



# Full wwPDB X-ray Structure Validation Report

Feb 28, 2014 – 12:36 AM GMT

PDB ID : 3CXC  
Title : The structure of an enhanced oxazolidinone inhibitor bound to the 50S ribosomal subunit of *H. marismortui*  
Authors : Ippolito, J.A.; Wang, D.; Kanyo, Z.F.; Duffy, E.M.  
Deposited on : 2008-04-24  
Resolution : 3.00 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

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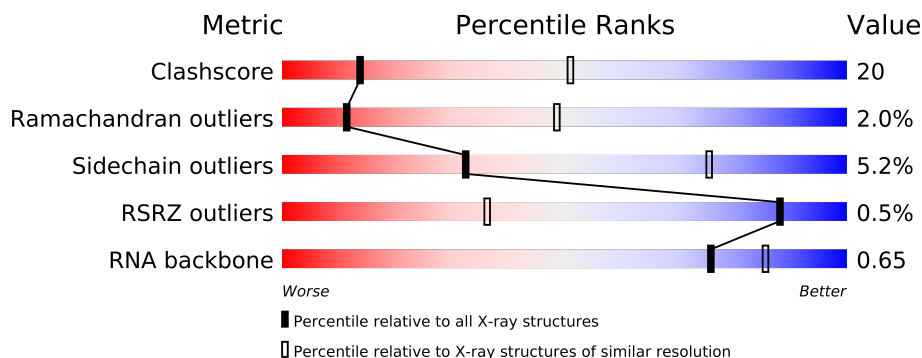
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.15 2013  
Xtriage (Phenix) : dev-1323  
EDS : stable22639  
Percentile statistics : 21963  
Refmac : 5.8.0049  
CCP4 : 6.3.0 (Settle)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 3.00 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	79885	1594 (3.00-3.00)
Ramachandran outliers	78287	1537 (3.00-3.00)
Sidechain outliers	78261	1540 (3.00-3.00)
RSRZ outliers	66119	1217 (3.00-3.00)
RNA backbone	1838	1070 (3.50-2.50)

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  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	0	2922	
2	9	122	
3	4	3	
4	A	239	
5	B	337	
6	C	246	
7	D	176	
8	E	177	
9	F	119	
10	G	348	
11	H	167	
12	I	145	
13	J	132	
14	K	164	

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Mol	Chain	Length	Quality of chain
15	L	194	
16	M	186	
17	N	115	
18	O	148	
19	P	95	
20	Q	154	
21	R	84	
22	S	119	
23	T	66	
24	U	70	
25	V	154	
26	W	91	
27	X	240	
28	Y	73	
29	Z	56	
30	1	48	
31	2	92	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
32	SLD	0	9500	-	X
33	MG	0	8006	-	X
33	MG	0	8009	-	X
33	MG	0	8020	-	X
33	MG	0	8021	-	X
33	MG	0	8022	-	X
33	MG	0	8024	-	X
33	MG	0	8030	-	X
33	MG	0	8038	-	X
33	MG	0	8041	-	X
33	MG	0	8042	-	X
33	MG	0	8044	-	X
33	MG	0	8045	-	X
33	MG	0	8046	-	X
33	MG	0	8049	-	X
33	MG	0	8051	-	X
33	MG	0	8053	-	X
33	MG	0	8054	-	X
33	MG	0	8064	-	X
33	MG	0	8072	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
33	MG	0	8085	-	X
33	MG	0	8088	-	X
33	MG	0	8090	-	X
33	MG	0	8092	-	X
33	MG	0	8097	-	X
33	MG	0	8099	-	X
33	MG	0	8100	-	X
33	MG	0	8102	-	X
33	MG	0	8103	-	X
33	MG	0	8106	-	X
33	MG	0	8108	-	X
33	MG	0	8113	-	X
33	MG	0	8114	-	X
33	MG	0	8115	-	X
33	MG	9	8095	-	X
33	MG	A	8105	-	X
34	K	0	8202	-	X
35	NA	0	8302	-	X
35	NA	0	8303	-	X
35	NA	0	8306	-	X
35	NA	0	8307	-	X
35	NA	0	8308	-	X
35	NA	0	8311	-	X
35	NA	0	8313	-	X
35	NA	0	8314	-	X
35	NA	0	8315	-	X
35	NA	0	8316	-	X
35	NA	0	8318	-	X
35	NA	0	8321	-	X
35	NA	0	8323	-	X
35	NA	0	8324	-	X
35	NA	0	8325	-	X
35	NA	0	8326	-	X
35	NA	0	8328	-	X
35	NA	0	8329	-	X
35	NA	0	8332	-	X
35	NA	0	8333	-	X
35	NA	0	8334	-	X
35	NA	0	8335	-	X
35	NA	0	8340	-	X
35	NA	0	8341	-	X
35	NA	0	8349	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
35	NA	0	8350	-	X
35	NA	0	8352	-	X
35	NA	0	8354	-	X
35	NA	0	8355	-	X
35	NA	0	8356	-	X
35	NA	0	8357	-	X
35	NA	0	8358	-	X
35	NA	0	8360	-	X
35	NA	0	8361	-	X
35	NA	0	8362	-	X
35	NA	0	8363	-	X
35	NA	0	8364	-	X
35	NA	0	8365	-	X
35	NA	0	8366	-	X
35	NA	0	8367	-	X
35	NA	0	8368	-	X
35	NA	0	8369	-	X
35	NA	0	8370	-	X
35	NA	0	8371	-	X
35	NA	0	8372	-	X
35	NA	0	8373	-	X
35	NA	0	8375	-	X
35	NA	0	8376	-	X
35	NA	0	8377	-	X
35	NA	0	8378	-	X
35	NA	0	8379	-	X
35	NA	0	8381	-	X
35	NA	0	8382	-	X
35	NA	0	8384	-	X
35	NA	0	8385	-	X
35	NA	9	8383	-	X
35	NA	C	8304	-	X
35	NA	H	8322	-	X
35	NA	K	8380	-	X
35	NA	Q	8386	-	X
35	NA	R	8312	-	X
36	CL	0	8503	-	X
36	CL	0	8505	-	X
36	CL	0	8513	-	X
36	CL	0	8515	-	X
36	CL	0	8516	-	X
36	CL	0	8517	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
36	CL	0	8522	-	X
36	CL	2	8504	-	X
36	CL	A	8509	-	X
36	CL	B	8519	-	X
36	CL	I	8521	-	X
36	CL	P	8511	-	X
36	CL	Q	8506	-	X
36	CL	X	8520	-	X
37	CD	N	8405	-	X

## 2 Entry composition

There are 38 unique types of molecules in this entry. The entry contains 98635 atoms, of which 0 are hydrogen and 0 are deuterium.

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

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

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

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
0	560	C	U	CONFLICT	GB 3377779

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

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

- Molecule 3 is a RNA chain called 5'-R(\*CP\*CP\*A)-3'.

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

- Molecule 4 is a protein called RIBOSOMAL PROTEIN L2.

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

- Molecule 5 is a protein called RIBOSOMAL PROTEIN L3.

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

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	310	ARG	PRO	CONFLICT	UNP P20279

- Molecule 6 is a protein called RIBOSOMAL PROTEIN L4.

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

- Molecule 7 is a protein called RIBOSOMAL PROTEIN L5.

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 RIBOSOMAL PROTEIN L6.

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 RIBOSOMAL PROTEIN L7AE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	F	119	Total	C	N	O	S	0	0	0
			886	552	141	192	1			

- Molecule 10 is a protein called RIBOSOMAL PROTEIN L10.

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 RIBOSOMAL PROTEIN L10E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	H	156	Total	C	N	O	S	0	0	0
			1216	766	233	213	4			

- Molecule 12 is a protein called RIBOSOMAL PROTEIN L13.



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

- Molecule 13 is a protein called RIBOSOMAL PROTEIN L14.

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

- Molecule 14 is a protein called RIBOSOMAL PROTEIN L15.

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

- Molecule 15 is a protein called RIBOSOMAL PROTEIN L15E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	L	194	Total	C	N	O	S	0	0	0
			1606	988	346	267	5			

- Molecule 16 is a protein called RIBOSOMAL PROTEIN L18.

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

- Molecule 17 is a protein called RIBOSOMAL PROTEIN L18E.

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

- Molecule 18 is a protein called RIBOSOMAL PROTEIN L19E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	O	143	Total	C	N	O	S	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 RIBOSOMAL PROTEIN L21E.

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

- Molecule 20 is a protein called RIBOSOMAL PROTEIN L22.

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 RIBOSOMAL PROTEIN L23.

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 RIBOSOMAL PROTEIN L24.

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

- Molecule 23 is a protein called 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 RIBOSOMAL PROTEIN L29.

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 RIBOSOMAL PROTEIN L30.

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

- Molecule 26 is a protein called 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 RIBOSOMAL PROTEIN L32E.

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

- Molecule 28 is a protein called RIBOSOMAL PROTEIN L37AE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	Y	73	Total	C	N	O	S	0	0	0
			564	359	111	87	7			

- Molecule 29 is a protein called RIBOSOMAL PROTEIN L37E.

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

- Molecule 30 is a protein called RIBOSOMAL PROTEIN L39E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	1	46	Total	C	N	O	S	0	0	0
			394	238	86	69	1			

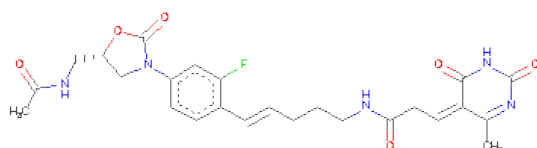
There is a discrepancy between the modelled and reference sequences:

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

- Molecule 31 is a protein called 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 (3Z)-N-[(4E)-5-(4-{(5S)-5-[(ACETYLAMINO)METHYL]-2-OXO-1,3-OXAZOLIDIN-3-YL}-2-FLUOROPHENYL)PENT-4-EN-1-YL]-3-(4-METHYL-2,6-DIOXO-1,6-DIHYDROPYRIMIDIN-5(2H)-YLIDENE)PROPANAMIDE (three-letter code: SLD) (formula: C<sub>25</sub>H<sub>28</sub>FN<sub>5</sub>O<sub>6</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
32	0	1	Total	C	F	N	O	0	0
			37	25	1	5	6		

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	0	107	Total	Mg	0	0
			107	107		
33	J	1	Total	Mg	0	0
			1	1		
33	B	1	Total	Mg	0	0
			1	1		
33	A	2	Total	Mg	0	0
			2	2		
33	4	1	Total	Mg	0	0
			1	1		
33	X	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	2	1	Total 1	Mg 1	0	0
33	9	2	Total 2	Mg 2	0	0
33	S	1	Total 1	Mg 1	0	0

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	0	73	Total 73	Na 73	0	0
35	P	1	Total 1	Na 1	0	0
35	Q	2	Total 2	Na 2	0	0
35	K	1	Total 1	Na 1	0	0
35	H	2	Total 2	Na 2	0	0
35	I	1	Total 1	Na 1	0	0
35	C	1	Total 1	Na 1	0	0
35	A	1	Total 1	Na 1	0	0
35	R	1	Total 1	Na 1	0	0
35	9	2	Total 2	Na 2	0	0
35	L	1	Total 1	Na 1	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	0	8	Total Cl 8 8	0	0
36	P	1	Total Cl 1 1	0	0
36	J	1	Total Cl 1 1	0	0
36	Q	1	Total Cl 1 1	0	0
36	K	1	Total Cl 1 1	0	0
36	B	1	Total Cl 1 1	0	0
36	I	3	Total Cl 3 3	0	0
36	A	1	Total Cl 1 1	0	0
36	N	1	Total Cl 1 1	0	0
36	X	1	Total Cl 1 1	0	0
36	2	1	Total Cl 1 1	0	0
36	L	1	Total Cl 1 1	0	0
36	M	1	Total Cl 1 1	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	Z	1	Total Cd 1 1	0	0
37	Y	1	Total Cd 1 1	0	0
37	T	1	Total Cd 1 1	0	0
37	2	1	Total Cd 1 1	0	0
37	N	1	Total Cd 1 1	0	0

- Molecule 38 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	0	5806	Total 5806	O 5806	0	0
38	9	147	Total 147	O 147	0	0
38	4	1	Total 1	O 1	0	0
38	A	136	Total 136	O 136	0	0
38	B	160	Total 160	O 160	0	0
38	C	180	Total 180	O 180	0	0
38	D	49	Total 49	O 49	0	0
38	E	47	Total 47	O 47	0	0
38	F	26	Total 26	O 26	0	0
38	G	21	Total 21	O 21	0	0
38	H	82	Total 82	O 82	0	0
38	I	61	Total 61	O 61	0	0
38	J	63	Total 63	O 63	0	0
38	K	85	Total 85	O 85	0	0
38	L	130	Total 130	O 130	0	0
38	M	69	Total 69	O 69	0	0
38	N	45	Total 45	O 45	0	0
38	O	70	Total 70	O 70	0	0
38	P	56	Total 56	O 56	0	0
38	Q	92	Total 92	O 92	0	0
38	R	40	Total 40	O 40	0	0
38	S	37	Total 37	O 37	0	0

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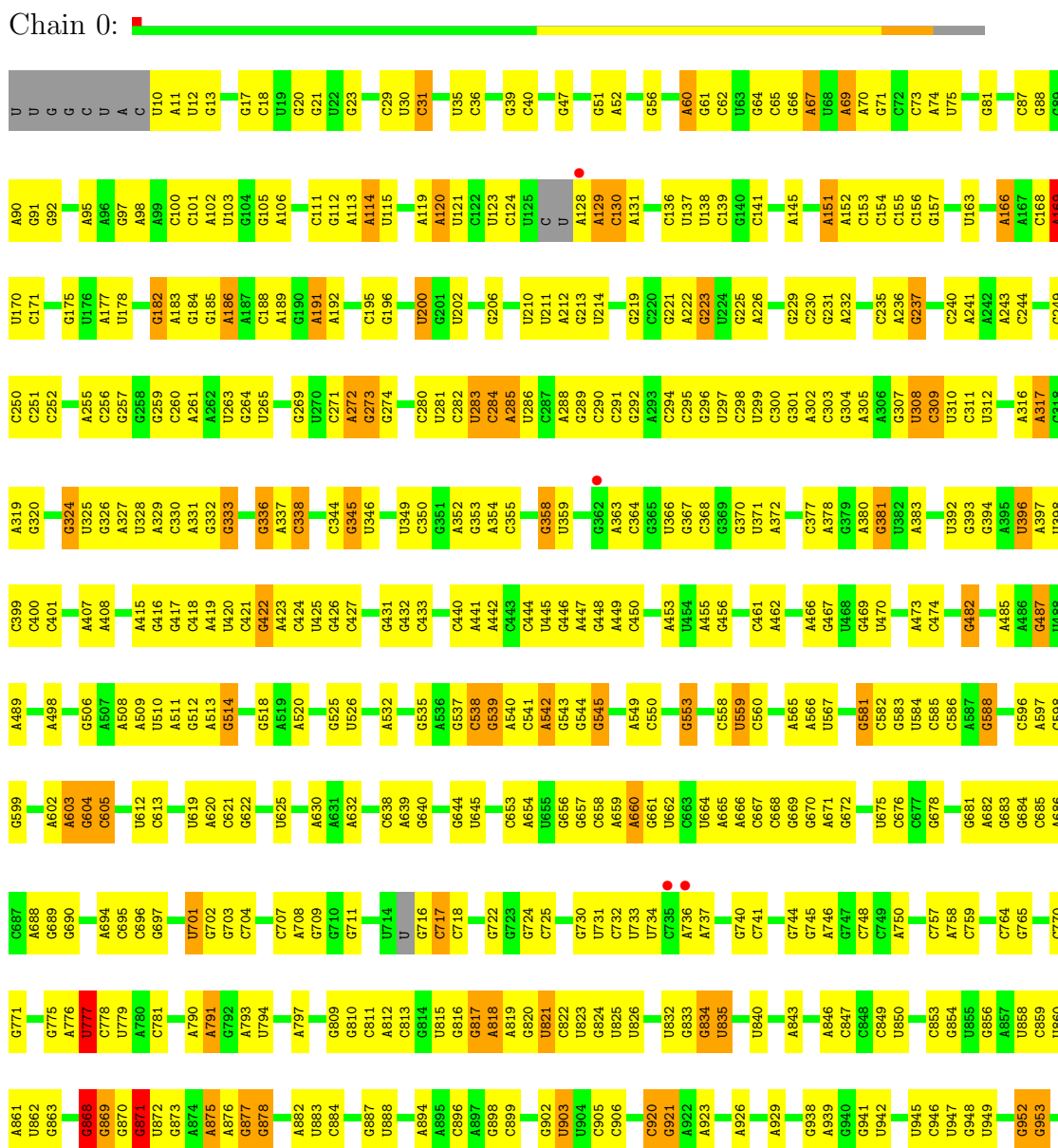
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	T	27	Total 27	O 27	0	0
38	U	13	Total 13	O 13	0	0
38	V	74	Total 74	O 74	0	0
38	W	29	Total 29	O 29	0	0
38	X	105	Total 105	O 105	0	0
38	Y	41	Total 41	O 41	0	0
38	Z	57	Total 57	O 57	0	0
38	1	45	Total 45	O 45	0	0
38	2	76	Total 76	O 76	0	0



