Full wwPDB X-ray Structure Validation Report (i)

Jan 31, 2016 – 09:58 PM GMT

PDB ID	:	1QVG
Title	:	Structure of CCA oligonucleotide bound to the tRNA binding sites of the large ribosomal subunit of Haloarcula marismortui
Authors	:	Schmeing, T.M.; Moore, P.B.; Steitz, T.A.
Deposited on	:	2003-08-27
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
http://wwpdb.org/validation/2016/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

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

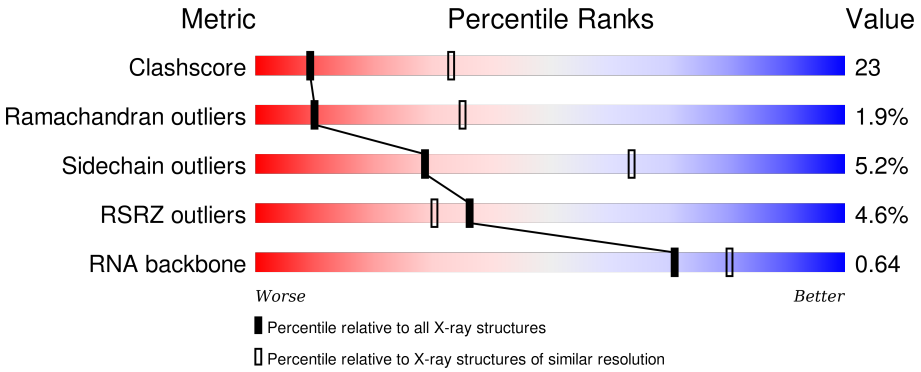
MolProbity	:	4.02b-467
Mogul	:	1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix)	:	1.9-1692
EDS	:	trunk26765
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk26865

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.90 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))
Clashscore	102246	1668 (2.90-2.90)
Ramachandran outliers	100387	1630 (2.90-2.90)
Sidechain outliers	100360	1632 (2.90-2.90)
RSRZ outliers	91569	1456 (2.90-2.90)
RNA backbone	2183	1093 (3.30-2.50)

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

Mol	Chain	Length	Quality of chain
1	0	2922	46% 41% 7% • 6%
2	9	122	2% 44% 41% 12% •
3	3	3	33% 33% 67%
3	4	3	33% 33% 67%
3	5	3	67% 33%

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Mol	Chain	Length	Quality of chain
4	A	239	9% 56% 36% 7%
5	B	337	47% 45% 7%
6	C	246	55% 40% 5%
7	D	176	27% 25% 47% 7% 20%
8	E	177	4% 53% 41%
9	F	119	16% 47% 51%
10	G	348	5% 6% 92%
11	H	167	2% 39% 46% 8% 7%
12	I	145	48% 43% 7%
13	J	132	52% 46%
14	K	164	12% 52% 33% 12%
15	L	194	2% 36% 61%
16	M	186	16% 36% 58% 6%
17	N	115	2% 59% 40%
18	O	148	3% 61% 34%
19	P	95	62% 37%
20	Q	154	% 60% 34%
21	R	84	4% 60% 37%
22	S	119	14% 46% 50%
23	T	66	6% 39% 41% 20%
24	U	70	27% 43% 44% 7%
25	V	154	42% 53% 6%
26	W	91	13% 44% 37% 9% 10%
27	X	240	3% 33% 23% 41%
28	Y	73	7% 36% 58% 7%

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Mol	Chain	Length	Quality of chain
29	Z	56	57% 43%
30	1	48	35% 48% 46%
31	2	92	9% 63% 36%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	MG	0	8049	-	-	-	X
32	MG	0	8054	-	-	-	X
34	NA	0	8310	-	-	-	X
34	NA	0	8320	-	-	-	X
34	NA	0	8321	-	-	-	X
34	NA	0	8325	-	-	-	X
34	NA	0	8326	-	-	-	X
34	NA	0	8328	-	-	-	X
34	NA	0	8335	-	-	-	X
34	NA	0	8350	-	-	-	X
34	NA	0	8355	-	-	-	X
34	NA	0	8356	-	-	-	X
34	NA	0	8359	-	-	-	X
34	NA	0	8361	-	-	-	X
34	NA	0	8362	-	-	-	X
34	NA	0	8365	-	-	-	X
34	NA	0	8367	-	-	-	X
34	NA	0	8371	-	-	-	X
34	NA	0	8372	-	-	-	X
34	NA	0	8373	-	-	-	X
34	NA	0	8374	-	-	-	X
34	NA	0	8376	-	-	-	X
34	NA	0	8378	-	-	-	X
34	NA	0	8379	-	-	-	X
34	NA	0	8382	-	-	-	X
34	NA	9	8383	-	-	-	X
34	NA	C	8304	-	-	-	X
34	NA	K	8380	-	-	-	X
34	NA	Q	8337	-	-	-	X
34	NA	Q	8386	-	-	-	X
35	CL	0	8505	-	-	-	X
35	CL	0	8515	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
35	CL	B	8519	-	-	-	X
35	CL	I	8502	-	-	X	-
35	CL	N	8508	-	-	-	X

2 Entry composition

There are 37 unique types of molecules in this entry. The entry contains 98494 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 23S ribosomal rna.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	0	2754	59017	26346	10878	19048	2745	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	9	122	2600	1160	472	847	121	0	0	0

- Molecule 3 is a RNA chain called Oligonucleotide CCA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
3	3	3	59	28	11	18	2	0	0	0
			Total	C	N	O	P			
3	4	3	59	28	11	18	2	0	0	0
			Total	C	N	O	P			
3	5	3	59	28	11	18	2	0	0	0

- Molecule 4 is a protein called 50S ribosomal protein L2P.

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

- Molecule 5 is a protein called 50S ribosomal protein L3P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	B	337	2624	1616	493	510	5	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	?	-	PRO	DELETION	UNP P20279
B	310	ARG	PHE	CONFLICT	UNP P20279

- Molecule 6 is a protein called 50S ribosomal protein L4E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	C	246	Total	C	N	O	S	0	0	0
			1858	1131	344	382	1			

- Molecule 7 is a protein called 50S ribosomal protein L5P.

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

- Molecule 8 is a protein called 50S ribosomal protein L6P.

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

- Molecule 9 is a protein called 50S ribosomal protein L7Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	F	119	Total	C	N	O	S	0	0	0
			885	552	141	191	1			

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

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

- Molecule 11 is a protein called L10 Ribosomal Protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	H	156	Total	C	N	O	S	0	0	0
			1215	766	233	212	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	I	142	Total	C	N	O	S	0	0	0
			1119	696	199	221	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	J	132	Total	C	N	O	S	0	0	0
			993	609	189	191	4			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
14	K	145	Total	C	N	O	0	0	0
			1114	668	222	224			

- Molecule 15 is a protein called L15 Ribosomal Protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	L	194	Total	C	N	O	S	0	0	0
			1605	988	346	266	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	M	186	Total	C	N	O	S	0	0	0
			1444	895	262	285	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	N	115	Total	C	N	O	0	0	0
			864	529	161	174			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	O	143	Total	C	N	O	0	0	0
			1133	680	230	223			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
O	71	LYS	TYR	CONFLICT	UNP P14119

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	P	95	Total	C	N	O	0	0	0
			734	450	141	143			

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

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

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
22	S	119	Total	C	N	O	0	0	0
			949	568	180	201			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	V	154	Total	C	N	O	S	0	0	0
			1195	737	209	243	6			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	Y	73	Total	C	N	O	S	0	0	0
			563	359	111	86	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	Z	56	Total	C	N	O	S	0	0	0
			430	258	86	82	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	1	46	Total	C	N	O	S	0	0	0
			393	238	86	68	1			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1	?	-	ARG	DELETION	UNP P22452

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	2	92	Total	C	N	O	S	0	0	0
			755	458	153	137	7			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	0	107	Total	Mg	0	0
			107	107		
32	J	1	Total	Mg	0	0
			1	1		
32	B	1	Total	Mg	0	0
			1	1		
32	A	3	Total	Mg	0	0
			3	3		
32	X	1	Total	Mg	0	0
			1	1		
32	2	1	Total	Mg	0	0
			1	1		
32	9	1	Total	Mg	0	0
			1	1		
32	S	1	Total	Mg	0	0
			1	1		

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	0	73	Total	Na	0	0
			73	73		
34	P	1	Total	Na	0	0
			1	1		
34	Q	3	Total	Na	0	0
			3	3		
34	K	1	Total	Na	0	0
			1	1		
34	H	1	Total	Na	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	I	1	Total Na 1 1	0	0
34	C	1	Total Na 1 1	0	0
34	A	1	Total Na 1 1	0	0
34	R	1	Total Na 1 1	0	0
34	9	2	Total Na 2 2	0	0
34	L	1	Total Na 1 1	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	0	9	Total Cl 9 9	0	0
35	J	1	Total Cl 1 1	0	0
35	Q	1	Total Cl 1 1	0	0
35	K	1	Total Cl 1 1	0	0
35	B	1	Total Cl 1 1	0	0
35	I	3	Total Cl 3 3	0	0
35	A	1	Total Cl 1 1	0	0
35	N	1	Total Cl 1 1	0	0
35	X	1	Total Cl 1 1	0	0
35	2	1	Total Cl 1 1	0	0
35	L	1	Total Cl 1 1	0	0
35	M	1	Total Cl 1 1	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	Z	1	Total Cd 1 1	0	0
36	Y	1	Total Cd 1 1	0	0
36	T	1	Total Cd 1 1	0	0
36	2	1	Total Cd 1 1	0	0
36	N	1	Total Cd 1 1	0	0

- Molecule 37 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	0	5766	Total O 5766 5766	0	0
37	9	148	Total O 148 148	0	0
37	4	1	Total O 1 1	0	0
37	5	2	Total O 2 2	0	0
37	A	115	Total O 115 115	0	0
37	B	146	Total O 146 146	0	0
37	C	166	Total O 166 166	0	0
37	D	48	Total O 48 48	0	0
37	E	43	Total O 43 43	0	0
37	F	25	Total O 25 25	0	0
37	G	20	Total O 20 20	0	0
37	H	77	Total O 77 77	0	0
37	I	56	Total O 56 56	0	0
37	J	56	Total O 56 56	0	0
37	K	80	Total O 80 80	0	0

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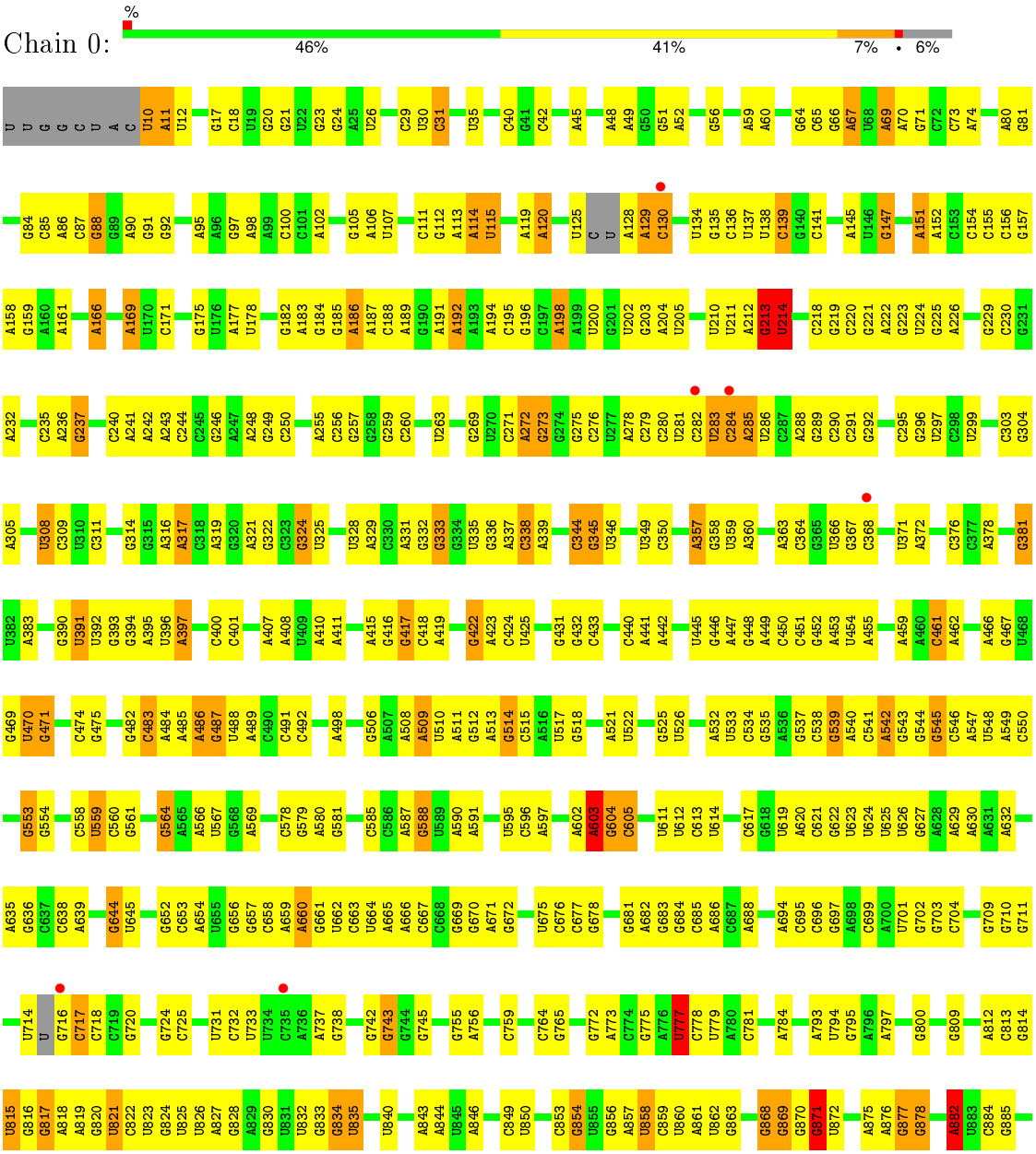
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	L	129	Total O 129 129	0	0
37	M	56	Total O 56 56	0	0
37	N	43	Total O 43 43	0	0
37	O	58	Total O 58 58	0	0
37	P	57	Total O 57 57	0	0
37	Q	85	Total O 85 85	0	0
37	R	31	Total O 31 31	0	0
37	S	38	Total O 38 38	0	0
37	T	30	Total O 30 30	0	0
37	U	12	Total O 12 12	0	0
37	V	69	Total O 69 69	0	0
37	W	27	Total O 27 27	0	0
37	X	97	Total O 97 97	0	0
37	Y	35	Total O 35 35	0	0
37	Z	54	Total O 54 54	0	0
37	1	42	Total O 42 42	0	0
37	2	56	Total O 56 56	0	0

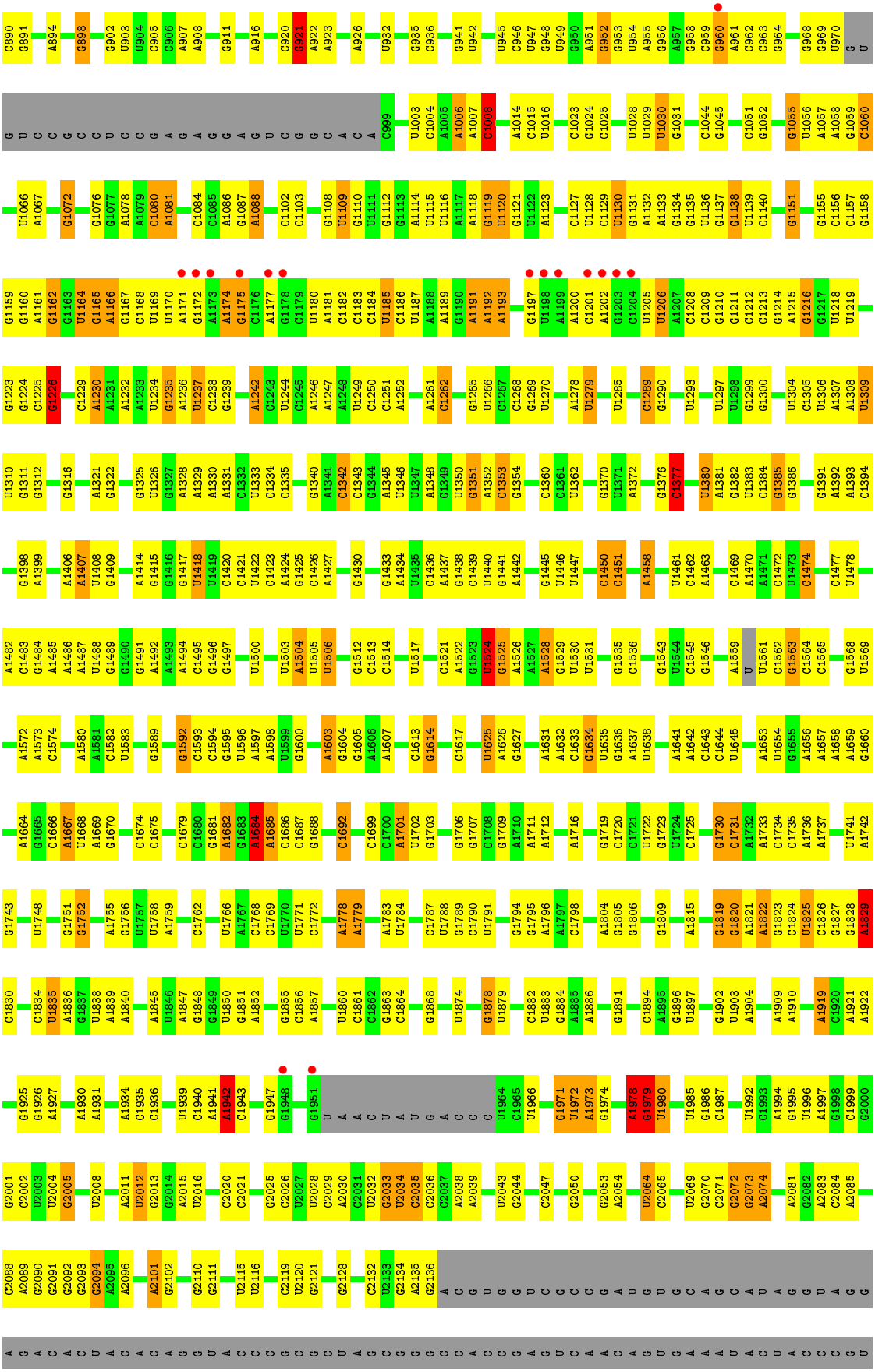
3 Residue-property plots (i)

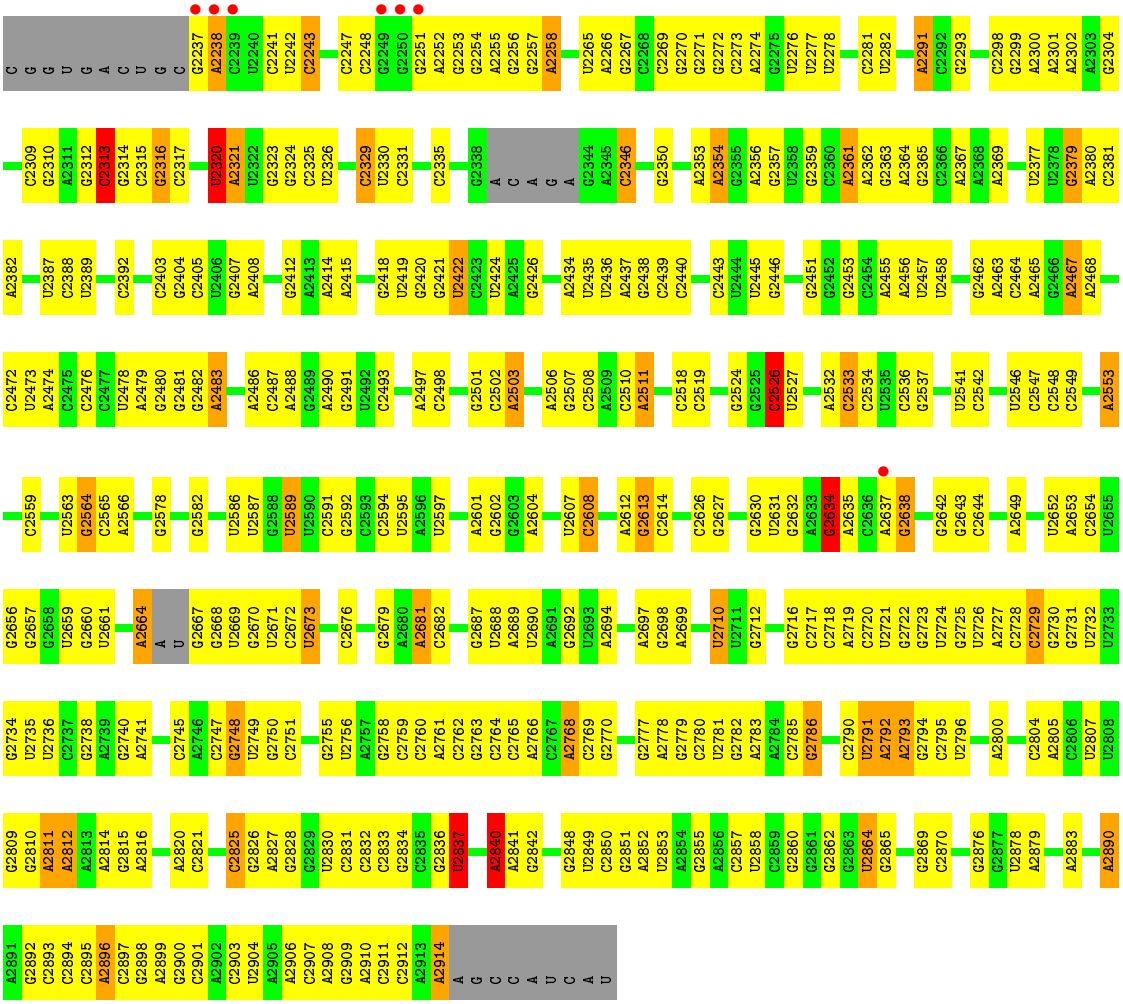
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according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

- Molecule 1: 23S ribosomal rna

Chain 0:

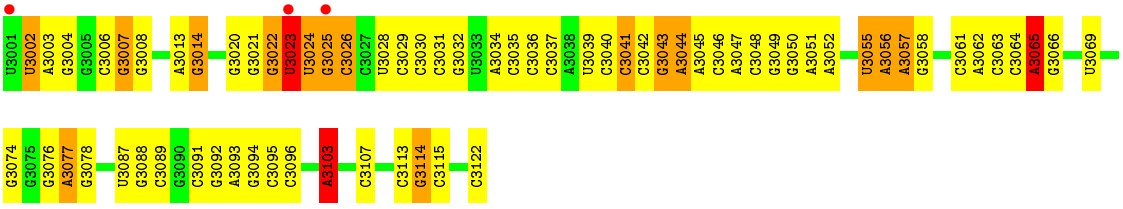






• Molecule 2: 5S ribosomal RNA

Chain 9:



• Molecule 3: Oligonucleotide CCA

Chain 3:

• Molecule 3: Oligonucleotide CCA

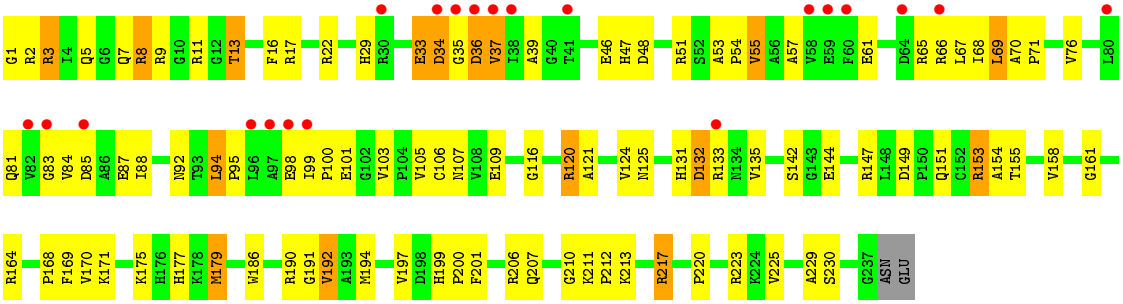
Chain 4:

• Molecule 3: Oligonucleotide CCA

Chain 5:

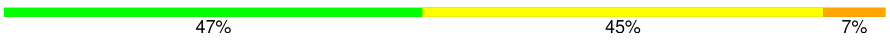
• Molecule 4: 50S ribosomal protein L2P

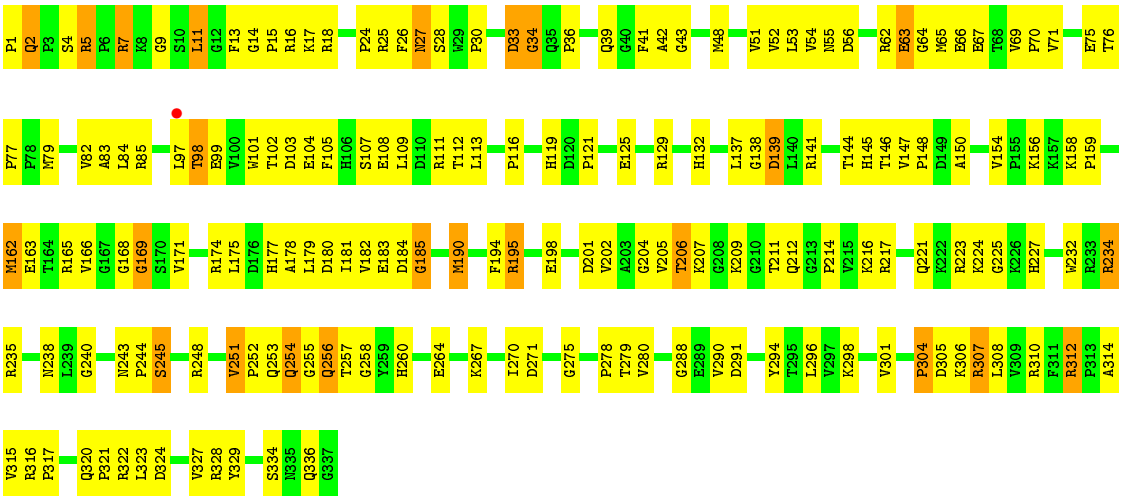
Chain A:



• Molecule 5: 50S ribosomal protein L3P

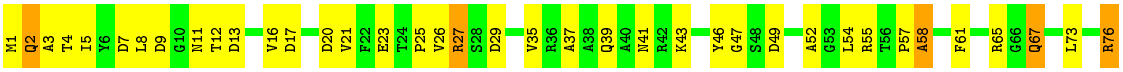
Chain B:

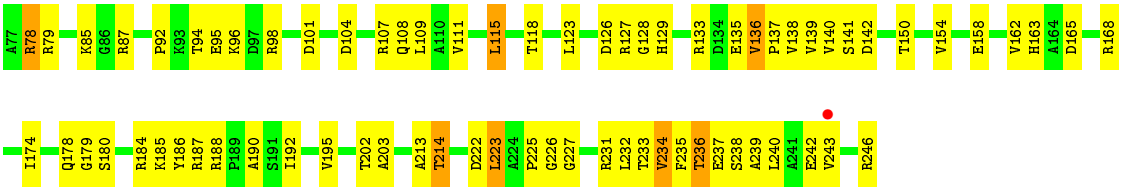




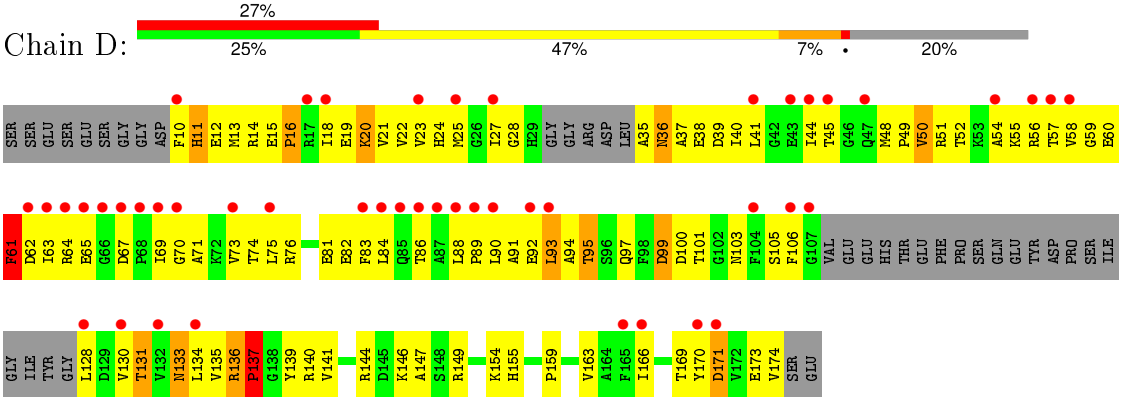
• Molecule 6: 50S ribosomal protein L4E

Chain C:

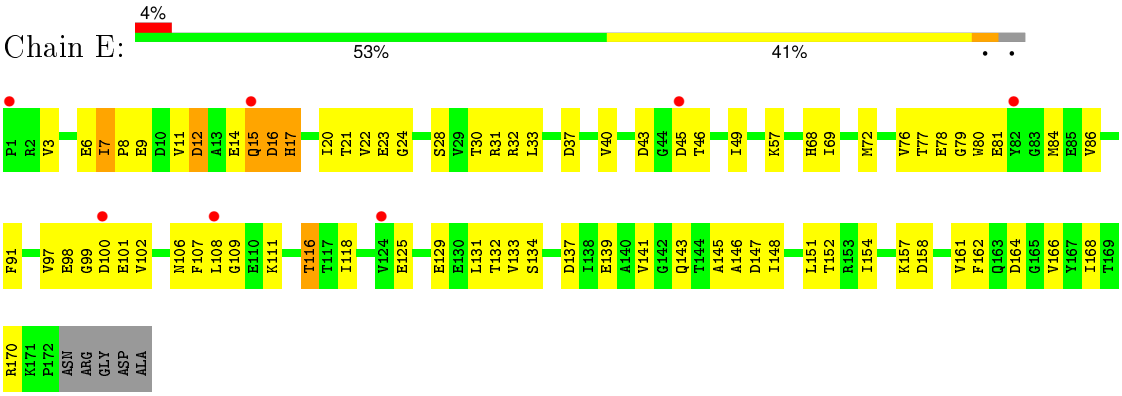




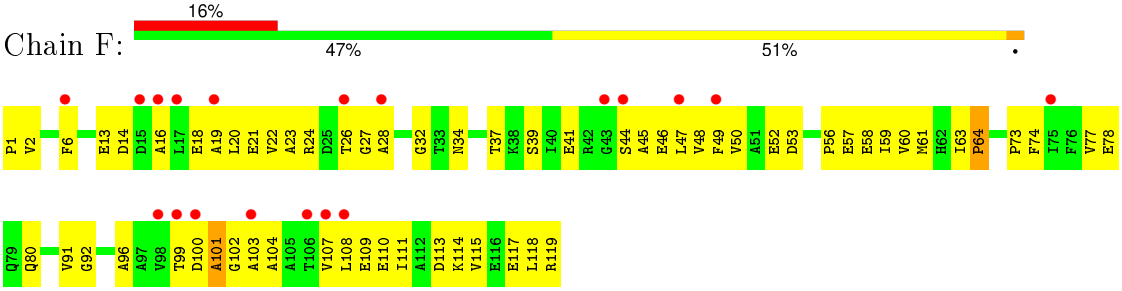
• Molecule 7: 50S ribosomal protein L5P



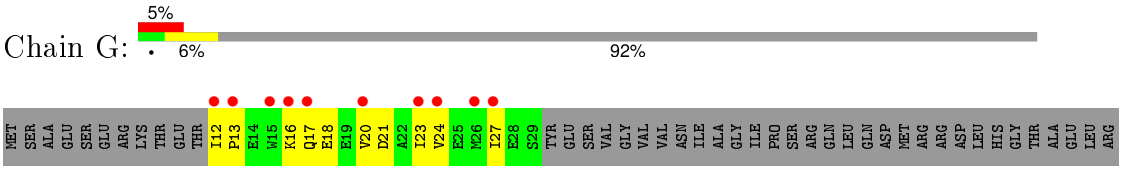
• Molecule 8: 50S ribosomal protein L6P

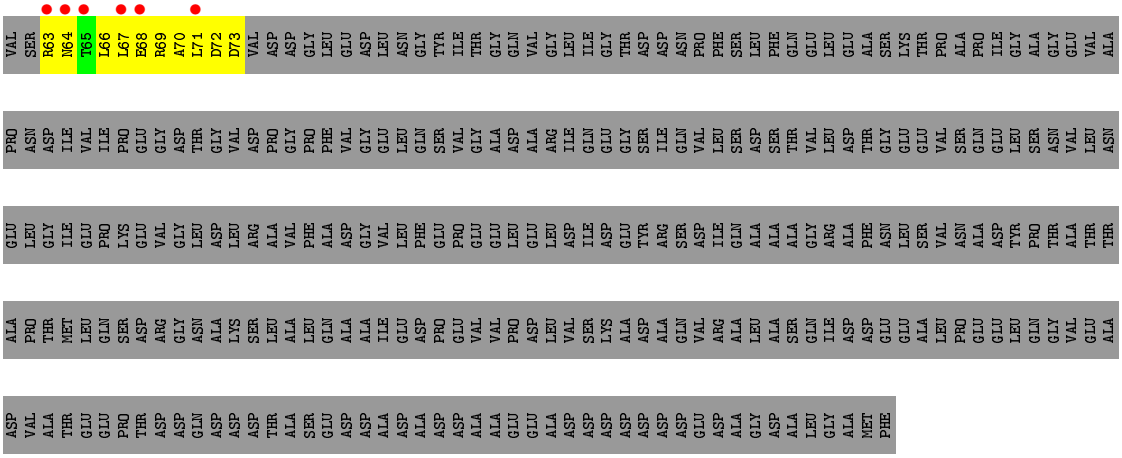


• Molecule 9: 50S ribosomal protein L7Ae



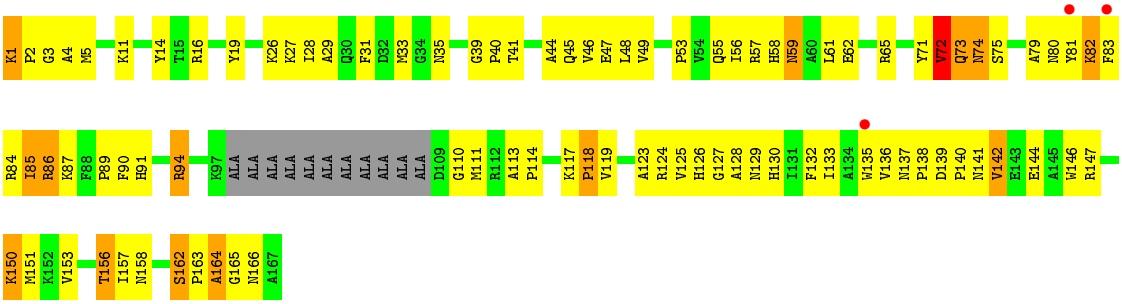
• Molecule 10: 50S RIBOSOMAL PROTEIN L10E





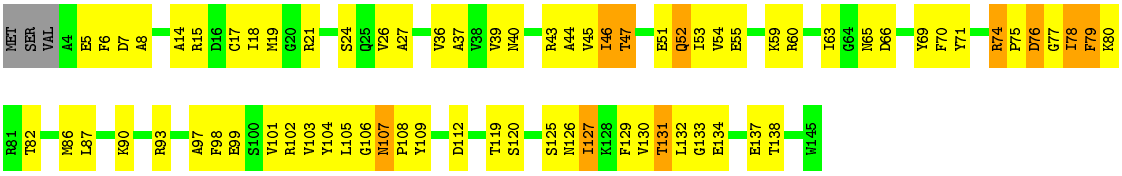
- Molecule 11: L10 Ribosomal Protein

Chain H:



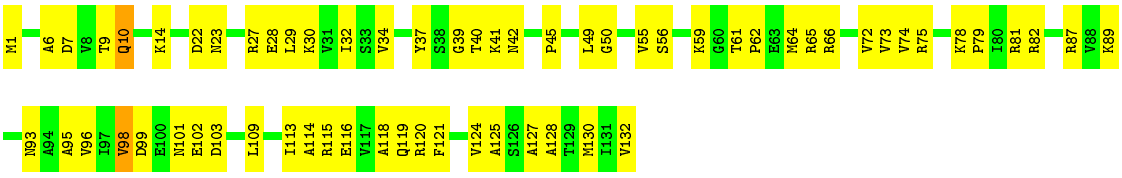
- Molecule 12: 50S ribosomal protein L13P

Chain I:



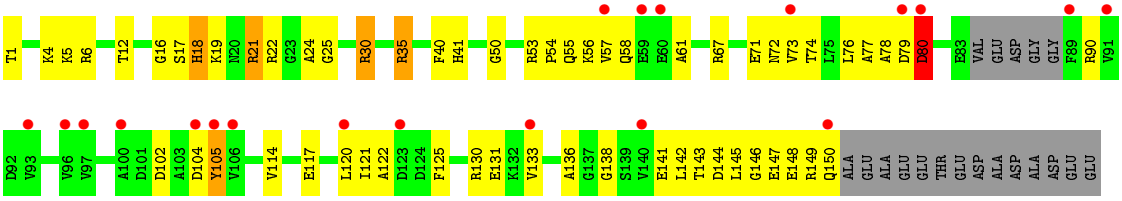
- Molecule 13: 50S ribosomal protein L14P

Chain J:



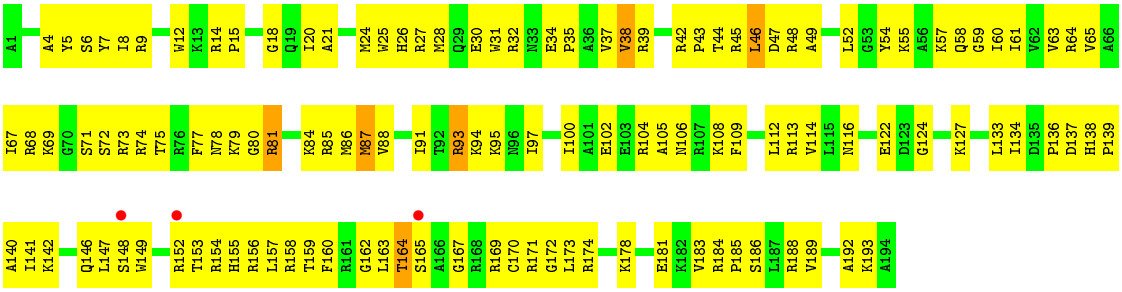
- Molecule 14: 50S ribosomal protein L15P

Chain K:



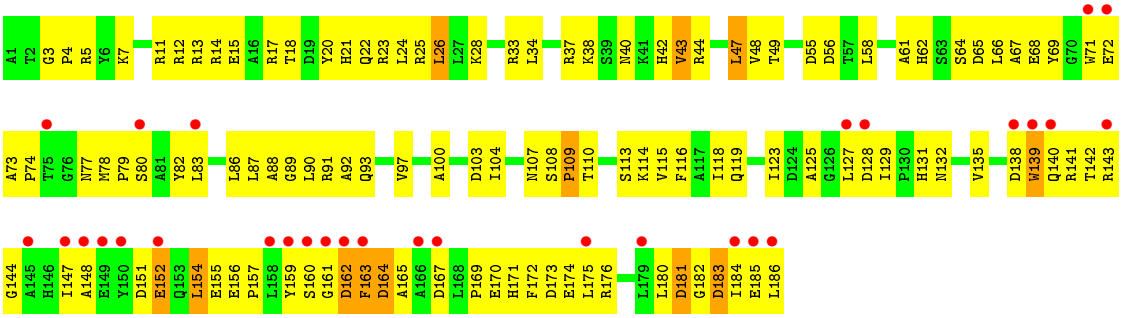
- Molecule 15: L15 Ribosomal Protein

Chain L:



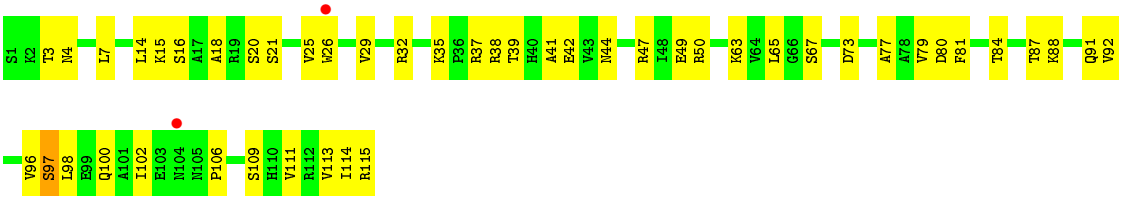
- Molecule 16: 50S ribosomal protein L18P

Chain M:



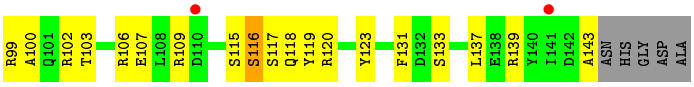
- Molecule 17: 50S ribosomal protein L18e

Chain N:

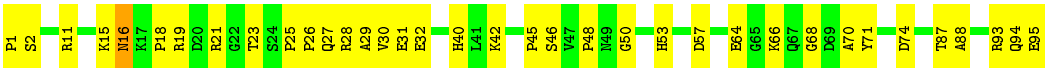


- Molecule 18: 50S ribosomal protein L19E

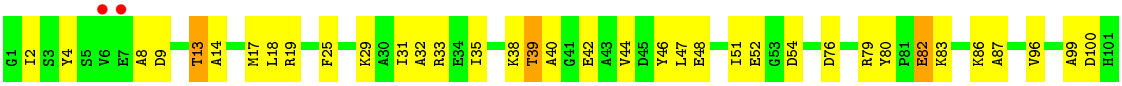
Chain O:

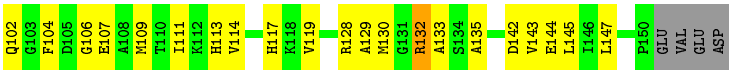


• Molecule 19: 50S ribosomal protein L21e

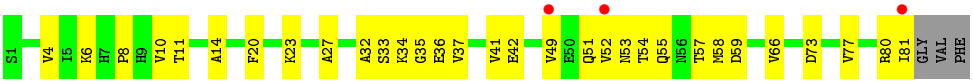


• Molecule 20: 50S ribosomal protein L22P

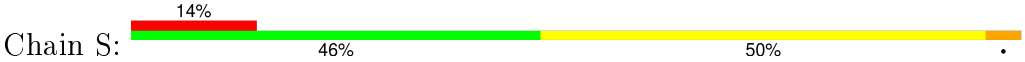


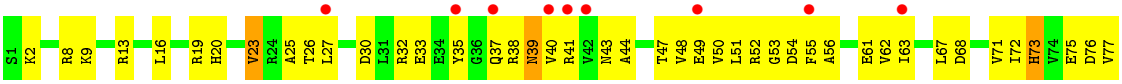


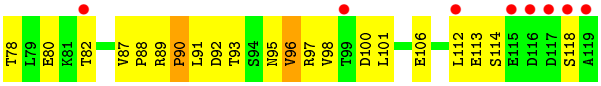
• Molecule 21: 50S ribosomal protein L23P



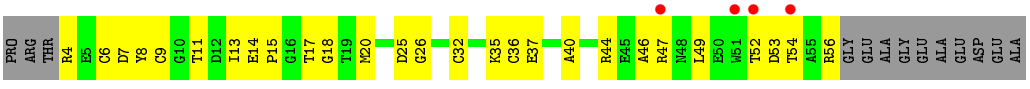
• Molecule 22: 50S ribosomal protein L24P



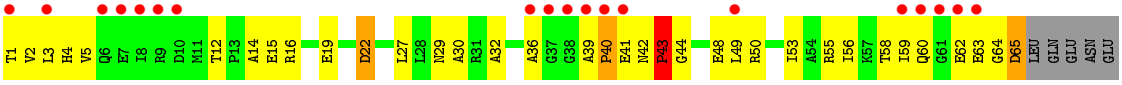




• Molecule 23: 50S ribosomal protein L24E

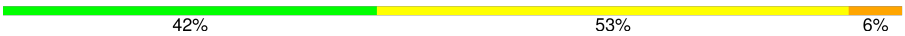


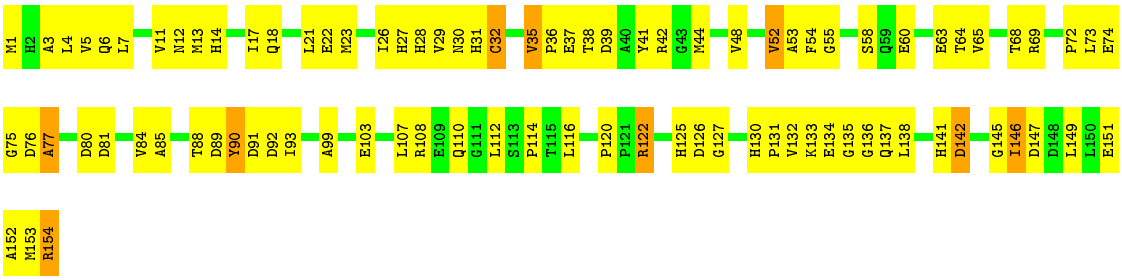
• Molecule 24: 50S ribosomal protein L29P



• Molecule 25: 50S ribosomal protein L30P

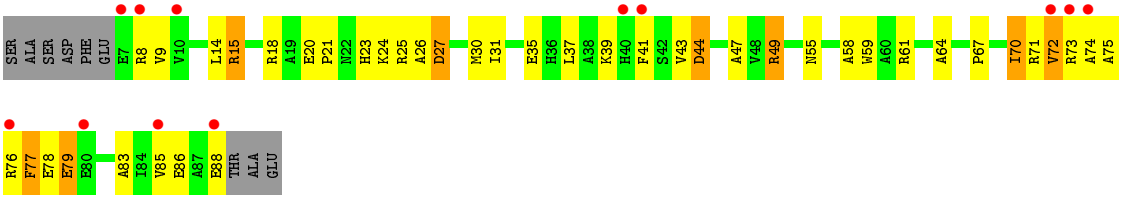
Chain V:





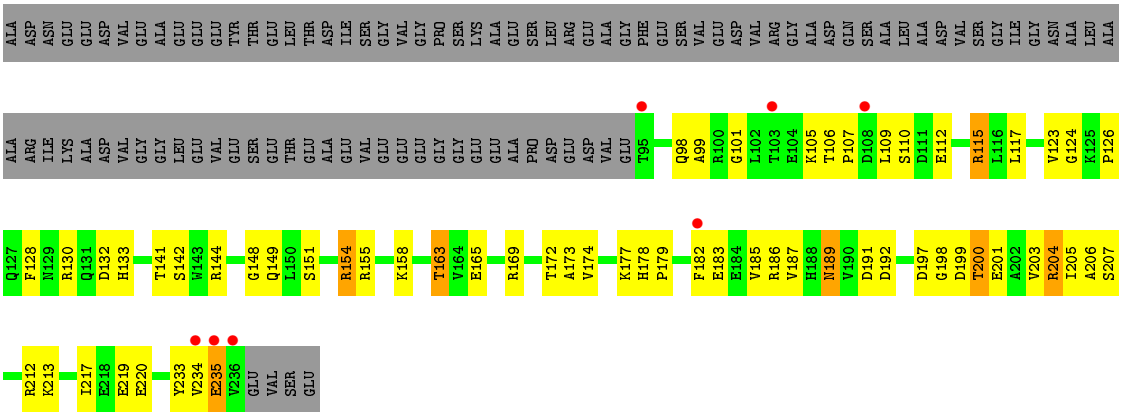
• Molecule 26: 50S ribosomal protein L31e

Chain W:



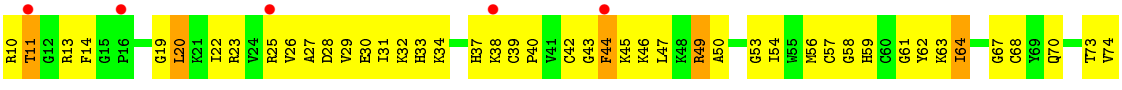
• Molecule 27: 50S ribosomal protein L32E

Chain X:



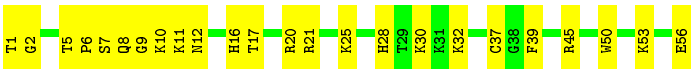
• Molecule 28: L37Ae 50S ribosomal protein

Chain Y:



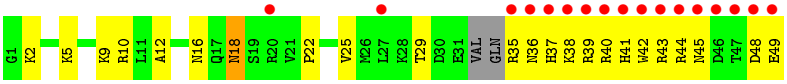
• Molecule 29: 50S ribosomal protein L37e

Chain Z:



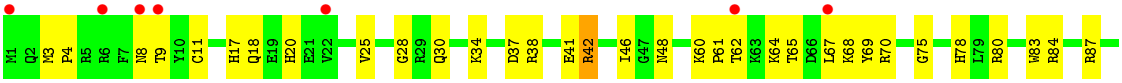
• Molecule 30: 50S ribosomal protein L39e

Chain 1:



• Molecule 31: 50S ribosomal protein L44E

Chain 2:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	213.52Å 300.61Å 573.93Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 2.90 47.91 – 2.80	Depositor EDS
% Data completeness (in resolution range)	(Not available) (50.00-2.90) 87.2 (47.91-2.80)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.62 (at 2.81Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.201 , 0.258 0.201 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	DCC
Wilson B-factor (Å^2)	51.8	Xtriage
Anisotropy	0.440	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 68.8	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.29$	Xtriage
Outliers	0 of 443536 reflections	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	98494	wwPDB-VP
Average B, all atoms (Å^2)	60.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.58% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NA, MG, CD, K, CL

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	0	0.75	2/66076 (0.0%)	0.75	24/103052 (0.0%)
2	9	0.67	0/2905	0.78	2/4528 (0.0%)
3	3	0.70	0/65	0.61	0/99
3	4	0.79	0/65	0.79	0/99
3	5	0.72	0/65	0.66	0/99
4	A	0.51	0/1787	0.72	0/2409
5	B	0.57	0/2689	0.74	0/3652
6	C	0.61	0/1883	0.77	0/2551
7	D	0.46	0/1111	0.66	0/1498
8	E	0.57	0/1382	0.68	0/1880
9	F	0.47	0/896	0.63	0/1219
10	G	0.47	0/241	0.57	0/324
11	H	0.62	0/1246	0.86	2/1686 (0.1%)
12	I	0.66	0/1135	0.73	0/1530
13	J	0.58	0/1003	0.77	0/1351
14	K	0.53	0/1126	0.74	0/1504
15	L	0.60	0/1633	0.76	0/2180
16	M	0.46	0/1473	0.72	0/1999
17	N	0.58	0/873	0.70	0/1181
18	O	0.52	0/1143	0.65	0/1521
19	P	0.61	0/748	0.80	1/1005 (0.1%)
20	Q	0.60	0/1172	0.75	0/1578
21	R	0.48	0/648	0.64	0/875
22	S	0.49	0/957	0.70	0/1289
23	T	0.53	0/417	0.68	0/562
24	U	0.40	0/502	0.60	0/675
25	V	0.61	0/1218	0.75	0/1655
26	W	0.61	0/664	0.72	0/895
27	X	0.59	0/1146	0.74	0/1536
28	Y	0.55	0/575	0.77	0/763
29	Z	0.59	0/437	0.71	0/578
30	1	0.49	0/398	0.60	0/527

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
31	2	0.64	1/771 (0.1%)	0.71	0/1024
All	All	0.70	3/98450 (0.0%)	0.74	29/147324 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	105
2	9	0	4
25	V	0	1
All	All	0	110

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	854	G	N9-C8	5.34	1.41	1.37
31	2	41	GLU	CG-CD	5.17	1.59	1.51
1	0	871	G	C5-C6	-5.03	1.37	1.42

All (29) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	0	1563	G	C2'-C3'-O3'	9.85	131.17	109.50
1	0	1979	G	C2'-C3'-O3'	7.29	125.53	109.50
11	H	74	ASN	N-CA-C	-7.20	91.57	111.00
1	0	1030	U	C5'-C4'-O4'	7.16	117.69	109.10
1	0	2467	A	C1'-O4'-C4'	-6.58	104.64	109.90
1	0	2664	A	N9-C1'-C2'	6.51	122.47	114.00
2	9	3103	A	C5'-C4'-O4'	6.38	116.75	109.10
1	0	1504	A	C1'-O4'-C4'	-6.30	104.86	109.90
1	0	1942	A	C5'-C4'-C3'	6.17	125.87	116.00
1	0	1120	U	C5'-C4'-C3'	-6.05	106.31	116.00
19	P	68	GLY	N-CA-C	-6.05	97.97	113.10
1	0	1524	U	C2'-C3'-O3'	5.85	123.06	113.70
1	0	2291	A	N9-C1'-C2'	5.77	121.50	114.00
1	0	535	G	N9-C1'-C2'	5.68	121.38	114.00
1	0	214	U	O5'-P-OP1	-5.57	100.68	105.70
1	0	777	U	O4'-C1'-N1	5.53	112.62	108.20
1	0	871	G	C5'-C4'-O4'	-5.51	102.49	109.10
1	0	2313	C	C5'-C4'-O4'	5.40	115.58	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	0	1261	A	N9-C1'-C2'	5.39	121.01	114.00
2	9	3103	A	C4'-C3'-C2'	-5.32	97.28	102.60
11	H	156	THR	N-CA-C	-5.27	96.77	111.00
1	0	921	G	N9-C1'-C2'	5.24	120.81	114.00
1	0	2526	C	N1-C1'-C2'	5.20	120.76	114.00
1	0	603	A	N9-C1'-C2'	5.19	120.74	114.00
1	0	1822	A	N9-C1'-C2'	-5.18	106.30	112.00
1	0	2316	G	C5'-C4'-C3'	-5.06	107.90	116.00
1	0	129	A	C2'-C3'-O3'	5.05	121.78	113.70
1	0	2313	C	C4'-C3'-C2'	-5.05	97.55	102.60
1	0	1829	A	N9-C1'-C2'	-5.04	106.45	112.00

There are no chirality outliers.

