:C8	2.50	0.47
30:0:222:A:H2'	30:0:223:G:O4'	2.14	0.47
30:0:308:U:C4	30:0:342:C:H1'	2.49	0.47
30:0:312:U:C2	30:0:320:G:N2	2.83	0.47
30:0:2526:C:C6	30:0:2526:C:C5'	2.95	0.47
30:0:2637:A:C5'	38:0:4941:HOH:O	2.62	0.47
30:0:2691:A:H5'	30:0:2693:U:H1'	1.96	0.47
6:F:91:VAL:HG11	30:0:262:A:OP2	2.14	0.47
8:H:54:VAL:HG13	8:H:162:PRO:HG3	1.97	0.47
23:W:88:THR:HG22	23:W:90:TYR:HD1	1.80	0.47
30:0:251:C:H2'	30:0:252:C:H6	1.80	0.47
30:0:304:G:H1'	30:0:347:A:N6	2.29	0.47
30:0:625:U:H5''	30:0:1044:C:N4	2.30	0.47
30:0:1682:A:H5''	38:0:9463:HOH:O	2.14	0.47
30:0:2241:C:O2'	30:0:2242:U:H5'	2.15	0.47
30:0:2269:C:H2'	30:0:2270:G:C5'	2.45	0.47
30:0:2506:A:O2'	30:0:2507:G:C8	2.50	0.47
31:9:1:U:C4'	31:9:3:A:OP1	2.62	0.47
2:B:132:HIS:NE2	2:B:171:VAL:HG23	2.28	0.47
30:0:545:G:C8	30:0:545:G:C5'	2.88	0.47
30:0:629:A:C2	30:0:2074:A:C2	3.03	0.47
30:0:685:C:O2	30:0:748:C:H4'	2.15	0.47
30:0:1165:G:H4'	30:0:1174:A:O2'	2.15	0.47
30:0:1632:A:H2'	30:0:1633:C:C5'	2.39	0.47
30:0:1667:A:H2'	30:0:1668:U:C6	2.50	0.47
30:0:2000:G:O2'	30:0:2001:G:H5'	2.15	0.47
31:9:42:C:H5'	31:9:43:G:OP2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:ARG:NH1	30:0:2270:G:H4'	2.30	0.47
10:J:36:VAL:HG12	10:J:37:ALA:N	2.30	0.47
10:J:42:GLU:O	10:J:131:THR:HG23	2.15	0.47
12:L:67:ARG:HB2	12:L:112:GLY:HA3	1.96	0.47
13:M:9:ARG:HD2	30:0:380:A:OP2	2.15	0.47
24:X:43:VAL:HG22	24:X:76:ARG:NH1	2.30	0.47
30:0:264:G:H1'	30:0:265:U:H5	1.80	0.47
30:0:295:C:H2'	30:0:296:G:O4'	2.15	0.47
30:0:638:C:H2'	30:0:639:A:C8	2.50	0.47
30:0:1167:G:H2'	30:0:1168:C:O4'	2.15	0.47
30:0:2073:G:OP2	30:0:2490:A:H5'	2.15	0.47
4:D:141:VAL:HG21	31:9:57:A:H8	1.80	0.46
11:K:34:VAL:HG22	11:K:47:ALA:HB2	1.97	0.46
17:Q:26:PRO:O	17:Q:30:VAL:HG23	2.14	0.46
30:0:677:C:O2'	30:0:678:G:H5'	2.15	0.46
30:0:1321:A:H2'	30:0:1322:G:C8	2.50	0.46
31:9:3:A:OP2	31:9:25:G:N2	2.47	0.46
31:9:7:G:H5'	38:9:9100:HOH:O	2.16	0.46
1:A:53:ALA:HB3	38:A:9066:HOH:O	2.15	0.46
2:B:298:LYS:HG2	38:0:5531:HOH:O	2.15	0.46
11:K:41:LYS:O	11:K:42:ASN:HB2	2.15	0.46
17:Q:75:ILE:HB	38:Q:6286:HOH:O	2.15	0.46
23:W:119:HIS:HD2	23:W:120:PRO:O	1.98	0.46
25:Y:126:PRO:HG2	25:Y:128:PHE:CE1	2.51	0.46
25:Y:210:GLY:H	30:0:1313:A:H5''	1.80	0.46
30:0:853:C:H2'	30:0:854:G:O4'	2.15	0.46
30:0:1180:U:O2'	30:0:1181:A:H5'	2.15	0.46
30:0:1477:C:C5'	30:0:1868:G:H5''	2.45	0.46
30:0:1805:G:H2'	30:0:1806:G:H8	1.79	0.46
30:0:2566:A:C2	30:0:2696:G:O4'	2.68	0.46
31:9:45:A:C5	31:9:46:C:C5	3.02	0.46
5:E:20:ILE:HD11	5:E:40:VAL:HG11	1.97	0.46
8:H:5:PRO:HD2	8:H:8:MET:SD	2.55	0.46
11:K:98:VAL:HG11	11:K:102:GLU:HA	1.95	0.46
13:M:99:ARG:CD	13:M:167:GLY:HA2	2.41	0.46
14:N:17:ARG:HB3	14:N:17:ARG:HH11	1.80	0.46
29:3:38:ARG:HB3	29:3:42:ARG:HH12	1.81	0.46
30:0:255:A:C5	30:0:256:C:C5	3.02	0.46
30:0:319:A:H4'	30:0:338:C:C4	2.50	0.46
1:A:204:GLY:N	30:0:2634:G:OP2	2.47	0.46
3:C:19:PRO:HG2	3:C:22:PHE:CD1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:99:ARG:NH1	30:0:1055:G:OP2	2.47	0.46
12:L:57:VAL:HG21	30:0:2443:C:H5'	1.97	0.46
17:Q:27:GLN:HE21	31:9:8:G:H5''	1.80	0.46
20:T:26:THR:HA	20:T:39:ASN:HB3	1.97	0.46
29:3:29:ARG:NH2	30:0:1925:G:C5'	2.79	0.46
30:0:800:G:H2'	30:0:801:U:C6	2.50	0.46
30:0:1139:U:H2'	30:0:1140:C:H6	1.80	0.46
30:0:1925:G:O2'	30:0:1926:G:H5'	2.16	0.46
30:0:2249:G:C2	30:0:2253:G:C6	3.04	0.46
30:0:2250:G:C2	30:0:2251:G:H1'	2.51	0.46
30:0:2831:C:C2'	30:0:2832:C:H5'	2.45	0.46
31:9:65:A:N6	31:9:112:U:C6	2.83	0.46
3:C:206:ASN:HB2	30:0:329:A:OP2	2.16	0.46
8:H:31:ILE:HG23	38:H:229:HOH:O	2.15	0.46
9:I:107:LYS:HB3	9:I:110:ASP:HB2	1.97	0.46
12:L:6:ARG:HD3	30:0:1299:G:O6	2.15	0.46
30:0:369:G:H2'	30:0:370:G:H8	1.81	0.46
30:0:1393:A:H2'	30:0:1394:C:C6	2.51	0.46
30:0:2869:G:H2'	30:0:2870:C:C6	2.50	0.46
31:9:55:U:H4'	31:9:56:A:H8	1.80	0.46
1:A:70:ALA:HA	1:A:71:PRO:HD3	1.75	0.46
6:F:96:ALA:HA	38:F:3111:HOH:O	2.15	0.46
13:M:27:ARG:HH12	13:M:44:THR:CG2	2.28	0.46
16:P:120:ARG:NH1	30:0:1594:C:C5	2.84	0.46
21:U:44:ARG:HB3	38:U:3805:HOH:O	2.15	0.46
30:0:158:A:H3'	38:0:7573:HOH:O	2.15	0.46
30:0:255:A:C4	30:0:256:C:C6	3.04	0.46
30:0:365:G:C6	30:0:366:U:C4	3.04	0.46
30:0:622:G:O2'	30:0:623:U:H5'	2.15	0.46
30:0:736:A:H2'	30:0:737:A:O4'	2.16	0.46
30:0:1211:G:H2'	30:0:1212:C:C6	2.50	0.46
30:0:1641:A:H2'	30:0:1642:A:C5'	2.44	0.46
30:0:1942:A:H4'	38:0:9046:HOH:O	2.16	0.46
30:0:2826:G:C6	30:0:2913:A:N6	2.84	0.46
11:K:29:LEU:HB3	11:K:55:VAL:HG11	1.98	0.46
12:L:18:HIS:HB2	30:0:903:U:O4	2.16	0.46
13:M:184:ARG:HG3	13:M:185:PRO:HA	1.98	0.46
30:0:451:C:O2'	30:0:452:G:H5'	2.16	0.46
30:0:2379:G:N7	30:0:2408:A:N1	2.64	0.46
30:0:2433:A:H2'	30:0:2434:A:C8	2.50	0.46
30:0:2594:C:O2'	30:0:2595:U:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2895:C:H2'	38:0:9573:HOH:O	2.15	0.46
13:M:27:ARG:NH1	13:M:44:THR:CG2	2.78	0.46
26:Z:76:THR:HG21	30:0:1652:C:H4'	1.96	0.46
30:0:1603:A:H5''	30:0:1604:G:H3'	1.98	0.46
30:0:1825:U:O2'	30:0:1826:C:H5'	2.15	0.46
8:H:39:LYS:HA	8:H:87:LYS:NZ	2.30	0.46
30:0:366:U:H2'	30:0:367:G:O4'	2.16	0.46
30:0:466:A:H2'	30:0:467:G:O4'	2.15	0.46
30:0:1015:C:O5'	30:0:1015:C:H6	1.98	0.46
30:0:1506:U:H6	30:0:1506:U:H5'	1.81	0.46
31:9:45:A:H2'	31:9:46:C:C6	2.51	0.46
3:C:27:ARG:HG3	3:C:29:ASP:OD1	2.16	0.46
4:D:103:ASN:HD22	4:D:134:LEU:H	1.60	0.46
8:H:165:ARG:HD2	38:H:231:HOH:O	2.16	0.46
15:O:24:ALA:HB3	30:0:710:G:OP1	2.16	0.46
16:P:120:ARG:NH2	16:P:123:TYR:CD2	2.83	0.46
23:W:21:LEU:O	23:W:26:ILE:HG23	2.16	0.46
30:0:958:G:O2'	30:0:959:C:H5'	2.15	0.46
30:0:1180:U:H2'	30:0:1181:A:O4'	2.16	0.46
30:0:1622:G:H2'	30:0:1623:C:H5'	1.98	0.46
30:0:1684:A:O2'	30:0:1685:A:H5''	2.16	0.46
30:0:1714:C:O2'	30:0:1715:C:H5'	2.16	0.46
30:0:1774:G:H1'	38:0:4551:HOH:O	2.14	0.46
30:0:2361:A:H2'	30:0:2362:A:C8	2.49	0.46
31:9:52:A:H2'	31:9:53:G:O4'	2.16	0.46
1:A:101:GLU:OE2	1:A:131:HIS:HB2	2.16	0.45
15:O:63:LYS:NZ	30:0:659:A:N7	2.53	0.45
16:P:40:VAL:O	16:P:44:VAL:HG23	2.17	0.45
30:0:417:G:P	38:0:7432:HOH:O	2.74	0.45
30:0:735:C:C5	30:0:736:A:N3	2.84	0.45
30:0:1165:G:H1'	30:0:1174:A:H1'	1.97	0.45
30:0:1202:A:O2'	30:0:1203:G:H5'	2.16	0.45
30:0:1278:A:H2'	30:0:1280:A:C8	2.51	0.45
30:0:1523:G:C6	30:0:1524:U:C4	3.04	0.45
30:0:2355:G:H5''	30:0:2356:A:OP2	2.16	0.45
30:0:2869:G:H2'	30:0:2870:C:H6	1.81	0.45
1:A:217:ARG:NH2	30:0:1853:C:O2'	2.49	0.45
3:C:79:ARG:O	3:C:87:ARG:HG2	2.16	0.45
9:I:114:TYR:CD1	9:I:114:TYR:N	2.84	0.45
20:T:38:ARG:NH1	38:0:6693:HOH:O	2.42	0.45
24:X:43:VAL:HG12	24:X:44:ASP:N	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:234:VAL:HG12	25:Y:235:GLU:N	2.31	0.45
27:1:28:HIS:CE1	27:1:31:LYS:HE2	2.51	0.45
30:0:24:G:N2	30:0:518:G:H1'	2.31	0.45
30:0:64:G:H2'	30:0:65:C:O4'	2.16	0.45
30:0:236:A:H4'	30:0:237:G:OP1	2.15	0.45
30:0:271:C:N4	30:0:378:A:C2	2.71	0.45
30:0:496:G:H3'	38:0:7681:HOH:O	2.15	0.45
30:0:711:G:O2'	30:0:712:C:H5'	2.17	0.45
31:9:106:U:O2'	31:9:107:C:H5'	2.15	0.45
2:B:26:PHE:HE1	38:B:9109:HOH:O	1.99	0.45
3:C:233:THR:HG22	3:C:234:VAL:H	1.81	0.45
4:D:170:TYR:N	4:D:170:TYR:HD1	2.14	0.45
5:E:1:PRO:HG2	5:E:59:MET:SD	2.56	0.45
6:F:36:THR:HG23	6:F:97:ALA:HB2	1.97	0.45
12:L:34:GLY:HA3	12:L:38:HIS:CE1	2.50	0.45
15:O:25:VAL:HG23	15:O:26:TRP:N	2.31	0.45
19:S:55:GLN:NE2	30:0:1446:U:H2'	2.30	0.45
20:T:21:LYS:HA	20:T:24:ARG:HG3	1.99	0.45
21:U:17:THR:CG2	21:U:18:GLY:N	2.79	0.45
23:W:73:LEU:HD12	23:W:73:LEU:HA	1.80	0.45
30:0:105:G:O2'	30:0:106:A:H5'	2.16	0.45
30:0:1201:C:H2'	30:0:1202:A:H5'	1.98	0.45
30:0:1883:U:C2'	30:0:1884:G:H5'	2.46	0.45
30:0:1909:A:N1	30:0:2128:G:H1'	2.31	0.45
30:0:2092:G:H2'	30:0:2613:G:OP1	2.16	0.45
30:0:2467:A:O2'	30:0:2468:A:H2'	2.17	0.45
1:A:94:LEU:HG	1:A:99:ILE:HD11	1.97	0.45
30:0:210:U:H2'	30:0:211:U:C6	2.51	0.45
30:0:1015:C:H2'	30:0:1016:U:C6	2.51	0.45
30:0:1942:A:HO2'	30:0:1943:C:H5'	1.80	0.45
31:9:2:U:OP2	31:9:2:U:H4'	2.16	0.45
3:C:236:THR:CG2	3:C:239:ALA:H	2.21	0.45
16:P:16:VAL:CG1	16:P:20:ARG:HB2	2.46	0.45
24:X:21:PRO:HG2	24:X:24:LYS:HD3	1.98	0.45
27:1:25:LYS:O	27:1:25:LYS:HG2	2.17	0.45
30:0:843:A:C2	30:0:846:A:C8	3.04	0.45
30:0:1001:U:O2'	30:0:1002:G:H5'	2.17	0.45
30:0:1268:C:H2'	30:0:1269:G:C8	2.52	0.45
30:0:1834:C:H2'	30:0:1840:A:H62	1.82	0.45
30:0:1855:G:H4'	30:0:1856:C:O5'	2.16	0.45
30:0:2895:C:O2'	30:0:2896:A:H5''	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:199:HIS:HD2	1:A:201:PHE:HB2	1.82	0.45
2:B:69:VAL:HA	2:B:70:PRO:HD3	1.81	0.45
4:D:141:VAL:HG21	31:9:57:A:C8	2.51	0.45
23:W:35:VAL:HG23	23:W:41:TYR:CD2	2.52	0.45
25:Y:133:HIS:HD2	38:Y:8881:HOH:O	1.98	0.45
28:2:48:ASP:O	28:2:49:GLU:HB2	2.17	0.45
30:0:423:A:C5	30:0:424:C:C5	3.05	0.45
30:0:682:A:H2'	30:0:683:G:O4'	2.16	0.45
30:0:945:U:H2'	30:0:946:C:C6	2.52	0.45
30:0:1634:G:C3'	38:0:3907:HOH:O	2.46	0.45
30:0:2314:G:C2'	30:0:2315:C:H5'	2.47	0.45
30:0:2456:A:H5'	38:0:5702:HOH:O	2.17	0.45
30:0:2664:A:H8	30:0:2664:A:OP1	1.99	0.45
2:B:5:ARG:NH2	30:0:2548:C:OP2	2.50	0.45
17:Q:25:PRO:HA	17:Q:26:PRO:HD3	1.83	0.45
23:W:13:MET:CE	23:W:17:ILE:HG22	2.47	0.45
30:0:73:U:O2'	30:0:74:G:H5'	2.17	0.45
30:0:482:G:O4'	30:0:511:A:C2	2.69	0.45
30:0:1183:C:H42	30:0:1184:C:N4	2.10	0.45
30:0:1379:A:H1'	38:0:9695:HOH:O	2.16	0.45
30:0:1386:G:O2'	30:0:1387:G:H5'	2.17	0.45
30:0:1624:A:H4'	30:0:1626:A:H5''	1.99	0.45