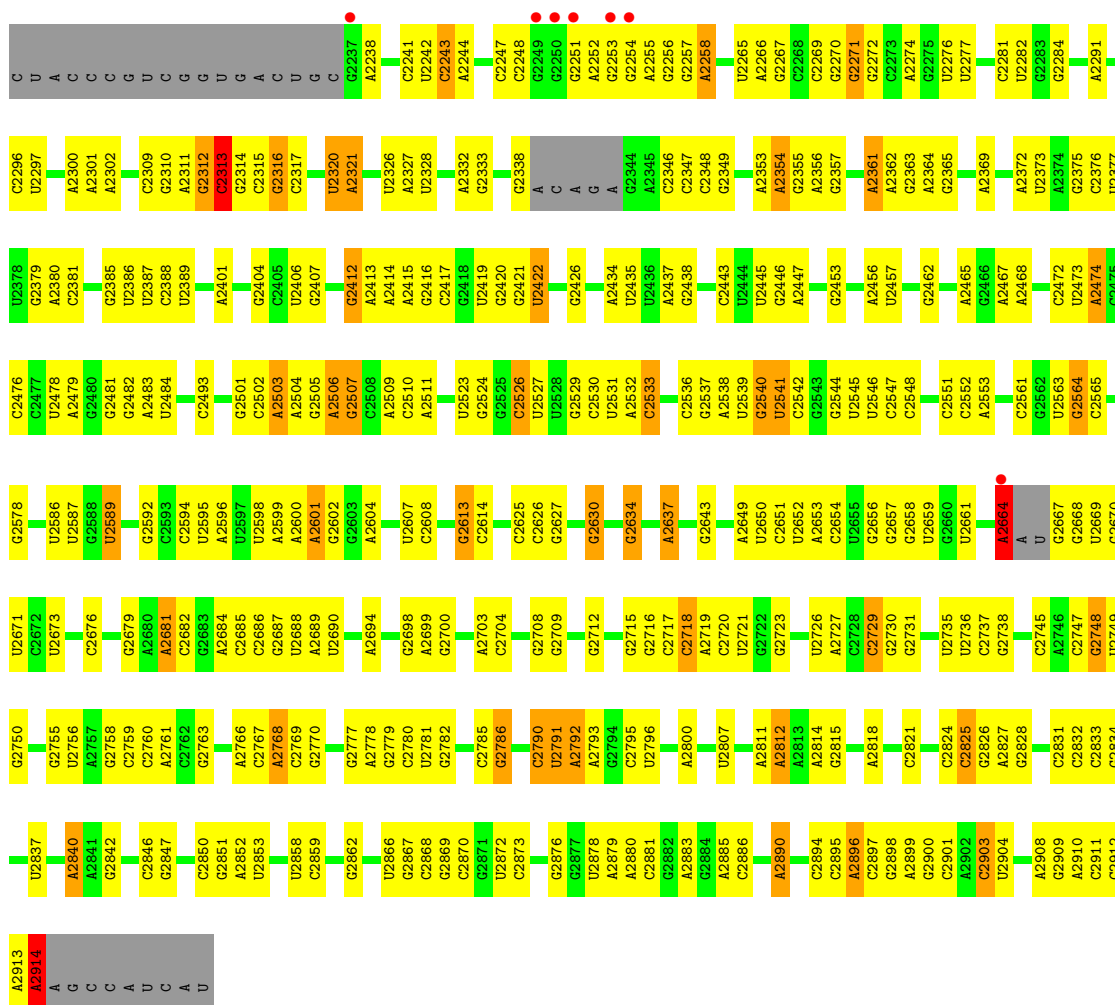
### 3 Residue-property plots

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

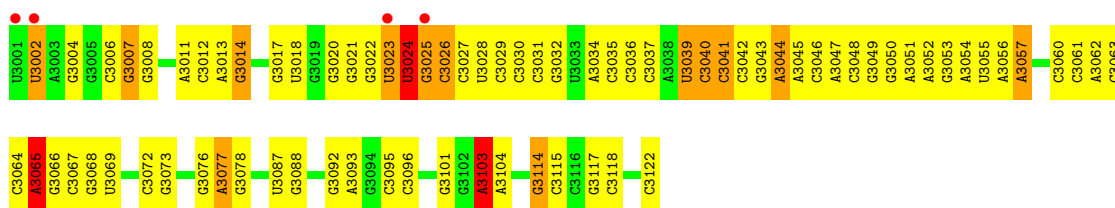


U	G2082	G2083	U1992	A1910	U1748	A1656	C1574	G1498	U1419	A1313	G1223	A1154	U1029	G958
A	A2083	A2089	C1993	G1917	G1751	A1657	C1575	U1499	C1420	U1314	G1224	G1155	U1030	C959
G	A2089	G2090	C1995	U1918	G1752	A1658	A1580	U1500	U1422	U1320	G1225	C1156	G1031	G960
U	G2090	G2091	U1996	A1919	A1755	C1666	G1584	U1503	A1424	A1321	G1226	G1157	G1044	A961
A	G2091	G2094	U1996	C1920	G1756	A1667	C1585	U1504	G1425	G1322	G1229	G1158	G1045	C962
G	G2094	A2095	G2000	A1921	U1757	U1668	G1586	U1505	G1426	G1323	C1229	G1159	C963	C963
A	A2095	A2096	G2001	G1922	U1758	A1669	U1587	U1506	A1427	G1325	U1234	G1160	G1062	G964
G	A2096	G2002	G2002	A1830	G1759	C1670	G1587	U1511	G1430	A1328	G1235	G1161	G1062	G968
A	G2002	U2003	U2003	G1926	G1760	C1675	G1589	G1512	G1431	A1329	G1236	G1162	G1065	G969
A	U2004	U2004	U2004	A1927	U1761	G1676	C1593	C1513	U1432	A1330	U1237	G1163	G1058	U970
C	G2102	G2102	G2005	C1928	C1762	U1677	C1594	C1514	G1433	A1331	U1238	G1165	G1059	U
A	G2102	G2102	G2005	C1763	C1763	A1676	G1585	A1515	G1436	A1332	G1239	A1166	G1060	G
C	G2105	C2105	U2008	A1840	U1766	C1679	U1596	C1516	U1434	C1332	U1242	U1170	U1064	U
U	C2106	C2107	A2011	A1845	U1767	A1682	U1597	U1517	U1435	U1333	U1243	A1171	U1064	C
A	U2107	U2107	U2011	A1846	C1767	A1683	U1598	A1518	C1436	C1334	G1244	A1172	G1065	C
A	G2110	G2110	U2012	U1847	C1768	A1684	U1599	U1519	U1440	C1335	U1244	A1173	G1069	C
C	G2111	G2111	G2013	G1848	U1770	A1685	G1600	C1520	G1441	C1342	U1245	A1174	C1069	C
A	G2111	G2111	G2014	G1849	U1771	A1686	A1603	C1521	G1442	C1343	A1246	G1175	A1070	C
G	A2112	G2112	A2015	U1936	C1772	C1687	G1604	U1523	G1443	C1344	A1247	U1180	G1071	U
G	G2113	G2113	U2016	G1937	G1773	C1687	G1605	U1524	U1444	A1345	U1248	A1181	G1072	C
U	G2114	G2114	G2023	U1939	G1774	C1692	G1605	U1525	G1445	U1346	U1249	A1182	C1079	C
A	U2115	U2115	G2023	A1852	G1774	C1692	G1609	A1526	G1445	U1346	U1250	C1182	A1078	G
C	U2116	U2116	G2023	A1853	G1774	C1692	G1610	A1527	G1445	U1346	U1251	C1183	A1078	A
C	U2028	U2028	U2028	C1854	U1778	G1697	G1611	A1528	G1450	A1382	A1252	C1184	G1080	A
C	C2029	C2029	C2029	C1855	U1779	U1698	A1612	A1529	C1451	C1383	G1253	U1185	A1081	G
G	A2030	A2030	A2030	C1856	G1780	U1698	C1613	G1529	G1452	C1384	U1254	C1186	G1086	A
G	G2121	G2121	G2121	A1857	C1781	U1701	G1614	U1535	U1454	C1360	U1266	U1187	A1086	G
C	G2121	G2121	G2121	G1782	U1702	A1702	G1615	U1536	U1454	C1361	U1267	U1188	G1087	A
C	G2124	G2124	U2034	A1783	U1703	A1703	A1616	U1537	U1455	U1362	U1268	A1189	A1088	G
U	G2125	G2125	C2035	U1784	U1704	U1704	G1617	C1537	C1456	U1363	U1269	G1190	U	U
A	G2128	G2128	C2036	U1785	U1705	U1705	G1618	U1539	U1457	C1366	U1270	A1191	U1109	C
G	G2134	G2134	A2039	C1787	U1706	U1706	G1619	U1540	G1458	C1367	U1271	A1192	G1110	G
C	A2135	A2135	C2040	U1788	U1707	U1707	A1624	C1545	G1459	A1372	C1273	A1193	G1111	G
G	G2136	G2136	G2041	C1789	U1708	U1708	U1625	G1546	U1461	A1373	U1274	G1196	A1114	C
G	G2136	G2136	U2042	G1790	U1709	U1709	A1626	A1547	C1462	C1375	U1275	G1197	U1115	A
C	A	A	U2043	U1791	U1710	U1710	A1627	U1548	U1463	G1376	U1276	G1198	U1116	C
C	C	C	G2044	C1792	U1711	U1711	G1627	U1549	U1464	C1377	U1277	U1199	A1117	A
C	C	C	G2044	C1793	U1712	U1712	G1628	U1550	U1465	U1378	U1278	A1200	A1118	C
A	G	G	U1964	C1794	U1713	U1713	G1629	U1551	U1466	U1379	U1279	A1201	U1119	C
A	A	A	C1965	U1714	U1714	U1714	G1630	U1552	A1470	A1381	G1283	C1201	U1120	C
C	C	C	U1966	U1715	U1715	U1715	G1631	U1553	A1471	A1382	G1284	A1202	U1121	C
C	C	C	U1966	U1716	U1716	U1716	G1632	U1554	A1472	U1383	G1285	A1203	U1122	C
A	G	G	U1966	U1717	U1717	U1717	G1633	U1555	A1473	U1384	G1286	C1204	A1123	C
A	G	G	U1966	U1718	U1718	U1718	G1634	U1556	A1474	U1385	G1287	U1205	C1129	C
C	C	C	U1966	U1719	U1719	U1719	G1635	U1557	A1475	U1386	G1288	U1206	C1130	C
C	C	C	U1966	U1720	U1720	U1720	G1636	U1558	A1476	U1387	G1289	A1207	G1131	C
C	C	C	U1966	U1721	U1721	U1721	G1637	U1559	A1477	U1388	G1290	C1208	A1132	C
C	C	C	U1966	U1722	U1722	U1722	G1638	U1560	A1478	U1389	G1291	C1209	A1133	C
C	C	C	U1966	U1723	U1723	U1723	G1639	U1561	A1479	U1390	G1292	G1210	G1134	C
C	C	C	U1966	U1724	U1724	U1724	G1640	U1562	A1480	U1391	G1293	G1211	G1135	C
C	C	C	U1966	U1725	U1725	U1725	G1641	U1563	A1481	U1392	G1294	G1212	G1136	C
C	C	C	U1966	U1726	U1726	U1726	G1642	U1564	A1482	U1393	G1295	G1213	G1137	C
C	C	C	U1966	U1727	U1727	U1727	G1643	U1565	A1483	U1394	G1296	G1214	G1138	C
C	C	C	U1966	U1728	U1728	U1728	G1644	U1566	A1484	U1395	G1297	G1215	G1139	C
C	C	C	U1966	U1729	U1729	U1729	G1645	U1567	A1485	U1396	G1298	G1216	C1140	C
C	C	C	U1966	U1730	U1730	U1730	G1646	U1568	A1486	U1397	G1299	G1217	G1151	C
C	C	C	U1966	U1731	U1731	U1731	G1647	U1569	A1487	U1398	G1300	G1218	G1152	C
C	C	C	U1966	U1732	U1732	U1732	G1648	U1570	A1488	U1399	G1301	G1219	G1153	C
C	C	C	U1966	U1733	U1733	U1733	G1649	U1571	A1489	U1400	G1302	G1220	G1154	C
C	C	C	U1966	U1734	U1734	U1734	G1650	U1572	A1490	U1401	G1303	G1221	G1155	C
C	C	C	U1966	U1735	U1735	U1735	G1651	U1573	A1491	U1402	G1304	G1222	G1156	C
C	C	C	U1966	U1736	U1736	U1736	G1652	U1574	A1492	U1403	G1305	G1223	G1157	C
C	C	C	U1966	U1737	U1737	U1737	G1653	U1575	A1493	U1404	G1306	G1224	G1158	C
C	C	C	U1966	U1738	U1738	U1738	G1654	U1576	A1494	U1405	G1307	G1225	G1159	C
C	C	C	U1966	U1739	U1739	U1739	G1655	U1577	A1495	U1406	G1308	G1226	G1160	C
C	C	C	U1966	U1740	U1740	U1740	G1656	U1578	A1496	U1407	G1309	G1227	G1161	C
C	C	C	U1966	U1741	U1741	U1741	G1657	U1579	A1497	U1408	G1310	G1228	G1162	C
C	C	C	U1966	U1742	U1742	U1742	G1658	U1580	A1498	U1409	G1311	G1229	G1163	C
C	C	C	U1966	U1743	U1743	U1743	G1659	U1581	A1499	U1410	G1312	G1230	G1164	C
C	C	C	U1966	U1744	U1744	U1744	G1660	U1582	A1500	U1411	G1313	G1231	G1165	C
C	C	C	U1966	U1745	U1745	U1745	G1661	U1583	A1501	U1412	G1314	G1232	G1166	C
C	C	C	U1966	U1746	U1746	U1746	G1662	U1584	A1502	U1413	G1315	G1233	G1167	C
C	C	C	U1966	U1747	U1747	U1747	G1663	U1585	A1503	U1414	G1316	G1234	G1168	C
C	C	C	U1966	U1748	U1748	U1748	G1664	U1586	A1504	U1415	G1317	G1235	G1169	C
C	C	C	U1966	U1749	U1749	U1749	G1665	U1587	A1505	U1416	G1318	G1236	G1170	C
C	C	C	U1966	U1750	U1750	U1750	G1666	U1588	A1506	U1417	G1319	G1237	G1171	C
C	C	C	U1966	U1751	U1751	U1751	G1667	U1589	A1507	U1418	G1320	G1238	G1172	C
C	C	C	U1966	U1752	U1752	U1752	G1668	U1590	A1508	U1419	G1321	G1239	G1173	C
C	C	C	U1966	U1753	U1753	U1753	G1669	U1591	A1509	U1420	G1322	G1240	G1174	C
C	C	C	U1966	U1754	U1754	U1754	G1670	U1592	A1510	U1421	G1323	G1241	G1175	C
C	C	C	U1966	U1755	U1755	U1755	G1671	U1593	A1511	U1422	G1324	G1242	G1176	C
C	C	C	U1966	U1756	U1756	U1756	G1672	U1594	A1512	U1423	G1325	G1243	G1177	C
C	C	C	U1966	U1757	U1757	U1757	G1673	U1595	A1513	U1424	G1326	G1244	G1178	C
C	C	C	U1966	U1758	U1758	U1758	G1674	U1596	A1514	U1425	G1327	G1245	G1179	C
C	C	C	U1966	U1759	U1759	U1759	G1675	U1597	A1515	U1426	G1328	G1246	G1180	C
C	C	C	U1966	U1760	U1760	U1760	G1676	U1598	A1516	U1427	G1329	G1247	G1181	C
C	C	C	U1966	U1761	U1761	U1761	G1677	U1599	A1517	U1428	G1330	G1248	G1182	C
C	C	C	U1966	U1762	U1762	U1762	G1678	U1600	A1518	U1429	G1331	G1249	G1183	C
C	C	C	U1966	U1763	U1763	U1763	G1679	U1601	A1519	U1430	G1332	G1250	G1184	C
C	C	C	U1966	U1764	U1764	U1764	G1680	U1602	A1520	U1431	G1333	G1251	G1185	C
C	C	C	U1966	U1765	U1765	U1765	G1681	U1603	A1521	U1432	G1334	G1252	G1186	C
C	C	C	U1966	U1766	U1766	U1766	G1682	U1604	A1522	U1433	G1335	G1253	G1187	C
C	C	C	U1966	U1767	U1767	U1767	G1683	U1605	A1523	U1434	G1336	G1254	G1188	C
C	C	C												



- Molecule 2: 5S RIBOSOMAL RNA

Chain 9:



- Molecule 3: 5'-R(\*CP\*CP\*A)-3'

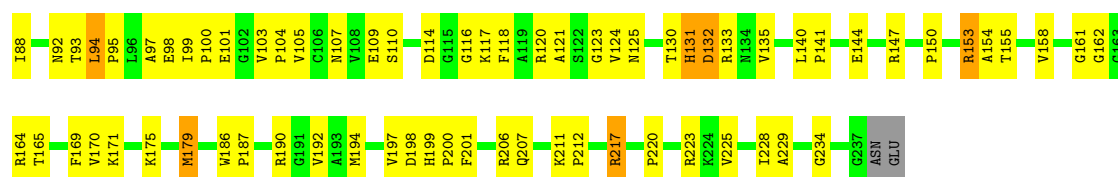
Chain 4:



- Molecule 4: RIBOSOMAL PROTEIN L2

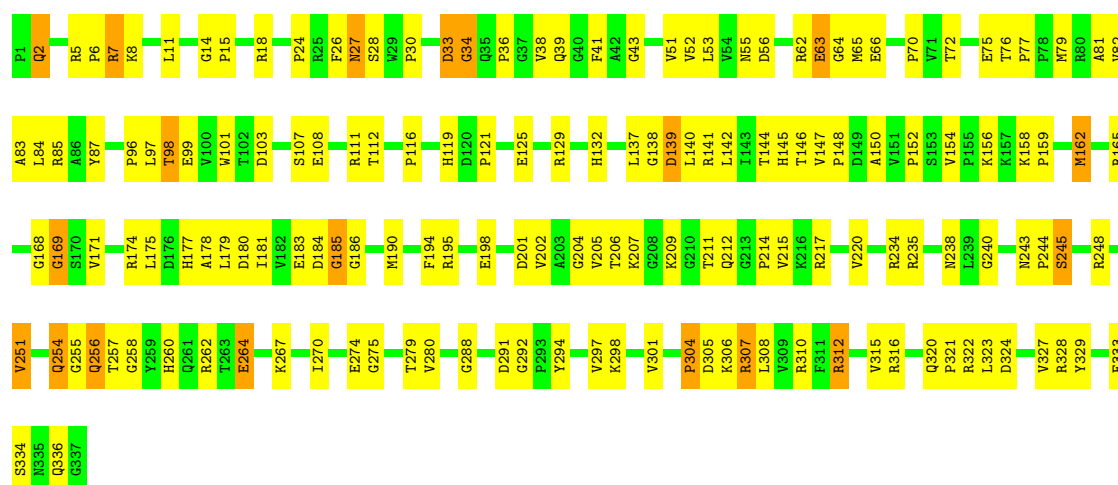
Chain A: 





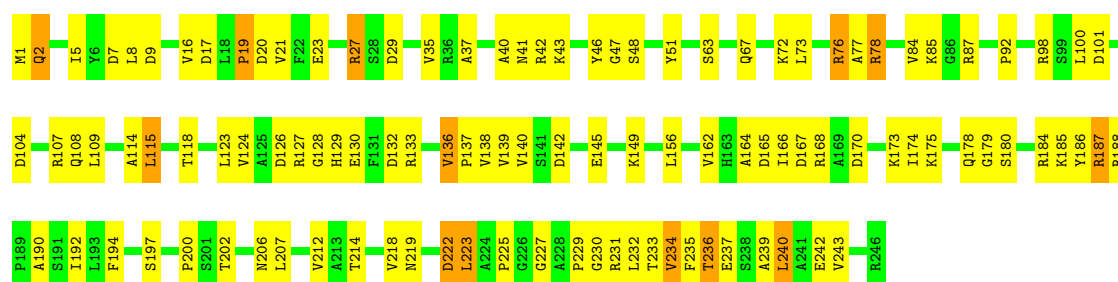
### • Molecule 5: RIBOSOMAL PROTEIN L3

Chain B:



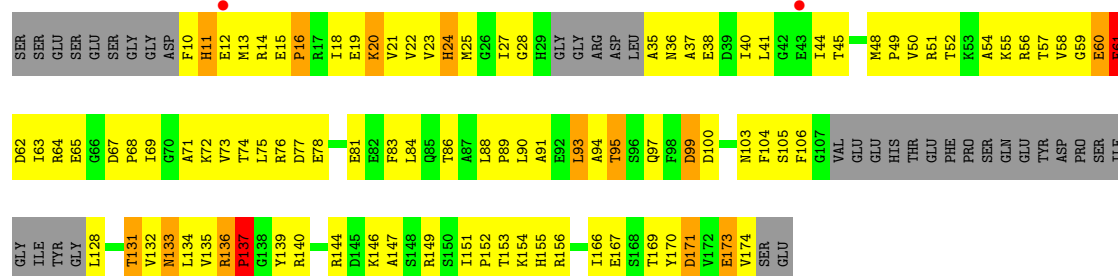
### • Molecule 6: RIBOSOMAL PROTEIN L4

Chain C:



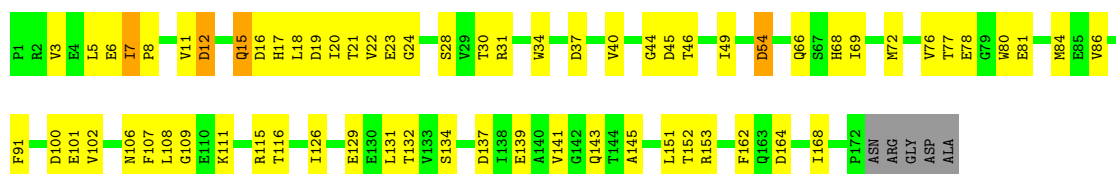
### • Molecule 7: RIBOSOMAL PROTEIN L5

Chain D:



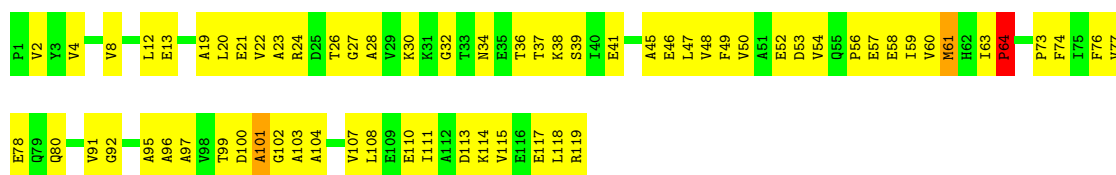
### • Molecule 8: RIBOSOMAL PROTEIN L6

Chain E:



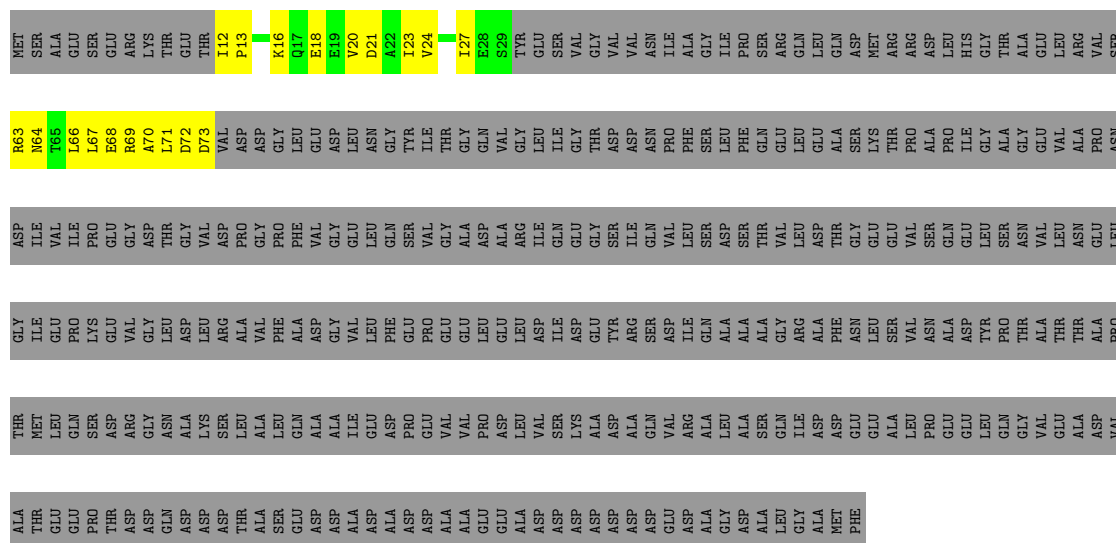
• Molecule 9: RIBOSOMAL PROTEIN L7AE

Chain F:



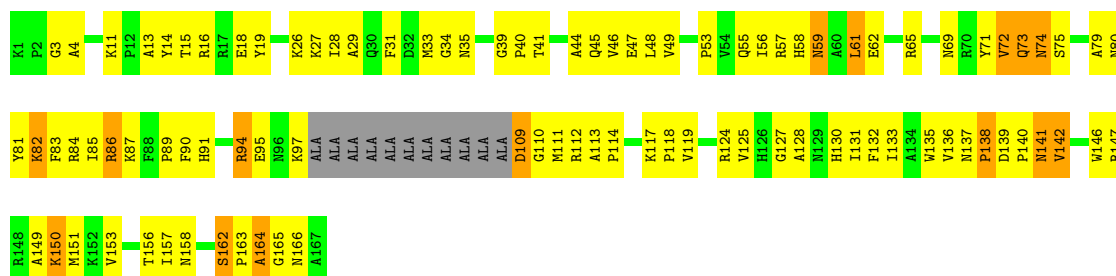
• Molecule 10: RIBOSOMAL PROTEIN L10

Chain G:



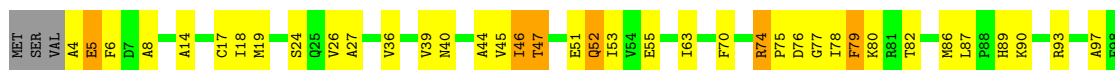
• Molecule 11: RIBOSOMAL PROTEIN L10E

Chain H:



• Molecule 12: RIBOSOMAL PROTEIN L13

Chain I:



• Molecule 13: RIBOSOMAL PROTEIN L14

Chain J:



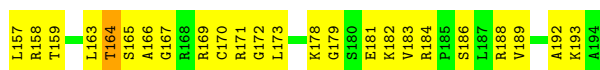
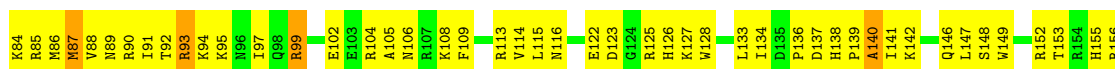
• Molecule 14: RIBOSOMAL PROTEIN L15

Chain K:



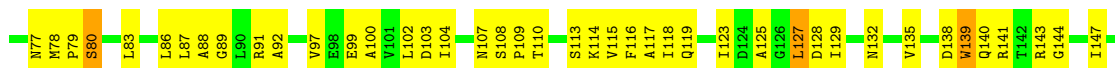
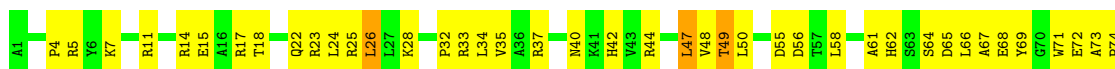
• Molecule 15: RIBOSOMAL PROTEIN L15E

Chain L:



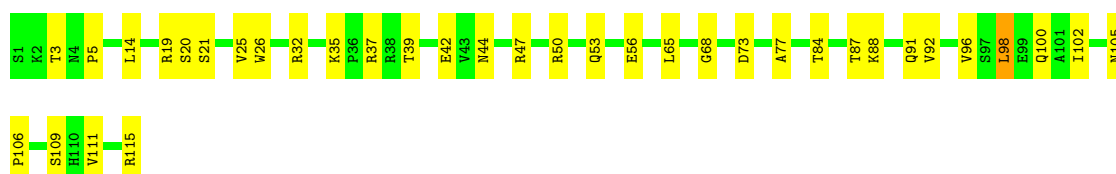
• Molecule 16: RIBOSOMAL PROTEIN L18

Chain M:



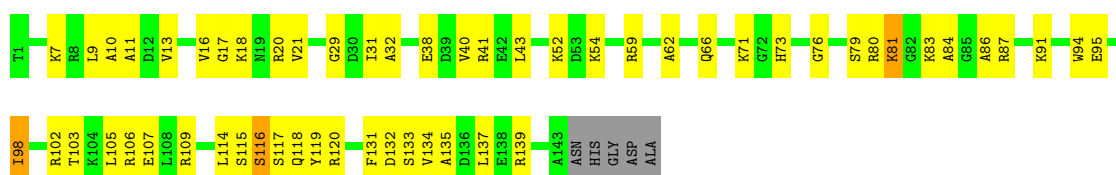
• Molecule 17: RIBOSOMAL PROTEIN L18E

Chain N:



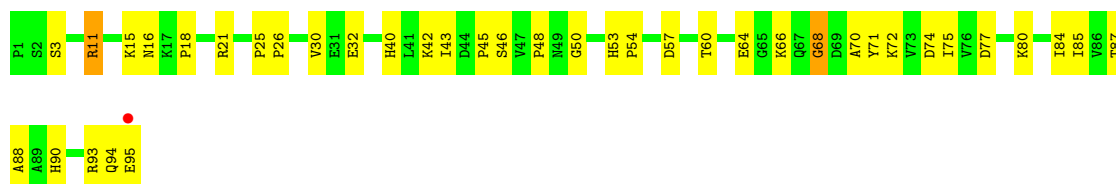
• Molecule 18: RIBOSOMAL PROTEIN L19E

Chain O:



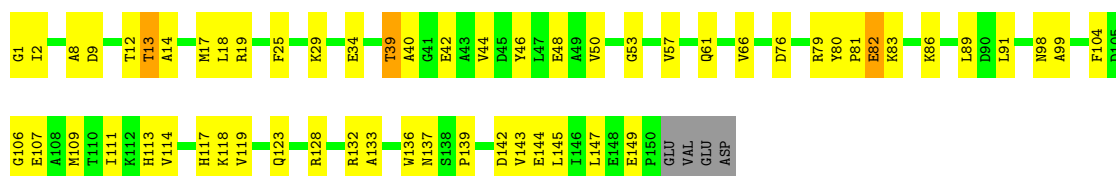
• Molecule 19: RIBOSOMAL PROTEIN L21E

Chain P:



• Molecule 20: RIBOSOMAL PROTEIN L22

Chain Q:



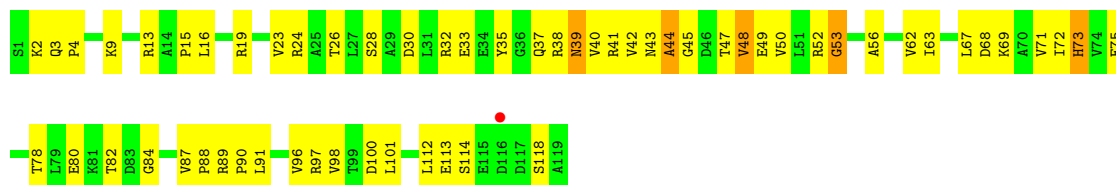
• Molecule 21: RIBOSOMAL PROTEIN L23

Chain R:



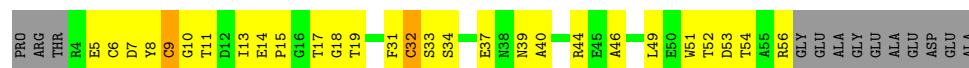
• Molecule 22: RIBOSOMAL PROTEIN L24

Chain S:



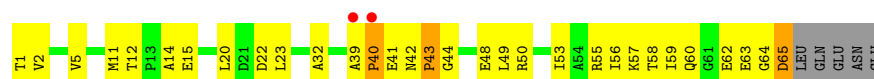
• Molecule 23: RIBOSOMAL PROTEIN L24E

Chain T:



- Molecule 24: RIBOSOMAL PROTEIN L29

Chain U:



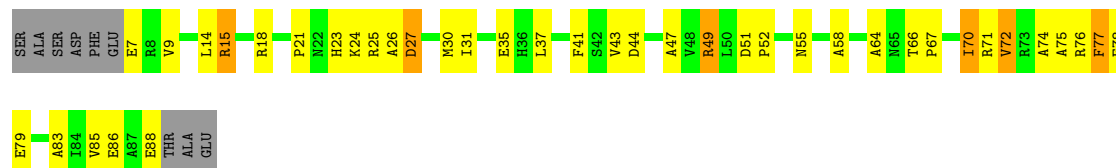
- Molecule 25: RIBOSOMAL PROTEIN L30

Chain V: 



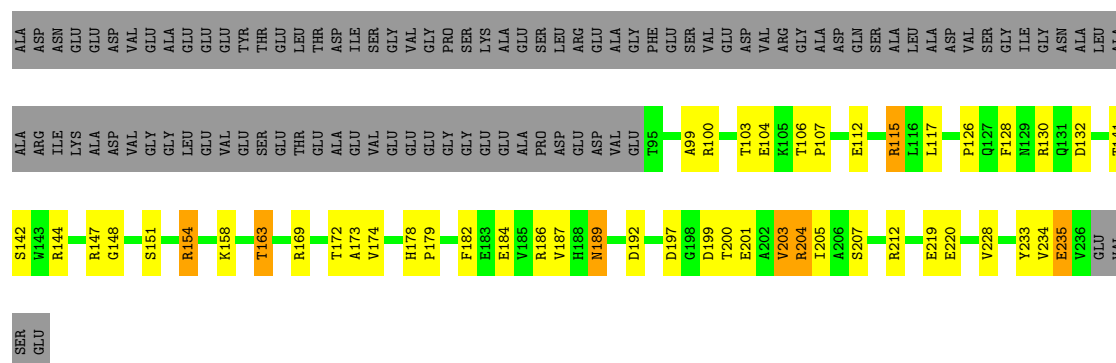
- Molecule 26: RIBOSOMAL PROTEIN L31E

Chain W:



- Molecule 27: RIBOSOMAL PROTEIN L32E

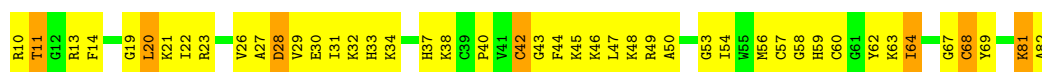
Chain X:



- Molecule 28: RIBOSOMAL PROTEIN L37AE

Chain Y: 





- Molecule 29: RIBOSOMAL PROTEIN L37E

Chain Z:

- Molecule 30: RIBOSOMAL PROTEIN L39E

Chain 1:

- Molecule 31: RIBOSOMAL PROTEIN L44E

Chain 2:



## 4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	213.66Å 300.71Å 575.37Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	20.00 – 3.00 20.00 – 2.99	Depositor EDS
% Data completeness (in resolution range)	91.4 (20.00-3.00) 90.8 (20.00-2.99)	Depositor EDS
$R_{merge}$	0.08	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.45 (at 2.98Å)	Xtriage
Refinement program	CNX	Depositor
R, $R_{free}$	0.186 , 0.229 0.186 , (Not available)	Depositor DCC
$R_{free}$ test set	No test flags present.	DCC
Wilson B-factor (Å <sup>2</sup> )	68.8	Xtriage
Anisotropy	0.431	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.29 , 45.9	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	0 of 360129 reflections	Xtriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	98635	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	70.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.82% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

## 5 Model quality

### 5.1 Standard geometry

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

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	0.52	4/66076 (0.0%)	0.71	23/103052 (0.0%)
2	9	0.46	0/2905	0.76	3/4528 (0.1%)
3	4	0.89	0/65	1.01	0/99
4	A	0.39	0/1787	0.70	0/2409
5	B	0.40	0/2690	0.68	0/3652
6	C	0.45	0/1884	0.71	0/2551
7	D	0.37	0/1111	0.62	0/1498
8	E	0.38	0/1382	0.61	0/1880
9	F	0.38	0/897	0.60	0/1219
10	G	0.38	0/241	0.58	0/324
11	H	0.44	0/1247	0.79	3/1686 (0.2%)
12	I	0.43	0/1136	0.65	0/1530
13	J	0.41	0/1004	0.72	0/1351
14	K	0.41	0/1130	0.71	0/1509
15	L	0.49	0/1634	0.75	1/2180 (0.0%)
16	M	0.39	0/1474	0.68	0/1999
17	N	0.41	0/874	0.67	0/1181
18	O	0.41	0/1143	0.60	0/1521
19	P	0.44	0/749	0.74	1/1005 (0.1%)
20	Q	0.44	0/1172	0.69	0/1578
21	R	0.38	0/648	0.62	0/875
22	S	0.40	0/958	0.69	0/1289
23	T	0.61	2/417 (0.5%)	0.68	0/562
24	U	0.36	0/502	0.60	0/675
25	V	0.43	0/1219	0.67	0/1655
26	W	0.41	0/664	0.65	0/895
27	X	0.43	0/1146	0.68	0/1536
28	Y	0.54	1/576 (0.2%)	0.80	0/763
29	Z	0.54	0/438	0.78	2/578 (0.3%)
30	1	0.43	0/399	0.58	0/527
31	2	0.73	2/771 (0.3%)	0.72	0/1024
All	All	0.49	9/98339 (0.0%)	0.70	33/147131 (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	70
2	9	0	2
25	V	0	1
All	All	0	73

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	2	14	CYS	CB-SG	-12.55	1.60	1.82
1	0	2102	G	C6-O6	-6.72	1.18	1.24
28	Y	60	CYS	CB-SG	-6.10	1.71	1.82
1	0	2474	A	N1-C2	5.85	1.39	1.34
23	T	9	CYS	CB-SG	-5.75	1.72	1.81
31	2	74	CYS	CB-SG	-5.65	1.72	1.81
1	0	456	G	C6-O6	-5.58	1.19	1.24
23	T	32	CYS	CB-SG	-5.19	1.73	1.81
1	0	2474	A	C5-C6	5.03	1.45	1.41

All (33) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	9	3024	U	C2'-C3'-O3'	8.48	128.16	109.50
1	0	1979	G	C2'-C3'-O3'	6.90	124.75	113.70
11	H	74	ASN	N-CA-C	-6.85	92.50	111.00
2	9	3103	A	C5'-C4'-O4'	6.75	117.20	109.10
1	0	1563	G	C2'-C3'-O3'	6.72	124.45	113.70
1	0	871	G	C5'-C4'-O4'	-6.35	101.48	109.10
1	0	1942	A	C5'-C4'-O4'	-6.12	101.76	109.10
29	Z	34	CYS	CA-CB-SG	-6.09	103.05	114.00
1	0	1559	A	C2'-C3'-O3'	6.08	123.42	113.70
19	P	68	GLY	N-CA-C	-6.05	97.98	113.10
1	0	1120	U	C5'-C4'-C3'	-5.95	106.48	116.00
15	L	52	LEU	CB-CG-CD1	-5.86	101.05	111.00
1	0	2338	G	C2'-C3'-O3'	5.85	123.06	113.70
1	0	1942	A	C5'-C4'-C3'	5.81	125.30	116.00
11	H	141	ASN	N-CA-C	-5.75	95.47	111.00
29	Z	19	CYS	CA-CB-SG	-5.71	103.72	114.00
1	0	2313	C	C5'-C4'-O4'	5.69	115.93	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	1819	G	C5'-C4'-C3'	5.58	124.92	116.00
1	0	2664	A	N9-C1'-C2'	5.56	121.22	114.00
1	0	2914	A	C2'-C3'-O3'	5.53	122.55	113.70
1	0	1342	C	N1-C1'-C2'	-5.53	105.92	112.00
1	0	2316	G	C5'-C4'-C3'	-5.44	107.29	116.00
1	0	2313	C	O4'-C1'-N1	5.41	112.52	108.20
2	9	3039	U	N1-C1'-C2'	5.40	121.02	114.00
11	H	110	GLY	N-CA-C	-5.39	99.61	113.10
1	0	206	G	C5'-C4'-C3'	-5.39	107.38	116.00
1	0	535	G	N9-C1'-C2'	5.34	120.94	114.00
1	0	1592	G	N9-C1'-C2'	5.25	120.82	114.00
1	0	169	A	C5'-C4'-O4'	-5.21	102.85	109.10
1	0	868	G	O4'-C1'-N9	5.19	112.36	108.20
1	0	1863	G	N9-C1'-C2'	-5.16	106.33	112.00
1	0	777	U	O4'-C1'-N1	5.10	112.28	108.20
1	0	2313	C	C5'-C4'-C3'	5.07	124.11	116.00

There are no chirality outliers.

All (73) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1055	G	Sidechain
1	0	1078	A	Sidechain
1	0	1226	G	Sidechain
1	0	1236	A	Sidechain
1	0	1309	U	Sidechain
1	0	1342	C	Sidechain
1	0	1417	G	Sidechain
1	0	1430	G	Sidechain
1	0	1595	G	Sidechain
1	0	1635	U	Sidechain
1	0	1744	G	Sidechain
1	0	1809	G	Sidechain
1	0	1819	G	Sidechain
1	0	182	G	Sidechain
1	0	1822	A	Sidechain
1	0	1829	A	Sidechain
1	0	1835	U	Sidechain
1	0	1845	A	Sidechain
1	0	1848	G	Sidechain
1	0	1861	C	Sidechain
1	0	1863	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1877	G	Sidechain
1	0	1878	G	Sidechain
1	0	1933	G	Sidechain
1	0	1978	A	Sidechain
1	0	202	U	Sidechain
1	0	2023	G	Sidechain
1	0	223	G	Sidechain
1	0	2312	G	Sidechain
1	0	2313	C	Sidechain
1	0	2316	G	Sidechain
1	0	2412	G	Sidechain
1	0	2465	A	Sidechain
1	0	2493	C	Sidechain
1	0	2503	A	Sidechain
1	0	2506	A	Sidechain
1	0	2526	C	Sidechain
1	0	2564	G	Sidechain
1	0	2607	U	Sidechain
1	0	261	A	Sidechain
1	0	2630	G	Sidechain
1	0	2637	A	Sidechain
1	0	2643	G	Sidechain
1	0	2673	U	Sidechain
1	0	2727	A	Sidechain
1	0	2729	C	Sidechain
1	0	2790	C	Sidechain
1	0	2793	A	Sidechain
1	0	2840	A	Sidechain
1	0	2853	U	Sidechain
1	0	324	G	Sidechain
1	0	333	G	Sidechain
1	0	396	U	Sidechain
1	0	422	G	Sidechain
1	0	469	G	Sidechain
1	0	482	G	Sidechain
1	0	518	G	Sidechain
1	0	532	A	Sidechain
1	0	619	U	Sidechain
1	0	664	U	Sidechain
1	0	722	G	Sidechain
1	0	781	C	Sidechain
1	0	791	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	815	U	Sidechain
1	0	817	G	Sidechain
1	0	818	A	Sidechain
1	0	868	G	Sidechain
1	0	903	U	Sidechain
1	0	939	A	Sidechain
1	0	952	G	Sidechain
2	9	3065	A	Sidechain
2	9	3087	U	Sidechain
25	V	90	TYR	Sidechain

## 5.2 Close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59017	0	29800	1222	0
2	9	2600	0	1326	88	0
3	4	59	0	35	2	0
4	A	1754	0	1763	127	0
5	B	2625	0	2533	170	0
6	C	1859	0	1816	112	0
7	D	1094	0	1085	125	0
8	E	1357	0	1266	65	0
9	F	886	0	854	67	0
10	G	240	0	231	22	0
11	H	1216	0	1215	155	0
12	I	1120	0	1098	69	0
13	J	994	0	1027	57	0
14	K	1118	0	1076	64	0
15	L	1606	0	1676	142	0
16	M	1445	0	1401	139	0
17	N	865	0	873	35	0
18	O	1133	0	1127	57	0
19	P	735	0	729	29	0
20	Q	1149	0	1122	61	0
21	R	641	0	605	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	S	950	0	923	53	0
23	T	410	0	364	33	0
24	U	499	0	511	32	0
25	V	1196	0	1137	97	0
26	W	654	0	653	46	0
27	X	1130	0	1133	51	0
28	Y	564	0	598	54	0
29	Z	431	0	426	24	0
30	1	394	0	406	32	0
31	2	755	0	729	51	0
32	0	37	0	28	4	0
33	0	107	0	0	0	0
33	2	1	0	0	0	0
33	4	1	0	0	0	0
33	9	2	0	0	0	0
33	A	2	0	0	0	0
33	B	1	0	0	0	0
33	J	1	0	0	0	0
33	S	1	0	0	0	0
33	X	1	0	0	0	0
34	0	2	0	0	0	0
35	0	73	0	0	0	0
35	9	2	0	0	0	0
35	A	1	0	0	0	0
35	C	1	0	0	0	0
35	H	2	0	0	0	0
35	I	1	0	0	0	0
35	K	1	0	0	0	0
35	L	1	0	0	0	0
35	P	1	0	0	0	0
35	Q	2	0	0	0	0
35	R	1	0	0	0	0
36	0	8	0	0	1	0
36	2	1	0	0	0	0
36	A	1	0	0	0	0
36	B	1	0	0	0	0
36	I	3	0	0	1	0
36	J	1	0	0	0	0
36	K	1	0	0	0	0
36	L	1	0	0	1	0
36	M	1	0	0	1	0
36	N	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	P	1	0	0	0	0
36	Q	1	0	0	0	0
36	X	1	0	0	0	0
37	2	1	0	0	2	0
37	N	1	0	0	0	0
37	T	1	0	0	0	0
37	Y	1	0	0	0	0
37	Z	1	0	0	0	0
38	0	5806	0	0	72	0
38	1	45	0	0	1	0
38	2	76	0	0	4	0
38	4	1	0	0	0	0
38	9	147	0	0	5	0
38	A	136	0	0	11	0
38	B	160	0	0	17	0
38	C	180	0	0	10	0
38	D	49	0	0	8	0
38	E	47	0	0	1	0
38	F	26	0	0	6	0
38	G	21	0	0	2	0
38	H	82	0	0	9	0
38	I	61	0	0	3	0
38	J	63	0	0	4	0
38	K	85	0	0	9	0
38	L	130	0	0	5	0
38	M	69	0	0	8	0
38	N	45	0	0	5	0
38	O	70	0	0	0	0
38	P	56	0	0	1	0
38	Q	92	0	0	4	0
38	R	40	0	0	1	0
38	S	37	0	0	3	0
38	T	27	0	0	2	0
38	U	13	0	0	1	0
38	V	74	0	0	6	0
38	W	29	0	0	3	0
38	X	105	0	0	4	0
38	Y	41	0	0	5	0
38	Z	57	0	0	1	0
All	All	98635	0	59566	2990	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 20.