All (110) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1008	C	Sidechain
1	0	1055	G	Sidechain
1	0	1078	A	Sidechain
1	0	1108	G	Sidechain
1	0	1191	A	Sidechain
1	0	1226	G	Sidechain
1	0	1230	A	Sidechain
1	0	1262	C	Sidechain
1	0	1300	G	Sidechain
1	0	1304	U	Sidechain
1	0	1309	U	Sidechain
1	0	1316	G	Sidechain
1	0	1340	G	Sidechain
1	0	1350	U	Sidechain
1	0	1351	G	Sidechain
1	0	1376	G	Sidechain
1	0	1377	C	Sidechain
1	0	1385	G	Sidechain
1	0	1417	G	Sidechain
1	0	1418	U	Sidechain
1	0	1430	G	Sidechain
1	0	1458	A	Sidechain
1	0	147	G	Sidechain
1	0	1487	A	Sidechain
1	0	1614	G	Sidechain
1	0	1684	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	171	C	Sidechain
1	0	1720	C	Sidechain
1	0	1758	U	Sidechain
1	0	1809	G	Sidechain
1	0	1825	U	Sidechain
1	0	1829	A	Sidechain
1	0	1835	U	Sidechain
1	0	1845	A	Sidechain
1	0	1848	G	Sidechain
1	0	1863	G	Sidechain
1	0	1878	G	Sidechain
1	0	1971	G	Sidechain
1	0	1972	U	Sidechain
1	0	1978	A	Sidechain
1	0	2034	U	Sidechain
1	0	2035	C	Sidechain
1	0	2053	G	Sidechain
1	0	2094	G	Sidechain
1	0	2101	A	Sidechain
1	0	213	G	Sidechain
1	0	2273	C	Sidechain
1	0	2312	G	Sidechain
1	0	2313	C	Sidechain
1	0	2320	U	Sidechain
1	0	246	G	Sidechain
1	0	2493	C	Sidechain
1	0	2526	C	Sidechain
1	0	2564	G	Sidechain
1	0	2597	U	Sidechain
1	0	26	U	Sidechain
1	0	2631	U	Sidechain
1	0	2632	G	Sidechain
1	0	2634	G	Sidechain
1	0	2673	U	Sidechain
1	0	2692	G	Sidechain
1	0	2710	U	Sidechain
1	0	2729	C	Sidechain
1	0	2793	A	Sidechain
1	0	2811	A	Sidechain
1	0	2837	U	Sidechain
1	0	2840	A	Sidechain
1	0	2842	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2849	U	Sidechain
1	0	2853	U	Sidechain
1	0	2855	G	Sidechain
1	0	2864	U	Sidechain
1	0	324	G	Sidechain
1	0	333	G	Sidechain
1	0	344	C	Sidechain
1	0	391	U	Sidechain
1	0	395	A	Sidechain
1	0	397	A	Sidechain
1	0	422	G	Sidechain
1	0	469	G	Sidechain
1	0	470	U	Sidechain
1	0	471	G	Sidechain
1	0	48	A	Sidechain
1	0	483	C	Sidechain
1	0	486	A	Sidechain
1	0	49	A	Sidechain
1	0	517	U	Sidechain
1	0	518	G	Sidechain
1	0	548	U	Sidechain
1	0	554	G	Sidechain
1	0	564	G	Sidechain
1	0	619	U	Sidechain
1	0	662	U	Sidechain
1	0	742	G	Sidechain
1	0	743	G	Sidechain
1	0	781	C	Sidechain
1	0	795	G	Sidechain
1	0	815	U	Sidechain
1	0	817	G	Sidechain
1	0	868	G	Sidechain
1	0	882	A	Sidechain
1	0	898	G	Sidechain
1	0	903	U	Sidechain
1	0	916	A	Sidechain
1	0	952	G	Sidechain
2	9	3023	U	Sidechain
2	9	3065	A	Sidechain
2	9	3087	U	Sidechain
2	9	3094	G	Sidechain
25	V	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	0	59017	0	29802	1339	0
2	9	2600	0	1326	87	0
3	3	59	0	35	1	0
3	4	59	0	35	3	0
3	5	59	0	35	0	0
4	A	1754	0	1763	120	0
5	B	2624	0	2533	208	0
6	C	1858	0	1816	132	0
7	D	1094	0	1085	140	0
8	E	1357	0	1266	86	0
9	F	885	0	854	65	0
10	G	240	0	231	28	0
11	H	1215	0	1215	172	0
12	I	1119	0	1098	83	0
13	J	993	0	1027	78	0
14	K	1114	0	1072	66	0
15	L	1605	0	1676	167	0
16	M	1444	0	1401	161	0
17	N	864	0	873	45	0
18	O	1133	0	1127	61	0
19	P	734	0	728	35	0
20	Q	1149	0	1122	75	0
21	R	641	0	605	33	0
22	S	949	0	923	75	0
23	T	410	0	364	40	0
24	U	499	0	511	36	0
25	V	1195	0	1137	112	0
26	W	654	0	653	54	0
27	X	1130	0	1133	78	0
28	Y	563	0	597	56	0
29	Z	430	0	426	33	0
30	1	393	0	406	43	0
31	2	755	0	728	34	0
32	0	107	0	0	0	0
32	2	1	0	0	0	0
32	9	1	0	0	0	0
32	A	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	B	1	0	0	0	0
32	J	1	0	0	0	0
32	S	1	0	0	0	0
32	X	1	0	0	0	0
33	0	2	0	0	0	0
34	0	73	0	0	0	0
34	9	2	0	0	0	0
34	A	1	0	0	0	0
34	C	1	0	0	0	0
34	H	1	0	0	0	0
34	I	1	0	0	0	0
34	K	1	0	0	0	0
34	L	1	0	0	0	0
34	P	1	0	0	0	0
34	Q	3	0	0	0	0
34	R	1	0	0	0	0
35	0	9	0	0	1	0
35	2	1	0	0	0	0
35	A	1	0	0	0	0
35	B	1	0	0	0	0
35	I	3	0	0	2	0
35	J	1	0	0	1	0
35	K	1	0	0	0	0
35	L	1	0	0	1	0
35	M	1	0	0	1	0
35	N	1	0	0	0	0
35	Q	1	0	0	0	0
35	X	1	0	0	0	0
36	2	1	0	0	0	0
36	N	1	0	0	0	0
36	T	1	0	0	0	0
36	Y	1	0	0	0	0
36	Z	1	0	0	0	0
37	0	5766	0	0	298	0
37	1	42	0	0	4	0
37	2	56	0	0	10	0
37	4	1	0	0	0	0
37	5	2	0	0	0	0
37	9	148	0	0	15	0
37	A	115	0	0	22	0
37	B	146	0	0	25	0
37	C	166	0	0	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	D	48	0	0	22	0
37	E	43	0	0	14	0
37	F	25	0	0	10	0
37	G	20	0	0	6	0
37	H	77	0	0	27	0
37	I	56	0	0	10	0
37	J	56	0	0	12	0
37	K	80	0	0	17	0
37	L	129	0	0	21	0
37	M	56	0	0	27	0
37	N	43	0	0	13	0
37	O	58	0	0	5	0
37	P	57	0	0	7	0
37	Q	85	0	0	11	0
37	R	31	0	0	9	0
37	S	38	0	0	6	0
37	T	30	0	0	10	0
37	U	12	0	0	2	0
37	V	69	0	0	12	0
37	W	27	0	0	7	0
37	X	97	0	0	21	0
37	Y	35	0	0	8	0
37	Z	54	0	0	5	0
All	All	98494	0	59603	3417	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 23.