30:0:2506:A:C4	38:0:6063:HOH:O	2.67	0.45
30:0:2681:A:H4'	30:0:2682:C:OP1	2.16	0.45
1:A:190:ARG:NH1	30:0:1845:A:OP2	2.49	0.45
2:B:223:ARG:HG3	2:B:232:TRP:O	2.17	0.45
12:L:61:ALA:HB2	12:L:105:TYR:CZ	2.52	0.45
14:N:40:ASN:ND2	31:9:28:U:H5''	2.31	0.45
18:R:96:VAL:HG13	18:R:106:GLY:HA3	1.99	0.45
30:0:670:G:H2'	30:0:671:A:C8	2.51	0.45
30:0:1014:A:H2'	30:0:1015:C:H5'	1.99	0.45
30:0:1484:G:H2'	38:0:9106:HOH:O	2.17	0.45
5:E:154:ILE:HD11	5:E:157:LYS:NZ	2.32	0.45
11:K:118:ALA:CA	11:K:125:ALA:HB2	2.47	0.45
25:Y:130:ARG:HB2	25:Y:142:SER:O	2.16	0.45
25:Y:170:SER:OG	25:Y:175:ARG:HG3	2.16	0.45
30:0:1221:G:H8	38:0:5995:HOH:O	1.95	0.45
30:0:1400:C:O2'	30:0:1401:G:H5'	2.17	0.45
30:0:2248:C:C4	30:0:2249:G:N7	2.85	0.45
30:0:2727:A:C6	30:0:2756:U:C2	3.05	0.45
1:A:94:LEU:HG	1:A:99:ILE:CD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:34:VAL:HB	38:K:7169:HOH:O	2.17	0.45
27:1:20:ARG:HG2	30:0:111:C:O2'	2.17	0.45
30:0:441:A:H8	30:0:441:A:O5'	1.99	0.45
30:0:861:A:H4'	30:0:1697:G:H4'	1.99	0.45
30:0:1191:A:C2	30:0:1207:A:C2	3.05	0.45
30:0:1279:U:O2	30:0:1279:U:C2'	2.64	0.45
30:0:1425:G:O2'	30:0:1426:C:H5'	2.17	0.45
30:0:1537:C:H1'	38:0:6597:HOH:O	2.16	0.45
30:0:2002:C:H2'	30:0:2003:U:H5'	1.99	0.45
30:0:2819:C:H2'	30:0:2820:A:C8	2.51	0.45
5:E:91:PHE:HE1	30:0:2694:A:H4'	1.82	0.44
12:L:36:ASP:HB2	38:L:8836:HOH:O	2.17	0.44
17:Q:42:LYS:HE2	30:0:952:G:OP1	2.18	0.44
24:X:74:ALA:HB2	24:X:85:VAL:HG13	2.00	0.44
30:0:107:U:H2'	30:0:108:U:H5'	1.99	0.44
30:0:128:A:C8	30:0:128:A:H3'	2.52	0.44
30:0:1333:U:H2'	30:0:1334:C:C6	2.52	0.44
30:0:1771:U:O2'	30:0:1773:G:N7	2.50	0.44
30:0:2072:G:C6	30:0:2533:C:H1'	2.52	0.44
30:0:2483:A:H4'	30:0:2484:U:OP2	2.17	0.44
30:0:2812:A:H1'	38:0:5796:HOH:O	2.17	0.44
31:9:36:C:C5	31:9:37:C:C5	3.05	0.44
31:9:39:U:HO2'	31:9:42:C:H5	1.65	0.44
6:F:30:LYS:HE2	6:F:99:THR:HG21	1.99	0.44
8:H:46:TYR:HA	8:H:47:PRO:HD3	1.80	0.44
20:T:9:LYS:HD2	38:0:3766:HOH:O	2.16	0.44
23:W:4:LEU:O	23:W:32:CYS:HA	2.17	0.44
30:0:213:G:N2	30:0:225:G:H2'	2.32	0.44
30:0:368:C:C2'	30:0:369:G:H5'	2.47	0.44
30:0:506:G:N2	30:0:509:A:C5'	2.72	0.44
30:0:790:A:H1'	30:0:1710:A:H2'	1.99	0.44
30:0:905:C:H3'	38:0:5198:HOH:O	2.17	0.44
30:0:1759:A:N3	30:0:1818:C:H2'	2.33	0.44
30:0:2329:C:O2'	30:0:2330:U:H5'	2.17	0.44
30:0:2543:G:H2'	30:0:2544:G:O4'	2.17	0.44
30:0:2689:A:H2'	30:0:2690:U:H5'	1.99	0.44
10:J:74:ARG:NH1	10:J:76:ASP:HB2	2.31	0.44
13:M:86:GLN:NE2	30:0:2274:A:H1'	2.32	0.44
13:M:164:THR:CG2	13:M:167:GLY:H	2.27	0.44
20:T:9:LYS:HG3	38:0:7437:HOH:O	2.16	0.44
21:U:33:SER:O	21:U:37:GLU:HG3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:343:C:O2'	30:0:344:C:H5'	2.17	0.44
30:0:579:G:H2'	30:0:580:A:C8	2.52	0.44
30:0:1522:A:C2	30:0:1665:G:C6	3.05	0.44
30:0:1545:C:H1'	30:0:1641:A:N6	2.33	0.44
30:0:2511:A:H2'	30:0:2512:U:O4'	2.17	0.44
31:9:39:U:C2'	31:9:40:C:OP1	2.65	0.44
1:A:109:GLU:HG2	1:A:116:GLY:N	2.33	0.44
1:A:223:ARG:HD2	30:0:2272:G:OP1	2.17	0.44
2:B:320:GLN:NE2	2:B:321:PRO:HD2	2.29	0.44
3:C:236:THR:HG22	3:C:239:ALA:CB	2.47	0.44
5:E:169:THR:HG22	5:E:170:ARG:HG3	2.00	0.44
17:Q:95:GLU:HA	30:0:949:U:H4'	1.99	0.44
30:0:281:U:H5	38:0:7606:HOH:O	2.01	0.44
30:0:999:C:O2'	30:0:1000:C:H5'	2.18	0.44
30:0:1175:G:H8	30:0:1193:A:HO2'	1.64	0.44
30:0:1622:G:C2'	30:0:1623:C:H5'	2.47	0.44
30:0:2239:C:H2'	30:0:2240:U:C6	2.53	0.44
30:0:2375:A:H2'	30:0:2376:C:C6	2.53	0.44
30:0:2775:A:C6	30:0:2799:A:C8	3.06	0.44
2:B:211:THR:HG21	38:0:7469:HOH:O	2.17	0.44
38:C:8546:HOH:O	30:0:457:U:H4'	2.17	0.44
6:F:57:GLU:O	6:F:61:MET:HG3	2.18	0.44
13:M:164:THR:HB	38:M:8819:HOH:O	2.18	0.44
14:N:141:ARG:NH2	31:9:48:C:H4'	2.27	0.44
14:N:143:ARG:HE	14:N:143:ARG:HB3	1.61	0.44
19:S:57:THR:HG22	19:S:58:MET:N	2.32	0.44
25:Y:134:HIS:HE1	30:0:538:C:OP2	2.01	0.44
30:0:249:G:O2'	30:0:250:C:H5'	2.17	0.44
30:0:2238:A:O2'	30:0:2239:C:H5'	2.17	0.44
30:0:2858:U:H2'	30:0:2859:C:O4'	2.16	0.44
2:B:280:VAL:HG13	2:B:333:GLU:O	2.18	0.44
11:K:87:ARG:NE	38:0:5721:HOH:O	2.50	0.44
16:P:54:LYS:HB2	30:0:1717:A:H5''	1.98	0.44
30:0:277:U:O2'	30:0:278:A:H5'	2.18	0.44
30:0:1790:C:H2'	30:0:1791:U:C6	2.51	0.44
30:0:1973:A:H5'	30:0:1973:A:C8	2.44	0.44
30:0:2800:A:H5'	30:0:2801:A:OP2	2.18	0.44
30:0:2812:A:N7	38:0:7529:HOH:O	2.36	0.44
31:9:1:U:H5''	31:9:3:A:OP1	2.18	0.44
4:D:57:THR:HG23	4:D:63:ILE:HA	2.00	0.44
7:G:63:ARG:N	38:G:2569:HOH:O	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:99:ARG:HH21	13:M:170:ASN:HD22	1.64	0.44
23:W:122:ARG:NH2	38:0:5297:HOH:O	2.49	0.44
23:W:133:LYS:HG3	38:W:5904:HOH:O	2.18	0.44
30:0:302:A:O2'	30:0:303:C:H5'	2.17	0.44
30:0:371:U:H2'	30:0:372:A:C8	2.48	0.44
30:0:636:G:H1'	30:0:2058:G:C4	2.53	0.44
30:0:1434:A:H2'	30:0:1436:C:C5	2.53	0.44
30:0:1592:G:O2'	30:0:1593:C:O4'	2.33	0.44
30:0:1593:C:H1'	38:0:6112:HOH:O	2.17	0.44
30:0:1950:G:H2'	30:0:1951:G:C8	2.53	0.44
30:0:2653:A:H2'	30:0:2654:C:C6	2.53	0.44
4:D:76:ARG:NE	31:9:44:A:O4'	2.51	0.44
7:G:63:ARG:O	7:G:67:LEU:HG	2.17	0.44
14:N:24:LEU:HD13	17:Q:26:PRO:HB3	1.98	0.44
18:R:132:ARG:NH2	30:0:2055:A:H4'	2.32	0.44
30:0:289:G:O2'	30:0:290:C:H5'	2.17	0.44
30:0:291:C:H2'	30:0:292:G:O4'	2.18	0.44
30:0:790:A:H2'	30:0:791:A:O4'	2.17	0.44
30:0:1067:A:H3'	38:0:4304:HOH:O	2.17	0.44
30:0:1191:A:H2	30:0:1206:U:H3	1.65	0.44
30:0:2252:A:C6	30:0:2253:G:H1'	2.53	0.44
30:0:2718:C:H5'	30:0:2718:C:C6	2.50	0.44
30:0:2831:C:H2'	30:0:2832:C:H5'	1.99	0.44
1:A:217:ARG:HH11	1:A:217:ARG:HG3	1.82	0.44
2:B:36:PRO:CA	2:B:168:GLY:HA3	2.43	0.44
14:N:164:ASP:OD1	14:N:167:ASP:HA	2.18	0.44
16:P:10:ALA:HA	16:P:13:VAL:HG12	1.99	0.44
25:Y:142:SER:OG	30:0:1331:G:OP2	2.32	0.44
30:0:567:U:O2'	30:0:568:G:H5'	2.17	0.44
30:0:699:C:H6	30:0:744:G:O4'	2.01	0.44
30:0:705:C:O2	30:0:705:C:H2'	2.17	0.44
30:0:1044:C:H5''	38:0:9029:HOH:O	2.18	0.44
30:0:1181:A:H2'	30:0:1182:C:C5'	2.48	0.44
30:0:1202:A:C2'	30:0:1203:G:H5'	2.48	0.44
30:0:1603:A:C5'	30:0:1605:G:C5'	2.95	0.44
30:0:2064:U:H4'	30:0:2653:A:OP1	2.17	0.44
30:0:2264:A:H2'	30:0:2265:U:C6	2.53	0.44
1:A:97:ALA:HA	1:A:131:HIS:NE2	2.33	0.43
3:C:168:ARG:NH2	3:C:190:ALA:O	2.51	0.43
8:H:87:LYS:NZ	8:H:87:LYS:HB2	2.33	0.43
15:O:65:LEU:HD13	30:0:746:A:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:141:THR:HG23	38:Y:8888:HOH:O	2.18	0.43
28:2:41:HIS:CD2	28:2:44:ARG:H	2.33	0.43
30:0:47:G:N3	30:0:114:A:C2	2.86	0.43
30:0:129:A:H4'	30:0:130:C:OP1	2.18	0.43
30:0:825:U:H5''	30:0:826:U:OP1	2.18	0.43
30:0:1127:C:C5	30:0:1128:U:C4	3.06	0.43
30:0:1163:G:C2	30:0:1184:C:N3	2.86	0.43
30:0:2598:U:O2	30:0:2600:A:C8	2.71	0.43
4:D:154:LYS:H	4:D:154:LYS:CD	2.24	0.43
6:F:91:VAL:CG1	6:F:92:GLY:N	2.78	0.43
13:M:99:ARG:HD2	13:M:167:GLY:CA	2.45	0.43
14:N:114:LYS:O	14:N:118:ILE:HG13	2.18	0.43
18:R:104:PHE:HB3	18:R:109:MET:HE1	2.01	0.43
18:R:128:ARG:NH2	30:0:2054:A:C2	2.86	0.43
30:0:134:U:C2	30:0:145:A:C2	3.07	0.43
30:0:677:C:P	38:0:7147:HOH:O	2.75	0.43
30:0:1552:G:N2	30:0:1634:G:H1'	2.33	0.43
30:0:1947:G:H2'	30:0:1948:G:H8	1.82	0.43
30:0:2379:G:H5'	30:0:2381:C:O4'	2.18	0.43
30:0:2421:G:H3'	30:0:2422:U:C5'	2.47	0.43
30:0:2488:A:H2'	30:0:2489:G:O4'	2.19	0.43
30:0:2566:A:H2	30:0:2695:C:O2	2.01	0.43
31:9:35:C:H5''	38:9:9080:HOH:O	2.17	0.43
2:B:304:PRO:HD2	2:B:307:ARG:HE	1.83	0.43
3:C:127:ARG:HD3	3:C:129:HIS:HE1	1.83	0.43
5:E:80:TRP:O	5:E:134:SER:HA	2.18	0.43
12:L:48:LYS:HE2	30:0:220:C:C2	2.53	0.43
22:V:44:GLY:HA3	30:0:92:G:H4'	1.99	0.43
30:0:484:A:N1	30:0:506:G:H4'	2.33	0.43
30:0:1115:U:O2'	30:0:1116:U:H5'	2.18	0.43
30:0:1762:C:O2'	30:0:1763:C:H5'	2.17	0.43
30:0:2607:U:H4'	38:0:9448:HOH:O	2.18	0.43
9:I:111:LEU:CD2	30:0:1163:G:H4'	2.45	0.43
14:N:41:LYS:HD3	38:9:9063:HOH:O	2.19	0.43
16:P:7:LYS:HG2	16:P:23:PHE:CE2	2.54	0.43
30:0:17:G:H2'	30:0:18:C:H6	1.82	0.43
30:0:1245:C:O5'	30:0:1245:C:H6	2.01	0.43
30:0:1395:C:H2'	30:0:1396:C:C6	2.53	0.43
30:0:1700:C:H5''	30:0:1701:A:OP2	2.18	0.43
30:0:2256:G:H2'	30:0:2257:G:O5'	2.17	0.43
33:0:8814:CL:CL	38:0:7753:HOH:O	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:34:A:H2'	31:9:35:C:O4'	2.18	0.43
1:A:55:VAL:HG23	1:A:68:ILE:O	2.19	0.43
1:A:95:PRO:HA	1:A:153:ARG:HA	1.99	0.43
1:A:103:VAL:HA	1:A:104:PRO:HD3	1.83	0.43
1:A:190:ARG:NH2	1:A:207:GLN:OE1	2.52	0.43
2:B:198:GLU:HA	38:B:9119:HOH:O	2.19	0.43
2:B:271:ASP:HB3	2:B:296:LEU:HD12	1.99	0.43
3:C:93:LYS:O	3:C:98:ARG:NH2	2.51	0.43
4:D:50:VAL:HG13	31:9:41:C:O4'	2.18	0.43
6:F:59:ILE:HD13	30:0:263:U:O4'	2.18	0.43
8:H:61:ARG:HG3	38:0:4984:HOH:O	2.17	0.43
11:K:115:ARG:HG3	11:K:116:GLU:N	2.34	0.43
13:M:157:ASP:HB3	13:M:160:PHE:HD1	1.84	0.43
24:X:15:ARG:HH22	30:0:2856:A:P	2.41	0.43
30:0:522:U:O2'	30:0:1366:C:H5'	2.18	0.43
30:0:559:U:H2'	30:0:560:U:O4'	2.18	0.43
30:0:1896:G:C6	30:0:1897:U:C4	3.07	0.43
30:0:1964:U:O2	30:0:1964:U:H2'	2.17	0.43
30:0:1972:U:C2'	30:0:1973:A:C5'	2.96	0.43
30:0:2504:A:H2'	30:0:2505:G:H5'	2.00	0.43
4:D:25:MET:CE	4:D:41:LEU:HG	2.47	0.43
12:L:39:GLU:HG2	30:0:926:A:C4'	2.48	0.43
13:M:193:LYS:HB3	30:0:392:U:H4'	1.99	0.43
14:N:151:ASP:OD1	14:N:166:ALA:HA	2.19	0.43
23:W:125:HIS:HB2	23:W:137:GLN:HG2	2.00	0.43
25:Y:216:ARG:NH1	38:Y:8833:HOH:O	2.51	0.43
30:0:542:A:H2'	30:0:543:G:O4'	2.18	0.43