All (2990) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:U:12:THR:HG22	24:U:15:GLU:HG3	1.24	1.14
13:J:10:GLN:NE2	13:J:10:GLN:H	1.47	1.13
1:O:871:G:H8	1:O:871:G:H5'	1.13	1.10
11:H:86:ARG:NH1	11:H:133:ILE:HG13	1.66	1.08
15:L:87:MET:HB3	31:2:46:ILE:HD13	1.31	1.07
6:C:236:THR:HG22	6:C:239:ALA:H	1.17	1.07
15:L:164:THR:HG22	15:L:167:GLY:H	1.20	1.06
1:O:1160:G:H5'	1:O:1161:A:H5'	1.33	1.06
1:O:871:G:C8	1:O:871:G:H5'	1.90	1.06
13:J:10:GLN:N	13:J:10:GLN:HE21	1.54	1.05
22:S:71:VAL:HG11	22:S:90:PRO:HB3	1.37	1.05
6:C:127:ARG:NH2	6:C:225:PRO:HG2	1.74	1.03
1:O:156:C:H5''	15:L:171:ARG:HD3	1.36	1.03
2:9:3023:U:H3'	2:9:3024:U:H5''	1.39	1.03
11:H:86:ARG:HH11	11:H:133:ILE:HG13	0.87	1.02
2:9:3056:A:H2'	2:9:3057:A:H5''	1.40	1.02
1:O:1119:G:H2'	12:I:52:GLN:HE22	1.25	1.02
15:L:106:ASN:ND2	36:L:8518:CL:CL	2.30	1.02
6:C:5:ILE:HD11	6:C:16:VAL:HG23	1.43	1.01
11:H:45:GLN:HB3	11:H:163:PRO:HD2	1.42	0.99
1:O:1751:G:H2'	1:O:1752:G:H5''	1.44	0.99
2:9:3076:G:H3'	2:9:3077:A:H5''	1.44	0.99
5:B:238:ASN:HD22	5:B:240:GLY:H	1.08	0.98
13:J:62:PRO:HG3	13:J:65:ARG:HH21	1.29	0.96
11:H:162:SER:HB2	11:H:163:PRO:HD3	1.46	0.95
7:D:105:SER:HB2	7:D:131:THR:HG23	1.49	0.95
5:B:162:MET:HE3	5:B:308:LEU:HD21	1.46	0.95
6:C:115:LEU:HD13	6:C:223:LEU:HD21	1.49	0.95
11:H:86:ARG:HH11	11:H:133:ILE:CG1	1.80	0.94
1:O:1164:U:H4'	1:O:1165:G:OP1	1.68	0.94
31:2:71:CYS:HG	37:2:8404:CD:CD	0.84	0.94
1:O:289:G:H22	1:O:363:A:H2	1.14	0.93
16:M:47:LEU:HD11	16:M:127:LEU:HD21	1.49	0.93
7:D:134:LEU:HD11	7:D:166:ILE:HD11	1.50	0.93
11:H:29:ALA:HB3	11:H:65:ARG:HH12	1.31	0.92
1:O:545:G:H8	1:O:545:G:H5'	1.34	0.92
1:O:870:G:H2'	1:O:871:G:H5''	1.51	0.92
1:O:1242:A:H5'	12:I:82:THR:HG23	1.51	0.92
2:9:3006:C:H5''	16:M:37:ARG:NH1	1.85	0.92
11:H:26:LYS:HD2	11:H:28:ILE:HD12	1.50	0.91
28:Y:46:LYS:HD3	28:Y:59:HIS:HB2	1.52	0.91
26:W:37:LEU:HD13	26:W:85:VAL:HG21	1.50	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:1134:G:H4'	11:H:151:MET:HE1	1.53	0.90
1:O:2812:A:H2	1:O:2814:A:H62	1.14	0.90
31:2:71:CYS:SG	37:2:8404:CD:CD	1.79	0.90
18:O:115:SER:H	18:O:118:GLN:HE21	0.96	0.89
1:O:182:G:H4'	15:L:157:LEU:HD13	1.51	0.89
11:H:55:GLN:HE21	11:H:124:ARG:HE	1.14	0.89
28:Y:38:LYS:HG2	28:Y:45:LYS:HG2	1.54	0.89
2:9:3024:U:O2'	2:9:3025:G:H4'	1.73	0.88
7:D:25:MET:HE2	7:D:41:LEU:HG	1.54	0.88
1:O:1120:U:H6	1:O:1120:U:H5''	1.39	0.88
15:L:102:GLU:OE1	15:L:164:THR:HG21	1.72	0.88
27:X:187:VAL:HG23	27:X:192:ASP:HB2	1.56	0.88
26:W:15:ARG:HH11	26:W:15:ARG:HB3	1.37	0.87
7:D:154:LYS:HD2	7:D:154:LYS:H	1.38	0.87
5:B:264:GLU:HG2	5:B:267:LYS:HE2	1.57	0.87
11:H:139:ASP:N	11:H:140:PRO:HD3	1.90	0.87
7:D:27:ILE:HG22	7:D:28:GLY:H	1.37	0.87
1:O:1116:U:O2'	1:O:1118:A:H2	1.56	0.86
16:M:49:THR:HG22	16:M:56:ASP:HB2	1.56	0.86
20:Q:99:ALA:HB1	20:Q:109:MET:HE1	1.55	0.86
25:V:72:PRO:HG2	25:V:77:ALA:HB3	1.57	0.86
1:O:1835:U:H5	1:O:1840:A:N7	1.74	0.86
11:H:162:SER:HB2	11:H:163:PRO:CD	2.06	0.85
25:V:4:LEU:HD22	25:V:52:VAL:HG21	1.59	0.85
25:V:88:THR:HG23	25:V:110:GLN:NE2	1.91	0.85
7:D:25:MET:HE1	7:D:37:ALA:HB1	1.58	0.85
11:H:26:LYS:HG2	11:H:28:ILE:H	1.42	0.84
1:O:2717:C:C2'	1:O:2718:C:H5''	2.07	0.84
30:1:41:HIS:H	30:1:45:ASN:HD22	1.24	0.84
18:O:103:THR:HA	18:O:106:ARG:NH1	1.91	0.84
1:O:506:G:H22	1:O:509:A:H5'	1.42	0.84
25:V:6:GLN:HB2	25:V:26:ILE:HD12	1.58	0.84
15:L:35:PRO:CG	15:L:38:VAL:HG23	2.06	0.83
1:O:2506:A:HO2'	1:O:2507:G:H8	0.85	0.83
1:O:56:G:H5''	24:U:50:ARG:HH12	1.43	0.83
28:Y:38:LYS:HE2	28:Y:45:LYS:HE2	1.60	0.83
8:E:6:GLU:HA	8:E:46:THR:HG22	1.58	0.83
12:I:131:THR:HG22	12:I:134:GLU:H	1.44	0.83
1:O:1771:U:H4'	28:Y:20:LEU:HD21	1.61	0.83
1:O:2717:C:H2'	1:O:2718:C:H5''	1.57	0.83
9:F:63:ILE:HB	9:F:64:PRO:HD3	1.57	0.83
1:O:2502:C:C2'	1:O:2503:A:H5'	2.09	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:O:115:SER:N	18:O:118:GLN:HE21	1.76	0.83
5:B:212:GLN:HB2	5:B:257:THR:HG21	1.61	0.83
25:V:122:ARG:HH11	25:V:122:ARG:HG2	1.42	0.83
25:V:88:THR:HG22	25:V:89:ASP:H	1.44	0.83
8:E:23:GLU:HG2	8:E:28:SER:HB3	1.62	0.82
11:H:27:LYS:H	11:H:58:HIS:HD2	1.23	0.82
15:L:106:ASN:HD22	15:L:114:VAL:HG23	1.44	0.82
26:W:76:ARG:HG3	26:W:76:ARG:HH11	1.44	0.82
7:D:37:ALA:O	7:D:40:ILE:HG12	1.80	0.82
4:A:194:MET:HE2	4:A:199:HIS:HB2	1.62	0.82
1:O:2502:C:H2'	1:O:2503:A:H5'	1.62	0.82
2:9:3023:U:H3'	2:9:3024:U:C5'	2.10	0.82
13:J:74:VAL:HG11	13:J:113:ILE:HG12	1.62	0.82
1:O:21:G:H5'	20:Q:2:ILE:HA	1.61	0.82
1:O:1450:C:H4'	1:O:1451:C:OP2	1.78	0.82
28:Y:28:ASP:O	28:Y:31:ILE:HG22	1.79	0.82
15:L:87:MET:HB2	15:L:91:ILE:HD11	1.61	0.81
5:B:27:ASN:H	5:B:27:ASN:HD22	1.25	0.81
1:O:2506:A:O2'	1:O:2507:G:H8	1.64	0.81
6:C:142:ASP:OD1	6:C:237:GLU:HB3	1.81	0.81
1:O:506:G:H22	1:O:509:A:C5'	1.93	0.81
1:O:1603:A:H5'	1:O:1605:G:O4'	1.80	0.81
6:C:162:VAL:HG12	6:C:192:ILE:HD11	1.62	0.81
1:O:870:G:C2'	1:O:871:G:H5''	2.11	0.81
22:S:9:LYS:HE3	22:S:13:ARG:NH1	1.95	0.81
1:O:2533:C:H6	1:O:2533:C:H5'	1.46	0.81
13:J:39:GLY:HA2	38:J:4183:HOH:O	1.78	0.80
24:U:1:THR:HG23	24:U:2:VAL:H	1.46	0.80
25:V:137:GLN:HE21	25:V:141:HIS:HE1	1.26	0.80
28:Y:37:HIS:HB2	28:Y:47:LEU:HB2	1.63	0.80
12:I:74:ARG:HB3	12:I:74:ARG:HH11	1.44	0.80
2:9:3056:A:C2'	2:9:3057:A:H5''	2.12	0.80
1:O:450:C:OP1	6:C:184:ARG:NH2	2.15	0.80
20:Q:39:THR:HG22	20:Q:42:GLU:H	1.47	0.79
11:H:45:GLN:HE21	11:H:135:TRP:HE1	1.31	0.79
1:O:2586:U:H3	1:O:2592:G:H22	1.30	0.79
11:H:139:ASP:H	11:H:140:PRO:HD3	1.47	0.79
4:A:36:ASP:OD2	4:A:85:ASP:HB2	1.83	0.79
4:A:194:MET:CE	4:A:199:HIS:HB2	2.13	0.79
1:O:2526:C:O2'	1:O:2527:U:H5'	1.82	0.79
16:M:87:LEU:HD12	16:M:186:LEU:HD21	1.65	0.79
5:B:304:PRO:HD2	5:B:307:ARG:HD2	1.64	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:B:18:ARG:HG3	5:B:256:GLN:HG3	1.64	0.79
5:B:195:ARG:HG2	5:B:323:LEU:HD22	1.63	0.79
2:9:3025:G:H3'	2:9:3026:C:C5'	2.13	0.78
31:2:70:ARG:HG2	31:2:77:ALA:HB2	1.65	0.78
1:0:1201:C:H5''	38:0:7119:HOH:O	1.83	0.78
8:E:20:ILE:HD11	8:E:40:VAL:HG11	1.64	0.78
5:B:201:ASP:HB2	5:B:312:ARG:HD2	1.64	0.78
1:0:2420:G:O2'	1:0:2421:G:H5'	1.82	0.78
8:E:107:PHE:CE2	8:E:108:LEU:HD13	2.19	0.78
4:A:69:LEU:HD21	4:A:120:ARG:HB3	1.65	0.78
15:L:139:PRO:O	15:L:140:ALA:HB3	1.81	0.78
24:U:12:THR:HG22	24:U:15:GLU:CG	2.12	0.78
1:0:2679:G:H2'	1:0:2681:A:OP2	1.82	0.78
1:0:1474:C:H6	1:0:1474:C:H5'	1.49	0.78
1:0:1164:U:H3	1:0:1192:A:H2	1.32	0.77
9:F:46:GLU:O	9:F:73:PRO:HD2	1.85	0.77
1:0:542:A:H5'	1:0:542:A:H8	1.48	0.77
13:J:14:LYS:HB2	13:J:45:PRO:HG2	1.65	0.77
21:R:33:SER:O	21:R:37:VAL:HG23	1.84	0.77
9:F:2:VAL:HG22	9:F:57:GLU:OE1	1.85	0.77
6:C:236:THR:HG22	6:C:239:ALA:N	1.98	0.77
1:0:1119:G:H2'	12:I:52:GLN:NE2	1.98	0.77
18:O:115:SER:OG	18:O:118:GLN:HG3	1.84	0.77
26:W:41:PHE:O	26:W:43:VAL:HG23	1.83	0.77
26:W:72:VAL:HG22	26:W:85:VAL:HG12	1.64	0.77
20:Q:8:ALA:HB1	20:Q:13:THR:HG21	1.66	0.77
15:L:164:THR:HG23	15:L:165:SER:N	2.00	0.77
20:Q:44:VAL:O	20:Q:48:GLU:HG3	1.85	0.77
2:9:3025:G:H3'	2:9:3026:C:H5'	1.64	0.77
1:0:1166:A:H1'	1:0:1192:A:C2	2.19	0.76
20:Q:99:ALA:HB1	20:Q:109:MET:CE	2.14	0.76
1:0:240:C:H4'	15:L:146:GLN:NE2	2.00	0.76
1:0:1116:U:H3	1:0:1246:A:H62	1.30	0.76
25:V:88:THR:HB	38:V:6679:HOH:O	1.83	0.76
13:J:29:LEU:HB3	13:J:55:VAL:HG11	1.65	0.76
1:0:2094:G:H4'	5:B:245:SER:HB3	1.66	0.76
1:0:1119:G:N2	1:0:1246:A:C2	2.52	0.76
25:V:21:LEU:HD22	25:V:26:ILE:HD11	1.67	0.76
1:0:282:C:H1'	1:0:368:C:N4	2.00	0.76
25:V:13:MET:HE3	25:V:17:ILE:HG22	1.67	0.76
5:B:238:ASN:ND2	5:B:240:GLY:H	1.81	0.76
7:D:19:GLU:O	7:D:20:LYS:HG2	1.85	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:V:4:LEU:HD23	25:V:54:PHE:HB3	1.67	0.76
16:M:7:LYS:HE3	19:P:21:ARG:O	1.86	0.76
4:A:211:LYS:HB3	4:A:212:PRO:HD2	1.66	0.76
11:H:75:SER:O	11:H:79:ALA:HB2	1.86	0.76
1:O:1751:G:C2'	1:O:1752:G:H5''	2.15	0.76
20:Q:106:GLY:HA2	20:Q:109:MET:HE3	1.67	0.76
4:A:35:GLY:O	4:A:36:ASP:HB3	1.86	0.76
2:9:3069:U:OP1	16:M:4:PRO:HG3	1.86	0.76
12:I:52:GLN:HG3	12:I:53:ILE:N	1.99	0.76
1:O:794:U:H3	1:O:819:A:H61	1.34	0.76
1:O:2694:A:H4'	8:E:91:PHE:HE1	1.50	0.75
1:O:656:G:OP2	17:N:37:ARG:HD2	1.87	0.75
14:K:136:ALA:HB3	38:K:8579:HOH:O	1.86	0.75
1:O:871:G:H8	1:O:871:G:C5'	1.95	0.75
11:H:55:GLN:NE2	11:H:124:ARG:HE	1.85	0.75
1:O:1206:U:H6	1:O:1206:U:H5'	1.50	0.75
18:O:59:ARG:NH2	18:O:66:GLN:HE22	1.85	0.75
15:L:60:ILE:C	15:L:61:ILE:HD12	2.07	0.75
1:O:1116:U:HO2'	1:O:1118:A:H2	0.77	0.75
11:H:162:SER:CB	11:H:163:PRO:HD3	2.16	0.75
1:O:2502:C:H4'	11:H:151:MET:HG2	1.67	0.75
8:E:15:GLN:HG3	8:E:20:ILE:HG12	1.68	0.75
1:O:2890:A:H1'	23:T:56:ARG:NH2	2.02	0.75
5:B:125:GLU:O	5:B:129:ARG:HG3	1.86	0.75
6:C:139:VAL:HG13	38:C:8461:HOH:O	1.85	0.75
27:X:187:VAL:HG23	27:X:192:ASP:CB	2.17	0.75
16:M:113:SER:HB2	38:M:8559:HOH:O	1.86	0.74
31:2:25:VAL:HG22	31:2:68:LYS:HG3	1.68	0.74
1:O:21:G:C5'	20:Q:2:ILE:HA	2.17	0.74
10:G:12:ILE:N	10:G:13:PRO:HD3	2.01	0.74
1:O:1120:U:H5''	1:O:1120:U:C6	2.22	0.74
1:O:962:C:H1'	16:M:5:ARG:NH1	2.03	0.74
16:M:11:ARG:HG3	16:M:14:ARG:NH1	2.03	0.74
6:C:162:VAL:HG13	6:C:232:LEU:HD21	1.70	0.74
21:R:51:GLN:HE21	21:R:53:ASN:HD21	1.34	0.74
1:O:1160:G:H5'	1:O:1161:A:C5'	2.16	0.74
17:N:32:ARG:O	17:N:32:ARG:HD3	1.87	0.74
7:D:146:LYS:NZ	16:M:107:ASN:HD21	1.86	0.74
6:C:78:ARG:HG3	6:C:78:ARG:HH11	1.52	0.73
1:O:284:C:H4'	1:O:285:A:O5'	1.87	0.73
16:M:86:LEU:HD12	16:M:125:ALA:HB2	1.71	0.73
11:H:47:GLU:HB3	11:H:133:ILE:HD13	1.70	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:J:62:PRO:HG3	13:J:65:ARG:NH2	2.03	0.73
9:F:91:VAL:HG12	9:F:92:GLY:N	2.03	0.73
7:D:22:VAL:HG22	7:D:74:THR:HG22	1.70	0.73
1:O:56:G:H5''	24:U:50:ARG:NH1	2.02	0.73
5:B:119:HIS:O	5:B:121:PRO:HD3	1.89	0.73
5:B:297:VAL:HB	38:B:8619:HOH:O	1.88	0.73
1:O:1834:C:H2'	1:O:1840:A:N6	2.03	0.73
15:L:104:ARG:O	15:L:108:LYS:HE2	1.88	0.73
1:O:2507:G:H2'	1:O:2510:C:H42	1.52	0.73
11:H:53:PRO:HG3	11:H:127:GLY:H	1.52	0.73
25:V:13:MET:HE1	25:V:18:GLN:HA	1.69	0.73
1:O:2851:G:O2'	1:O:2852:A:H5'	1.87	0.73
7:D:57:THR:HG23	7:D:63:ILE:HG22	1.71	0.73
1:O:1080:C:H4'	1:O:1081:A:OP1	1.87	0.73
11:H:59:ASN:HD22	11:H:59:ASN:N	1.87	0.72
7:D:135:VAL:HG21	7:D:139:TYR:CD1	2.24	0.72
11:H:130:HIS:CD2	11:H:133:ILE:HD11	2.24	0.72
2:9:3092:G:H2'	2:9:3093:A:C8	2.24	0.72
11:H:56:ILE:HG22	11:H:61:LEU:HD22	1.70	0.72
1:O:545:G:C8	1:O:545:G:H5'	2.23	0.72
1:O:541:C:C2'	1:O:542:A:H5''	2.20	0.72
7:D:41:LEU:HA	7:D:44:ILE:HG22	1.72	0.72
16:M:184:ILE:HG22	16:M:185:GLU:HG3	1.70	0.72
7:D:88:LEU:HB2	7:D:89:PRO:HD3	1.71	0.72
1:O:603:A:H5''	1:O:604:G:OP1	1.88	0.72
10:G:16:LYS:O	10:G:20:VAL:HG23	1.89	0.72
1:O:447:A:OP1	22:S:2:LYS:HG2	1.90	0.72
16:M:159:TYR:HB3	16:M:162:ASP:HB2	1.72	0.72
20:Q:9:ASP:O	20:Q:13:THR:HB	1.90	0.72
16:M:89:GLY:O	16:M:92:ALA:HB3	1.89	0.72
14:K:143:THR:HG22	14:K:145:LEU:H	1.54	0.72
8:E:23:GLU:HG2	8:E:28:SER:CB	2.20	0.72
8:E:11:VAL:HG12	8:E:12:ASP:N	2.04	0.71
1:O:121:U:OP2	30:1:10:ARG:NH2	2.23	0.71
1:O:289:G:N2	1:O:363:A:H2	1.86	0.71
1:O:1118:A:H3'	1:O:1118:A:C8	2.25	0.71
25:V:21:LEU:HD22	25:V:26:ILE:CD1	2.21	0.71
13:J:109:LEU:HD13	13:J:113:ILE:HD11	1.72	0.71
7:D:99:ASP:HB3	7:D:103:ASN:H	1.56	0.71
7:D:105:SER:CB	7:D:131:THR:HG23	2.19	0.71
1:O:541:C:H2'	1:O:542:A:H5''	1.71	0.71
1:O:1160:G:C5'	1:O:1161:A:H5'	2.14	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:H:28:ILE:HA	11:H:62:GLU:OE1	1.90	0.71
25:V:88:THR:HG22	25:V:89:ASP:N	2.05	0.71
4:A:217:ARG:HG2	4:A:229:ALA:HB2	1.71	0.71
2:9:3048:C:H4'	16:M:141:ARG:HH21	1.55	0.71
20:Q:14:ALA:HB3	20:Q:147:LEU:HB2	1.72	0.71
1:0:2827:A:H2'	1:0:2828:G:O4'	1.89	0.71
25:V:4:LEU:HD22	25:V:52:VAL:CG2	2.20	0.71
24:U:39:ALA:N	24:U:40:PRO:HD2	2.06	0.71
16:M:144:GLY:O	16:M:147:ILE:HG22	1.90	0.71
6:C:127:ARG:HG2	6:C:127:ARG:HH11	1.56	0.71
12:I:93:ARG:HH11	12:I:93:ARG:HB3	1.56	0.71
23:T:9:CYS:HA	23:T:52:THR:HG23	1.72	0.71
11:H:137:ASN:O	11:H:139:ASP:N	2.23	0.71
31:2:17:HIS:O	31:2:18:GLN:HG3	1.90	0.71
5:B:24:PRO:CG	5:B:204:GLY:HA2	2.21	0.71
1:0:1328:A:OP1	27:X:169:ARG:HD2	1.90	0.70
11:H:55:GLN:HE21	11:H:124:ARG:NE	1.89	0.70
7:D:64:ARG:HG2	7:D:67:ASP:HB3	1.73	0.70
26:W:78:GLU:HG2	26:W:79:GLU:H	1.56	0.70
25:V:88:THR:HG23	25:V:110:GLN:HE21	1.54	0.70
1:0:2256:G:O2'	1:0:2257:G:H5'	1.89	0.70
1:0:1185:U:H2'	1:0:1186:C:C6	2.27	0.70
15:L:34:GLU:HB3	15:L:35:PRO:HD2	1.74	0.70
1:0:31:C:H4'	38:S:7242:HOH:O	1.90	0.70
28:Y:40:PRO:HD3	28:Y:47:LEU:HD11	1.73	0.70
11:H:35:ASN:ND2	11:H:80:ASN:HA	2.07	0.70
1:0:2716:G:H5''	5:B:206:THR:HG21	1.72	0.70
1:0:1805:G:H2'	1:0:1806:G:H8	1.56	0.70
4:A:88:ILE:HD13	4:A:100:PRO:HD3	1.74	0.70
27:X:189:ASN:C	27:X:189:ASN:HD22	1.95	0.70
20:Q:18:LEU:HB2	20:Q:143:VAL:HG12	1.72	0.70
1:0:1535:G:H2'	1:0:1536:C:C6	2.27	0.70
1:0:1684:A:H1'	30:1:43:ARG:HH22	1.55	0.70
29:Z:25:LYS:HD2	30:1:49:GLU:H	1.55	0.70
16:M:138:ASP:O	16:M:140:GLN:N	2.23	0.70
7:D:27:ILE:HG22	7:D:28:GLY:N	2.07	0.70
9:F:58:GLU:HA	9:F:61:MET:HG3	1.72	0.70
23:T:52:THR:HG22	23:T:54:THR:H	1.57	0.70
1:0:371:U:H2'	1:0:372:A:H8	1.57	0.70
23:T:39:ASN:ND2	23:T:44:ARG:HH11	1.89	0.70
4:A:190:ARG:NH2	4:A:207:GLN:OE1	2.24	0.70
26:W:71:ARG:HB3	26:W:88:GLU:OE1	1.92	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:94:LEU:HG	4:A:99:ILE:HD11	1.73	0.69
6:C:115:LEU:O	6:C:118:THR:HB	1.92	0.69
1:O:2694:A:H4'	8:E:91:PHE:CE1	2.26	0.69
1:O:1165:G:H4'	1:O:1174:A:O2'	1.91	0.69
4:A:51:ARG:HB2	38:A:8617:HOH:O	1.91	0.69
15:L:139:PRO:O	15:L:140:ALA:CB	2.39	0.69
16:M:132:ASN:O	16:M:135:VAL:HG12	1.92	0.69
5:B:177:HIS:O	5:B:181:ILE:HG13	1.93	0.69
16:M:48:VAL:CG1	16:M:55:ASP:HB3	2.22	0.69
16:M:119:GLN:O	16:M:123:ILE:HG13	1.93	0.69
6:C:107:ARG:NH1	6:C:107:ARG:HB3	2.07	0.69
6:C:236:THR:CG2	6:C:239:ALA:H	2.01	0.69
14:K:133:VAL:HA	38:K:8579:HOH:O	1.91	0.69
11:H:45:GLN:HG3	11:H:135:TRP:NE1	2.08	0.69
26:W:15:ARG:NH1	26:W:15:ARG:HB3	2.06	0.69
5:B:55:ASN:HB3	5:B:63:GLU:HA	1.73	0.69
1:O:236:A:H4'	1:O:237:G:H5'	1.75	0.69
1:O:1926:G:H2'	1:O:1927:A:H8	1.58	0.69
1:O:1130:U:H2'	1:O:1131:G:O4'	1.93	0.69
20:Q:39:THR:HG23	20:Q:107:GLU:O	1.93	0.69
8:E:20:ILE:CD1	8:E:40:VAL:HG11	2.22	0.69
1:O:1942:A:H3'	38:O:8223:HOH:O	1.92	0.69