All (3417) 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)
11:H:86:ARG:NH1	11:H:133:ILE:HG13	1.55	1.20
24:U:12:THR:HG22	24:U:15:GLU:HG3	1.32	1.11
6:C:236:THR:HG22	6:C:239:ALA:H	1.00	1.07
6:C:127:ARG:NH2	6:C:225:PRO:HG2	1.70	1.06
11:H:86:ARG:HH11	11:H:133:ILE:CG1	1.68	1.06
11:H:45:GLN:HB3	11:H:163:PRO:HD2	1.31	1.06
6:C:115:LEU:HD13	6:C:223:LEU:HD21	1.36	1.05
1:0:1119:G:H2'	12:I:52:GLN:HE22	1.22	1.04
7:D:105:SER:HB2	7:D:131:THR:HG23	1.37	1.03
28:Y:58:GLY:HA3	37:Y:8436:HOH:O	1.58	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:3024:U:O2'	2:9:3025:G:H4'	1.57	1.03
15:L:164:THR:HG22	15:L:167:GLY:H	1.21	1.03
5:B:238:ASN:HD22	5:B:240:GLY:H	1.07	1.02
22:S:71:VAL:HG11	22:S:90:PRO:HB3	1.40	1.01
2:9:3056:A:H2'	2:9:3057:A:H5"	1.41	1.01
1:0:156:C:H5"	15:L:171:ARG:HD3	1.38	1.01
15:L:35:PRO:CG	15:L:38:VAL:HG23	1.91	1.01
1:0:1160:G:H5'	1:0:1161:A:H5'	1.41	1.00
37:0:3213:HOH:O	15:L:157:LEU:HD11	1.60	1.00
1:0:2637:A:H4'	1:0:2638:G:O5'	1.55	1.00
6:C:5:ILE:HD11	6:C:16:VAL:HG23	1.40	1.00
1:0:1878:G:H1'	37:0:5422:HOH:O	1.61	0.99
1:0:200:U:H2'	37:0:9930:HOH:O	1.60	0.99
13:J:10:GLN:H	13:J:10:GLN:NE2	1.61	0.99
37:0:3984:HOH:O	15:L:94:LYS:HE3	1.60	0.99
15:L:87:MET:HB3	31:2:46:ILE:HD13	1.45	0.98
9:F:91:VAL:HG12	9:F:92:GLY:H	1.29	0.98
13:J:14:LYS:HB2	13:J:45:PRO:HG2	1.42	0.98
7:D:25:MET:HE2	7:D:41:LEU:HG	1.45	0.98
11:H:165:GLY:HA3	37:H:8384:HOH:O	1.64	0.97
1:0:1134:G:H4'	11:H:151:MET:HE1	1.43	0.96
1:0:871:G:H5'	1:0:871:G:H8	1.27	0.96
2:9:3076:G:H3'	2:9:3077:A:H5"	1.45	0.96
1:0:1242:A:H5'	12:I:82:THR:HG23	1.46	0.95
11:H:86:ARG:HH11	11:H:133:ILE:HG13	0.79	0.95
28:Y:10:ARG:HA	37:Y:8414:HOH:O	1.67	0.95
21:R:57:THR:HG22	21:R:59:ASP:H	1.32	0.95
1:0:871:G:C8	1:0:871:G:H5'	2.01	0.95
11:H:162:SER:HB2	11:H:163:PRO:HD3	1.46	0.94
1:0:870:G:H2'	1:0:871:G:H5"	1.47	0.94
20:Q:99:ALA:HB1	20:Q:109:MET:HE1	1.47	0.93
20:Q:8:ALA:HB1	20:Q:13:THR:HG21	1.49	0.93
11:H:2:PRO:HB2	37:H:8351:HOH:O	1.67	0.93
15:L:106:ASN:HD22	15:L:114:VAL:HG23	1.32	0.92
15:L:87:MET:HB2	15:L:91:ILE:HD11	1.52	0.91
11:H:139:ASP:HA	37:H:8355:HOH:O	1.69	0.91
18:O:115:SER:H	18:O:118:GLN:HE21	0.96	0.91
13:J:62:PRO:HG3	13:J:65:ARG:HH21	1.34	0.91
7:D:134:LEU:HD11	7:D:166:ILE:HD11	1.49	0.91
27:X:187:VAL:HG23	27:X:192:ASP:HB2	1.50	0.91
1:0:1119:G:H2'	12:I:52:GLN:NE2	1.85	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:39:THR:HG22	20:Q:42:GLU:H	1.34	0.91
6:C:242:GLU:HG3	37:C:8378:HOH:O	1.69	0.91
1:0:1751:G:H2'	1:0:1752:G:H5"	1.53	0.91
1:0:856:G:H2'	37:0:4865:HOH:O	1.70	0.91
1:0:960:G:H4'	37:0:6805:HOH:O	1.71	0.90
13:J:74:VAL:HG11	13:J:113:ILE:HG12	1.53	0.90
11:H:55:GLN:HE21	11:H:124:ARG:HE	1.16	0.90
2:9:3006:C:H5"	16:M:37:ARG:NH1	1.87	0.90
1:0:1116:U:O2'	1:0:1118:A:H2	1.53	0.90
18:O:143:ALA:HA	37:O:5521:HOH:O	1.72	0.90
20:Q:18:LEU:HB2	20:Q:143:VAL:HG12	1.54	0.90
15:L:52:LEU:HD11	37:L:8617:HOH:O	1.72	0.90
2:9:3023:U:H3'	37:9:8485:HOH:O	1.72	0.90
5:B:162:MET:HE3	5:B:308:LEU:HD21	1.55	0.89
1:0:2637:A:H5'	37:0:5481:HOH:O	1.72	0.89
7:D:146:LYS:NZ	16:M:107:ASN:HD21	1.70	0.89
1:0:1474:C:H6	1:0:1474:C:H5'	1.37	0.89
6:C:236:THR:HG22	6:C:239:ALA:N	1.86	0.89
10:G:12:ILE:HA	37:G:4499:HOH:O	1.71	0.89
1:0:2812:A:H2	1:0:2814:A:H62	1.17	0.89
2:9:3023:U:H4'	2:9:3024:U:OP2	1.69	0.89
1:0:1184:C:H1'	37:0:6843:HOH:O	1.72	0.89
1:0:1559:A:H1'	37:0:5293:HOH:O	1.72	0.89
1:0:282:C:H1'	1:0:368:C:N4	1.88	0.88
1:0:1165:G:OP1	1:0:1165:G:H3'	1.73	0.88
15:L:102:GLU:OE1	15:L:164:THR:HG21	1.71	0.88
11:H:26:LYS:HD2	11:H:28:ILE:HD12	1.54	0.88
1:0:542:A:H5'	1:0:542:A:H8	1.39	0.88
29:Z:21:ARG:HD2	29:Z:39:PHE:HB2	1.55	0.88
1:0:1835:U:H5	1:0:1840:A:N7	1.70	0.88
1:0:711:G:H1'	37:0:6483:HOH:O	1.73	0.87
37:0:4667:HOH:O	13:J:39:GLY:HA2	1.74	0.87
7:D:27:ILE:HG22	7:D:28:GLY:H	1.38	0.87
15:L:84:LYS:HE2	37:L:8576:HOH:O	1.74	0.87
14:K:79:ASP:HB3	37:K:8559:HOH:O	1.75	0.87
16:M:47:LEU:HD11	16:M:127:LEU:HD21	1.55	0.87
4:A:223:ARG:HG3	37:A:8596:HOH:O	1.75	0.86
5:B:201:ASP:HB2	5:B:312:ARG:HD2	1.54	0.86
1:0:1116:U:H3	1:0:1246:A:H62	1.24	0.86
11:H:59:ASN:HD22	11:H:59:ASN:H	1.24	0.86
15:L:164:THR:HG22	15:L:167:GLY:N	1.90	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:100:ASP:HB2	37:E:2789:HOH:O	1.74	0.86
1:0:541:C:H2'	1:0:542:A:H5"	1.56	0.86
1:0:111:C:O2'	29:Z:20:ARG:HG2	1.76	0.86
12:I:19:MET:HE3	12:I:132:LEU:HD11	1.58	0.86
21:R:51:GLN:HE21	21:R:53:ASN:HD21	1.20	0.86
14:K:67:ARG:O	14:K:71:GLU:HG3	1.75	0.86
12:I:131:THR:HG22	12:I:134:GLU:H	1.41	0.85
16:M:86:LEU:HD12	16:M:125:ALA:HB2	1.59	0.85
13:J:29:LEU:HB3	13:J:55:VAL:HG11	1.57	0.85
25:V:68:THR:HG23	25:V:69:ARG:HG2	1.58	0.85
4:A:192:VAL:HB	37:A:8587:HOH:O	1.76	0.85
13:J:81:ARG:HB2	13:J:87:ARG:HH11	1.39	0.85
26:W:78:GLU:HG2	26:W:79:GLU:H	1.41	0.85
28:Y:38:LYS:HE2	28:Y:45:LYS:HE2	1.58	0.85
5:B:195:ARG:HG2	5:B:323:LEU:HD22	1.58	0.84
1:0:289:G:H22	1:0:363:A:H2	1.24	0.84
1:0:962:C:H1'	16:M:5:ARG:NH1	1.93	0.84
7:D:20:LYS:HA	7:D:75:LEU:O	1.78	0.84
37:0:3245:HOH:O	22:S:9:LYS:HD2	1.76	0.84
17:N:32:ARG:HB2	37:N:4656:HOH:O	1.77	0.84
14:K:77:ALA:HB3	37:K:8531:HOH:O	1.76	0.84
15:L:164:THR:HG23	15:L:165:SER:N	1.90	0.84
1:0:2751:C:H3'	37:0:6655:HOH:O	1.76	0.84
11:H:139:ASP:N	11:H:140:PRO:HD3	1.93	0.84
24:U:1:THR:HG23	24:U:2:VAL:H	1.39	0.84
11:H:41:THR:HA	37:H:8381:HOH:O	1.76	0.84
1:0:1450:C:H4'	1:0:1451:C:OP2	1.77	0.83
1:0:2310:G:OP2	11:H:114:PRO:HD2	1.77	0.83
5:B:321:PRO:HA	37:B:8657:HOH:O	1.78	0.83
37:9:8479:HOH:O	16:M:23:ARG:HD3	1.77	0.83
1:0:1187:U:HO2'	1:0:1189:A:H2	1.25	0.83
1:0:1372:A:H3'	37:0:6577:HOH:O	1.77	0.83
4:A:88:ILE:HD13	4:A:100:PRO:HD3	1.57	0.83
28:Y:46:LYS:HD3	28:Y:59:HIS:HB2	1.59	0.83
25:V:149:LEU:HG	25:V:153:MET:HE2	1.59	0.83
30:1:41:HIS:H	30:1:45:ASN:HD22	1.26	0.83
11:H:29:ALA:HB3	11:H:65:ARG:HH12	1.44	0.83
1:0:545:G:H8	1:0:545:G:H5'	1.44	0.83
16:M:87:LEU:HD12	16:M:186:LEU:HD21	1.59	0.83
18:O:103:THR:HA	18:O:106:ARG:NH1	1.93	0.82
5:B:202:VAL:HG11	5:B:301:VAL:HG13	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:962:C:H1'	16:M:5:ARG:HH12	1.44	0.82
12:I:93:ARG:HH11	12:I:93:ARG:HB3	1.41	0.82
37:0:3329:HOH:O	11:H:11:LYS:HE2	1.79	0.82
4:A:121:ALA:O	4:A:124:VAL:HG22	1.77	0.82
1:0:1164:U:H4'	1:0:1165:G:OP1	1.79	0.82
25:V:88:THR:HB	37:V:6679:HOH:O	1.78	0.82
25:V:72:PRO:HG2	25:V:77:ALA:HB3	1.59	0.82
1:0:1187:U:H2'	37:0:6289:HOH:O	1.79	0.82
1:0:2890:A:H1'	23:T:56:ARG:NH2	1.94	0.82
18:O:115:SER:OG	18:O:118:GLN:HG3	1.79	0.82
11:H:27:LYS:H	11:H:58:HIS:HD2	1.25	0.82
1:0:877:G:H5'	1:0:878:G:OP1	1.80	0.82
8:E:107:PHE:CE2	8:E:108:LEU:HD13	2.15	0.81
9:F:1:PRO:HB2	37:F:5897:HOH:O	1.78	0.81
1:0:1834:C:H2'	1:0:1840:A:N6	1.95	0.81
16:M:113:SER:HB2	37:M:6448:HOH:O	1.80	0.81
1:0:541:C:C2'	1:0:542:A:H5"	2.11	0.81
8:E:97:VAL:HG12	37:E:4191:HOH:O	1.81	0.81
1:0:2094:G:H4'	5:B:245:SER:HB3	1.63	0.81
25:V:4:LEU:HD22	25:V:52:VAL:HG21	1.61	0.81
2:9:3024:U:H4'	2:9:3025:G:OP1	1.79	0.81
2:9:3014:G:H8	2:9:3014:G:H5'	1.44	0.81
8:E:20:ILE:HD11	8:E:40:VAL:HG11	1.61	0.81
1:0:1741:U:H5'	1:0:1742:A:OP1	1.80	0.80
22:S:32:ARG:NH1	22:S:38:ARG:HH12	1.78	0.80
37:0:4316:HOH:O	15:L:14:ARG:HG2	1.78	0.80
26:W:72:VAL:HG22	26:W:85:VAL:HG12	1.63	0.80
1:0:157:G:H4'	15:L:95:LYS:HE3	1.63	0.80
1:0:1667:A:H8	1:0:1667:A:H5'	1.46	0.80
9:F:91:VAL:HG12	9:F:92:GLY:N	1.95	0.80
26:W:37:LEU:HD13	26:W:85:VAL:HG21	1.62	0.80
24:U:12:THR:HG22	24:U:15:GLU:CG	2.10	0.80
20:Q:9:ASP:O	20:Q:13:THR:HB	1.81	0.80
20:Q:18:LEU:HB2	20:Q:143:VAL:CG1	2.12	0.80
13:J:62:PRO:HG3	13:J:65:ARG:NH2	1.95	0.80
7:D:154:LYS:HD2	7:D:154:LYS:H	1.46	0.80
20:Q:99:ALA:HB1	20:Q:109:MET:CE	2.10	0.80
31:2:60:LYS:HG3	31:2:61:PRO:HD2	1.63	0.80
2:9:3056:A:C2'	2:9:3057:A:H5"	2.11	0.80
15:L:35:PRO:HG2	15:L:38:VAL:HG23	1.61	0.79
1:0:282:C:H1'	1:0:368:C:H42	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:23:GLU:HG2	8:E:28:SER:HB3	1.64	0.79
12:I:19:MET:CE	12:I:132:LEU:HD11	2.13	0.79
1:0:1909:A:H2'	1:0:1910:A:C8	2.17	0.79
1:0:714:U:H3'	37:0:6334:HOH:O	1.82	0.79
30:1:39:ARG:HG2	37:1:3143:HOH:O	1.82	0.79
25:V:6:GLN:HB2	25:V:26:ILE:HD12	1.64	0.79
31:2:25:VAL:HG22	31:2:68:LYS:HG3	1.63	0.79
26:W:41:PHE:O	26:W:43:VAL:HG23	1.82	0.79
1:0:2478:U:H2'	1:0:2479:A:H8	1.47	0.79
1:0:630:A:H5"	37:0:4210:HOH:O	1.82	0.79
4:A:35:GLY:O	4:A:36:ASP:HB3	1.82	0.79
11:H:140:PRO:HB3	37:H:8366:HOH:O	1.82	0.79
2:9:3006:C:H5"	16:M:37:ARG:HH12	1.48	0.79
12:I:76:ASP:HA	37:I:5907:HOH:O	1.80	0.79
7:D:91:ALA:HB1	37:D:5198:HOH:O	1.81	0.79
12:I:133:GLY:O	12:I:137:GLU:HG3	1.83	0.79
16:M:80:SER:HB2	37:M:4257:HOH:O	1.82	0.79
1:0:1822:A:O2'	1:0:1823:G:H5'	1.82	0.78
27:X:99:ALA:HB2	27:X:233:TYR:CZ	2.18	0.78
6:C:236:THR:HG21	37:C:8370:HOH:O	1.83	0.78
1:0:812:A:H1'	37:0:3438:HOH:O	1.82	0.78
1:0:462:A:C2	30:1:37:HIS:HB3	2.18	0.78
1:0:188:C:H5"	15:L:163:LEU:HD21	1.64	0.78
1:0:559:U:H6	1:0:559:U:H5'	1.48	0.78
1:0:1118:A:H3'	1:0:1118:A:C8	2.18	0.78
15:L:72:SER:HB2	15:L:93:ARG:HG2	1.66	0.78
5:B:238:ASN:HD22	5:B:240:GLY:N	1.81	0.78
1:0:2637:A:H4'	1:0:2638:G:C5'	2.14	0.78
37:0:6832:HOH:O	5:B:211:THR:HG21	1.83	0.78
1:0:182:G:H5'	37:0:4607:HOH:O	1.84	0.78
15:L:37:VAL:HG21	15:L:108:LYS:HG3	1.65	0.78
9:F:96:ALA:HA	37:F:3111:HOH:O	1.83	0.78
18:O:115:SER:H	18:O:118:GLN:NE2	1.78	0.78
1:0:1166:A:H1'	1:0:1192:A:C2	2.18	0.78
26:W:71:ARG:HB3	26:W:88:GLU:OE1	1.84	0.78
1:0:814:G:H8	37:0:6598:HOH:O	1.66	0.77
27:X:200:THR:HG22	27:X:201:GLU:HG2	1.67	0.77
15:L:186:SER:O	15:L:189:VAL:HG12	1.82	0.77
1:0:1701:A:H5'	37:0:5694:HOH:O	1.84	0.77
1:0:871:G:C5'	1:0:871:G:H8	1.97	0.77
18:O:115:SER:N	18:O:118:GLN:HE21	1.80	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Y:38:LYS:HG2	28:Y:45:LYS:HG2	1.65	0.77
5:B:195:ARG:HD2	5:B:324:ASP:OD1	1.84	0.77
37:0:5654:HOH:O	4:A:5:GLN:HB3	1.83	0.77
4:A:192:VAL:HG12	4:A:207:GLN:HB3	1.65	0.77
4:A:153:ARG:HH11	4:A:153:ARG:HB2	1.49	0.77
23:T:14:GLU:OE1	23:T:15:PRO:HD2	1.85	0.77
11:H:162:SER:HB2	11:H:163:PRO:CD	2.13	0.77
11:H:26:LYS:HG2	11:H:28:ILE:H	1.49	0.77
27:X:212:ARG:HD2	37:X:8606:HOH:O	1.83	0.77
25:V:4:LEU:HD22	25:V:52:VAL:CG2	2.14	0.77
1:0:2586:U:H3	1:0:2592:G:H22	1.28	0.77
1:0:2414:A:H2'	1:0:2415:A:C8	2.20	0.77
4:A:211:LYS:HB3	4:A:212:PRO:HD2	1.66	0.77
5:B:304:PRO:HD2	5:B:307:ARG:HD2	1.66	0.77
1:0:794:U:H3	1:0:819:A:H61	1.32	0.77
5:B:162:MET:CE	5:B:308:LEU:HD21	2.14	0.77
16:M:7:LYS:HE3	19:P:21:ARG:O	1.85	0.77
1:0:1206:U:H5'	1:0:1206:U:H6	1.49	0.77
25:V:88:THR:HG22	25:V:89:ASP:H	1.48	0.77
4:A:36:ASP:OD2	4:A:85:ASP:HB2	1.85	0.77
22:S:9:LYS:HE3	22:S:13:ARG:NH1	1.99	0.76
16:M:169:PRO:O	16:M:172:PHE:HB3	1.85	0.76
27:X:187:VAL:HG23	27:X:192:ASP:CB	2.15	0.76
6:C:78:ARG:HH11	6:C:78:ARG:HG3	1.51	0.76
1:0:1165:G:H4'	1:0:1174:A:O2'	1.85	0.76
8:E:166:VAL:HG12	37:E:3134:HOH:O	1.85	0.76
1:0:2908:A:H2'	1:0:2909:G:O4'	1.86	0.76
16:M:151:ASP:OD1	16:M:154:LEU:HD13	1.86	0.76
9:F:46:GLU:O	9:F:73:PRO:HD2	1.84	0.76
5:B:156:LYS:HE3	37:B:8628:HOH:O	1.85	0.76
4:A:199:HIS:HD2	4:A:201:PHE:H	1.33	0.76
10:G:23:ILE:HD13	10:G:67:LEU:HD23	1.67	0.76
14:K:136:ALA:HB3	37:K:8573:HOH:O	1.86	0.76
25:V:21:LEU:HD21	25:V:48:VAL:CG1	2.16	0.76
16:M:49:THR:HG22	16:M:56:ASP:HB2	1.68	0.76
15:L:164:THR:CG2	15:L:167:GLY:H	1.96	0.76
14:K:148:GLU:HB2	37:K:8587:HOH:O	1.84	0.76
1:0:560:C:H42	1:0:597:A:H61	1.33	0.76
14:K:143:THR:HG21	37:K:8539:HOH:O	1.84	0.75
1:0:1679:C:H5'	37:0:8840:HOH:O	1.86	0.75
37:0:5706:HOH:O	7:D:99:ASP:HA	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1625:U:H4'	37:0:4122:HOH:O	1.86	0.75
6:C:5:ILE:HD11	6:C:16:VAL:CG2	2.15	0.75
37:0:3272:HOH:O	15:L:189:VAL:HG21	1.85	0.75
5:B:62:ARG:HA	5:B:65:MET:HE2	1.68	0.75
1:0:2533:C:H5'	1:0:2533:C:H6	1.51	0.75
1:0:870:G:C2'	1:0:871:G:H5"	2.16	0.75
4:A:105:VAL:HG13	4:A:155:THR:O	1.85	0.75
13:J:74:VAL:CG1	13:J:113:ILE:HG12	2.15	0.75
1:0:1474:C:C6	1:0:1474:C:H5'	2.21	0.75
1:0:1164:U:H3	1:0:1192:A:H2	1.31	0.75
1:0:1160:G:C5'	1:0:1161:A:H5'	2.17	0.75
1:0:2637:A:H5"	1:0:2638:G:H5'	1.68	0.75
16:M:89:GLY:O	16:M:92:ALA:HB3	1.87	0.75
1:0:56:G:H5"	24:U:50:ARG:HH12	1.52	0.75
28:Y:37:HIS:HB2	28:Y:47:LEU:HB2	1.69	0.75
23:T:14:GLU:O	23:T:17:THR:HB	1.87	0.74
37:0:3171:HOH:O	15:L:79:LYS:HD3	1.87	0.74
1:0:2851:G:O2'	1:0:2852:A:H5'	1.87	0.74
15:L:34:GLU:HB3	15:L:35:PRO:HD2	1.69	0.74
8:E:23:GLU:HG2	8:E:28:SER:CB	2.17	0.74
1:0:381:G:H5"	37:0:3789:HOH:O	1.86	0.74
11:H:47:GLU:HB3	11:H:133:ILE:CD1	2.17	0.74
2:9:3025:G:H3'	2:9:3026:C:H5'	1.68	0.74
25:V:21:LEU:HD21	25:V:48:VAL:HG11	1.68	0.74
2:9:3025:G:H3'	2:9:3026:C:C5'	2.18	0.74
5:B:168:GLY:N	5:B:174:ARG:HD3	2.02	0.74
21:R:57:THR:HG22	21:R:59:ASP:N	2.00	0.74
26:W:72:VAL:HG22	26:W:85:VAL:CG1	2.17	0.74
15:L:139:PRO:O	15:L:140:ALA:HB3	1.86	0.74
1:0:2325:C:H1'	37:0:3624:HOH:O	1.88	0.74
5:B:253:GLN:HA	37:B:8620:HOH:O	1.87	0.74
5:B:27:ASN:H	5:B:27:ASN:HD22	1.35	0.74
30:1:41:HIS:N	30:1:45:ASN:HD22	1.84	0.74
1:0:317:A:H5'	22:S:52:ARG:HD2	1.68	0.74
11:H:4:ALA:HB3	37:H:8351:HOH:O	1.88	0.74
2:9:3048:C:H4'	16:M:141:ARG:HH21	1.51	0.74
7:D:64:ARG:HG2	7:D:67:ASP:HB3	1.68	0.74
1:0:21:G:C5'	20:Q:2:ILE:HA	2.18	0.74
5:B:18:ARG:HG3	5:B:256:GLN:HG3	1.68	0.74
1:0:1383:U:H5"	37:0:6061:HOH:O	1.86	0.74
1:0:240:C:H4'	15:L:146:GLN:NE2	2.02	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2291:A:C8	1:0:2309:C:H5'	2.22	0.74
13:J:10:GLN:H	13:J:10:GLN:HE21	1.35	0.73
17:N:47:ARG:HA	17:N:50:ARG:HH12	1.51	0.73
12:I:107:ASN:ND2	12:I:109:TYR:H	1.87	0.73
1:0:1328:A:OP1	27:X:169:ARG:HD2	1.88	0.73
1:0:2502:C:H4'	11:H:151:MET:HG2	1.71	0.73
7:D:105:SER:CB	7:D:131:THR:HG23	2.15	0.73
4:A:69:LEU:HD21	4:A:120:ARG:HB3	1.69	0.73
1:0:2004:U:H4'	37:0:4752:HOH:O	1.88	0.73
25:V:122:ARG:HH11	25:V:122:ARG:HG2	1.54	0.73
12:I:52:GLN:HG3	12:I:53:ILE:N	2.03	0.73
7:D:37:ALA:O	7:D:40:ILE:HG12	1.88	0.73
7:D:19:GLU:O	7:D:20:LYS:HG2	1.89	0.73
16:M:144:GLY:O	16:M:147:ILE:HG22	1.89	0.73
11:H:28:ILE:HA	11:H:62:GLU:OE1	1.88	0.73
29:Z:25:LYS:HD2	30:1:49:GLU:N	2.04	0.73
5:B:225:GLY:HA3	37:B:8568:HOH:O	1.88	0.73
28:Y:59:HIS:HA	37:Y:8438:HOH:O	1.87	0.73
1:0:2587:U:H2'	1:0:2589:U:H5"	1.71	0.72
1:0:1118:A:H3'	1:0:1118:A:H8	1.54	0.72
26:W:76:ARG:HH11	26:W:76:ARG:HG3	1.52	0.72
28:Y:40:PRO:HD3	28:Y:47:LEU:HD11	1.71	0.72
1:0:2256:G:H2'	1:0:2257:G:H5'	1.71	0.72
15:L:74:ARG:HG3	15:L:74:ARG:HH11	1.53	0.72
11:H:56:ILE:HG22	11:H:61:LEU:HD22	1.72	0.72
8:E:43:ASP:HA	37:E:5864:HOH:O	1.88	0.72
1:0:2637:A:C5'	37:0:5481:HOH:O	2.34	0.72
17:N:47:ARG:HA	17:N:50:ARG:NH1	2.04	0.72
17:N:42:GLU:HB2	37:N:2176:HOH:O	1.89	0.72
37:0:5220:HOH:O	15:L:170:CYS:SG	2.46	0.72
1:0:285:A:H2'	1:0:286:U:O4'	1.90	0.72
1:0:1028:U:H1'	37:0:3135:HOH:O	1.89	0.72
1:0:1234:U:N3	5:B:244:PRO:HB3	2.04	0.72
11:H:5:MET:HG3	37:H:8351:HOH:O	1.89	0.72
1:0:541:C:H2'	1:0:542:A:C5'	2.19	0.72
1:0:1666:C:O2'	1:0:1667:A:H5"	1.90	0.72
9:F:58:GLU:HA	9:F:61:MET:HG3	1.71	0.72
15:L:38:VAL:C	15:L:63:VAL:HG13	2.10	0.72
11:H:137:ASN:O	11:H:139:ASP:N	2.22	0.72
5:B:43:GLY:O	5:B:308:LEU:HD12	1.89	0.72
5:B:175:LEU:C	5:B:175:LEU:HD23	2.10	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1666:C:H2'	1:0:1667:A:H5'	1.71	0.72
7:D:36:ASN:HA	37:D:7500:HOH:O	1.88	0.72
1:0:1044:C:H5"	37:0:8544:HOH:O	1.88	0.72
22:S:52:ARG:HB2	22:S:95:ASN:HB3	1.71	0.71
25:V:14:HIS:HB2	25:V:17:ILE:HG13	1.71	0.71
1:0:232:A:H4'	37:0:5501:HOH:O	1.90	0.71
11:H:47:GLU:HB3	11:H:133:ILE:HD13	1.72	0.71
11:H:14:TYR:H	11:H:91:HIS:CE1	2.07	0.71
25:V:21:LEU:HD22	25:V:26:ILE:HD11	1.71	0.71
25:V:122:ARG:HH21	25:V:154:ARG:HD2	1.55	0.71
1:0:2426:G:H1'	37:0:5510:HOH:O	1.88	0.71
9:F:2:VAL:HG22	9:F:57:GLU:OE1	1.90	0.71
16:M:154:LEU:O	16:M:155:GLU:HB3	1.88	0.71
1:0:1119:G:N2	1:0:1246:A:C2	2.58	0.71
8:E:37:ASP:OD1	12:I:125:SER:HB3	1.90	0.71
16:M:163:PHE:HE1	16:M:171:HIS:HD1	1.38	0.71
29:Z:28:HIS:HD2	29:Z:30:LYS:H	1.35	0.71
5:B:119:HIS:O	5:B:121:PRO:HD3	1.91	0.71
1:0:2862:G:H4'	5:B:336:GLN:O	1.91	0.71
1:0:2559:C:H4'	37:0:6644:HOH:O	1.89	0.71
27:X:200:THR:HG22	27:X:201:GLU:CG	2.20	0.71
1:0:2405:C:H5'	37:0:5993:HOH:O	1.90	0.71
1:0:777:U:O2'	29:Z:11:LYS:HG2	1.91	0.71
13:J:74:VAL:HG13	13:J:113:ILE:HG23	1.72	0.71
16:M:183:ASP:OD2	16:M:186:LEU:HD12	1.89	0.71
16:M:151:ASP:O	16:M:154:LEU:HB2	1.91	0.71
1:0:2508:C:H2'	37:0:6145:HOH:O	1.89	0.71
7:D:135:VAL:HG22	7:D:136:ARG:H	1.55	0.71
9:F:104:ALA:HA	37:F:6617:HOH:O	1.90	0.71
26:W:15:ARG:HH11	26:W:15:ARG:HB3	1.55	0.71
5:B:41:PHE:HB3	5:B:190:MET:HE3	1.72	0.71
1:0:2897:C:H2'	1:0:2898:G:H8	1.56	0.71
1:0:1080:C:H4'	1:0:1081:A:OP1	1.90	0.71
7:D:27:ILE:HG22	7:D:28:GLY:N	2.07	0.70
12:I:74:ARG:HD3	37:I:5061:HOH:O	1.91	0.70
1:0:1835:U:C5	1:0:1840:A:N7	2.56	0.70
1:0:21:G:H5'	20:Q:2:ILE:HA	1.74	0.70
37:0:4403:HOH:O	2:9:3103:A:H4'	1.91	0.70
1:0:2780:C:H1'	8:E:143:GLN:HE21	1.57	0.70
1:0:2276:U:H2'	1:0:2277:U:C6	2.27	0.70
16:M:33:ARG:NH1	16:M:103:ASP:OD2	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:14:LYS:HD2	35:J:8512:CL:CL	2.28	0.70
7:D:39:ASP:HB2	37:D:5583:HOH:O	1.91	0.70
18:O:59:ARG:NH2	18:O:66:GLN:HE22	1.89	0.70
7:D:38:GLU:OE2	7:D:51:ARG:CZ	2.40	0.70
1:0:1285:U:H4'	25:V:74:GLU:OE1	1.92	0.70
37:0:9204:HOH:O	5:B:254:GLN:HG3	1.90	0.70
7:D:55:LYS:HA	37:D:6752:HOH:O	1.92	0.70
13:J:81:ARG:HB2	13:J:87:ARG:NH1	2.06	0.70
1:0:2478:U:H2'	1:0:2479:A:C8	2.26	0.70
25:V:13:MET:HE3	25:V:17:ILE:HG22	1.73	0.70
1:0:1684:A:H1'	30:1:43:ARG:HH22	1.57	0.70
7:D:88:LEU:HB2	7:D:89:PRO:HD3	1.73	0.70
1:0:56:G:H5"	24:U:50:ARG:NH1	2.07	0.69
27:X:133:HIS:HD2	37:X:8583:HOH:O	1.74	0.69
12:I:104:TYR:HA	37:I:2238:HOH:O	1.92	0.69
1:0:1330:A:H5"	1:0:1331:A:OP2	1.92	0.69
2:9:3092:G:H2'	2:9:3093:A:C8	2.27	0.69
6:C:236:THR:H	6:C:239:ALA:HB3	1.57	0.69
7:D:41:LEU:HA	7:D:44:ILE:HG22	1.74	0.69
11:H:26:LYS:HD2	11:H:28:ILE:CD1	2.22	0.69
1:0:2346:C:O2'	7:D:52:THR:HG21	1.92	0.69
37:0:6529:HOH:O	29:Z:1:THR:HB	1.91	0.69
24:U:39:ALA:N	24:U:40:PRO:HD2	2.08	0.69
15:L:153:THR:HB	37:L:8613:HOH:O	1.92	0.69
1:0:1162:G:H2'	37:0:5981:HOH:O	1.92	0.69
1:0:506:G:H3'	37:0:3260:HOH:O	1.91	0.69
1:0:214:U:H5'	37:0:5555:HOH:O	1.91	0.69
13:J:115:ARG:HG3	13:J:116:GLU:N	2.06	0.69
5:B:190:MET:HE1	5:B:194:PHE:CD1	2.28	0.69
1:0:2301:A:H5"	1:0:2302:A:H5'	1.75	0.69
2:9:3035:C:H5"	37:9:8459:HOH:O	1.93	0.69
10:G:12:ILE:N	10:G:13:PRO:HD3	2.06	0.69
8:E:11:VAL:HG12	8:E:12:ASP:N	2.06	0.69
16:M:143:ARG:HA	16:M:172:PHE:CD2	2.27	0.69
1:0:1120:U:C6	1:0:1120:U:H5"	2.28	0.69
20:Q:106:GLY:HA2	20:Q:109:MET:HE3	1.73	0.69
11:H:59:ASN:HD22	11:H:59:ASN:N	1.90	0.69
25:V:88:THR:HG23	25:V:110:GLN:NE2	2.06	0.69
14:K:143:THR:HG22	14:K:144:ASP:N	2.07	0.69
1:0:2256:G:C2'	1:0:2257:G:H5'	2.23	0.69
5:B:41:PHE:HA	5:B:79:MET:HE2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:T:13:ILE:HG12	23:T:32:CYS:HB3	1.75	0.69
7:D:101:THR:HG22	37:D:7400:HOH:O	1.92	0.69
26:W:25:ARG:HD2	37:W:3861:HOH:O	1.92	0.69
37:0:3582:HOH:O	5:B:158:LYS:HB2	1.91	0.69
12:I:74:ARG:HH11	12:I:74:ARG:HB3	1.55	0.69
9:F:99:THR:HA	37:F:3461:HOH:O	1.92	0.69
1:0:2679:G:H2'	1:0:2681:A:OP2	1.92	0.69
31:2:30:GLN:HB3	37:2:8544:HOH:O	1.91	0.69
1:0:656:G:H5'	17:N:3:THR:HB	1.74	0.69
10:G:12:ILE:HB	37:G:4714:HOH:O	1.92	0.69
25:V:4:LEU:HD23	25:V:54:PHE:HB3	1.75	0.69
24:U:49:LEU:O	24:U:53:ILE:HG13	1.93	0.69
1:0:2690:U:O2'	8:E:111:LYS:HE3	1.93	0.69
1:0:236:A:H4'	1:0:237:G:H5'	1.75	0.69
9:F:63:ILE:HB	9:F:64:PRO:HD3	1.75	0.69
25:V:4:LEU:O	25:V:32:CYS:HA	1.93	0.68
2:9:3014:G:H5'	2:9:3014:G:C8	2.28	0.68
37:0:5730:HOH:O	7:D:55:LYS:HB2	1.91	0.68
23:T:6:CYS:HA	23:T:13:ILE:HD11	1.75	0.68
8:E:9:GLU:HA	37:E:5240:HOH:O	1.93	0.68
4:A:199:HIS:CD2	4:A:201:PHE:H	2.11	0.68
1:0:1589:G:N2	1:0:1605:G:H1'	2.08	0.68
11:H:162:SER:CB	11:H:163:PRO:HD3	2.22	0.68
14:K:133:VAL:HA	37:K:8573:HOH:O	1.92	0.68
22:S:50:VAL:HG12	22:S:56:ALA:HA	1.75	0.68
1:0:821:U:H2'	1:0:822:C:H6	1.59	0.68
1:0:1191:A:H3'	1:0:1192:A:H5"	1.75	0.68
20:Q:40:ALA:O	20:Q:44:VAL:HG23	1.93	0.68
5:B:212:GLN:HB2	5:B:257:THR:HG21	1.75	0.68
17:N:87:THR:O	17:N:91:GLN:HG3	1.94	0.68
16:M:48:VAL:CG1	16:M:55:ASP:HB3	2.23	0.68
11:H:139:ASP:H	11:H:140:PRO:HD3	1.58	0.68
23:T:9:CYS:HA	23:T:52:THR:HG23	1.75	0.68
1:0:338:C:H5"	37:0:5264:HOH:O	1.92	0.68
4:A:101:GLU:OE2	4:A:131:HIS:HB2	1.92	0.68
2:9:3039:U:H1'	2:9:3044:A:H61	1.58	0.68
1:0:2241:C:H2'	1:0:2242:U:C6	2.29	0.68
5:B:238:ASN:ND2	5:B:240:GLY:H	1.86	0.68
11:H:48:LEU:HG	11:H:157:ILE:HG21	1.76	0.68
1:0:1185:U:H2'	1:0:1186:C:C6	2.29	0.68
10:G:64:ASN:O	10:G:68:GLU:HG3	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:168:GLY:H	5:B:174:ARG:HD3	1.58	0.68
7:D:49:PRO:HG3	37:D:5828:HOH:O	1.94	0.68
4:A:210:GLY:HA3	37:A:8579:HOH:O	1.93	0.68
6:C:129:HIS:CE1	6:C:231:ARG:HA	2.28	0.68
22:S:9:LYS:HE3	22:S:13:ARG:HH11	1.58	0.68
1:0:454:U:C2	37:0:8548:HOH:O	2.44	0.68
15:L:81:ARG:O	15:L:86:MET:HE2	1.94	0.68
16:M:11:ARG:HG3	16:M:14:ARG:NH1	2.08	0.68
28:Y:11:THR:OG1	28:Y:23:ARG:HB2	1.94	0.68
30:1:35:ARG:HB2	37:1:2691:HOH:O	1.93	0.68
1:0:2638:G:H5'	37:0:5481:HOH:O	1.94	0.68
7:D:64:ARG:CG	7:D:67:ASP:HB3	2.24	0.68
5:B:175:LEU:O	5:B:175:LEU:HD23	1.94	0.68
27:X:186:ARG:HG2	27:X:186:ARG:HH11	1.57	0.68
7:D:57:THR:HG23	7:D:63:ILE:HG22	1.75	0.68
28:Y:49:ARG:HD2	37:Y:8425:HOH:O	1.93	0.68
1:0:2890:A:H2'	37:0:4637:HOH:O	1.93	0.67
9:F:50:VAL:HG21	9:F:63:ILE:HG21	1.76	0.67
15:L:152:ARG:HB3	37:L:8639:HOH:O	1.93	0.67
1:0:182:G:H4'	15:L:157:LEU:HD13	1.77	0.67
7:D:25:MET:CE	7:D:41:LEU:HG	2.23	0.67
20:Q:39:THR:HB	20:Q:42:GLU:HG3	1.76	0.67
8:E:6:GLU:HA	8:E:46:THR:HG22	1.74	0.67
1:0:154:C:H2'	1:0:155:C:H6	1.57	0.67
11:H:45:GLN:HB3	11:H:163:PRO:CD	2.16	0.67
14:K:143:THR:HG22	14:K:145:LEU:H	1.58	0.67
1:0:553:G:H5'	37:0:9985:HOH:O	1.95	0.67
26:W:21:PRO:HG2	26:W:24:LYS:HD3	1.77	0.67
27:X:220:GLU:HG2	37:X:8550:HOH:O	1.93	0.67
6:C:237:GLU:HB2	37:C:8427:HOH:O	1.95	0.67
16:M:141:ARG:N	37:M:7307:HOH:O	2.27	0.67
1:0:2793:A:H5'	37:0:4014:HOH:O	1.94	0.67
13:J:55:VAL:HG12	13:J:56:SER:N	2.10	0.67
16:M:155:GLU:O	16:M:156:GLU:HG3	1.95	0.67
5:B:240:GLY:HA3	37:B:8529:HOH:O	1.94	0.67
4:A:88:ILE:HG22	4:A:88:ILE:O	1.94	0.67
5:B:36:PRO:HA	5:B:168:GLY:HA2	1.77	0.67
20:Q:39:THR:HG23	20:Q:107:GLU:O	1.95	0.67
25:V:88:THR:HG23	25:V:110:GLN:HE21	1.60	0.67
17:N:88:LYS:HB3	37:N:7061:HOH:O	1.94	0.67
1:0:2502:C:C4'	11:H:151:MET:HG2	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:338:C:H4'	6:C:174:ILE:CD1	2.24	0.66
8:E:81:GLU:HG2	8:E:134:SER:HB3	1.77	0.66
30:1:44:ARG:HG2	37:1:5527:HOH:O	1.94	0.66
14:K:72:ASN:O	14:K:76:LEU:HG	1.95	0.66
21:R:51:GLN:NE2	21:R:53:ASN:HD21	1.93	0.66
1:0:2827:A:H2'	1:0:2828:G:O4'	1.96	0.66
6:C:139:VAL:HG13	37:C:8444:HOH:O	1.94	0.66
1:0:1165:G:C3'	1:0:1165:G:OP1	2.44	0.66
37:9:8471:HOH:O	16:M:147:ILE:HD12	1.94	0.66
1:0:902:G:N7	14:K:18:HIS:HD2	1.92	0.66
5:B:51:VAL:HG13	5:B:53:LEU:HD13	1.76	0.66
24:U:42:ASN:HB3	37:U:7247:HOH:O	1.96	0.66
1:0:2237:G:H1'	37:0:4307:HOH:O	1.94	0.66
31:2:17:HIS:O	31:2:18:GLN:HG3	1.95	0.66
25:V:154:ARG:C	37:V:4276:HOH:O	2.34	0.66
26:W:15:ARG:NH1	26:W:15:ARG:HB3	2.11	0.66
27:X:235:GLU:CD	27:X:235:GLU:H	1.97	0.66
6:C:1:MET:HG2	6:C:2:GLN:H	1.60	0.66
2:9:3064:C:H2'	2:9:3065:A:H5'	1.76	0.66
37:0:8909:HOH:O	15:L:94:LYS:HE2	1.95	0.66
2:9:3006:C:OP1	16:M:37:ARG:NH1	2.28	0.66
5:B:104:GLU:HG3	37:B:8593:HOH:O	1.96	0.66
31:2:65:THR:HG23	31:2:67:LEU:HG	1.77	0.66
1:0:2064:U:H4'	1:0:2653:A:OP1	1.95	0.66
9:F:91:VAL:CG1	9:F:92:GLY:H	2.06	0.66
1:0:2256:G:H2'	1:0:2257:G:C5'	2.26	0.66
10:G:63:ARG:N	37:G:2569:HOH:O	2.28	0.66
12:I:90:LYS:HB2	35:I:8502:CL:CL	2.32	0.66
25:V:81:ASP:OD1	25:V:92:ASP:HB2	1.95	0.66
20:Q:14:ALA:HB3	20:Q:147:LEU:HB2	1.77	0.66
1:0:1160:G:H5'	1:0:1161:A:C5'	2.22	0.66
11:H:46:VAL:O	11:H:146:TRP:HH2	1.79	0.66
11:H:27:LYS:N	11:H:58:HIS:HD2	1.94	0.66
15:L:139:PRO:O	15:L:140:ALA:CB	2.43	0.66
15:L:173:LEU:HD23	15:L:183:VAL:HG12	1.77	0.66
13:J:34:VAL:HB	37:J:7169:HOH:O	1.96	0.66
1:0:1593:C:H5'	18:O:116:SER:O	1.95	0.66
27:X:185:VAL:HA	37:X:8565:HOH:O	1.94	0.66
1:0:1603:A:H5'	1:0:1605:G:O4'	1.94	0.66
24:U:5:VAL:HG23	37:U:2271:HOH:O	1.96	0.66
7:D:23:VAL:HG23	7:D:23:VAL:O	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:25:MET:HE1	7:D:37:ALA:O	1.96	0.65
1:0:1159:G:H21	1:0:1189:A:H8	1.44	0.65
1:0:2094:G:C4'	5:B:245:SER:HB3	2.25	0.65
16:M:24:LEU:HD13	19:P:26:PRO:HB3	1.77	0.65
15:L:97:ILE:HA	15:L:100:ILE:HD12	1.77	0.65
1:0:289:G:N2	1:0:363:A:H2	1.92	0.65
14:K:114:VAL:HG11	37:K:8573:HOH:O	1.95	0.65
1:0:869:G:OP1	15:L:79:LYS:HE2	1.96	0.65
15:L:35:PRO:HG3	15:L:38:VAL:HG23	1.76	0.65
1:0:485:A:N3	1:0:487:G:H5"	2.11	0.65
6:C:107:ARG:NH1	6:C:107:ARG:HB3	2.12	0.65
29:Z:10:LYS:HG3	37:Z:8432:HOH:O	1.95	0.65
8:E:31:ARG:NH1	37:E:5919:HOH:O	2.29	0.65
27:X:187:VAL:HB	37:X:8571:HOH:O	1.96	0.65
24:U:44:GLY:O	24:U:48:GLU:HG2	1.95	0.65
1:0:2111:G:H1'	37:0:8566:HOH:O	1.96	0.65
1:0:2722:G:H4'	37:J:5029:HOH:O	1.96	0.65
7:D:135:VAL:HG22	7:D:136:ARG:N	2.11	0.65
2:9:3107:C:C5	37:9:8440:HOH:O	2.49	0.65
5:B:125:GLU:O	5:B:129:ARG:HG3	1.97	0.65
25:V:7:LEU:HD12	25:V:53:ALA:HB2	1.79	0.65
5:B:280:VAL:HG13	5:B:334:SER:HA	1.77	0.65
2:9:3024:U:O2'	2:9:3025:G:C4'	2.41	0.65
5:B:36:PRO:HA	5:B:168:GLY:CA	2.27	0.65
13:J:81:ARG:HD3	13:J:87:ARG:NH1	2.12	0.65
1:0:462:A:C8	37:0:4337:HOH:O	2.50	0.65
5:B:154:VAL:HG12	5:B:156:LYS:HG2	1.79	0.65
2:9:3028:U:H2'	2:9:3029:C:C6	2.32	0.65
12:I:26:VAL:HG13	12:I:36:VAL:HG11	1.79	0.65
7:D:146:LYS:HZ3	16:M:107:ASN:HD21	1.45	0.65
28:Y:30:GLU:HA	28:Y:33:HIS:HB3	1.79	0.65
5:B:54:VAL:HB	37:B:8611:HOH:O	1.95	0.65
1:0:1972:U:H2'	1:0:1973:A:H5'	1.79	0.65
1:0:2035:C:O2'	1:0:2036:C:H5'	1.97	0.65
6:C:16:VAL:HG12	6:C:17:ASP:N	2.11	0.65
6:C:162:VAL:HG12	6:C:192:ILE:HD11	1.79	0.65
11:H:35:ASN:ND2	11:H:80:ASN:HA	2.12	0.65
20:Q:82:GLU:O	20:Q:86:LYS:HG3	1.97	0.65
5:B:179:LEU:O	5:B:183:GLU:HG2	1.95	0.65
26:W:71:ARG:HD3	37:W:7542:HOH:O	1.97	0.65
1:0:567:U:H5"	37:V:5817:HOH:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:314:ALA:HB3	5:B:317:PRO:HG3	1.79	0.65
1:0:694:A:H2'	1:0:695:C:H5'	1.79	0.65
6:C:141:SER:HA	37:C:8376:HOH:O	1.97	0.64
1:0:1118:A:H62	1:0:1244:U:H3	1.45	0.64
2:9:3003:A:H2'	37:9:8424:HOH:O	1.97	0.64
1:0:542:A:H5'	1:0:542:A:C8	2.28	0.64
1:0:544:G:H2'	1:0:545:G:H5"	1.79	0.64
1:0:2837:U:H2'	37:0:6230:HOH:O	1.97	0.64
29:Z:25:LYS:HD2	30:1:49:GLU:H	1.62	0.64
2:9:3040:C:N4	7:D:51:ARG:HB2	2.11	0.64
1:0:2241:C:H2'	1:0:2242:U:H6	1.62	0.64
11:H:84:ARG:NH2	11:H:135:TRP:HH2	1.95	0.64
13:J:10:GLN:HE21	13:J:10:GLN:N	1.95	0.64
27:X:107:PRO:HB3	27:X:182:PHE:CE2	2.32	0.64
7:D:99:ASP:HB3	7:D:103:ASN:H	1.60	0.64
27:X:149:GLN:NE2	37:X:8607:HOH:O	2.29	0.64
1:0:1015:C:H2'	1:0:1016:U:H6	1.61	0.64
14:K:104:ASP:O	14:K:105:TYR:HB3	1.97	0.64
13:J:10:GLN:N	13:J:10:GLN:NE2	2.41	0.64
7:D:146:LYS:NZ	16:M:107:ASN:ND2	2.45	0.64
1:0:545:G:C8	1:0:545:G:H5'	2.31	0.64
27:X:107:PRO:HB3	27:X:182:PHE:CD2	2.33	0.64
7:D:64:ARG:CD	7:D:67:ASP:HB3	2.27	0.64
1:0:1120:U:H6	1:0:1120:U:H5"	1.62	0.64
30:1:40:ARG:HG3	30:1:45:ASN:CB	2.28	0.64
26:W:85:VAL:HG12	26:W:86:GLU:N	2.12	0.64
1:0:2768:A:H2'	1:0:2769:C:O4'	1.96	0.64
1:0:2719:A:C2	5:B:70:PRO:HG3	2.33	0.64
1:0:2326:U:H4'	1:0:2412:G:H4'	1.79	0.64
11:H:150:LYS:HE2	37:H:8368:HOH:O	1.96	0.64
1:0:1209:C:H4'	37:0:4724:HOH:O	1.96	0.64
25:V:110:GLN:NE2	25:V:110:GLN:HA	2.13	0.64
5:B:55:ASN:HB3	5:B:63:GLU:HA	1.79	0.64
1:0:138:U:H5"	1:0:139:C:OP2	1.98	0.64
11:H:46:VAL:HG12	11:H:146:TRP:HZ3	1.63	0.64
20:Q:104:PHE:HB2	20:Q:109:MET:HE1	1.80	0.64
8:E:15:GLN:HG3	8:E:20:ILE:HG12	1.78	0.64
26:W:25:ARG:NH1	37:W:3861:HOH:O	2.30	0.64
17:N:14:LEU:HD23	17:N:102:ILE:HD11	1.79	0.64
1:0:2594:C:O2'	1:0:2595:U:H5'	1.98	0.64
16:M:164:ASP:CG	16:M:167:ASP:HA	2.18	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:55:GLN:HA	14:K:58:GLN:NE2	2.11	0.64
16:M:37:ARG:NE	37:M:3863:HOH:O	2.31	0.64
11:H:26:LYS:HD2	11:H:28:ILE:HB	1.78	0.64
11:H:26:LYS:HD3	11:H:89:PRO:HG3	1.80	0.64
10:G:16:LYS:O	10:G:20:VAL:HG23	1.97	0.64
4:A:191:GLY:HA2	4:A:194:MET:HE3	1.78	0.64
11:H:136:VAL:HG22	11:H:137:ASN:O	1.97	0.64
27:X:141:THR:HG23	37:X:8591:HOH:O	1.98	0.64
18:O:27:ARG:HA	37:O:3969:HOH:O	1.96	0.64
23:T:37:GLU:HB3	37:T:408:HOH:O	1.96	0.64
11:H:44:ALA:HA	11:H:163:PRO:O	1.98	0.64
1:0:1164:U:C4'	1:0:1165:G:OP1	2.46	0.64
37:0:6799:HOH:O	22:S:9:LYS:HB2	1.96	0.64
25:V:88:THR:HG22	25:V:89:ASP:N	2.13	0.64
1:0:1362:U:H5'	37:0:9756:HOH:O	1.98	0.64
1:0:272:A:H5'	1:0:273:G:OP2	1.98	0.64
1:0:2486:A:H1'	3:4:76:A:H2'	1.80	0.64
17:N:47:ARG:HH11	17:N:47:ARG:HG3	1.62	0.64
1:0:419:A:H1'	1:0:1921:A:C2	2.32	0.64
31:2:75:GLY:HA2	37:2:8547:HOH:O	1.97	0.64
5:B:264:GLU:HG2	5:B:267:LYS:HE2	1.79	0.64
15:L:164:THR:CG2	15:L:165:SER:N	2.57	0.63
1:0:1008:C:H5"	11:H:16:ARG:HH12	1.63	0.63
24:U:12:THR:CG2	24:U:15:GLU:HG3	2.19	0.63
25:V:84:VAL:HG12	37:V:6679:HOH:O	1.98	0.63
1:0:814:G:H4'	37:0:9624:HOH:O	1.98	0.63
1:0:660:A:H4'	1:0:661:G:O5'	1.98	0.63
1:0:1130:U:H5'	37:0:7046:HOH:O	1.98	0.63
30:1:40:ARG:HA	30:1:45:ASN:ND2	2.13	0.63
16:M:22:GLN:HG2	16:M:26:LEU:HD22	1.79	0.63
1:0:506:G:N2	1:0:508:A:H3'	2.13	0.63
1:0:1535:G:H2'	1:0:1536:C:C6	2.33	0.63
12:I:45:VAL:HG23	12:I:130:VAL:O	1.98	0.63
26:W:78:GLU:HG2	26:W:79:GLU:N	2.12	0.63
25:V:5:VAL:HG22	25:V:32:CYS:HB2	1.78	0.63
9:F:99:THR:HG23	9:F:99:THR:O	1.99	0.63
23:T:47:ARG:HG3	37:T:4381:HOH:O	1.97	0.63
1:0:1213:C:O2'	1:0:1214:G:H5'	1.98	0.63
14:K:53:ARG:NH2	14:K:57:VAL:HG12	2.14	0.63
16:M:61:ALA:HB3	16:M:88:ALA:HB2	1.80	0.63
11:H:33:MET:HB2	11:H:83:PHE:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:962:C:H5"	37:0:4368:HOH:O	1.98	0.63
1:0:656:G:H1'	37:0:6667:HOH:O	1.98	0.63
20:Q:119:VAL:HG21	20:Q:142:ASP:CG	2.19	0.63
1:0:2361:A:H2'	1:0:2362:A:C8	2.33	0.63
1:0:67:A:H5"	1:0:69:A:C8	2.34	0.63
29:Z:12:ASN:HB3	37:Z:8449:HOH:O	1.97	0.63
11:H:55:GLN:NE2	11:H:124:ARG:HE	1.92	0.63
1:0:1205:U:C2'	1:0:1206:U:H5"	2.29	0.63
2:9:3006:C:C5'	16:M:37:ARG:NH1	2.61	0.63
37:0:3245:HOH:O	22:S:9:LYS:HB2	1.99	0.63
17:N:32:ARG:HD3	17:N:32:ARG:O	1.97	0.63
12:I:93:ARG:NH1	12:I:93:ARG:HB3	2.12	0.63
8:E:116:THR:HG22	8:E:151:LEU:HD22	1.80	0.63
15:L:104:ARG:O	15:L:108:LYS:HE2	1.99	0.63
30:1:40:ARG:HG2	30:1:40:ARG:HH11	1.64	0.63
6:C:76:ARG:HD2	37:C:8430:HOH:O	1.99	0.63
18:O:13:VAL:HG11	18:O:40:VAL:HG11	1.81	0.63
4:A:170:VAL:HG22	28:Y:22:ILE:HG23	1.79	0.63
1:0:2816:A:H3'	37:0:5166:HOH:O	1.99	0.63
28:Y:42:CYS:SG	28:Y:44:PHE:HB2	2.38	0.63
5:B:162:MET:HG3	5:B:310:ARG:HD3	1.80	0.63
1:0:1205:U:H2'	1:0:1206:U:H5"	1.81	0.63
22:S:106:GLU:HG3	37:S:4913:HOH:O	1.98	0.63
1:0:684:G:H5"	37:0:3542:HOH:O	1.99	0.63
15:L:64:ARG:HD2	37:L:8584:HOH:O	1.99	0.63
7:D:163:VAL:HA	37:D:6326:HOH:O	1.97	0.62
37:0:4425:HOH:O	11:H:57:ARG:HG3	1.99	0.62
22:S:32:ARG:NH1	22:S:38:ARG:NH1	2.47	0.62
1:0:1206:U:C6	1:0:1206:U:H5'	2.34	0.62
1:0:1874:U:H2'	4:A:120:ARG:HG3	1.78	0.62
6:C:104:ASP:HA	6:C:107:ARG:HH12	1.63	0.62
25:V:1:MET:HB2	25:V:103:GLU:HG2	1.81	0.62
1:0:513:A:N3	37:0:3150:HOH:O	2.31	0.62
20:Q:132:ARG:HG2	20:Q:133:ALA:N	2.14	0.62
26:W:25:ARG:HD3	26:W:64:ALA:O	1.99	0.62
1:0:2254:G:H1'	37:0:4974:HOH:O	1.98	0.62
5:B:145:HIS:HD2	5:B:146:THR:O	1.81	0.62
4:A:100:PRO:HG2	4:A:103:VAL:HG21	1.79	0.62
1:0:2276:U:H2'	1:0:2277:U:H6	1.63	0.62
1:0:638:C:H2'	1:0:639:A:C8	2.34	0.62
21:R:51:GLN:HE21	21:R:53:ASN:ND2	1.95	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2547:C:OP2	5:B:5:ARG:NH1	2.32	0.62
1:0:20:G:H21	20:Q:117:HIS:HD2	1.47	0.62
22:S:71:VAL:HG11	22:S:90:PRO:CB	2.24	0.62
11:H:49:VAL:O	11:H:157:ILE:HG23	2.00	0.62
16:M:71:TRP:CE3	16:M:175:LEU:HD22	2.35	0.62
1:0:558:C:H2'	1:0:559:U:C5'	2.29	0.62
29:Z:25:LYS:O	29:Z:25:LYS:HG2	1.99	0.62
23:T:47:ARG:CG	37:T:4381:HOH:O	2.48	0.62
27:X:130:ARG:HB2	27:X:142:SER:O	2.00	0.62
20:Q:29:LYS:HB3	37:Q:8534:HOH:O	2.00	0.62
7:D:97:GLN:O	7:D:97:GLN:HG2	1.99	0.62
12:I:75:PRO:HG2	12:I:105:LEU:HD21	1.81	0.62
1:0:1596:U:H2'	1:0:1598:A:OP2	1.99	0.62
15:L:39:ARG:HA	15:L:63:VAL:HG22	1.82	0.62
15:L:74:ARG:NH1	15:L:74:ARG:HG3	2.11	0.62
1:0:2533:C:C6	1:0:2533:C:H5'	2.34	0.62
1:0:213:G:H1'	1:0:214:U:OP2	1.99	0.62
37:A:8606:HOH:O	28:Y:75:ALA:HB3	1.99	0.62
7:D:140:ARG:O	7:D:144:ARG:HG2	2.00	0.62
1:0:1733:A:H4'	5:B:212:GLN:HA	1.80	0.62
7:D:50:VAL:O	7:D:71:ALA:HA	2.00	0.62
18:O:38:GLU:HA	18:O:41:ARG:NH1	2.15	0.62
28:Y:61:GLY:HA3	37:Y:8423:HOH:O	1.99	0.62
5:B:82:VAL:O	5:B:82:VAL:HG12	1.98	0.62
6:C:233:THR:HG22	6:C:234:VAL:N	2.14	0.62
1:0:871:G:C8	1:0:871:G:C5'	2.76	0.62
1:0:1187:U:O2'	1:0:1189:A:H2	1.83	0.62
28:Y:57:CYS:SG	28:Y:59:HIS:HB3	2.40	0.62
15:L:60:ILE:C	15:L:61:ILE:HD12	2.19	0.62
15:L:61:ILE:N	15:L:61:ILE:HD12	2.14	0.62
25:V:122:ARG:HH22	25:V:154:ARG:C	2.03	0.62
37:0:3138:HOH:O	17:N:3:THR:HG21	2.00	0.62
8:E:101:GLU:HB2	8:E:116:THR:O	1.99	0.62
21:R:37:VAL:O	21:R:41:VAL:HG23	2.00	0.62
6:C:115:LEU:O	6:C:118:THR:HB	2.00	0.62
1:0:2637:A:C5'	1:0:2638:G:H5'	2.29	0.62
11:H:26:LYS:HG2	11:H:28:ILE:N	2.15	0.62
12:I:107:ASN:HD22	12:I:107:ASN:C	2.02	0.62
11:H:75:SER:O	11:H:79:ALA:HB2	2.00	0.62
31:2:11:CYS:HB2	31:2:20:HIS:CE1	2.35	0.62
16:M:180:LEU:O	16:M:181:ASP:HB3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:184:ILE:HG22	16:M:185:GLU:HG3	1.80	0.62
2:9:3114:G:O6	16:M:11:ARG:HD3	2.00	0.62
16:M:12:ARG:HD3	16:M:18:THR:OG1	1.99	0.62
14:K:90:ARG:NH2	14:K:121:ILE:HD11	2.15	0.62
1:0:189:A:OP1	15:L:171:ARG:NH2	2.33	0.61
1:0:1450:C:O2'	1:0:1494:A:H5'	1.99	0.61
16:M:154:LEU:HD11	16:M:157:PRO:HA	1.81	0.61
28:Y:62:TYR:CE2	28:Y:64:ILE:HG23	2.35	0.61
6:C:129:HIS:HE1	6:C:231:ARG:HA	1.63	0.61
1:0:1634:G:H3'	37:0:3377:HOH:O	1.97	0.61
17:N:49:GLU:HG2	37:N:5191:HOH:O	2.00	0.61
6:C:25:PRO:HA	37:C:8356:HOH:O	2.00	0.61
1:0:1688:G:H4'	29:Z:8:GLN:HG3	1.81	0.61
18:O:16:VAL:HG12	18:O:17:GLY:N	2.15	0.61
1:0:820:G:H5'	1:0:821:U:H5'	1.81	0.61
37:0:5867:HOH:O	5:B:27:ASN:HB3	1.99	0.61
16:M:164:ASP:OD2	16:M:167:ASP:HA	1.99	0.61
1:0:2001:G:O2'	1:0:2002:C:H5'	2.00	0.61
1:0:280:C:H2'	1:0:281:U:O4'	2.00	0.61
1:0:281:U:H2'	1:0:282:C:O4'	1.99	0.61
7:D:99:ASP:CB	7:D:103:ASN:H	2.13	0.61
4:A:131:HIS:O	4:A:132:ASP:HB2	1.99	0.61
6:C:1:MET:HG2	6:C:2:GLN:NE2	2.15	0.61
1:0:263:U:O4'	9:F:59:ILE:HD13	2.00	0.61
1:0:558:C:C2'	1:0:559:U:H5"	2.31	0.61
2:9:3043:G:H5'	37:9:8410:HOH:O	2.00	0.61
1:0:2768:A:O2'	1:0:2769:C:H5'	2.01	0.61
1:0:1657:A:H2'	1:0:1658:A:C8	2.34	0.61
13:J:14:LYS:HB2	13:J:45:PRO:CG	2.25	0.61
26:W:15:ARG:HH11	26:W:15:ARG:CB	2.13	0.61
16:M:119:GLN:O	16:M:123:ILE:HG13	2.00	0.61
1:0:1636:G:O2'	1:0:1637:A:H5'	2.00	0.61
37:0:5695:HOH:O	27:X:158:LYS:HD3	1.99	0.61
1:0:2578:G:H5'	1:0:2578:G:H8	1.65	0.61
1:0:2320:U:H4'	1:0:2321:A:O4'	2.00	0.61
15:L:30:GLU:O	15:L:34:GLU:HG3	1.99	0.61
25:V:65:VAL:HA	25:V:68:THR:HG22	1.82	0.61
1:0:1909:A:N1	1:0:2128:G:H1'	2.16	0.61
4:A:211:LYS:NZ	37:A:8565:HOH:O	2.33	0.61
1:0:514:G:O5'	1:0:514:G:H8	1.84	0.61
1:0:1418:U:OP1	30:1:42:TRP:HB3	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:155:HIS:CE1	15:L:158:ARG:HE	2.17	0.61
6:C:163:HIS:HD2	37:C:8435:HOH:O	1.82	0.61
7:D:69:ILE:HG22	7:D:69:ILE:O	1.99	0.61
6:C:78:ARG:HG3	6:C:78:ARG:NH1	2.16	0.61
2:9:3029:C:H2'	2:9:3030:C:H5'	1.82	0.61
37:0:4957:HOH:O	5:B:298:LYS:HD3	2.00	0.61
1:0:1711:A:O2'	1:0:1712:A:H5'	2.00	0.61
15:L:87:MET:HB2	15:L:91:ILE:CD1	2.28	0.61
11:H:26:LYS:CG	11:H:28:ILE:H	2.14	0.61
1:0:2415:A:N3	16:M:26:LEU:HD13	2.16	0.61
4:A:109:GLU:HG2	4:A:116:GLY:N	2.15	0.61
15:L:37:VAL:HG21	15:L:108:LYS:CG	2.29	0.61
7:D:25:MET:HE1	7:D:37:ALA:HB1	1.83	0.61
27:X:189:ASN:HB2	37:X:8525:HOH:O	2.00	0.61
1:0:1751:G:C2'	1:0:1752:G:H5"	2.29	0.61
8:E:7:ILE:HD11	8:E:11:VAL:C	2.22	0.61
24:U:56:ILE:O	24:U:60:GLN:HG3	2.01	0.61
37:0:6164:HOH:O	16:M:4:PRO:HD2	2.00	0.61
11:H:150:LYS:HG2	37:H:8368:HOH:O	1.99	0.61
1:0:902:G:N7	14:K:18:HIS:CD2	2.69	0.61
22:S:47:THR:HB	22:S:100:ASP:HB3	1.83	0.61
11:H:58:HIS:HA	11:H:61:LEU:HD23	1.83	0.60
26:W:43:VAL:HG12	26:W:44:ASP:N	2.15	0.60
1:0:1641:A:H2'	1:0:1642:A:H5'	1.82	0.60
1:0:2786:G:H2'	37:0:6575:HOH:O	2.00	0.60
7:D:22:VAL:HG22	7:D:74:THR:HG22	1.81	0.60
1:0:1299:G:O6	14:K:6:ARG:HD3	2.01	0.60
1:0:1654:U:H2'	4:A:47:HIS:HD2	1.66	0.60
27:X:189:ASN:ND2	27:X:192:ASP:H	1.99	0.60
23:T:52:THR:CG2	23:T:54:THR:HB	2.31	0.60
18:O:27:ARG:O	18:O:31:ILE:HG13	2.00	0.60
1:0:1759:A:N7	37:0:9064:HOH:O	2.31	0.60
26:W:18:ARG:NH1	37:W:4132:HOH:O	2.26	0.60
1:0:539:G:H2'	1:0:540:A:C8	2.36	0.60
6:C:140:VAL:HB	37:C:8446:HOH:O	2.01	0.60
13:J:109:LEU:HD13	13:J:113:ILE:HD11	1.82	0.60
11:H:26:LYS:HD2	11:H:28:ILE:CG1	2.30	0.60
1:0:1741:U:O2'	1:0:2723:G:H4'	2.01	0.60
7:D:136:ARG:HD2	7:D:155:HIS:O	2.01	0.60
2:9:3114:G:H2'	2:9:3115:C:C6	2.37	0.60
9:F:21:GLU:O	9:F:24:ARG:HG3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:110:GLU:O	9:F:114:LYS:HG3	2.01	0.60
9:F:58:GLU:OE1	15:L:27:ARG:NH2	2.30	0.60
26:W:9:VAL:HG13	26:W:88:GLU:OE2	2.01	0.60
1:0:2346:C:H6	1:0:2346:C:O5'	1.85	0.60
8:E:31:ARG:HH12	8:E:68:HIS:CE1	2.19	0.60
5:B:146:THR:O	5:B:159:PRO:HB3	2.00	0.60
11:H:166:ASN:HD22	11:H:166:ASN:N	1.99	0.60
1:0:1441:G:O2'	1:0:1442:A:H5'	2.00	0.60
11:H:26:LYS:CD	11:H:28:ILE:HB	2.31	0.60
11:H:57:ARG:HG3	11:H:57:ARG:HH11	1.67	0.60
26:W:85:VAL:HG12	26:W:86:GLU:H	1.67	0.60
4:A:105:VAL:HG11	4:A:154:ALA:HB1	1.82	0.60
1:0:1268:C:H2'	1:0:1269:G:H8	1.67	0.60
1:0:1278:A:H4'	1:0:1279:U:C4	2.37	0.60
17:N:21:SER:OG	17:N:106:PRO:HB2	2.02	0.60
7:D:23:VAL:HG22	7:D:73:VAL:HB	1.82	0.60