30:0:570:C:H2'	30:0:571:C:H5'	2.01	0.43
30:0:1063:G:H8	38:0:9865:HOH:O	2.01	0.43
30:0:1187:U:C2	30:0:1189:A:OP2	2.72	0.43
30:0:1702:U:H5'	38:0:3432:HOH:O	2.18	0.43
30:0:2070:G:H2'	30:0:2072:G:OP1	2.19	0.43
30:0:2437:A:H2'	30:0:2438:G:C8	2.54	0.43
30:0:2906:A:H5'	30:0:2907:C:O4'	2.19	0.43
31:9:28:U:H2'	31:9:29:C:C6	2.54	0.43
1:A:179:MET:HG2	1:A:186:TRP:CB	2.49	0.43
2:B:14:GLY:HA2	2:B:15:PRO:C	2.39	0.43
2:B:87:TYR:HD1	38:B:9041:HOH:O	2.01	0.43
3:C:25:PRO:HG2	38:C:8523:HOH:O	2.18	0.43
3:C:54:LEU:HD23	3:C:79:ARG:HG3	2.00	0.43
29:3:11:CYS:HB2	29:3:20:HIS:CE1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:17:G:H2'	30:0:18:C:C6	2.53	0.43
30:0:37:A:H2'	30:0:38:G:C8	2.54	0.43
30:0:243:A:H61	30:0:269:G:H1'	1.83	0.43
30:0:969:G:H1	30:0:999:C:H42	1.66	0.43
30:0:1198:U:C6	30:0:1200:A:OP2	2.72	0.43
30:0:2115:U:H2'	30:0:2116:U:C6	2.53	0.43
30:0:2587:OMU:H2'	30:0:2589:U:H5''	2.00	0.43
2:B:234:ARG:NH2	30:0:2039:A:OP2	2.51	0.43
2:B:248:ARG:NH1	38:B:9080:HOH:O	2.50	0.43
2:B:297:VAL:HB	38:B:9070:HOH:O	2.19	0.43
3:C:173:LYS:HE3	30:0:1311:G:O6	2.18	0.43
4:D:10:PHE:CG	4:D:11:HIS:N	2.87	0.43
6:F:72:VAL:HA	6:F:73:PRO:HD3	1.85	0.43
14:N:108:SER:HA	14:N:109:PRO:HD3	1.78	0.43
16:P:133:SER:HA	38:0:3512:HOH:O	2.18	0.43
23:W:13:MET:HE3	23:W:17:ILE:HG22	2.00	0.43
28:2:28:LYS:O	30:0:87:C:H2'	2.18	0.43
30:0:652:G:H8	38:0:3020:HOH:O	2.00	0.43
30:0:734:U:H2'	30:0:736:A:OP2	2.19	0.43
30:0:886:A:OP2	30:0:2113:G:H5'	2.19	0.43
30:0:947:U:O2'	30:0:948:G:H5'	2.19	0.43
30:0:1163:G:H1	30:0:1184:C:N4	2.16	0.43
30:0:1553:C:H2'	30:0:1554:C:H6	1.84	0.43
30:0:1588:G:C6	30:0:1589:G:C6	3.07	0.43
30:0:2134:G:N2	30:0:2242:U:C2	2.87	0.43
3:C:170:ASP:OD2	30:0:330:C:H5	2.01	0.43
27:1:37:CYS:SG	27:1:39:PHE:HB2	2.59	0.43
30:0:129:A:O2'	30:0:131:A:OP1	2.36	0.43
30:0:297:U:H1'	38:0:3947:HOH:O	2.18	0.43
30:0:735:C:C5	30:0:736:A:C2	3.06	0.43
30:0:792:G:H4'	38:0:3424:HOH:O	2.19	0.43
30:0:1186:C:N4	30:0:1187:U:C4	2.87	0.43
30:0:1942:A:H2'	30:0:1943:C:H6	1.83	0.43
31:9:1:U:O3'	31:9:3:A:OP1	2.36	0.43
31:9:106:U:O5'	31:9:106:U:H6	2.01	0.43
8:H:22:TYR:CZ	30:0:1007:A:H2'	2.54	0.43
13:M:171:ARG:NH2	30:0:189:A:OP1	2.51	0.43
16:P:98:ILE:HD12	16:P:102:ARG:NE	2.34	0.43
19:S:57:THR:C	19:S:59:ASP:H	2.22	0.43
30:0:1883:U:O2'	30:0:1884:G:H5'	2.19	0.43
30:0:2712:G:O2'	30:0:2713:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2820:A:H2'	30:0:2821:C:C6	2.54	0.43
30:0:2842:G:H2'	30:0:2843:A:C5'	2.48	0.43
3:C:78:ARG:HG3	3:C:78:ARG:NH1	2.34	0.42
3:C:236:THR:HG22	3:C:239:ALA:HB2	2.01	0.42
5:E:69:ILE:HA	5:E:72:MET:CE	2.48	0.42
13:M:47:ASP:CG	13:M:48:LYS:N	2.72	0.42
14:N:23:ARG:O	14:N:27:LEU:HG	2.18	0.42
14:N:171:HIS:CE1	38:N:8855:HOH:O	2.72	0.42
15:O:81:PHE:HB2	15:O:86:GLU:HB2	2.01	0.42
17:Q:53:HIS:CD2	30:0:2389:U:H4'	2.54	0.42
21:U:4:ARG:N	38:U:5334:HOH:O	2.52	0.42
23:W:21:LEU:HD21	23:W:48:VAL:CG1	2.46	0.42
26:Z:47:ARG:NH1	38:Z:8704:HOH:O	2.50	0.42
27:1:28:HIS:HD2	27:1:30:LYS:H	1.66	0.42
30:0:212:A:O4'	30:0:214:U:C6	2.72	0.42
30:0:282:C:O2'	30:0:283:U:C4'	2.67	0.42
30:0:305:A:C5	30:0:329:A:C2	3.07	0.42
30:0:1052:G:N3	30:0:1052:G:H2'	2.33	0.42
30:0:1965:C:O5'	30:0:1965:C:H6	2.02	0.42
30:0:2756:U:C2	30:0:2896:A:H2	2.37	0.42
30:0:2783:A:H2'	30:0:2784:A:C8	2.54	0.42
2:B:190:MET:HE2	2:B:194:PHE:CD1	2.53	0.42
3:C:184:ARG:NH1	30:0:1306:U:OP1	2.51	0.42
3:C:237:GLU:HA	38:C:8626:HOH:O	2.18	0.42
11:K:82:ARG:NH2	11:K:115:ARG:HG2	2.33	0.42
30:0:128:A:O2'	30:0:129:A:C5'	2.67	0.42
30:0:162:C:H2'	30:0:163:U:H5'	2.02	0.42
30:0:834:G:H3'	30:0:835:U:H4'	2.01	0.42
30:0:867:A:H2	30:0:880:C:O2	2.02	0.42
30:0:1706:G:C5	30:0:1707:G:C6	3.07	0.42
30:0:1921:A:C6	30:0:1922:A:C2	3.08	0.42
30:0:2332:A:H3'	30:0:2333:G:H8	1.84	0.42
2:B:74:ILE:HG13	38:B:9070:HOH:O	2.17	0.42
2:B:238:ASN:ND2	2:B:240:GLY:H	2.04	0.42
14:N:69:TYR:CE2	14:N:184:ILE:HD11	2.55	0.42
14:N:164:ASP:CG	14:N:167:ASP:HA	2.39	0.42
19:S:57:THR:HG23	38:S:8979:HOH:O	2.19	0.42
30:0:31:C:C4'	38:0:7437:HOH:O	2.66	0.42
30:0:128:A:C8	30:0:128:A:C3'	3.02	0.42
30:0:932:U:H1'	30:0:1296:A:H1'	2.00	0.42
30:0:1249:U:H2'	30:0:1250:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1350:U:H4'	38:0:5134:HOH:O	2.18	0.42
30:0:1461:U:H2'	30:0:1462:C:C6	2.54	0.42
30:0:2121:G:O2'	30:0:2122:C:H5'	2.19	0.42
30:0:2347:C:H2'	30:0:2348:C:H6	1.83	0.42
6:F:59:ILE:CD1	30:0:263:U:C2	3.02	0.42
6:F:110:ASP:O	6:F:114:LYS:HG3	2.20	0.42
15:O:105:ASN:HD21	15:O:109:SER:N	2.17	0.42
18:R:104:PHE:CB	18:R:109:MET:HE1	2.49	0.42
29:3:11:CYS:HB2	29:3:20:HIS:HE1	1.85	0.42
30:0:40:C:O5'	30:0:40:C:H6	2.02	0.42
30:0:699:C:C2	30:0:744:G:C2	3.07	0.42
30:0:1098:A:H2'	30:0:1099:G:O4'	2.19	0.42
30:0:1613:C:H2'	30:0:1614:G:O4'	2.19	0.42
30:0:1741:U:C4	30:0:2033:G:C8	3.07	0.42
4:D:129:ASP:OD1	30:0:2338:G:H2'	2.20	0.42
10:J:75:PRO:HD3	10:J:136:SER:OG	2.20	0.42
14:N:71:TRP:HB2	38:N:8833:HOH:O	2.19	0.42
16:P:87:ARG:HG2	38:P:188:HOH:O	2.18	0.42
18:R:3:SER:HB2	30:0:20:G:O3'	2.19	0.42
23:W:4:LEU:HD23	23:W:4:LEU:HA	1.83	0.42
30:0:74:G:H2'	30:0:75:U:C6	2.54	0.42
30:0:177:A:H2'	30:0:178:U:O4'	2.19	0.42
30:0:1020:A:H1'	38:0:7242:HOH:O	2.19	0.42
30:0:2032:U:O2'	30:0:2033:G:H5''	2.20	0.42
30:0:2801:A:H2'	30:0:2801:A:N3	2.34	0.42
2:B:41:PHE:CZ	2:B:79:MET:HG3	2.55	0.42
24:X:78:GLU:HB3	38:X:5564:HOH:O	2.19	0.42
25:Y:132:ASP:OD2	30:0:621:C:H5'	2.19	0.42
30:0:69:A:C8	30:0:69:A:C5'	2.96	0.42
30:0:316:A:N3	30:0:336:G:O2'	2.46	0.42
30:0:1081:A:H5''	38:0:3159:HOH:O	2.19	0.42
30:0:1482:A:O2'	30:0:1483:C:H5'	2.20	0.42
30:0:1495:C:H1'	30:0:1573:A:H1'	2.02	0.42
30:0:1760:G:H5'	30:0:1818:C:O2'	2.20	0.42
30:0:2089:A:C2'	30:0:2090:G:H5'	2.49	0.42
30:0:2657:G:O2'	30:0:2842:G:N7	2.47	0.42
30:0:2754:G:C2'	30:0:2755:G:H5'	2.49	0.42
2:B:56:ASP:HB2	2:B:322:ARG:HE	1.85	0.42
4:D:18:ILE:HD13	4:D:84:LEU:HD12	2.01	0.42
9:I:73:LEU:HD12	9:I:107:LYS:HZ2	1.85	0.42
17:Q:28:ARG:HG2	38:Q:4350:HOH:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1735:C:O2'	30:0:1736:A:H5'	2.19	0.42
30:0:2523:U:O2'	30:0:2524:G:H5'	2.20	0.42
3:C:129:HIS:HE1	3:C:231:ARG:HA	1.84	0.42
4:D:21:VAL:HA	4:D:131:THR:O	2.19	0.42
8:H:91:ARG:NH1	8:H:138:THR:OG1	2.50	0.42
11:K:29:LEU:HD22	11:K:55:VAL:HG11	2.02	0.42
18:R:82:GLU:O	18:R:86:LYS:HG3	2.19	0.42
28:2:41:HIS:HB3	28:2:44:ARG:HB2	2.02	0.42
30:0:113:A:OP2	30:0:114:A:H2'	2.19	0.42
30:0:445:U:H2'	30:0:446:G:C8	2.54	0.42
30:0:583:C:H2'	30:0:584:U:C6	2.50	0.42
30:0:1058:A:H2'	30:0:1060:C:C5'	2.48	0.42
30:0:2265:U:H2'	30:0:2266:A:C8	2.55	0.42
30:0:2421:G:H3'	30:0:2422:U:H5''	2.02	0.42
30:0:2600:A:H2'	30:0:2601:A:O4'	2.19	0.42
30:0:2809:G:H2'	30:0:2810:G:O4'	2.20	0.42
1:A:206:ARG:NH2	30:0:2630:G:O6	2.53	0.42
6:F:107:ASP:O	6:F:111:ILE:HG13	2.19	0.42
6:F:111:ILE:O	6:F:115:VAL:HG23	2.20	0.42
9:I:114:TYR:N	9:I:114:TYR:HD1	2.17	0.42
11:K:78:LYS:HA	11:K:79:PRO:HD3	1.94	0.42
14:N:37:ARG:NH2	38:N:8828:HOH:O	2.51	0.42
14:N:159:TYR:HE1	31:9:50:G:H5''	1.85	0.42
16:P:13:VAL:HG13	16:P:14:LEU:N	2.35	0.42
19:S:37:VAL:O	19:S:41:VAL:HG23	2.20	0.42
20:T:41:ARG:NH1	20:T:42:VAL:O	2.53	0.42
28:2:2:LYS:HG3	30:0:1486:A:C5	2.55	0.42
30:0:1307:A:H2'	30:0:1308:A:C8	2.55	0.42
30:0:1562:C:N4	38:0:5872:HOH:O	2.52	0.42
30:0:1603:A:H5'	30:0:1605:G:C5'	2.49	0.42
30:0:1644:C:O2'	30:0:1645:U:H5'	2.19	0.42
30:0:1878:G:O2'	30:0:1879:U:OP2	2.38	0.42
30:0:2255:A:O2'	30:0:2256:G:H5'	2.20	0.42
2:B:5:ARG:NH1	30:0:2547:C:OP2	2.53	0.42
2:B:18:ARG:HG3	2:B:256:GLN:HG3	2.01	0.42
3:C:111:VAL:HB	38:C:8522:HOH:O	2.20	0.42
8:H:12:ILE:HD12	8:H:57:THR:HG22	2.02	0.42
20:T:97:ARG:NH2	30:0:308:U:H5'	2.35	0.42
30:0:634:G:O2'	30:0:1358:A:OP1	2.35	0.42
30:0:912:A:C4	30:0:1294:A:C2	3.07	0.42
30:0:1398:G:H2'	30:0:1399:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1788:U:C2	30:0:1805:G:N2	2.88	0.42
30:0:2032:U:C2'	30:0:2033:G:C5'	2.98	0.42
30:0:2461:U:O2	30:0:2466:G:H1'	2.19	0.42
30:0:2553:A:H2'	30:0:2553:A:N3	2.34	0.42
30:0:2758:G:H2'	30:0:2759:C:C6	2.55	0.42
4:D:131:THR:HG21	30:0:2348:C:H1'	2.01	0.41
6:F:38:LYS:HE3	30:0:244:C:OP2	2.20	0.41
16:P:61:ARG:NH2	30:0:2737:C:OP2	2.43	0.41
18:R:9:ASP:HA	18:R:10:PRO:HD2	1.90	0.41
22:V:44:GLY:O	22:V:48:GLU:HG2	2.20	0.41
23:W:11:VAL:O	23:W:12:ASN:HB2	2.20	0.41
27:1:45:ARG:HB3	38:1:8967:HOH:O	2.20	0.41
30:0:12:U:C2'	30:0:13:G:H5'	2.49	0.41
30:0:1845:A:O2'	30:0:1846:U:H5'	2.19	0.41
30:0:1942:A:C4'	38:0:9046:HOH:O	2.67	0.41
30:0:2290:U:H2'	38:0:7148:HOH:O	2.19	0.41
3:C:39:GLN:O	3:C:43:LYS:HD3	2.19	0.41
4:D:151:ILE:HA	4:D:152:PRO:HD3	1.92	0.41
13:M:65:VAL:HG21	13:M:105:ALA:HB2	2.02	0.41
22:V:1:THR:HG23	22:V:2:VAL:HG23	2.02	0.41
23:W:125:HIS:CE1	30:0:1097:A:H5''	2.56	0.41
24:X:34:ARG:NH1	24:X:48:VAL:O	2.51	0.41
26:Z:63:CYS:HA	26:Z:64:PRO:HD3	1.91	0.41
29:3:70:ARG:HD3	38:3:9059:HOH:O	2.19	0.41
30:0:297:U:H2'	30:0:298:C:H6	1.83	0.41
30:0:351:A:O2'	30:0:352:A:H5'	2.20	0.41
30:0:488:U:C2'	38:0:4019:HOH:O	2.67	0.41
30:0:1598:A:N6	33:0:8815:CL:CL	2.90	0.41
30:0:1636:G:O2'	30:0:1637:A:H5'	2.20	0.41
31:9:5:G:C2'	31:9:6:C:H5'	2.49	0.41
4:D:76:ARG:NH1	31:9:42:C:O2	2.50	0.41
10:J:88:PRO:HD3	30:0:1104:C:H4'	2.01	0.41
24:X:22:ASN:HA	24:X:25:ARG:HG3	2.02	0.41
30:0:383:A:H2'	30:0:384:G:O4'	2.19	0.41
30:0:941:G:C6	30:0:942:U:C4	3.08	0.41