15:L:35:PRO:HG2	15:L:38:VAL:HG23	1.75	0.68
1:O:560:C:H42	1:O:597:A:H61	1.41	0.68
5:B:321:PRO:HA	38:B:8672:HOH:O	1.92	0.68
22:S:32:ARG:NH1	22:S:38:ARG:HH12	1.90	0.68
1:O:1118:A:H3'	1:O:1118:A:H8	1.57	0.68
1:O:2908:A:H2'	1:O:2909:G:O4'	1.94	0.68
24:U:12:THR:CG2	24:U:15:GLU:HG3	2.14	0.68
1:O:285:A:H2'	1:O:286:U:O4'	1.94	0.68
4:A:153:ARG:HH11	4:A:153:ARG:HB2	1.57	0.68
17:N:47:ARG:HA	17:N:50:ARG:NH1	2.08	0.68
4:A:131:HIS:O	4:A:132:ASP:HB2	1.92	0.68
1:O:1790:C:H2'	1:O:1791:U:H6	1.59	0.68
22:S:71:VAL:HG11	22:S:90:PRO:CB	2.20	0.68
27:X:187:VAL:CG2	27:X:192:ASP:HB2	2.23	0.68
1:O:2414:A:H2'	1:O:2415:A:C8	2.29	0.68
1:O:188:C:H5''	15:L:163:LEU:HD21	1.76	0.68
1:O:2346:C:O2'	7:D:52:THR:HG21	1.93	0.68
15:L:164:THR:CG2	15:L:165:SER:N	2.56	0.68
26:W:72:VAL:HG22	26:W:85:VAL:CG1	2.24	0.68
16:M:164:ASP:CG	16:M:167:ASP:HA	2.14	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:C:219:ASN:O	6:C:222:ASP:OD1	2.12	0.68
16:M:169:PRO:O	16:M:172:PHE:HB3	1.93	0.68
22:S:47:THR:HB	22:S:100:ASP:HB3	1.75	0.68
7:D:20:LYS:HA	7:D:75:LEU:O	1.93	0.68
8:E:37:ASP:OD1	12:I:125:SER:HB3	1.94	0.68
15:L:164:THR:HG22	15:L:167:GLY:N	2.02	0.68
1:O:1450:C:O2'	1:O:1494:A:H5'	1.93	0.68
15:L:12:TRP:CE2	15:L:20:ILE:HD11	2.28	0.68
5:B:258:GLY:H	5:B:260:HIS:CE1	2.11	0.68
15:L:37:VAL:HG21	15:L:108:LYS:HG3	1.75	0.67
13:J:74:VAL:HG13	13:J:113:ILE:HG23	1.76	0.67
1:O:1209:C:H2'	1:O:1210:G:H8	1.56	0.67
17:N:47:ARG:HA	17:N:50:ARG:HH12	1.59	0.67
6:C:1:MET:HG2	6:C:2:GLN:H	1.58	0.67
5:B:41:PHE:HA	5:B:79:MET:HE2	1.76	0.67
5:B:168:GLY:H	5:B:174:ARG:HD3	1.57	0.67
1:O:1244:U:OP1	12:I:18:ILE:HD13	1.94	0.67
1:O:1191:A:H3'	1:O:1192:A:H5''	1.76	0.67
15:L:55:LYS:O	15:L:60:ILE:HD12	1.95	0.67
1:O:2768:A:H2'	1:O:2769:C:O4'	1.93	0.67
7:D:50:VAL:O	7:D:71:ALA:HA	1.95	0.67
12:I:133:GLY:O	12:I:137:GLU:HG3	1.95	0.67
1:O:2274:A:H1'	15:L:86:MET:SD	2.34	0.67
14:K:67:ARG:O	14:K:71:GLU:HG3	1.94	0.67
17:N:44:ASN:OD1	17:N:65:LEU:HB2	1.95	0.67
1:O:288:A:H61	1:O:364:C:H42	1.42	0.67
4:A:36:ASP:HA	4:A:83:GLY:HA3	1.77	0.67
4:A:192:VAL:HB	38:A:8604:HOH:O	1.94	0.67
1:O:1666:C:H2'	1:O:1667:A:H5'	1.77	0.67
1:O:2897:C:H2'	1:O:2898:G:H8	1.59	0.67
15:L:65:VAL:HG21	15:L:105:ALA:HB2	1.75	0.67
22:S:50:VAL:HG12	22:S:56:ALA:HA	1.76	0.67
1:O:2769:C:O2'	1:O:2770:G:H5'	1.94	0.67
24:U:64:GLY:O	24:U:65:ASP:HB2	1.93	0.67
5:B:254:GLN:HG2	5:B:255:GLY:N	2.08	0.67
14:K:73:VAL:HG23	14:K:74:THR:H	1.60	0.67
1:O:2780:C:H1'	8:E:143:GLN:HE21	1.59	0.67
5:B:24:PRO:HG2	5:B:204:GLY:HA2	1.76	0.67
1:O:2265:U:H2'	1:O:2266:A:C8	2.30	0.67
1:O:1930:A:H2'	1:O:1931:A:C8	2.30	0.67
1:O:1008:C:H5''	11:H:16:ARG:HH12	1.59	0.67
28:Y:53:GLY:HA2	28:Y:67:GLY:O	1.94	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:1299:G:O6	14:K:6:ARG:HD3	1.95	0.67
9:F:107:VAL:O	9:F:111:ILE:HG13	1.95	0.67
1:O:820:G:OP2	4:A:171:LYS:NZ	2.27	0.67
2:9:3023:U:C3'	2:9:3024:U:H5''	2.20	0.66
25:V:6:GLN:HB2	25:V:26:ILE:CD1	2.25	0.66
1:O:559:U:H5'	1:O:559:U:H6	1.59	0.66
17:N:73:ASP:HA	17:N:92:VAL:O	1.95	0.66
25:V:122:ARG:NH2	25:V:154:ARG:OXT	2.26	0.66
12:I:19:MET:CE	12:I:132:LEU:HD11	2.25	0.66
1:O:2256:G:C2'	1:O:2257:G:H5'	2.25	0.66
1:O:1926:G:H2'	1:O:1927:A:C8	2.29	0.66
12:I:117:ASP:O	12:I:119:THR:HG23	1.96	0.66
6:C:233:THR:HG22	6:C:234:VAL:H	1.60	0.66
1:O:2769:C:H2'	1:O:2770:G:O4'	1.95	0.66
11:H:26:LYS:HD2	11:H:28:ILE:CD1	2.25	0.66
7:D:64:ARG:CG	7:D:67:ASP:HB3	2.26	0.66
20:Q:18:LEU:HB2	20:Q:143:VAL:CG1	2.26	0.66
2:9:3039:U:H1'	2:9:3044:A:H61	1.61	0.66
27:X:203:VAL:HG12	27:X:228:VAL:HG22	1.78	0.66
1:O:2421:G:H3'	1:O:2422:U:H5''	1.76	0.66
11:H:47:GLU:HB3	11:H:133:ILE:CD1	2.26	0.66
5:B:41:PHE:HB3	5:B:190:MET:HE1	1.78	0.66
5:B:7:ARG:HG2	5:B:7:ARG:HH11	1.61	0.66
23:T:14:GLU:O	23:T:17:THR:HB	1.95	0.66
28:Y:30:GLU:O	28:Y:33:HIS:HB3	1.95	0.66
11:H:150:LYS:HB2	11:H:157:ILE:HD12	1.78	0.66
1:O:2506:A:O2'	1:O:2507:G:O5'	2.14	0.66
7:D:135:VAL:HG22	7:D:136:ARG:H	1.61	0.66
1:O:2594:C:O2'	1:O:2595:U:H5'	1.95	0.66
5:B:162:MET:CE	5:B:308:LEU:HD21	2.22	0.66
11:H:33:MET:HB2	11:H:83:PHE:HB3	1.77	0.66
13:J:81:ARG:HB2	13:J:87:ARG:NH1	2.11	0.66
28:Y:11:THR:OG1	28:Y:23:ARG:HB2	1.96	0.65
5:B:238:ASN:HD22	5:B:240:GLY:N	1.87	0.65
5:B:195:ARG:HD2	5:B:324:ASP:OD1	1.96	0.65
15:L:72:SER:HB2	15:L:93:ARG:HG2	1.77	0.65
5:B:280:VAL:CG1	5:B:334:SER:HA	2.27	0.65
1:O:2269:C:C2'	1:O:2270:G:H5'	2.26	0.65
1:O:1641:A:H2'	1:O:1642:A:H5'	1.78	0.65
1:O:2578:G:H5'	1:O:2578:G:H8	1.61	0.65
5:B:175:LEU:HD23	5:B:175:LEU:C	2.17	0.65
1:O:1771:U:C4'	28:Y:20:LEU:HD21	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:E:11:VAL:HG12	8:E:12:ASP:H	1.61	0.65
28:Y:38:LYS:HE2	28:Y:45:LYS:CE	2.27	0.65
31:2:55:VAL:O	31:2:56:PRO:O	2.15	0.65
1:0:2271:G:H5'	38:A:8579:HOH:O	1.95	0.65
11:H:13:ALA:HA	11:H:91:HIS:HE1	1.62	0.65
1:0:1835:U:C5	1:0:1840:A:N7	2.61	0.65
5:B:312:ARG:HD3	5:B:315:VAL:HG13	1.78	0.65
21:R:37:VAL:O	21:R:41:VAL:HG23	1.96	0.65
5:B:168:GLY:N	5:B:174:ARG:HD3	2.11	0.65
1:0:1505:U:H5'	1:0:1505:U:H6	1.60	0.65
16:M:154:LEU:O	16:M:155:GLU:HB3	1.96	0.65
1:0:877:G:H5'	1:0:878:G:OP1	1.96	0.65
1:0:111:C:O2'	29:Z:20:ARG:HG2	1.96	0.65
16:M:163:PHE:HE1	16:M:171:HIS:HD1	1.44	0.65
20:Q:29:LYS:HD3	38:Q:8542:HOH:O	1.96	0.65
2:9:3054:A:O2'	2:9:3055:U:H5'	1.97	0.65
1:0:544:G:H2'	1:0:545:G:H5''	1.79	0.65
11:H:140:PRO:HA	11:H:142:VAL:HG12	1.78	0.65
15:L:37:VAL:HG21	15:L:108:LYS:CG	2.27	0.65
1:0:1234:U:N3	5:B:244:PRO:HB3	2.12	0.65
1:0:2717:C:O2'	1:0:2718:C:H5''	1.97	0.64
9:F:50:VAL:HG13	9:F:60:VAL:HG11	1.77	0.64
12:I:19:MET:HE3	12:I:132:LEU:HD11	1.78	0.64
1:0:2878:U:H2'	1:0:2879:A:O4'	1.97	0.64
29:Z:28:HIS:CE1	29:Z:31:LYS:HE2	2.32	0.64
2:9:3006:C:OP1	16:M:37:ARG:NH1	2.29	0.64
28:Y:29:VAL:O	28:Y:33:HIS:HB2	1.97	0.64
23:T:52:THR:HG22	23:T:54:THR:N	2.13	0.64
14:K:54:PRO:HG2	14:K:57:VAL:HG21	1.78	0.64
6:C:235:PHE:HE2	6:C:243:VAL:HG21	1.62	0.64
5:B:275:GLY:O	5:B:291:ASP:HA	1.97	0.64
5:B:307:ARG:HB2	5:B:307:ARG:HH11	1.63	0.64
5:B:36:PRO:HA	5:B:168:GLY:CA	2.27	0.64
1:0:184:G:H5''	15:L:153:THR:HG22	1.78	0.64
26:W:25:ARG:HD3	26:W:64:ALA:O	1.97	0.64
2:9:3028:U:H5''	16:M:40:ASN:HD21	1.63	0.64
28:Y:33:HIS:CE1	28:Y:49:ARG:HD2	2.33	0.64
1:0:2094:G:C4'	5:B:245:SER:HB3	2.27	0.64
24:U:49:LEU:O	24:U:53:ILE:HG13	1.97	0.64
2:9:3049:G:O2'	2:9:3050:G:H5'	1.96	0.64
9:F:53:ASP:OD1	9:F:80:GLN:HB2	1.96	0.64
13:J:74:VAL:CG1	13:J:113:ILE:HG12	2.26	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:I:74:ARG:CB	12:I:74:ARG:HH11	2.10	0.64
1:0:541:C:H2'	1:0:542:A:C5'	2.26	0.64
1:0:1803:C:H2'	1:0:1804:A:C8	2.33	0.64
20:Q:25:PHE:CE2	20:Q:29:LYS:HE2	2.32	0.64
4:A:140:LEU:HB3	4:A:141:PRO:HD2	1.77	0.64
1:0:407:A:H2'	1:0:408:A:C8	2.33	0.64
21:R:57:THR:HG22	21:R:59:ASP:N	2.12	0.64
17:N:32:ARG:HE	17:N:35:LYS:HD2	1.63	0.64
20:Q:18:LEU:HD12	20:Q:143:VAL:HG11	1.80	0.64
11:H:44:ALA:HA	11:H:163:PRO:O	1.98	0.64
14:K:104:ASP:O	14:K:105:TYR:HB3	1.96	0.64
22:S:101:LEU:HD13	22:S:112:LEU:HD11	1.79	0.64
23:T:52:THR:CG2	23:T:54:THR:HB	2.28	0.64
1:0:2613:G:O2'	1:0:2614:C:H5'	1.98	0.64
11:H:27:LYS:N	11:H:58:HIS:HD2	1.94	0.64
7:D:64:ARG:CD	7:D:67:ASP:HB3	2.28	0.64
12:I:27:ALA:HB1	12:I:87:LEU:HD21	1.80	0.64
14:K:143:THR:HG22	14:K:144:ASP:N	2.13	0.63
1:0:1972:U:H2'	1:0:1973:A:H5'	1.80	0.63
1:0:157:G:H4'	15:L:95:LYS:HE3	1.80	0.63
7:D:25:MET:CE	7:D:41:LEU:HG	2.27	0.63
4:A:48:ASP:HB3	38:A:8617:HOH:O	1.97	0.63
13:J:55:VAL:HG12	13:J:56:SER:H	1.62	0.63
11:H:14:TYR:H	11:H:91:HIS:CE1	2.15	0.63
12:I:107:ASN:ND2	12:I:109:TYR:H	1.96	0.63
1:0:871:G:C8	1:0:871:G:C5'	2.74	0.63
15:L:87:MET:HB3	31:2:46:ILE:HG21	1.80	0.63
4:A:88:ILE:HD13	4:A:100:PRO:CD	2.28	0.63
23:T:14:GLU:OE1	23:T:15:PRO:HD2	1.98	0.63
1:0:1595:G:O2'	1:0:1596:U:H5'	1.99	0.63
7:D:23:VAL:HG22	7:D:73:VAL:HB	1.80	0.63
16:M:183:ASP:OD2	16:M:186:LEU:HD12	1.99	0.63
22:S:49:GLU:OE2	22:S:97:ARG:HD2	1.98	0.63
11:H:84:ARG:NH2	11:H:135:TRP:HH2	1.96	0.63
11:H:147:ARG:HA	11:H:150:LYS:NZ	2.14	0.63
1:0:2690:U:O2'	8:E:111:LYS:HE3	1.98	0.63
14:K:24:ALA:HB2	14:K:30:ARG:HD2	1.81	0.63
26:W:30:MET:HE1	26:W:55:ASN:HA	1.79	0.63
10:G:64:ASN:N	10:G:64:ASN:HD22	1.94	0.63
12:I:45:VAL:HG21	12:I:129:PHE:CD1	2.34	0.63
26:W:15:ARG:HH11	26:W:15:ARG:CB	2.10	0.63
1:0:1596:U:H2'	1:0:1598:A:OP2	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:G:64:ASN:O	10:G:68:GLU:HG3	1.98	0.63
5:B:202:VAL:HG11	5:B:301:VAL:HG13	1.81	0.63
1:0:960:G:H2'	1:0:960:G:N3	2.14	0.63
1:0:136:C:H2'	1:0:137:U:O4'	1.98	0.63
15:L:52:LEU:HD13	15:L:116:ASN:HB3	1.80	0.63
11:H:26:LYS:HD3	11:H:89:PRO:HG3	1.80	0.63
1:0:1474:C:C6	1:0:1474:C:H5'	2.33	0.63
6:C:104:ASP:HA	6:C:107:ARG:HH12	1.63	0.63
1:0:2270:G:H4'	4:A:223:ARG:HH12	1.64	0.63
6:C:46:TYR:CE2	6:C:98:ARG:NH1	2.67	0.63
13:J:10:GLN:H	13:J:10:GLN:HE21	0.75	0.62
14:K:114:VAL:HG11	38:K:8579:HOH:O	1.99	0.62
4:A:94:LEU:N	4:A:94:LEU:HD23	2.14	0.62
11:H:13:ALA:HA	11:H:91:HIS:CE1	2.33	0.62
32:0:9500:SLD:C6S	3:4:76:A:H5''	2.29	0.62
1:0:1741:U:H5'	1:0:1742:A:OP1	1.99	0.62
1:0:553:G:P	27:X:204:ARG:HH22	2.22	0.62
4:A:164:ARG:HB2	28:Y:68:CYS:SG	2.39	0.62
1:0:2070:G:H2'	1:0:2072:G:OP1	2.00	0.62
1:0:2265:U:H2'	1:0:2266:A:H8	1.64	0.62
2:9:3040:C:N4	7:D:51:ARG:HB2	2.13	0.62
21:R:57:THR:HG22	21:R:59:ASP:H	1.65	0.62
27:X:186:ARG:HG2	27:X:186:ARG:HH11	1.64	0.62
2:9:3020:G:O2'	2:9:3021:G:H5'	1.99	0.62
1:0:1667:A:H8	1:0:1667:A:H5'	1.64	0.62
2:9:3051:A:H5'	16:M:160:SER:HB3	1.81	0.62
5:B:56:ASP:HB3	5:B:322:ARG:HH21	1.65	0.62
1:0:2780:C:H2'	1:0:2781:U:C6	2.34	0.62
1:0:731:U:H2'	1:0:732:C:C6	2.35	0.62
31:2:65:THR:HG23	31:2:67:LEU:HG	1.80	0.62
28:Y:62:TYR:CE2	28:Y:64:ILE:HG23	2.34	0.62
1:0:1636:G:O2'	1:0:1637:A:H5'	1.98	0.62
1:0:2256:G:H2'	1:0:2257:G:H5'	1.82	0.62
22:S:32:ARG:NH1	22:S:38:ARG:NH1	2.47	0.62
25:V:68:THR:HG23	25:V:69:ARG:HG2	1.79	0.62
9:F:21:GLU:O	9:F:24:ARG:HG3	1.99	0.62
1:0:2456:A:H2'	1:0:2457:U:C6	2.34	0.62
2:9:3006:C:H5''	16:M:37:ARG:HH12	1.63	0.62
25:V:137:GLN:HE21	25:V:141:HIS:CE1	2.13	0.62
14:K:138:GLY:HA3	38:K:8558:HOH:O	2.00	0.62
1:0:2269:C:O2'	1:0:2270:G:H5'	2.00	0.62
1:0:2054:A:N3	20:Q:128:ARG:NH2	2.47	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:H:48:LEU:HG	11:H:157:ILE:HG21	1.82	0.62
1:0:2421:G:H3'	1:0:2422:U:C5'	2.27	0.62
4:A:81:GLN:HB2	4:A:92:ASN:ND2	2.14	0.62
18:O:76:GLY:O	18:O:79:SER:N	2.32	0.62
29:Z:21:ARG:HD2	29:Z:39:PHE:HB2	1.82	0.62
1:0:702:G:O2'	1:0:703:G:H5'	2.00	0.62
1:0:638:C:H2'	1:0:639:A:C8	2.35	0.62
1:0:2505:G:O2'	1:0:2506:A:H5'	2.00	0.61
4:A:101:GLU:OE2	4:A:131:HIS:HB2	2.00	0.61
1:0:558:C:O2'	1:0:559:U:H5''	1.99	0.61
2:9:3030:C:OP1	7:D:137:PRO:O	2.18	0.61
13:J:98:VAL:HG13	13:J:102:GLU:HA	1.82	0.61
18:O:7:LYS:HD3	18:O:21:VAL:CG2	2.30	0.61
11:H:29:ALA:HB3	11:H:65:ARG:NH1	2.09	0.61
28:Y:30:GLU:HA	28:Y:33:HIS:HB3	1.81	0.61
22:S:9:LYS:CE	22:S:13:ARG:NH1	2.62	0.61
27:X:112:GLU:OE1	27:X:112:GLU:HA	2.00	0.61
4:A:121:ALA:O	4:A:124:VAL:HG22	1.99	0.61
20:Q:40:ALA:O	20:Q:44:VAL:HG23	2.01	0.61
2:9:3044:A:O4'	7:D:76:ARG:NE	2.33	0.61
9:F:96:ALA:HA	38:F:3111:HOH:O	2.00	0.61
1:0:470:U:O2'	29:Z:16:HIS:HD2	1.82	0.61
1:0:2375:G:H2'	1:0:2376:C:C6	2.35	0.61
6:C:5:ILE:HD11	6:C:16:VAL:CG2	2.24	0.61
1:0:2533:C:C6	1:0:2533:C:H5'	2.33	0.61
16:M:91:ARG:HG3	16:M:186:LEU:HD23	1.81	0.61
1:0:1850:U:H2'	1:0:1851:G:H8	1.65	0.61
16:M:48:VAL:HG11	16:M:55:ASP:HB3	1.82	0.61
15:L:48:ARG:HH11	15:L:52:LEU:HD21	1.64	0.61
1:0:2795:C:O2'	1:0:2796:U:H5'	2.00	0.61
23:T:11:THR:HG22	23:T:53:ASP:OD2	2.01	0.61
1:0:1909:A:H2'	1:0:1910:A:C8	2.35	0.61
1:0:281:U:H2'	1:0:282:C:O4'	2.01	0.61
1:0:696:C:O2'	1:0:697:G:H5'	2.00	0.61
1:0:1250:C:O2'	1:0:1251:C:H5'	2.01	0.61
12:I:74:ARG:O	12:I:78:ILE:HG12	2.00	0.61
1:0:669:G:O2'	1:0:670:G:H5'	2.00	0.61
1:0:1422:U:H2'	1:0:1423:C:C6	2.35	0.61
1:0:2502:C:C4'	11:H:151:MET:HG2	2.30	0.61
1:0:1882:C:H2'	1:0:1883:U:H6	1.64	0.61
16:M:152:GLU:C	16:M:154:LEU:H	2.03	0.61
2:9:3013:A:O2'	2:9:3014:G:H5''	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:G:23:ILE:HD13	10:G:67:LEU:HD23	1.83	0.61
8:E:31:ARG:HH12	8:E:68:HIS:CG	2.19	0.61
27:X:200:THR:HG22	27:X:201:GLU:HG3	1.83	0.61
9:F:56:PRO:HG2	15:L:44:THR:HA	1.82	0.61
1:O:2840:A:OP1	5:B:211:THR:HG23	2.01	0.61
5:B:145:HIS:HD2	5:B:146:THR:O	1.84	0.61
1:O:657:G:OP1	6:C:27:ARG:NH2	2.28	0.61
1:O:1170:U:O2'	1:O:1172:G:N7	2.32	0.61
25:V:84:VAL:HG12	38:V:6679:HOH:O	1.99	0.61
10:G:71:LEU:C	10:G:73:ASP:H	2.04	0.61
6:C:47:GLY:HA2	6:C:92:PRO:HB2	1.81	0.61
25:V:122:ARG:NH1	25:V:152:ALA:O	2.34	0.61
4:A:199:HIS:HD2	4:A:201:PHE:HB2	1.66	0.61
24:U:39:ALA:C	24:U:41:GLU:H	2.04	0.61
26:W:9:VAL:HG22	26:W:88:GLU:OE2	2.01	0.60
1:O:1666:C:O2'	1:O:1667:A:H5''	2.00	0.60
2:9:3025:G:C3'	2:9:3026:C:H5'	2.31	0.60
9:F:56:PRO:CG	15:L:44:THR:HA	2.32	0.60
1:O:1666:C:C2'	1:O:1667:A:H5'	2.31	0.60
6:C:27:ARG:HD2	17:N:5:PRO:HD2	1.81	0.60
4:A:27:LEU:HD21	4:A:55:VAL:HG21	1.83	0.60
1:O:1393:A:H2'	1:O:1394:C:C6	2.36	0.60
1:O:1003:U:HO2'	11:H:90:PHE:HE1	1.49	0.60
1:O:1119:G:H22	1:O:1246:A:H2	1.48	0.60
31:2:42:ARG:HH11	31:2:42:ARG:HG3	1.65	0.60
12:I:75:PRO:HG2	12:I:105:LEU:HD21	1.82	0.60
1:O:777:U:O2'	29:Z:11:LYS:HG2	2.01	0.60
20:Q:106:GLY:HA2	20:Q:109:MET:CE	2.32	0.60
11:H:95:GLU:HB3	11:H:119:VAL:HG11	1.82	0.60
12:I:52:GLN:HG3	12:I:53:ILE:H	1.64	0.60
23:T:49:LEU:HG	38:T:3805:HOH:O	2.00	0.60
1:O:645:U:OP2	14:K:4:LYS:HE2	2.00	0.60
1:O:241:A:C2	1:O:378:A:H4'	2.36	0.60
1:O:2001:G:O2'	1:O:2002:C:H5'	2.01	0.60
28:Y:30:GLU:HA	28:Y:33:HIS:CB	2.32	0.60
1:O:1158:G:O2'	1:O:1159:G:H5'	2.01	0.60
31:2:60:LYS:HG3	31:2:61:PRO:HD2	1.84	0.60
1:O:2291:A:C8	1:O:2309:C:H5'	2.37	0.60
12:I:45:VAL:HG23	12:I:130:VAL:O	2.01	0.60
1:O:2266:A:H2'	1:O:2267:G:C8	2.36	0.60
13:J:28:GLU:HG2	13:J:58:THR:HB	1.84	0.60
1:O:2028:U:H2'	1:O:2029:C:C6	2.36	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:C:118:THR:O	6:C:136:VAL:HG13	2.01	0.60
11:H:27:LYS:H	11:H:58:HIS:CD2	2.13	0.60
6:C:78:ARG:HG3	6:C:78:ARG:NH1	2.13	0.60
1:O:2415:A:N3	16:M:26:LEU:HD13	2.17	0.60
4:A:164:ARG:HA	28:Y:69:TYR:CE1	2.36	0.60
1:O:2598:U:O2	1:O:2600:A:H8	1.83	0.60