7:D:51:ARG:HD3	37:D:7636:HOH:O	2.01	0.60
1:0:2755:G:H1'	37:0:4138:HOH:O	2.01	0.60
1:0:1353:C:P	37:0:4134:HOH:O	2.58	0.60
1:0:282:C:O2'	1:0:283:U:H5'	2.01	0.60
21:R:32:ALA:HA	21:R:36:GLU:OE1	2.01	0.60
1:0:793:A:H5"	18:O:83:LYS:HG2	1.83	0.60
6:C:35:VAL:HG21	6:C:227:GLY:HA2	1.82	0.60
20:Q:18:LEU:HD12	20:Q:143:VAL:HG11	1.83	0.60
13:J:32:ILE:HD11	13:J:56:SER:HB3	1.83	0.60
25:V:65:VAL:HG12	25:V:116:LEU:HD13	1.84	0.60
28:Y:19:GLY:O	28:Y:23:ARG:HG2	2.02	0.60
1:0:2748:G:H5'	37:0:6698:HOH:O	2.00	0.60
7:D:135:VAL:HG21	7:D:139:TYR:CD1	2.37	0.60
1:0:661:G:C5	1:0:686:A:C2	2.89	0.60
1:0:1130:U:H2'	1:0:1131:G:O4'	2.01	0.60
1:0:2304:G:H5'	37:0:9861:HOH:O	2.01	0.60
37:0:5059:HOH:O	5:B:2:GLN:HG3	2.02	0.60
11:H:71:TYR:C	11:H:73:GLN:H	2.05	0.60
4:A:16:PHE:HB3	37:A:8548:HOH:O	2.02	0.60
9:F:37:THR:O	9:F:41:GLU:HG3	2.02	0.60
7:D:146:LYS:HZ1	16:M:107:ASN:HD21	1.47	0.60
1:0:1667:A:H5'	1:0:1667:A:C8	2.34	0.60
5:B:62:ARG:HA	5:B:65:MET:CE	2.31	0.60
17:N:47:ARG:HB2	37:N:6739:HOH:O	2.01	0.60
9:F:100:ASP:O	9:F:101:ALA:O	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:107:VAL:HG23	37:F:6617:HOH:O	2.01	0.60
2:9:3039:U:H1'	2:9:3044:A:N6	2.16	0.60
1:0:2769:C:O2'	1:0:2770:G:H5'	2.02	0.60
16:M:34:LEU:HD13	16:M:47:LEU:HD21	1.83	0.59
16:M:83:LEU:HD13	16:M:175:LEU:HD23	1.84	0.59
27:X:99:ALA:HB2	27:X:233:TYR:CE2	2.37	0.59
4:A:95:PRO:HG2	4:A:98:GLU:HG2	1.84	0.59
28:Y:13:ARG:NH1	28:Y:14:PHE:CE2	2.70	0.59
1:0:564:G:H1'	37:0:5720:HOH:O	2.01	0.59
1:0:2443:C:H3'	37:0:9959:HOH:O	2.00	0.59
25:V:141:HIS:HB2	25:V:146:ILE:HG12	1.84	0.59
26:W:37:LEU:CD1	26:W:85:VAL:HG21	2.31	0.59
4:A:94:LEU:N	4:A:94:LEU:HD23	2.17	0.59
4:A:94:LEU:HG	4:A:99:ILE:HD11	1.85	0.59
25:V:137:GLN:HE21	25:V:141:HIS:HE1	1.48	0.59
14:K:17:SER:C	14:K:19:LYS:H	2.06	0.59
22:S:48:VAL:CG2	22:S:98:VAL:HA	2.32	0.59
6:C:127:ARG:HH11	6:C:127:ARG:HG2	1.66	0.59
1:0:1118:A:C3'	1:0:1118:A:C8	2.84	0.59
21:R:53:ASN:ND2	37:R:2190:HOH:O	2.34	0.59
17:N:44:ASN:OD1	17:N:65:LEU:HB2	2.03	0.59
12:I:17:CYS:HA	12:I:119:THR:O	2.01	0.59
1:0:1477:C:H5'	1:0:1868:G:H5"	1.82	0.59
22:S:38:ARG:HG3	22:S:38:ARG:HH11	1.67	0.59
1:0:558:C:H2'	1:0:559:U:H5'	1.84	0.59
1:0:1675:C:H3'	37:0:7180:HOH:O	2.03	0.59
1:0:657:G:H2'	1:0:658:C:H6	1.65	0.59
1:0:349:U:O2'	1:0:350:C:H5'	2.02	0.59
11:H:86:ARG:NH1	11:H:130:HIS:CD2	2.70	0.59
2:9:3022:G:O2'	2:9:3024:U:H5'	2.02	0.59
12:I:80:LYS:HE2	12:I:98:PHE:CZ	2.37	0.59
1:0:1191:A:C3'	1:0:1192:A:H5"	2.32	0.59
15:L:138:HIS:ND1	15:L:139:PRO:O	2.29	0.59
29:Z:25:LYS:HE2	37:1:7213:HOH:O	2.02	0.59
5:B:24:PRO:O	5:B:25:ARG:HD3	2.02	0.59
26:W:14:LEU:HD12	26:W:67:PRO:O	2.02	0.59
24:U:64:GLY:O	24:U:65:ASP:HB2	2.02	0.59
7:D:95:THR:O	7:D:97:GLN:N	2.29	0.59
1:0:88:G:H5'	1:0:88:G:H8	1.68	0.59
1:0:2694:A:H4'	8:E:91:PHE:CE1	2.37	0.59
5:B:258:GLY:H	5:B:260:HIS:CE1	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:797:A:H4'	28:Y:10:ARG:N	2.17	0.59
16:M:93:GLN:HG2	37:M:6239:HOH:O	2.02	0.59
1:0:2420:G:O2'	1:0:2421:G:H5'	2.03	0.59
1:0:645:U:OP2	14:K:4:LYS:HE2	2.03	0.59
1:0:328:U:O4'	6:C:202:THR:HG22	2.03	0.59
11:H:27:LYS:H	11:H:58:HIS:CD2	2.14	0.59
1:0:553:G:P	27:X:204:ARG:HH22	2.25	0.59
20:Q:47:LEU:O	20:Q:51:ILE:HG13	2.02	0.59
22:S:26:THR:HA	22:S:39:ASN:HB3	1.85	0.59
25:V:38:THR:O	25:V:42:ARG:HB2	2.02	0.59
20:Q:39:THR:HB	20:Q:42:GLU:CD	2.23	0.59
1:0:820:G:O2'	1:0:856:G:H4'	2.03	0.59
25:V:65:VAL:CG1	25:V:116:LEU:HD13	2.33	0.59
12:I:39:VAL:HG12	12:I:40:ASN:ND2	2.18	0.59
5:B:279:THR:OG1	5:B:290:VAL:HB	2.03	0.59
1:0:657:G:H2'	1:0:658:C:C6	2.38	0.59
1:0:2783:A:H3'	37:0:4676:HOH:O	2.02	0.59
5:B:56:ASP:OD1	5:B:322:ARG:HB3	2.03	0.59
28:Y:53:GLY:HA2	28:Y:67:GLY:O	2.03	0.59
12:I:52:GLN:HG3	12:I:53:ILE:H	1.67	0.58
16:M:115:VAL:HG22	37:M:5851:HOH:O	2.03	0.58
1:0:1015:C:H2'	1:0:1016:U:C6	2.38	0.58
1:0:2769:C:C2'	1:0:2770:G:H5'	2.33	0.58
1:0:100:C:H4'	22:S:16:LEU:HB2	1.85	0.58
6:C:214:THR:HG21	37:C:8399:HOH:O	2.03	0.58
11:H:85:ILE:HB	11:H:132:PHE:CE2	2.38	0.58
1:0:284:C:H4'	1:0:285:A:O5'	2.02	0.58
5:B:62:ARG:HG2	5:B:65:MET:HE3	1.85	0.58
2:9:3078:G:N2	2:9:3103:A:OP2	2.33	0.58
17:N:41:ALA:HA	37:N:5104:HOH:O	2.03	0.58
28:Y:28:ASP:O	28:Y:31:ILE:HG22	2.03	0.58
12:I:47:THR:CB	37:I:3661:HOH:O	2.51	0.58
6:C:95:GLU:HG3	37:C:8469:HOH:O	2.03	0.58
15:L:52:LEU:HD13	15:L:116:ASN:HB3	1.85	0.58
11:H:65:ARG:HB3	37:H:8370:HOH:O	2.01	0.58
4:A:36:ASP:HA	4:A:83:GLY:HA3	1.86	0.58
1:0:2363:G:O2'	19:P:11:ARG:HG3	2.03	0.58
11:H:123:ALA:HA	37:H:8310:HOH:O	2.02	0.58
1:0:157:G:H4'	15:L:95:LYS:CE	2.32	0.58
1:0:1589:G:H22	1:0:1605:G:H1'	1.67	0.58
28:Y:33:HIS:HE1	28:Y:49:ARG:NE	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:63:ILE:HD11	22:S:75:GLU:HB2	1.84	0.58
19:P:25:PRO:HB2	37:P:4350:HOH:O	2.02	0.58
1:0:1393:A:H2'	1:0:1394:C:C6	2.38	0.58
1:0:2435:U:H1'	37:0:4868:HOH:O	2.03	0.58
21:R:6:LYS:HB2	21:R:27:ALA:O	2.02	0.58
37:0:4002:HOH:O	11:H:151:MET:HE2	2.02	0.58
4:A:192:VAL:CG1	4:A:207:GLN:HB3	2.31	0.58
25:V:80:ASP:O	25:V:84:VAL:HG23	2.02	0.58
28:Y:29:VAL:O	28:Y:33:HIS:HB2	2.04	0.58
6:C:27:ARG:HG3	6:C:29:ASP:OD1	2.03	0.58
16:M:78:MET:HB2	16:M:79:PRO:HD3	1.85	0.58
1:0:1003:U:O2	11:H:90:PHE:HZ	1.85	0.58
15:L:52:LEU:HD21	37:L:8617:HOH:O	2.02	0.58
1:0:2241:C:O2'	1:0:2242:U:H5'	2.04	0.58
10:G:64:ASN:N	10:G:64:ASN:HD22	2.02	0.58
37:0:3945:HOH:O	18:O:37:ARG:HB2	2.03	0.58
1:0:2672:C:H1'	37:B:8633:HOH:O	2.04	0.58
17:N:113:VAL:O	17:N:114:ILE:HD13	2.04	0.58
27:X:155:ARG:NH1	37:X:8558:HOH:O	2.37	0.58
1:0:2468:A:H61	31:2:48:ASN:HD21	1.52	0.58
1:0:1348:A:H3'	37:0:3275:HOH:O	2.02	0.58
1:0:346:U:H4'	37:0:6234:HOH:O	2.02	0.58
28:Y:50:ALA:HB3	28:Y:54:ILE:HG22	1.86	0.58
20:Q:39:THR:CG2	20:Q:42:GLU:HG3	2.34	0.58
1:0:542:A:H1'	37:0:4132:HOH:O	2.03	0.58
25:V:88:THR:HG23	25:V:110:GLN:HB3	1.84	0.58
10:G:71:LEU:C	10:G:73:ASP:H	2.07	0.58
14:K:133:VAL:HB	37:K:8557:HOH:O	2.03	0.58
11:H:139:ASP:HB2	37:H:8334:HOH:O	2.03	0.58
20:Q:39:THR:HB	20:Q:42:GLU:CG	2.33	0.58
30:1:41:HIS:H	30:1:45:ASN:ND2	2.00	0.58
7:D:95:THR:C	7:D:97:GLN:H	2.07	0.58
1:0:1003:U:O2	11:H:90:PHE:CZ	2.57	0.58
17:N:73:ASP:HA	17:N:92:VAL:O	2.03	0.58
1:0:1766:U:O2	1:0:1778:A:H5'	2.04	0.58
15:L:106:ASN:ND2	35:L:8518:CL:CL	2.74	0.58
1:0:31:C:OP2	22:S:8:ARG:HD2	2.04	0.58
25:V:6:GLN:HB2	25:V:26:ILE:CD1	2.31	0.58
1:0:1667:A:H2'	1:0:1668:U:C6	2.38	0.58
1:0:656:G:OP2	17:N:37:ARG:HD2	2.04	0.58
1:0:2694:A:H4'	8:E:91:PHE:HE1	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:P:93:ARG:HG3	19:P:93:ARG:HH11	1.68	0.58
1:0:2904:U:H4'	26:W:8:ARG:NH1	2.19	0.58
23:T:20:MET:HE2	37:T:7438:HOH:O	2.03	0.58
8:E:86:VAL:CG1	8:E:129:GLU:HA	2.34	0.58
11:H:150:LYS:HB2	11:H:157:ILE:HD12	1.86	0.58
1:0:1185:U:H5'	37:0:6843:HOH:O	2.03	0.58
16:M:71:TRP:HE3	16:M:175:LEU:HD22	1.68	0.58
28:Y:46:LYS:O	28:Y:57:CYS:HA	2.04	0.58
23:T:17:THR:HG22	23:T:18:GLY:N	2.19	0.58
4:A:109:GLU:HG2	4:A:116:GLY:H	1.68	0.58
6:C:214:THR:HG23	37:C:8434:HOH:O	2.04	0.58
8:E:32:ARG:O	8:E:33:LEU:HD23	2.03	0.58
5:B:315:VAL:HG23	5:B:316:ARG:HG2	1.86	0.57
25:V:149:LEU:HG	25:V:153:MET:CE	2.32	0.57
14:K:148:GLU:HG3	37:K:8552:HOH:O	2.03	0.57
16:M:24:LEU:O	16:M:28:LYS:HG2	2.04	0.57
1:0:1687:C:O2	29:Z:9:GLY:HA2	2.04	0.57
13:J:32:ILE:CD1	13:J:56:SER:HB3	2.34	0.57
1:0:1942:A:O2'	1:0:1943:C:H5'	2.05	0.57
19:P:26:PRO:HG3	37:P:2847:HOH:O	2.05	0.57
1:0:2365:G:H4'	19:P:45:PRO:O	2.03	0.57
28:Y:38:LYS:HE2	28:Y:45:LYS:CE	2.33	0.57
4:A:153:ARG:CB	4:A:153:ARG:HH11	2.17	0.57
15:L:133:LEU:O	15:L:134:ILE:HD13	2.03	0.57
1:0:2326:U:H4'	1:0:2412:G:C4'	2.35	0.57
1:0:547:A:H3'	37:0:4398:HOH:O	2.05	0.57
37:0:6796:HOH:O	15:L:154:ARG:HD3	2.02	0.57
1:0:2472:C:O2'	1:0:2634:G:H4'	2.04	0.57
11:H:147:ARG:HA	11:H:150:LYS:HZ2	1.70	0.57
2:9:3044:A:O4'	7:D:76:ARG:NE	2.38	0.57
22:S:61:GLU:HG3	37:S:3851:HOH:O	2.04	0.57
17:N:4:ASN:HB3	17:N:7:LEU:HB3	1.86	0.57
30:1:22:PRO:HG2	30:1:25:VAL:HG23	1.86	0.57
1:0:1377:C:H6	1:0:1377:C:H5'	1.68	0.57
7:D:170:TYR:O	7:D:171:ASP:HB3	2.04	0.57
1:0:1422:U:H2'	1:0:1423:C:C6	2.39	0.57
2:9:3004:G:O2'	16:M:44:ARG:NH2	2.38	0.57
15:L:87:MET:HB3	31:2:46:ILE:HG21	1.86	0.57
1:0:2501:G:H1'	37:0:4002:HOH:O	2.03	0.57
16:M:152:GLU:C	16:M:154:LEU:H	2.06	0.57
4:A:105:VAL:CG1	4:A:154:ALA:HB1	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2769:C:H2'	1:0:2770:G:O4'	2.04	0.57
2:9:3069:U:OP1	16:M:4:PRO:HG3	2.05	0.57
1:0:1003:U:HO2'	11:H:90:PHE:HE1	1.51	0.57
1:0:1919:A:H4'	37:0:4303:HOH:O	2.05	0.57
4:A:135:VAL:HG21	4:A:147:ARG:NH1	2.18	0.57
1:0:1127:C:H2'	1:0:1128:U:H5'	1.86	0.57
1:0:447:A:OP1	22:S:2:LYS:HG2	2.04	0.57
6:C:236:THR:HA	37:C:8446:HOH:O	2.04	0.57
26:W:73:ARG:O	26:W:85:VAL:HG13	2.05	0.57
12:I:107:ASN:HD21	12:I:109:TYR:HB2	1.70	0.57
5:B:53:LEU:HD21	5:B:270:ILE:HD12	1.87	0.57
1:0:775:G:H1'	37:0:8832:HOH:O	2.05	0.57
1:0:1132:A:N6	1:0:1229:C:H2'	2.20	0.57
21:R:52:VAL:HG22	21:R:66:VAL:HG22	1.85	0.57
15:L:48:ARG:NH2	37:L:8559:HOH:O	2.37	0.57
1:0:1058:A:H2'	1:0:1060:C:H5"	1.87	0.57
8:E:3:VAL:HG22	8:E:49:ILE:HB	1.86	0.57
6:C:12:THR:HB	37:C:8437:HOH:O	2.05	0.57
15:L:38:VAL:O	15:L:63:VAL:HG13	2.04	0.57
12:I:19:MET:HE2	12:I:79:PHE:HA	1.85	0.57
26:W:78:GLU:CG	26:W:79:GLU:H	2.16	0.57
6:C:2:GLN:HB3	37:C:8337:HOH:O	2.03	0.57
5:B:280:VAL:CG1	5:B:334:SER:HA	2.35	0.57
1:0:2748:G:C5'	37:0:6698:HOH:O	2.52	0.57
1:0:2878:U:H2'	1:0:2879:A:O4'	2.04	0.57
1:0:1995:G:O2'	1:0:1997:A:N7	2.38	0.57
4:A:190:ARG:NH2	4:A:207:GLN:OE1	2.37	0.57
37:0:3045:HOH:O	15:L:152:ARG:HG3	2.04	0.57
18:O:13:VAL:HG11	18:O:40:VAL:CG1	2.35	0.57
1:0:512:G:O3'	1:0:513:A:H8	1.86	0.57
27:X:144:ARG:NH1	37:X:8577:HOH:O	2.36	0.57
1:0:2032:U:O2'	1:0:2033:G:H5"	2.04	0.57
1:0:1407:A:O2'	1:0:1408:U:H3'	2.05	0.57
1:0:1244:U:OP1	12:I:18:ILE:HD13	2.04	0.57
13:J:74:VAL:HG12	13:J:75:ARG:HG3	1.87	0.57
1:0:1874:U:OP1	4:A:51:ARG:HD2	2.03	0.57
14:K:104:ASP:HB2	37:K:8576:HOH:O	2.04	0.57
14:K:149:ARG:O	14:K:150:GLN:HB2	2.05	0.57
1:0:1653:A:N6	37:0:3737:HOH:O	2.36	0.57
1:0:136:C:H2'	1:0:137:U:O4'	2.04	0.57
4:A:161:GLY:O	28:Y:68:CYS:SG	2.56	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:106:ASN:ND2	8:E:109:GLY:HA2	2.19	0.57
4:A:179:MET:HG2	4:A:186:TRP:CB	2.35	0.57
14:K:122:ALA:HB3	14:K:125:PHE:CZ	2.40	0.57
11:H:130:HIS:CD2	11:H:133:ILE:HD11	2.40	0.57
1:0:182:G:O3'	15:L:157:LEU:CD1	2.53	0.57
37:0:6257:HOH:O	4:A:211:LYS:HD3	2.04	0.57
10:G:23:ILE:O	10:G:27:ILE:HG13	2.05	0.57
1:0:1625:U:H5"	37:0:5443:HOH:O	2.05	0.57
4:A:101:GLU:HG2	4:A:131:HIS:ND1	2.20	0.57
1:0:2269:C:C2'	1:0:2270:G:H5'	2.34	0.56
12:I:74:ARG:O	12:I:78:ILE:HG12	2.04	0.56
37:0:6359:HOH:O	24:U:4:HIS:HB3	2.05	0.56
1:0:461:C:H2'	37:0:3478:HOH:O	2.04	0.56
1:0:926:A:O2'	14:K:41:HIS:CD2	2.58	0.56
5:B:305:ASP:O	5:B:306:LYS:HB2	2.05	0.56
37:0:6266:HOH:O	15:L:178:LYS:HB2	2.05	0.56
1:0:629:A:C2	1:0:2074:A:C2	2.93	0.56
2:9:3030:C:OP1	7:D:137:PRO:O	2.23	0.56
17:N:79:VAL:HA	37:N:6810:HOH:O	2.05	0.56
1:0:407:A:H2'	1:0:408:A:C8	2.40	0.56
11:H:83:PHE:HZ	11:H:146:TRP:HE1	1.50	0.56
11:H:139:ASP:N	11:H:140:PRO:CD	2.67	0.56
5:B:42:ALA:HB1	5:B:308:LEU:HD11	1.85	0.56
10:G:12:ILE:N	10:G:13:PRO:CD	2.68	0.56
1:0:1666:C:C2'	1:0:1667:A:H5'	2.35	0.56
1:0:625:U:H5'	37:0:9677:HOH:O	2.05	0.56
1:0:1477:C:O2'	1:0:1478:U:H5'	2.04	0.56
1:0:657:G:OP1	6:C:27:ARG:NH2	2.28	0.56
37:0:5090:HOH:O	22:S:68:ASP:HB2	2.05	0.56
18:O:94:TRP:CZ2	18:O:98:ILE:HG13	2.41	0.56
1:0:2612:A:H4'	37:0:3173:HOH:O	2.05	0.56
6:C:236:THR:CG2	6:C:239:ALA:H	1.94	0.56
11:H:5:MET:N	37:H:8351:HOH:O	2.37	0.56
8:E:107:PHE:CD2	8:E:108:LEU:HD13	2.41	0.56
25:V:85:ALA:HB2	25:V:91:ASP:O	2.05	0.56
1:0:2463:A:H4'	1:0:2464:C:OP2	2.06	0.56
6:C:246:ARG:NH1	6:C:246:ARG:HB3	2.20	0.56
1:0:450:C:OP1	6:C:184:ARG:NH2	2.36	0.56
13:J:75:ARG:CZ	37:J:4172:HOH:O	2.53	0.56
1:0:2415:A:C2	16:M:25:ARG:HB3	2.41	0.56
25:V:13:MET:HE1	25:V:18:GLN:HA	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:20:GLU:CD	26:W:21:PRO:HD2	2.26	0.56
1:0:2419:U:H5"	1:0:2420:G:H5'	1.87	0.56
1:0:926:A:O2'	14:K:41:HIS:HD2	1.88	0.56
15:L:12:TRP:O	15:L:15:PRO:HD3	2.06	0.56
6:C:235:PHE:HE2	6:C:243:VAL:HG21	1.71	0.56
13:J:55:VAL:HG12	13:J:56:SER:H	1.70	0.56
1:0:1543:G:N1	1:0:1641:A:OP2	2.34	0.56
4:A:1:GLY:HA2	4:A:197:VAL:HG23	1.87	0.56
1:0:825:U:H5"	1:0:826:U:OP1	2.06	0.56
1:0:820:G:C6	4:A:171:LYS:HB2	2.40	0.56
1:0:1834:C:H2'	1:0:1840:A:H62	1.70	0.56
4:A:37:VAL:HG22	37:A:8590:HOH:O	2.06	0.56
1:0:2379:G:H4'	1:0:2380:A:H5"	1.88	0.56
37:0:9108:HOH:O	15:L:165:SER:HB3	2.06	0.56
5:B:320:GLN:HG3	5:B:321:PRO:HD2	1.88	0.56
8:E:7:ILE:HD11	8:E:11:VAL:O	2.05	0.56
5:B:36:PRO:HG3	5:B:168:GLY:HA3	1.88	0.56
2:9:3048:C:H4'	16:M:141:ARG:NH2	2.20	0.56
7:D:65:GLU:HG3	37:D:6752:HOH:O	2.06	0.56
22:S:55:PHE:CD2	22:S:77:VAL:HG13	2.41	0.56
7:D:21:VAL:HG13	7:D:131:THR:O	2.06	0.56
27:X:187:VAL:CG2	27:X:192:ASP:HB2	2.29	0.56
12:I:45:VAL:HG22	12:I:46:ILE:N	2.20	0.56
16:M:87:LEU:CD1	16:M:186:LEU:HD21	2.35	0.56
11:H:127:GLY:O	11:H:128:ALA:HB3	2.06	0.56
1:0:681:G:N3	1:0:681:G:H5'	2.21	0.56
11:H:163:PRO:O	11:H:164:ALA:HB2	2.06	0.56
11:H:151:MET:HE3	11:H:151:MET:HA	1.88	0.56
11:H:142:VAL:HG13	37:H:8366:HOH:O	2.05	0.56
1:0:2256:G:O2'	1:0:2257:G:H5'	2.05	0.56
4:A:57:ALA:HA	4:A:67:LEU:HD23	1.87	0.56
17:N:96:VAL:HG12	17:N:97:SER:O	2.06	0.56
16:M:132:ASN:O	16:M:135:VAL:HG12	2.06	0.56
1:0:1659:A:H2'	1:0:1660:G:O4'	2.05	0.56
25:V:60:GLU:O	25:V:63:GLU:HB2	2.06	0.56
11:H:47:GLU:HG2	11:H:133:ILE:HD12	1.86	0.55
1:0:1942:A:H3'	37:0:6726:HOH:O	2.06	0.55
16:M:48:VAL:HG11	16:M:55:ASP:HB3	1.88	0.55
7:D:11:HIS:O	7:D:12:GLU:HB3	2.06	0.55
1:0:935:G:H1'	37:0:6862:HOH:O	2.06	0.55
1:0:125:U:H2'	37:0:3255:HOH:O	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2083:A:N1	37:0:4588:HOH:O	2.33	0.55
1:0:1979:G:H2'	37:0:9786:HOH:O	2.06	0.55
1:0:1617:C:C4	1:0:1643:C:H4'	2.41	0.55
4:A:211:LYS:NZ	37:A:8612:HOH:O	2.39	0.55
5:B:41:PHE:CD1	5:B:79:MET:HE2	2.40	0.55
1:0:1654:U:H2'	4:A:47:HIS:CD2	2.41	0.55
4:A:87:GLU:HB3	37:A:8614:HOH:O	2.06	0.55
1:0:1381:A:H4'	1:0:1382:G:O5'	2.06	0.55
1:0:2734:G:H4'	37:0:9071:HOH:O	2.05	0.55
9:F:53:ASP:OD1	9:F:80:GLN:HB2	2.05	0.55
1:0:256:C:H2'	1:0:257:G:O4'	2.06	0.55
4:A:217:ARG:HG2	4:A:229:ALA:HB2	1.88	0.55
1:0:558:C:O2'	1:0:559:U:H5"	2.07	0.55
9:F:21:GLU:HA	9:F:24:ARG:HE	1.71	0.55
4:A:39:ALA:HB3	4:A:61:GLU:OE2	2.06	0.55
11:H:72:VAL:HG11	11:H:81:TYR:CZ	2.41	0.55
1:0:2323:G:H5'	37:0:6412:HOH:O	2.06	0.55
1:0:669:G:O2'	1:0:670:G:H5'	2.07	0.55
1:0:2070:G:H5"	37:0:3269:HOH:O	2.06	0.55
1:0:1230:A:H5'	37:0:6420:HOH:O	2.06	0.55
5:B:71:VAL:HG11	5:B:296:LEU:HB3	1.88	0.55
25:V:21:LEU:HD22	25:V:26:ILE:CD1	2.35	0.55
22:S:38:ARG:HG3	22:S:38:ARG:NH1	2.21	0.55
16:M:154:LEU:O	16:M:155:GLU:CB	2.55	0.55
1:0:1197:G:N2	37:0:5647:HOH:O	2.39	0.55
5:B:66:GLU:OE1	5:B:328:ARG:HD2	2.05	0.55
14:K:35:ARG:O	14:K:40:PHE:HA	2.06	0.55
1:0:1790:C:H2'	1:0:1791:U:H6	1.71	0.55
27:X:189:ASN:C	27:X:189:ASN:HD22	2.10	0.55
18:O:59:ARG:HH22	18:O:66:GLN:HE22	1.53	0.55
1:0:288:A:H61	1:0:364:C:H42	1.54	0.55
1:0:1857:A:N6	1:0:2247:C:H1'	2.22	0.55
1:0:2613:G:O2'	1:0:2614:C:H5'	2.06	0.55
1:0:2502:C:C2'	1:0:2503:A:H5'	2.35	0.55
1:0:111:C:H2'	1:0:112:G:O4'	2.07	0.55
1:0:212:A:O4'	1:0:214:U:C6	2.59	0.55
1:0:1423:C:O2'	1:0:1424:A:H5'	2.06	0.55
37:0:8596:HOH:O	5:B:214:PRO:HD2	2.05	0.55
1:0:1748:U:H4'	37:0:6898:HOH:O	2.06	0.55
25:V:90:TYR:CD1	25:V:90:TYR:N	2.74	0.55
1:0:2054:A:N3	20:Q:128:ARG:NH2	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:819:A:HO2'	1:0:821:U:H6	1.54	0.55
1:0:1174:A:C5	1:0:1201:C:H4'	2.41	0.55
30:1:40:ARG:HG3	30:1:45:ASN:HB3	1.87	0.55
14:K:145:LEU:HB2	37:K:8539:HOH:O	2.05	0.55
5:B:52:VAL:O	5:B:53:LEU:HD12	2.07	0.55
2:9:3064:C:C2'	2:9:3065:A:H5'	2.37	0.55
7:D:10:PHE:CG	7:D:11:HIS:N	2.75	0.55
2:9:3020:G:O2'	2:9:3021:G:H5'	2.07	0.55
8:E:84:MET:HB2	8:E:131:LEU:HB2	1.88	0.55
1:0:396:U:H1'	37:0:7004:HOH:O	2.06	0.55
17:N:15:LYS:O	17:N:18:ALA:N	2.40	0.55
1:0:1119:G:H22	1:0:1246:A:H2	1.50	0.55
1:0:797:A:C4'	28:Y:10:ARG:N	2.69	0.55
7:D:166:ILE:HD12	37:D:6326:HOH:O	2.06	0.55
1:0:1164:U:N3	1:0:1192:A:H2	2.02	0.55
1:0:338:C:H4'	6:C:174:ILE:HD12	1.89	0.55
18:O:38:GLU:HA	18:O:41:ARG:HH11	1.71	0.55
1:0:2548:C:OP2	5:B:5:ARG:NH2	2.39	0.55
7:D:94:ALA:HB3	7:D:174:VAL:HA	1.89	0.55
1:0:2132:C:H2'	37:0:6933:HOH:O	2.07	0.55
1:0:1669:A:H2'	1:0:1670:G:C8	2.42	0.55
1:0:1398:G:H2'	1:0:1399:A:C8	2.42	0.55
14:K:30:ARG:NH2	37:K:8522:HOH:O	2.38	0.55
1:0:303:C:O2'	1:0:304:G:H5'	2.07	0.55
1:0:1333:U:H2'	1:0:1334:C:C6	2.42	0.55
1:0:2382:A:H5'	37:0:4200:HOH:O	2.07	0.55
7:D:54:ALA:HB2	7:D:69:ILE:HD12	1.89	0.55
14:K:148:GLU:HA	37:K:8572:HOH:O	2.05	0.55
28:Y:40:PRO:HG2	28:Y:64:ILE:HD13	1.89	0.55
28:Y:25:ARG:O	28:Y:29:VAL:HG23	2.06	0.55
17:N:77:ALA:HB1	17:N:98:LEU:HD12	1.89	0.55
16:M:138:ASP:O	16:M:140:GLN:N	2.33	0.55
1:0:849:C:O2'	1:0:850:U:H5'	2.06	0.55
1:0:675:U:H2'	1:0:676:C:H5'	1.89	0.55
1:0:1139:U:H2'	1:0:1140:C:C6	2.41	0.55
1:0:2266:A:H2'	1:0:2267:G:C8	2.42	0.55
14:K:61:ALA:HA	37:K:8564:HOH:O	2.07	0.55
7:D:128:LEU:N	37:D:6007:HOH:O	2.39	0.55
15:L:9:ARG:HG3	37:L:8544:HOH:O	2.06	0.55
1:0:159:G:H5"	15:L:74:ARG:HH22	1.71	0.55
7:D:35:ALA:N	37:D:5576:HOH:O	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:62:PRO:CG	13:J:65:ARG:HH21	2.13	0.55
1:0:31:C:H4'	37:0:6799:HOH:O	2.07	0.55
1:0:559:U:H2'	1:0:560:C:O4'	2.07	0.55
11:H:75:SER:C	11:H:79:ALA:HB2	2.28	0.55
1:0:954:U:O2'	1:0:955:A:H5'	2.07	0.55
14:K:73:VAL:HG23	14:K:74:THR:N	2.22	0.55
15:L:65:VAL:HG21	15:L:105:ALA:HB2	1.89	0.55
2:9:3002:U:OP2	2:9:3003:A:H5'	2.07	0.54
9:F:28:ALA:HB3	9:F:99:THR:O	2.08	0.54
1:0:2405:C:C5'	37:0:5993:HOH:O	2.52	0.54
7:D:58:VAL:HG12	7:D:59:GLY:N	2.22	0.54
19:P:64:GLU:HG3	19:P:74:ASP:OD2	2.06	0.54
6:C:133:ARG:HD2	37:C:8405:HOH:O	2.05	0.54
11:H:31:PHE:CD2	11:H:85:ILE:HG23	2.43	0.54
15:L:157:LEU:HB3	15:L:160:PHE:HD1	1.72	0.54
1:0:2269:C:H2'	1:0:2270:G:H5'	1.87	0.54
12:I:103:VAL:HG12	37:I:5907:HOH:O	2.06	0.54
18:O:98:ILE:HD12	18:O:102:ARG:NE	2.22	0.54
6:C:109:LEU:HD12	6:C:109:LEU:O	2.06	0.54
11:H:45:GLN:HG3	11:H:135:TRP:NE1	2.22	0.54
1:0:2896:A:H5"	37:0:5517:HOH:O	2.06	0.54
1:0:100:C:H5'	22:S:16:LEU:HD12	1.89	0.54
29:Z:45:ARG:HB3	37:Z:8419:HOH:O	2.07	0.54
1:0:1864:C:OP1	15:L:75:THR:HG23	2.07	0.54
28:Y:73:THR:O	28:Y:74:VAL:C	2.46	0.54
1:0:2676:C:H4'	12:I:70:PHE:CE1	2.42	0.54
1:0:970:U:H2'	37:0:5738:HOH:O	2.07	0.54
12:I:99:GLU:HA	37:I:7377:HOH:O	2.06	0.54
21:R:4:VAL:HG23	37:R:2334:HOH:O	2.07	0.54
21:R:57:THR:HG22	21:R:59:ASP:HB2	1.88	0.54
20:Q:18:LEU:HD11	20:Q:87:ALA:O	2.07	0.54
1:0:289:G:O2'	1:0:290:C:H5'	2.06	0.54
4:A:88:ILE:HD13	4:A:100:PRO:CD	2.32	0.54
30:1:48:ASP:O	30:1:49:GLU:HB2	2.08	0.54
11:H:35:ASN:ND2	11:H:79:ALA:O	2.41	0.54
1:0:581:G:H5'	37:0:7057:HOH:O	2.06	0.54
12:I:14:ALA:HB1	12:I:44:ALA:HB2	1.87	0.54
2:9:3049:G:H5"	37:9:8471:HOH:O	2.07	0.54
7:D:86:THR:O	7:D:90:LEU:HG	2.07	0.54
15:L:12:TRP:CE2	15:L:20:ILE:HD11	2.43	0.54
23:T:49:LEU:HD11	37:T:3805:HOH:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:132:THR:O	8:E:132:THR:HG23	2.07	0.54
1:0:1947:G:N2	1:0:1966:U:C2	2.75	0.54
1:0:1118:A:H8	1:0:1119:G:H5"	1.73	0.54
1:0:182:G:O3'	15:L:157:LEU:HD13	2.07	0.54
1:0:119:A:N3	37:0:8653:HOH:O	2.34	0.54
1:0:1666:C:O2'	1:0:1667:A:C5'	2.56	0.54
14:K:143:THR:CG2	14:K:144:ASP:N	2.70	0.54
1:0:2072:G:C6	1:0:2533:C:H1'	2.43	0.54
28:Y:56:MET:CE	28:Y:63:LYS:HE3	2.37	0.54
37:0:5729:HOH:O	18:O:100:ALA:HA	2.07	0.54
37:0:9481:HOH:O	14:K:22:ARG:HG2	2.07	0.54
1:0:1886:A:N3	37:0:4278:HOH:O	2.33	0.54
23:T:11:THR:HG22	23:T:53:ASP:OD2	2.08	0.54
13:J:37:TYR:HE2	13:J:45:PRO:HA	1.73	0.54
8:E:11:VAL:HG12	8:E:12:ASP:H	1.70	0.54
23:T:52:THR:HG22	23:T:54:THR:HB	1.89	0.54
1:0:138:U:OP2	1:0:139:C:H5	1.90	0.54
22:S:48:VAL:HG23	22:S:98:VAL:HA	1.90	0.54
1:0:2265:U:H2'	1:0:2266:A:C8	2.43	0.54
9:F:48:VAL:HG23	9:F:74:PHE:CB	2.38	0.54
1:0:542:A:H2'	1:0:543:G:O4'	2.08	0.54
22:S:9:LYS:CE	22:S:13:ARG:NH1	2.70	0.54
8:E:8:PRO:HB2	8:E:11:VAL:HG23	1.89	0.54
1:0:625:U:H5"	1:0:1044:C:N4	2.23	0.54
24:U:39:ALA:C	24:U:41:GLU:H	2.11	0.54
5:B:82:VAL:HG12	5:B:101:TRP:CE3	2.43	0.54
17:N:96:VAL:CG1	17:N:100:GLN:HB2	2.38	0.54
22:S:80:GLU:HA	37:S:6653:HOH:O	2.07	0.54
1:0:241:A:C2	1:0:378:A:H4'	2.43	0.54
11:H:31:PHE:HD2	11:H:85:ILE:O	1.91	0.54
15:L:164:THR:HG23	15:L:165:SER:H	1.70	0.54
11:H:62:GLU:HA	37:H:8370:HOH:O	2.08	0.54
25:V:26:ILE:HG13	25:V:26:ILE:O	2.08	0.54
2:9:3013:A:O2'	2:9:3014:G:H5"	2.08	0.54
5:B:205:VAL:O	5:B:307:ARG:NE	2.40	0.54
5:B:48:MET:HB2	37:B:8561:HOH:O	2.08	0.54
1:0:371:U:H2'	1:0:372:A:H8	1.72	0.54
13:J:28:GLU:HB3	13:J:59:LYS:HB2	1.90	0.54
4:A:81:GLN:HB2	4:A:92:ASN:ND2	2.22	0.54
1:0:1561:U:H2'	37:0:3619:HOH:O	2.06	0.54
4:A:17:ARG:HD2	37:A:8537:HOH:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:844:A:C6	1:0:882:A:C5	2.95	0.54
1:0:2825:C:H4'	1:0:2826:G:O5'	2.08	0.54
5:B:177:HIS:O	5:B:181:ILE:HG13	2.07	0.54
2:9:3003:A:N6	2:9:3022:G:H1'	2.23	0.53
5:B:238:ASN:ND2	5:B:240:GLY:N	2.51	0.53
6:C:162:VAL:HG13	6:C:232:LEU:HD21	1.90	0.53
12:I:47:THR:HB	37:I:3661:HOH:O	2.08	0.53
1:0:2377:U:H6	1:0:2377:U:O5'	1.91	0.53
1:0:947:U:O2'	1:0:948:G:H5'	2.08	0.53
20:Q:96:VAL:HG13	20:Q:106:GLY:HA3	1.89	0.53
1:0:1209:C:H2'	1:0:1210:G:H8	1.73	0.53
1:0:544:G:C2'	1:0:545:G:H5"	2.38	0.53
9:F:19:ALA:O	9:F:22:VAL:HG22	2.08	0.53
1:0:1787:C:H4'	1:0:2883:A:O4'	2.09	0.53
1:0:1562:C:O2	1:0:1562:C:H2'	2.06	0.53
18:O:139:ARG:NH2	37:O:6072:HOH:O	2.41	0.53
11:H:47:GLU:CB	11:H:133:ILE:HD13	2.38	0.53
1:0:1134:G:C4'	11:H:151:MET:HE1	2.30	0.53
1:0:821:U:H2'	1:0:822:C:C6	2.42	0.53
13:J:49:LEU:HD21	13:J:74:VAL:O	2.07	0.53
16:M:159:TYR:HB3	16:M:162:ASP:HB2	1.91	0.53
24:U:39:ALA:N	24:U:40:PRO:CD	2.71	0.53
23:T:6:CYS:C	23:T:8:TYR:H	2.12	0.53
16:M:5:ARG:HG3	19:P:18:PRO:HB3	1.89	0.53
12:I:40:ASN:OD1	12:I:106:GLY:HA2	2.08	0.53
1:0:2064:U:H5'	1:0:2652:U:O3'	2.08	0.53
22:S:55:PHE:HB2	37:S:6384:HOH:O	2.08	0.53
15:L:77:PHE:HD2	37:L:8528:HOH:O	1.91	0.53
5:B:141:ARG:HG2	5:B:165:ARG:HA	1.89	0.53
15:L:63:VAL:HG21	15:L:109:PHE:CE1	2.44	0.53
12:I:130:VAL:HG12	12:I:131:THR:N	2.21	0.53
1:0:1120:U:H5'	1:0:1121:G:OP2	2.09	0.53
14:K:57:VAL:HG12	14:K:57:VAL:O	2.08	0.53
5:B:221:GLN:HE22	13:J:42:ASN:HD22	1.56	0.53
5:B:132:HIS:HB2	5:B:137:LEU:HD22	1.89	0.53
4:A:33:GLU:O	4:A:34:ASP:HB2	2.08	0.53
1:0:1804:A:H2'	1:0:1805:G:C8	2.43	0.53
27:X:112:GLU:HA	27:X:112:GLU:OE1	2.09	0.53
7:D:44:ILE:HG23	7:D:45:THR:HG23	1.89	0.53
4:A:48:ASP:HB3	37:A:8602:HOH:O	2.07	0.53
5:B:175:LEU:C	5:B:175:LEU:CD2	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2896:A:OP1	26:W:15:ARG:NH1	2.41	0.53
5:B:13:PHE:O	5:B:16:ARG:HD2	2.08	0.53
4:A:168:PRO:O	4:A:170:VAL:HG23	2.07	0.53
1:0:1595:G:O2'	1:0:1596:U:H5'	2.09	0.53
1:0:1477:C:H5'	1:0:1868:G:C5'	2.38	0.53
11:H:72:VAL:CG1	11:H:81:TYR:CZ	2.92	0.53
15:L:137:ASP:C	15:L:142:LYS:HE3	2.29	0.53
25:V:108:ARG:HE	25:V:114:PRO:HG3	1.73	0.53
1:0:2359:G:N7	37:0:3190:HOH:O	2.34	0.53
1:0:1342:C:C2'	1:0:1343:C:H5'	2.39	0.53
1:0:1189:A:H3'	37:0:7055:HOH:O	2.08	0.53
11:H:26:LYS:HD2	11:H:28:ILE:CB	2.38	0.53
11:H:59:ASN:H	11:H:59:ASN:ND2	1.99	0.53
12:I:19:MET:HE1	12:I:132:LEU:HD21	1.90	0.53
12:I:93:ARG:CB	12:I:93:ARG:HH11	2.15	0.53
1:0:2909:G:H2'	1:0:2910:A:H8	1.73	0.53
1:0:1328:A:C8	27:X:169:ARG:HD3	2.44	0.53
1:0:319:A:H4'	1:0:338:C:C5	2.44	0.53
1:0:2860:G:H1'	37:0:6193:HOH:O	2.07	0.53
1:0:1735:C:O2'	1:0:1736:A:H5'	2.08	0.53
1:0:1771:U:H4'	28:Y:20:LEU:HD21	1.90	0.53
13:J:118:ALA:HA	13:J:125:ALA:HB2	1.90	0.53
2:9:3061:C:H2'	2:9:3062:A:H8	1.74	0.53
1:0:1528:A:H2'	1:0:1529:G:O4'	2.08	0.53
7:D:54:ALA:CB	7:D:69:ILE:HD12	2.38	0.53
1:0:2898:G:H4'	5:B:288:GLY:HA2	1.90	0.53
31:2:65:THR:HB	31:2:83:TRP:H	1.74	0.53
20:Q:25:PHE:CE2	20:Q:29:LYS:HE2	2.43	0.53
37:0:5622:HOH:O	5:B:2:GLN:HA	2.08	0.53
5:B:141:ARG:HD2	5:B:163:GLU:OE2	2.08	0.53
1:0:1783:A:C2'	1:0:1784:U:H5'	2.39	0.53
1:0:521:A:H2'	1:0:522:U:H5'	1.91	0.53
2:9:3076:G:C3'	2:9:3077:A:H5"	2.29	0.53
11:H:56:ILE:HG22	11:H:61:LEU:CD2	2.37	0.53
17:N:32:ARG:HE	17:N:35:LYS:HD2	1.73	0.53
1:0:2274:A:H1'	15:L:86:MET:SD	2.49	0.53
1:0:858:U:H2'	1:0:859:C:H6	1.72	0.53
11:H:45:GLN:HE21	11:H:135:TRP:HE1	1.57	0.53
2:9:3025:G:C3'	2:9:3026:C:H5'	2.36	0.53
28:Y:56:MET:HA	28:Y:62:TYR:O	2.09	0.53
25:V:122:ARG:HG2	25:V:152:ALA:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:V:151:GLU:O	25:V:154:ARG:HB3	2.09	0.53
20:Q:132:ARG:CZ	37:Q:8585:HOH:O	2.57	0.53
1:0:1790:C:O2'	1:0:1791:U:H5'	2.08	0.53
5:B:148:PRO:HD2	37:B:8583:HOH:O	2.08	0.53
25:V:125:HIS:HE1	37:V:3071:HOH:O	1.92	0.53
1:0:702:G:O2'	1:0:703:G:H5'	2.09	0.53
1:0:175:G:H2'	15:L:192:ALA:HB3	1.91	0.53
1:0:1878:G:O2'	1:0:1879:U:C6	2.61	0.52
1:0:280:C:H5'	37:0:5735:HOH:O	2.08	0.52
1:0:714:U:H4'	37:0:5169:HOH:O	2.09	0.52
1:0:2781:U:C2'	1:0:2782:G:H5'	2.39	0.52
20:Q:33:ARG:NH1	37:Q:8546:HOH:O	2.41	0.52
1:0:169:A:O2'	31:2:48:ASN:ND2	2.42	0.52
1:0:2136:G:H2'	37:0:4843:HOH:O	2.10	0.52
4:A:13:THR:HB	37:A:8531:HOH:O	2.09	0.52
31:2:69:TYR:HB2	31:2:78:HIS:CE1	2.43	0.52
16:M:73:ALA:N	37:M:6988:HOH:O	2.43	0.52
1:0:1151:G:OP1	10:G:63:ARG:NH1	2.43	0.52
8:E:31:ARG:NH1	8:E:68:HIS:CG	2.77	0.52
8:E:49:ILE:HD11	8:E:69:ILE:HD12	1.90	0.52
15:L:25:TRP:HE3	15:L:26:HIS:HD2	1.57	0.52
2:9:3055:U:H4'	2:9:3056:A:C8	2.45	0.52
11:H:151:MET:CE	11:H:151:MET:HA	2.39	0.52
1:0:1189:A:O2'	1:0:1208:C:H2'	2.09	0.52
29:Z:21:ARG:HD2	29:Z:37:CYS:SG	2.50	0.52
37:0:3541:HOH:O	5:B:27:ASN:HB2	2.08	0.52
1:0:338:C:H4'	6:C:174:ILE:HD11	1.91	0.52
1:0:1783:A:O2'	1:0:1784:U:H5'	2.09	0.52
14:K:142:LEU:HG	14:K:146:GLY:HA3	1.91	0.52
1:0:737:A:H2'	1:0:738:G:O4'	2.09	0.52
5:B:75:GLU:C	5:B:77:PRO:HD3	2.30	0.52
13:J:1:MET:HE1	37:J:6646:HOH:O	2.08	0.52
1:0:2716:G:H5"	5:B:206:THR:HG21	1.90	0.52
37:0:3701:HOH:O	30:1:38:LYS:HE3	2.08	0.52
1:0:2729:C:H2'	1:0:2730:G:H8	1.74	0.52
6:C:16:VAL:HG12	6:C:17:ASP:H	1.73	0.52
6:C:236:THR:O	6:C:237:GLU:C	2.47	0.52
37:0:9947:HOH:O	12:I:46:ILE:HD12	2.09	0.52
8:E:107:PHE:CE1	8:E:152:THR:HB	2.45	0.52
1:0:1205:U:H2'	1:0:1206:U:C5'	2.40	0.52
22:S:49:GLU:OE2	22:S:97:ARG:HD2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:48:MET:N	37:B:8561:HOH:O	2.41	0.52
1:0:2314:G:C2'	1:0:2315:C:H5'	2.40	0.52
1:0:198:A:H2'	37:0:5321:HOH:O	2.09	0.52
1:0:1847:A:OP1	4:A:175:LYS:HG3	2.10	0.52
1:0:1682:A:H5"	37:0:8966:HOH:O	2.08	0.52
4:A:125:ASN:HB3	4:A:158:VAL:HG12	1.91	0.52
10:G:67:LEU:O	10:G:71:LEU:HG	2.10	0.52
16:M:74:PRO:HG2	16:M:159:TYR:CZ	2.44	0.52
23:T:52:THR:HG22	23:T:54:THR:N	2.24	0.52
25:V:1:MET:N	25:V:37:GLU:HG3	2.24	0.52
1:0:396:U:OP2	31:2:38:ARG:HD2	2.09	0.52
1:0:316:A:H5'	22:S:54:ASP:OD2	2.08	0.52
18:O:131:PHE:CD1	18:O:137:LEU:HD13	2.43	0.52
11:H:48:LEU:CG	11:H:157:ILE:HG21	2.39	0.52
1:0:120:A:H5'	29:Z:20:ARG:HH21	1.74	0.52
8:E:20:ILE:CD1	8:E:40:VAL:HG11	2.34	0.52
1:0:2756:U:H3	1:0:2896:A:H2	1.58	0.52
8:E:80:TRP:O	8:E:134:SER:HA	2.08	0.52
2:9:3107:C:H5	37:9:8440:HOH:O	1.89	0.52
1:0:677:C:H4'	6:C:246:ARG:NH2	2.25	0.52
7:D:59:GLY:C	7:D:61:PHE:H	2.13	0.52
1:0:2047:C:H5'	37:0:9311:HOH:O	2.09	0.52
6:C:47:GLY:HA2	6:C:92:PRO:HB2	1.92	0.52
14:K:138:GLY:HA3	37:K:8554:HOH:O	2.08	0.52
11:H:85:ILE:HG23	11:H:85:ILE:O	2.10	0.52
5:B:207:LYS:HG2	5:B:304:PRO:HB3	1.89	0.52
23:T:9:CYS:CA	23:T:52:THR:HG23	2.40	0.52
15:L:149:TRP:O	15:L:152:ARG:HG2	2.10	0.52
22:S:35:TYR:CG	22:S:112:LEU:HD22	2.45	0.52
6:C:180:SER:HB2	37:C:8441:HOH:O	2.08	0.52
2:9:3031:C:H2'	2:9:3032:G:O4'	2.09	0.52
26:W:30:MET:HE1	26:W:55:ASN:HA	1.91	0.52
1:0:229:G:O2'	1:0:230:C:H5'	2.10	0.52
9:F:56:PRO:HG2	15:L:44:THR:HA	1.91	0.52
6:C:118:THR:O	6:C:136:VAL:HG13	2.10	0.52
15:L:67:ILE:HD11	15:L:104:ARG:HD2	1.92	0.52
11:H:147:ARG:HA	11:H:150:LYS:NZ	2.24	0.52
11:H:55:GLN:HE22	11:H:91:HIS:CD2	2.28	0.52
16:M:47:LEU:CD1	16:M:97:VAL:HG11	2.39	0.52
12:I:46:ILE:HA	37:I:1123:HOH:O	2.08	0.52
1:0:2781:U:O2'	1:0:2782:G:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:P:30:VAL:O	19:P:30:VAL:HG12	2.10	0.52
27:X:126:PRO:HG2	27:X:128:PHE:CE1	2.44	0.52
1:0:42:C:H1'	37:0:4131:HOH:O	2.08	0.52
1:0:1025:C:H5'	25:V:23:MET:O	2.10	0.52
26:W:43:VAL:CG1	26:W:47:ALA:HB3	2.39	0.52
27:X:186:ARG:NH1	27:X:186:ARG:HG2	2.24	0.52
1:0:2359:G:H3'	37:0:5121:HOH:O	2.09	0.52
1:0:1926:G:H2'	1:0:1927:A:C8	2.45	0.52
27:X:178:HIS:CG	27:X:179:PRO:HD2	2.45	0.52
1:0:2745:C:H5	37:0:5311:HOH:O	1.92	0.52
11:H:86:ARG:CZ	11:H:130:HIS:CD2	2.93	0.52
15:L:67:ILE:CD1	15:L:104:ARG:HD2	2.39	0.52
27:X:213:LYS:O	27:X:217:ILE:HG13	2.10	0.52
1:0:1450:C:C4'	1:0:1451:C:OP2	2.55	0.52
5:B:36:PRO:HG3	5:B:169:GLY:H	1.75	0.52
15:L:57:LYS:HE2	15:L:140:ALA:O	2.10	0.52
1:0:1234:U:C4	5:B:244:PRO:HB3	2.45	0.52
5:B:16:ARG:HB3	5:B:217:ARG:HH21	1.75	0.52
1:0:92:G:H4'	24:U:44:GLY:HA3	1.90	0.52
25:V:7:LEU:CD1	25:V:53:ALA:HB2	2.40	0.52
20:Q:133:ALA:HB3	37:Q:8588:HOH:O	2.09	0.52
5:B:1:PRO:O	5:B:2:GLN:HB2	2.10	0.52
5:B:85:ARG:NH1	37:B:8633:HOH:O	2.43	0.52
7:D:59:GLY:O	7:D:61:PHE:N	2.35	0.52
22:S:23:VAL:C	22:S:93:THR:HG21	2.31	0.52
13:J:99:ASP:OD1	13:J:101:ASN:N	2.42	0.52
6:C:195:VAL:HA	6:C:213:ALA:O	2.09	0.52
1:0:1138:G:H4'	37:0:5139:HOH:O	2.09	0.52
1:0:1236:A:H2'	1:0:1237:U:O4'	2.10	0.52
13:J:23:ASN:HA	37:J:7075:HOH:O	2.10	0.52
1:0:359:U:H2'	1:0:360:A:H8	1.75	0.52
6:C:168:ARG:NH2	6:C:190:ALA:O	2.43	0.52
15:L:104:ARG:O	15:L:108:LYS:HG2	2.09	0.51
30:1:40:ARG:HG2	30:1:40:ARG:NH1	2.26	0.51
26:W:41:PHE:CZ	26:W:74:ALA:HB3	2.45	0.51
7:D:99:ASP:HB2	7:D:103:ASN:HB2	1.91	0.51
2:9:3051:A:H5'	16:M:160:SER:HB3	1.91	0.51
1:0:1819:G:H2'	1:0:1820:G:H4'	1.90	0.51
1:0:113:A:OP2	1:0:114:A:H2'	2.10	0.51
20:Q:4:TYR:N	37:Q:8550:HOH:O	2.42	0.51
1:0:1072:G:OP2	27:X:154:ARG:NH2	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:115:VAL:O	16:M:118:ILE:HB	2.10	0.51
4:A:105:VAL:HG12	4:A:106:CYS:N	2.25	0.51
15:L:59:GLY:HA3	15:L:141:ILE:CD1	2.39	0.51
7:D:64:ARG:HB3	7:D:67:ASP:OD2	2.10	0.51
9:F:115:VAL:O	9:F:118:LEU:N	2.44	0.51
5:B:13:PHE:N	5:B:13:PHE:CD1	2.78	0.51
1:0:2274:A:H1'	15:L:86:MET:HE1	1.92	0.51
20:Q:119:VAL:O	20:Q:119:VAL:HG12	2.09	0.51
12:I:75:PRO:HG2	12:I:105:LEU:CD2	2.39	0.51
1:0:784:A:O2'	1:0:1458:A:N3	2.41	0.51
1:0:2119:C:O2'	1:0:2120:U:H5'	2.10	0.51
8:E:154:ILE:HD11	8:E:157:LYS:HB2	1.92	0.51
11:H:118:PRO:HD2	37:H:8326:HOH:O	2.09	0.51
27:X:165:GLU:HB3	37:X:8598:HOH:O	2.10	0.51
1:0:652:G:H8	37:0:9504:HOH:O	1.93	0.51
7:D:25:MET:CE	7:D:37:ALA:HB1	2.40	0.51
1:0:2503:A:H1'	37:0:5772:HOH:O	2.10	0.51
1:0:2503:A:OP1	11:H:147:ARG:NH2	2.40	0.51
27:X:185:VAL:HG12	37:X:8571:HOH:O	2.08	0.51
20:Q:44:VAL:O	20:Q:48:GLU:HG3	2.11	0.51
1:0:960:G:N3	1:0:960:G:H2'	2.25	0.51
17:N:35:LYS:HD3	37:N:3360:HOH:O	2.09	0.51
20:Q:19:ARG:HA	20:Q:142:ASP:OD1	2.10	0.51
1:0:2434:A:O3'	31:2:28:GLY:HA3	2.11	0.51
12:I:54:VAL:HG11	12:I:138:THR:HG21	1.92	0.51
31:2:3:MET:O	31:2:90:PHE:HA	2.09	0.51
11:H:83:PHE:HE1	11:H:146:TRP:CZ2	2.28	0.51
20:Q:39:THR:CB	20:Q:42:GLU:HG3	2.41	0.51
8:E:108:LEU:HD11	8:E:164:ASP:HB2	1.92	0.51
30:1:36:ASN:HB3	30:1:39:ARG:NE	2.25	0.51
1:0:558:C:C2'	1:0:559:U:C5'	2.88	0.51
1:0:240:C:H2'	1:0:240:C:O2	2.11	0.51
12:I:107:ASN:ND2	12:I:107:ASN:C	2.63	0.51
14:K:17:SER:O	14:K:19:LYS:N	2.44	0.51
5:B:258:GLY:HA2	37:B:8560:HOH:O	2.10	0.51
37:J:1387:HOH:O	23:T:20:MET:HE1	2.10	0.51
1:0:86:A:C2	30:1:25:VAL:HG13	2.45	0.51
11:H:81:TYR:C	11:H:81:TYR:CD1	2.83	0.51
20:Q:17:MET:SD	37:Q:8550:HOH:O	2.59	0.51
25:V:28:HIS:HD2	25:V:31:HIS:CE1	2.28	0.51
19:P:66:LYS:HB2	19:P:70:ALA:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:127:ARG:CZ	6:C:225:PRO:HG2	2.39	0.51
25:V:122:ARG:NH2	25:V:154:ARG:HD2	2.23	0.51
7:D:94:ALA:HB3	7:D:174:VAL:CA	2.40	0.51
1:0:1268:C:H2'	1:0:1269:G:C8	2.45	0.51
1:0:2115:U:H2'	1:0:2116:U:C6	2.46	0.51
1:0:1839:A:H5'	1:0:2643:G:H4'	1.92	0.51
5:B:138:GLY:O	5:B:139:ASP:O	2.28	0.51
1:0:2524:G:H21	1:0:2526:C:N4	2.09	0.51
15:L:184:ARG:HG3	15:L:185:PRO:HA	1.92	0.51
15:L:5:TYR:O	15:L:7:TYR:N	2.44	0.51
23:T:35:LYS:NZ	37:T:6621:HOH:O	2.43	0.51
6:C:5:ILE:HG23	37:C:8427:HOH:O	2.09	0.51
1:0:1187:U:C3'	37:0:6289:HOH:O	2.59	0.51
1:0:1181:A:H2'	1:0:1182:C:O4'	2.10	0.51
1:0:1470:A:OP1	15:L:93:ARG:HD2	2.11	0.51
17:N:47:ARG:NH1	17:N:47:ARG:HG3	2.25	0.51
7:D:155:HIS:NE2	37:D:7597:HOH:O	2.33	0.51
1:0:184:G:H5"	15:L:153:THR:HG22	1.91	0.51
4:A:55:VAL:HG11	4:A:67:LEU:HD13	1.93	0.51
25:V:108:ARG:NH2	37:V:2359:HOH:O	2.44	0.51
1:0:2491:G:H1'	37:0:6260:HOH:O	2.09	0.51
5:B:7:ARG:HD3	5:B:9:GLY:O	2.09	0.51
1:0:2044:G:OP1	26:W:23:HIS:HE1	1.94	0.51
1:0:603:A:H5"	1:0:604:G:OP1	2.10	0.51
1:0:344:C:H2'	1:0:345:G:O4'	2.10	0.51
2:9:3025:G:H8	37:M:2665:HOH:O	1.94	0.51
20:Q:106:GLY:HA2	20:Q:109:MET:CE	2.41	0.51
37:9:8479:HOH:O	16:M:23:ARG:NH1	2.40	0.51
1:0:1285:U:H1'	37:0:6879:HOH:O	2.11	0.51
5:B:254:GLN:HG2	5:B:255:GLY:N	2.25	0.51
9:F:46:GLU:N	37:F:3461:HOH:O	2.44	0.51
1:0:1293:U:O2'	27:X:149:GLN:NE2	2.38	0.51
14:K:17:SER:C	14:K:19:LYS:N	2.62	0.51
15:L:69:LYS:HG2	15:L:127:LYS:HG3	1.93	0.51
1:0:185:G:H4'	1:0:186:A:H4'	1.92	0.51
1:0:2071:C:H5'	37:0:9034:HOH:O	2.11	0.51
1:0:621:C:H5'	27:X:132:ASP:OD2	2.11	0.51
16:M:22:GLN:HG2	16:M:26:LEU:CD2	2.39	0.51
1:0:1603:A:H5'	1:0:1605:G:H5'	1.92	0.51
17:N:14:LEU:CD2	17:N:102:ILE:HD11	2.41	0.51
7:D:174:VAL:HG13	37:D:6555:HOH:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:260:HIS:HA	37:B:8624:HOH:O	2.10	0.51
1:0:703:G:O2'	1:0:704:C:H5'	2.10	0.51
1:0:622:G:O2'	1:0:623:U:H5'	2.11	0.51
14:K:12:THR:HG21	14:K:16:GLY:O	2.11	0.51
13:J:27:ARG:HD2	37:J:4747:HOH:O	2.10	0.51
1:0:1503:U:H2'	1:0:1504:A:O4'	2.11	0.51
19:P:50:GLY:HA3	19:P:87:THR:OG1	2.11	0.51
1:0:177:A:H2'	1:0:178:U:O4'	2.09	0.51
1:0:1119:G:N2	1:0:1246:A:H2	2.06	0.51
7:D:23:VAL:HG21	7:D:45:THR:HG21	1.92	0.51
13:J:113:ILE:HG22	13:J:114:ALA:O	2.10	0.51
26:W:76:ARG:HG3	26:W:76:ARG:NH1	2.21	0.51
8:E:69:ILE:HA	8:E:72:MET:CE	2.40	0.51
8:E:16:ASP:O	8:E:17:HIS:HB2	2.10	0.51
27:X:172:THR:HG22	27:X:173:ALA:N	2.26	0.51
1:0:1307:A:H2'	1:0:1308:A:C8	2.46	0.51
22:S:41:ARG:HH11	22:S:41:ARG:HG2	1.75	0.51
5:B:248:ARG:O	5:B:251:VAL:CG1	2.59	0.51
15:L:37:VAL:CG2	15:L:108:LYS:HG3	2.37	0.51
21:R:57:THR:CG2	21:R:59:ASP:HB2	2.41	0.51
1:0:281:U:O2'	1:0:282:C:H5'	2.11	0.51
13:J:29:LEU:HB3	13:J:55:VAL:CG1	2.36	0.51
1:0:1701:A:H4'	1:0:1702:U:O5'	2.11	0.51
9:F:28:ALA:CB	9:F:99:THR:HG23	2.41	0.51
1:0:2780:C:H2'	1:0:2781:U:C6	2.46	0.51
4:A:94:LEU:HG	4:A:99:ILE:CD1	2.40	0.51
1:0:1151:G:OP1	10:G:16:LYS:NZ	2.36	0.51
1:0:694:A:C2'	1:0:695:C:H5'	2.40	0.51
21:R:33:SER:O	21:R:37:VAL:HG23	2.11	0.51
26:W:30:MET:CE	26:W:58:ALA:HB3	2.41	0.51
1:0:1183:C:N4	37:0:3869:HOH:O	2.36	0.51
1:0:823:U:H2'	1:0:824:G:O4'	2.11	0.51
1:0:1825:U:O4'	1:0:1999:C:H5"	2.11	0.51
1:0:755:G:O2'	1:0:756:A:H5'	2.11	0.51
1:0:1768:C:H2'	1:0:1769:C:O4'	2.10	0.51
1:0:80:A:H3'	22:S:43:ASN:OD1	2.11	0.51
18:O:87:ARG:HG2	37:O:5182:HOH:O	2.10	0.51
1:0:324:G:O2'	1:0:325:U:H5'	2.10	0.51
1:0:1719:G:H1'	37:0:3215:HOH:O	2.11	0.51
6:C:49:ASP:HB3	6:C:52:ALA:HB2	1.93	0.51
6:C:127:ARG:HG2	6:C:127:ARG:NH1	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:290:C:O2'	1:0:291:C:H5'	2.11	0.50
27:X:169:ARG:NH2	37:X:8531:HOH:O	2.42	0.50
16:M:61:ALA:CB	16:M:88:ALA:HB2	2.42	0.50
1:0:2252:A:C5	1:0:2253:G:H1'	2.45	0.50
25:V:39:ASP:HB2	37:V:3580:HOH:O	2.10	0.50
1:0:1306:U:OP1	6:C:184:ARG:HD2	2.11	0.50
1:0:1789:G:O6	18:O:73:HIS:HE1	1.94	0.50
1:0:1334:C:H2'	1:0:1335:C:H6	1.76	0.50
6:C:133:ARG:NH2	37:C:8423:HOH:O	2.43	0.50
1:0:1370:G:C4	37:0:9632:HOH:O	2.64	0.50
1:0:772:G:H2'	1:0:773:A:O4'	2.11	0.50
1:0:130:C:H5'	37:0:4659:HOH:O	2.10	0.50
1:0:1051:C:H2'	1:0:1052:G:O4'	2.11	0.50
31:2:84:ARG:HD3	37:2:8541:HOH:O	2.10	0.50
7:D:41:LEU:HA	7:D:44:ILE:CG2	2.41	0.50
1:0:1593:C:OP1	18:O:117:SER:CB	2.60	0.50
1:0:1189:A:H1'	1:0:1209:C:C1'	2.42	0.50
1:0:2361:A:H5"	37:0:8523:HOH:O	2.10	0.50
1:0:1500:U:P	18:O:41:ARG:HH22	2.34	0.50
4:A:8:ARG:NH1	37:A:8547:HOH:O	2.43	0.50
1:0:2670:G:N2	37:0:3113:HOH:O	2.32	0.50
1:0:1664:A:OP1	1:0:1664:A:H8	1.93	0.50
1:0:894:A:C2	6:C:87:ARG:NH2	2.79	0.50
1:0:820:G:H5'	1:0:821:U:C5'	2.42	0.50
1:0:281:U:H3'	37:0:6595:HOH:O	2.11	0.50
17:N:39:THR:O	17:N:115:ARG:NH2	2.44	0.50
23:T:17:THR:CG2	23:T:18:GLY:N	2.74	0.50
16:M:161:GLY:O	16:M:162:ASP:C	2.49	0.50
2:9:3042:C:H5'	2:9:3043:G:OP2	2.11	0.50
28:Y:30:GLU:HA	28:Y:33:HIS:CB	2.41	0.50
1:0:1674:C:H2'	1:0:1675:C:H6	1.77	0.50
22:S:75:GLU:O	22:S:76:ASP:HB2	2.10	0.50
24:U:58:THR:O	24:U:62:GLU:HG3	2.11	0.50
1:0:2906:A:H5'	1:0:2907:C:O4'	2.12	0.50
8:E:11:VAL:CG1	8:E:12:ASP:N	2.73	0.50
1:0:816:G:H5'	1:0:1598:A:H4'	1.93	0.50
9:F:78:GLU:CB	37:F:2750:HOH:O	2.59	0.50
1:0:1730:G:H5'	1:0:1731:C:C6	2.46	0.50
23:T:4:ARG:N	37:T:5334:HOH:O	2.43	0.50
1:0:958:G:O2'	1:0:959:C:H5'	2.12	0.50
1:0:1087:G:H4'	1:0:1088:A:OP1	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:V:110:GLN:HE21	25:V:110:GLN:HA	1.75	0.50
4:A:36:ASP:HB2	4:A:84:VAL:N	2.27	0.50
29:Z:25:LYS:CG	30:1:49:GLU:H	2.25	0.50
1:0:154:C:H2'	1:0:155:C:C6	2.44	0.50
20:Q:117:HIS:HA	37:Q:8537:HOH:O	2.10	0.50
5:B:248:ARG:NH1	37:B:8614:HOH:O	2.45	0.50
1:0:128:A:C8	1:0:128:A:H3'	2.47	0.50
1:0:832:U:H2'	1:0:833:G:C8	2.46	0.50
9:F:26:THR:HG21	9:F:103:ALA:CB	2.41	0.50
1:0:920:C:H5'	1:0:921:G:C4	2.47	0.50
5:B:108:GLU:HB3	5:B:111:ARG:HD2	1.93	0.50