30:0:1375:A:C2'	30:0:1376:G:H5'	2.50	0.41
30:0:2088:C:H1'	30:0:2841:A:N1	2.35	0.41
30:0:2090:G:H2'	30:0:2091:G:C8	2.55	0.41
31:9:49:G:C2'	31:9:50:G:H5'	2.50	0.41
1:A:1:GLY:HA2	30:0:2114:C:OP1	2.20	0.41
1:A:167:LYS:HB2	26:Z:53:ILE:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:214:SER:HB2	38:0:4377:HOH:O	2.20	0.41
1:A:217:ARG:HH11	1:A:217:ARG:CG	2.33	0.41
13:M:59:GLY:HA3	13:M:141:ILE:HD12	2.02	0.41
20:T:3:GLN:HA	20:T:4:PRO:HD3	1.85	0.41
23:W:3:ALA:O	23:W:54:PHE:HA	2.20	0.41
24:X:72:VAL:HG22	24:X:85:VAL:HG12	2.03	0.41
30:0:1625:U:H3'	30:0:1625:U:C6	2.54	0.41
30:0:1706:G:C6	30:0:1707:G:C6	3.09	0.41
9:I:130:LEU:CD2	30:0:1167:G:H4'	2.50	0.41
11:K:37:TYR:HB3	38:K:7169:HOH:O	2.20	0.41
12:L:114:VAL:HG11	38:L:8874:HOH:O	2.20	0.41
15:O:21:SER:OG	15:O:106:PRO:HB2	2.20	0.41
23:W:43:GLY:HA3	30:0:945:U:O2'	2.20	0.41
27:1:12:ASN:O	30:0:1415:G:H5'	2.20	0.41
29:3:28:GLY:HA3	30:0:2435:U:OP1	2.20	0.41
30:0:69:A:H2'	30:0:70:A:OP2	2.20	0.41
30:0:423:A:C4	30:0:424:C:C6	3.09	0.41
30:0:724:G:O2'	30:0:725:C:H5'	2.21	0.41
30:0:920:C:H4'	30:0:921:G:N2	2.35	0.41
30:0:1069:C:H2'	30:0:1070:A:O4'	2.21	0.41
30:0:1184:C:O2'	30:0:1185:U:OP2	2.35	0.41
30:0:2274:A:O2'	30:0:2275:G:H5'	2.20	0.41
30:0:2385:G:H2'	30:0:2386:U:C6	2.56	0.41
30:0:2635:A:C2'	30:0:2636:C:H5'	2.50	0.41
1:A:1:GLY:HA2	1:A:197:VAL:HG23	2.03	0.41
1:A:173:GLY:O	1:A:176:HIS:HB3	2.19	0.41
3:C:107:ARG:O	3:C:111:VAL:HG23	2.21	0.41
10:J:19:MET:CE	10:J:132:LEU:HD11	2.51	0.41
30:0:307:G:H3'	38:0:6693:HOH:O	2.21	0.41
30:0:1193:A:H2	30:0:1194:A:N6	2.16	0.41
30:0:1413:A:H2'	30:0:1414:A:O4'	2.20	0.41
30:0:1483:C:O2'	30:0:1484:G:H5'	2.21	0.41
30:0:1594:C:O2'	30:0:1607:A:H4'	2.20	0.41
30:0:1787:C:O2'	30:0:1788:U:H5'	2.20	0.41
30:0:2281:C:C2'	30:0:2282:U:H5'	2.50	0.41
30:0:2505:G:H2'	30:0:2506:A:C5'	2.48	0.41
30:0:2506:A:O2'	30:0:2507:G:P	2.79	0.41
30:0:2777:G:O2'	30:0:2778:A:H5'	2.20	0.41
1:A:48:ASP:HA	1:A:49:PRO:HD3	1.85	0.41
2:B:233:ARG:HG2	2:B:233:ARG:NH1	2.35	0.41
3:C:101:ASP:HB2	30:0:750:A:O3'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:128:LEU:N	38:D:6007:HOH:O	2.53	0.41
30:0:309:C:O2	30:0:309:C:H2'	2.20	0.41
30:0:459:A:H4'	38:0:9460:HOH:O	2.20	0.41
30:0:571:C:O5'	30:0:571:C:H6	2.04	0.41
30:0:736:A:H8	38:0:7219:HOH:O	2.03	0.41
30:0:1381:A:N3	30:0:1382:G:H1'	2.36	0.41
30:0:1926:G:H2'	30:0:1927:A:H8	1.86	0.41
30:0:2032:U:H2'	30:0:2033:G:H5'	2.03	0.41
30:0:2903:C:O2'	30:0:2904:U:H5'	2.21	0.41
9:I:101:LYS:O	9:I:105:GLU:HG3	2.20	0.41
30:0:764:C:H2'	30:0:765:G:O4'	2.20	0.41
30:0:962:C:H2'	30:0:963:C:H5'	2.03	0.41
30:0:1829:A:H2'	30:0:1830:C:H5'	2.03	0.41
30:0:1926:G:H2'	30:0:1927:A:C8	2.55	0.41
2:B:60:SER:HA	2:B:61:PRO:HD3	1.87	0.41
2:B:101:TRP:HB2	2:B:119:HIS:CD2	2.56	0.41
2:B:242:TRP:CZ2	30:0:2607:U:C4	3.08	0.41
5:E:7:ILE:HG13	5:E:11:VAL:HB	2.03	0.41
5:E:68:HIS:CE1	38:E:5919:HOH:O	2.74	0.41
5:E:125:GLU:HB2	5:E:132:THR:HG23	2.03	0.41
12:L:6:ARG:NH1	30:0:1299:G:N7	2.69	0.41
14:N:82:TYR:CD2	14:N:82:TYR:C	2.93	0.41
16:P:59:ARG:O	16:P:63:ARG:HG3	2.21	0.41
22:V:5:VAL:HG23	38:V:2271:HOH:O	2.20	0.41
23:W:119:HIS:CG	38:0:5297:HOH:O	2.74	0.41
27:1:28:HIS:O	27:1:32:LYS:N	2.48	0.41
29:3:38:ARG:NH1	30:0:396:U:C2	2.89	0.41
30:0:243:A:H61	30:0:269:G:C1'	2.34	0.41
30:0:535:G:O6	30:0:2064:U:C6	2.74	0.41
30:0:653:U:H2'	30:0:654:A:C8	2.55	0.41
30:0:1159:G:H2'	30:0:1160:G:O4'	2.21	0.41
30:0:1298:U:H2'	30:0:1299:G:C8	2.56	0.41
30:0:1520:G:C6	30:0:1521:C:C4	3.08	0.41
30:0:1625:U:C6	30:0:1625:U:C3'	3.04	0.41
30:0:1626:A:H2'	30:0:1627:G:O4'	2.21	0.41
30:0:1634:G:H2'	30:0:1635:U:C6	2.56	0.41
30:0:2314:G:H2'	30:0:2315:C:H5'	2.03	0.41
30:0:2316:G:H8	38:0:5663:HOH:O	2.03	0.41
30:0:2354:A:C2	30:0:2367:A:C8	3.09	0.41
30:0:2506:A:O2'	30:0:2507:G:O5'	2.39	0.41
31:9:61:C:H2'	31:9:62:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:47:HIS:CD2	30:0:1654:U:H2'	2.56	0.41
2:B:225:GLY:HA3	38:B:9027:HOH:O	2.21	0.41
5:E:91:PHE:HA	5:E:92:PRO:HD3	1.90	0.41
18:R:18:LEU:HG	18:R:91:LEU:HD13	2.03	0.41
20:T:106:GLU:HG3	38:T:4913:HOH:O	2.21	0.41
30:0:491:C:O2'	30:0:492:C:H5'	2.21	0.41
30:0:506:G:N1	30:0:509:A:OP2	2.54	0.41
30:0:615:G:H2'	30:0:616:U:C6	2.56	0.41
30:0:694:A:C2'	30:0:695:C:H5'	2.51	0.41
30:0:963:C:O2	30:0:1005:A:N1	2.54	0.41
30:0:1795:G:H2'	30:0:1796:A:O4'	2.21	0.41
30:0:1871:U:O4'	30:0:1873:G:C8	2.74	0.41
30:0:1903:U:O2'	30:0:1904:A:C8	2.72	0.41
30:0:2754:G:O2'	30:0:2755:G:H5'	2.20	0.41
30:0:2765:C:H2'	30:0:2766:A:C8	2.56	0.41
1:A:109:GLU:HG2	1:A:116:GLY:H	1.85	0.40
3:C:131:PHE:CD2	3:C:131:PHE:N	2.89	0.40
8:H:157:TYR:CD1	8:H:157:TYR:C	2.94	0.40
9:I:112:LEU:HG	30:0:1162:G:O2'	2.21	0.40
22:V:39:ALA:N	22:V:40:PRO:CD	2.84	0.40
23:W:130:HIS:NE2	31:9:88:G:OP1	2.50	0.40
23:W:130:HIS:O	23:W:136:GLY:HA3	2.21	0.40
30:0:106:A:H2'	30:0:107:U:O4'	2.21	0.40
30:0:304:G:H1'	30:0:347:A:H61	1.86	0.40
30:0:626:U:C4	30:0:627:G:C6	3.09	0.40
30:0:1116:U:C2	30:0:1246:A:N6	2.89	0.40
30:0:1205:U:H2'	30:0:1206:U:H5'	1.94	0.40
30:0:1375:A:H2'	30:0:1376:G:H5'	2.04	0.40
30:0:1555:G:H4'	30:0:1630:A:H2	1.86	0.40
30:0:2112:A:H2'	30:0:2113:G:H8	1.85	0.40
30:0:2491:G:C1'	38:0:6878:HOH:O	2.58	0.40
1:A:38:ILE:HD13	1:A:38:ILE:HA	1.88	0.40
1:A:88:ILE:O	1:A:88:ILE:HG22	2.21	0.40
14:N:170:GLU:O	14:N:174:GLU:HG3	2.20	0.40
15:O:38:ARG:NH1	38:O:7674:HOH:O	2.53	0.40
20:T:9:LYS:HE2	20:T:13:ARG:HH12	1.84	0.40
23:W:35:VAL:HA	23:W:36:PRO:HD3	1.83	0.40
23:W:117:ARG:HD3	30:0:1287:A:O4'	2.21	0.40
30:0:423:A:H2'	30:0:424:C:H6	1.87	0.40
30:0:499:G:O2'	30:0:500:G:H5'	2.21	0.40
30:0:1992:U:H2'	30:0:1994:A:OP2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2564:G:OP2	30:0:2565:C:H5''	2.21	0.40
3:C:102:LEU:HD12	3:C:102:LEU:HA	1.91	0.40
3:C:193:LEU:HD12	3:C:211:ASP:O	2.21	0.40
25:Y:145:LYS:O	25:Y:147:ARG:HG2	2.21	0.40
26:Z:77:GLY:HA2	26:Z:91:GLY:O	2.21	0.40
27:1:21:ARG:HD2	27:1:39:PHE:HB2	2.04	0.40
30:0:553:G:O4'	30:0:1325:G:H5'	2.22	0.40
30:0:570:C:O5'	30:0:570:C:H6	2.04	0.40
30:0:821:U:H2'	30:0:822:C:C6	2.57	0.40
30:0:1761:U:H2'	30:0:1762:C:C6	2.55	0.40
30:0:1947:G:H2'	30:0:1948:G:C8	2.56	0.40
30:0:2614:C:O2'	30:0:2615:U:H5'	2.21	0.40
2:B:199:TYR:HE2	2:B:268:ARG:HB2	1.85	0.40
2:B:229:ARG:HD2	38:0:9111:HOH:O	2.20	0.40
4:D:22:VAL:HA	4:D:73:VAL:O	2.21	0.40
4:D:23:VAL:HG12	4:D:130:VAL:HG22	2.03	0.40
5:E:68:HIS:O	5:E:72:MET:HG3	2.22	0.40
9:I:130:LEU:HA	38:I:6825:HOH:O	2.22	0.40
12:L:145:LEU:O	12:L:148:GLU:HG3	2.21	0.40
13:M:122:GLN:OE1	13:M:127:LYS:HE2	2.22	0.40
18:R:18:LEU:HD12	18:R:143:VAL:HG11	2.03	0.40
18:R:114:VAL:HG13	18:R:114:VAL:O	2.22	0.40
25:Y:148:GLY:HA3	30:0:622:G:P	2.62	0.40
26:Z:45:VAL:HG12	38:Z:8713:HOH:O	2.21	0.40
30:0:138:U:OP2	30:0:139:C:C5	2.70	0.40
30:0:503:G:H2'	30:0:504:G:H8	1.87	0.40
30:0:939:A:N1	30:0:1027:G:O2'	2.50	0.40
30:0:1014:A:H5''	31:9:101:G:O2'	2.22	0.40
30:0:1311:G:C2	30:0:1312:G:C8	3.09	0.40
30:0:2032:U:H2'	30:0:2033:G:H5''	2.03	0.40
30:0:2135:A:O4'	30:0:2243:C:N4	2.54	0.40
2:B:115:VAL:HA	2:B:116:PRO:HD3	1.85	0.40
2:B:267:LYS:HD3	38:0:9565:HOH:O	2.22	0.40
13:M:188:ARG:HH11	30:0:154:C:H3'	1.86	0.40
15:O:32:ARG:HE	15:O:35:LYS:HD2	1.86	0.40
16:P:94:TRP:CZ2	16:P:98:ILE:HG13	2.57	0.40
20:T:14:ALA:HA	20:T:15:PRO:HD3	1.85	0.40
27:1:53:LYS:HD3	27:1:53:LYS:HA	1.91	0.40
30:0:214:U:H5'	38:0:6146:HOH:O	2.22	0.40
30:0:695:C:H2'	30:0:696:C:C6	2.57	0.40
30:0:812:A:H2'	30:0:813:C:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1236:A:H2'	30:0:1237:U:O4'	2.22	0.40
30:0:1773:G:N2	30:0:1774:G:C8	2.90	0.40
30:0:2509:A:C2	30:0:2510:C:H1'	2.56	0.40
30:0:2734:G:O2'	30:0:2735:U:H5'	2.22	0.40
30:0:2897:C:O2'	30:0:2898:G:H5'	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	235/240 (98%)	211 (90%)	18 (8%)	6 (3%)	5	20
2	B	335/338 (99%)	306 (91%)	25 (8%)	4 (1%)	13	40
3	C	244/246 (99%)	224 (92%)	19 (8%)	1 (0%)	34	66
4	D	134/177 (76%)	113 (84%)	16 (12%)	5 (4%)	3	13
5	E	170/178 (96%)	161 (95%)	9 (5%)	0	100	100
6	F	117/120 (98%)	106 (91%)	8 (7%)	3 (3%)	5	20
7	G	25/348 (7%)	25 (100%)	0	0	100	100
8	H	156/177 (88%)	147 (94%)	8 (5%)	1 (1%)	25	58
9	I	68/162 (42%)	54 (79%)	13 (19%)	1 (2%)	10	34
10	J	140/145 (97%)	130 (93%)	9 (6%)	1 (1%)	22	54
11	K	130/132 (98%)	124 (95%)	5 (4%)	1 (1%)	19	51
12	L	141/165 (86%)	125 (89%)	14 (10%)	2 (1%)	11	36
13	M	192/196 (98%)	182 (95%)	9 (5%)	1 (0%)	29	61
14	N	184/187 (98%)	169 (92%)	12 (6%)	3 (2%)	9	32
15	O	113/116 (97%)	108 (96%)	5 (4%)	0	100	100
16	P	141/149 (95%)	141 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	Q	93/96 (97%)	88 (95%)	5 (5%)	0	100	100
18	R	148/155 (96%)	141 (95%)	7 (5%)	0	100	100
19	S	79/85 (93%)	75 (95%)	4 (5%)	0	100	100
20	T	117/120 (98%)	110 (94%)	7 (6%)	0	100	100
21	U	51/67 (76%)	45 (88%)	5 (10%)	1 (2%)	7	27
22	V	63/71 (89%)	60 (95%)	2 (3%)	1 (2%)	9	32
23	W	152/154 (99%)	146 (96%)	4 (3%)	2 (1%)	12	37
24	X	80/92 (87%)	75 (94%)	4 (5%)	1 (1%)	12	37
25	Y	140/241 (58%)	138 (99%)	2 (1%)	0	100	100
26	Z	71/116 (61%)	62 (87%)	7 (10%)	2 (3%)	5	19
27	1	54/57 (95%)	52 (96%)	2 (4%)	0	100	100
28	2	42/50 (84%)	41 (98%)	1 (2%)	0	100	100
29	3	90/92 (98%)	88 (98%)	2 (2%)	0	100	100
All	All	3705/4472 (83%)	3447 (93%)	222 (6%)	36 (1%)	15	45