20:Q:18:LEU:HG	20:Q:91:LEU:HD13	1.84	0.60
16:M:165:ALA:HB1	38:M:8526:HOH:O	2.02	0.60
1:O:2241:C:H2'	1:O:2242:U:C6	2.37	0.60
1:O:256:C:H2'	1:O:257:G:O4'	2.02	0.60
7:D:44:ILE:HG23	7:D:45:THR:HG23	1.83	0.60
11:H:139:ASP:N	11:H:140:PRO:CD	2.65	0.60
18:O:59:ARG:HH22	18:O:66:GLN:HE22	1.48	0.60
7:D:135:VAL:HG22	7:D:136:ARG:N	2.17	0.60
1:O:2779:G:H21	8:E:143:GLN:NE2	2.00	0.60
1:O:2720:C:O2	13:J:87:ARG:NH2	2.35	0.60
5:B:5:ARG:HD2	5:B:8:LYS:NZ	2.17	0.60
1:O:29:C:O2'	1:O:30:U:H5'	2.02	0.60
15:L:74:ARG:HG3	15:L:74:ARG:HH11	1.66	0.59
25:V:64:THR:O	25:V:68:THR:HG22	2.02	0.59
1:O:2320:U:H4'	1:O:2321:A:O4'	2.02	0.59
11:H:31:PHE:CD2	11:H:85:ILE:HG23	2.37	0.59
8:E:86:VAL:CG1	8:E:129:GLU:HA	2.31	0.59
1:O:2361:A:H2'	1:O:2362:A:C8	2.37	0.59
1:O:2256:G:H2'	1:O:2257:G:C5'	2.31	0.59
20:Q:61:GLN:NE2	38:Q:8542:HOH:O	2.35	0.59
15:L:48:ARG:NH1	15:L:52:LEU:HD21	2.17	0.59
5:B:51:VAL:HG13	5:B:53:LEU:HD13	1.83	0.59
7:D:95:THR:O	7:D:97:GLN:N	2.31	0.59
25:V:149:LEU:HG	25:V:153:MET:CE	2.32	0.59
1:O:902:G:N7	14:K:18:HIS:HD2	1.99	0.59
9:F:58:GLU:OE1	15:L:27:ARG:NH2	2.34	0.59
1:O:1790:C:H2'	1:O:1791:U:C6	2.37	0.59
2:9:3014:G:H8	2:9:3014:G:H5'	1.67	0.59
14:K:35:ARG:O	14:K:40:PHE:HA	2.02	0.59
8:E:11:VAL:HG13	8:E:23:GLU:O	2.03	0.59
26:W:76:ARG:O	26:W:77:PHE:HB3	2.01	0.59
10:G:12:ILE:N	10:G:13:PRO:CD	2.64	0.59
31:2:84:ARG:HD3	38:2:8554:HOH:O	2.02	0.59
30:1:40:ARG:HG2	30:1:40:ARG:HH11	1.67	0.59
1:O:2507:G:H2'	1:O:2510:C:N4	2.17	0.59
11:H:127:GLY:O	11:H:128:ALA:HB3	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:C:1:MET:HG2	6:C:2:GLN:NE2	2.16	0.59
13:J:115:ARG:HG3	13:J:116:GLU:N	2.18	0.59
16:M:155:GLU:O	16:M:156:GLU:HG3	2.02	0.59
1:O:1461:U:H2'	1:O:1462:C:C6	2.37	0.59
1:O:947:U:H2'	1:O:948:G:C8	2.37	0.59
15:L:138:HIS:ND1	15:L:139:PRO:O	2.31	0.59
26:W:43:VAL:HG12	26:W:44:ASP:N	2.17	0.59
7:D:86:THR:O	7:D:90:LEU:HG	2.02	0.59
27:X:235:GLU:CD	27:X:235:GLU:H	2.03	0.59
1:O:303:C:O2'	1:O:304:G:H5'	2.03	0.59
1:O:2356:A:H2'	1:O:2357:G:O4'	2.03	0.59
1:O:2413:A:N7	16:M:109:PRO:HB3	2.17	0.59
20:Q:12:THR:HG22	20:Q:149:GLU:OE1	2.03	0.59
11:H:46:VAL:HG12	11:H:146:TRP:HZ3	1.68	0.59
4:A:194:MET:HE2	4:A:199:HIS:CB	2.32	0.59
16:M:151:ASP:O	16:M:154:LEU:HB2	2.01	0.59
14:K:54:PRO:HG2	14:K:57:VAL:CG2	2.32	0.59
1:O:449:A:N7	6:C:43:LYS:HG2	2.18	0.59
16:M:33:ARG:NH1	16:M:103:ASP:OD2	2.26	0.59
16:M:164:ASP:OD2	16:M:167:ASP:HA	2.02	0.59
2:9:3039:U:H1'	2:9:3044:A:N6	2.17	0.59
1:O:1855:G:H8	4:A:144:GLU:OE2	1.85	0.59
7:D:25:MET:CE	7:D:37:ALA:HB1	2.31	0.59
25:V:110:GLN:NE2	25:V:110:GLN:HA	2.18	0.59
26:W:76:ARG:HG3	26:W:76:ARG:NH1	2.16	0.59
23:T:52:THR:HG22	23:T:54:THR:HB	1.85	0.59
1:O:1552:G:H2'	1:O:1553:C:C6	2.38	0.59
30:1:41:HIS:HD2	30:1:44:ARG:H	1.51	0.58
1:O:282:C:O2'	1:O:283:U:H5'	2.03	0.58
6:C:233:THR:HG22	6:C:234:VAL:N	2.17	0.58
1:O:2363:G:O2'	19:P:11:ARG:HG3	2.03	0.58
1:O:95:A:H5''	1:O:97:G:O4'	2.03	0.58
9:F:91:VAL:HG12	9:F:92:GLY:H	1.64	0.58
1:O:1187:U:O2'	1:O:1189:A:H2	1.86	0.58
1:O:338:C:H4'	6:C:174:ILE:CD1	2.32	0.58
14:K:149:ARG:O	14:K:150:GLN:HB2	2.03	0.58
16:M:143:ARG:HA	16:M:172:PHE:CD2	2.38	0.58
1:O:694:A:H2'	1:O:695:C:H5'	1.84	0.58
4:A:110:SER:HA	4:A:118:PHE:HE1	1.68	0.58
17:N:14:LEU:HG	17:N:102:ILE:HD11	1.85	0.58
2:9:3055:U:H4'	2:9:3056:A:C8	2.37	0.58
16:M:25:ARG:HA	16:M:28:LYS:HG3	1.84	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:X:200:THR:HG22	27:X:201:GLU:CG	2.32	0.58
7:D:94:ALA:HB3	7:D:174:VAL:CA	2.33	0.58
1:O:625:U:H5''	1:O:1044:C:N4	2.18	0.58
15:L:74:ARG:NH1	15:L:74:ARG:HG3	2.17	0.58
1:O:292:G:H2'	1:O:358:G:N2	2.17	0.58
7:D:99:ASP:HA	38:D:5675:HOH:O	2.04	0.58
5:B:36:PRO:HA	5:B:168:GLY:HA3	1.85	0.58
9:F:110:GLU:HA	9:F:113:ASP:OD2	2.03	0.58
15:L:80:GLY:O	15:L:81:ARG:HD2	2.04	0.58
7:D:44:ILE:HG12	7:D:83:PHE:HE1	1.68	0.58
5:B:144:THR:HG22	5:B:145:HIS:N	2.18	0.58
24:U:56:ILE:O	24:U:60:GLN:HG3	2.03	0.58
17:N:87:THR:O	17:N:91:GLN:HG3	2.04	0.58
18:O:9:LEU:O	18:O:13:VAL:HG12	2.03	0.58
11:H:166:ASN:HD22	11:H:166:ASN:N	1.99	0.58
18:O:115:SER:H	18:O:118:GLN:NE2	1.82	0.58
7:D:49:PRO:HA	7:D:73:VAL:HG22	1.86	0.58
14:K:145:LEU:O	14:K:148:GLU:HG3	2.03	0.58
1:O:1643:C:O2'	1:O:1644:C:H5'	2.04	0.58
15:L:37:VAL:HG13	15:L:63:VAL:HG11	1.86	0.58
25:V:122:ARG:HH11	25:V:122:ARG:CG	2.14	0.58
1:O:21:G:H4'	20:Q:2:ILE:HG22	1.84	0.58
5:B:96:PRO:HG2	38:B:8648:HOH:O	2.03	0.58
25:V:65:VAL:HG12	25:V:116:LEU:HD13	1.86	0.58
1:O:2300:A:H4'	1:O:2301:A:O5'	2.03	0.58
1:O:1164:U:C4'	1:O:1165:G:OP1	2.48	0.58
1:O:1864:C:OP1	15:L:75:THR:HG23	2.03	0.58
1:O:812:A:H2'	1:O:813:C:C6	2.39	0.58
14:K:93:VAL:HG12	14:K:97:VAL:HG23	1.85	0.58
31:2:11:CYS:HB2	31:2:20:HIS:CE1	2.38	0.58
23:T:17:THR:HG22	23:T:18:GLY:N	2.18	0.58
1:O:2894:C:O2'	1:O:2895:C:H5'	2.04	0.58
1:O:862:U:H2'	1:O:863:G:H8	1.68	0.58
5:B:141:ARG:HG2	5:B:165:ARG:HA	1.85	0.58
1:O:1444:G:O2'	1:O:1445:G:H5'	2.02	0.58
1:O:2668:G:H2'	1:O:2669:U:C6	2.38	0.58
1:O:544:G:C2'	1:O:545:G:H5''	2.34	0.57
11:H:46:VAL:O	11:H:146:TRP:HH2	1.87	0.57
7:D:19:GLU:O	7:D:133:ASN:HB3	2.03	0.57
12:I:39:VAL:HG12	12:I:40:ASN:ND2	2.18	0.57
8:E:132:THR:HG23	8:E:132:THR:O	2.03	0.57
22:S:73:HIS:CD2	22:S:88:PRO:HG3	2.38	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:10:U:HO2'	1:0:11:A:H8	1.50	0.57
16:M:97:VAL:HG12	16:M:127:LEU:HD11	1.86	0.57
2:9:3048:C:H4'	16:M:141:ARG:NH2	2.17	0.57
1:0:1804:A:H2'	1:0:1805:G:C8	2.39	0.57
4:A:66:ARG:HH11	4:A:66:ARG:HB2	1.67	0.57
13:J:72:VAL:HG11	13:J:121:PHE:CD1	2.39	0.57
1:0:566:A:H2'	1:0:567:U:O4'	2.04	0.57
21:R:6:LYS:HB2	21:R:27:ALA:O	2.04	0.57
11:H:47:GLU:CB	11:H:133:ILE:HD13	2.35	0.57
11:H:26:LYS:HE3	11:H:28:ILE:HB	1.86	0.57
1:0:820:G:C6	4:A:171:LYS:HB2	2.39	0.57
17:N:77:ALA:HB1	17:N:98:LEU:HD12	1.86	0.57
4:A:33:GLU:O	4:A:34:ASP:HB2	2.03	0.57
23:T:13:ILE:HG12	23:T:32:CYS:HB3	1.85	0.57
1:0:1441:G:O2'	1:0:1442:A:H5'	2.03	0.57
1:0:2756:U:H3	1:0:2896:A:H2	1.53	0.57
13:J:55:VAL:HG12	13:J:56:SER:N	2.19	0.57
18:O:13:VAL:HG11	18:O:40:VAL:HG11	1.86	0.57
1:0:1496:G:H5'	1:0:1572:A:H1'	1.86	0.57
7:D:64:ARG:HB3	7:D:67:ASP:OD2	2.04	0.57
5:B:190:MET:HE2	5:B:194:PHE:CD1	2.39	0.57
12:I:39:VAL:HG13	12:I:106:GLY:O	2.03	0.57
9:F:117:GLU:C	9:F:119:ARG:H	2.08	0.57
16:M:78:MET:HB2	16:M:79:PRO:HD3	1.87	0.57
24:U:44:GLY:O	24:U:48:GLU:HG2	2.04	0.57
11:H:71:TYR:C	11:H:73:GLN:H	2.08	0.57
1:0:1783:A:O2'	1:0:1784:U:H5'	2.04	0.57
1:0:297:U:H2'	1:0:298:C:H6	1.69	0.57
11:H:53:PRO:HA	11:H:125:VAL:O	2.05	0.57
2:9:3028:U:H2'	2:9:3029:C:C6	2.40	0.57
27:X:99:ALA:HB2	27:X:233:TYR:CZ	2.40	0.57
1:0:832:U:H2'	1:0:833:G:C8	2.39	0.57
28:Y:19:GLY:O	28:Y:23:ARG:HG2	2.05	0.57
13:J:99:ASP:OD1	13:J:101:ASN:N	2.36	0.57
1:0:1827:G:H2'	1:0:1828:G:C8	2.39	0.57
15:L:186:SER:O	15:L:189:VAL:HG12	2.04	0.57
25:V:38:THR:HG22	25:V:39:ASP:N	2.20	0.57
24:U:11:MET:HB3	24:U:15:GLU:HB2	1.87	0.57
11:H:83:PHE:HZ	11:H:146:TRP:HE1	1.47	0.57
25:V:151:GLU:O	25:V:154:ARG:HB3	2.04	0.57
4:A:199:HIS:CD2	4:A:201:PHE:H	2.23	0.57
1:0:797:A:H4'	28:Y:10:ARG:N	2.19	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:962:C:H1'	16:M:5:ARG:HH12	1.69	0.57
1:0:1667:A:H2'	1:0:1668:U:C6	2.40	0.57
12:I:107:ASN:HD21	12:I:109:TYR:HB2	1.70	0.57
1:0:1333:U:H2'	1:0:1334:C:C6	2.40	0.57
28:Y:50:ALA:HB3	28:Y:54:ILE:HG22	1.85	0.57
28:Y:57:CYS:SG	28:Y:59:HIS:HB3	2.45	0.57
11:H:49:VAL:O	11:H:157:ILE:HG23	2.05	0.57
1:0:2717:C:H2'	1:0:2718:C:C5'	2.30	0.57
6:C:162:VAL:CG1	6:C:192:ILE:HD11	2.34	0.57
1:0:1205:U:C2'	1:0:1206:U:H5''	2.35	0.57
1:0:1803:C:H2'	1:0:1804:A:H8	1.68	0.57
1:0:1189:A:H3'	38:0:8560:HOH:O	2.05	0.57
5:B:140:LEU:HA	38:B:8592:HOH:O	2.04	0.57
38:0:6828:HOH:O	11:H:4:ALA:HB3	2.05	0.57
4:A:87:GLU:HB3	38:A:8635:HOH:O	2.04	0.57
1:0:170:U:H2'	1:0:171:C:H5'	1.87	0.57
28:Y:10:ARG:HA	38:Y:8416:HOH:O	2.03	0.57
1:0:371:U:H2'	1:0:372:A:C8	2.40	0.57
1:0:1234:U:C4	5:B:244:PRO:HB3	2.40	0.57
1:0:2456:A:H2'	1:0:2457:U:H6	1.69	0.57
8:E:31:ARG:HH12	8:E:68:HIS:CD2	2.23	0.57
4:A:39:ALA:HB3	4:A:61:GLU:OE2	2.04	0.57
9:F:19:ALA:O	9:F:22:VAL:HG22	2.04	0.56
1:0:2780:C:H2'	1:0:2781:U:H6	1.68	0.56
18:O:80:ARG:HG2	18:O:87:ARG:CZ	2.35	0.56
1:0:2729:C:O2'	1:0:2730:G:H5'	2.05	0.56
1:0:12:U:H2'	1:0:13:G:H5'	1.86	0.56
1:0:290:C:O2'	1:0:291:C:H5'	2.05	0.56
29:Z:25:LYS:HD2	30:1:49:GLU:N	2.19	0.56
10:G:23:ILE:O	10:G:27:ILE:HG13	2.04	0.56
1:0:1398:G:H2'	1:0:1399:A:C8	2.41	0.56
4:A:1:GLY:HA2	4:A:197:VAL:HG23	1.87	0.56
2:9:3023:U:H6	2:9:3023:U:H5''	1.69	0.56
7:D:41:LEU:HA	7:D:44:ILE:CG2	2.35	0.56
11:H:35:ASN:HD21	11:H:80:ASN:HA	1.69	0.56
24:U:39:ALA:N	24:U:40:PRO:CD	2.67	0.56
26:W:78:GLU:HG2	26:W:79:GLU:N	2.18	0.56
6:C:104:ASP:HA	6:C:107:ARG:NH1	2.19	0.56
22:S:28:SER:O	22:S:32:ARG:HG3	2.05	0.56
17:N:47:ARG:HH11	17:N:47:ARG:HG3	1.70	0.56
16:M:143:ARG:NH1	16:M:173:ASP:OD2	2.36	0.56
1:0:1209:C:H2'	1:0:1210:G:C8	2.39	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:431:G:P	15:L:48:ARG:HH12	2.28	0.56
1:0:1352:A:N1	6:C:48:SER:HB3	2.20	0.56
1:0:1829:A:H2'	1:0:1830:C:H5'	1.88	0.56
1:0:1766:U:O2	1:0:1778:A:H5'	2.06	0.56
15:L:172:GLY:O	15:L:183:VAL:HG11	2.04	0.56
1:0:2404:G:O5'	19:P:68:GLY:HA3	2.04	0.56
1:0:392:U:O2'	15:L:182:LYS:HE2	2.05	0.56
14:K:90:ARG:NH2	14:K:121:ILE:HD11	2.21	0.56
20:Q:82:GLU:HG3	20:Q:83:LYS:N	2.20	0.56
21:R:52:VAL:HG22	21:R:66:VAL:HG22	1.88	0.56
12:I:26:VAL:HG13	12:I:36:VAL:HG11	1.88	0.56
2:9:3055:U:H4'	2:9:3056:A:H8	1.71	0.56
25:V:21:LEU:HD21	25:V:48:VAL:HG11	1.88	0.56
16:M:71:TRP:HE3	16:M:175:LEU:HD22	1.71	0.56
9:F:47:LEU:HB2	9:F:108:LEU:HD11	1.88	0.56
7:D:146:LYS:HZ1	16:M:107:ASN:HD21	1.51	0.56
5:B:24:PRO:HG3	5:B:204:GLY:HA2	1.87	0.56
1:0:2269:C:H2'	1:0:2270:G:H5'	1.86	0.56
24:U:58:THR:O	24:U:62:GLU:HG3	2.05	0.56
15:L:155:HIS:CE1	15:L:158:ARG:HE	2.23	0.56
1:0:64:G:H2'	1:0:65:C:C6	2.40	0.56
1:0:2011:A:H4'	1:0:2012:U:O5'	2.06	0.56
1:0:558:C:H2'	1:0:559:U:H5'	1.86	0.56
2:9:3028:U:H5''	16:M:40:ASN:ND2	2.20	0.56
1:0:960:G:H4'	38:0:8921:HOH:O	2.05	0.56
19:P:64:GLU:HG3	19:P:74:ASP:OD2	2.05	0.56
1:0:1139:U:H2'	1:0:1140:C:C6	2.40	0.56
1:0:445:U:H2'	1:0:446:G:H8	1.69	0.56
2:9:3025:G:H5''	2:9:3026:C:C6	2.40	0.56
26:W:37:LEU:CD1	26:W:85:VAL:HG21	2.32	0.56
12:I:74:ARG:NH1	12:I:76:ASP:HB2	2.20	0.56
5:B:175:LEU:O	5:B:175:LEU:HD23	2.05	0.56
1:0:732:C:H2'	1:0:733:U:C6	2.40	0.56
6:C:27:ARG:HG3	6:C:29:ASP:OD1	2.06	0.56
11:H:97:LYS:HD3	11:H:117:LYS:HD3	1.86	0.56
1:0:2364:A:H5''	19:P:15:LYS:HD3	1.87	0.56
1:0:1669:A:H2'	1:0:1670:G:C8	2.41	0.56
18:O:16:VAL:HG12	18:O:17:GLY:N	2.20	0.56
4:A:51:ARG:NH1	4:A:120:ARG:O	2.38	0.56
1:0:2768:A:O2'	1:0:2769:C:H5'	2.05	0.56
2:9:3029:C:H2'	2:9:3030:C:H5'	1.87	0.56
1:0:2054:A:C2	20:Q:128:ARG:NH2	2.74	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:862:U:H2'	1:0:863:G:C8	2.39	0.56
38:0:6414:HOH:O	5:B:298:LYS:HD3	2.06	0.56
1:0:1586:G:O2'	1:0:1587:U:H5'	2.06	0.56
7:D:25:MET:SD	7:D:40:ILE:HD11	2.46	0.56
7:D:69:ILE:O	7:D:69:ILE:HG22	2.05	0.56
8:E:31:ARG:NH1	8:E:68:HIS:CG	2.73	0.56
1:0:2310:G:OP2	11:H:114:PRO:HD2	2.05	0.56
15:L:134:ILE:O	15:L:136:PRO:HD3	2.05	0.56
5:B:82:VAL:HG12	5:B:82:VAL:O	2.06	0.56
1:0:2909:G:O2'	1:0:2910:A:H5'	2.06	0.56
1:0:2119:C:O2'	1:0:2120:U:H5'	2.06	0.56
12:I:27:ALA:HB1	12:I:87:LEU:CD2	2.36	0.56
7:D:10:PHE:CG	7:D:11:HIS:N	2.73	0.56
1:0:2426:G:H1'	38:0:6980:HOH:O	2.05	0.56
1:0:2435:U:OP1	31:2:28:GLY:HA3	2.06	0.56
1:0:1154:A:H2'	1:0:1155:G:C8	2.40	0.56
1:0:1453:G:H2'	1:0:1454:U:O4'	2.06	0.56
6:C:20:ASP:O	6:C:23:GLU:HB2	2.06	0.56
11:H:157:ILE:HG22	11:H:158:ASN:N	2.21	0.56
1:0:1733:A:H4'	5:B:212:GLN:HA	1.88	0.56
4:A:100:PRO:HG2	4:A:103:VAL:HG21	1.87	0.56
13:J:81:ARG:HB2	13:J:87:ARG:HH11	1.70	0.56
5:B:56:ASP:OD1	5:B:322:ARG:HB3	2.05	0.56
1:0:485:A:N3	1:0:487:G:H5'	2.21	0.56
26:W:66:THR:HG23	26:W:67:PRO:HD2	1.88	0.56
6:C:72:LYS:HG2	6:C:77:ALA:HA	1.86	0.56
12:I:99:GLU:HA	38:I:7377:HOH:O	2.06	0.56
20:Q:104:PHE:HB2	20:Q:109:MET:HE1	1.88	0.55
23:T:44:ARG:HB3	38:T:3805:HOH:O	2.06	0.55
1:0:1882:C:H2'	1:0:1883:U:C6	2.42	0.55
4:A:192:VAL:HG12	4:A:192:VAL:O	2.05	0.55
16:M:77:ASN:OD1	16:M:79:PRO:HD2	2.05	0.55
2:9:3023:U:H4'	2:9:3024:U:OP2	2.05	0.55
30:1:18:ASN:ND2	30:1:40:ARG:H	2.04	0.55
17:N:53:GLN:HG2	17:N:56:GLU:OE1	2.07	0.55
1:0:1657:A:H2'	1:0:1658:A:C8	2.41	0.55
11:H:46:VAL:HG21	38:H:8387:HOH:O	2.05	0.55
25:V:21:LEU:HD21	25:V:48:VAL:CG1	2.36	0.55
1:0:596:C:H2'	1:0:597:A:C8	2.41	0.55
5:B:280:VAL:HG13	5:B:334:SER:HA	1.88	0.55
18:O:7:LYS:HD3	18:O:21:VAL:HG21	1.87	0.55
38:0:7746:HOH:O	15:L:178:LYS:HB2	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:125:ASN:CB	4:A:158:VAL:HG12	2.36	0.55
9:F:61:MET:HB3	15:L:19:GLN:OE1	2.05	0.55
14:K:66:VAL:HG23	14:K:67:ARG:N	2.21	0.55
25:V:149:LEU:HG	25:V:153:MET:HE2	1.87	0.55
1:0:671:A:O2'	1:0:672:G:H2'	2.07	0.55
1:0:1223:G:O2'	1:0:1224:G:H5'	2.06	0.55
31:2:3:MET:O	31:2:90:PHE:HA	2.05	0.55
27:X:103:THR:HG22	27:X:104:GLU:OE2	2.07	0.55
6:C:168:ARG:NH2	6:C:190:ALA:O	2.39	0.55
9:F:56:PRO:HG2	15:L:43:PRO:O	2.06	0.55
1:0:542:A:H2'	1:0:543:G:O4'	2.07	0.55
21:R:32:ALA:HA	21:R:36:GLU:OE1	2.06	0.55
7:D:99:ASP:HB2	7:D:103:ASN:HB2	1.88	0.55
28:Y:56:MET:HA	28:Y:62:TYR:O	2.06	0.55
1:0:319:A:H4'	1:0:338:C:C4	2.41	0.55
26:W:31:ILE:O	26:W:35:GLU:HG3	2.06	0.55
1:0:1789:G:O6	18:O:73:HIS:HE1	1.89	0.55
1:0:793:A:H5''	18:O:83:LYS:HG2	1.89	0.55
28:Y:42:CYS:SG	28:Y:44:PHE:HB2	2.47	0.55
8:E:81:GLU:HG2	8:E:134:SER:HB3	1.88	0.55
4:A:105:VAL:CG1	4:A:154:ALA:HB1	2.36	0.55
1:0:1249:U:H2'	1:0:1250:C:C6	2.41	0.55
1:0:67:A:H5''	1:0:69:A:C8	2.41	0.55
6:C:124:VAL:HA	6:C:230:GLY:O	2.07	0.55
9:F:37:THR:O	9:F:41:GLU:HG3	2.07	0.55
1:0:420:U:H2'	1:0:421:C:C6	2.42	0.55
1:0:2715:G:O2'	5:B:262:ARG:HD2	2.06	0.55
6:C:139:VAL:CG2	6:C:240:LEU:HD12	2.37	0.55
15:L:12:TRP:O	15:L:15:PRO:HD3	2.07	0.55
15:L:47:ASP:CG	15:L:48:ARG:H	2.09	0.55
22:S:71:VAL:HG13	22:S:91:LEU:O	2.07	0.55
7:D:23:VAL:HG21	7:D:45:THR:HG21	1.87	0.55
4:A:36:ASP:HB2	4:A:84:VAL:N	2.22	0.55
1:0:432:G:O2'	1:0:433:C:H5'	2.07	0.55
10:G:71:LEU:O	10:G:73:ASP:N	2.40	0.55
15:L:134:ILE:HG23	15:L:141:ILE:HD13	1.89	0.55