1:0:1386:G:N3	37:0:9680:HOH:O	2.34	0.50
22:S:71:VAL:HG13	22:S:91:LEU:O	2.11	0.50
37:0:9657:HOH:O	15:L:87:MET:HE3	2.11	0.50
25:V:13:MET:HA	37:V:4944:HOH:O	2.10	0.50
5:B:51:VAL:CG2	5:B:327:VAL:HG13	2.41	0.50
15:L:172:GLY:O	15:L:183:VAL:HG11	2.12	0.50
19:P:32:GLU:HA	19:P:71:TYR:OH	2.11	0.50
13:J:118:ALA:O	13:J:120:ARG:N	2.44	0.50
4:A:2:ARG:HB3	37:A:8523:HOH:O	2.11	0.50
9:F:57:GLU:O	9:F:61:MET:HG3	2.11	0.50
16:M:47:LEU:HD13	16:M:97:VAL:HG11	1.93	0.50
29:Z:25:LYS:HD2	30:1:48:ASP:HA	1.93	0.50
25:V:14:HIS:HB2	25:V:17:ILE:CG1	2.40	0.50
1:0:2672:C:P	5:B:25:ARG:HH11	2.35	0.50
1:0:396:U:O2'	1:0:418:C:H4'	2.12	0.50
5:B:7:ARG:NH1	5:B:11:LEU:HD22	2.27	0.50
1:0:1930:A:H2'	1:0:1931:A:C8	2.47	0.50
1:0:2424:U:H5'	37:0:6673:HOH:O	2.11	0.50
1:0:1211:G:O2'	1:0:1212:C:H5'	2.11	0.50
1:0:2894:C:O2'	1:0:2895:C:H5'	2.11	0.50
1:0:2626:C:H2'	1:0:2627:G:C8	2.47	0.50
8:E:57:LYS:HG3	37:E:358:HOH:O	2.12	0.50
1:0:1883:U:O2'	1:0:1884:G:H5'	2.12	0.50
7:D:57:THR:HG23	7:D:63:ILE:CB	2.42	0.50
1:0:1634:G:H2'	1:0:1635:U:H6	1.77	0.50
27:X:109:LEU:HA	37:X:8572:HOH:O	2.11	0.50
21:R:57:THR:C	21:R:59:ASP:H	2.15	0.50
1:0:558:C:H2'	1:0:559:U:H5"	1.92	0.50
5:B:217:ARG:HG3	5:B:257:THR:CG2	2.42	0.50
1:0:319:A:H4'	1:0:338:C:C4	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:31:ARG:HH12	8:E:68:HIS:CG	2.30	0.50
1:0:2748:G:C2'	37:0:6917:HOH:O	2.60	0.50
15:L:47:ASP:CG	15:L:48:ARG:N	2.65	0.50
1:0:1060:C:H5'	1:0:1060:C:H6	1.77	0.50
23:T:44:ARG:CB	37:T:3805:HOH:O	2.60	0.50
9:F:56:PRO:CG	15:L:44:THR:HA	2.42	0.50
1:0:603:A:H4'	1:0:604:G:O5'	2.12	0.50
21:R:81:ILE:HG23	37:R:4527:HOH:O	2.12	0.50
27:X:117:LEU:HD23	37:X:8616:HOH:O	2.11	0.50
37:E:2512:HOH:O	12:I:127:ILE:HD11	2.12	0.50
14:K:78:ALA:HB2	37:K:8560:HOH:O	2.12	0.50
8:E:79:GLY:HA3	37:E:7046:HOH:O	2.12	0.50
13:J:37:TYR:CE2	13:J:45:PRO:HA	2.46	0.49
5:B:195:ARG:NH1	5:B:324:ASP:OD1	2.45	0.49
7:D:154:LYS:HD3	37:D:1796:HOH:O	2.11	0.49
1:0:1943:C:O4'	4:A:212:PRO:HA	2.12	0.49
9:F:107:VAL:O	9:F:111:ILE:HG13	2.11	0.49
31:2:18:GLN:HB3	37:2:8514:HOH:O	2.11	0.49
5:B:132:HIS:CE1	5:B:171:VAL:HG21	2.46	0.49
1:0:1342:C:O2'	1:0:1343:C:H5'	2.12	0.49
1:0:858:U:H2'	1:0:859:C:C6	2.46	0.49
1:0:2840:A:H3'	37:0:7023:HOH:O	2.12	0.49
6:C:55:ARG:NH2	29:Z:56:GLU:OE2	2.31	0.49
37:0:4530:HOH:O	5:B:216:LYS:HA	2.12	0.49
1:0:2727:A:H2'	1:0:2728:C:H5'	1.93	0.49
11:H:47:GLU:CB	11:H:133:ILE:CD1	2.88	0.49
15:L:27:ARG:O	15:L:30:GLU:N	2.45	0.49
15:L:74:ARG:HD3	15:L:91:ILE:HD12	1.94	0.49
1:0:1702:U:H5'	37:0:9913:HOH:O	2.12	0.49
37:0:8873:HOH:O	29:Z:1:THR:HA	2.11	0.49
15:L:80:GLY:O	15:L:81:ARG:HD3	2.12	0.49
7:D:57:THR:HG23	7:D:63:ILE:CG2	2.40	0.49
1:0:2064:U:H2'	1:0:2065:C:H6	1.78	0.49
19:P:93:ARG:HG3	19:P:93:ARG:NH1	2.27	0.49
18:O:80:ARG:HG2	18:O:87:ARG:CZ	2.43	0.49
1:0:2028:U:H2'	1:0:2029:C:C6	2.47	0.49
4:A:200:PRO:HG2	4:A:225:VAL:HG21	1.94	0.49
1:0:105:G:O2'	1:0:106:A:H5'	2.12	0.49
19:P:46:SER:O	19:P:48:PRO:HD3	2.12	0.49
1:0:945:U:H2'	1:0:946:C:C6	2.48	0.49
1:0:1380:U:O4	1:0:2043:U:H4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:31:TRP:HA	15:L:34:GLU:HG3	1.94	0.49
15:L:61:ILE:HA	37:L:8626:HOH:O	2.11	0.49
1:0:2004:U:H2'	1:0:2005:G:OP1	2.12	0.49
4:A:179:MET:HG2	4:A:186:TRP:CG	2.47	0.49
1:0:359:U:H2'	1:0:360:A:C8	2.47	0.49
11:H:117:LYS:O	11:H:119:VAL:HG13	2.13	0.49
1:0:366:U:H2'	1:0:367:G:O4'	2.12	0.49
1:0:827:A:H2'	1:0:828:G:O4'	2.12	0.49
1:0:392:U:C5'	15:L:193:LYS:HB3	2.43	0.49
1:0:2330:U:H4'	1:0:2331:C:OP1	2.11	0.49
1:0:1116:U:H3	1:0:1246:A:N6	2.01	0.49
13:J:49:LEU:HD23	13:J:73:VAL:O	2.12	0.49
1:0:2812:A:C2	1:0:2814:A:N6	2.73	0.49
6:C:107:ARG:NE	37:C:8452:HOH:O	2.43	0.49
1:0:2672:C:OP2	5:B:25:ARG:NH1	2.46	0.49
6:C:246:ARG:NE	37:C:8421:HOH:O	2.44	0.49
11:H:53:PRO:HG3	11:H:127:GLY:H	1.76	0.49
1:0:682:A:H2'	1:0:683:G:O4'	2.13	0.49
1:0:920:C:H5"	1:0:921:G:O5'	2.13	0.49
27:X:123:VAL:HG12	27:X:124:GLY:O	2.12	0.49
5:B:30:PRO:HB2	5:B:39:GLN:NE2	2.28	0.49
1:0:204:A:H2'	1:0:205:U:H5'	1.93	0.49
1:0:861:A:H2'	1:0:862:U:C6	2.47	0.49
1:0:222:A:H2'	1:0:223:G:O4'	2.12	0.49
9:F:39:SER:HB3	9:F:45:ALA:HB2	1.95	0.49
2:9:3055:U:H4'	2:9:3056:A:H8	1.77	0.49
15:L:35:PRO:C	37:L:8537:HOH:O	2.51	0.49
1:0:820:G:C5	4:A:171:LYS:HB2	2.47	0.49
10:G:12:ILE:HG22	10:G:17:GLN:NE2	2.26	0.49
1:0:120:A:H2'	1:0:120:A:N3	2.28	0.49
16:M:91:ARG:HG3	16:M:186:LEU:HD23	1.95	0.49
1:0:31:C:H2'	37:0:7063:HOH:O	2.12	0.49
1:0:2353:A:H4'	1:0:2354:A:O5'	2.12	0.49
1:0:2781:U:H2'	1:0:2782:G:H5'	1.94	0.49
1:0:2300:A:H4'	1:0:2301:A:O5'	2.13	0.49
2:9:3041:C:O4'	7:D:50:VAL:HG23	2.13	0.49
7:D:95:THR:HG21	7:D:174:VAL:HG22	1.95	0.49
21:R:42:GLU:HG2	21:R:49:VAL:HG23	1.93	0.49
37:0:9267:HOH:O	14:K:41:HIS:HE1	1.95	0.49
15:L:77:PHE:N	37:L:8528:HOH:O	2.40	0.49
1:0:635:A:H2'	1:0:636:G:H5"	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:77:THR:OG1	8:E:78:GLU:N	2.44	0.49
2:9:3023:U:C4'	2:9:3024:U:OP2	2.51	0.49
11:H:136:VAL:HG23	37:H:8330:HOH:O	2.12	0.49
16:M:34:LEU:HA	16:M:47:LEU:HD23	1.93	0.49
1:0:545:G:H2'	1:0:546:C:O4'	2.12	0.49
16:M:143:ARG:NH1	16:M:173:ASP:OD2	2.37	0.49
24:U:39:ALA:O	24:U:41:GLU:N	2.45	0.49
5:B:314:ALA:CB	5:B:317:PRO:HG3	2.42	0.49
28:Y:13:ARG:NH1	28:Y:14:PHE:CZ	2.81	0.49
1:0:1003:U:O2'	11:H:90:PHE:HE1	1.96	0.49
17:N:38:ARG:NH1	37:N:7674:HOH:O	2.44	0.49
6:C:39:GLN:O	6:C:43:LYS:HD3	2.12	0.49
1:0:1496:G:H5'	1:0:1572:A:H1'	1.94	0.49
13:J:72:VAL:HG11	13:J:121:PHE:CD1	2.47	0.49
17:N:25:VAL:HG23	17:N:26:TRP:N	2.28	0.49
1:0:259:G:O2'	1:0:260:C:H5'	2.13	0.49
1:0:2050:G:H5"	20:Q:80:TYR:O	2.13	0.49
26:W:43:VAL:CG1	26:W:44:ASP:N	2.75	0.49
14:K:145:LEU:O	14:K:148:GLU:HG3	2.13	0.49
4:A:191:GLY:HA2	4:A:194:MET:CE	2.40	0.49
21:R:33:SER:OG	21:R:36:GLU:HG3	2.12	0.49
37:0:6810:HOH:O	6:C:163:HIS:HE1	1.95	0.49
1:0:2785:C:H4'	1:0:2786:G:OP2	2.13	0.49
14:K:24:ALA:HB2	14:K:30:ARG:HD2	1.94	0.49
13:J:101:ASN:O	13:J:102:GLU:HB2	2.13	0.49
1:0:2526:C:O2'	1:0:2527:U:H5'	2.12	0.49
4:A:3:ARG:HB3	4:A:7:GLN:HB2	1.95	0.49
1:0:1289:C:O2'	1:0:1290:G:H5'	2.13	0.49
1:0:671:A:O2'	1:0:672:G:H2'	2.13	0.49
6:C:142:ASP:OD1	6:C:237:GLU:HB3	2.12	0.49
2:9:3056:A:H1'	7:D:14:ARG:HG2	1.94	0.49
27:X:200:THR:HG22	27:X:201:GLU:HG3	1.94	0.49
14:K:53:ARG:HH22	14:K:57:VAL:HG12	1.77	0.49
20:Q:29:LYS:CD	37:Q:8543:HOH:O	2.61	0.49
16:M:139:TRP:HA	16:M:139:TRP:CE3	2.47	0.49
1:0:935:G:O2'	1:0:936:C:H5'	2.13	0.49
1:0:255:A:H2'	1:0:256:C:C6	2.48	0.49
16:M:42:HIS:CG	16:M:62:HIS:HE1	2.31	0.49
16:M:82:TYR:C	16:M:82:TYR:CD2	2.86	0.49
1:0:911:G:H5'	1:0:932:U:OP1	2.12	0.49
1:0:1488:U:H4'	1:0:1489:G:OP1	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:417:G:P	37:0:6794:HOH:O	2.71	0.49
25:V:130:HIS:O	25:V:136:GLY:HA3	2.13	0.49
1:0:1909:A:H2'	1:0:1910:A:H8	1.75	0.49
23:T:52:THR:HG22	23:T:54:THR:H	1.78	0.49
25:V:38:THR:HG22	25:V:39:ASP:N	2.28	0.49
1:0:371:U:H2'	1:0:372:A:C8	2.48	0.49
1:0:738:G:H3'	37:0:6439:HOH:O	2.11	0.49
37:0:5682:HOH:O	18:O:63:ARG:NH2	2.44	0.49
1:0:1321:A:H2'	1:0:1322:G:C8	2.47	0.49
1:0:305:A:C5	1:0:329:A:C2	3.01	0.49
1:0:2436:U:H5'	31:2:68:LYS:HE2	1.94	0.49
5:B:211:THR:HA	5:B:255:GLY:O	2.13	0.49
15:L:55:LYS:HB2	15:L:60:ILE:CD1	2.43	0.49
16:M:147:ILE:HG23	16:M:148:ALA:N	2.28	0.49
7:D:95:THR:CG2	7:D:174:VAL:HG22	2.43	0.49
5:B:82:VAL:O	5:B:83:ALA:HB2	2.13	0.49
16:M:139:TRP:HH2	16:M:176:ARG:HH11	1.59	0.49
1:0:1634:G:H2'	1:0:1635:U:C6	2.48	0.49
1:0:2748:G:H2'	37:0:6917:HOH:O	2.13	0.49
1:0:1936:C:H3'	37:0:6563:HOH:O	2.12	0.49
7:D:159:PRO:O	7:D:163:VAL:HG23	2.12	0.48
1:0:1189:A:H1'	1:0:1209:C:O4'	2.13	0.48
16:M:115:VAL:HG23	16:M:116:PHE:H	1.78	0.48
24:U:64:GLY:O	24:U:65:ASP:CB	2.60	0.48
25:V:38:THR:HG22	25:V:39:ASP:H	1.78	0.48
1:0:2293:G:C8	1:0:2464:C:C4	3.01	0.48
25:V:125:HIS:CD2	25:V:127:GLY:H	2.31	0.48
5:B:248:ARG:O	5:B:251:VAL:HG12	2.13	0.48
1:0:459:A:H4'	37:0:8963:HOH:O	2.13	0.48
5:B:109:LEU:HG	5:B:113:LEU:HD12	1.94	0.48
19:P:40:HIS:CE1	19:P:94:GLN:HA	2.48	0.48
1:0:2238:A:H3'	37:0:6070:HOH:O	2.12	0.48
5:B:26:PHE:HA	37:B:8582:HOH:O	2.13	0.48
1:0:1134:G:OP2	11:H:156:THR:HG23	2.13	0.48
11:H:46:VAL:O	11:H:146:TRP:CH2	2.62	0.48
1:0:1166:A:H61	1:0:1180:U:H3	1.60	0.48
25:V:88:THR:CG2	25:V:110:GLN:NE2	2.76	0.48
9:F:27:GLY:HA3	9:F:101:ALA:O	2.13	0.48
23:T:8:TYR:O	23:T:46:ALA:CB	2.61	0.48
9:F:50:VAL:CG2	9:F:63:ILE:HG21	2.43	0.48
1:0:2421:G:H3'	1:0:2422:U:H5"	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1406:A:H4'	1:0:1407:A:H5"	1.95	0.48
15:L:137:ASP:O	15:L:142:LYS:HE3	2.12	0.48
5:B:7:ARG:HG2	5:B:7:ARG:HH11	1.78	0.48
1:0:1829:A:H5"	37:0:9574:HOH:O	2.13	0.48
1:0:2091:G:O3'	5:B:235:ARG:HD3	2.12	0.48
1:0:2563:U:H2'	1:0:2565:C:O5'	2.12	0.48
7:D:23:VAL:HG12	7:D:130:VAL:HG22	1.95	0.48
11:H:153:VAL:HA	37:H:8337:HOH:O	2.12	0.48
1:0:1594:C:OP2	18:O:120:ARG:HD2	2.13	0.48
27:X:189:ASN:HD22	27:X:191:ASP:N	2.11	0.48
1:0:2712:G:H5'	37:0:4667:HOH:O	2.13	0.48
16:M:5:ARG:HG3	19:P:18:PRO:CB	2.43	0.48
30:1:16:ASN:C	30:1:18:ASN:H	2.17	0.48
5:B:36:PRO:HD3	5:B:169:GLY:H	1.77	0.48
15:L:47:ASP:CG	15:L:48:ARG:H	2.17	0.48
17:N:97:SER:HB3	17:N:100:GLN:HE21	1.78	0.48
1:0:1825:U:O2'	1:0:1826:C:H5'	2.12	0.48
1:0:224:U:H1'	37:0:9387:HOH:O	2.12	0.48
1:0:394:G:H1	15:L:181:GLU:CD	2.17	0.48
1:0:2630:G:O6	4:A:206:ARG:NH2	2.46	0.48
1:0:383:A:H4'	37:0:4771:HOH:O	2.13	0.48
1:0:1184:C:O2'	1:0:1185:U:P	2.72	0.48
1:0:962:C:C1'	16:M:5:ARG:NH1	2.73	0.48
1:0:2851:G:C2'	1:0:2852:A:H5'	2.43	0.48
1:0:1778:A:H2'	1:0:1779:A:H5'	1.95	0.48
1:0:2634:G:O2'	1:0:2635:A:H5'	2.14	0.48
22:S:19:ARG:NH1	22:S:68:ASP:O	2.47	0.48
2:9:3061:C:H2'	2:9:3062:A:C8	2.48	0.48
9:F:52:GLU:HG3	9:F:77:VAL:O	2.13	0.48
29:Z:2:GLY:O	29:Z:7:SER:OG	2.25	0.48
1:0:1495:C:H1'	1:0:1573:A:H1'	1.95	0.48
16:M:38:LYS:HD2	16:M:114:LYS:HE3	1.95	0.48
1:0:1446:U:H4'	1:0:1447:U:OP2	2.13	0.48
11:H:14:TYR:N	11:H:91:HIS:CE1	2.77	0.48
11:H:113:ALA:N	11:H:114:PRO:HD3	2.28	0.48
30:1:41:HIS:O	30:1:45:ASN:HB2	2.12	0.48
12:I:77:GLY:O	12:I:78:ILE:C	2.50	0.48
12:I:6:PHE:O	12:I:8:ALA:N	2.47	0.48
10:G:64:ASN:ND2	10:G:64:ASN:N	2.60	0.48
37:0:9562:HOH:O	20:Q:83:LYS:HB3	2.13	0.48
1:0:308:U:H5'	22:S:97:ARG:NH2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:U:16:ARG:NH1	24:U:65:ASP:O	2.45	0.48
1:0:195:C:H2'	1:0:196:G:H5'	1.95	0.48
6:C:85:LYS:CE	37:C:8324:HOH:O	2.62	0.48
1:0:2364:A:H5"	19:P:15:LYS:HD3	1.95	0.48
25:V:21:LEU:HD21	25:V:48:VAL:HG13	1.94	0.48
11:H:166:ASN:ND2	11:H:166:ASN:N	2.61	0.48
25:V:90:TYR:CE2	25:V:99:ALA:HB2	2.49	0.48
1:0:2135:A:O4'	1:0:2243:C:N4	2.47	0.48
1:0:2015:A:H2'	1:0:2016:U:O4'	2.13	0.48
12:I:27:ALA:HB1	12:I:87:LEU:CD2	2.44	0.48
1:0:2764:C:O2'	1:0:2765:C:H5'	2.13	0.48
1:0:2830:U:H4'	37:0:9584:HOH:O	2.13	0.48
5:B:185:GLY:HA2	37:B:8632:HOH:O	2.13	0.48
11:H:132:PHE:O	11:H:133:ILE:HD13	2.13	0.48
22:S:89:ARG:C	22:S:89:ARG:HD2	2.34	0.48
1:0:2270:G:O3'	4:A:223:ARG:NH1	2.47	0.48
37:0:5661:HOH:O	23:T:56:ARG:HD3	2.13	0.48
37:0:5336:HOH:O	15:L:189:VAL:HG23	2.13	0.48
1:0:588:G:O6	25:V:154:ARG:NH1	2.46	0.48
2:9:3008:G:O6	16:M:11:ARG:NH1	2.47	0.48
17:N:84:THR:O	17:N:88:LYS:HG3	2.13	0.48
1:0:1675:C:H5"	30:1:5:LYS:HD2	1.96	0.48
6:C:46:TYR:CE2	6:C:98:ARG:NH1	2.81	0.48
1:0:2735:U:H2'	1:0:2736:U:C6	2.48	0.48
21:R:80:ARG:HG2	37:R:4527:HOH:O	2.14	0.48
8:E:158:ASP:HA	37:E:2712:HOH:O	2.12	0.48
12:I:60:ARG:HD3	12:I:71:TYR:CE1	2.48	0.48
1:0:1878:G:O2'	1:0:1879:U:O4'	2.31	0.48
5:B:329:TYR:HE2	23:T:15:PRO:HG2	1.78	0.48
15:L:134:ILE:HG23	15:L:141:ILE:HD13	1.96	0.48
15:L:59:GLY:HA3	15:L:141:ILE:HD12	1.96	0.48
25:V:13:MET:HE3	25:V:17:ILE:CG2	2.44	0.48
6:C:129:HIS:CE1	6:C:232:LEU:H	2.32	0.48
8:E:137:ASP:O	8:E:141:VAL:HG23	2.14	0.48
16:M:139:TRP:CH2	16:M:176:ARG:NH1	2.82	0.48
8:E:69:ILE:HA	8:E:72:MET:HE2	1.95	0.48
27:X:115:ARG:NE	37:X:8556:HOH:O	2.47	0.48
1:0:35:U:H5'	6:C:47:GLY:O	2.14	0.48
1:0:907:A:H2'	1:0:908:A:C8	2.47	0.48
6:C:20:ASP:HB2	37:C:8392:HOH:O	2.13	0.48
31:2:34:LYS:HB2	31:2:37:ASP:OD2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1123:A:C2	1:0:1129:C:H4'	2.49	0.48
5:B:227:HIS:CD2	37:B:8531:HOH:O	2.66	0.48
1:0:134:U:C2	1:0:145:A:C2	3.02	0.48
6:C:238:SER:O	37:C:8378:HOH:O	2.20	0.48
1:0:1134:G:H4'	11:H:151:MET:CE	2.30	0.48
16:M:37:ARG:NH2	37:M:3863:HOH:O	2.46	0.48
1:0:1191:A:H3'	1:0:1192:A:C5'	2.43	0.48
5:B:195:ARG:N	5:B:198:GLU:OE1	2.42	0.48
8:E:23:GLU:HG2	8:E:28:SER:HB2	1.95	0.48
30:1:10:ARG:HD2	30:1:49:GLU:OE2	2.13	0.48
7:D:144:ARG:NH2	37:D:3839:HOH:O	2.47	0.48
22:S:48:VAL:HG22	22:S:97:ARG:C	2.34	0.48
23:T:44:ARG:HB3	37:T:3805:HOH:O	2.12	0.48
21:R:80:ARG:NH1	37:R:7263:HOH:O	2.46	0.48
1:0:1305:C:H5'	37:0:9330:HOH:O	2.13	0.48
1:0:1894:C:C2	1:0:1939:U:C4	3.01	0.48
1:0:1613:C:H2'	1:0:1614:G:O4'	2.13	0.48
11:H:31:PHE:HA	11:H:85:ILE:CG2	2.44	0.48
15:L:37:VAL:CG1	15:L:63:VAL:HG11	2.44	0.48
11:H:150:LYS:CD	37:H:8368:HOH:O	2.60	0.48
16:M:77:ASN:OD1	16:M:80:SER:HB2	2.13	0.48
9:F:28:ALA:HB3	9:F:99:THR:HG23	1.95	0.48
17:N:47:ARG:NH2	37:N:510:HOH:O	2.47	0.48
19:P:11:ARG:NH1	37:P:5620:HOH:O	2.46	0.48
4:A:169:PHE:O	4:A:170:VAL:HB	2.13	0.48
29:Z:5:THR:HB	29:Z:6:PRO:CD	2.44	0.48
1:0:1600:G:OP2	1:0:1600:G:H8	1.97	0.48
16:M:20:TYR:N	37:M:4363:HOH:O	2.33	0.48
1:0:1250:C:O2'	1:0:1251:C:H5'	2.14	0.48
6:C:107:ARG:NH2	37:C:8452:HOH:O	2.44	0.47
21:R:81:ILE:HA	37:R:6969:HOH:O	2.14	0.47
1:0:2073:G:C6	1:0:2607:U:C2	3.02	0.47
1:0:1215:A:O3'	1:0:1216:G:H4'	2.14	0.47
5:B:102:THR:HG22	37:B:8613:HOH:O	2.13	0.47
13:J:37:TYR:HD2	37:J:7169:HOH:O	1.98	0.47
7:D:23:VAL:CG2	7:D:23:VAL:O	2.62	0.47
25:V:26:ILE:CG1	25:V:26:ILE:O	2.61	0.47
1:0:1439:C:H5"	30:1:41:HIS:CE1	2.49	0.47
26:W:76:ARG:O	26:W:77:PHE:HB3	2.14	0.47
5:B:304:PRO:HD2	5:B:307:ARG:CD	2.40	0.47
16:M:143:ARG:HA	16:M:172:PHE:CE2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2254:G:C1'	37:0:4974:HOH:O	2.58	0.47
20:Q:33:ARG:NH2	37:Q:8534:HOH:O	2.46	0.47
1:0:1269:G:H2'	1:0:1270:U:C6	2.49	0.47
19:P:28:ARG:HG2	37:P:4350:HOH:O	2.14	0.47
1:0:2039:A:H4'	1:0:2760:C:O2'	2.15	0.47
22:S:20:HIS:HB3	22:S:41:ARG:HD2	1.96	0.47
1:0:1730:G:H5'	1:0:1731:C:C5	2.49	0.47
1:0:941:G:C5	1:0:942:U:C4	3.03	0.47
26:W:31:ILE:O	26:W:35:GLU:HG3	2.14	0.47
9:F:20:LEU:O	9:F:23:ALA:HB3	2.13	0.47
1:0:2717:C:O2'	1:0:2718:C:H5'	2.14	0.47
1:0:474:C:O3'	6:C:73:LEU:HD21	2.14	0.47
1:0:335:U:H4'	22:S:92:ASP:OD2	2.14	0.47
26:W:75:ALA:O	26:W:83:ALA:HA	2.13	0.47
6:C:37:ALA:O	6:C:41:ASN:ND2	2.47	0.47
20:Q:39:THR:HG22	20:Q:42:GLU:N	2.16	0.47
16:M:37:ARG:CZ	37:M:3863:HOH:O	2.62	0.47
16:M:67:ALA:C	16:M:69:TYR:H	2.17	0.47
1:0:1666:C:C2'	1:0:1667:A:C5'	2.92	0.47
16:M:165:ALA:HA	37:M:2052:HOH:O	2.14	0.47
2:9:3049:G:O2'	2:9:3050:G:H5'	2.14	0.47
1:0:482:G:H4'	1:0:508:A:N1	2.29	0.47
1:0:213:G:C1'	1:0:214:U:OP2	2.61	0.47
1:0:485:A:H4'	1:0:486:A:OP1	2.14	0.47
11:H:71:TYR:O	11:H:73:GLN:N	2.48	0.47
1:0:1805:G:H2'	1:0:1806:G:H8	1.78	0.47
1:0:1055:G:OP2	11:H:94:ARG:NH1	2.48	0.47
27:X:110:SER:HB2	37:X:8557:HOH:O	2.13	0.47
1:0:2831:C:H2'	1:0:2832:C:H5'	1.96	0.47
1:0:1351:G:OP1	6:C:96:LYS:NZ	2.42	0.47
5:B:162:MET:CE	5:B:310:ARG:HD3	2.44	0.47
10:G:12:ILE:HG22	10:G:12:ILE:O	2.14	0.47
16:M:182:GLY:N	37:M:7390:HOH:O	2.37	0.47
5:B:329:TYR:CE2	23:T:15:PRO:HG2	2.49	0.47
15:L:134:ILE:O	15:L:136:PRO:HD3	2.14	0.47
29:Z:25:LYS:CD	30:1:49:GLU:H	2.25	0.47
5:B:16:ARG:HB3	5:B:217:ARG:NH2	2.29	0.47
1:0:816:G:C6	1:0:817:G:N1	2.82	0.47
22:S:48:VAL:HG22	22:S:98:VAL:HA	1.97	0.47
1:0:2672:C:O2'	1:0:2673:U:H5'	2.14	0.47
1:0:1421:C:O2'	1:0:1422:U:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:450:C:H4'	6:C:46:TYR:CE1	2.50	0.47
1:0:521:A:C2'	1:0:522:U:H5'	2.45	0.47
15:L:122:GLU:OE2	15:L:127:LYS:HE2	2.15	0.47
1:0:204:A:C2'	1:0:205:U:H5'	2.44	0.47
16:M:62:HIS:O	16:M:65:ASP:OD1	2.32	0.47
6:C:3:ALA:HA	37:C:8448:HOH:O	2.13	0.47
1:0:1855:G:O6	4:A:142:SER:HB3	2.14	0.47
1:0:2502:C:H2'	1:0:2503:A:H5'	1.96	0.47
1:0:2591:C:H2'	1:0:2592:G:O4'	2.13	0.47
5:B:55:ASN:HB3	5:B:64:GLY:H	1.80	0.47
7:D:94:ALA:O	7:D:95:THR:O	2.33	0.47
1:0:1269:G:H2'	1:0:1270:U:H6	1.79	0.47
1:0:1790:C:H2'	1:0:1791:U:C6	2.48	0.47
26:W:23:HIS:HB2	37:W:7830:HOH:O	2.14	0.47
1:0:907:A:H2'	1:0:908:A:H8	1.80	0.47
18:O:7:LYS:HD3	18:O:21:VAL:CG2	2.44	0.47
12:I:51:GLU:O	12:I:55:GLU:HG3	2.15	0.47
1:0:1699:C:OP2	37:0:5097:HOH:O	2.20	0.47
1:0:2659:U:H4'	20:Q:76:ASP:HB3	1.96	0.47
1:0:1297:U:H1'	37:0:9876:HOH:O	2.12	0.47
1:0:1524:U:O2'	1:0:1525:G:O5'	2.31	0.47
5:B:275:GLY:O	5:B:291:ASP:HA	2.14	0.47
11:H:48:LEU:HD13	11:H:146:TRP:HB3	1.96	0.47
37:9:8526:HOH:O	16:M:107:ASN:HB3	2.15	0.47
16:M:67:ALA:C	16:M:69:TYR:N	2.68	0.47
1:0:2478:U:O2'	1:0:2479:A:H5'	2.15	0.47
12:I:74:ARG:NH1	12:I:76:ASP:HB2	2.30	0.47
1:0:2837:U:H1'	5:B:307:ARG:HH12	1.78	0.47
16:M:151:ASP:OD2	16:M:165:ALA:O	2.32	0.47
14:K:120:LEU:HD12	14:K:133:VAL:HG21	1.96	0.47
11:H:71:TYR:C	11:H:73:GLN:N	2.67	0.47
1:0:2451:G:O2'	31:2:38:ARG:NH2	2.47	0.47
1:0:955:A:H2'	1:0:956:G:O4'	2.15	0.47
1:0:1926:G:H2'	1:0:1927:A:H8	1.80	0.47
6:C:79:ARG:O	6:C:87:ARG:HG2	2.15	0.47
5:B:33:ASP:O	5:B:34:GLY:O	2.33	0.47
1:0:1086:A:C6	25:V:11:VAL:HG11	2.48	0.47
26:W:70:ILE:O	26:W:70:ILE:HG23	2.15	0.47
11:H:74:ASN:ND2	11:H:141:ASN:OD1	2.47	0.47
12:I:97:ALA:O	12:I:101:VAL:HG23	2.15	0.47
20:Q:114:VAL:O	20:Q:114:VAL:HG13	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1707:G:N2	1:0:1709:G:H3'	2.30	0.47
1:0:166:A:N7	14:K:25:GLY:HA2	2.29	0.47
1:0:1116:U:H1'	37:0:3990:HOH:O	2.14	0.47
15:L:109:PHE:HB3	15:L:112:LEU:HD12	1.96	0.47
1:0:1175:G:H1'	1:0:1193:A:H2'	1.97	0.47
4:A:220:PRO:HD2	4:A:223:ARG:HD3	1.96	0.47
5:B:312:ARG:HD3	5:B:315:VAL:HG13	1.97	0.47
5:B:320:GLN:HG3	5:B:321:PRO:CD	2.44	0.47
25:V:72:PRO:HB2	25:V:74:GLU:O	2.14	0.47
1:0:484:A:N1	1:0:506:G:H4'	2.30	0.47
10:G:66:LEU:O	10:G:69:ARG:HB3	2.15	0.47
18:O:10:ALA:HA	18:O:13:VAL:HG12	1.97	0.47
22:S:51:LEU:HD11	22:S:97:ARG:HB2	1.97	0.47
37:0:9267:HOH:O	14:K:41:HIS:CE1	2.68	0.47
6:C:54:LEU:HD23	6:C:79:ARG:HG3	1.97	0.47
1:0:275:G:C2	1:0:376:C:N3	2.82	0.47
1:0:1743:G:N7	37:0:8775:HOH:O	2.36	0.47
1:0:2687:G:O2'	1:0:2688:U:H5'	2.14	0.47
1:0:653:C:H2'	1:0:654:A:C8	2.50	0.47
6:C:150:THR:HA	6:C:203:ALA:O	2.15	0.47
1:0:2833:C:C2	1:0:2848:G:N2	2.83	0.47
1:0:1482:A:H1'	37:0:8932:HOH:O	2.13	0.47
27:X:205:ILE:O	27:X:206:ALA:C	2.53	0.47
1:0:299:U:H5'	37:0:6718:HOH:O	2.15	0.47
1:0:1246:A:O2'	1:0:1247:A:H3'	2.15	0.47
7:D:146:LYS:CE	16:M:107:ASN:ND2	2.78	0.47
1:0:2661:U:H3	1:0:2812:A:H62	1.63	0.47
1:0:119:A:H2'	1:0:120:A:H5"	1.97	0.47
16:M:182:GLY:O	16:M:183:ASP:O	2.33	0.47
10:G:71:LEU:C	10:G:73:ASP:N	2.67	0.47
2:9:3047:A:C2	2:9:3048:C:C2	3.01	0.47
1:0:21:G:H4'	20:Q:2:ILE:HG22	1.97	0.47
1:0:400:C:O2'	1:0:401:C:H5'	2.15	0.47
28:Y:26:VAL:O	28:Y:30:GLU:HG3	2.14	0.47
28:Y:33:HIS:CE1	28:Y:49:ARG:NE	2.83	0.47
6:C:104:ASP:HA	6:C:107:ARG:NH1	2.26	0.47
1:0:1517:U:C2	1:0:1670:G:N2	2.83	0.47
1:0:1266:U:H4'	27:X:115:ARG:HH21	1.78	0.47
1:0:1681:G:H5"	1:0:1682:A:H5'	1.95	0.47
11:H:117:LYS:HB2	37:H:8326:HOH:O	2.14	0.47
1:0:1249:U:H2'	1:0:1250:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:X:197:ASP:OD1	27:X:199:ASP:HB2	2.15	0.47
1:0:1593:C:OP1	18:O:117:SER:HB3	2.15	0.47
1:0:1189:A:H1'	1:0:1209:C:H1'	1.97	0.47
1:0:541:C:O2'	1:0:542:A:H5"	2.15	0.47
25:V:1:MET:N	25:V:103:GLU:OE2	2.43	0.47
5:B:4:SER:O	5:B:5:ARG:HB2	2.15	0.47
14:K:1:THR:HB	14:K:6:ARG:NH1	2.30	0.47
4:A:164:ARG:HB2	28:Y:68:CYS:SG	2.54	0.47
1:0:2054:A:C2	20:Q:128:ARG:NH2	2.83	0.47
1:0:2676:C:H4'	12:I:70:PHE:HE1	1.80	0.47
1:0:1743:G:H1'	37:0:4345:HOH:O	2.15	0.47
1:0:2506:A:N6	1:0:2511:A:O2'	2.48	0.47
7:D:166:ILE:HB	37:D:6326:HOH:O	2.13	0.47
1:0:1182:C:H1'	1:0:1192:A:H8	1.80	0.47
17:N:47:ARG:NH1	37:N:4564:HOH:O	2.47	0.47
1:0:236:A:H8	1:0:236:A:OP1	1.98	0.47
1:0:2001:G:C2'	1:0:2002:C:H5'	2.45	0.47
9:F:117:GLU:C	9:F:119:ARG:H	2.19	0.47
7:D:11:HIS:C	7:D:13:MET:H	2.18	0.47
1:0:935:G:H4'	17:N:38:ARG:HH12	1.80	0.47
1:0:2761:A:C4	1:0:2763:G:C8	3.02	0.47
1:0:2455:A:H2'	1:0:2456:A:O4'	2.15	0.47
1:0:2093:G:H5"	37:B:8528:HOH:O	2.15	0.47
1:0:1878:G:H5"	37:0:4614:HOH:O	2.14	0.46
7:D:25:MET:SD	7:D:40:ILE:HD11	2.55	0.46
1:0:1594:C:C5	18:O:120:ARG:NH1	2.83	0.46
37:0:7213:HOH:O	4:A:190:ARG:HG3	2.14	0.46
17:N:39:THR:HB	37:N:3360:HOH:O	2.14	0.46
27:X:106:THR:HG22	27:X:107:PRO:O	2.15	0.46
12:I:107:ASN:HD22	12:I:108:PRO:N	2.13	0.46
1:0:566:A:H2'	1:0:567:U:O4'	2.15	0.46
1:0:2779:G:H21	8:E:143:GLN:NE2	2.12	0.46
9:F:50:VAL:HG13	9:F:60:VAL:HG11	1.97	0.46
12:I:37:ALA:HA	12:I:102:ARG:O	2.15	0.46
5:B:144:THR:HG22	5:B:145:HIS:N	2.30	0.46
7:D:95:THR:C	7:D:97:GLN:N	2.68	0.46
16:M:180:LEU:O	16:M:181:ASP:CB	2.62	0.46
6:C:98:ARG:NH1	37:C:8357:HOH:O	2.47	0.46
1:0:1333:U:H2'	1:0:1334:C:H6	1.80	0.46
1:0:894:A:H1'	37:0:4672:HOH:O	2.14	0.46
1:0:890:C:O2'	1:0:891:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2507:G:H2'	1:0:2510:C:H42	1.80	0.46
1:0:952:G:OP1	19:P:42:LYS:HE2	2.15	0.46
1:0:1794:G:H3'	37:0:9997:HOH:O	2.14	0.46
15:L:46:LEU:HG	37:L:8624:HOH:O	2.15	0.46
1:0:515:C:H5	37:0:6485:HOH:O	1.98	0.46
1:0:135:G:OP1	15:L:39:ARG:NH1	2.47	0.46
7:D:41:LEU:CA	7:D:44:ILE:HG22	2.44	0.46
11:H:26:LYS:HD3	11:H:89:PRO:CG	2.45	0.46
1:0:745:G:N2	14:K:67:ARG:HD2	2.31	0.46
7:D:19:GLU:O	7:D:133:ASN:HB3	2.15	0.46
16:M:143:ARG:HH12	16:M:173:ASP:CG	2.16	0.46
1:0:2316:G:H4'	37:0:5510:HOH:O	2.15	0.46
5:B:279:THR:HG22	5:B:280:VAL:N	2.31	0.46
1:0:2769:C:H2'	1:0:2770:G:C5'	2.45	0.46
20:Q:25:PHE:CE2	20:Q:29:LYS:CE	2.98	0.46
24:U:16:ARG:NH2	24:U:63:GLU:HG3	2.30	0.46
1:0:2421:G:H3'	1:0:2422:U:C5'	2.44	0.46
15:L:20:ILE:HG22	37:L:8591:HOH:O	2.15	0.46
1:0:1771:U:H4'	1:0:1772:C:OP2	2.15	0.46
19:P:87:THR:HB	37:P:1295:HOH:O	2.14	0.46
1:0:2670:G:O2'	1:0:2671:U:H5'	2.14	0.46
1:0:2688:U:H2'	1:0:2689:A:C8	2.50	0.46
15:L:71:SER:O	15:L:73:ARG:NH1	2.48	0.46
2:9:3036:C:C5	2:9:3037:C:C5	3.03	0.46
1:0:1574:C:H6	1:0:1574:C:O5'	1.98	0.46
1:0:95:A:H5"	1:0:97:G:O4'	2.15	0.46
1:0:2656:G:O2'	1:0:2657:G:H5'	2.16	0.46
1:0:626:U:C4	1:0:627:G:C6	3.02	0.46
1:0:1118:A:C8	1:0:1119:G:H5"	2.50	0.46
12:I:45:VAL:CG2	12:I:46:ILE:N	2.78	0.46
25:V:26:ILE:HG22	37:V:5420:HOH:O	2.14	0.46
27:X:212:ARG:HB3	37:X:8535:HOH:O	2.14	0.46
29:Z:25:LYS:HG3	30:1:49:GLU:H	1.79	0.46
8:E:84:MET:HG2	8:E:168:ILE:HD13	1.97	0.46
1:0:1308:A:O4'	6:C:226:GLY:HA3	2.15	0.46
9:F:26:THR:HG21	9:F:103:ALA:HB2	1.97	0.46
1:0:29:C:O2'	1:0:30:U:H5'	2.15	0.46
1:0:1262:C:H1'	25:V:120:PRO:HG3	1.97	0.46
13:J:124:VAL:HG23	37:J:2659:HOH:O	2.14	0.46
1:0:1878:G:O2'	1:0:1879:U:H6	1.98	0.46
16:M:37:ARG:HA	16:M:37:ARG:HD3	1.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:12:ILE:CD1	37:G:692:HOH:O	2.63	0.46
8:E:11:VAL:CG1	8:E:12:ASP:H	2.29	0.46
26:W:71:ARG:HD3	37:W:2171:HOH:O	2.16	0.46
25:V:14:HIS:HA	37:V:2978:HOH:O	2.16	0.46
2:9:3091:C:H2'	2:9:3092:G:O4'	2.16	0.46
11:H:35:ASN:HD21	11:H:80:ASN:HA	1.79	0.46
8:E:125:GLU:O	8:E:132:THR:HG22	2.15	0.46
1:0:391:U:H2'	1:0:392:U:C6	2.51	0.46
1:0:1462:C:H2'	1:0:1463:A:C8	2.50	0.46
14:K:21:ARG:N	37:K:8532:HOH:O	2.48	0.46
1:0:2324:G:H4'	1:0:2418:G:O2'	2.15	0.46
8:E:24:GLY:HA3	8:E:76:VAL:HB	1.97	0.46
1:0:585:C:H6	37:0:5513:HOH:O	1.99	0.46
1:0:491:C:O2'	1:0:492:C:H5'	2.16	0.46
5:B:252:PRO:HA	37:B:8572:HOH:O	2.16	0.46
1:0:243:A:H61	1:0:269:G:H1'	1.80	0.46
2:9:3056:A:C3'	2:9:3057:A:H5"	2.45	0.46
1:0:1878:G:O2'	1:0:1879:U:O5'	2.34	0.46
20:Q:39:THR:N	20:Q:42:GLU:OE1	2.41	0.46
1:0:2270:G:H4'	4:A:223:ARG:HH12	1.81	0.46
12:I:126:ASN:O	12:I:129:PHE:HE2	1.98	0.46
24:U:1:THR:HG23	24:U:2:VAL:N	2.18	0.46
1:0:2064:U:H2'	1:0:2065:C:C6	2.49	0.46
1:0:2064:U:H5'	1:0:2652:U:H4'	1.97	0.46
5:B:279:THR:CG2	5:B:280:VAL:N	2.79	0.46
1:0:1787:C:O2'	1:0:1788:U:H5'	2.16	0.46
22:S:23:VAL:CA	22:S:93:THR:HG21	2.46	0.46
6:C:85:LYS:NZ	37:C:8324:HOH:O	2.38	0.46
20:Q:113:HIS:HE1	20:Q:144:GLU:CD	2.19	0.46
1:0:2081:A:H4'	12:I:69:TYR:CE1	2.50	0.46
1:0:1414:A:H2'	1:0:1415:G:O4'	2.16	0.46
1:0:1076:G:H1'	37:0:3913:HOH:O	2.15	0.46
6:C:142:ASP:OD1	6:C:236:THR:HG23	2.16	0.46
18:O:115:SER:C	18:O:117:SER:H	2.19	0.46
12:I:19:MET:HE1	12:I:132:LEU:HD11	1.95	0.46
25:V:68:THR:HG23	25:V:69:ARG:N	2.30	0.46
1:0:2720:C:O2	13:J:87:ARG:NH2	2.49	0.46
25:V:4:LEU:HD22	25:V:52:VAL:HG22	1.95	0.46
16:M:115:VAL:HG23	16:M:116:PHE:N	2.31	0.46
12:I:39:VAL:CG1	12:I:107:ASN:HB2	2.46	0.46
25:V:13:MET:HE2	25:V:18:GLN:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:1:MET:HG2	6:C:2:GLN:N	2.30	0.46
22:S:101:LEU:HD13	22:S:112:LEU:HD11	1.97	0.46
1:0:2407:G:O2'	1:0:2408:A:H5'	2.16	0.46
1:0:947:U:H2'	1:0:948:G:C8	2.51	0.46
1:0:1804:A:H2'	1:0:1805:G:H8	1.78	0.46
15:L:5:TYR:O	15:L:8:ILE:N	2.49	0.46
1:0:832:U:H2'	1:0:833:G:H8	1.79	0.46
1:0:2073:G:OP2	1:0:2490:A:H5'	2.15	0.46
22:S:44:ALA:HA	22:S:62:VAL:HG12	1.98	0.46
15:L:113:ARG:NH2	15:L:156:ARG:HG2	2.30	0.46
37:0:6120:HOH:O	19:P:2:SER:HA	2.15	0.46
1:0:779:U:H5'	1:0:1836:A:C2	2.50	0.46
1:0:423:A:O2'	1:0:424:C:H5'	2.15	0.46
1:0:151:A:H2'	1:0:152:A:O4'	2.15	0.46
16:M:115:VAL:HG23	37:M:6448:HOH:O	2.16	0.46
9:F:47:LEU:HB2	9:F:108:LEU:HD11	1.98	0.46
11:H:75:SER:HB3	11:H:79:ALA:HB1	1.98	0.46
1:0:2251:G:H2'	1:0:2252:A:C8	2.51	0.46
1:0:849:C:C2'	1:0:850:U:H5'	2.46	0.46
17:N:26:TRP:CE3	17:N:26:TRP:HA	2.51	0.46
17:N:25:VAL:O	17:N:29:VAL:HG23	2.15	0.46
30:1:9:LYS:O	30:1:12:ALA:HB3	2.15	0.46
4:A:70:ALA:HA	4:A:71:PRO:HD3	1.77	0.46
6:C:7:ASP:O	6:C:9:ASP:N	2.49	0.46
13:J:89:LYS:HA	37:J:7064:HOH:O	2.16	0.46
1:0:1192:A:O2'	1:0:1193:A:P	2.73	0.46
12:I:131:THR:CG2	12:I:134:GLU:HG3	2.46	0.46
1:0:2587:U:C2	1:0:2589:U:H5'	2.51	0.46
13:J:6:ALA:HB3	13:J:116:GLU:HG2	1.98	0.46
1:0:695:C:O2'	1:0:696:C:H5'	2.16	0.46
20:Q:25:PHE:CZ	20:Q:29:LYS:HE2	2.51	0.46
16:M:93:GLN:CG	37:M:6239:HOH:O	2.63	0.46
8:E:145:ALA:O	8:E:148:ILE:HB	2.16	0.46
9:F:13:GLU:O	9:F:16:ALA:HB3	2.16	0.46
37:0:9840:HOH:O	19:P:16:ASN:HB2	2.15	0.46
37:M:4624:HOH:O	19:P:19:ARG:HD2	2.15	0.46
37:0:6835:HOH:O	6:C:188:ARG:CD	2.64	0.46
31:2:42:ARG:HD2	37:2:8507:HOH:O	2.15	0.46
1:0:595:U:O2'	1:0:596:C:H5'	2.16	0.46
1:0:1311:G:C2	1:0:1312:G:C8	3.04	0.46
5:B:14:GLY:HA2	5:B:15:PRO:C	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:238:ASN:HA	37:B:8522:HOH:O	2.14	0.46
15:L:35:PRO:CD	15:L:38:VAL:HG23	2.46	0.46
1:0:159:G:H5"	15:L:74:ARG:NH2	2.31	0.46
7:D:146:LYS:HE2	16:M:107:ASN:ND2	2.31	0.46
1:0:2269:C:H2'	1:0:2270:G:C5'	2.46	0.46
24:U:1:THR:C	24:U:3:LEU:N	2.69	0.46
8:E:108:LEU:N	8:E:108:LEU:HD12	2.31	0.46
1:0:559:U:O2'	1:0:560:C:H5'	2.16	0.46
1:0:1641:A:C2'	1:0:1642:A:H5'	2.45	0.46
5:B:307:ARG:HB2	5:B:307:ARG:HH11	1.80	0.46
16:M:171:HIS:CE1	37:M:6988:HOH:O	2.69	0.46
15:L:81:ARG:HG3	15:L:85:ARG:HB2	1.97	0.46
5:B:125:GLU:OE2	5:B:129:ARG:NH1	2.48	0.46
7:D:141:VAL:HG13	7:D:144:ARG:HH21	1.80	0.46
37:0:9688:HOH:O	14:K:4:LYS:HG3	2.14	0.46
1:0:1766:U:O4'	1:0:1779:A:N6	2.48	0.46
1:0:1947:G:N2	1:0:1966:U:O2	2.49	0.46
1:0:449:A:N7	6:C:43:LYS:HG2	2.31	0.46
1:0:644:G:N3	1:0:644:G:H5'	2.31	0.46
1:0:843:A:C2	1:0:846:A:C8	3.04	0.46
15:L:162:GLY:HA2	37:L:8519:HOH:O	2.16	0.46
22:S:37:GLN:OE1	22:S:118:SER:HA	2.16	0.46
1:0:10:U:HO2'	1:0:11:A:P	2.39	0.46
1:0:800:G:H4'	37:0:6447:HOH:O	2.15	0.46
1:0:1116:U:O2'	1:0:1118:A:C2	2.41	0.46
16:M:90:LEU:HB2	16:M:186:LEU:HD22	1.97	0.46
13:J:55:VAL:CG1	13:J:56:SER:N	2.78	0.46
37:0:3245:HOH:O	22:S:9:LYS:CD	2.51	0.46
8:E:98:GLU:N	37:E:4191:HOH:O	2.49	0.46
5:B:154:VAL:CG1	5:B:156:LYS:HG2	2.46	0.46
14:K:143:THR:HG22	14:K:144:ASP:H	1.81	0.46
1:0:240:C:C4'	15:L:146:GLN:NE2	2.78	0.46
12:I:6:PHE:HB3	12:I:109:TYR:OH	2.15	0.46
1:0:1162:G:H2'	1:0:1162:G:N3	2.31	0.46
2:9:3041:C:H2'	2:9:3042:C:H6	1.81	0.46
7:D:92:GLU:O	7:D:93:LEU:O	2.33	0.46
1:0:1329:A:H2	37:0:4139:HOH:O	1.98	0.46
1:0:2748:G:C5'	37:0:6917:HOH:O	2.64	0.46
22:S:25:ALA:O	22:S:39:ASN:HB2	2.15	0.46
22:S:25:ALA:O	22:S:39:ASN:CB	2.65	0.46
1:0:431:G:P	15:L:48:ARG:HH12	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1787:C:OP1	18:O:68:LYS:HE2	2.16	0.46
1:0:1496:G:H4'	37:0:5092:HOH:O	2.15	0.46
13:J:72:VAL:O	13:J:95:ALA:HA	2.16	0.46
1:0:195:C:C5	1:0:196:G:C5	3.04	0.46
16:M:110:THR:HG22	37:M:5537:HOH:O	2.14	0.46
5:B:294:TYR:HE2	37:B:8649:HOH:O	1.99	0.46
11:H:82:LYS:HB2	11:H:82:LYS:NZ	2.32	0.46
13:J:66:ARG:HG2	13:J:66:ARG:HH11	1.81	0.46
15:L:32:ARG:HA	37:L:8647:HOH:O	2.15	0.46
1:0:602:A:O2'	1:0:605:C:H4'	2.15	0.46
1:0:1420:C:C2	1:0:1445:G:N2	2.84	0.46
27:X:105:LYS:HE2	27:X:198:GLY:O	2.16	0.46
1:0:295:C:H2'	1:0:296:G:O4'	2.16	0.46
1:0:1116:U:HO2'	1:0:1118:A:H2	0.69	0.45
30:1:25:VAL:O	30:1:29:THR:HG23	2.16	0.45
1:0:332:G:H4'	22:S:2:LYS:O	2.16	0.45
1:0:447:A:O2'	1:0:448:G:H5'	2.17	0.45
16:M:62:HIS:HB3	16:M:65:ASP:OD1	2.15	0.45
1:0:2710:U:O5'	1:0:2710:U:H6	1.99	0.45
16:M:58:LEU:N	16:M:58:LEU:HD12	2.32	0.45
1:0:1850:U:H2'	1:0:1851:G:H8	1.80	0.45
1:0:2270:G:H4'	4:A:223:ARG:NH1	2.31	0.45
12:I:19:MET:HE1	12:I:132:LEU:CD2	2.45	0.45
25:V:21:LEU:CD2	25:V:48:VAL:HG11	2.43	0.45
1:0:1821:A:O2'	1:0:1822:A:H5'	2.16	0.45
4:A:53:ALA:HB1	4:A:54:PRO:HD2	1.97	0.45
2:9:3063:C:O2'	2:9:3064:C:H5'	2.16	0.45
18:O:10:ALA:HA	18:O:13:VAL:CG1	2.47	0.45
12:I:47:THR:HG22	37:I:2409:HOH:O	2.16	0.45
22:S:19:ARG:HD3	22:S:67:LEU:O	2.17	0.45
1:0:275:G:N2	1:0:376:C:C2	2.84	0.45
2:9:3037:C:H4'	16:M:110:THR:HG23	1.96	0.45
1:0:2488:A:H61	1:0:2534:C:H42	1.63	0.45
1:0:1827:G:H2'	1:0:1828:G:C8	2.51	0.45
7:D:15:GLU:O	7:D:16:PRO:O	2.33	0.45
1:0:64:G:H2'	1:0:65:C:O4'	2.16	0.45
1:0:2834:G:OP1	26:W:39:LYS:HE2	2.16	0.45
11:H:150:LYS:CE	37:H:8368:HOH:O	2.61	0.45
5:B:307:ARG:CG	5:B:307:ARG:HH11	2.28	0.45
6:C:76:ARG:HG2	6:C:78:ARG:NH1	2.31	0.45
5:B:36:PRO:HG3	5:B:169:GLY:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:213:G:H1'	1:0:225:G:N1	2.31	0.45
1:0:1603:A:H5'	1:0:1605:G:C5'	2.47	0.45
1:0:2274:A:N3	15:L:86:MET:HE1	2.32	0.45
18:O:83:LYS:O	18:O:86:ALA:HB3	2.17	0.45
8:E:125:GLU:HB2	8:E:132:THR:CG2	2.47	0.45
31:2:84:ARG:CD	37:2:8541:HOH:O	2.65	0.45
2:9:3088:G:OP1	25:V:130:HIS:NE2	2.39	0.45
1:0:278:A:H2'	1:0:279:C:O4'	2.17	0.45
31:2:64:LYS:HE2	37:2:8558:HOH:O	2.15	0.45
25:V:132:VAL:HG23	25:V:138:LEU:O	2.16	0.45
11:H:150:LYS:CG	37:H:8368:HOH:O	2.62	0.45
8:E:11:VAL:HG11	8:E:22:VAL:HG13	1.97	0.45
23:T:14:GLU:OE1	23:T:15:PRO:CD	2.58	0.45
1:0:1940:C:H4'	37:0:6726:HOH:O	2.15	0.45
8:E:166:VAL:HB	37:E:6341:HOH:O	2.16	0.45
13:J:82:ARG:NH2	13:J:115:ARG:HG2	2.32	0.45
37:0:6956:HOH:O	28:Y:31:ILE:HG13	2.15	0.45
27:X:126:PRO:HG2	27:X:128:PHE:CZ	2.51	0.45
12:I:27:ALA:HB1	12:I:87:LEU:HD21	1.96	0.45
1:0:65:C:O2'	1:0:66:G:H5'	2.16	0.45
1:0:724:G:O2'	1:0:725:C:H5'	2.17	0.45
1:0:244:C:O5'	1:0:244:C:H6	2.00	0.45
18:O:109:ARG:NH1	18:O:119:TYR:CE2	2.85	0.45
25:V:29:VAL:O	25:V:30:ASN:HB2	2.16	0.45
1:0:249:G:O2'	1:0:250:C:H5'	2.17	0.45
1:0:1168:C:H2'	1:0:1169:U:O4'	2.15	0.45
11:H:86:ARG:HG2	11:H:86:ARG:H	1.38	0.45
15:L:84:LYS:O	15:L:87:MET:HG2	2.16	0.45
11:H:158:ASN:ND2	37:H:8372:HOH:O	2.49	0.45
13:J:75:ARG:O	13:J:93:ASN:HA	2.16	0.45
1:0:814:G:N2	1:0:815:U:H1'	2.32	0.45
5:B:36:PRO:CD	5:B:169:GLY:H	2.30	0.45
1:0:240:C:C5'	15:L:146:GLN:NE2	2.79	0.45
7:D:55:LYS:O	7:D:56:ARG:HB2	2.16	0.45
6:C:174:ILE:HG12	6:C:186:TYR:CE2	2.51	0.45
8:E:81:GLU:N	37:E:6931:HOH:O	2.40	0.45
1:0:2379:G:N7	1:0:2408:A:N1	2.64	0.45
9:F:48:VAL:HG23	9:F:74:PHE:HB3	1.98	0.45
27:X:151:SER:HB3	27:X:154:ARG:HB3	1.97	0.45
9:F:13:GLU:OE2	9:F:78:GLU:HG2	2.17	0.45
22:S:37:GLN:HB3	37:S:6711:HOH:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2445:U:H2'	1:0:2446:G:C8	2.51	0.45
1:0:2900:G:H2'	1:0:2901:C:O4'	2.17	0.45
1:0:161:A:H3'	37:0:8848:HOH:O	2.17	0.45
1:0:183:A:H5'	15:L:157:LEU:HD12	1.98	0.45
7:D:166:ILE:O	7:D:169:THR:N	2.50	0.45
5:B:162:MET:HG3	5:B:310:ARG:CD	2.46	0.45
11:H:65:ARG:CZ	37:H:8370:HOH:O	2.65	0.45
5:B:166:VAL:O	5:B:174:ARG:HD2	2.17	0.45
2:9:3114:G:H2'	2:9:3115:C:H6	1.81	0.45
9:F:48:VAL:CG2	9:F:74:PHE:HB3	2.45	0.45
1:0:1829:A:H2'	1:0:1830:C:H5'	1.99	0.45
25:V:11:VAL:O	25:V:12:ASN:HB2	2.17	0.45
16:M:100:ALA:O	16:M:129:ILE:HG12	2.16	0.45
18:O:6:GLN:N	18:O:6:GLN:OE1	2.45	0.45
1:0:2134:G:C6	1:0:2258:A:C8	3.05	0.45
1:0:665:A:C6	1:0:666:A:C6	3.05	0.45
1:0:579:G:H2'	1:0:580:A:C8	2.51	0.45
20:Q:35:ILE:O	20:Q:38:LYS:HB2	2.17	0.45
37:0:5608:HOH:O	15:L:174:ARG:HD3	2.15	0.45
1:0:1530:U:O2'	1:0:1531:U:H5'	2.17	0.45
11:H:31:PHE:HE2	11:H:87:LYS:O	1.99	0.45
1:0:1439:C:O5'	1:0:1439:C:H6	1.99	0.45
12:I:74:ARG:HH11	12:I:74:ARG:CB	2.28	0.45
25:V:122:ARG:CG	25:V:152:ALA:O	2.65	0.45
1:0:2897:C:H2'	1:0:2898:G:C8	2.45	0.45
5:B:217:ARG:HG3	5:B:257:THR:HG22	1.97	0.45
2:9:3058:G:H1'	37:D:3839:HOH:O	2.17	0.45
1:0:1058:A:H2'	1:0:1060:C:C5'	2.47	0.45
4:A:1:GLY:N	37:A:8604:HOH:O	2.49	0.45
7:D:59:GLY:C	7:D:61:PHE:N	2.70	0.45
1:0:2730:G:O2'	1:0:2731:G:H5'	2.17	0.45
1:0:2481:G:C3'	1:0:2482:G:H5"	2.47	0.45
1:0:489:A:C8	22:S:82:THR:HG22	2.52	0.45
1:0:2667:G:H1'	1:0:2914:A:N3	2.31	0.45
6:C:236:THR:C	37:C:8444:HOH:O	2.55	0.45
11:H:84:ARG:CZ	11:H:135:TRP:CH2	2.99	0.45
7:D:35:ALA:O	7:D:37:ALA:N	2.50	0.45
1:0:363:A:O5'	1:0:363:A:H8	1.99	0.45
4:A:153:ARG:NH1	4:A:153:ARG:HB2	2.27	0.45
1:0:1942:A:O3'	4:A:213:LYS:HE2	2.17	0.45
4:A:105:VAL:HG11	4:A:154:ALA:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:3049:G:H2'	2:9:3050:G:O4'	2.16	0.45
8:E:31:ARG:HH12	8:E:68:HIS:CD2	2.34	0.45
1:0:2253:G:N2	37:0:4974:HOH:O	2.28	0.45
1:0:1477:C:C5'	1:0:1868:G:H5"	2.46	0.45
1:0:1504:A:H5'	37:0:3881:HOH:O	2.17	0.45
1:0:1052:G:H2'	1:0:1052:G:N3	2.31	0.45
11:H:110:GLY:N	37:H:8382:HOH:O	2.49	0.45
11:H:144:GLU:HA	11:H:144:GLU:OE1	2.16	0.45
26:W:26:ALA:HB1	26:W:59:TRP:CE2	2.51	0.45
37:0:6737:HOH:O	4:A:177:HIS:HE1	1.99	0.45
6:C:140:VAL:HG12	6:C:141:SER:N	2.32	0.45
11:H:157:ILE:HG22	11:H:158:ASN:N	2.32	0.45
18:O:120:ARG:NH2	18:O:123:TYR:CD2	2.84	0.45
1:0:1180:U:H2'	1:0:1181:A:O4'	2.17	0.45
12:I:45:VAL:HG21	12:I:129:PHE:CD1	2.52	0.45
7:D:154:LYS:CD	7:D:154:LYS:H	2.22	0.45
5:B:168:GLY:H	5:B:174:ARG:HH11	1.65	0.45
16:M:72:GLU:H	16:M:171:HIS:CE1	2.34	0.45
15:L:147:LEU:O	15:L:149:TRP:N	2.50	0.45
18:O:16:VAL:CG1	18:O:17:GLY:N	2.80	0.45
19:P:32:GLU:O	19:P:93:ARG:NH2	2.50	0.45
19:P:16:ASN:HA	19:P:16:ASN:HD22	1.50	0.45
1:0:2869:G:H2'	1:0:2870:C:C6	2.51	0.45
1:0:2697:A:H2'	1:0:2698:G:O4'	2.17	0.45
13:J:40:THR:O	13:J:41:LYS:C	2.55	0.45
1:0:1114:A:H2'	1:0:1115:U:H6	1.82	0.45
1:0:2299:G:O6	19:P:1:PRO:HA	2.16	0.45
1:0:659:A:H5"	37:N:6799:HOH:O	2.16	0.45
1:0:1007:A:H2'	11:H:19:TYR:CZ	2.52	0.45
18:O:14:LEU:HD13	18:O:51:ALA:HB2	1.98	0.45
11:H:84:ARG:CZ	11:H:135:TRP:HH2	2.30	0.45
4:A:88:ILE:CD1	4:A:100:PRO:HD3	2.39	0.45
1:0:2256:G:C2'	1:0:2257:G:C5'	2.92	0.45
1:0:154:C:C2	1:0:155:C:C5	3.05	0.45
11:H:53:PRO:HA	11:H:125:VAL:O	2.17	0.45
1:0:1384:C:H5'	26:W:30:MET:HG2	1.98	0.45
27:X:117:LEU:HD12	27:X:174:VAL:CG1	2.46	0.45
1:0:890:C:O2'	29:Z:50:TRP:O	2.33	0.45
27:X:101:GLY:HA3	37:X:8560:HOH:O	2.17	0.45
24:U:19:GLU:O	24:U:22:ASP:HB2	2.17	0.45
1:0:462:A:N3	30:1:37:HIS:HB3	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:99:ILE:O	4:A:131:HIS:CE1	2.70	0.44
27:X:219:GLU:HG3	27:X:220:GLU:N	2.31	0.44
1:0:696:C:O2'	1:0:697:G:H5'	2.16	0.44
18:O:31:ILE:HG12	18:O:43:LEU:HD13	1.99	0.44
1:0:1008:C:OP1	11:H:16:ARG:NH2	2.47	0.44
1:0:1706:G:H1'	1:0:1712:A:H61	1.82	0.44
1:0:818:A:O2'	28:Y:13:ARG:HD3	2.16	0.44
16:M:79:PRO:HG3	16:M:142:THR:O	2.17	0.44
1:0:331:A:H1'	37:0:4253:HOH:O	2.16	0.44
5:B:76:THR:N	5:B:77:PRO:HD3	2.32	0.44
6:C:85:LYS:HE2	37:C:8324:HOH:O	2.17	0.44
1:0:1755:A:H2'	1:0:1756:G:O4'	2.17	0.44
4:A:149:ASP:OD1	4:A:151:GLN:HB2	2.17	0.44
20:Q:100:ASP:C	20:Q:102:GLN:H	2.19	0.44
13:J:78:LYS:HA	13:J:79:PRO:HD3	1.85	0.44
10:G:18:GLU:O	10:G:21:ASP:HB2	2.17	0.44
1:0:242:A:H5'	37:0:5252:HOH:O	2.18	0.44
1:0:357:A:N7	37:0:4583:HOH:O	2.36	0.44
6:C:237:GLU:N	37:C:8444:HOH:O	2.49	0.44
7:D:23:VAL:CG2	7:D:73:VAL:HB	2.47	0.44
11:H:46:VAL:CG1	11:H:146:TRP:HZ3	2.29	0.44
11:H:57:ARG:HG3	11:H:57:ARG:NH1	2.32	0.44
16:M:67:ALA:O	16:M:69:TYR:N	2.51	0.44
1:0:963:C:O5'	1:0:963:C:H6	2.00	0.44
1:0:2353:A:O2'	16:M:7:LYS:HB3	2.17	0.44
25:V:122:ARG:CZ	37:V:5817:HOH:O	2.65	0.44
9:F:104:ALA:O	9:F:108:LEU:HB3	2.17	0.44
37:0:3180:HOH:O	8:E:143:GLN:HG2	2.16	0.44
1:0:213:G:C2'	1:0:214:U:OP2	2.65	0.44
2:9:3107:C:C6	37:9:8440:HOH:O	2.68	0.44
14:K:121:ILE:HG12	14:K:141:GLU:HB2	2.00	0.44
1:0:2443:C:O3'	14:K:56:LYS:HE3	2.17	0.44
1:0:308:U:C5'	22:S:97:ARG:NH2	2.80	0.44
37:C:8366:HOH:O	22:S:2:LYS:HE2	2.16	0.44
1:0:303:C:H2'	1:0:304:G:O4'	2.17	0.44
1:0:1820:G:C6	1:0:2030:A:C2	3.05	0.44
1:0:1794:G:P	18:O:133:SER:HB2	2.58	0.44
1:0:2483:A:H4'	37:0:6875:HOH:O	2.17	0.44
8:E:162:PHE:CD1	8:E:162:PHE:N	2.84	0.44
1:0:1497:G:H4'	1:0:1627:G:O2'	2.17	0.44
1:0:1565:C:O4'	1:0:2738:G:H1'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:R:34:LYS:HG2	21:R:54:THR:HG23	1.99	0.44
15:L:37:VAL:HG11	15:L:108:LYS:HG3	1.99	0.44
1:0:2637:A:H4'	1:0:2638:G:H5'	1.97	0.44
7:D:35:ALA:HB1	37:D:3279:HOH:O	2.17	0.44
1:0:814:G:C8	37:0:6598:HOH:O	2.54	0.44
10:G:71:LEU:O	10:G:73:ASP:N	2.50	0.44
25:V:154:ARG:HB3	25:V:154:ARG:HE	1.60	0.44
16:M:33:ARG:HD2	16:M:103:ASP:OD2	2.17	0.44
24:U:42:ASN:O	24:U:44:GLY:N	2.49	0.44
19:P:26:PRO:O	19:P:30:VAL:HG23	2.18	0.44
2:9:3029:C:C2'	2:9:3030:C:H5'	2.48	0.44
1:0:2548:C:H2'	1:0:2549:C:H6	1.83	0.44
7:D:93:LEU:HB3	7:D:97:GLN:OE1	2.17	0.44
7:D:170:TYR:CD1	7:D:170:TYR:N	2.85	0.44