All (36) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	37	VAL
4	D	137	PRO
6	F	101	ALA
14	N	154	LEU
14	N	183	ASP
14	N	184	ILE
1	A	27	LEU
8	H	19	ARG
1	A	34	ASP
10	J	65	ASN
23	W	49	ASN
23	W	77	ALA
26	Z	44	ARG
1	A	36	ASP
2	B	2	GLN
2	B	185	GLY
4	D	65	GLU
11	K	127	ALA
12	L	149	ARG

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Mol	Chain	Res	Type
13	M	71	SER
24	X	70	ILE
26	Z	65	ASN
2	B	184	ASP
4	D	56	ARG
6	F	100	ASP
12	L	82	ALA
21	U	55	ALA
22	V	43	PRO
1	A	69	LEU
3	C	201	SER
4	D	27	ILE
4	D	97	GLN
9	I	83	GLY
1	A	88	ILE
2	B	169	GLY
6	F	27	GLY

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	179/182 (98%)	170 (95%)	9 (5%)	24	57
2	B	282/283 (100%)	263 (93%)	19 (7%)	16	43
3	C	193/193 (100%)	176 (91%)	17 (9%)	10	30
4	D	117/148 (79%)	110 (94%)	7 (6%)	19	49
5	E	152/156 (97%)	149 (98%)	3 (2%)	55	82
6	F	93/94 (99%)	91 (98%)	2 (2%)	52	81
7	G	27/282 (10%)	27 (100%)	0	100	100
8	H	134/145 (92%)	129 (96%)	5 (4%)	34	68
9	I	58/130 (45%)	57 (98%)	1 (2%)	60	86
10	J	118/121 (98%)	110 (93%)	8 (7%)	16	42
11	K	106/106 (100%)	104 (98%)	2 (2%)	57	84