8:E:7:ILE:HG22	8:E:45:ASP:O	2.07	0.55
11:H:31:PHE:HA	11:H:85:ILE:CG2	2.37	0.55
4:A:179:MET:HG2	4:A:186:TRP:CG	2.42	0.55
13:J:74:VAL:HG12	13:J:75:ARG:HG3	1.89	0.55
28:Y:27:ALA:HA	38:Y:8416:HOH:O	2.07	0.55
2:9:3114:G:O6	16:M:11:ARG:HD3	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:F:91:VAL:CG1	9:F:92:GLY:N	2.70	0.55
7:D:54:ALA:HB2	7:D:69:ILE:HD12	1.88	0.55
4:A:125:ASN:HB3	4:A:158:VAL:HG12	1.88	0.55
15:L:149:TRP:O	15:L:152:ARG:HG2	2.07	0.55
6:C:218:VAL:N	38:C:8434:HOH:O	2.40	0.55
1:O:1165:G:H1'	1:O:1174:A:H1'	1.89	0.54
4:A:170:VAL:HG13	28:Y:22:ILE:HG21	1.89	0.54
1:O:1942:A:H2'	1:O:1943:C:H6	1.72	0.54
1:O:596:C:H2'	1:O:597:A:H8	1.72	0.54
1:O:2600:A:H2'	1:O:2601:A:O4'	2.07	0.54
1:O:832:U:H2'	1:O:833:G:H8	1.72	0.54
21:R:11:THR:H	21:R:14:ALA:HB3	1.71	0.54
9:F:50:VAL:HG21	9:F:63:ILE:HG21	1.89	0.54
13:J:75:ARG:HG2	13:J:90:PHE:CD2	2.42	0.54
1:O:1943:C:O4'	4:A:212:PRO:HA	2.08	0.54
1:O:2777:G:O2'	1:O:2778:A:H5'	2.07	0.54
1:O:398:U:H2'	1:O:399:C:C6	2.43	0.54
25:V:125:HIS:CD2	25:V:127:GLY:H	2.25	0.54
1:O:2502:C:H2'	1:O:2503:A:C5'	2.36	0.54
1:O:2718:C:H6	1:O:2718:C:H5'	1.71	0.54
1:O:506:G:N2	1:O:509:A:H5'	2.19	0.54
1:O:2072:G:C6	1:O:2533:C:H1'	2.42	0.54
1:O:2769:C:C2'	1:O:2770:G:H5'	2.37	0.54
24:U:57:LYS:HA	24:U:60:GLN:HE21	1.71	0.54
1:O:825:U:H5''	1:O:826:U:OP1	2.07	0.54
11:H:3:GLY:HA2	11:H:57:ARG:NH1	2.23	0.54
1:O:1377:C:H5'	1:O:1377:C:H6	1.71	0.54
1:O:2885:A:H2'	1:O:2886:C:H6	1.71	0.54
8:E:5:LEU:HD21	8:E:66:GLN:HG3	1.89	0.54
25:V:90:TYR:CE2	25:V:99:ALA:HB2	2.41	0.54
1:O:2419:U:H5''	1:O:2420:G:H5'	1.89	0.54
21:R:57:THR:C	21:R:59:ASP:H	2.11	0.54
6:C:40:ALA:CB	6:C:100:LEU:HD12	2.37	0.54
2:9:3064:C:C2'	2:9:3065:A:H5'	2.37	0.54
14:K:65:ASP:CG	14:K:111:ALA:HB3	2.28	0.54
1:O:263:U:O4'	9:F:59:ILE:HD13	2.07	0.54
1:O:1119:G:N2	1:O:1246:A:H2	2.05	0.54
9:F:28:ALA:HB3	9:F:99:THR:O	2.07	0.54
14:K:73:VAL:HG23	14:K:74:THR:N	2.22	0.54
25:V:125:HIS:HD2	25:V:127:GLY:H	1.55	0.54
26:W:21:PRO:HG2	26:W:24:LYS:HD3	1.90	0.54
1:O:2050:G:H5''	20:Q:80:TYR:O	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2766:A:O2'	1:0:2767:C:H5'	2.07	0.54
2:9:3076:G:C3'	2:9:3077:A:H5''	2.28	0.54
31:2:69:TYR:HB2	31:2:78:HIS:CE1	2.43	0.54
1:0:1666:C:O2'	1:0:1667:A:C5'	2.55	0.54
1:0:2897:C:H2'	1:0:2898:G:C8	2.41	0.54
1:0:2676:C:H4'	12:I:70:PHE:CE1	2.42	0.54
1:0:100:C:H4'	22:S:16:LEU:HB2	1.90	0.54
4:A:42:VAL:HG21	4:A:74:VAL:CG1	2.38	0.54
2:9:3056:A:H1'	7:D:14:ARG:HG2	1.90	0.54
6:C:16:VAL:HG12	6:C:17:ASP:N	2.22	0.54
1:0:282:C:H1'	1:0:368:C:H42	1.70	0.54
11:H:31:PHE:HD2	11:H:85:ILE:O	1.90	0.54
1:0:1331:A:OP2	27:X:142:SER:OG	2.23	0.54
1:0:263:U:C4	9:F:54:VAL:HG13	2.42	0.54
1:0:660:A:H4'	1:0:661:G:O5'	2.08	0.54
8:E:24:GLY:HA3	8:E:76:VAL:HB	1.90	0.54
5:B:305:ASP:O	5:B:306:LYS:HB2	2.08	0.54
5:B:248:ARG:O	5:B:251:VAL:HG13	2.08	0.54
28:Y:48:LYS:HG2	38:Y:8435:HOH:O	2.08	0.54
1:0:2112:A:H2'	1:0:2113:G:C8	2.41	0.54
18:O:29:GLY:O	18:O:32:ALA:HB3	2.07	0.54
2:9:3006:C:C5'	16:M:37:ARG:NH1	2.67	0.54
9:F:28:ALA:CB	9:F:99:THR:HG23	2.37	0.54
30:1:39:ARG:HG2	38:1:3143:HOH:O	2.06	0.54
1:0:2379:G:H4'	1:0:2380:A:H5''	1.90	0.54
7:D:140:ARG:O	7:D:144:ARG:HG2	2.07	0.54
16:M:34:LEU:HD22	16:M:129:ILE:HD13	1.88	0.54
1:0:947:U:H2'	1:0:948:G:H8	1.70	0.54
20:Q:98:ASN:N	20:Q:98:ASN:HD22	2.04	0.54
4:A:53:ALA:HB3	38:A:8617:HOH:O	2.08	0.54
1:0:1641:A:C2'	1:0:1642:A:H5'	2.38	0.54
16:M:154:LEU:HD11	38:M:8526:HOH:O	2.08	0.54
1:0:60:A:O2'	1:0:61:G:H5'	2.08	0.54
1:0:2437:A:H2'	1:0:2438:G:C8	2.42	0.54
1:0:512:G:O3'	1:0:513:A:H8	1.91	0.54
16:M:34:LEU:HA	16:M:47:LEU:HD23	1.89	0.53
1:0:249:G:O2'	1:0:250:C:H5'	2.08	0.53
29:Z:28:HIS:HD2	29:Z:30:LYS:H	1.56	0.53
13:J:28:GLU:OE2	13:J:58:THR:HG21	2.08	0.53
5:B:52:VAL:O	5:B:53:LEU:HD12	2.06	0.53
1:0:1123:A:C2	1:0:1129:C:H4'	2.43	0.53
1:0:168:C:O2'	1:0:169:A:H5'	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:415:A:O2'	1:0:416:G:H5'	2.09	0.53
16:M:139:TRP:HA	16:M:139:TRP:CE3	2.42	0.53
8:E:84:MET:HB2	8:E:131:LEU:HB2	1.89	0.53
15:L:87:MET:HB2	15:L:91:ILE:CD1	2.36	0.53
31:2:56:PRO:HA	38:2:8553:HOH:O	2.07	0.53
1:0:639:A:H2'	1:0:640:G:C8	2.43	0.53
7:D:94:ALA:HB3	7:D:174:VAL:HA	1.89	0.53
38:9:8461:HOH:O	19:P:25:PRO:HB2	2.08	0.53
1:0:316:A:N3	1:0:336:G:O2'	2.39	0.53
1:0:352:A:H2'	1:0:353:G:C8	2.43	0.53
9:F:52:GLU:HG3	9:F:77:VAL:O	2.09	0.53
28:Y:30:GLU:HB2	38:Y:8416:HOH:O	2.07	0.53
1:0:447:A:O2'	1:0:448:G:H5'	2.08	0.53
7:D:54:ALA:CB	7:D:69:ILE:HD12	2.38	0.53
1:0:1884:G:O6	4:A:190:ARG:HD2	2.07	0.53
1:0:1666:C:H2'	1:0:1667:A:H8	1.73	0.53
14:K:61:ALA:HA	38:K:8569:HOH:O	2.08	0.53
1:0:2791:U:H1'	1:0:2792:A:H5''	1.91	0.53
22:S:19:ARG:NH1	22:S:68:ASP:O	2.41	0.53
1:0:381:G:H5''	38:0:5237:HOH:O	2.06	0.53
1:0:2276:U:H2'	1:0:2277:U:C6	2.43	0.53
1:0:1528:A:H2'	1:0:1529:G:O4'	2.08	0.53
1:0:1182:C:H1'	1:0:1192:A:H8	1.73	0.53
9:F:63:ILE:HB	9:F:64:PRO:CD	2.33	0.53
1:0:797:A:C4'	28:Y:10:ARG:N	2.72	0.53
16:M:11:ARG:HG3	16:M:14:ARG:HH12	1.72	0.53
1:0:1805:G:H2'	1:0:1806:G:C8	2.40	0.53
13:J:98:VAL:CG1	13:J:102:GLU:HA	2.38	0.53
1:0:1825:U:O2'	1:0:1826:C:H5'	2.08	0.53
18:O:131:PHE:CD1	18:O:137:LEU:HD13	2.43	0.53
13:J:34:VAL:HG22	13:J:47:ALA:HB2	1.90	0.53
1:0:2243:C:HO2'	1:0:2244:A:H8	1.56	0.53
7:D:59:GLY:O	7:D:61:PHE:N	2.35	0.53
1:0:1471:A:H2'	1:0:1472:C:C6	2.43	0.53
22:S:37:GLN:OE1	22:S:118:SER:HA	2.09	0.53
1:0:810:G:H2'	1:0:811:C:C6	2.43	0.53
6:C:127:ARG:HG2	6:C:127:ARG:NH1	2.20	0.53
1:0:2781:U:O2'	1:0:2782:G:H5'	2.08	0.53
31:2:65:THR:HB	31:2:83:TRP:H	1.73	0.53
1:0:1516:C:H2'	1:0:1517:U:C6	2.44	0.53
1:0:2247:C:O2'	1:0:2248:C:H5'	2.07	0.53
25:V:52:VAL:HG22	25:V:53:ALA:H	1.74	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2353:A:O2'	16:M:7:LYS:HB3	2.08	0.53
14:K:133:VAL:HG13	38:K:8558:HOH:O	2.09	0.53
7:D:57:THR:HG23	7:D:63:ILE:CG2	2.38	0.53
20:Q:18:LEU:HD12	20:Q:143:VAL:CG1	2.38	0.53
1:0:111:C:O2'	1:0:112:G:H5'	2.07	0.53
1:0:861:A:H2'	1:0:862:U:C6	2.43	0.53
1:0:462:A:C2	30:1:37:HIS:HB3	2.43	0.53
1:0:1934:A:C8	1:0:1935:C:C5	2.96	0.53
25:V:81:ASP:OD1	25:V:92:ASP:HB2	2.09	0.53
1:0:1058:A:H2'	1:0:1060:C:H5''	1.91	0.53
15:L:32:ARG:HH21	15:L:123:ASP:HB3	1.74	0.53
7:D:41:LEU:CA	7:D:44:ILE:HG22	2.37	0.53
1:0:280:C:H2'	1:0:281:U:O4'	2.09	0.53
16:M:167:ASP:O	16:M:168:LEU:HD23	2.08	0.53
1:0:2721:U:H4'	13:J:87:ARG:HG3	1.91	0.53
1:0:120:A:H2'	1:0:120:A:N3	2.23	0.53
1:0:1132:A:N6	1:0:1229:C:H2'	2.24	0.53
1:0:1701:A:H4'	1:0:1702:U:H5''	1.89	0.53
7:D:23:VAL:HG23	7:D:41:LEU:HD22	1.89	0.53
1:0:2712:G:H5'	38:J:4183:HOH:O	2.09	0.53
16:M:71:TRP:CE3	16:M:175:LEU:HD22	2.43	0.53
4:A:220:PRO:HD2	4:A:223:ARG:HD3	1.90	0.53
1:0:703:G:O2'	1:0:704:C:H5'	2.09	0.53
38:0:4718:HOH:O	15:L:189:VAL:HG21	2.08	0.53
25:V:108:ARG:HE	25:V:114:PRO:HG3	1.74	0.53
20:Q:118:LYS:HE3	20:Q:139:PRO:HB3	1.91	0.53
12:I:46:ILE:HG12	12:I:53:ILE:HD13	1.91	0.53
24:U:39:ALA:O	24:U:41:GLU:N	2.42	0.53
20:Q:29:LYS:HB3	38:Q:8533:HOH:O	2.08	0.53
1:0:661:G:C5	1:0:686:A:C2	2.96	0.53
1:0:1304:U:H2'	1:0:1305:C:C6	2.44	0.53
1:0:394:G:H1	15:L:181:GLU:CD	2.12	0.53
2:9:3060:C:O2'	2:9:3061:C:H5'	2.08	0.53
25:V:10:GLU:HG3	25:V:11:VAL:N	2.24	0.53
11:H:147:ARG:HA	11:H:150:LYS:HZ3	1.73	0.53
1:0:1878:G:O2'	1:0:1879:U:P	2.67	0.53
2:9:3041:C:O4'	7:D:50:VAL:HG23	2.08	0.53
5:B:87:TYR:HD1	38:B:8592:HOH:O	1.91	0.53
22:S:35:TYR:CG	22:S:112:LEU:HD22	2.43	0.53
7:D:95:THR:C	7:D:97:GLN:H	2.13	0.53
1:0:1515:A:H2'	1:0:1516:C:C6	2.43	0.53
1:0:324:G:O2'	1:0:325:U:H5'	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1714:C:O2'	1:0:1715:C:H5'	2.08	0.53
15:L:87:MET:CB	31:2:46:ILE:HG21	2.38	0.52
6:C:175:LYS:HD3	6:C:184:ARG:O	2.09	0.52
1:0:1850:U:H2'	1:0:1851:G:C8	2.44	0.52
1:0:1829:A:H5''	38:0:4035:HOH:O	2.09	0.52
6:C:130:GLU:HG2	6:C:168:ARG:HD3	1.91	0.52
25:V:1:MET:N	25:V:37:GLU:HG3	2.24	0.52
1:0:2812:A:C2	1:0:2814:A:N6	2.72	0.52
1:0:470:U:O2'	29:Z:16:HIS:CD2	2.61	0.52
1:0:695:C:O2'	1:0:696:C:H5'	2.08	0.52
1:0:949:U:O2'	19:P:40:HIS:HE1	1.92	0.52
1:0:858:U:H2'	1:0:859:C:H6	1.74	0.52
1:0:1899:C:O2'	1:0:1900:A:H5'	2.09	0.52
1:0:2115:U:H2'	1:0:2116:U:C6	2.44	0.52
11:H:26:LYS:CD	11:H:28:ILE:HB	2.39	0.52
28:Y:31:ILE:HG23	28:Y:32:LYS:N	2.25	0.52
4:A:88:ILE:O	4:A:88:ILE:HG22	2.09	0.52
9:F:13:GLU:OE2	9:F:78:GLU:HG2	2.09	0.52
1:0:1821:A:O2'	1:0:1822:A:H5'	2.09	0.52
7:D:154:LYS:H	7:D:154:LYS:CD	2.17	0.52
1:0:1206:U:C6	1:0:1206:U:H5'	2.37	0.52
4:A:94:LEU:HG	4:A:99:ILE:CD1	2.38	0.52
16:M:151:ASP:OD1	16:M:154:LEU:HD13	2.10	0.52
1:0:1634:G:H2'	1:0:1635:U:C6	2.44	0.52
1:0:2468:A:H61	31:2:48:ASN:HD21	1.58	0.52
1:0:1568:G:O2'	1:0:1569:U:H5'	2.08	0.52
1:0:1055:G:OP2	11:H:94:ARG:NH1	2.43	0.52
1:0:332:G:O2'	1:0:333:G:H5'	2.10	0.52
1:0:1638:U:O2'	1:0:1639:U:H5'	2.09	0.52
7:D:23:VAL:HG23	7:D:23:VAL:O	2.09	0.52
1:0:2346:C:O5'	1:0:2346:C:H6	1.92	0.52
25:V:65:VAL:CG1	25:V:116:LEU:HD13	2.38	0.52
2:9:3064:C:H2'	2:9:3065:A:H5'	1.91	0.52
1:0:858:U:H2'	1:0:859:C:C6	2.43	0.52
9:F:49:PHE:O	9:F:95:ALA:HA	2.09	0.52
1:0:621:C:H5'	27:X:132:ASP:OD2	2.10	0.52
1:0:1268:C:H2'	1:0:1269:G:H8	1.75	0.52
5:B:162:MET:HE3	5:B:308:LEU:CD2	2.31	0.52
1:0:1191:A:C3'	1:0:1192:A:H5''	2.38	0.52
4:A:192:VAL:O	4:A:207:GLN:HG2	2.10	0.52
1:0:2781:U:C2'	1:0:2782:G:H5'	2.40	0.52
1:0:2326:U:H4'	1:0:2412:G:H4'	1.90	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:221:G:H2'	1:0:222:A:C8	2.44	0.52
1:0:1787:C:H4'	1:0:2883:A:O4'	2.10	0.52
1:0:330:C:H5	6:C:170:ASP:OD2	1.92	0.52
1:0:240:C:O2	1:0:240:C:H2'	2.10	0.52
5:B:101:TRP:HB2	5:B:119:HIS:CD2	2.45	0.52
1:0:2266:A:OP2	15:L:90:ARG:NH2	2.42	0.52
1:0:1513:C:O2'	1:0:1514:C:H5'	2.10	0.52
1:0:1456:C:H2'	1:0:1457:U:C6	2.44	0.52
6:C:236:THR:O	6:C:239:ALA:N	2.43	0.52
22:S:71:VAL:HG12	22:S:72:ILE:N	2.23	0.52
1:0:1134:G:OP2	11:H:156:THR:HG23	2.09	0.52
22:S:9:LYS:HE3	22:S:13:ARG:HH11	1.70	0.52
8:E:15:GLN:HG2	8:E:19:ASP:O	2.10	0.52
1:0:2909:G:H2'	1:0:2910:A:H8	1.75	0.52
15:L:52:LEU:HD13	15:L:116:ASN:CG	2.30	0.52
25:V:38:THR:HG22	25:V:39:ASP:H	1.74	0.52
1:0:1730:G:H5'	1:0:1731:C:C5	2.45	0.52
1:0:269:G:O3'	1:0:274:G:H4'	2.09	0.52
16:M:62:HIS:HB3	16:M:65:ASP:OD1	2.09	0.52
1:0:289:G:O2'	1:0:290:C:H5'	2.10	0.52
8:E:15:GLN:HB2	8:E:20:ILE:HG23	1.92	0.52
1:0:1878:G:O2'	1:0:1879:U:C6	2.60	0.52
5:B:36:PRO:HA	5:B:168:GLY:HA2	1.92	0.52
1:0:2269:C:H2'	1:0:2270:G:C5'	2.40	0.52
1:0:105:G:O2'	1:0:106:A:H5'	2.10	0.52
1:0:1497:G:H4'	1:0:1627:G:O2'	2.10	0.52
1:0:226:A:H1'	1:0:393:G:C5	2.45	0.52
1:0:2903:C:O2'	1:0:2904:U:H5'	2.10	0.52
11:H:47:GLU:HG2	11:H:133:ILE:HD12	1.91	0.52
1:0:155:C:O2'	1:0:156:C:H5'	2.10	0.52
11:H:59:ASN:ND2	11:H:59:ASN:N	2.56	0.52
1:0:542:A:H5'	1:0:542:A:C8	2.37	0.52
7:D:38:GLU:OE2	7:D:51:ARG:CZ	2.57	0.52
15:L:47:ASP:CG	15:L:48:ARG:N	2.64	0.52
1:0:1527:A:H1'	1:0:1528:A:C8	2.45	0.52
17:N:84:THR:CG2	17:N:88:LYS:HE3	2.40	0.52
9:F:30:LYS:HB2	9:F:97:ALA:HB3	1.91	0.52
16:M:180:LEU:O	16:M:181:ASP:HB3	2.08	0.52
1:0:1345:A:H2'	1:0:1346:U:C6	2.45	0.52
1:0:175:G:H2'	15:L:192:ALA:HB3	1.91	0.52
22:S:63:ILE:HD11	22:S:75:GLU:HB2	1.91	0.52
1:0:189:A:OP1	15:L:171:ARG:NH2	2.43	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:P:26:PRO:O	19:P:30:VAL:HG23	2.10	0.51
1:0:1634:G:H2'	1:0:1635:U:H6	1.74	0.51
13:J:98:VAL:HG13	13:J:99:ASP:N	2.24	0.51
1:0:255:A:H2'	1:0:256:C:C6	2.45	0.51
25:V:26:ILE:HG13	25:V:26:ILE:O	2.10	0.51
22:S:9:LYS:HB2	38:S:7242:HOH:O	2.10	0.51
25:V:13:MET:CE	25:V:17:ILE:HG22	2.39	0.51
5:B:63:GLU:HG3	5:B:63:GLU:O	2.10	0.51
1:0:2781:U:H1'	8:E:139:GLU:OE2	2.10	0.51
1:0:820:G:C5	4:A:171:LYS:HB2	2.46	0.51
15:L:52:LEU:HD13	15:L:116:ASN:CB	2.40	0.51
1:0:1909:A:N1	1:0:2128:G:H1'	2.25	0.51
15:L:147:LEU:O	15:L:149:TRP:N	2.43	0.51
19:P:42:LYS:NZ	19:P:43:ILE:O	2.42	0.51
27:X:178:HIS:CG	27:X:179:PRO:HD2	2.46	0.51
25:V:73:LEU:O	25:V:74:GLU:HG3	2.11	0.51
1:0:2531:U:O2'	1:0:2532:A:H5'	2.10	0.51
1:0:2296:C:H5	19:P:3:SER:HG	1.58	0.51
9:F:48:VAL:CG2	9:F:74:PHE:HB3	2.40	0.51
1:0:1820:G:C6	1:0:2030:A:C2	2.98	0.51
5:B:62:ARG:HA	5:B:65:MET:CE	2.38	0.51
5:B:62:ARG:HA	5:B:65:MET:HE2	1.92	0.51
5:B:304:PRO:CG	5:B:307:ARG:NH1	2.73	0.51
2:9:3007:G:H5'	38:9:8479:HOH:O	2.09	0.51
1:0:2121:G:H1'	38:0:5481:HOH:O	2.10	0.51
1:0:816:G:H5'	1:0:1598:A:H4'	1.93	0.51
17:N:96:VAL:HG13	17:N:100:GLN:HB2	1.93	0.51
7:D:170:TYR:O	7:D:171:ASP:HB3	2.09	0.51
1:0:1218:U:H2'	1:0:1219:U:C6	2.44	0.51
1:0:419:A:H1'	1:0:1921:A:C2	2.45	0.51
8:E:11:VAL:CG1	8:E:12:ASP:N	2.72	0.51
16:M:115:VAL:HG23	38:M:8559:HOH:O	2.10	0.51
5:B:72:THR:HB	38:B:8619:HOH:O	2.09	0.51
5:B:280:VAL:HG13	5:B:333:GLU:O	2.10	0.51
1:0:958:G:H2'	1:0:959:C:C6	2.45	0.51
5:B:212:GLN:HB2	5:B:257:THR:CG2	2.38	0.51
1:0:1159:G:H21	1:0:1189:A:H8	1.58	0.51
24:U:64:GLY:O	24:U:65:ASP:CB	2.58	0.51
16:M:154:LEU:O	16:M:155:GLU:CB	2.58	0.51
22:S:78:THR:HB	22:S:87:VAL:O	2.11	0.51
19:P:32:GLU:HA	19:P:71:TYR:OH	2.11	0.51
6:C:173:LYS:HB3	6:C:187:ARG:HG3	1.90	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:H:151:MET:CE	11:H:151:MET:HA	2.41	0.51
15:L:38:VAL:HG12	15:L:38:VAL:O	2.11	0.51
1:O:2346:C:O2'	1:O:2347:C:H5'	2.11	0.51
8:E:31:ARG:HH12	8:E:68:HIS:CE1	2.29	0.51
1:O:2241:C:O2'	1:O:2242:U:H5'	2.11	0.51
17:N:96:VAL:CG1	17:N:100:GLN:HB2	2.41	0.51
1:O:39:G:H2'	1:O:40:C:O4'	2.11	0.51
1:O:1385:G:O3'	26:W:49:ARG:NH1	2.43	0.51
12:I:90:LYS:HB2	36:I:8502:CL:CL	2.47	0.51
25:V:4:LEU:CD2	25:V:54:PHE:HB3	2.38	0.51
1:O:506:G:H22	1:O:509:A:H5''	1.73	0.51
16:M:87:LEU:CD1	16:M:186:LEU:HD21	2.39	0.51
1:O:1810:C:OP1	23:T:44:ARG:NE	2.32	0.51
26:W:9:VAL:HG13	26:W:88:GLU:OE2	2.11	0.51
31:2:55:VAL:HG23	31:2:55:VAL:O	2.10	0.51
1:O:184:G:H5''	15:L:153:THR:CG2	2.41	0.51
1:O:2598:U:O2	1:O:2600:A:C8	2.63	0.51
1:O:2547:C:OP2	5:B:5:ARG:NH1	2.44	0.51
1:O:1332:C:O2'	1:O:1333:U:H5'	2.11	0.51
30:1:36:ASN:HB3	30:1:39:ARG:NE	2.25	0.51
5:B:294:TYR:HE2	38:B:8665:HOH:O	1.94	0.51
6:C:109:LEU:O	6:C:109:LEU:HD12	2.10	0.51
1:O:2785:C:H4'	1:O:2786:G:OP2	2.11	0.51
16:M:64:SER:C	16:M:66:LEU:H	2.12	0.51
15:L:27:ARG:NH2	15:L:44:THR:HG23	2.26	0.51