6:C:246:ARG:HH11	6:C:246:ARG:HB3	1.82	0.44
1:0:2038:A:O2'	1:0:2039:A:H5'	2.18	0.44
13:J:50:GLY:O	13:J:120:ARG:NH1	2.49	0.44
1:0:1855:G:H8	4:A:144:GLU:OE2	2.00	0.44
1:0:1170:U:O2'	1:0:1172:G:N7	2.34	0.44
31:2:70:ARG:HH11	31:2:70:ARG:HG2	1.81	0.44
1:0:2892:G:C6	1:0:2893:C:N3	2.86	0.44
1:0:2437:A:H2'	1:0:2438:G:C8	2.52	0.44
1:0:2807:U:OP2	5:B:28:SER:OG	2.35	0.44
25:V:65:VAL:HA	25:V:68:THR:CG2	2.47	0.44
25:V:6:GLN:CB	25:V:26:ILE:HD12	2.42	0.44
37:0:9949:HOH:O	2:9:3103:A:H1'	2.17	0.44
1:0:1603:A:C5'	1:0:1605:G:H5'	2.48	0.44
20:Q:32:ALA:O	20:Q:33:ARG:C	2.54	0.44
1:0:1299:G:N2	37:0:4139:HOH:O	2.50	0.44
7:D:10:PHE:CD1	7:D:11:HIS:N	2.86	0.44
1:0:396:U:P	31:2:38:ARG:HH11	2.39	0.44
28:Y:73:THR:O	28:Y:76:GLY:N	2.50	0.44
27:X:112:GLU:OE1	27:X:115:ARG:NH1	2.50	0.44
6:C:178:GLN:O	6:C:179:GLY:C	2.56	0.44
1:0:1819:G:H2'	1:0:1820:G:C5'	2.47	0.44
1:0:860:U:H2'	1:0:861:A:C8	2.53	0.44
1:0:488:U:H2'	37:0:3484:HOH:O	2.17	0.44
1:0:2668:G:H2'	1:0:2669:U:C6	2.53	0.44
1:0:2497:A:H2'	1:0:2498:C:C6	2.52	0.44
16:M:131:HIS:NE2	37:M:4678:HOH:O	2.36	0.44
1:0:73:C:O2'	1:0:74:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1235:G:C1'	12:I:63:ILE:HG23	2.48	0.44
23:T:25:ASP:OD2	23:T:26:GLY:N	2.50	0.44
1:0:532:A:N1	1:0:2660:G:O2'	2.41	0.44
11:H:1:LYS:CA	37:H:8353:HOH:O	2.65	0.44
1:0:1181:A:O2'	1:0:1182:C:H5'	2.18	0.44
1:0:1192:A:O2'	1:0:1193:A:OP1	2.35	0.44
1:0:1667:A:H2'	1:0:1668:U:H6	1.83	0.44
1:0:812:A:H2'	1:0:813:C:C6	2.52	0.44
9:F:32:GLY:N	37:F:3111:HOH:O	2.49	0.44
1:0:1972:U:C2'	1:0:1973:A:H5'	2.45	0.44
20:Q:46:TYR:CD2	20:Q:47:LEU:HD23	2.52	0.44
8:E:170:ARG:HB2	8:E:170:ARG:HE	1.63	0.44
1:0:2518:C:H2'	1:0:2519:C:O4'	2.16	0.44
4:A:29:HIS:CE1	4:A:107:ASN:ND2	2.86	0.44
1:0:2387:U:H2'	1:0:2388:C:C6	2.52	0.44
11:H:45:GLN:CB	11:H:163:PRO:HD2	2.22	0.44
1:0:1209:C:H2'	1:0:1210:G:C8	2.51	0.44
4:A:76:VAL:HG23	28:Y:63:LYS:HB3	1.99	0.44
15:L:78:ASN:C	15:L:79:LYS:HG2	2.38	0.44
4:A:53:ALA:HB3	37:A:8602:HOH:O	2.17	0.44
7:D:52:THR:HG22	7:D:52:THR:O	2.17	0.44
1:0:1500:U:OP2	18:O:41:ARG:NH2	2.51	0.44
20:Q:29:LYS:NZ	37:Q:8543:HOH:O	2.49	0.44
7:D:174:VAL:CG1	37:D:6555:HOH:O	2.65	0.44
16:M:176:ARG:O	16:M:180:LEU:HG	2.18	0.44
13:J:98:VAL:HG13	13:J:99:ASP:N	2.32	0.44
4:A:66:ARG:HH11	4:A:66:ARG:HB2	1.81	0.44
1:0:1226:G:N2	37:0:4048:HOH:O	2.44	0.44
31:2:8:ASN:O	31:2:9:THR:HB	2.17	0.44
1:0:2542:C:H5"	1:0:2608:C:N4	2.32	0.44
1:0:440:C:O2'	1:0:441:A:H5'	2.18	0.44
1:0:485:A:O2'	1:0:487:G:H5'	2.18	0.44
1:0:2769:C:H2'	1:0:2770:G:H5'	2.00	0.44
1:0:2815:G:N7	12:I:80:LYS:NZ	2.65	0.44
1:0:2032:U:H2'	1:0:2033:G:C5'	2.48	0.44
17:N:77:ALA:HA	17:N:96:VAL:O	2.18	0.44
1:0:1925:G:O2'	1:0:1926:G:H5'	2.18	0.44
1:0:2457:U:H2'	1:0:2458:U:C6	2.53	0.44
11:H:144:GLU:HG3	37:H:8332:HOH:O	2.17	0.44
16:M:64:SER:C	16:M:66:LEU:H	2.19	0.44
1:0:876:A:H2'	1:0:876:A:N3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2777:G:O2'	1:0:2778:A:H5'	2.17	0.44
1:0:2356:A:H2'	1:0:2357:G:O4'	2.17	0.44
1:0:415:A:O2'	1:0:416:G:H5'	2.18	0.44
1:0:611:U:H2'	1:0:612:U:C6	2.53	0.44
1:0:716:G:H2'	1:0:717:C:O5'	2.18	0.44
1:0:794:U:H3	1:0:819:A:N6	2.10	0.44
12:I:130:VAL:CG1	12:I:131:THR:N	2.81	0.44
25:V:65:VAL:CA	25:V:68:THR:HG22	2.47	0.44
1:0:2721:U:H4'	13:J:87:ARG:HG3	2.00	0.44
26:W:43:VAL:HG22	26:W:76:ARG:NH1	2.32	0.44
1:0:812:A:H2'	1:0:813:C:O4'	2.17	0.44
7:D:84:LEU:C	7:D:86:THR:H	2.21	0.44
31:2:3:MET:HG3	31:2:4:PRO:HD2	1.99	0.44
1:0:2488:A:H1'	37:0:8613:HOH:O	2.16	0.44
1:0:1882:C:O2'	1:0:2012:U:OP2	2.31	0.44
1:0:2791:U:H1'	1:0:2792:A:H5"	2.00	0.44
27:X:177:LYS:HE2	27:X:183:GLU:OE2	2.18	0.44
1:0:2248:C:H3'	37:0:4880:HOH:O	2.18	0.44
15:L:28:MET:HA	15:L:31:TRP:HB2	2.00	0.44
20:Q:39:THR:O	20:Q:40:ALA:C	2.55	0.44
11:H:59:ASN:ND2	11:H:59:ASN:N	2.60	0.44
11:H:39:GLY:O	11:H:41:THR:N	2.51	0.44
16:M:151:ASP:HB3	37:M:3251:HOH:O	2.17	0.44
5:B:168:GLY:O	5:B:169:GLY:O	2.36	0.44
1:0:2255:A:C6	1:0:2256:G:C5	3.06	0.44
6:C:162:VAL:HG12	6:C:162:VAL:O	2.18	0.44
23:T:36:CYS:O	23:T:37:GLU:C	2.56	0.44
22:S:98:VAL:HG11	22:S:101:LEU:CD2	2.48	0.44
5:B:322:ARG:HB2	37:B:8606:HOH:O	2.17	0.44
1:0:681:G:H1'	1:0:683:G:O6	2.18	0.44
5:B:132:HIS:CE1	5:B:171:VAL:CG2	3.01	0.44
4:A:149:ASP:OD1	4:A:151:GLN:CB	2.66	0.44
1:0:1486:A:C5	30:1:2:LYS:HG3	2.52	0.44
8:E:21:THR:HG23	8:E:30:THR:OG1	2.18	0.44
6:C:111:VAL:HB	37:C:8321:HOH:O	2.17	0.44
1:0:1597:A:O4'	18:O:95:GLU:HG2	2.18	0.44
1:0:2911:C:H2'	1:0:2912:C:C6	2.52	0.44
2:9:3002:U:H1'	37:9:8484:HOH:O	2.17	0.43
1:0:1592:G:O2'	1:0:1593:C:O4'	2.35	0.43
1:0:283:U:H5"	1:0:284:C:P	2.58	0.43
13:J:30:LYS:O	13:J:55:VAL:HG13	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1589:G:H4'	37:0:6248:HOH:O	2.17	0.43
1:0:1014:A:H2'	1:0:1015:C:H5'	2.00	0.43
1:0:2265:U:H2'	1:0:2266:A:H8	1.82	0.43
5:B:278:PRO:HD3	5:B:294:TYR:CZ	2.52	0.43
1:0:1135:G:C6	1:0:1136:U:C4	3.07	0.43
1:0:1692:C:H1'	37:0:8974:HOH:O	2.16	0.43
7:D:27:ILE:CG2	7:D:28:GLY:H	2.20	0.43
16:M:86:LEU:O	16:M:90:LEU:HG	2.18	0.43
10:G:73:ASP:O	37:G:2218:HOH:O	2.21	0.43
14:K:143:THR:CG2	14:K:144:ASP:H	2.31	0.43
1:0:2897:C:O2'	1:0:2898:G:H5'	2.19	0.43
1:0:2782:G:O6	1:0:2790:C:H5"	2.18	0.43
2:9:3034:A:H2'	2:9:3035:C:O4'	2.18	0.43
5:B:145:HIS:CD2	5:B:146:THR:O	2.68	0.43
1:0:221:G:H2'	1:0:222:A:C8	2.53	0.43
1:0:1215:A:O3'	1:0:1216:G:C4'	2.65	0.43
1:0:1114:A:H2'	1:0:1115:U:C6	2.53	0.43
1:0:1934:A:C8	1:0:1935:C:C5	3.07	0.43
21:R:11:THR:H	21:R:14:ALA:HB3	1.83	0.43
1:0:226:A:H1'	1:0:393:G:C5	2.53	0.43
28:Y:34:LYS:HE2	37:Y:8422:HOH:O	2.18	0.43
1:0:1838:U:O2'	1:0:2644:C:H5'	2.17	0.43
1:0:624:U:H5"	37:0:9026:HOH:O	2.17	0.43
27:X:189:ASN:HA	27:X:217:ILE:HD11	2.00	0.43
1:0:1874:U:P	4:A:51:ARG:HD2	2.58	0.43
9:F:108:LEU:HG	9:F:109:GLU:N	2.33	0.43
13:J:115:ARG:CG	13:J:116:GLU:N	2.77	0.43
1:0:236:A:H4'	1:0:237:G:OP1	2.18	0.43
1:0:2546:U:H2'	1:0:2547:C:C6	2.54	0.43
18:O:84:ALA:C	18:O:86:ALA:H	2.20	0.43
15:L:45:ARG:CZ	15:L:48:ARG:HG3	2.48	0.43
17:N:26:TRP:HA	17:N:26:TRP:HE3	1.82	0.43
5:B:102:THR:O	5:B:105:PHE:CZ	2.71	0.43
5:B:102:THR:CG2	5:B:182:VAL:HG12	2.48	0.43
12:I:59:LYS:O	12:I:63:ILE:HG13	2.18	0.43
19:P:29:ALA:HB1	37:P:7270:HOH:O	2.18	0.43
1:0:699:C:C2	1:0:743:G:N2	2.87	0.43
25:V:107:LEU:O	25:V:112:LEU:HB2	2.18	0.43
17:N:63:LYS:HG3	17:N:80:ASP:O	2.18	0.43
1:0:1155:G:H2'	1:0:1156:C:C6	2.52	0.43
12:I:15:ARG:CZ	12:I:43:ARG:NH1	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1265:G:H1'	37:0:4454:HOH:O	2.17	0.43
1:0:51:G:O2'	1:0:52:A:H5'	2.18	0.43
20:Q:8:ALA:CB	20:Q:13:THR:HG21	2.34	0.43
16:M:116:PHE:CG	37:M:6448:HOH:O	2.70	0.43
1:0:1701:A:H4'	1:0:1702:U:C5'	2.49	0.43
12:I:39:VAL:HG11	12:I:107:ASN:HB2	2.00	0.43
4:A:120:ARG:NH2	37:A:8577:HOH:O	2.50	0.43
1:0:2780:C:H1'	37:0:3180:HOH:O	2.17	0.43
1:0:483:C:C4	1:0:484:A:C6	3.06	0.43
1:0:695:C:H2'	1:0:696:C:C6	2.54	0.43
14:K:55:GLN:HA	14:K:58:GLN:HE21	1.82	0.43
23:T:47:ARG:HG2	37:T:4381:HOH:O	2.15	0.43
9:F:113:ASP:O	9:F:117:GLU:HG3	2.18	0.43
5:B:271:ASP:HB3	5:B:296:LEU:HD12	2.00	0.43
4:A:125:ASN:CB	4:A:158:VAL:HG12	2.48	0.43
27:X:117:LEU:HD12	27:X:174:VAL:HG11	2.00	0.43
1:0:2831:C:C2'	1:0:2832:C:H5'	2.49	0.43
37:0:6835:HOH:O	6:C:188:ARG:HD3	2.18	0.43
1:0:2892:G:C6	1:0:2893:C:C4	3.06	0.43
1:0:2791:U:C1'	1:0:2792:A:H5"	2.49	0.43
1:0:2758:G:H2'	1:0:2759:C:C6	2.54	0.43
1:0:1545:C:H2'	1:0:1546:G:O4'	2.19	0.43
1:0:732:C:H2'	1:0:733:U:C6	2.53	0.43
9:F:49:PHE:N	9:F:49:PHE:CD1	2.87	0.43
1:0:218:C:C5	1:0:220:C:C4	3.06	0.43
1:0:2453:G:H4'	14:K:50:GLY:C	2.39	0.43
1:0:2335:C:C2	1:0:2350:G:C2	3.06	0.43
1:0:2367:A:H5"	37:M:4034:HOH:O	2.18	0.43
1:0:445:U:H2'	1:0:446:G:H8	1.83	0.43
2:9:3026:C:P	37:9:8445:HOH:O	2.77	0.43
15:L:164:THR:HG22	15:L:167:GLY:CA	2.49	0.43
1:0:158:A:H2'	1:0:159:G:O4'	2.19	0.43
1:0:870:G:C3'	1:0:871:G:H5"	2.48	0.43
1:0:1242:A:H5'	12:I:82:THR:CG2	2.33	0.43
16:M:147:ILE:CG2	16:M:148:ALA:N	2.82	0.43
29:Z:17:THR:HA	30:1:49:GLU:HA	2.01	0.43
9:F:22:VAL:HG21	9:F:104:ALA:HB2	2.00	0.43
23:T:6:CYS:O	23:T:8:TYR:N	2.52	0.43
1:0:2672:C:P	5:B:25:ARG:NH1	2.92	0.43
29:Z:45:ARG:NH1	37:Z:8435:HOH:O	2.52	0.43
18:O:131:PHE:CE1	18:O:137:LEU:HD13	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:40:VAL:HG22	22:S:41:ARG:N	2.33	0.43
1:0:1851:G:H1'	37:0:3899:HOH:O	2.18	0.43
1:0:2403:C:H2'	1:0:2404:G:O5'	2.18	0.43
1:0:90:A:H2'	1:0:91:G:O4'	2.18	0.43
37:0:3877:HOH:O	4:A:11:ARG:CZ	2.66	0.43
1:0:613:C:H2'	1:0:614:U:H6	1.83	0.43
1:0:1592:G:O2'	1:0:1593:C:O5'	2.36	0.43
13:J:39:GLY:HA3	37:J:992:HOH:O	2.18	0.43
16:M:175:LEU:HD12	16:M:175:LEU:HA	1.84	0.43
4:A:36:ASP:CB	4:A:85:ASP:H	2.32	0.43
1:0:814:G:H2'	1:0:815:U:O4'	2.19	0.43
28:Y:39:CYS:HA	28:Y:40:PRO:HD3	1.89	0.43
15:L:61:ILE:N	15:L:61:ILE:CD1	2.81	0.43
1:0:2898:G:O2'	1:0:2899:A:H5'	2.17	0.43
4:A:132:ASP:OD1	4:A:133:ARG:N	2.49	0.43
27:X:234:VAL:HG12	27:X:235:GLU:N	2.33	0.43
20:Q:119:VAL:CG2	20:Q:142:ASP:HB2	2.49	0.43
22:S:53:GLY:HA3	37:S:6384:HOH:O	2.19	0.43
1:0:2039:A:OP2	5:B:234:ARG:NH2	2.51	0.43
1:0:951:A:C2'	1:0:952:G:H5'	2.48	0.43
7:D:15:GLU:HA	7:D:16:PRO:HD3	1.94	0.43
26:W:27:ASP:OD2	26:W:27:ASP:N	2.41	0.43
1:0:1644:C:H2'	1:0:1645:U:H6	1.84	0.43
6:C:123:LEU:HD23	6:C:123:LEU:HA	1.85	0.43
9:F:6:PHE:O	9:F:6:PHE:CD1	2.71	0.43
25:V:41:TYR:HA	25:V:44:MET:HE3	2.01	0.43
1:0:853:C:H2'	1:0:854:G:O4'	2.17	0.43
1:0:1345:A:H2'	1:0:1346:U:C6	2.53	0.43
1:0:1345:A:H2'	1:0:1346:U:H6	1.84	0.43
1:0:1992:U:H2'	1:0:1994:A:OP2	2.19	0.43
21:R:73:ASP:O	21:R:77:VAL:HG23	2.18	0.43
18:O:103:THR:O	18:O:107:GLU:HG3	2.19	0.43
15:L:139:PRO:C	15:L:141:ILE:H	2.22	0.43
7:D:48:MET:HA	7:D:49:PRO:HD3	1.83	0.43
1:0:2274:A:C1'	15:L:86:MET:HE1	2.49	0.43
15:L:172:GLY:C	15:L:183:VAL:HG11	2.39	0.43
6:C:26:VAL:N	37:C:8356:HOH:O	2.26	0.43
9:F:21:GLU:O	9:F:24:ARG:CG	2.65	0.43
37:0:3339:HOH:O	11:H:90:PHE:HD2	2.01	0.43
25:V:63:GLU:HG2	25:V:93:ILE:HG22	2.00	0.43
13:J:101:ASN:O	13:J:102:GLU:CB	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:X:148:GLY:O	27:X:154:ARG:HD3	2.18	0.43
1:0:2642:G:H2'	1:0:2643:G:O4'	2.18	0.43
1:0:2765:C:H2'	1:0:2766:A:C8	2.54	0.43
1:0:2438:G:H2'	1:0:2439:C:O4'	2.19	0.43
4:A:65:ARG:C	4:A:66:ARG:HG3	2.38	0.43
27:X:98:GLN:HA	37:X:8537:HOH:O	2.18	0.43
29:Z:53:LYS:HD3	29:Z:53:LYS:HA	1.88	0.43
1:0:1582:C:O2'	1:0:1583:U:H5'	2.19	0.43
6:C:126:ASP:C	6:C:128:GLY:N	2.70	0.43
25:V:4:LEU:HA	25:V:4:LEU:HD23	1.83	0.43
25:V:5:VAL:HG11	25:V:153:MET:CE	2.48	0.43
30:1:18:ASN:HD22	30:1:18:ASN:HA	1.57	0.43
1:0:187:A:H3'	1:0:188:C:H6	1.82	0.43
9:F:111:ILE:O	9:F:115:VAL:HG23	2.19	0.43
1:0:2120:U:H2'	1:0:2121:G:O4'	2.19	0.43
1:0:128:A:C8	1:0:128:A:C3'	3.01	0.43
1:0:2894:C:H2'	1:0:2895:C:H6	1.84	0.43
1:0:2073:G:N2	37:0:4143:HOH:O	2.52	0.43
31:2:70:ARG:HG2	31:2:70:ARG:NH1	2.33	0.43
20:Q:111:ILE:HG23	20:Q:145:LEU:HD11	2.00	0.43
1:0:2809:G:H2'	1:0:2810:G:O4'	2.18	0.43
1:0:1436:C:O2'	1:0:1437:A:H5'	2.19	0.43
2:9:3095:C:O2'	2:9:3096:C:H5'	2.19	0.43
15:L:35:PRO:HD2	15:L:38:VAL:HG21	1.99	0.43
11:H:157:ILE:CG2	11:H:158:ASN:N	2.82	0.43
16:M:37:ARG:HD3	35:M:8507:CL:CL	2.56	0.43
1:0:283:U:H5	1:0:284:C:N4	2.17	0.43
28:Y:38:LYS:CG	28:Y:45:LYS:HG2	2.43	0.43
25:V:122:ARG:NH1	25:V:122:ARG:HG2	2.28	0.43
1:0:401:C:C5'	37:0:5220:HOH:O	2.67	0.43
7:D:81:GLU:O	7:D:84:LEU:N	2.51	0.43
2:9:3041:C:H4'	7:D:48:MET:HB2	2.01	0.43
1:0:1268:C:O2'	1:0:1269:G:H5'	2.19	0.43
11:H:126:HIS:O	11:H:127:GLY:C	2.55	0.43
1:0:2135:A:O2'	1:0:2136:G:H5'	2.18	0.43
5:B:109:LEU:HD11	5:B:113:LEU:HD11	2.01	0.43
1:0:11:A:H5'	1:0:12:U:OP2	2.18	0.43
1:0:248:A:H5'	1:0:249:G:OP2	2.19	0.43
22:S:78:THR:HB	22:S:87:VAL:O	2.18	0.43
1:0:2795:C:O2'	1:0:2796:U:H5'	2.19	0.43
1:0:1056:U:H2'	1:0:1057:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Y:32:LYS:NZ	28:Y:70:GLN:NE2	2.66	0.43
25:V:131:PRO:HG2	25:V:134:GLU:HB2	2.00	0.43
25:V:58:SER:OG	25:V:147:ASP:OD2	2.36	0.43
1:0:1187:U:H3'	37:0:6289:HOH:O	2.17	0.43
25:V:3:ALA:O	25:V:54:PHE:HA	2.18	0.43
25:V:76:ASP:O	25:V:77:ALA:C	2.57	0.43
23:T:52:THR:HG21	23:T:54:THR:HB	2.01	0.43
18:O:13:VAL:HG21	18:O:41:ARG:HG2	2.01	0.43
8:E:32:ARG:C	8:E:33:LEU:HD23	2.39	0.43
21:R:49:VAL:HG13	21:R:66:VAL:HG13	2.01	0.43
8:E:106:ASN:HD21	8:E:109:GLY:HA2	1.83	0.43
1:0:113:A:H3'	1:0:114:A:H5"	2.00	0.43
27:X:117:LEU:HA	27:X:174:VAL:HG11	2.00	0.43
1:0:1524:U:O2'	1:0:1525:G:P	2.77	0.43
1:0:488:U:O2'	22:S:82:THR:HG21	2.18	0.43
6:C:61:PHE:HB3	37:C:8440:HOH:O	2.19	0.43
21:R:23:LYS:HE2	37:R:3430:HOH:O	2.19	0.43
13:J:61:THR:O	13:J:64:MET:N	2.50	0.43
1:0:1568:G:O2'	1:0:1569:U:H5'	2.18	0.43
1:0:525:G:H2'	1:0:526:U:O4'	2.18	0.43
1:0:2473:U:O3'	1:0:2474:A:H3'	2.19	0.43
6:C:118:THR:HG22	6:C:137:PRO:HB3	2.01	0.42
15:L:39:ARG:HG3	37:L:8601:HOH:O	2.19	0.42
1:0:2637:A:C4'	1:0:2638:G:C5'	2.93	0.42
11:H:1:LYS:HA	11:H:2:PRO:HD3	1.82	0.42
5:B:162:MET:HE3	5:B:308:LEU:CD2	2.37	0.42
1:0:2812:A:H2	1:0:2814:A:N6	1.99	0.42
30:1:16:ASN:C	30:1:18:ASN:N	2.72	0.42
1:0:1823:G:O2'	1:0:1824:C:H5'	2.19	0.42
6:C:246:ARG:NH2	37:C:8421:HOH:O	2.52	0.42
1:0:1669:A:H2'	1:0:1670:G:H8	1.84	0.42
1:0:1335:C:OP2	27:X:207:SER:HB2	2.19	0.42
22:S:23:VAL:O	22:S:93:THR:HG21	2.17	0.42
1:0:2794:G:N2	1:0:2795:C:H1'	2.33	0.42
22:S:113:GLU:O	22:S:114:SER:C	2.56	0.42
8:E:146:ALA:O	8:E:147:ASP:C	2.57	0.42
1:0:1109:U:O4	12:I:21:ARG:HA	2.19	0.42
1:0:1433:G:H2'	1:0:1434:A:O4'	2.19	0.42
11:H:86:ARG:HD3	11:H:130:HIS:HD2	1.84	0.42
5:B:162:MET:HG3	5:B:310:ARG:CZ	2.48	0.42
16:M:71:TRP:N	37:M:4394:HOH:O	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:152:GLU:OE1	16:M:152:GLU:HA	2.18	0.42
14:K:144:ASP:HA	14:K:147:GLU:HG3	2.00	0.42
9:F:101:ALA:HB2	9:F:108:LEU:HD22	2.01	0.42
16:M:11:ARG:O	16:M:15:GLU:HG3	2.19	0.42
1:0:2362:A:H2'	1:0:2363:G:C8	2.54	0.42
5:B:82:VAL:CG1	5:B:82:VAL:O	2.66	0.42
6:C:138:VAL:O	6:C:234:VAL:HA	2.19	0.42
1:0:2381:C:H4'	31:2:80:ARG:NH2	2.34	0.42
1:0:2760:C:OP1	5:B:209:LYS:NZ	2.40	0.42
1:0:2670:G:H4'	5:B:112:THR:HG22	2.01	0.42
6:C:21:VAL:C	6:C:23:GLU:H	2.23	0.42
11:H:129:ASN:HD22	11:H:129:ASN:N	2.17	0.42
1:0:1391:G:H2'	1:0:1392:A:H5'	2.01	0.42
1:0:1218:U:H2'	1:0:1219:U:C6	2.53	0.42
1:0:590:A:H2'	1:0:591:A:H5'	2.01	0.42
1:0:1593:C:C6	18:O:120:ARG:HD3	2.54	0.42
1:0:2890:A:H1'	23:T:56:ARG:HH21	1.77	0.42
15:L:49:ALA:C	15:L:54:TYR:HB3	2.40	0.42
1:0:2035:C:H2'	1:0:2036:C:H6	1.84	0.42
1:0:661:G:C4	1:0:686:A:C2	3.08	0.42
26:W:30:MET:HE2	26:W:58:ALA:HB3	1.99	0.42
1:0:1086:A:N6	25:V:11:VAL:HG11	2.34	0.42
1:0:2456:A:H2'	1:0:2457:U:C6	2.54	0.42
11:H:82:LYS:CB	11:H:82:LYS:NZ	2.82	0.42
1:0:1167:G:O2'	1:0:1168:C:H5'	2.18	0.42
1:0:699:C:H5'	37:0:3489:HOH:O	2.19	0.42
1:0:192:A:N6	1:0:194:A:C2	2.88	0.42
18:O:71:LYS:O	18:O:71:LYS:HG3	2.19	0.42
1:0:297:U:H1'	37:0:3416:HOH:O	2.19	0.42
13:J:109:LEU:CD1	13:J:113:ILE:HD11	2.48	0.42
1:0:1186:C:N4	1:0:1187:U:C4	2.87	0.42
2:9:3007:G:OP1	16:M:23:ARG:NE	2.52	0.42
4:A:211:LYS:HB3	4:A:212:PRO:CD	2.43	0.42
16:M:170:GLU:O	16:M:174:GLU:HG3	2.18	0.42
16:M:163:PHE:HA	37:M:2180:HOH:O	2.18	0.42
1:0:2781:U:H2'	1:0:2782:G:C5'	2.48	0.42
2:9:3042:C:O2	7:D:76:ARG:NH1	2.51	0.42
28:Y:11:THR:CG2	28:Y:23:ARG:HB2	2.49	0.42
20:Q:119:VAL:O	20:Q:119:VAL:CG1	2.67	0.42
7:D:95:THR:OG1	7:D:174:VAL:HG22	2.19	0.42
17:N:44:ASN:HB3	17:N:67:SER:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:305:ASP:O	5:B:306:LYS:CB	2.66	0.42
13:J:125:ALA:C	13:J:127:ALA:H	2.22	0.42
1:0:2314:G:H2'	1:0:2315:C:H5'	2.00	0.42
1:0:1308:A:C5	1:0:1309:U:C5	3.07	0.42
13:J:130:MET:SD	23:T:25:ASP:O	2.77	0.42
1:0:731:U:O2'	1:0:732:C:H5'	2.20	0.42
1:0:2392:C:N3	37:0:4305:HOH:O	2.36	0.42
16:M:104:ILE:HG13	16:M:104:ILE:O	2.19	0.42
21:R:8:PRO:HD2	24:U:32:ALA:HA	2.01	0.42
1:0:2820:A:H2'	1:0:2821:C:O4'	2.19	0.42
15:L:35:PRO:HD2	15:L:38:VAL:CG2	2.49	0.42
7:D:27:ILE:HD11	7:D:37:ALA:CB	2.50	0.42
1:0:710:G:O2'	1:0:711:G:H5'	2.20	0.42
25:V:6:GLN:HA	25:V:52:VAL:HG23	2.01	0.42
4:A:105:VAL:CG1	4:A:106:CYS:N	2.82	0.42
1:0:317:A:OP1	22:S:52:ARG:O	2.37	0.42
4:A:69:LEU:CD2	4:A:120:ARG:HB3	2.44	0.42
23:T:6:CYS:C	23:T:8:TYR:N	2.73	0.42
1:0:2748:G:C4'	37:0:6917:HOH:O	2.67	0.42
5:B:24:PRO:HG2	5:B:204:GLY:HA2	2.01	0.42
13:J:118:ALA:C	13:J:120:ARG:H	2.23	0.42
15:L:42:ARG:HA	15:L:43:PRO:HD3	1.86	0.42
1:0:2089:A:O2'	1:0:2090:G:H5'	2.20	0.42
1:0:732:C:O2'	1:0:733:U:H5'	2.19	0.42
1:0:453:A:H4'	1:0:455:A:N7	2.34	0.42
1:0:466:A:H2'	1:0:467:G:O4'	2.19	0.42
1:0:40:C:H4'	37:0:6394:HOH:O	2.18	0.42
1:0:578:C:O2	1:0:1112:G:H4'	2.20	0.42
21:R:10:VAL:HG11	24:U:36:ALA:HA	2.01	0.42
15:L:18:GLY:O	15:L:21:ALA:HB3	2.19	0.42
31:2:87:ARG:NH1	37:2:8520:HOH:O	2.53	0.42
1:0:17:G:H2'	1:0:18:C:C6	2.55	0.42
1:0:1133:A:H2'	1:0:1134:G:O4'	2.19	0.42
11:H:58:HIS:CE1	11:H:59:ASN:ND2	2.88	0.42
28:Y:46:LYS:NZ	37:Y:8438:HOH:O	2.52	0.42
4:A:35:GLY:O	4:A:36:ASP:CB	2.58	0.42
1:0:553:G:O4'	1:0:1325:G:H5'	2.19	0.42
20:Q:82:GLU:HG3	20:Q:83:LYS:N	2.34	0.42
6:C:13:ASP:N	37:C:8437:HOH:O	2.52	0.42
7:D:58:VAL:CG1	7:D:59:GLY:N	2.82	0.42
1:0:2028:U:H2'	1:0:2029:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:424:C:H2'	1:0:425:U:C6	2.54	0.42
1:0:2807:U:H1'	37:0:9700:HOH:O	2.19	0.42
1:0:2857:C:O2'	1:0:2858:U:H5'	2.19	0.42
1:0:1084:C:O5'	1:0:1084:C:H6	2.02	0.42
1:0:2864:U:H3'	1:0:2865:G:C8	2.55	0.42
1:0:1224:G:H2'	1:0:1225:C:C6	2.54	0.42
1:0:1512:G:O2'	1:0:1513:C:H5'	2.18	0.42
6:C:154:VAL:O	6:C:158:GLU:HG3	2.19	0.42
16:M:3:GLY:HA3	37:M:853:HOH:O	2.19	0.42
26:W:9:VAL:HG22	26:W:88:GLU:OE2	2.19	0.42
1:0:2346:C:H4'	7:D:52:THR:HG22	2.02	0.42
1:0:2547:C:H2'	1:0:2548:C:H6	1.84	0.42
1:0:818:A:H2	28:Y:13:ARG:HA	1.85	0.42
22:S:48:VAL:CG1	22:S:96:VAL:HG13	2.49	0.42
30:1:22:PRO:HG2	30:1:25:VAL:CG2	2.49	0.42
1:0:1406:A:H4'	1:0:1407:A:C5'	2.49	0.42
29:Z:45:ARG:NH2	37:Z:8427:HOH:O	2.46	0.42
5:B:165:ARG:HG2	5:B:165:ARG:HH11	1.85	0.42
13:J:99:ASP:OD1	13:J:99:ASP:C	2.57	0.42
1:0:2526:C:H5'	1:0:2526:C:C6	2.54	0.42
1:0:1504:A:H4'	1:0:1506:U:C5	2.54	0.42
1:0:2388:C:OP1	37:0:4061:HOH:O	2.21	0.42
1:0:1513:C:O2'	1:0:1514:C:H5'	2.19	0.42
1:0:102:A:H4'	37:0:6713:HOH:O	2.20	0.42
37:0:9185:HOH:O	27:X:163:THR:HG23	2.18	0.42
1:0:210:U:O2'	1:0:211:U:H5'	2.20	0.42
5:B:223:ARG:HG3	5:B:232:TRP:O	2.19	0.42
1:0:2804:C:H2'	1:0:2805:A:O4'	2.20	0.42
1:0:2440:C:H5"	37:0:3304:HOH:O	2.19	0.42
1:0:470:U:O2'	29:Z:16:HIS:CD2	2.73	0.42
13:J:132:VAL:C	37:J:3160:HOH:O	2.57	0.42
1:0:23:G:C6	1:0:24:G:N1	2.88	0.42
7:D:27:ILE:O	7:D:69:ILE:HG22	2.19	0.42
11:H:150:LYS:HA	11:H:153:VAL:HG22	2.02	0.42
1:0:1594:C:O2'	1:0:1607:A:H4'	2.20	0.42
1:0:963:C:H2'	1:0:964:G:C8	2.54	0.42
1:0:560:C:H2'	1:0:561:G:H8	1.84	0.42
16:M:73:ALA:HB1	16:M:74:PRO:CD	2.49	0.42
16:M:74:PRO:HB3	37:M:4713:HOH:O	2.20	0.42
7:D:52:THR:N	7:D:70:GLY:O	2.53	0.42
1:0:2301:A:H5"	1:0:2302:A:C5'	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:27:LEU:HG	22:S:39:ASN:HA	2.02	0.42
16:M:78:MET:CB	16:M:79:PRO:HD3	2.50	0.42
7:D:128:LEU:N	37:D:5495:HOH:O	2.53	0.42
4:A:125:ASN:ND2	37:A:8532:HOH:O	2.52	0.42
1:0:2831:C:H2'	1:0:2832:C:C5'	2.49	0.42
1:0:422:G:O2'	1:0:423:A:H5'	2.19	0.42
1:0:716:G:C2'	1:0:717:C:O5'	2.68	0.42
1:0:834:G:H5"	1:0:835:U:O5'	2.20	0.42
1:0:115:U:H2'	37:0:8671:HOH:O	2.19	0.42
15:L:169:ARG:HD2	37:L:8589:HOH:O	2.20	0.42
1:0:1252:A:O3'	37:0:7105:HOH:O	2.22	0.42
1:0:2740:G:H2'	1:0:2741:A:O4'	2.19	0.42
7:D:23:VAL:HG23	7:D:41:LEU:HD22	2.01	0.42
12:I:131:THR:HG22	12:I:134:GLU:N	2.21	0.42
16:M:67:ALA:HA	16:M:71:TRP:HB3	2.02	0.42
24:U:1:THR:C	24:U:3:LEU:H	2.22	0.42
11:H:111:MET:O	11:H:114:PRO:HD3	2.19	0.42
29:Z:28:HIS:O	29:Z:32:LYS:N	2.44	0.42
7:D:81:GLU:O	7:D:83:PHE:N	2.53	0.42
4:A:95:PRO:O	4:A:99:ILE:HG12	2.20	0.42
5:B:63:GLU:HG3	5:B:63:GLU:O	2.19	0.42
1:0:661:G:C6	1:0:686:A:C2	3.08	0.42
16:M:139:TRP:HE3	16:M:139:TRP:HA	1.85	0.42
25:V:55:GLY:CA	25:V:146:ILE:HG13	2.49	0.42
1:0:1127:C:C5	1:0:1128:U:C4	3.07	0.42
1:0:332:G:O2'	1:0:333:G:H5'	2.19	0.42
1:0:1979:G:P	37:0:5724:HOH:O	2.77	0.42
1:0:2381:C:H2'	1:0:2382:A:H8	1.85	0.42
1:0:862:U:H2'	1:0:863:G:C8	2.55	0.42
1:0:151:A:C2	1:0:442:A:C8	3.08	0.42
22:S:73:HIS:CD2	22:S:88:PRO:HG3	2.54	0.42
1:0:2088:C:H1'	1:0:2841:A:N1	2.34	0.42
1:0:1860:U:H2'	1:0:1861:C:O4'	2.20	0.42
5:B:147:VAL:O	5:B:150:ALA:HB3	2.20	0.42
1:0:2084:C:H2'	1:0:2085:A:H8	1.85	0.42
18:O:99:ARG:HA	37:O:7545:HOH:O	2.19	0.42
20:Q:129:ALA:O	20:Q:130:MET:HB2	2.19	0.42
13:J:9:THR:O	13:J:10:GLN:C	2.57	0.42
6:C:185:LYS:HD3	6:C:186:TYR:CE1	2.55	0.42
28:Y:23:ARG:NH1	37:Y:8404:HOH:O	2.52	0.42
1:0:1213:C:C2'	1:0:1214:G:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:617:C:O2'	27:X:158:LYS:O	2.32	0.42
1:0:682:A:H3'	1:0:683:G:H8	1.85	0.42
1:0:2266:A:H2'	1:0:2267:G:H8	1.85	0.42
19:P:88:ALA:N	37:P:1295:HOH:O	2.52	0.42
1:0:2727:A:C2'	1:0:2728:C:H5'	2.49	0.42
1:0:949:U:O2'	19:P:40:HIS:HE1	2.02	0.42
1:0:1351:G:H1'	37:0:3528:HOH:O	2.20	0.42
1:0:778:C:C4	1:0:779:U:C4	3.08	0.42
22:S:87:VAL:HB	22:S:88:PRO:HD2	2.01	0.42
12:I:66:ASP:HA	37:I:6706:HOH:O	2.19	0.42
6:C:65:ARG:HG3	6:C:67:GLN:HB2	2.02	0.42
25:V:126:ASP:HB3	25:V:135:GLY:O	2.20	0.42
9:F:34:ASN:HA	15:L:4:ALA:HB2	2.01	0.42
14:K:130:ARG:O	14:K:131:GLU:C	2.58	0.42
6:C:142:ASP:OD2	6:C:238:SER:OG	2.24	0.41
1:0:1815:A:H4'	1:0:2751:C:O4'	2.20	0.41
1:0:539:G:H2'	1:0:540:A:H8	1.84	0.41
9:F:26:THR:HB	9:F:102:GLY:HA3	2.02	0.41
1:0:1829:A:C2'	1:0:1830:C:H5'	2.49	0.41
20:Q:114:VAL:HA	20:Q:144:GLU:O	2.19	0.41
16:M:108:SER:HA	16:M:109:PRO:HD3	1.84	0.41
1:0:549:A:O2'	1:0:550:C:H5'	2.20	0.41
1:0:830:G:N3	37:0:8779:HOH:O	2.37	0.41
1:0:663:C:H2'	1:0:664:U:O4'	2.20	0.41
1:0:410:A:H5"	1:0:411:A:H2'	2.01	0.41
1:0:432:G:O2'	1:0:433:C:H5'	2.20	0.41
22:S:71:VAL:HG12	22:S:72:ILE:N	2.33	0.41
7:D:35:ALA:C	7:D:37:ALA:N	2.73	0.41
10:G:12:ILE:HD12	37:G:692:HOH:O	2.19	0.41
1:0:533:U:H4'	1:0:534:C:O5'	2.20	0.41
4:A:36:ASP:O	4:A:37:VAL:C	2.58	0.41
1:0:2255:A:N1	1:0:2256:G:C4	2.88	0.41
27:X:133:HIS:CD2	37:X:8583:HOH:O	2.58	0.41
6:C:162:VAL:HG12	6:C:192:ILE:CD1	2.48	0.41
6:C:104:ASP:O	6:C:108:GLN:HG3	2.21	0.41
5:B:55:ASN:HB3	5:B:64:GLY:N	2.35	0.41
1:0:694:A:H2'	1:0:695:C:C5'	2.49	0.41
1:0:684:G:H2'	1:0:685:C:C6	2.55	0.41
1:0:2547:C:H2'	1:0:2548:C:C6	2.55	0.41
9:F:110:GLU:HG2	37:F:6926:HOH:O	2.20	0.41
4:A:9:ARG:HG2	4:A:16:PHE:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2734:G:O2'	1:0:2735:U:H5'	2.20	0.41
18:O:18:LYS:O	18:O:21:VAL:HG22	2.20	0.41
18:O:7:LYS:HD3	18:O:21:VAL:HG21	2.03	0.41
1:0:2439:C:H5'	37:0:4924:HOH:O	2.19	0.41
1:0:470:U:H2'	1:0:471:G:O4'	2.20	0.41
15:L:169:ARG:HB3	37:L:8589:HOH:O	2.20	0.41
1:0:1902:G:H2'	1:0:1903:U:O4'	2.20	0.41
1:0:720:G:H5'	37:0:8867:HOH:O	2.20	0.41
1:0:1852:A:H4'	4:A:230:SER:HB2	2.01	0.41
26:W:61:ARG:N	37:W:1449:HOH:O	2.50	0.41
1:0:2389:U:H4'	19:P:53:HIS:CD2	2.55	0.41
1:0:2637:A:H8	3:4:75:C:OP1	2.03	0.41
1:0:711:G:C2	1:0:718:C:C2	3.08	0.41
5:B:168:GLY:HA3	5:B:174:ARG:HB3	2.03	0.41
5:B:36:PRO:CG	5:B:169:GLY:H	2.32	0.41
5:B:41:PHE:HB3	5:B:190:MET:CE	2.47	0.41
1:0:2346:C:O3'	7:D:52:THR:HG23	2.20	0.41
1:0:154:C:H3'	15:L:188:ARG:NH1	2.36	0.41
19:P:26:PRO:O	19:P:27:GLN:C	2.57	0.41
1:0:1706:G:OP1	18:O:65:ARG:HD2	2.20	0.41
1:0:2904:U:H4'	26:W:8:ARG:HH12	1.84	0.41
4:A:1:GLY:HA3	37:A:8525:HOH:O	2.19	0.41
1:0:2379:G:H4'	1:0:2380:A:C5'	2.50	0.41
8:E:84:MET:HE3	8:E:131:LEU:HD13	2.03	0.41
1:0:2729:C:H2'	1:0:2730:G:C8	2.54	0.41
1:0:1768:C:C2'	1:0:1769:C:H5'	2.50	0.41
5:B:109:LEU:CG	5:B:113:LEU:HD12	2.50	0.41
1:0:2832:C:H5	37:0:6602:HOH:O	2.02	0.41
1:0:1223:G:O2'	1:0:1224:G:H5'	2.20	0.41
1:0:2553:A:N3	1:0:2553:A:H2'	2.34	0.41
1:0:1200:A:H4'	37:0:6722:HOH:O	2.20	0.41
1:0:2604:A:H5'	37:0:5218:HOH:O	2.19	0.41
22:S:30:ASP:O	22:S:33:GLU:HB3	2.20	0.41
27:X:189:ASN:HD21	27:X:192:ASP:H	1.69	0.41
1:0:1439:C:H5"	30:1:41:HIS:HE1	1.85	0.41
1:0:462:A:C4	30:1:37:HIS:CG	3.09	0.41
16:M:170:GLU:HA	16:M:173:ASP:OD2	2.21	0.41
5:B:243:ASN:HA	5:B:244:PRO:C	2.41	0.41
7:D:86:THR:C	7:D:89:PRO:HD2	2.40	0.41
2:9:3042:C:N4	2:9:3044:A:N1	2.68	0.41
1:0:1325:G:O2'	1:0:1326:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:63:ARG:HB2	10:G:66:LEU:HG	2.02	0.41
7:D:140:ARG:HG3	7:D:140:ARG:HH11	1.84	0.41
14:K:80:ASP:HB2	14:K:90:ARG:O	2.20	0.41
1:0:1329:A:N1	35:0:8513:CL:CL	2.90	0.41
9:F:110:GLU:HA	9:F:113:ASP:OD2	2.20	0.41
1:0:331:A:C6	1:0:332:G:C4	3.08	0.41
1:0:314:G:N2	1:0:316:A:H3'	2.35	0.41
1:0:2688:U:H2'	1:0:2689:A:H8	1.85	0.41
1:0:1486:A:C4	30:1:2:LYS:HG3	2.54	0.41
28:Y:32:LYS:HZ2	28:Y:70:GLN:NE2	2.18	0.41
1:0:1631:A:H2'	1:0:1632:A:C8	2.55	0.41
1:0:2025:G:C6	1:0:2026:C:C4	3.08	0.41
1:0:81:G:N3	1:0:98:A:C2	2.88	0.41
1:0:1469:C:N3	1:0:1472:C:OP2	2.53	0.41
20:Q:52:GLU:CG	20:Q:54:ASP:OD2	2.68	0.41
1:0:2724:U:H2'	1:0:2725:G:O4'	2.20	0.41
12:I:52:GLN:CG	12:I:53:ILE:N	2.78	0.41
1:0:1165:G:H5'	37:0:5033:HOH:O	2.19	0.41
37:0:5144:HOH:O	13:J:87:ARG:CZ	2.68	0.41
24:U:42:ASN:N	24:U:43:PRO:HD3	2.34	0.41
25:V:7:LEU:HD23	25:V:7:LEU:HA	1.89	0.41
14:K:54:PRO:HG2	14:K:57:VAL:CG2	2.51	0.41
1:0:2816:A:H4'	37:0:3386:HOH:O	2.21	0.41
1:0:2132:C:H1'	15:L:124:GLY:HA3	2.03	0.41
14:K:73:VAL:HG23	14:K:74:THR:H	1.84	0.41
21:R:81:ILE:HG22	24:U:29:ASN:OD1	2.20	0.41
1:0:475:G:H5'	6:C:73:LEU:HD23	2.01	0.41
6:C:7:ASP:OD1	6:C:11:ASN:O	2.38	0.41
1:0:1583:U:H1'	37:0:9471:HOH:O	2.20	0.41
1:0:2821:C:H4'	5:B:116:PRO:HG3	2.02	0.41
24:U:55:ARG:O	24:U:59:ILE:HG12	2.19	0.41
6:C:4:THR:HB	6:C:135:GLU:OE1	2.20	0.41
1:0:202:U:H2'	1:0:203:G:O4'	2.21	0.41
1:0:1006:A:N3	1:0:2298:C:O2'	2.45	0.41
1:0:84:G:O2'	1:0:85:C:H5'	2.21	0.41
1:0:1795:G:H2'	1:0:1796:A:O4'	2.20	0.41
1:0:1425:G:O2'	1:0:1426:C:H5'	2.21	0.41
1:0:2281:C:C5	1:0:2282:U:C4	3.08	0.41
1:0:2654:C:H5'	37:B:8661:HOH:O	2.20	0.41
1:0:111:C:O2'	1:0:112:G:H5'	2.20	0.41
1:0:962:C:C2'	1:0:963:C:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:14:GLU:HG2	8:E:15:GLN:N	2.35	0.41
24:U:27:LEU:O	24:U:30:ALA:HB3	2.20	0.41
8:E:133:VAL:HG12	8:E:141:VAL:HG13	2.03	0.41
6:C:107:ARG:NH1	6:C:107:ARG:CB	2.82	0.41
1:0:1891:G:H1'	1:0:1972:U:O2	2.20	0.41
5:B:83:ALA:HB2	5:B:101:TRP:CD2	2.55	0.41
4:A:46:GLU:O	4:A:55:VAL:N	2.46	0.41
1:0:2054:A:H4'	20:Q:135:ALA:O	2.21	0.41
5:B:180:ASP:O	5:B:181:ILE:C	2.58	0.41
1:0:2329:C:O2'	1:0:2330:U:H5'	2.20	0.41
2:9:3088:G:N2	2:9:3089:C:C2	2.89	0.41
1:0:2090:G:H2'	1:0:2091:G:C8	2.55	0.41
1:0:1446:U:H2'	21:R:55:GLN:NE2	2.36	0.41
6:C:7:ASP:C	6:C:9:ASP:H	2.24	0.41
1:0:2582:G:O3'	13:J:41:LYS:HA	2.20	0.41
1:0:1638:U:H5'	37:0:6658:HOH:O	2.21	0.41
12:I:24:SER:HA	12:I:86:MET:SD	2.61	0.41
25:V:22:GLU:HG2	25:V:27:HIS:CD2	2.55	0.41
5:B:224:LYS:HA	5:B:224:LYS:HD3	1.72	0.41
16:M:13:ARG:NH1	16:M:13:ARG:O	2.53	0.41
37:0:4185:HOH:O	16:M:21:HIS:HD2	2.04	0.41
37:9:8493:HOH:O	25:V:133:LYS:HG3	2.19	0.41
7:D:23:VAL:HG21	7:D:45:THR:CG2	2.50	0.41
11:H:136:VAL:HG22	11:H:137:ASN:N	2.36	0.41
1:0:1666:C:H2'	1:0:1667:A:H8	1.85	0.41
8:E:7:ILE:HG22	8:E:45:ASP:O	2.21	0.41
16:M:143:ARG:NH1	16:M:173:ASP:OD1	2.53	0.41
2:9:3028:U:H5"	16:M:40:ASN:ND2	2.36	0.41
12:I:36:VAL:HG12	12:I:37:ALA:N	2.35	0.41
23:T:37:GLU:O	23:T:40:ALA:HB3	2.20	0.41
1:0:2748:G:H5"	37:0:6698:HOH:O	2.20	0.41
1:0:2092:G:H5"	1:0:2613:G:OP1	2.21	0.41
27:X:112:GLU:CD	27:X:115:ARG:NH1	2.73	0.41
1:0:1825:U:C4'	1:0:1999:C:H5"	2.51	0.41
1:0:1461:U:H2'	1:0:1462:C:C6	2.56	0.41
1:0:1310:U:C2'	1:0:1311:G:O5'	2.68	0.41
1:0:1385:G:O3'	26:W:49:ARG:NH1	2.53	0.41
16:M:17:ARG:NE	37:M:922:HOH:O	2.32	0.41
1:0:569:A:H5"	1:0:587:A:N1	2.34	0.41
1:0:2278:U:H3'	37:0:4546:HOH:O	2.20	0.41
1:0:1986:G:C6	1:0:1987:C:N4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:22:ASP:HB3	13:J:96:VAL:HG13	2.02	0.41
11:H:130:HIS:CG	11:H:133:ILE:HD11	2.55	0.41
6:C:141:SER:HB3	37:C:8413:HOH:O	2.20	0.41
22:S:89:ARG:O	22:S:90:PRO:C	2.59	0.41
1:0:1667:A:C2	1:0:1668:U:C2	3.09	0.41
1:0:1667:A:O2'	1:0:1668:U:H5'	2.21	0.41
1:0:597:A:H8	1:0:597:A:O5'	2.03	0.41
1:0:1206:U:C5'	1:0:1206:U:H6	2.24	0.41
16:M:154:LEU:HD12	16:M:156:GLU:O	2.21	0.41
2:9:3050:G:C6	2:9:3051:A:C6	3.09	0.41
5:B:84:LEU:HD23	5:B:178:ALA:HB1	2.03	0.41
1:0:235:C:O2'	1:0:236:A:H2'	2.21	0.41
8:E:137:ASP:C	8:E:137:ASP:OD1	2.58	0.41
8:E:31:ARG:NH1	8:E:68:HIS:ND1	2.69	0.41
1:0:1921:A:C6	1:0:1922:A:C2	3.08	0.41
18:O:37:ARG:O	18:O:40:VAL:HB	2.21	0.41
25:V:137:GLN:O	25:V:137:GLN:HG3	2.21	0.41
20:Q:46:TYR:HD2	20:Q:47:LEU:HD23	1.86	0.41
28:Y:27:ALA:O	28:Y:31:ILE:N	2.50	0.41
1:0:844:A:C6	1:0:882:A:C6	3.09	0.41
6:C:165:ASP:O	6:C:168:ARG:HB3	2.21	0.41
1:0:2765:C:H2'	1:0:2766:A:H8	1.86	0.41
1:0:45:A:N6	1:0:147:G:C4	2.89	0.41
1:0:1491:G:H4'	1:0:1492:A:OP2	2.20	0.41
21:R:35:GLY:N	37:R:1504:HOH:O	2.37	0.41
1:0:1978:A:HO2'	1:0:1980:U:H6	1.69	0.41
37:0:5996:HOH:O	14:K:102:ASP:HA	2.21	0.41
1:0:1157:C:H2'	1:0:1158:G:H8	1.85	0.41
1:0:1066:U:H2'	1:0:1067:A:C8	2.55	0.41
11:H:47:GLU:CG	11:H:133:ILE:HD12	2.49	0.41
1:0:2502:C:H4'	11:H:151:MET:CG	2.45	0.41
27:X:189:ASN:ND2	27:X:191:ASP:N	2.68	0.41
16:M:69:TYR:HE2	16:M:183:ASP:OD2	2.03	0.41
25:V:48:VAL:CG1	25:V:48:VAL:O	2.68	0.41
16:M:43:VAL:HG13	16:M:118:ILE:HD11	2.02	0.41
26:W:85:VAL:CG1	26:W:86:GLU:N	2.81	0.41
8:E:11:VAL:HG13	8:E:23:GLU:O	2.20	0.41
1:0:1943:C:C4'	4:A:212:PRO:HA	2.50	0.41
15:L:54:TYR:CG	15:L:55:LYS:N	2.89	0.41
1:0:21:G:H5"	20:Q:2:ILE:HA	1.97	0.41
1:0:240:C:C2'	1:0:240:C:O2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Z:25:LYS:HD2	30:1:48:ASP:CA	2.51	0.41
1:0:2690:U:H4'	8:E:111:LYS:CE	2.50	0.41
1:0:1603:A:H5'	1:0:1605:G:C4'	2.50	0.41
26:W:20:GLU:CG	26:W:21:PRO:HD2	2.50	0.41
5:B:54:VAL:O	5:B:55:ASN:C	2.58	0.41
1:0:696:C:HO2'	1:0:697:G:H5'	1.86	0.41
28:Y:42:CYS:SG	28:Y:43:GLY:N	2.94	0.41
1:0:2748:G:C3'	37:0:6917:HOH:O	2.68	0.41
1:0:622:G:P	27:X:148:GLY:HA3	2.60	0.41
21:R:81:ILE:HG12	37:R:4527:HOH:O	2.21	0.41
1:0:2050:G:OP1	20:Q:79:ARG:HB3	2.21	0.41
18:O:7:LYS:CD	18:O:21:VAL:CG2	2.99	0.41
1:0:2698:G:H2'	1:0:2699:A:C8	2.55	0.41
1:0:2810:G:OP1	5:B:17:LYS:NZ	2.41	0.41
13:J:22:ASP:C	13:J:22:ASP:OD1	2.58	0.41
37:0:5721:HOH:O	8:E:139:GLU:HA	2.21	0.41
1:0:2487:C:H5	37:0:4342:HOH:O	2.03	0.41
1:0:451:C:N4	1:0:452:G:C6	2.89	0.41
1:0:1762:C:H4'	37:0:4111:HOH:O	2.21	0.41
1:0:1685:A:H4'	1:0:1686:C:OP2	2.21	0.41
7:D:60:GLU:C	7:D:62:ASP:N	2.74	0.41
1:0:1354:G:O6	14:K:5:LYS:HE3	2.21	0.41
1:0:1023:C:H2'	1:0:1024:G:O4'	2.21	0.41
1:0:321:A:O2'	1:0:322:G:H5'	2.20	0.41
24:U:12:THR:HG23	24:U:14:ALA:H	1.86	0.41
13:J:14:LYS:HD2	13:J:45:PRO:HG3	2.03	0.41
13:J:49:LEU:HA	13:J:73:VAL:CG1	2.51	0.41
7:D:91:ALA:HB2	7:D:106:PHE:CD2	2.56	0.41
1:0:2414:A:C2	1:0:2415:A:C6	3.09	0.41
16:M:151:ASP:CG	16:M:165:ALA:O	2.59	0.41
7:D:18:ILE:HD13	7:D:84:LEU:CD1	2.51	0.41
10:G:20:VAL:O	10:G:24:VAL:HG23	2.21	0.41
12:I:90:LYS:N	35:I:8502:CL:CL	2.81	0.41
6:C:107:ARG:CB	6:C:107:ARG:HH11	2.33	0.41
5:B:69:VAL:HA	5:B:70:PRO:HD3	1.93	0.41
20:Q:33:ARG:HG3	37:Q:8568:HOH:O	2.20	0.41
22:S:98:VAL:HG11	22:S:101:LEU:HD21	2.02	0.41
1:0:1789:G:H2'	1:0:1790:C:O5'	2.21	0.41
1:0:2613:G:H2'	1:0:2614:C:C6	2.55	0.41
9:F:56:PRO:HG2	15:L:43:PRO:O	2.20	0.41
13:J:101:ASN:HB2	13:J:103:ASP:OD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:292:G:H1'	1:0:360:A:N6	2.36	0.41
1:0:1310:U:H2'	1:0:1311:G:O5'	2.20	0.41
1:0:1169:U:C5	1:0:1170:U:C4	3.09	0.41
1:0:1235:G:H1'	12:I:63:ILE:HG23	2.03	0.41
1:0:922:A:N7	1:0:2281:C:H5'	2.36	0.41
1:0:276:C:H4'	37:0:6202:HOH:O	2.20	0.41
6:C:57:PRO:O	6:C:58:ALA:C	2.59	0.41
1:0:1985:U:H5"	37:0:4645:HOH:O	2.20	0.41
1:0:1427:A:H61	1:0:1440:U:H1'	1.85	0.41
11:H:84:ARG:NH2	11:H:135:TRP:CH2	2.84	0.40
11:H:113:ALA:N	11:H:114:PRO:CD	2.83	0.40
8:E:99:GLY:N	37:E:4191:HOH:O	2.53	0.40
16:M:154:LEU:C	16:M:156:GLU:H	2.24	0.40
5:B:55:ASN:CB	5:B:63:GLU:HA	2.49	0.40
5:B:144:THR:CG2	5:B:145:HIS:N	2.84	0.40
4:A:135:VAL:N	37:A:8589:HOH:O	2.54	0.40
15:L:20:ILE:O	15:L:24:MET:HG2	2.21	0.40
1:0:1788:U:O2'	1:0:1789:G:H5'	2.21	0.40
8:E:84:MET:HE1	8:E:148:ILE:HD12	2.03	0.40
1:0:1735:C:OP2	5:B:234:ARG:HG3	2.21	0.40
1:0:2731:G:H2'	1:0:2732:U:O4'	2.21	0.40
6:C:178:GLN:C	6:C:180:SER:N	2.72	0.40
1:0:106:A:H2'	1:0:107:U:O4'	2.21	0.40
1:0:636:G:N2	37:0:8769:HOH:O	2.47	0.40
1:0:709:G:O2'	17:N:25:VAL:HG12	2.21	0.40
1:0:275:G:H1'	37:0:3022:HOH:O	2.22	0.40
15:L:32:ARG:NH2	37:L:8596:HOH:O	2.53	0.40
1:0:1102:C:O2'	1:0:1103:C:H5'	2.21	0.40
2:9:3045:A:H2'	2:9:3046:C:H6	1.85	0.40
13:J:113:ILE:HD12	13:J:128:ALA:HB2	2.04	0.40
1:0:533:U:H2'	1:0:2814:A:C6	2.57	0.40
11:H:27:LYS:HG3	11:H:58:HIS:CD2	2.56	0.40
11:H:57:ARG:O	11:H:61:LEU:HD22	2.21	0.40
30:1:18:ASN:HD21	30:1:40:ARG:H	1.69	0.40
5:B:41:PHE:HA	5:B:79:MET:CE	2.48	0.40
23:T:46:ALA:HB1	23:T:52:THR:HG21	2.04	0.40
7:D:57:THR:HG23	7:D:63:ILE:HA	2.03	0.40
8:E:81:GLU:HA	8:E:133:VAL:O	2.21	0.40
8:E:101:GLU:HA	8:E:118:ILE:HG13	2.02	0.40
1:0:2547:C:C2	1:0:2548:C:C5	3.10	0.40
6:C:95:GLU:CD	6:C:95:GLU:H	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2464:C:H5"	1:0:2465:A:OP1	2.22	0.40
1:0:1139:U:H2'	1:0:1140:C:H6	1.86	0.40
1:0:1072:G:P	27:X:154:ARG:NH2	2.94	0.40
1:0:10:U:H5'	37:0:5458:HOH:O	2.20	0.40
26:W:26:ALA:O	26:W:27:ASP:C	2.59	0.40
20:Q:111:ILE:HG23	20:Q:145:LEU:CD1	2.51	0.40
1:0:2020:C:O2'	1:0:2021:C:H5'	2.20	0.40
21:R:20:PHE:CD2	21:R:20:PHE:N	2.87	0.40
1:0:2069:U:H5'	37:0:4221:HOH:O	2.20	0.40
5:B:98:THR:HG22	5:B:99:GLU:H	1.87	0.40
1:0:968:G:O2'	1:0:969:G:H5'	2.21	0.40
4:A:22:ARG:NH1	37:A:8558:HOH:O	2.53	0.40
15:L:37:VAL:CB	15:L:108:LYS:HG3	2.51	0.40
10:G:12:ILE:HG22	10:G:17:GLN:HE22	1.86	0.40
1:0:1201:C:H2'	1:0:1202:A:H5'	2.03	0.40
7:D:64:ARG:NE	7:D:67:ASP:HB3	2.37	0.40
1:0:506:G:N1	1:0:509:A:OP2	2.53	0.40
20:Q:31:ILE:O	20:Q:32:ALA:C	2.59	0.40
19:P:31:GLU:CD	19:P:93:ARG:HH12	2.24	0.40
7:D:170:TYR:O	7:D:171:ASP:CB	2.70	0.40
1:0:407:A:C2	1:0:408:A:C4	3.10	0.40
8:E:84:MET:HE1	8:E:148:ILE:CD1	2.52	0.40
1:0:1562:C:C2'	1:0:1562:C:O2	2.70	0.40
31:2:69:TYR:CB	31:2:78:HIS:CE1	3.04	0.40
15:L:5:TYR:C	15:L:7:TYR:N	2.74	0.40
29:Z:2:GLY:O	29:Z:6:PRO:HG2	2.21	0.40
15:L:174:ARG:HG3	37:L:8521:HOH:O	2.20	0.40
1:0:876:A:C2'	1:0:876:A:N3	2.84	0.40
3:3:75:C:O5'	3:3:75:C:H6	2.05	0.40
1:0:1004:C:H1'	37:0:4292:HOH:O	2.21	0.40
25:V:75:GLY:HA3	37:V:5763:HOH:O	2.21	0.40
1:0:1703:G:C2	1:0:1716:A:C4	3.09	0.40
1:0:1116:U:C2'	1:0:1118:A:C2	3.05	0.40
7:D:40:ILE:HG23	37:D:5583:HOH:O	2.21	0.40
1:0:797:A:H5'	28:Y:10:ARG:HG2	2.02	0.40
18:O:115:SER:O	18:O:117:SER:N	2.54	0.40
11:H:3:GLY:HA2	11:H:57:ARG:NH1	2.36	0.40
25:V:64:THR:O	25:V:68:THR:HG22	2.20	0.40
1:0:962:C:H2'	1:0:963:C:H5'	2.03	0.40
5:B:202:VAL:CG1	5:B:301:VAL:HG13	2.41	0.40
27:X:182:PHE:HD2	27:X:200:THR:O	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1641:A:C8	1:0:1702:U:O4	2.75	0.40
15:L:60:ILE:HG12	15:L:134:ILE:HD12	2.03	0.40
4:A:51:ARG:NH2	37:A:8602:HOH:O	2.53	0.40
5:B:175:LEU:O	5:B:178:ALA:HB3	2.22	0.40
1:0:508:A:C2'	1:0:509:A:H5'	2.52	0.40
1:0:212:A:H5'	1:0:214:U:O4'	2.22	0.40
2:9:3074:G:H1	2:9:3107:C:H42	1.68	0.40
5:B:55:ASN:ND2	5:B:67:GLU:OE2	2.54	0.40
1:0:1015:C:O5'	1:0:1015:C:H6	2.04	0.40
1:0:2252:A:C6	1:0:2253:G:H1'	2.55	0.40
1:0:2421:G:HO2'	1:0:2422:U:P	2.44	0.40
4:A:179:MET:HG2	4:A:186:TRP:HB2	2.02	0.40
1:0:2408:A:H2	37:2:8515:HOH:O	2.04	0.40
1:0:1819:G:H5"	37:0:4167:HOH:O	2.20	0.40
9:F:78:GLU:HB2	37:F:2750:HOH:O	2.22	0.40
1:0:731:U:H2'	1:0:732:C:C6	2.56	0.40
1:0:311:C:O5'	1:0:311:C:H6	2.05	0.40
1:0:1483:C:O2'	1:0:1484:G:H5'	2.22	0.40
1:0:390:G:H5"	37:0:9056:HOH:O	2.20	0.40
1:0:764:C:H2'	1:0:765:G:O4'	2.21	0.40
9:F:14:ASP:O	9:F:18:GLU:HG3	2.21	0.40
1:0:1896:G:C6	1:0:1897:U:C4	3.09	0.40
1:0:1521:C:C4	1:0:1522:A:N7	2.90	0.40
25:V:142:ASP:HB3	25:V:145:GLY:H	1.85	0.40
3:4:75:C:H6	3:4:75:C:O5'	2.04	0.40
15:L:87:MET:CB	31:2:46:ILE:HG21	2.50	0.40
1:0:1594:C:C5	18:O:120:ARG:CZ	3.05	0.40
27:X:189:ASN:C	27:X:189:ASN:ND2	2.74	0.40
1:0:1166:A:N3	1:0:1166:A:H2'	2.36	0.40
16:M:155:GLU:C	16:M:156:GLU:HG3	2.42	0.40
10:G:23:ILE:HG22	10:G:70:ALA:CB	2.52	0.40
1:0:56:G:C5'	24:U:50:ARG:HH12	2.26	0.40
5:B:36:PRO:HA	5:B:168:GLY:HA3	2.00	0.40
16:M:72:GLU:HB3	16:M:171:HIS:HE1	1.87	0.40
24:U:27:LEU:HA	24:U:49:LEU:HD13	2.02	0.40
37:0:3666:HOH:O	27:X:186:ARG:HD2	2.21	0.40
1:0:678:G:OP2	6:C:107:ARG:NH2	2.54	0.40
1:0:2381:C:H2'	1:0:2382:A:C8	2.57	0.40
1:0:1734:C:OP1	5:B:234:ARG:HD3	2.21	0.40
31:2:62:THR:HB	37:2:8541:HOH:O	2.22	0.40
1:0:259:G:H21	15:L:58:GLN:NE2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2659:U:C4'	20:Q:76:ASP:HB3	2.52	0.40
1:0:666:A:H2'	1:0:667:C:O4'	2.22	0.40
25:V:35:VAL:HA	25:V:36:PRO:HD3	1.75	0.40
1:0:2566:A:H4'	8:E:161:VAL:HG21	2.03	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
4	A	235/239 (98%)	204 (87%)	27 (12%)	4 (2%)	11 38
5	B	335/337 (99%)	295 (88%)	31 (9%)	9 (3%)	6 25
6	C	244/246 (99%)	221 (91%)	21 (9%)	2 (1%)	24 60
7	D	134/176 (76%)	93 (69%)	29 (22%)	12 (9%)	1 2
8	E	170/177 (96%)	157 (92%)	12 (7%)	1 (1%)	30 67
9	F	117/119 (98%)	103 (88%)	11 (9%)	3 (3%)	7 26
10	G	25/348 (7%)	21 (84%)	3 (12%)	1 (4%)	4 15
11	H	152/167 (91%)	131 (86%)	16 (10%)	5 (3%)	5 20
12	I	140/145 (97%)	128 (91%)	8 (6%)	4 (3%)	6 23
13	J	130/132 (98%)	111 (85%)	18 (14%)	1 (1%)	24 60
14	K	141/164 (86%)	118 (84%)	20 (14%)	3 (2%)	9 32
15	L	192/194 (99%)	165 (86%)	24 (12%)	3 (2%)	12 40
16	M	184/186 (99%)	161 (88%)	15 (8%)	8 (4%)	3 13
17	N	113/115 (98%)	104 (92%)	7 (6%)	2 (2%)	11 37
18	O	141/148 (95%)	132 (94%)	8 (6%)	1 (1%)	26 63
19	P	93/95 (98%)	88 (95%)	4 (4%)	1 (1%)	17 51