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	L	113/127 (89%)	110 (97%)	3 (3%)	44	77
13	M	158/160 (99%)	151 (96%)	7 (4%)	28	61
14	N	149/150 (99%)	142 (95%)	7 (5%)	26	59
15	O	93/94 (99%)	92 (99%)	1 (1%)	73	92
16	P	113/117 (97%)	111 (98%)	2 (2%)	59	85
17	Q	79/80 (99%)	76 (96%)	3 (4%)	33	67
18	R	117/122 (96%)	111 (95%)	6 (5%)	24	56
19	S	71/74 (96%)	70 (99%)	1 (1%)	67	89
20	T	105/106 (99%)	97 (92%)	8 (8%)	13	36
21	U	44/53 (83%)	43 (98%)	1 (2%)	50	80
22	V	51/57 (90%)	50 (98%)	1 (2%)	55	82
23	W	130/130 (100%)	126 (97%)	4 (3%)	40	74
24	X	66/74 (89%)	62 (94%)	4 (6%)	18	48
25	Y	120/196 (61%)	116 (97%)	4 (3%)	38	72
26	Z	60/94 (64%)	60 (100%)	0	100	100
27	1	46/47 (98%)	46 (100%)	0	100	100
28	2	42/46 (91%)	41 (98%)	1 (2%)	49	79
29	3	79/79 (100%)	78 (99%)	1 (1%)	69	90
All	All	3095/3646 (85%)	2968 (96%)	127 (4%)	30	64

All (127) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3	ARG
1	A	36	ASP
1	A	37	VAL
1	A	38	ILE
1	A	94	LEU
1	A	131	HIS
1	A	153	ARG
1	A	179	MET
1	A	217	ARG
2	B	7	ARG
2	B	11	LEU
2	B	16	ARG
2	B	27	ASN

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Mol	Chain	Res	Type
2	B	49	THR
2	B	71	VAL
2	B	97	LEU
2	B	98	THR
2	B	103	ASP
2	B	108	GLU
2	B	132	HIS
2	B	190	MET
2	B	192	ASP
2	B	234	ARG
2	B	248	ARG
2	B	251	VAL
2	B	254	GLN
2	B	264	GLU
2	B	277	GLU
3	C	27	ARG
3	C	78	ARG
3	C	94	THR
3	C	131	PHE
3	C	136	VAL
3	C	151	GLN
3	C	162	VAL
3	C	187	ARG
3	C	202	THR
3	C	211	ASP
3	C	214	THR
3	C	222	ASP
3	C	223	LEU
3	C	234	VAL
3	C	236	THR
3	C	237	GLU
3	C	243	VAL
4	D	24	HIS
4	D	36	ASN
4	D	50	VAL
4	D	137	PRO
4	D	149	ARG
4	D	161	ASP
4	D	170	TYR
5	E	7	ILE
5	E	102	VAL
5	E	156	ASP

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Mol	Chain	Res	Type
6	F	12	LEU
6	F	46	GLU
8	H	62	HIS
8	H	65	LEU
8	H	87	LYS
8	H	91	ARG
8	H	157	TYR
9	I	114	TYR
10	J	45	VAL
10	J	46	ILE
10	J	52	GLN
10	J	74	ARG
10	J	76	ASP
10	J	79	PHE
10	J	107	ASN
10	J	112	ASP
11	K	10	GLN
11	K	119	GLN
12	L	35	ARG
12	L	80	ASP
12	L	104	ASP
13	M	10	ASP
13	M	46	LEU
13	M	68	ARG
13	M	93	ARG
13	M	99	ARG
13	M	116	ASN
13	M	164	THR
14	N	17	ARG
14	N	26	LEU
14	N	49	THR
14	N	127	LEU
14	N	134	ASP
14	N	135	VAL
14	N	147	ILE
15	O	38	ARG
16	P	21	VAL
16	P	98	ILE
17	Q	11	ARG
17	Q	57	ASP
17	Q	95	GLU
18	R	13	THR