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
20	Q	148/154 (96%)	136 (92%)	12 (8%)	0	100 100
21	R	79/84 (94%)	75 (95%)	3 (4%)	1 (1%)	15 46
22	S	117/119 (98%)	99 (85%)	17 (14%)	1 (1%)	21 57
23	T	51/66 (77%)	45 (88%)	5 (10%)	1 (2%)	9 33
24	U	63/70 (90%)	56 (89%)	5 (8%)	2 (3%)	5 20
25	V	152/154 (99%)	139 (91%)	12 (8%)	1 (1%)	26 63
26	W	80/91 (88%)	72 (90%)	6 (8%)	2 (2%)	7 27
27	X	140/240 (58%)	134 (96%)	6 (4%)	0	100 100
28	Y	71/73 (97%)	57 (80%)	13 (18%)	1 (1%)	14 44
29	Z	54/56 (96%)	51 (94%)	3 (6%)	0	100 100
30	1	42/48 (88%)	40 (95%)	2 (5%)	0	100 100
31	2	90/92 (98%)	84 (93%)	6 (7%)	0	100 100
All	All	3633/4235 (86%)	3220 (89%)	344 (10%)	69 (2%)	10 35

All (69) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	B	139	ASP
7	D	16	PRO
7	D	93	LEU
7	D	95	THR
7	D	137	PRO
7	D	173	GLU
9	F	101	ALA
11	H	162	SER
11	H	164	ALA
16	M	154	LEU
16	M	162	ASP
16	M	164	ASP
16	M	181	ASP
16	M	183	ASP
24	U	43	PRO
5	B	34	GLY
5	B	169	GLY
5	B	184	ASP
6	C	8	LEU
7	D	20	LYS
7	D	61	PHE

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Mol	Chain	Res	Type
7	D	147	ALA
7	D	171	ASP
12	I	5	GLU
13	J	119	GLN
14	K	80	ASP
15	L	6	SER
17	N	20	SER
18	O	116	SER
4	A	34	ASP
5	B	107	SER
7	D	11	HIS
7	D	36	ASN
11	H	72	VAL
11	H	138	PRO
12	I	7	ASP
12	I	78	ILE
14	K	21	ARG
16	M	139	TRP
19	P	23	THR
23	T	7	ASP
25	V	77	ALA
26	W	77	PHE
4	A	132	ASP
10	G	72	ASP
14	K	105	TYR
17	N	16	SER
5	B	185	GLY
5	B	206	THR
6	C	58	ALA
7	D	82	GLU
8	E	17	HIS
9	F	44	SER
9	F	64	PRO
11	H	40	PRO
15	L	148	SER
16	M	68	GLU
21	R	58	MET
26	W	70	ILE
28	Y	20	LEU
4	A	192	VAL
5	B	2	GLN
12	I	65	ASN

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Mol	Chain	Res	Type
22	S	90	PRO
16	M	109	PRO
24	U	40	PRO
4	A	37	VAL
5	B	5	ARG
15	L	88	VAL

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
4	A	179/181 (99%)	166 (93%)	13 (7%)	17 45
5	B	282/282 (100%)	263 (93%)	19 (7%)	20 50
6	C	193/193 (100%)	177 (92%)	16 (8%)	14 38
7	D	117/147 (80%)	107 (92%)	10 (8%)	13 37
8	E	152/155 (98%)	146 (96%)	6 (4%)	39 75
9	F	92/92 (100%)	92 (100%)	0	100 100
10	G	27/283 (10%)	27 (100%)	0	100 100
11	H	122/122 (100%)	111 (91%)	11 (9%)	12 34
12	I	118/121 (98%)	107 (91%)	11 (9%)	11 32
13	J	106/106 (100%)	103 (97%)	3 (3%)	51 84
14	K	112/126 (89%)	107 (96%)	5 (4%)	34 70
15	L	166/166 (100%)	158 (95%)	8 (5%)	31 67
16	M	149/149 (100%)	143 (96%)	6 (4%)	38 74
17	N	93/93 (100%)	89 (96%)	4 (4%)	35 71
18	O	113/116 (97%)	109 (96%)	4 (4%)	43 78
19	P	79/79 (100%)	76 (96%)	3 (4%)	40 76
20	Q	117/121 (97%)	113 (97%)	4 (3%)	44 79
21	R	71/73 (97%)	71 (100%)	0	100 100
22	S	105/105 (100%)	101 (96%)	4 (4%)	40 76

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
23	T	44/52 (85%)	44 (100%)	0	100 100
24	U	51/56 (91%)	48 (94%)	3 (6%)	24 58
25	V	130/130 (100%)	122 (94%)	8 (6%)	23 55
26	W	66/73 (90%)	60 (91%)	6 (9%)	12 34
27	X	120/195 (62%)	112 (93%)	8 (7%)	20 50
28	Y	56/56 (100%)	52 (93%)	4 (7%)	18 47
29	Z	46/46 (100%)	46 (100%)	0	100 100
30	1	42/44 (96%)	41 (98%)	1 (2%)	57 86
31	2	79/79 (100%)	78 (99%)	1 (1%)	76 94
All	All	3027/3441 (88%)	2869 (95%)	158 (5%)	29 64

All (158) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	3	ARG
4	A	8	ARG
4	A	13	THR
4	A	33	GLU
4	A	36	ASP
4	A	55	VAL
4	A	68	ILE
4	A	69	LEU
4	A	94	LEU
4	A	120	ARG
4	A	153	ARG
4	A	179	MET
4	A	217	ARG
5	B	7	ARG
5	B	11	LEU
5	B	27	ASN
5	B	33	ASP
5	B	63	GLU
5	B	97	LEU
5	B	98	THR
5	B	103	ASP
5	B	162	MET
5	B	190	MET
5	B	195	ARG
5	B	234	ARG

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Mol	Chain	Res	Type
5	B	245	SER
5	B	251	VAL
5	B	254	GLN
5	B	256	GLN
5	B	304	PRO
5	B	307	ARG
5	B	312	ARG
6	C	2	GLN
6	C	27	ARG
6	C	67	GLN
6	C	76	ARG
6	C	78	ARG
6	C	94	THR
6	C	101	ASP
6	C	115	LEU
6	C	136	VAL
6	C	187	ARG
6	C	214	THR
6	C	222	ASP
6	C	223	LEU
6	C	234	VAL
6	C	236	THR
6	C	240	LEU
7	D	24	HIS
7	D	50	VAL
7	D	61	PHE
7	D	99	ASP
7	D	100	ASP
7	D	131	THR
7	D	133	ASN
7	D	136	ARG
7	D	137	PRO
7	D	149	ARG
8	E	7	ILE
8	E	12	ASP
8	E	15	GLN
8	E	16	ASP
8	E	102	VAL
8	E	116	THR
11	H	1	LYS
11	H	59	ASN
11	H	72	VAL

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Mol	Chain	Res	Type
11	H	73	GLN
11	H	82	LYS
11	H	85	ILE
11	H	86	ARG
11	H	94	ARG
11	H	118	PRO
11	H	142	VAL
11	H	150	LYS
12	I	46	ILE
12	I	47	THR
12	I	52	GLN
12	I	74	ARG
12	I	76	ASP
12	I	79	PHE
12	I	107	ASN
12	I	112	ASP
12	I	120	SER
12	I	127	ILE
12	I	131	THR
13	J	7	ASP
13	J	10	GLN
13	J	98	VAL
14	K	18	HIS
14	K	30	ARG
14	K	35	ARG
14	K	80	ASP
14	K	117	GLU
15	L	38	VAL
15	L	46	LEU
15	L	68	ARG
15	L	81	ARG
15	L	87	MET
15	L	93	ARG
15	L	159	THR
15	L	164	THR
16	M	26	LEU
16	M	43	VAL
16	M	47	LEU
16	M	128	ASP
16	M	152	GLU
16	M	163	PHE
17	N	81	PHE

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Mol	Chain	Res	Type
17	N	97	SER
17	N	109	SER
17	N	111	VAL
18	O	52	LYS
18	O	91	LYS
18	O	94	TRP
18	O	98	ILE
19	P	16	ASN
19	P	57	ASP
19	P	95	GLU
20	Q	13	THR
20	Q	39	THR
20	Q	82	GLU
20	Q	132	ARG
22	S	23	VAL
22	S	39	ASN
22	S	73	HIS
22	S	96	VAL
24	U	22	ASP
24	U	43	PRO
24	U	65	ASP
25	V	32	CYS
25	V	35	VAL
25	V	52	VAL
25	V	73	LEU
25	V	122	ARG
25	V	142	ASP
25	V	146	ILE
25	V	154	ARG
26	W	15	ARG
26	W	27	ASP
26	W	44	ASP
26	W	49	ARG
26	W	72	VAL
26	W	79	GLU
27	X	115	ARG
27	X	154	ARG
27	X	163	THR
27	X	189	ASN
27	X	200	THR
27	X	203	VAL
27	X	204	ARG

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Mol	Chain	Res	Type
27	X	235	GLU
28	Y	11	THR
28	Y	44	PHE
28	Y	49	ARG
28	Y	64	ILE
30	1	18	ASN
31	2	42	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (101) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	29	HIS
4	A	47	HIS
4	A	92	ASN
4	A	127	GLN
4	A	199	HIS
5	B	27	ASN
5	B	145	HIS
5	B	221	GLN
5	B	238	ASN
5	B	260	HIS
5	B	332	ASN
6	C	2	GLN
6	C	39	GLN
6	C	129	HIS
6	C	163	HIS
7	D	47	GLN
7	D	103	ASN
7	D	133	ASN
8	E	90	HIS
8	E	106	ASN
8	E	143	GLN
9	F	80	GLN
10	G	17	GLN
10	G	64	ASN
11	H	8	ASN
11	H	35	ASN
11	H	55	GLN
11	H	58	HIS
11	H	59	ASN
11	H	74	ASN
11	H	80	ASN

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Mol	Chain	Res	Type
11	H	91	HIS
11	H	129	ASN
11	H	130	HIS
11	H	137	ASN
11	H	166	ASN
12	I	52	GLN
12	I	107	ASN
13	J	10	GLN
14	K	18	HIS
14	K	41	HIS
14	K	42	ASN
14	K	43	HIS
14	K	58	GLN
14	K	116	HIS
15	L	26	HIS
15	L	58	GLN
15	L	176	GLN
16	M	40	ASN
16	M	107	ASN
16	M	119	GLN
17	N	53	GLN
17	N	100	GLN
18	O	28	GLN
18	O	50	GLN
18	O	66	GLN
18	O	73	HIS
18	O	118	GLN
19	P	16	ASN
19	P	40	HIS
20	Q	61	GLN
20	Q	94	ASN
20	Q	98	ASN
20	Q	113	HIS
20	Q	117	HIS
20	Q	122	GLN
21	R	53	ASN
21	R	55	GLN
22	S	11	GLN
22	S	39	ASN
22	S	73	HIS
23	T	39	ASN
23	T	48	ASN

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Mol	Chain	Res	Type
24	U	60	GLN
25	V	12	ASN
25	V	27	HIS
25	V	28	HIS
25	V	59	GLN
25	V	87	HIS
25	V	110	GLN
25	V	119	HIS
25	V	125	HIS
25	V	141	HIS
26	W	23	HIS
27	X	133	HIS
27	X	134	HIS
27	X	149	GLN
27	X	189	ASN
28	Y	33	HIS
28	Y	70	GLN
29	Z	8	GLN
29	Z	16	HIS
29	Z	28	HIS
30	1	16	ASN
30	1	18	ASN
30	1	41	HIS
30	1	45	ASN
31	2	13	HIS
31	2	15	ASN
31	2	30	GLN
31	2	48	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2746/2922 (93%)	264 (9%)	55 (2%)
2	9	121/122 (99%)	18 (14%)	7 (5%)
3	3	2/3 (66%)	1 (50%)	0
3	4	2/3 (66%)	0	0
3	5	2/3 (66%)	1 (50%)	0
All	All	2873/3053 (94%)	284 (9%)	62 (2%)

All (284) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	11	A
1	0	31	C
1	0	60	A
1	0	67	A
1	0	69	A
1	0	70	A
1	0	71	G
1	0	87	C
1	0	88	G
1	0	114	A
1	0	115	U
1	0	120	A
1	0	130	C
1	0	139	C
1	0	141	C
1	0	151	A
1	0	166	A
1	0	186	A
1	0	191	A
1	0	192	A
1	0	198	A
1	0	213	G
1	0	214	U
1	0	219	G
1	0	237	G
1	0	271	C
1	0	272	A
1	0	273	G
1	0	283	U
1	0	284	C
1	0	285	A
1	0	308	U
1	0	309	C
1	0	317	A
1	0	336	G
1	0	337	A
1	0	338	C
1	0	339	A
1	0	345	G
1	0	358	G
1	0	381	G
1	0	397	A
1	0	417	G

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Mol	Chain	Res	Type
1	0	461	C
1	0	487	G
1	0	498	A
1	0	509	A
1	0	510	U
1	0	511	A
1	0	514	G
1	0	537	G
1	0	538	C
1	0	539	G
1	0	542	A
1	0	545	G
1	0	553	G
1	0	559	U
1	0	588	G
1	0	604	G
1	0	605	C
1	0	620	A
1	0	632	A
1	0	644	G
1	0	660	A
1	0	688	A
1	0	701	U
1	0	717	C
1	0	759	C
1	0	777	U
1	0	809	G
1	0	821	U
1	0	835	U
1	0	840	U
1	0	857	A
1	0	858	U
1	0	868	G
1	0	869	G
1	0	871	G
1	0	872	U
1	0	875	A
1	0	877	G
1	0	878	G
1	0	882	A
1	0	884	C
1	0	885	G

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Mol	Chain	Res	Type
1	0	898	G
1	0	905	C
1	0	921	G
1	0	923	A
1	0	953	G
1	0	960	G
1	0	961	A
1	0	1006	A
1	0	1008	C
1	0	1029	U
1	0	1030	U
1	0	1031	G
1	0	1045	G
1	0	1059	G
1	0	1060	C
1	0	1072	G
1	0	1081	A
1	0	1088	A
1	0	1109	U
1	0	1110	G
1	0	1119	G
1	0	1130	U
1	0	1138	G
1	0	1151	G
1	0	1162	G
1	0	1164	U
1	0	1165	G
1	0	1166	A
1	0	1171	A
1	0	1174	A
1	0	1175	G
1	0	1177	A
1	0	1185	U
1	0	1192	A
1	0	1193	A
1	0	1206	U
1	0	1216	G
1	0	1226	G
1	0	1235	G
1	0	1237	U
1	0	1238	C
1	0	1239	G

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Mol	Chain	Res	Type
1	0	1242	A
1	0	1279	U
1	0	1289	C
1	0	1342	C
1	0	1353	C
1	0	1360	C
1	0	1377	C
1	0	1380	U
1	0	1407	A
1	0	1409	G
1	0	1438	G
1	0	1451	C
1	0	1474	C
1	0	1485	A
1	0	1505	U
1	0	1506	U
1	0	1524	U
1	0	1525	G
1	0	1526	A
1	0	1528	A
1	0	1563	G
1	0	1564	C
1	0	1580	A
1	0	1592	G
1	0	1603	A
1	0	1604	G
1	0	1625	U
1	0	1626	A
1	0	1633	C
1	0	1634	G
1	0	1656	A
1	0	1667	A
1	0	1682	A
1	0	1684	A
1	0	1685	A
1	0	1692	C
1	0	1701	A
1	0	1722	U
1	0	1723	G
1	0	1725	C
1	0	1730	G
1	0	1731	C

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Mol	Chain	Res	Type
1	0	1737	A
1	0	1752	G
1	0	1778	A
1	0	1779	A
1	0	1798	C
1	0	1819	G
1	0	1820	G
1	0	1829	A
1	0	1856	C
1	0	1904	A
1	0	1919	A
1	0	1941	A
1	0	1942	A
1	0	1971	G
1	0	1973	A
1	0	1974	G
1	0	1978	A
1	0	1980	U
1	0	1996	U
1	0	2005	G
1	0	2008	U
1	0	2011	A
1	0	2012	U
1	0	2013	G
1	0	2033	G
1	0	2034	U
1	0	2064	U
1	0	2072	G
1	0	2073	G
1	0	2074	A
1	0	2096	A
1	0	2101	A
1	0	2102	G
1	0	2110	G
1	0	2238	A
1	0	2243	C
1	0	2258	A
1	0	2271	G
1	0	2272	G
1	0	2317	C
1	0	2320	U
1	0	2321	A

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Mol	Chain	Res	Type
1	0	2329	C
1	0	2346	C
1	0	2354	A
1	0	2361	A
1	0	2369	A
1	0	2379	G
1	0	2422	U
1	0	2462	G
1	0	2467	A
1	0	2476	C
1	0	2480	G
1	0	2483	A
1	0	2503	A
1	0	2511	A
1	0	2532	A
1	0	2533	C
1	0	2537	G
1	0	2541	U
1	0	2553	A
1	0	2564	G
1	0	2589	U
1	0	2601	A
1	0	2602	G
1	0	2608	C
1	0	2613	G
1	0	2634	G
1	0	2638	G
1	0	2649	A
1	0	2664	A
1	0	2681	A
1	0	2682	C
1	0	2726	U
1	0	2747	C
1	0	2748	G
1	0	2749	U
1	0	2750	G
1	0	2762	C
1	0	2768	A
1	0	2786	G
1	0	2792	A
1	0	2800	A
1	0	2811	A

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Mol	Chain	Res	Type
1	0	2812	A
1	0	2825	C
1	0	2836	G
1	0	2837	U
1	0	2840	A
1	0	2850	C
1	0	2876	G
1	0	2890	A
1	0	2896	A
1	0	2903	C
1	0	2914	A
2	9	3002	U
2	9	3007	G
2	9	3014	G
2	9	3022	G
2	9	3023	U
2	9	3024	U
2	9	3025	G
2	9	3026	C
2	9	3041	C
2	9	3043	G
2	9	3044	A
2	9	3052	A
2	9	3056	A
2	9	3057	A
2	9	3066	G
2	9	3077	A
2	9	3114	G
2	9	3122	C
3	3	76	A
3	5	76	A

All (62) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	10	U
1	0	59	A
1	0	87	C
1	0	129	A
1	0	169	A
1	0	213	G
1	0	284	C

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Mol	Chain	Res	Type
1	0	338	C
1	0	357	A
1	0	509	A
1	0	603	A
1	0	604	G
1	0	644	G
1	0	834	G
1	0	857	A
1	0	871	G
1	0	877	G
1	0	898	G
1	0	1030	U
1	0	1080	C
1	0	1137	G
1	0	1164	U
1	0	1192	A
1	0	1232	A
1	0	1235	G
1	0	1237	U
1	0	1352	A
1	0	1377	C
1	0	1380	U
1	0	1450	C
1	0	1524	U
1	0	1563	G
1	0	1603	A
1	0	1667	A
1	0	1730	G
1	0	1752	G
1	0	1856	C
1	0	1941	A
1	0	1979	G
1	0	2011	A
1	0	2102	G
1	0	2313	C
1	0	2320	U
1	0	2369	A
1	0	2379	G
1	0	2467	A
1	0	2503	A
1	0	2526	C
1	0	2536	C

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Mol	Chain	Res	Type
1	0	2748	G
1	0	2749	U
1	0	2791	U
1	0	2836	G
1	0	2837	U
1	0	2850	C
2	9	3002	U
2	9	3023	U
2	9	3024	U
2	9	3055	U
2	9	3065	A
2	9	3103	A
2	9	3113	C

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no carbohydrates in this entry.

5.6 Ligand geometry (i)

Of 231 ligands modelled in this entry, 231 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

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	0	2754/2922 (94%)	-0.14	29 (1%) 82 80	23, 53, 103, 166	0
2	9	122/122 (100%)	-0.01	3 (2%) 61 55	36, 67, 104, 164	0
3	3	3/3 (100%)	1.53	1 (33%) 0 0	68, 68, 83, 120	0
3	4	3/3 (100%)	1.40	1 (33%) 0 0	88, 88, 89, 103	0
3	5	3/3 (100%)	-0.04	0 100 100	57, 57, 58, 64	0
4	A	237/239 (99%)	0.31	21 (8%) 12 7	33, 66, 100, 126	0
5	B	337/337 (100%)	-0.04	1 (0%) 94 94	27, 60, 86, 95	0
6	C	246/246 (100%)	-0.06	1 (0%) 93 92	27, 57, 81, 88	0
7	D	140/176 (79%)	1.79	47 (33%) 0 0	65, 111, 129, 137	0
8	E	172/177 (97%)	0.47	7 (4%) 41 34	43, 69, 95, 101	0
9	F	119/119 (100%)	0.79	19 (15%) 3 1	65, 88, 112, 117	0
10	G	29/348 (8%)	2.14	16 (55%) 0 0	72, 95, 107, 111	0
11	H	156/167 (93%)	0.09	3 (1%) 70 66	31, 56, 83, 92	0
12	I	142/145 (97%)	-0.16	0 100 100	37, 50, 75, 87	0
13	J	132/132 (100%)	0.01	0 100 100	41, 60, 83, 90	0
14	K	145/164 (88%)	0.54	20 (13%) 4 2	31, 77, 121, 127	0
15	L	194/194 (100%)	-0.00	3 (1%) 76 74	37, 56, 80, 88	0
16	M	186/186 (100%)	0.74	30 (16%) 3 1	43, 78, 123, 135	0
17	N	115/115 (100%)	0.10	2 (1%) 73 70	47, 65, 83, 86	0
18	O	143/148 (96%)	0.43	4 (2%) 56 50	39, 65, 85, 94	0
19	P	95/95 (100%)	0.02	0 100 100	35, 49, 67, 86	0
20	Q	150/154 (97%)	-0.14	2 (1%) 79 78	35, 47, 69, 80	0
21	R	81/84 (96%)	0.34	3 (3%) 45 38	56, 80, 96, 103	0
22	S	119/119 (100%)	0.87	17 (14%) 4 2	52, 71, 101, 120	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
23	T	53/66 (80%)	0.39	4 (7%) 17 11	48, 62, 79, 91	0
24	U	65/70 (92%)	1.47	19 (29%) 1 0	67, 93, 127, 133	0
25	V	154/154 (100%)	-0.21	0 100 100	32, 49, 70, 80	0
26	W	82/91 (90%)	0.69	12 (14%) 3 2	46, 63, 84, 101	0
27	X	142/240 (59%)	0.02	7 (4%) 33 27	28, 52, 77, 93	0
28	Y	73/73 (100%)	0.39	5 (6%) 20 14	55, 72, 90, 96	0
29	Z	56/56 (100%)	-0.34	0 100 100	29, 42, 50, 53	0
30	1	46/48 (95%)	2.14	17 (36%) 0 0	42, 77, 136, 138	0
31	2	92/92 (100%)	0.53	8 (8%) 13 8	44, 67, 80, 91	0
All	All	6586/7288 (90%)	0.13	302 (4%) 36 30	23, 60, 108, 166	0

All (302) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
24	U	1	THR	10.0
30	1	48	ASP	8.9
30	1	36	ASN	8.9
30	1	42	TRP	8.6
30	1	45	ASN	7.8
30	1	44	ARG	7.5
16	M	186	LEU	7.5
7	D	88	LEU	7.0
30	1	39	ARG	6.7
16	M	162	ASP	6.7
30	1	47	THR	6.5
7	D	66	GLY	6.5
7	D	89	PRO	6.3
10	G	27	ILE	6.3
7	D	85	GLN	6.1
30	1	38	LYS	5.6
7	D	63	ILE	5.5
30	1	37	HIS	5.5
1	0	2237	G	5.5
22	S	119	ALA	5.4
9	F	44	SER	5.4
7	D	170	TYR	5.3
2	9	3001	U	5.3
7	D	57	THR	5.2
30	1	41	HIS	5.1

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Mol	Chain	Res	Type	RSRZ
7	D	87	ALA	5.1
7	D	134	LEU	5.0
7	D	10	PHE	5.0
16	M	179	LEU	5.0
7	D	56	ARG	5.0
16	M	159	TYR	4.8
30	1	46	ASP	4.7
24	U	40	PRO	4.7
7	D	90	LEU	4.7
3	3	74	C	4.7
7	D	17	ARG	4.6
7	D	106	PHE	4.6
28	Y	11	THR	4.6
7	D	69	ILE	4.5
7	D	86	THR	4.5
9	F	106	THR	4.5
10	G	23	ILE	4.4
2	9	3025	G	4.4
30	1	43	ARG	4.4
30	1	49	GLU	4.4
22	S	116	ASP	4.4
7	D	84	LEU	4.3
22	S	112	LEU	4.2
16	M	147	ILE	4.2
7	D	130	VAL	4.2
16	M	160	SER	4.1
7	D	45	THR	4.1
24	U	8	ILE	4.1
7	D	92	GLU	4.1
21	R	81	ILE	4.0
16	M	184	ILE	4.0
7	D	128	LEU	3.9
7	D	62	ASP	3.9
14	K	60	GLU	3.9
24	U	9	ARG	3.9
27	X	235	GLU	3.9
1	0	1172	G	3.9
8	E	45	ASP	3.8
7	D	18	ILE	3.8
16	M	149	GLU	3.8
7	D	58	VAL	3.8
16	M	138	ASP	3.8

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Mol	Chain	Res	Type	RSRZ
7	D	23	VAL	3.8
1	0	735	C	3.8
30	1	35	ARG	3.7
16	M	163	PHE	3.7
24	U	39	ALA	3.7
26	W	88	GLU	3.7
28	Y	44	PHE	3.7
23	T	47	ARG	3.7
26	W	80	GLU	3.6
7	D	171	ASP	3.6
26	W	41	PHE	3.6
14	K	105	TYR	3.5
1	0	1199	A	3.5
1	0	716	G	3.5
9	F	98	VAL	3.5
7	D	44	ILE	3.5
24	U	41	GLU	3.5
23	T	51	TRP	3.5
26	W	72	VAL	3.5
1	0	2250	G	3.5
4	A	82	VAL	3.5
1	0	1177	A	3.5
7	D	166	ILE	3.4
7	D	64	ARG	3.4
14	K	106	VAL	3.4
1	0	2637	A	3.4
4	A	80	LEU	3.4
7	D	27	ILE	3.3
24	U	59	ILE	3.3
7	D	83	PHE	3.3
7	D	41	LEU	3.3
14	K	104	ASP	3.3
31	2	1	MET	3.3
24	U	38	GLY	3.3
10	G	15	TRP	3.3
10	G	26	MET	3.2
7	D	93	LEU	3.2
7	D	104	PHE	3.2
14	K	80	ASP	3.2
22	S	118	SER	3.2
7	D	47	GLN	3.2
24	U	3	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
22	S	55	PHE	3.2
15	L	152	ARG	3.2
16	M	152	GLU	3.2
17	N	26	TRP	3.1
22	S	35	TYR	3.1
7	D	25	MET	3.1
10	G	71	LEU	3.1
1	0	1171	A	3.1
7	D	75	LEU	3.1
8	E	100	ASP	3.1
9	F	17	LEU	3.1
1	0	282	C	3.1
1	0	960	G	3.1
4	A	35	GLY	3.0
10	G	67	LEU	3.0
14	K	97	VAL	3.0
4	A	96	LEU	3.0
30	1	40	ARG	3.0
9	F	19	ALA	2.9
4	A	58	VAL	2.9
30	1	20	ARG	2.9
1	0	1948	G	2.9
9	F	28	ALA	2.9
10	G	68	GLU	2.8
18	O	110	ASP	2.8
24	U	63	GLU	2.8
9	F	108	LEU	2.8
7	D	65	GLU	2.8
16	M	72	GLU	2.8
31	2	22	VAL	2.8
9	F	47	LEU	2.8
1	0	1951	G	2.8
22	S	37	GLN	2.8
4	A	36	ASP	2.8
8	E	1	PRO	2.8
22	S	99	THR	2.8
7	D	70	GLY	2.8
9	F	6	PHE	2.8
16	M	127	LEU	2.8
16	M	166	ALA	2.8
22	S	117	ASP	2.8
24	U	62	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
26	W	73	ARG	2.7
26	W	85	VAL	2.7
24	U	61	GLY	2.7
22	S	27	LEU	2.7
27	X	108	ASP	2.7
9	F	26	THR	2.7
9	F	16	ALA	2.7
14	K	96	VAL	2.7
16	M	150	TYR	2.7
7	D	67	ASP	2.7
7	D	43	GLU	2.7
7	D	132	VAL	2.7
22	S	40	VAL	2.7
9	F	75	ILE	2.7
11	H	135	TRP	2.7
4	A	37	VAL	2.7
1	0	2238	A	2.7
16	M	158	LEU	2.7
26	W	74	ALA	2.7
14	K	89	PHE	2.6
7	D	68	PRO	2.6
24	U	60	GLN	2.6
10	G	64	ASN	2.6
24	U	7	GLU	2.6
4	A	133	ARG	2.6
1	0	1173	A	2.6
16	M	161	GLY	2.6
7	D	165	PHE	2.6
9	F	43	GLY	2.6
14	K	123	ASP	2.6
24	U	36	ALA	2.6
24	U	37	GLY	2.6
26	W	8	ARG	2.6
26	W	10	VAL	2.6
16	M	83	LEU	2.6
27	X	236	VAL	2.6
16	M	185	GLU	2.6
16	M	71	TRP	2.6
1	0	1202	A	2.6
16	M	139	TRP	2.5
1	0	1197	G	2.5
9	F	49	PHE	2.5

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Mol	Chain	Res	Type	RSRZ
14	K	73	VAL	2.5
14	K	59	GLU	2.5
1	0	1204	C	2.5
31	2	8	ASN	2.5
11	H	81	TYR	2.5
10	G	17	GLN	2.5
31	2	92	GLU	2.5
16	M	167	ASP	2.5
22	S	42	VAL	2.5
27	X	95	THR	2.5
16	M	175	LEU	2.5
10	G	12	ILE	2.5
10	G	24	VAL	2.5
11	H	83	PHE	2.5
9	F	100	ASP	2.5
16	M	148	ALA	2.4
18	O	141	ILE	2.4
27	X	182	PHE	2.4
4	A	98	GLU	2.4
14	K	133	VAL	2.4
2	9	3023	U	2.4
4	A	59	GLU	2.4
1	0	1198	U	2.4
4	A	64	ASP	2.4
10	G	65	THR	2.4
4	A	83	GLY	2.4
26	W	40	HIS	2.4
1	0	2249	G	2.4
10	G	13	PRO	2.4
18	O	16	VAL	2.4
21	R	49	VAL	2.4
16	M	143	ARG	2.4
26	W	76	ARG	2.4
16	M	75	THR	2.4
1	0	1175	G	2.4
28	Y	38	LYS	2.4
23	T	54	THR	2.4
7	D	107	GLY	2.3
7	D	73	VAL	2.3
4	A	38	ILE	2.3
4	A	99	ILE	2.3
9	F	107	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
14	K	93	VAL	2.3
17	N	104	ASN	2.3
7	D	54	ALA	2.3
10	G	16	LYS	2.3
20	Q	6	VAL	2.3
15	L	165	SER	2.3
14	K	140	VAL	2.3
4	A	97	ALA	2.3
31	2	6	ARG	2.3
1	0	1201	C	2.3
1	0	2251	G	2.3
3	4	76	A	2.2
9	F	103	ALA	2.2
26	W	7	GLU	2.2
9	F	15	ASP	2.2
10	G	63	ARG	2.2
22	S	49	GLU	2.2
10	G	20	VAL	2.2
23	T	52	THR	2.2
15	L	148	SER	2.2
30	1	27	LEU	2.2
1	0	1178	G	2.2
8	E	15	GLN	2.2
16	M	140	GLN	2.2
16	M	128	ASP	2.2
24	U	10	ASP	2.2
22	S	63	ILE	2.2
8	E	82	TYR	2.2
14	K	120	LEU	2.2
14	K	100	ALA	2.2
14	K	150	GLN	2.2
24	U	6	GLN	2.2
4	A	30	ARG	2.2
4	A	85	ASP	2.2
22	S	82	THR	2.2
4	A	34	ASP	2.1
4	A	60	PHE	2.1
8	E	124	VAL	2.1
24	U	49	LEU	2.1
1	0	2239	C	2.1
4	A	66	ARG	2.1
28	Y	25	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
6	C	243	VAL	2.1
27	X	103	THR	2.1
27	X	234	VAL	2.1
31	2	67	LEU	2.1
5	B	97	LEU	2.1
16	M	80	SER	2.1
1	0	130	C	2.1
9	F	99	THR	2.1
22	S	41	ARG	2.1
1	0	284	C	2.1
1	0	368	C	2.1
14	K	91	VAL	2.1
21	R	52	VAL	2.1
16	M	145	ALA	2.1
20	Q	7	GLU	2.1
22	S	115	GLU	2.1
14	K	57	VAL	2.1
28	Y	16	PRO	2.1
4	A	41	THR	2.1
31	2	62	THR	2.1
8	E	108	LEU	2.1
14	K	79	ASP	2.0
1	0	1203	G	2.0
18	O	77	ALA	2.0
31	2	9	THR	2.0

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates (i)

There are no carbohydrates in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors

of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
35	CL	0	8515	1/1	0.92	0.41	45.14	96,96,96,96	0
34	NA	0	8371	1/1	0.71	0.42	41.11	58,58,58,58	0
34	NA	0	8374	1/1	0.77	0.98	37.63	74,74,74,74	0
34	NA	0	8378	1/1	0.96	0.59	36.30	45,45,45,45	0
34	NA	0	8359	1/1	0.90	0.43	32.55	66,66,66,66	0
34	NA	0	8356	1/1	0.92	0.47	32.18	77,77,77,77	0
34	NA	0	8350	1/1	0.95	0.27	25.69	61,61,61,61	0
34	NA	Q	8386	1/1	0.89	0.73	23.15	84,84,84,84	0
34	NA	0	8372	1/1	0.56	0.47	20.41	71,71,71,71	0
34	NA	K	8380	1/1	0.86	0.49	19.85	77,77,77,77	0
34	NA	0	8361	1/1	0.96	0.58	18.58	47,47,47,47	0
34	NA	9	8383	1/1	0.83	0.38	18.52	62,62,62,62	0
35	CL	0	8505	1/1	0.54	0.44	16.91	87,87,87,87	0
34	NA	0	8376	1/1	0.98	0.27	15.39	33,33,33,33	0
34	NA	0	8335	1/1	0.92	0.35	15.24	54,54,54,54	0
34	NA	0	8320	1/1	0.95	0.21	9.69	44,44,44,44	0
32	MG	0	8054	1/1	0.97	0.23	9.41	17,17,17,17	0
34	NA	0	8310	1/1	0.96	0.30	8.79	20,20,20,20	0
34	NA	0	8373	1/1	0.94	0.33	7.40	53,53,53,53	0
34	NA	0	8362	1/1	0.91	0.25	7.39	73,73,73,73	0
34	NA	0	8355	1/1	0.95	0.42	7.11	59,59,59,59	0
34	NA	0	8328	1/1	0.95	0.27	6.93	51,51,51,51	0
34	NA	0	8365	1/1	0.91	0.43	6.92	58,58,58,58	0
34	NA	0	8326	1/1	0.85	0.40	6.69	52,52,52,52	0
34	NA	0	8367	1/1	0.90	0.22	6.29	54,54,54,54	0
32	MG	0	8049	1/1	0.90	0.30	5.67	64,64,64,64	0
34	NA	0	8325	1/1	0.96	0.19	4.33	45,45,45,45	0
34	NA	0	8382	1/1	0.90	0.20	4.19	64,64,64,64	0
35	CL	N	8508	1/1	0.78	0.37	3.89	101,101,101,101	0
35	CL	B	8519	1/1	0.95	0.26	3.81	58,58,58,58	0
34	NA	0	8321	1/1	0.97	0.25	3.74	45,45,45,45	0
34	NA	0	8379	1/1	0.88	0.17	2.86	34,34,34,34	0
34	NA	Q	8337	1/1	0.91	0.26	2.59	43,43,43,43	0
34	NA	C	8304	1/1	0.89	0.30	2.21	59,59,59,59	0
32	MG	0	8044	1/1	0.95	0.18	1.93	54,54,54,54	0
35	CL	0	8516	1/1	0.96	0.18	0.91	65,65,65,65	0
32	MG	0	8013	1/1	0.96	0.16	0.87	64,64,64,64	0
32	MG	0	8070	1/1	0.99	0.17	0.80	41,41,41,41	0
34	NA	A	8345	1/1	0.95	0.19	0.73	58,58,58,58	0
33	K	0	8201	1/1	0.98	0.16	0.26	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
34	NA	0	8366	1/1	0.92	0.15	0.08	48,48,48,48	0
34	NA	0	8323	1/1	0.97	0.17	-0.03	46,46,46,46	0
34	NA	0	8308	1/1	0.82	0.13	-0.13	54,54,54,54	0
32	MG	0	8112	1/1	0.89	0.15	-0.14	52,52,52,52	0
32	MG	0	8064	1/1	0.98	0.13	-0.26	22,22,22,22	0
34	NA	0	8317	1/1	0.84	0.37	-0.33	75,75,75,75	0
34	NA	0	8332	1/1	0.84	0.13	-0.49	30,30,30,30	0
34	NA	0	8305	1/1	0.94	0.14	-0.50	39,39,39,39	0
34	NA	Q	8338	1/1	0.94	0.13	-0.68	96,96,96,96	0
32	MG	0	8027	1/1	0.96	0.12	-1.00	69,69,69,69	0
32	MG	0	8108	1/1	0.94	0.12	-1.07	61,61,61,61	0
34	NA	0	8333	1/1	0.94	0.11	-1.07	34,34,34,34	0
32	MG	0	8057	1/1	0.94	0.15	-1.11	51,51,51,51	0
32	MG	0	8010	1/1	0.97	0.12	-1.13	19,19,19,19	0
32	MG	B	8056	1/1	0.99	0.18	-1.22	65,65,65,65	0
35	CL	I	8521	1/1	0.93	0.14	-1.22	54,54,54,54	0
34	NA	0	8353	1/1	0.94	0.13	-1.35	40,40,40,40	0
34	NA	0	8303	1/1	0.94	0.13	-1.37	54,54,54,54	0
36	CD	2	8404	1/1	0.97	0.09	-1.38	76,76,76,76	0
34	NA	0	8331	1/1	0.97	0.12	-1.41	50,50,50,50	0
36	CD	Z	8402	1/1	0.99	0.08	-1.48	75,75,75,75	0
36	CD	Y	8403	1/1	0.99	0.08	-1.54	82,82,82,82	0
32	MG	0	8018	1/1	0.95	0.11	-1.59	75,75,75,75	0
34	NA	P	8348	1/1	0.90	0.12	-1.61	47,47,47,47	0
34	NA	H	8309	1/1	0.96	0.11	-1.74	29,29,29,29	0
35	CL	2	8504	1/1	0.93	0.14	-1.78	77,77,77,77	0
32	MG	2	8078	1/1	0.98	0.06	-1.87	31,31,31,31	0
34	NA	0	8339	1/1	0.91	0.13	-1.90	34,34,34,34	0
36	CD	T	8401	1/1	0.99	0.07	-1.95	78,78,78,78	0
32	MG	S	8073	1/1	0.98	0.14	-2.00	64,64,64,64	0
32	MG	0	8055	1/1	0.84	0.10	-2.11	54,54,54,54	0
32	MG	0	8048	1/1	0.99	0.10	-2.16	35,35,35,35	0
34	NA	0	8343	1/1	0.95	0.08	-2.41	33,33,33,33	0
32	MG	0	8060	1/1	0.98	0.11	-2.47	34,34,34,34	0
32	MG	0	8032	1/1	0.94	0.07	-2.63	26,26,26,26	0
34	NA	0	8368	1/1	0.88	0.10	-2.78	51,51,51,51	0
32	MG	0	8004	1/1	0.95	0.06	-3.11	44,44,44,44	0
32	MG	A	8065	1/1	0.99	0.10	-3.11	56,56,56,56	0
32	MG	0	8096	1/1	0.98	0.07	-3.14	39,39,39,39	0
35	CL	J	8512	1/1	0.97	0.08	-3.20	40,40,40,40	0
32	MG	0	8003	1/1	0.97	0.11	-3.27	26,26,26,26	0
32	MG	0	8012	1/1	0.99	0.09	-3.31	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
32	MG	0	8077	1/1	0.96	0.06	-3.34	31,31,31,31	0
32	MG	0	8038	1/1	0.98	0.09	-3.39	23,23,23,23	0
32	MG	0	8033	1/1	0.99	0.12	-3.39	15,15,15,15	0
32	MG	0	8017	1/1	0.99	0.04	-3.57	33,33,33,33	0
32	MG	X	8109	1/1	0.94	0.07	-3.66	34,34,34,34	0
32	MG	0	8088	1/1	0.93	0.12	-3.77	34,34,34,34	0
35	CL	0	8513	1/1	0.98	0.08	-3.82	62,62,62,62	0
32	MG	0	8020	1/1	0.99	0.08	-3.87	25,25,25,25	0
32	MG	0	8071	1/1	0.88	0.10	-3.88	104,104,104,104	0
32	MG	0	8067	1/1	0.98	0.14	-3.96	78,78,78,78	0
34	NA	I	8346	1/1	0.97	0.05	-3.98	39,39,39,39	0
34	NA	0	8344	1/1	0.97	0.04	-4.07	21,21,21,21	0
35	CL	L	8518	1/1	0.99	0.10	-4.19	52,52,52,52	0
32	MG	0	8001	1/1	0.99	0.11	-4.36	40,40,40,40	0
34	NA	0	8327	1/1	0.98	0.09	-4.36	37,37,37,37	0
32	MG	0	8107	1/1	0.98	0.05	-4.82	52,52,52,52	0
32	MG	0	8074	1/1	0.96	0.04	-5.08	29,29,29,29	0
32	MG	0	8053	1/1	0.99	0.07	-5.10	47,47,47,47	0
32	MG	0	8091	1/1	0.82	0.09	-5.19	73,73,73,73	0
33	K	0	8202	1/1	0.94	0.11	-5.52	79,79,79,79	0
32	MG	0	8052	1/1	0.92	0.08	-5.64	42,42,42,42	0
32	MG	0	8015	1/1	0.95	0.06	-5.75	61,61,61,61	0
34	NA	L	8347	1/1	0.96	0.09	-5.77	38,38,38,38	0
32	MG	0	8062	1/1	0.93	0.05	-6.44	67,67,67,67	0
32	MG	0	8019	1/1	0.99	0.04	-6.73	24,24,24,24	0
32	MG	0	8006	1/1	0.98	0.06	-6.87	46,46,46,46	0
32	MG	0	8014	1/1	0.98	0.07	-7.07	16,16,16,16	0
32	MG	0	8080	1/1	0.98	0.07	-7.37	39,39,39,39	0
32	MG	0	8008	1/1	0.94	0.08	-7.56	39,39,39,39	0
32	MG	0	8007	1/1	0.99	0.06	-8.06	14,14,14,14	0
32	MG	0	8002	1/1	0.98	0.05	-9.68	23,23,23,23	0
32	MG	0	8022	1/1	0.98	0.04	-9.97	27,27,27,27	0
32	MG	0	8035	1/1	0.98	0.05	-12.35	50,50,50,50	0
32	MG	0	8084	1/1	0.99	0.07	-13.39	101,101,101,101	0
32	MG	0	8058	1/1	0.98	0.06	-14.14	63,63,63,63	0
32	MG	0	8110	1/1	0.93	0.09	-	34,34,34,34	0
32	MG	0	8046	1/1	0.82	0.10	-	61,61,61,61	0
34	NA	0	8318	1/1	0.98	0.13	-	20,20,20,20	0
32	MG	0	8040	1/1	0.97	0.10	-	53,53,53,53	0
32	MG	0	8099	1/1	0.79	0.14	-	73,73,73,73	0
35	CL	I	8502	1/1	0.90	0.11	-	54,54,54,54	0
32	MG	0	8102	1/1	0.97	0.12	-	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
32	MG	0	8085	1/1	0.90	0.14	-	82,82,82,82	0
34	NA	0	8342	1/1	0.93	0.21	-	36,36,36,36	0
32	MG	0	8093	1/1	0.91	0.08	-	37,37,37,37	0
34	NA	0	8324	1/1	0.90	0.19	-	62,62,62,62	0
32	MG	0	8116	1/1	0.93	0.11	-	40,40,40,40	0
32	MG	0	8047	1/1	0.99	0.10	-	48,48,48,48	0
32	MG	0	8092	1/1	0.62	0.53	-	109,109,109,109	0
32	MG	0	8041	1/1	0.96	0.12	-	53,53,53,53	0
34	NA	0	8306	1/1	0.87	0.69	-	57,57,57,57	0
34	NA	0	8352	1/1	0.81	0.71	-	61,61,61,61	0
32	MG	0	8042	1/1	0.97	0.06	-	32,32,32,32	0
34	NA	0	8341	1/1	0.75	0.15	-	42,42,42,42	0
34	NA	R	8312	1/1	0.60	0.25	-	60,60,60,60	0
32	MG	0	8094	1/1	0.97	0.14	-	56,56,56,56	0
35	CL	X	8520	1/1	0.96	0.14	-	43,43,43,43	0
32	MG	0	8023	1/1	0.98	0.12	-	20,20,20,20	0
35	CL	0	8522	1/1	0.97	0.37	-	68,68,68,68	0
32	MG	0	8076	1/1	0.88	0.18	-	83,83,83,83	0
32	MG	0	8106	1/1	0.99	0.08	-	58,58,58,58	0
32	MG	0	8079	1/1	0.97	0.10	-	50,50,50,50	0
34	NA	0	8381	1/1	0.91	0.13	-	47,47,47,47	0
32	MG	0	8031	1/1	0.97	0.04	-	19,19,19,19	0
32	MG	0	8039	1/1	0.98	0.06	-	39,39,39,39	0
32	MG	0	8011	1/1	0.99	0.39	-	1,1,1,1	0
34	NA	0	8385	1/1	0.91	0.34	-	44,44,44,44	0
34	NA	0	8314	1/1	0.95	0.12	-	26,26,26,26	0
32	MG	0	8103	1/1	0.89	0.27	-	88,88,88,88	0
34	NA	0	8313	1/1	0.97	0.17	-	77,77,77,77	0
32	MG	9	8095	1/1	0.92	0.15	-	73,73,73,73	0
34	NA	0	8369	1/1	0.75	0.55	-	68,68,68,68	0
32	MG	0	8026	1/1	0.97	0.11	-	25,25,25,25	0
32	MG	0	8036	1/1	0.98	0.10	-	36,36,36,36	0
35	CL	A	8509	1/1	0.79	0.31	-	78,78,78,78	0
32	MG	0	8061	1/1	0.99	0.08	-	23,23,23,23	0
34	NA	0	8354	1/1	0.94	0.20	-	44,44,44,44	0
32	MG	0	8063	1/1	0.90	0.11	-	143,143,143,143	0
34	NA	9	8351	1/1	0.70	0.23	-	89,89,89,89	0
32	MG	0	8115	1/1	0.99	0.04	-	27,27,27,27	0
32	MG	0	8051	1/1	0.94	0.10	-	86,86,86,86	0
34	NA	0	8329	1/1	0.78	0.23	-	135,135,135,135	0
35	CL	I	8501	1/1	0.92	0.16	-	64,64,64,64	0
32	MG	0	8025	1/1	0.99	0.11	-	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
32	MG	0	8098	1/1	0.98	0.12	-	18,18,18,18	0
34	NA	0	8384	1/1	0.16	0.76	-	132,132,132,132	0
32	MG	0	8024	1/1	0.21	0.46	-	146,146,146,146	0
32	MG	0	8100	1/1	0.86	0.32	-	74,74,74,74	0
32	MG	0	8075	1/1	0.92	0.09	-	54,54,54,54	0
34	NA	0	8375	1/1	0.91	0.48	-	55,55,55,55	0
34	NA	0	8340	1/1	0.97	0.17	-	36,36,36,36	0
32	MG	0	8068	1/1	0.97	0.06	-	52,52,52,52	0
32	MG	0	8089	1/1	0.97	0.08	-	60,60,60,60	0
32	MG	0	8059	1/1	0.82	0.18	-	84,84,84,84	0
35	CL	0	8503	1/1	0.85	0.24	-	67,67,67,67	0
34	NA	0	8364	1/1	0.85	0.20	-	51,51,51,51	0
32	MG	0	8021	1/1	0.99	0.08	-	19,19,19,19	0
34	NA	0	8377	1/1	0.96	0.13	-	66,66,66,66	0
32	MG	0	8043	1/1	0.94	0.09	-	58,58,58,58	0
34	NA	0	8316	1/1	0.93	0.21	-	39,39,39,39	0
35	CL	0	8514	1/1	0.95	0.11	-	80,80,80,80	0
32	MG	0	8005	1/1	0.97	0.13	-	55,55,55,55	0
32	MG	0	8072	1/1	0.99	0.08	-	38,38,38,38	0
35	CL	Q	8506	1/1	0.97	0.17	-	52,52,52,52	0
34	NA	0	8358	1/1	0.98	0.31	-	102,102,102,102	0
32	MG	0	8104	1/1	0.88	0.24	-	58,58,58,58	0
32	MG	0	8029	1/1	0.97	0.12	-	38,38,38,38	0
32	MG	0	8097	1/1	0.93	0.20	-	37,37,37,37	0
34	NA	0	8360	1/1	0.92	0.59	-	47,47,47,47	0
36	CD	N	8405	1/1	0.96	0.10	-	90,90,90,90	0
34	NA	0	8363	1/1	0.84	0.38	-	47,47,47,47	0
32	MG	0	8101	1/1	0.92	0.14	-	68,68,68,68	0
34	NA	0	8311	1/1	0.93	0.14	-	44,44,44,44	0
34	NA	0	8370	1/1	0.96	0.19	-	60,60,60,60	0
34	NA	0	8322	1/1	0.93	0.27	-	65,65,65,65	0
35	CL	0	8517	1/1	0.96	0.07	-	64,64,64,64	0
35	CL	0	8511	1/1	0.90	0.31	-	90,90,90,90	0
34	NA	0	8315	1/1	0.95	0.12	-	41,41,41,41	0
32	MG	0	8086	1/1	0.98	0.10	-	61,61,61,61	0
34	NA	0	8330	1/1	0.94	0.17	-	45,45,45,45	0
32	MG	0	8030	1/1	0.98	0.15	-	25,25,25,25	0
32	MG	0	8082	1/1	0.90	0.13	-	77,77,77,77	0
35	CL	K	8510	1/1	0.83	0.20	-	71,71,71,71	0
34	NA	0	8301	1/1	0.94	0.09	-	30,30,30,30	0
34	NA	0	8336	1/1	0.86	0.07	-	50,50,50,50	0
32	MG	J	8069	1/1	0.98	0.24	-	114,114,114,114	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
32	MG	0	8111	1/1	0.94	0.07	-	57,57,57,57	0
32	MG	0	8090	1/1	0.93	0.26	-	65,65,65,65	0
32	MG	0	8009	1/1	0.96	0.07	-	53,53,53,53	0
35	CL	M	8507	1/1	0.81	0.30	-	66,66,66,66	0
34	NA	0	8302	1/1	0.83	0.11	-	40,40,40,40	0
32	MG	0	8050	1/1	0.93	0.10	-	50,50,50,50	0
32	MG	0	8037	1/1	0.99	0.10	-	32,32,32,32	0
32	MG	0	8113	1/1	0.76	0.15	-	39,39,39,39	0
34	NA	0	8319	1/1	0.93	0.10	-	37,37,37,37	0
32	MG	0	8081	1/1	0.95	0.10	-	34,34,34,34	0
32	MG	A	8105	1/1	0.98	0.19	-	29,29,29,29	0
32	MG	0	8034	1/1	0.99	0.07	-	16,16,16,16	0
32	MG	0	8087	1/1	0.90	0.08	-	83,83,83,83	0
32	MG	0	8117	1/1	0.97	0.08	-	28,28,28,28	0
34	NA	0	8357	1/1	0.89	0.12	-	63,63,63,63	0
32	MG	0	8028	1/1	0.89	0.06	-	93,93,93,93	0
32	MG	0	8016	1/1	0.88	0.14	-	50,50,50,50	0
34	NA	0	8334	1/1	0.98	0.04	-	36,36,36,36	0
34	NA	0	8349	1/1	0.98	0.15	-	51,51,51,51	0
32	MG	0	8083	1/1	0.97	0.06	-	36,36,36,36	0
32	MG	A	8066	1/1	0.92	0.06	-	44,44,44,44	0
32	MG	0	8045	1/1	0.97	0.08	-	67,67,67,67	0
34	NA	0	8307	1/1	0.88	0.30	-	40,40,40,40	0

6.5 Other polymers

There are no such residues in this entry.