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Mol	Chain	Res	Type
18	R	39	THR
18	R	82	GLU
18	R	119	VAL
18	R	132	ARG
18	R	143	VAL
19	S	10	VAL
20	T	26	THR
20	T	39	ASN
20	T	48	VAL
20	T	73	HIS
20	T	89	ARG
20	T	96	VAL
20	T	115	GLU
20	T	117	ASP
21	U	47	ARG
22	V	22	ASP
23	W	38	THR
23	W	52	VAL
23	W	88	THR
23	W	146	ILE
24	X	27	ASP
24	X	46	ASP
24	X	79	GLU
24	X	82	GLU
25	Y	95	THR
25	Y	154	ARG
25	Y	189	ASN
25	Y	203	VAL
28	2	18	ASN
29	3	3	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (75) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	47	HIS
1	A	199	HIS
2	B	2	GLN
2	B	27	ASN
2	B	145	HIS
2	B	238	ASN
2	B	256	GLN
2	B	260	HIS

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Mol	Chain	Res	Type
2	B	320	GLN
3	C	2	GLN
3	C	73	GLN
3	C	129	HIS
3	C	151	GLN
4	D	103	ASN
5	E	119	HIS
5	E	143	GLN
5	E	150	GLN
7	G	17	GLN
7	G	64	ASN
8	H	34	HIS
8	H	59	GLN
8	H	62	HIS
10	J	52	GLN
10	J	107	ASN
10	J	126	ASN
10	J	142	ASN
11	K	10	GLN
11	K	42	ASN
11	K	44	HIS
11	K	67	GLN
12	L	18	HIS
12	L	41	HIS
12	L	116	HIS
13	M	58	GLN
13	M	77	HIS
13	M	137	ASN
13	M	170	ASN
14	N	93	GLN
14	N	107	ASN
14	N	132	ASN
16	P	50	GLN
16	P	66	GLN
16	P	118	GLN
17	Q	27	GLN
17	Q	40	HIS
18	R	61	GLN
18	R	94	ASN
18	R	98	ASN
18	R	113	HIS
18	R	117	HIS

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Mol	Chain	Res	Type
19	S	44	GLN
19	S	53	ASN
20	T	39	ASN
21	U	39	ASN
22	V	4	HIS
22	V	60	GLN
23	W	2	HIS
23	W	110	GLN
23	W	119	HIS
23	W	125	HIS
23	W	141	HIS
24	X	23	HIS
25	Y	133	HIS
25	Y	134	HIS
25	Y	149	GLN
25	Y	189	ASN
26	Z	61	HIS
27	1	8	GLN
27	1	16	HIS
27	1	28	HIS
28	2	41	HIS
28	2	45	ASN
29	3	15	ASN
29	3	20	HIS
29	3	48	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
30	0	2745/2923 (93%)	242 (8%)	27 (0%)
31	9	121/122 (99%)	15 (12%)	1 (0%)
All	All	2866/3045 (94%)	257 (8%)	28 (0%)

All (257) RNA backbone outliers are listed below:

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

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Mol	Chain	Res	Type
30	0	86	A
30	0	87	C
30	0	88	G
30	0	114	A
30	0	115	U
30	0	130	C
30	0	139	C
30	0	141	C
30	0	151	A
30	0	166	A
30	0	186	A
30	0	187	A
30	0	191	A
30	0	192	A
30	0	200	C
30	0	219	G
30	0	237	G
30	0	271	C
30	0	272	A
30	0	273	G
30	0	283	U
30	0	284	C
30	0	308	U
30	0	309	C
30	0	318	U
30	0	336	G
30	0	337	A
30	0	358	G
30	0	381	G
30	0	397	A
30	0	417	G
30	0	461	C
30	0	487	G
30	0	498	A
30	0	510	U
30	0	511	A
30	0	514	G
30	0	537	G
30	0	538	C
30	0	539	G
30	0	542	A
30	0	545	G

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Mol	Chain	Res	Type
30	0	553	G
30	0	559	U
30	0	588	G
30	0	604	G
30	0	605	C
30	0	620	A
30	0	632	A
30	0	644	G
30	0	660	A
30	0	688	A
30	0	698	A
30	0	701	U
30	0	759	C
30	0	777	U
30	0	809	G
30	0	821	U
30	0	835	U
30	0	840	U
30	0	857	A
30	0	858	U
30	0	868	G
30	0	869	G
30	0	871	G
30	0	872	U
30	0	875	A
30	0	877	G
30	0	878	G
30	0	885	G
30	0	898	G
30	0	905	C
30	0	920	C
30	0	921	G
30	0	923	A
30	0	953	G
30	0	960	G
30	0	961	A
30	0	1006	A
30	0	1008	C
30	0	1029	U
30	0	1045	G
30	0	1059	G
30	0	1060	C

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Mol	Chain	Res	Type
30	0	1072	G
30	0	1081	A
30	0	1088	A
30	0	1109	U
30	0	1110	G
30	0	1119	G
30	0	1130	U
30	0	1137	G
30	0	1151	G
30	0	1164	U
30	0	1165	G
30	0	1166	A
30	0	1174	A
30	0	1175	G
30	0	1185	U
30	0	1192	A
30	0	1193	A
30	0	1205	U
30	0	1206	U
30	0	1208	C
30	0	1216	G
30	0	1237	U
30	0	1238	C
30	0	1239	G
30	0	1279	U
30	0	1289	C
30	0	1331	G
30	0	1342	C
30	0	1353	C
30	0	1360	C
30	0	1377	C
30	0	1378	G
30	0	1407	A
30	0	1409	G
30	0	1474	C
30	0	1488	U
30	0	1505	U
30	0	1506	U
30	0	1524	U
30	0	1525	G
30	0	1526	A
30	0	1562	C

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Mol	Chain	Res	Type
30	0	1592	G
30	0	1617	C
30	0	1625	U
30	0	1626	A
30	0	1634	G
30	0	1656	A
30	0	1667	A
30	0	1682	A
30	0	1684	A
30	0	1685	A
30	0	1692	C
30	0	1701	A
30	0	1722	U
30	0	1723	G
30	0	1725	C
30	0	1731	C
30	0	1732	A
30	0	1752	G
30	0	1778	A
30	0	1779	A
30	0	1798	C
30	0	1819	G
30	0	1820	G
30	0	1829	A
30	0	1856	C
30	0	1879	U
30	0	1919	A
30	0	1942	A
30	0	1968	A
30	0	1971	G
30	0	1973	A
30	0	1978	A
30	0	1979	G
30	0	1980	U
30	0	1996	U
30	0	2004	U
30	0	2006	C
30	0	2008	U
30	0	2011	A
30	0	2012	U
30	0	2013	G
30	0	2033	G

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Mol	Chain	Res	Type
30	0	2034	U
30	0	2064	U
30	0	2072	G
30	0	2073	G
30	0	2074	A
30	0	2096	A
30	0	2101	A
30	0	2102	G
30	0	2110	G
30	0	2243	C
30	0	2258	A
30	0	2271	G
30	0	2272	G
30	0	2317	C
30	0	2321	A
30	0	2345	A
30	0	2354	A
30	0	2361	A
30	0	2369	A
30	0	2379	G
30	0	2422	U
30	0	2462	G
30	0	2465	A
30	0	2469	A
30	0	2476	C
30	0	2483	A
30	0	2507	G
30	0	2509	A
30	0	2511	A
30	0	2513	A
30	0	2526	C
30	0	2527	U
30	0	2533	C
30	0	2537	G
30	0	2541	U
30	0	2553	A
30	0	2564	G
30	0	2570	G
30	0	2589	U
30	0	2601	A
30	0	2602	G
30	0	2608	C

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Mol	Chain	Res	Type
30	0	2613	G
30	0	2637	A
30	0	2638	G
30	0	2645	U
30	0	2649	A
30	0	2664	A
30	0	2681	A
30	0	2682	C
30	0	2718	C
30	0	2719	A
30	0	2726	U
30	0	2747	C
30	0	2748	G
30	0	2749	U
30	0	2750	G
30	0	2762	C
30	0	2768	A
30	0	2800	A
30	0	2811	A
30	0	2812	A
30	0	2825	C
30	0	2852	A
30	0	2876	G
30	0	2890	A
30	0	2896	A
30	0	2903	C
30	0	2914	A
31	9	2	U
31	9	14	G
31	9	22	G
31	9	23	U
31	9	24	U
31	9	25	G
31	9	40	C
31	9	41	C
31	9	43	G
31	9	52	A
31	9	57	A
31	9	66	G
31	9	77	A
31	9	114	G
31	9	122	C

All (28) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
30	0	69	A
30	0	129	A
30	0	604	G
30	0	644	G
30	0	681	G
30	0	699	C
30	0	834	G
30	0	857	A
30	0	871	G
30	0	877	G
30	0	1080	C
30	0	1232	A
30	0	1237	U
30	0	1246	A
30	0	1352	A
30	0	1377	C
30	0	1474	C
30	0	1506	U
30	0	1692	C
30	0	1979	G
30	0	2313	C
30	0	2467	A
30	0	2526	C
30	0	2536	C
30	0	2649	A
30	0	2718	C
30	0	2726	U
31	9	65	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
30	UR3	0	2619	30	19,22,23	0.44	0	26,32,35	0.65	1 (3%)
30	1MA	0	628	30	16,25,26	1.40	3 (18%)	18,37,40	1.12	3 (16%)
30	OMG	0	2588	30	18,26,27	1.00	2 (11%)	19,38,41	0.70	1 (5%)
30	OMU	0	2587	30	19,22,23	0.29	0	26,31,34	0.38	0
30	PSU	0	2621	30	18,21,22	1.43	2 (11%)	22,30,33	1.32	3 (13%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	UR3	0	2619	30	-	0/7/25/26	0/2/2/2
30	1MA	0	628	30	-	0/3/25/26	0/3/3/3
30	OMG	0	2588	30	-	0/5/27/28	0/3/3/3
30	OMU	0	2587	30	-	0/9/27/28	0/2/2/2
30	PSU	0	2621	30	-	0/7/25/26	0/2/2/2

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	2621	PSU	C2-N1	4.63	1.43	1.36
30	0	628	1MA	C2-N3	3.66	1.33	1.29
30	0	628	1MA	C6-N6	2.53	1.33	1.27
30	0	2588	OMG	C5-C6	-2.47	1.42	1.47
30	0	2588	OMG	C8-N7	-2.42	1.30	1.35
30	0	2621	PSU	C6-C5	2.39	1.38	1.35
30	0	628	1MA	C8-N7	-2.12	1.31	1.35

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	0	2621	PSU	C6-C5-C4	3.64	120.74	118.20
30	0	628	1MA	N1-C2-N3	2.87	129.37	126.02
30	0	2621	PSU	C6-N1-C2	-2.83	119.79	122.68
30	0	2621	PSU	O2-C2-N1	2.71	125.78	122.79
30	0	628	1MA	C5-C6-N1	2.55	117.70	113.90
30	0	2619	UR3	C4-N3-C2	2.50	126.92	124.56
30	0	2588	OMG	O6-C6-C5	2.11	128.49	124.37
30	0	628	1MA	O4'-C1'-C2'	-2.09	103.88	106.93

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	0	2587	OMU	3	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	A	237/240 (98%)	-0.39	5 (2%) 63 61	35, 59, 97, 117	0
2	B	337/338 (99%)	-0.60	1 (0%) 94 94	36, 60, 90, 100	0
3	C	246/246 (100%)	-0.58	0 100 100	30, 51, 75, 89	0
4	D	140/177 (79%)	1.08	29 (20%) 1 0	73, 108, 135, 146	0
5	E	172/178 (96%)	-0.51	1 (0%) 89 89	51, 74, 96, 104	0
6	F	119/120 (99%)	0.13	5 (4%) 36 32	55, 78, 111, 125	0
7	G	29/348 (8%)	0.48	2 (6%) 16 13	83, 103, 109, 112	0
8	H	160/177 (90%)	0.03	9 (5%) 24 20	50, 73, 106, 113	0
9	I	70/162 (43%)	3.13	45 (64%) 0 0	137, 156, 173, 174	0
10	J	142/145 (97%)	-0.57	1 (0%) 87 87	41, 58, 78, 97	0
11	K	132/132 (100%)	-0.71	0 100 100	40, 55, 79, 82	0
12	L	145/165 (87%)	0.07	7 (4%) 30 27	34, 73, 123, 136	0
13	M	194/196 (98%)	-0.71	0 100 100	35, 50, 66, 73	0
14	N	186/187 (99%)	-0.08	5 (2%) 54 50	52, 75, 123, 135	0
15	O	115/116 (99%)	-0.60	0 100 100	45, 61, 78, 84	0
16	P	143/149 (95%)	-0.64	0 100 100	46, 61, 77, 84	0
17	Q	95/96 (98%)	-0.60	0 100 100	44, 55, 71, 86	0
18	R	150/155 (96%)	-0.73	0 100 100	39, 52, 71, 86	0
19	S	81/85 (95%)	-0.51	1 (1%) 79 79	49, 65, 86, 98	0
20	T	119/120 (99%)	-0.35	5 (4%) 36 32	47, 62, 89, 123	0
21	U	53/67 (79%)	-0.62	0 100 100	48, 62, 79, 88	0
22	V	65/71 (91%)	0.69	8 (12%) 4 3	55, 80, 129, 134	0
23	W	154/154 (100%)	-0.52	1 (0%) 89 89	41, 57, 74, 88	0
24	X	82/92 (89%)	-0.19	3 (3%) 41 37	49, 67, 90, 108	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	Y	142/241 (58%)	-0.76	1 (0%) 87 87	31, 50, 73, 94	0
26	Z	73/116 (62%)	0.73	12 (16%) 1 1	63, 87, 101, 106	0
27	1	56/57 (98%)	-0.66	0 100 100	32, 39, 45, 53	0
28	2	46/50 (92%)	-0.12	3 (6%) 18 14	41, 69, 104, 115	0
29	3	92/92 (100%)	-0.38	0 100 100	44, 68, 81, 91	0
30	0	2749/2923 (94%)	-0.67	8 (0%) 94 94	28, 53, 96, 172	0
31	9	122/122 (100%)	-0.83	2 (1%) 72 71	45, 74, 96, 153	0
All	All	6646/7517 (88%)	-0.45	154 (2%) 60 58	28, 58, 108, 174	0

All (154) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
9	I	74	ILE	10.1
22	V	39	ALA	8.0
22	V	1	THR	7.6
4	D	63	ILE	7.5
9	I	71	ALA	7.5
26	Z	46	SER	7.4
9	I	70	THR	7.4
9	I	72	GLU	7.4
9	I	66	GLY	7.3
22	V	43	PRO	6.9
9	I	104	ALA	6.8
14	N	166	ALA	6.5
9	I	106	GLN	6.4
9	I	100	VAL	6.0
4	D	57	THR	5.8
22	V	40	PRO	5.7
9	I	80	PHE	5.4
9	I	79	GLY	5.2
26	Z	58	ASN	5.1
4	D	85	GLN	5.0
9	I	128	THR	5.0
9	I	108	HIS	4.9
9	I	132	VAL	4.8
4	D	134	LEU	4.8
26	Z	35	SER	4.8
26	Z	44	ARG	4.8
9	I	109	PRO	4.7
9	I	113	SER	4.7

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Mol	Chain	Res	Type	RSRZ
9	I	102	GLN	4.6
9	I	112	LEU	4.5
20	T	118	SER	4.5
1	A	237	GLY	4.4
9	I	93	ALA	4.4
4	D	18	ILE	4.3
9	I	105	GLU	4.2
4	D	90	LEU	4.2
26	Z	45	VAL	4.2
9	I	99	GLN	4.1
9	I	76	ASP	4.0
31	9	1	U	4.0
9	I	69	PRO	3.9
9	I	83	GLY	3.8
9	I	92	VAL	3.8
19	S	81	ILE	3.8
14	N	155	GLU	3.8
9	I	97	VAL	3.8
6	F	106	ALA	3.8
9	I	86	GLU	3.7
9	I	110	ASP	3.7
20	T	116	ASP	3.7
30	0	1198	U	3.6
4	D	88	LEU	3.6
9	I	88	GLN	3.6
26	Z	60	ASP	3.6
9	I	78	ALA	3.6
30	0	735	C	3.5
24	X	71	ARG	3.5
9	I	111	LEU	3.5
8	H	40	GLN	3.5
12	L	60	GLU	3.4
26	Z	50	VAL	3.3
20	T	119	ALA	3.3
9	I	82	THR	3.3
4	D	64	ARG	3.3
4	D	91	ALA	3.3
4	D	84	LEU	3.3
22	V	38	GLY	3.3
9	I	103	ILE	3.2
9	I	81	GLU	3.2
9	I	75	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
9	I	98	ASP	3.2
12	L	81	VAL	3.2
4	D	102	GLY	3.2
12	L	75	LEU	3.2
26	Z	49	ARG	3.0
22	V	41	GLU	3.0
8	H	133	GLY	3.0
4	D	17	ARG	3.0
4	D	69	ILE	3.0
4	D	81	GLU	3.0
8	H	86	TYR	2.9
25	Y	235	GLU	2.9
26	Z	69	ASP	2.9
4	D	44	ILE	2.9
4	D	75	LEU	2.9
28	2	49	GLU	2.9
4	D	92	GLU	2.8
4	D	93	LEU	2.8
22	V	37	GLY	2.8
1	A	37	VAL	2.7
7	G	27	ILE	2.7
8	H	149	VAL	2.7
4	D	45	THR	2.7
1	A	91	GLY	2.6
9	I	67	VAL	2.6
4	D	135	VAL	2.6
9	I	116	LEU	2.5
4	D	165	PHE	2.5
30	0	282	C	2.5
30	0	1199	A	2.5
12	L	80	ASP	2.5
20	T	115	GLU	2.4
6	F	75	ILE	2.4
4	D	157	LEU	2.4
4	D	10	PHE	2.4
9	I	84	SER	2.4
1	A	99	ILE	2.3
26	Z	42	TYR	2.3
6	F	99	THR	2.3
4	D	172	VAL	2.3
28	2	39	ARG	2.3
4	D	89	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
4	D	130	VAL	2.3
6	F	17	LEU	2.3
28	2	35	ARG	2.3
9	I	73	LEU	2.3
9	I	114	TYR	2.3
9	I	91	PHE	2.3
9	I	94	ASP	2.3
6	F	16	ALA	2.3
4	D	166	ILE	2.3
20	T	117	ASP	2.2
30	0	1169	U	2.2
8	H	37	GLY	2.2
26	Z	68	GLU	2.2
10	J	70	PHE	2.2
22	V	2	VAL	2.2
4	D	56	ARG	2.2
4	D	171	ASP	2.2
9	I	118	ASN	2.2
14	N	138	ASP	2.2
2	B	105	PHE	2.2
24	X	85	VAL	2.2
23	W	96	LEU	2.2
30	0	1172	G	2.2
31	9	24	U	2.2
9	I	127	CYS	2.2
8	H	39	LYS	2.1
5	E	170	ARG	2.1
26	Z	55	SER	2.1
30	0	1200	A	2.1
12	L	76	LEU	2.1
8	H	76	LEU	2.1
30	0	970	U	2.1
14	N	185	GLU	2.1
1	A	103	VAL	2.1
8	H	158	ASN	2.1
12	L	100	ALA	2.0
9	I	125	GLY	2.0
8	H	35	LYS	2.0
24	X	7	GLU	2.0
12	L	106	VAL	2.0
14	N	147	ILE	2.0
7	G	24	VAL	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(Å ²)	Q<0.9
30	OMG	0	2588	24/25	0.98	0.12	38,42,43,43	0
30	UR3	0	2619	21/22	0.98	0.14	43,45,48,49	0
30	1MA	0	628	23/24	0.99	0.15	35,38,38,39	0
30	OMU	0	2587	21/22	0.99	0.13	40,43,46,49	0
30	PSU	0	2621	20/21	0.99	0.14	35,38,47,48	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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	SR	0	9006	1/1	0.11	1.24	200,200,200,200	0
34	SR	0	8994	1/1	0.41	0.98	200,200,200,200	0
34	SR	0	8922	1/1	0.41	0.22	170,170,170,170	0
35	NA	0	8522	1/1	0.54	0.38	83,83,83,83	0
35	NA	0	8562	1/1	0.55	0.80	74,74,74,74	0
32	MG	0	8089	1/1	0.58	0.12	57,57,57,57	0
34	SR	0	8991	1/1	0.58	0.09	197,197,197,197	0
35	NA	0	8546	1/1	0.60	1.30	112,112,112,112	0
34	SR	0	8919	1/1	0.61	0.13	192,192,192,192	0
34	SR	0	8986	1/1	0.61	0.17	200,200,200,200	0
35	NA	0	8555	1/1	0.64	0.49	51,51,51,51	0
34	SR	B	8987	1/1	0.67	0.49	200,200,200,200	0
34	SR	0	9001	1/1	0.71	0.10	173,173,173,173	0
35	NA	0	8518	1/1	0.71	0.48	94,94,94,94	0
35	NA	0	8563	1/1	0.71	0.36	94,94,94,94	0
35	NA	0	8570	1/1	0.71	0.13	60,60,60,60	0
34	SR	0	8997	1/1	0.72	0.46	200,200,200,200	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
35	NA	9	8572	1/1	0.72	0.33	111,111,111,111	0
32	MG	0	8037	1/1	0.74	0.33	90,90,90,90	0
34	SR	0	8982	1/1	0.75	1.22	200,200,200,200	0
34	SR	9	8980	1/1	0.76	0.15	200,200,200,200	0
32	MG	0	8091	1/1	0.77	0.06	62,62,62,62	0
34	SR	0	8993	1/1	0.77	0.09	182,182,182,182	0
34	SR	0	8988	1/1	0.77	0.13	173,173,173,173	0
35	NA	0	8525	1/1	0.78	0.19	78,78,78,78	0
35	NA	0	8560	1/1	0.78	0.38	83,83,83,83	0
34	SR	0	8938	1/1	0.78	0.13	192,192,192,192	0
34	SR	0	8944	1/1	0.80	0.13	182,182,182,182	0
35	NA	0	8505	1/1	0.80	1.03	49,49,49,49	0
34	SR	0	8959	1/1	0.81	0.20	174,174,174,174	0
35	NA	0	8506	1/1	0.81	0.25	68,68,68,68	0
34	SR	0	8976	1/1	0.81	0.25	200,200,200,200	0
34	SR	0	8947	1/1	0.82	0.27	200,200,200,200	0
35	NA	0	8550	1/1	0.82	0.52	61,61,61,61	0
32	MG	0	8036	1/1	0.83	0.10	50,50,50,50	0
35	NA	0	8544	1/1	0.83	0.20	75,75,75,75	0
35	NA	0	8571	1/1	0.84	0.09	77,77,77,77	0
34	SR	0	8996	1/1	0.84	1.02	200,200,200,200	0
32	MG	0	8081	1/1	0.85	0.18	74,74,74,74	0
35	NA	0	8528	1/1	0.85	0.29	58,58,58,58	0
35	NA	J	8538	1/1	0.85	0.16	60,60,60,60	0
34	SR	0	8957	1/1	0.86	0.10	196,196,196,196	0
35	NA	0	8557	1/1	0.86	0.10	52,52,52,52	0
34	SR	0	8927	1/1	0.87	0.06	151,151,151,151	0
34	SR	A	8977	1/1	0.87	0.06	161,161,161,161	0
35	NA	0	8527	1/1	0.87	0.23	71,71,71,71	0
32	MG	0	8062	1/1	0.88	0.17	50,50,50,50	0
34	SR	0	8951	1/1	0.88	0.07	142,142,142,142	0
34	SR	0	8928	1/1	0.88	0.06	135,135,135,135	0
32	MG	0	8077	1/1	0.88	0.07	49,49,49,49	0
32	MG	A	8051	1/1	0.88	0.41	72,72,72,72	0
34	SR	0	8985	1/1	0.89	0.06	143,143,143,143	0
35	NA	0	8502	1/1	0.89	0.11	65,65,65,65	0
32	MG	0	8071	1/1	0.89	0.19	71,71,71,71	0
34	SR	0	8998	1/1	0.89	0.13	175,175,175,175	0
34	SR	0	9007	1/1	0.90	1.33	200,200,200,200	0
35	NA	0	8559	1/1	0.90	0.15	76,76,76,76	0
35	NA	0	8533	1/1	0.90	0.13	67,67,67,67	0
32	MG	0	8082	1/1	0.90	0.28	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
34	SR	0	8968	1/1	0.90	0.08	165,165,165,165	0
35	NA	0	8548	1/1	0.90	0.17	55,55,55,55	0
32	MG	0	8075	1/1	0.90	0.03	46,46,46,46	0
35	NA	0	8574	1/1	0.90	0.38	55,55,55,55	0
34	SR	0	8979	1/1	0.90	0.20	198,198,198,198	0
34	SR	0	8983	1/1	0.91	0.45	195,195,195,195	0
35	NA	0	8530	1/1	0.91	0.28	55,55,55,55	0
32	MG	0	8059	1/1	0.91	0.06	59,59,59,59	0
35	NA	0	8541	1/1	0.91	0.22	69,69,69,69	0
34	SR	0	8915	1/1	0.91	0.09	131,131,131,131	0
32	MG	0	8072	1/1	0.91	0.10	53,53,53,53	0
35	NA	C	8503	1/1	0.91	0.16	44,44,44,44	0
32	MG	0	8087	1/1	0.91	0.08	47,47,47,47	0
35	NA	S	8510	1/1	0.91	0.06	49,49,49,49	0
35	NA	0	8519	1/1	0.92	0.12	50,50,50,50	0
34	SR	0	8958	1/1	0.92	0.11	123,123,123,123	0
33	CL	0	8811	1/1	0.92	0.11	68,68,68,68	0
34	SR	0	8984	1/1	0.92	0.04	123,123,123,123	0
35	NA	Q	8540	1/1	0.92	0.08	60,60,60,60	0
35	NA	0	8561	1/1	0.92	0.49	78,78,78,78	0
34	SR	0	8960	1/1	0.92	0.05	150,150,150,150	0
32	MG	0	8083	1/1	0.92	0.11	73,73,73,73	0
32	MG	0	8066	1/1	0.92	0.15	76,76,76,76	0
34	SR	0	8989	1/1	0.92	0.14	185,185,185,185	0
35	NA	0	8509	1/1	0.92	0.15	69,69,69,69	0
34	SR	0	8942	1/1	0.92	0.08	133,133,133,133	0
35	NA	0	8529	1/1	0.93	0.05	45,45,45,45	0
32	MG	0	8090	1/1	0.93	0.33	62,62,62,62	0
34	SR	S	8961	1/1	0.93	0.10	122,122,122,122	0
32	MG	T	8057	1/1	0.93	0.07	65,65,65,65	0
33	CL	O	8808	1/1	0.93	0.07	81,81,81,81	0
34	SR	0	8962	1/1	0.93	0.05	175,175,175,175	0
35	NA	0	8566	1/1	0.93	0.25	60,60,60,60	0
35	NA	0	8547	1/1	0.93	0.61	54,54,54,54	0
32	MG	0	8038	1/1	0.93	0.10	75,75,75,75	0
34	SR	0	8974	1/1	0.93	0.13	149,149,149,149	0
32	MG	0	8052	1/1	0.93	0.07	52,52,52,52	0
37	K	0	8401	1/1	0.93	0.13	74,74,74,74	0
35	NA	0	8558	1/1	0.94	0.17	50,50,50,50	0
34	SR	0	8946	1/1	0.94	0.23	122,122,122,122	0
35	NA	0	8535	1/1	0.94	0.24	53,53,53,53	0
35	NA	0	8536	1/1	0.94	0.07	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8006	1/1	0.94	0.14	30,30,30,30	0
34	SR	0	8966	1/1	0.94	0.08	111,111,111,111	0
35	NA	0	8565	1/1	0.94	0.94	68,68,68,68	0
32	MG	0	8035	1/1	0.94	0.14	68,68,68,68	0
35	NA	0	8567	1/1	0.94	0.21	80,80,80,80	0
34	SR	0	8956	1/1	0.94	0.09	155,155,155,155	0
34	SR	0	8939	1/1	0.94	0.04	160,160,160,160	0
34	SR	0	8924	1/1	0.94	0.16	135,135,135,135	0
33	CL	A	8809	1/1	0.94	0.09	74,74,74,74	0
35	NA	0	8531	1/1	0.94	0.11	44,44,44,44	0
32	MG	K	8054	1/1	0.95	0.13	50,50,50,50	0
34	SR	0	8945	1/1	0.95	0.07	112,112,112,112	0
32	MG	0	8007	1/1	0.95	0.20	38,38,38,38	0
35	NA	0	8507	1/1	0.95	0.16	42,42,42,42	0
32	MG	0	8060	1/1	0.95	0.06	61,61,61,61	0
34	SR	0	8917	1/1	0.95	0.13	111,111,111,111	0
34	SR	0	8970	1/1	0.95	0.03	128,128,128,128	0
35	NA	0	8545	1/1	0.95	0.14	41,41,41,41	0
34	SR	0	8971	1/1	0.95	0.07	180,180,180,180	0
35	NA	0	8524	1/1	0.95	0.18	58,58,58,58	0
34	SR	A	8929	1/1	0.95	0.16	137,137,137,137	0
35	NA	0	8573	1/1	0.95	0.25	77,77,77,77	0
34	SR	0	8992	1/1	0.95	0.15	137,137,137,137	0
34	SR	0	8941	1/1	0.95	0.13	116,116,116,116	0
32	MG	0	8048	1/1	0.95	0.20	26,26,26,26	0
32	MG	0	8063	1/1	0.96	0.17	71,71,71,71	0
35	NA	0	8537	1/1	0.96	0.11	41,41,41,41	0
32	MG	0	8085	1/1	0.96	0.08	73,73,73,73	0
35	NA	0	8542	1/1	0.96	0.40	66,66,66,66	0
34	SR	0	8908	1/1	0.96	0.10	110,110,110,110	0
32	MG	0	8064	1/1	0.96	0.15	37,37,37,37	0
32	MG	0	8046	1/1	0.96	0.13	41,41,41,41	0
32	MG	0	8021	1/1	0.96	0.10	30,30,30,30	0
32	MG	0	8024	1/1	0.96	0.13	55,55,55,55	0
35	NA	0	8511	1/1	0.96	0.13	59,59,59,59	0
35	NA	0	8554	1/1	0.96	0.89	78,78,78,78	0
35	NA	0	8514	1/1	0.96	0.59	48,48,48,48	0
35	NA	0	8515	1/1	0.96	0.14	37,37,37,37	0
35	NA	0	8516	1/1	0.96	0.12	42,42,42,42	0
32	MG	0	8092	1/1	0.96	0.25	67,67,67,67	0
32	MG	9	8074	1/1	0.96	0.11	77,77,77,77	0
34	SR	0	8995	1/1	0.96	0.17	140,140,140,140	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8010	1/1	0.96	0.12	35,35,35,35	0
33	CL	J	8801	1/1	0.96	0.17	79,79,79,79	0
35	NA	0	8564	1/1	0.96	0.41	81,81,81,81	0
35	NA	0	8526	1/1	0.96	0.05	57,57,57,57	0
33	CL	L	8810	1/1	0.96	0.08	61,61,61,61	0
34	SR	0	8972	1/1	0.96	0.14	141,141,141,141	0
35	NA	0	8569	1/1	0.96	0.19	54,54,54,54	0
32	MG	0	8039	1/1	0.96	0.26	77,77,77,77	0
32	MG	0	8079	1/1	0.96	0.10	55,55,55,55	0
33	CL	0	8815	1/1	0.96	0.10	78,78,78,78	0
32	MG	0	8061	1/1	0.96	0.21	30,30,30,30	0
35	NA	9	8543	1/1	0.96	0.18	49,49,49,49	0
35	NA	0	8534	1/1	0.96	0.24	42,42,42,42	0
32	MG	0	8043	1/1	0.96	0.10	49,49,49,49	0
34	SR	0	8975	1/1	0.97	0.07	135,135,135,135	0
35	NA	R	8532	1/1	0.97	0.08	46,46,46,46	0
34	SR	0	8911	1/1	0.97	0.08	85,85,85,85	0
33	CL	R	8806	1/1	0.97	0.13	52,52,52,52	0
33	CL	0	8803	1/1	0.97	0.08	62,62,62,62	0
34	SR	0	8948	1/1	0.97	0.12	102,102,102,102	0
34	SR	0	8949	1/1	0.97	0.08	119,119,119,119	0
33	CL	0	8805	1/1	0.97	0.06	67,67,67,67	0
35	NA	0	8549	1/1	0.97	0.27	58,58,58,58	0
34	SR	0	8954	1/1	0.97	0.12	112,112,112,112	0
35	NA	0	8551	1/1	0.97	0.24	59,59,59,59	0
35	NA	0	8513	1/1	0.97	0.13	58,58,58,58	0
34	SR	0	8955	1/1	0.97	0.16	200,200,200,200	0
35	NA	0	8556	1/1	0.97	0.40	49,49,49,49	0
34	SR	0	8921	1/1	0.97	0.12	92,92,92,92	0
32	MG	0	8029	1/1	0.97	0.17	48,48,48,48	0
33	CL	0	8812	1/1	0.97	0.06	54,54,54,54	0
32	MG	0	8031	1/1	0.97	0.39	72,72,72,72	0
35	NA	0	8520	1/1	0.97	0.08	53,53,53,53	0
35	NA	0	8521	1/1	0.97	0.08	65,65,65,65	0
33	CL	0	8816	1/1	0.97	0.18	85,85,85,85	0
34	SR	0	8933	1/1	0.97	0.17	150,150,150,150	0
34	SR	0	8963	1/1	0.97	0.04	134,134,134,134	0
34	SR	0	8937	1/1	0.97	0.21	115,115,115,115	0
34	SR	0	8967	1/1	0.97	0.08	132,132,132,132	0
35	NA	0	8568	1/1	0.97	0.49	50,50,50,50	0
32	MG	0	8001	1/1	0.97	0.09	33,33,33,33	0
34	SR	0	9002	1/1	0.97	0.08	184,184,184,184	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
34	SR	0	8969	1/1	0.97	0.10	160,160,160,160	0
33	CL	J	8802	1/1	0.97	0.09	76,76,76,76	0
32	MG	0	8067	1/1	0.97	0.20	34,34,34,34	0
35	NA	0	8575	1/1	0.97	0.18	86,86,86,86	0
34	SR	9	9003	1/1	0.97	0.01	170,170,170,170	0
33	CL	N	8807	1/1	0.97	0.10	71,71,71,71	0
32	MG	0	8078	1/1	0.97	0.32	61,61,61,61	0
37	K	0	8402	1/1	0.97	0.27	87,87,87,87	0
33	CL	0	8814	1/1	0.98	0.10	60,60,60,60	0
32	MG	0	8056	1/1	0.98	0.11	51,51,51,51	0
32	MG	0	8020	1/1	0.98	0.13	43,43,43,43	0
33	CL	0	8822	1/1	0.98	0.55	106,106,106,106	0
32	MG	B	8042	1/1	0.98	0.09	50,50,50,50	0
32	MG	0	8088	1/1	0.98	0.14	42,42,42,42	0
34	SR	B	8950	1/1	0.98	0.17	132,132,132,132	0
34	SR	0	8953	1/1	0.98	0.08	157,157,157,157	0
32	MG	Y	8086	1/1	0.98	0.05	46,46,46,46	0
34	SR	F	9005	1/1	0.98	0.07	134,134,134,134	0
34	SR	0	9004	1/1	0.98	0.64	200,200,200,200	0
32	MG	0	8026	1/1	0.98	0.07	37,37,37,37	0
34	SR	0	8901	1/1	0.98	0.10	85,85,85,85	0
32	MG	0	8012	1/1	0.98	0.16	25,25,25,25	0
34	SR	0	8909	1/1	0.98	0.14	85,85,85,85	0
32	MG	0	8040	1/1	0.98	0.16	96,96,96,96	0
32	MG	0	8093	1/1	0.98	0.08	35,35,35,35	0
32	MG	0	8041	1/1	0.98	0.20	31,31,31,31	0
34	SR	0	8964	1/1	0.98	0.10	139,139,139,139	0
34	SR	0	8965	1/1	0.98	0.05	124,124,124,124	0
35	NA	0	8501	1/1	0.98	0.22	44,44,44,44	0
34	SR	0	8918	1/1	0.98	0.14	85,85,85,85	0
32	MG	0	8030	1/1	0.98	0.48	69,69,69,69	0
34	SR	0	8920	1/1	0.98	0.05	134,134,134,134	0
32	MG	0	8070	1/1	0.98	0.13	45,45,45,45	0
35	NA	0	8508	1/1	0.98	0.18	39,39,39,39	0
32	MG	0	8044	1/1	0.98	0.05	53,53,53,53	0
34	SR	0	8923	1/1	0.98	0.10	116,116,116,116	0
32	MG	0	8016	1/1	0.98	0.18	60,60,60,60	0
34	SR	0	8973	1/1	0.98	0.07	137,137,137,137	0
34	SR	0	8926	1/1	0.98	0.10	127,127,127,127	0
33	CL	M	8818	1/1	0.98	0.10	47,47,47,47	0
32	MG	0	8032	1/1	0.98	0.05	46,46,46,46	0
34	SR	0	8931	1/1	0.98	0.09	117,117,117,117	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
34	SR	0	8981	1/1	0.98	0.16	153,153,153,153	0
32	MG	0	8076	1/1	0.98	0.07	42,42,42,42	0
34	SR	0	8936	1/1	0.98	0.10	94,94,94,94	0
35	NA	0	8523	1/1	0.98	0.12	45,45,45,45	0
32	MG	0	8049	1/1	0.98	0.38	68,68,68,68	0
32	MG	0	8050	1/1	0.98	0.12	37,37,37,37	0
32	MG	0	8033	1/1	0.98	0.09	49,49,49,49	0
32	MG	0	8053	1/1	0.98	0.04	59,59,59,59	0
32	MG	0	8055	1/1	0.98	0.20	46,46,46,46	0
33	CL	Y	8820	1/1	0.99	0.23	51,51,51,51	0
33	CL	3	8804	1/1	0.99	0.06	67,67,67,67	0
32	MG	0	8008	1/1	0.99	0.15	27,27,27,27	0
32	MG	0	8017	1/1	0.99	0.22	25,25,25,25	0
32	MG	0	8018	1/1	0.99	0.19	46,46,46,46	0
34	SR	0	8934	1/1	0.99	0.11	130,130,130,130	0
34	SR	0	8935	1/1	0.99	0.10	80,80,80,80	0
32	MG	0	8080	1/1	0.99	0.36	69,69,69,69	0
33	CL	0	8813	1/1	0.99	0.06	61,61,61,61	0
32	MG	0	8034	1/1	0.99	0.07	45,45,45,45	0
34	SR	0	8990	1/1	0.99	0.10	137,137,137,137	0
32	MG	0	8019	1/1	0.99	0.18	27,27,27,27	0
34	SR	0	8940	1/1	0.99	0.08	93,93,93,93	0
32	MG	0	8058	1/1	0.99	0.07	23,23,23,23	0
33	CL	0	8817	1/1	0.99	0.10	65,65,65,65	0
34	SR	0	8943	1/1	0.99	0.07	117,117,117,117	0
32	MG	0	8084	1/1	0.99	0.15	37,37,37,37	0
32	MG	0	8009	1/1	0.99	0.20	29,29,29,29	0
34	SR	A	8930	1/1	0.99	0.05	104,104,104,104	0
34	SR	0	9000	1/1	0.99	0.12	177,177,177,177	0
32	MG	0	8002	1/1	0.99	0.07	32,32,32,32	0
32	MG	0	8022	1/1	0.99	0.11	32,32,32,32	0
32	MG	0	8023	1/1	0.99	0.14	32,32,32,32	0
32	MG	0	8005	1/1	0.99	0.17	33,33,33,33	0
34	SR	R	8912	1/1	0.99	0.16	86,86,86,86	0
34	SR	0	9008	1/1	0.99	0.14	89,89,89,89	0
34	SR	9	8978	1/1	0.99	0.08	133,133,133,133	0
35	NA	0	8553	1/1	0.99	0.36	68,68,68,68	0
32	MG	0	8025	1/1	0.99	0.11	35,35,35,35	0
34	SR	1	8952	1/1	0.99	0.13	91,91,91,91	0
34	SR	3	8999	1/1	0.99	0.04	106,106,106,106	0
32	MG	0	8065	1/1	0.99	0.06	49,49,49,49	0
35	NA	M	8539	1/1	0.99	0.10	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
34	SR	0	8903	1/1	0.99	0.18	58,58,58,58	0
34	SR	0	8904	1/1	0.99	0.19	66,66,66,66	0
34	SR	0	8905	1/1	0.99	0.28	68,68,68,68	0
32	MG	0	8013	1/1	0.99	0.03	30,30,30,30	0
32	MG	0	8027	1/1	0.99	0.09	49,49,49,49	0
35	NA	0	8504	1/1	0.99	0.16	37,37,37,37	0
34	SR	0	8910	1/1	0.99	0.04	101,101,101,101	0
32	MG	0	8068	1/1	0.99	0.09	54,54,54,54	0
33	CL	B	8819	1/1	0.99	0.10	54,54,54,54	0
34	SR	0	8916	1/1	0.99	0.06	113,113,113,113	0
32	MG	0	8069	1/1	0.99	0.16	72,72,72,72	0
32	MG	0	8045	1/1	0.99	0.11	35,35,35,35	0
35	NA	0	8512	1/1	0.99	0.42	56,56,56,56	0
33	CL	J	8821	1/1	0.99	0.13	71,71,71,71	0
32	MG	0	8028	1/1	0.99	0.16	27,27,27,27	0
32	MG	0	8047	1/1	0.99	0.28	65,65,65,65	0
32	MG	0	8073	1/1	0.99	0.07	83,83,83,83	0
35	NA	0	8517	1/1	0.99	0.21	36,36,36,36	0
36	CD	U	8701	1/1	0.99	0.11	72,72,72,72	0
36	CD	Z	8703	1/1	0.99	0.09	91,91,91,91	0
36	CD	1	8702	1/1	0.99	0.10	65,65,65,65	0
32	MG	0	8014	1/1	0.99	0.16	35,35,35,35	0
32	MG	0	8015	1/1	0.99	0.17	36,36,36,36	0
34	SR	3	8932	1/1	1.00	0.12	79,79,79,79	0
34	SR	0	8906	1/1	1.00	0.21	60,60,60,60	0
34	SR	0	8907	1/1	1.00	0.14	56,56,56,56	0
35	NA	0	8552	1/1	1.00	0.28	72,72,72,72	0
32	MG	0	8003	1/1	1.00	0.18	34,34,34,34	0
32	MG	0	8004	1/1	1.00	0.17	30,30,30,30	0
36	CD	O	8705	1/1	1.00	0.07	94,94,94,94	0
34	SR	0	8902	1/1	1.00	0.11	66,66,66,66	0
34	SR	1	8913	1/1	1.00	0.09	96,96,96,96	0
34	SR	0	8914	1/1	1.00	0.27	110,110,110,110	0
36	CD	3	8704	1/1	1.00	0.07	81,81,81,81	0
32	MG	0	8011	1/1	1.00	0.16	33,33,33,33	0
34	SR	0	8925	1/1	1.00	0.12	91,91,91,91	0

6.5 Other polymers [\(i\)](#)

There are no such residues in this entry.