31:2:14:CYS:HB3	31:2:16:GLU:HG2	1.93	0.51
27:X:99:ALA:HB2	27:X:233:TYR:CE2	2.45	0.51
1:O:1333:U:H2'	1:O:1334:C:H6	1.76	0.51
1:O:222:A:H2'	1:O:223:G:O4'	2.10	0.51
1:O:920:C:H5''	1:O:921:G:O5'	2.11	0.51
28:Y:22:ILE:O	28:Y:26:VAL:HG23	2.11	0.51
31:2:69:TYR:O	31:2:77:ALA:HA	2.10	0.51
1:O:1189:A:H1'	1:O:1209:C:O4'	2.11	0.51
1:O:1855:G:H4'	1:O:1856:C:O5'	2.09	0.51
15:L:155:HIS:ND1	15:L:158:ARG:NE	2.54	0.51
1:O:1920:C:O2'	1:O:1921:A:H5'	2.11	0.51
2:9:3045:A:H2'	2:9:3046:C:H6	1.75	0.51
1:O:1654:U:H2'	4:A:47:HIS:CD2	2.46	0.51
11:H:26:LYS:HD3	11:H:89:PRO:CG	2.40	0.51
8:E:11:VAL:CG1	8:E:12:ASP:H	2.24	0.51
1:O:1849:G:H1'	1:O:2011:A:N1	2.26	0.51
1:O:1855:G:O6	4:A:141:PRO:HG2	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2676:C:H4'	12:I:70:PHE:HE1	1.76	0.51
1:0:1819:G:H2'	1:0:1820:G:H4'	1.93	0.51
5:B:75:GLU:C	5:B:77:PRO:HD3	2.32	0.51
28:Y:26:VAL:O	28:Y:30:GLU:HG3	2.11	0.50
31:2:70:ARG:HH11	31:2:70:ARG:HG2	1.76	0.50
21:R:33:SER:OG	21:R:36:GLU:HG3	2.12	0.50
25:V:13:MET:HE3	25:V:17:ILE:CG2	2.38	0.50
11:H:85:ILE:O	11:H:85:ILE:HG23	2.11	0.50
11:H:165:GLY:C	11:H:166:ASN:HD22	2.14	0.50
1:0:243:A:H61	1:0:269:G:H1'	1.75	0.50
4:A:200:PRO:HG2	4:A:225:VAL:HG21	1.94	0.50
1:0:195:C:H2'	1:0:196:G:H5'	1.93	0.50
1:0:2667:G:H1'	1:0:2914:A:N3	2.25	0.50
1:0:2314:G:C2'	1:0:2315:C:H5'	2.41	0.50
26:W:85:VAL:HG12	26:W:86:GLU:N	2.26	0.50
24:U:20:LEU:HD22	24:U:60:GLN:HE22	1.75	0.50
14:K:90:ARG:NH1	14:K:119:THR:HG21	2.26	0.50
6:C:165:ASP:O	6:C:168:ARG:HB3	2.12	0.50
19:P:75:ILE:HD13	19:P:84:ILE:HD11	1.94	0.50
1:0:426:G:H2'	1:0:427:C:O4'	2.12	0.50
1:0:1192:A:O2'	1:0:1193:A:OP1	2.29	0.50
1:0:1197:G:N2	38:0:7119:HOH:O	2.39	0.50
1:0:288:A:H2'	1:0:289:G:C8	2.45	0.50
1:0:283:U:H5	1:0:284:C:N4	2.09	0.50
16:M:24:LEU:HD13	19:P:26:PRO:HB3	1.93	0.50
14:K:125:PHE:CE1	14:K:140:VAL:HG13	2.47	0.50
1:0:1654:U:H2'	4:A:47:HIS:HD2	1.75	0.50
19:P:46:SER:O	19:P:48:PRO:HD3	2.12	0.50
1:0:213:G:N2	1:0:225:G:H2'	2.26	0.50
20:Q:119:VAL:HG12	20:Q:119:VAL:O	2.11	0.50
1:0:2758:G:H2'	1:0:2759:C:C6	2.47	0.50
1:0:182:G:O2'	1:0:183:A:H5'	2.12	0.50
5:B:217:ARG:CD	5:B:257:THR:HG22	2.41	0.50
21:R:51:GLN:HB3	21:R:67:ARG:NH1	2.26	0.50
7:D:86:THR:C	7:D:89:PRO:HD2	2.31	0.50
1:0:1804:A:H2'	1:0:1805:G:H8	1.74	0.50
2:9:3041:C:C6	7:D:50:VAL:HG21	2.47	0.50
13:J:82:ARG:NH2	13:J:115:ARG:HG2	2.26	0.50
11:H:165:GLY:HA3	38:H:8403:HOH:O	2.11	0.50
11:H:166:ASN:N	11:H:166:ASN:ND2	2.60	0.50
1:0:1398:G:O2'	1:0:1399:A:H5'	2.11	0.50
18:O:134:VAL:O	18:O:137:LEU:HB3	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:Q:119:VAL:CG2	20:Q:142:ASP:HB2	2.42	0.50
25:V:22:GLU:HG2	25:V:27:HIS:CD2	2.46	0.50
1:O:2862:G:H4'	5:B:336:GLN:O	2.12	0.50
1:O:2540:G:O2'	1:O:2541:U:H5''	2.11	0.50
8:E:107:PHE:CD2	8:E:108:LEU:HD13	2.47	0.50
7:D:99:ASP:CB	7:D:103:ASN:HB2	2.41	0.50
4:A:100:PRO:O	4:A:103:VAL:HG23	2.11	0.50
1:O:559:U:H2'	1:O:560:C:O4'	2.11	0.50
8:E:137:ASP:OD1	8:E:139:GLU:HB2	2.11	0.50
25:V:38:THR:O	25:V:42:ARG:HB2	2.11	0.50
1:O:1822:A:O2'	1:O:1823:G:H5'	2.11	0.50
2:9:3002:U:OP2	2:9:3002:U:H4'	2.11	0.50
8:E:16:ASP:O	8:E:17:HIS:HB2	2.11	0.50
31:2:8:ASN:O	31:2:9:THR:HB	2.10	0.50
23:T:33:SER:O	23:T:37:GLU:HG3	2.12	0.50
11:H:86:ARG:HD3	11:H:130:HIS:HD2	1.77	0.50
5:B:207:LYS:HG2	5:B:304:PRO:HB3	1.93	0.50
26:W:9:VAL:HG13	26:W:88:GLU:OE1	2.12	0.50
1:O:1008:C:OP1	11:H:16:ARG:NH2	2.44	0.50
1:O:667:C:H2'	1:O:668:C:H6	1.76	0.50
7:D:97:GLN:O	7:D:97:GLN:HG2	2.11	0.50
1:O:1762:C:O2'	1:O:1763:C:H5'	2.11	0.50
1:O:20:G:H21	20:Q:117:HIS:HD2	1.60	0.50
20:Q:132:ARG:HG2	20:Q:133:ALA:N	2.26	0.50
22:S:71:VAL:CG1	22:S:90:PRO:HB3	2.25	0.50
25:V:122:ARG:NH1	25:V:122:ARG:CG	2.74	0.50
11:H:59:ASN:HD22	11:H:59:ASN:H	1.59	0.50
12:I:19:MET:HE1	12:I:132:LEU:HD21	1.93	0.50
14:K:148:GLU:HA	38:K:8578:HOH:O	2.10	0.50
14:K:104:ASP:HB3	38:K:8569:HOH:O	2.11	0.50
1:O:241:A:N1	1:O:378:A:H4'	2.27	0.50
15:L:166:ALA:HA	15:L:169:ARG:NH1	2.27	0.50
1:O:2626:C:H2'	1:O:2627:G:C8	2.47	0.50
38:O:5742:HOH:O	12:I:47:THR:HB	2.11	0.50
1:O:1538:C:O2'	1:O:1539:U:H5'	2.12	0.50
11:H:130:HIS:CG	11:H:133:ILE:HD11	2.47	0.50
6:C:237:GLU:HB2	38:C:8441:HOH:O	2.11	0.50
28:Y:38:LYS:CE	28:Y:45:LYS:HE2	2.38	0.50
38:O:5524:HOH:O	17:N:35:LYS:HD3	2.12	0.50
9:F:91:VAL:CG1	9:F:92:GLY:H	2.25	0.50
7:D:57:THR:HG23	7:D:63:ILE:CB	2.42	0.50
22:S:48:VAL:HG22	22:S:98:VAL:HA	1.92	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:O:38:GLU:HA	18:O:41:ARG:NH1	2.27	0.50
1:O:2699:A:H2'	1:O:2700:G:O4'	2.11	0.50
1:O:2251:G:H2'	1:O:2252:A:C8	2.46	0.50
25:V:60:GLU:O	25:V:63:GLU:HB2	2.12	0.50
25:V:63:GLU:HG2	25:V:93:ILE:HG22	1.92	0.50
1:O:151:A:C2	1:O:442:A:C8	3.00	0.50
1:O:2101:A:H2'	6:C:63:SER:OG	2.11	0.50
20:Q:111:ILE:HG23	20:Q:145:LEU:HD11	1.92	0.50
11:H:142:VAL:HG13	38:H:8387:HOH:O	2.12	0.50
15:L:38:VAL:C	15:L:63:VAL:HG13	2.33	0.50
4:A:199:HIS:CD2	4:A:201:PHE:HB2	2.47	0.50
13:J:49:LEU:HD21	13:J:74:VAL:O	2.12	0.50
5:B:304:PRO:HD2	5:B:307:ARG:NH1	2.27	0.50
1:O:1171:A:H2'	1:O:1172:G:H5'	1.94	0.50
1:O:1463:A:H2'	1:O:1464:U:C6	2.47	0.50
38:O:4491:HOH:O	15:L:152:ARG:HG3	2.12	0.50
1:O:353:G:H2'	1:O:354:A:C8	2.46	0.50
1:O:352:A:H2'	1:O:353:G:H8	1.75	0.50
22:S:19:ARG:HD3	22:S:67:LEU:O	2.12	0.50
1:O:2541:U:H2'	1:O:2542:C:C6	2.47	0.50
1:O:90:A:H2'	1:O:91:G:O4'	2.12	0.50
1:O:154:C:P	15:L:188:ARG:HH12	2.34	0.50
1:O:281:U:O2'	1:O:282:C:H5'	2.11	0.49
1:O:962:C:H2'	1:O:963:C:H5'	1.94	0.49
12:I:93:ARG:HH11	12:I:93:ARG:CB	2.25	0.49
1:O:2818:A:H2	38:B:8648:HOH:O	1.93	0.49
1:O:694:A:C2'	1:O:695:C:H5'	2.42	0.49
26:W:14:LEU:HD12	26:W:67:PRO:O	2.12	0.49
1:O:354:A:H2'	1:O:355:C:C6	2.47	0.49
18:O:71:LYS:O	18:O:71:LYS:HG3	2.12	0.49
1:O:2416:G:H2'	1:O:2417:C:C6	2.47	0.49
18:O:98:ILE:HD12	18:O:102:ARG:NE	2.27	0.49
1:O:1266:U:H4'	27:X:115:ARG:HH21	1.76	0.49
6:C:166:ILE:HD13	6:C:207:LEU:HD22	1.93	0.49
1:O:1174:A:C5	1:O:1201:C:H4'	2.46	0.49
7:D:40:ILE:HG23	38:D:5583:HOH:O	2.11	0.49
14:K:143:THR:CG2	14:K:144:ASP:N	2.76	0.49
12:I:39:VAL:HG11	12:I:107:ASN:HB2	1.92	0.49
1:O:396:U:OP2	31:2:38:ARG:NH1	2.37	0.49
1:O:2547:C:H2'	1:O:2548:C:H6	1.77	0.49
5:B:53:LEU:HD21	5:B:270:ILE:HD12	1.94	0.49
1:O:2911:C:H2'	1:O:2912:C:C6	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:1:41:HIS:N	30:1:45:ASN:HD22	2.02	0.49
9:F:27:GLY:HA3	9:F:101:ALA:O	2.12	0.49
1:0:1925:G:O2'	1:0:1926:G:H5'	2.12	0.49
29:Z:8:GLN:HE22	29:Z:11:LYS:NZ	2.11	0.49
1:0:2028:U:H2'	1:0:2029:C:H6	1.78	0.49
1:0:297:U:H2'	1:0:298:C:C6	2.47	0.49
1:0:2587:U:H2'	1:0:2589:U:H5''	1.94	0.49
2:9:3017:G:O2'	2:9:3018:U:H5'	2.12	0.49
8:E:34:TRP:O	12:I:127:ILE:HD11	2.12	0.49
1:0:1425:G:O2'	1:0:1426:C:H5'	2.12	0.49
6:C:164:ALA:O	6:C:167:ASP:HB2	2.12	0.49
2:9:3023:U:C3'	2:9:3024:U:C5'	2.87	0.49
16:M:159:TYR:HE2	16:M:163:PHE:HE2	1.60	0.49
1:0:962:C:C2'	1:0:963:C:H5'	2.42	0.49
1:0:119:A:H2'	1:0:120:A:H5''	1.95	0.49
1:0:657:G:H2'	1:0:658:C:C6	2.48	0.49
25:V:90:TYR:N	25:V:90:TYR:CD1	2.80	0.49
1:0:1935:C:H2'	1:0:1936:C:H6	1.76	0.49
1:0:214:U:H5'	38:0:7028:HOH:O	2.11	0.49
15:L:137:ASP:C	15:L:142:LYS:HE3	2.33	0.49
1:0:1483:C:O2'	1:0:1484:G:H5'	2.12	0.49
25:V:107:LEU:O	25:V:112:LEU:HB2	2.11	0.49
19:P:72:LYS:HG2	19:P:85:ILE:HD13	1.93	0.49
15:L:87:MET:HG2	31:2:46:ILE:HG21	1.94	0.49
1:0:1834:C:H2'	1:0:1840:A:H62	1.75	0.49
30:1:40:ARG:NH1	30:1:40:ARG:HG2	2.28	0.49
30:1:41:HIS:O	30:1:45:ASN:HB2	2.11	0.49
1:0:21:G:H5''	20:Q:1:GLY:O	2.12	0.49
16:M:110:THR:HB	16:M:113:SER:OG	2.12	0.49
5:B:329:TYR:CE2	23:T:15:PRO:HG2	2.48	0.49
18:O:13:VAL:HG21	18:O:41:ARG:HG2	1.94	0.49
1:0:1902:G:O2'	1:0:1903:U:H5'	2.12	0.49
20:Q:111:ILE:HG23	20:Q:145:LEU:CD1	2.42	0.49
1:0:1213:C:O2'	1:0:1214:G:H5'	2.12	0.49
1:0:1687:C:O2	29:Z:9:GLY:HA2	2.13	0.49
1:0:2478:U:H2'	1:0:2479:A:C8	2.47	0.49
25:V:4:LEU:O	25:V:32:CYS:HA	2.12	0.49
5:B:304:PRO:CD	5:B:307:ARG:NH1	2.76	0.49
1:0:1205:U:H2'	1:0:1206:U:H5''	1.94	0.49
6:C:107:ARG:HH11	6:C:107:ARG:HB3	1.74	0.49
16:M:22:GLN:HG2	16:M:26:LEU:HD22	1.95	0.49
12:I:6:PHE:HB3	12:I:109:TYR:OH	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:J:6:ALA:HB3	13:J:116:GLU:HG2	1.93	0.49
1:0:853:C:H2'	1:0:854:G:O4'	2.12	0.49
1:0:74:A:H2'	1:0:75:U:C6	2.47	0.49
1:0:2446:G:H2'	1:0:2447:A:H8	1.78	0.49
9:F:26:THR:HG21	9:F:103:ALA:CB	2.43	0.49
1:0:2563:U:H2'	1:0:2565:C:O5'	2.12	0.49
22:S:71:VAL:CG1	22:S:72:ILE:N	2.75	0.49
11:H:62:GLU:HA	38:H:8390:HOH:O	2.12	0.49
38:0:4656:HOH:O	15:L:157:LEU:HD11	2.12	0.49
2:9:3014:G:C8	2:9:3014:G:H5'	2.47	0.49
20:Q:82:GLU:O	20:Q:86:LYS:HG3	2.13	0.49
20:Q:119:VAL:HG21	20:Q:142:ASP:CG	2.33	0.49
1:0:1735:C:O2'	1:0:1736:A:H5'	2.13	0.49
2:9:3035:C:H5''	38:9:8457:HOH:O	2.12	0.49
25:V:115:THR:HG23	38:V:5420:HOH:O	2.12	0.49
1:0:1563:G:O2'	1:0:1564:C:OP2	2.23	0.49
1:0:894:A:C2	6:C:87:ARG:NH2	2.81	0.49
15:L:164:THR:HB	38:L:8519:HOH:O	2.12	0.49
1:0:1134:G:H4'	11:H:151:MET:CE	2.32	0.49
1:0:182:G:H5'	38:0:6059:HOH:O	2.13	0.49
11:H:139:ASP:HA	38:H:8375:HOH:O	2.13	0.49
4:A:99:ILE:O	4:A:131:HIS:HE1	1.96	0.49
2:9:3041:C:H4'	7:D:48:MET:HB2	1.94	0.49
8:E:137:ASP:O	8:E:141:VAL:HG23	2.13	0.49
29:Z:28:HIS:O	29:Z:32:LYS:N	2.40	0.49
6:C:21:VAL:C	6:C:23:GLU:H	2.16	0.49
7:D:58:VAL:HG12	7:D:59:GLY:N	2.27	0.49
25:V:67:ALA:HB2	25:V:93:ILE:HD13	1.93	0.49
11:H:131:ILE:HG23	11:H:132:PHE:CD1	2.48	0.49
1:0:1994:A:P	13:J:66:ARG:HH22	2.36	0.49
1:0:1181:A:O2'	1:0:1182:C:H5'	2.12	0.49
9:F:46:GLU:OE1	9:F:100:ASP:HA	2.13	0.49
12:I:93:ARG:HB3	12:I:93:ARG:NH1	2.24	0.49
6:C:174:ILE:HD13	6:C:185:LYS:HE2	1.94	0.49
1:0:2252:A:C5	1:0:2253:G:H1'	2.47	0.49
1:0:2377:U:O5'	1:0:2377:U:H6	1.95	0.49
1:0:849:C:O2'	1:0:850:U:H5'	2.12	0.49
1:0:1768:C:H2'	1:0:1769:C:O4'	2.13	0.49
1:0:684:G:H2'	1:0:685:C:C6	2.48	0.49
6:C:84:VAL:O	6:C:85:LYS:HB2	2.13	0.49
1:0:612:U:H2'	1:0:613:C:C6	2.48	0.49
7:D:167:GLU:C	7:D:169:THR:H	2.16	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:H:149:ALA:C	11:H:151:MET:H	2.15	0.49
1:O:1450:C:C4'	1:O:1451:C:OP2	2.55	0.49
24:U:1:THR:HG23	24:U:2:VAL:N	2.23	0.49
1:O:1942:A:O2'	1:O:1943:C:H5'	2.13	0.49
7:D:99:ASP:CB	7:D:103:ASN:H	2.25	0.49
5:B:274:GLU:HA	5:B:292:GLY:O	2.12	0.49
10:G:64:ASN:N	10:G:64:ASN:ND2	2.60	0.49
18:O:13:VAL:HG11	18:O:40:VAL:CG1	2.42	0.49
1:O:1086:A:C6	25:V:11:VAL:HG11	2.47	0.49
6:C:84:VAL:HG12	6:C:85:LYS:HG2	1.93	0.49
1:O:1162:G:H2'	1:O:1162:G:N3	2.27	0.49
1:O:682:A:H2'	1:O:683:G:O4'	2.11	0.49
30:1:18:ASN:HD21	30:1:40:ARG:H	1.61	0.48
15:L:37:VAL:CG1	15:L:63:VAL:HG11	2.43	0.48
1:O:2504:A:H2'	1:O:2505:G:O4'	2.13	0.48
18:O:59:ARG:HH22	18:O:66:GLN:NE2	2.11	0.48
1:O:776:A:OP1	29:Z:28:HIS:HE1	1.95	0.48
6:C:235:PHE:CE2	6:C:243:VAL:HG21	2.44	0.48
1:O:2668:G:H2'	1:O:2669:U:H6	1.78	0.48
13:J:34:VAL:HB	38:J:7169:HOH:O	2.12	0.48
4:A:200:PRO:HD3	38:A:8522:HOH:O	2.12	0.48
8:E:54:ASP:OD1	8:E:54:ASP:N	2.46	0.48
1:O:1203:G:O2'	1:O:1204:C:H5'	2.13	0.48
1:O:887:G:H2'	1:O:888:U:C6	2.48	0.48
1:O:1808:C:O2'	1:O:1809:G:H5'	2.13	0.48
1:O:2406:U:O2'	1:O:2407:G:H5'	2.13	0.48
15:L:164:THR:HG23	15:L:165:SER:H	1.75	0.48
16:M:72:GLU:HB3	16:M:171:HIS:HE1	1.78	0.48
2:9:3042:C:O2	7:D:76:ARG:NH1	2.46	0.48
7:D:93:LEU:HB3	7:D:97:GLN:OE1	2.13	0.48
1:O:1778:A:H2'	1:O:1779:A:H5'	1.94	0.48
15:L:172:GLY:C	15:L:183:VAL:HG11	2.34	0.48
1:O:2296:C:H2'	1:O:2297:U:H6	1.78	0.48
1:O:1375:A:O2'	1:O:1376:G:H5'	2.12	0.48
1:O:1007:A:H2'	11:H:19:TYR:CZ	2.48	0.48
25:V:88:THR:CG2	25:V:89:ASP:H	2.21	0.48
7:D:146:LYS:HE2	16:M:107:ASN:ND2	2.28	0.48
1:O:1535:G:H2'	1:O:1536:C:H6	1.78	0.48
1:O:1210:G:O2'	1:O:1211:G:H5'	2.14	0.48
1:O:2791:U:C1'	1:O:2792:A:H5''	2.43	0.48
19:P:32:GLU:O	19:P:93:ARG:NH2	2.45	0.48
2:9:3004:G:O2'	16:M:44:ARG:NH2	2.46	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:X:126:PRO:HG2	27:X:128:PHE:CE1	2.47	0.48
13:J:49:LEU:HA	13:J:73:VAL:HG12	1.95	0.48
1:0:1189:A:O2'	1:0:1208:C:H2'	2.12	0.48
1:0:821:U:H2'	1:0:822:C:H6	1.78	0.48
1:0:120:A:H5'	29:Z:20:ARG:HH21	1.78	0.48
9:F:32:GLY:N	38:F:3111:HOH:O	2.45	0.48
1:0:1829:A:C2'	1:0:1830:C:H5'	2.43	0.48
25:V:11:VAL:O	25:V:12:ASN:HB2	2.14	0.48
1:0:2089:A:O2'	1:0:2090:G:H5'	2.13	0.48
1:0:1015:C:H2'	1:0:1016:U:C6	2.48	0.48
9:F:50:VAL:CG2	9:F:63:ILE:HG21	2.43	0.48
31:2:70:ARG:NH1	31:2:70:ARG:HG2	2.28	0.48
23:T:52:THR:HG21	23:T:54:THR:HB	1.95	0.48
1:0:678:G:OP2	6:C:107:ARG:NH2	2.46	0.48
26:W:30:MET:CE	26:W:58:ALA:HB3	2.44	0.48
1:0:638:C:H2'	1:0:639:A:H8	1.77	0.48
14:K:40:PHE:CD1	14:K:41:HIS:N	2.82	0.48
9:F:117:GLU:C	9:F:119:ARG:N	2.67	0.48
4:A:179:MET:HA	4:A:179:MET:CE	2.43	0.48
24:U:55:ARG:O	24:U:59:ILE:HG12	2.14	0.48
20:Q:114:VAL:HA	20:Q:144:GLU:O	2.13	0.48
1:0:344:C:H2'	1:0:345:G:O4'	2.13	0.48
1:0:2387:U:H2'	1:0:2388:C:C6	2.48	0.48
2:9:3023:U:C6	2:9:3023:U:H5''	2.49	0.48
2:9:3026:C:O2'	2:9:3027:C:H5'	2.14	0.48
1:0:1166:A:N3	1:0:1166:A:H2'	2.28	0.48
1:0:2502:C:O2'	1:0:2503:A:H5'	2.13	0.48
11:H:157:ILE:CG2	11:H:158:ASN:N	2.77	0.48
1:0:182:G:O3'	15:L:157:LEU:CD1	2.62	0.48
15:L:108:LYS:HD3	15:L:108:LYS:N	2.28	0.48
25:V:122:ARG:HG2	25:V:152:ALA:O	2.14	0.48
26:W:43:VAL:CG1	26:W:44:ASP:N	2.75	0.48
1:0:1882:C:O2'	1:0:2012:U:OP2	2.32	0.48
19:P:30:VAL:O	19:P:30:VAL:HG12	2.13	0.48
1:0:1422:U:H2'	1:0:1423:C:H6	1.77	0.48
7:D:95:THR:CG2	7:D:174:VAL:HG22	2.43	0.48
2:9:3063:C:O2'	2:9:3064:C:H5'	2.14	0.48
18:O:94:TRP:CZ2	18:O:98:ILE:HG13	2.48	0.48
27:X:117:LEU:HD12	27:X:174:VAL:HG11	1.95	0.48
5:B:215:VAL:HA	5:B:220:VAL:HG22	1.94	0.48
7:D:56:ARG:N	38:D:6752:HOH:O	2.46	0.48
26:W:51:ASP:OD2	26:W:52:PRO:HD2	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:229:G:O2'	1:0:230:C:H5'	2.13	0.48
21:R:50:GLU:OE2	21:R:69:SER:HB3	2.14	0.48
1:0:707:C:C2	1:0:708:A:C8	3.02	0.48
22:S:40:VAL:HG22	22:S:41:ARG:N	2.28	0.48
1:0:2858:U:H2'	1:0:2859:C:C6	2.48	0.48
11:H:163:PRO:O	11:H:164:ALA:HB2	2.14	0.48
1:0:2348:C:H2'	1:0:2349:G:H8	1.78	0.48
1:0:2270:G:H4'	4:A:223:ARG:NH1	2.29	0.48
10:G:71:LEU:C	10:G:73:ASP:N	2.66	0.48
5:B:146:THR:O	5:B:148:PRO:HD3	2.14	0.48
1:0:2821:C:H4'	5:B:116:PRO:HB3	1.95	0.48
1:0:1321:A:H2'	1:0:1322:G:C8	2.49	0.48
6:C:129:HIS:CE1	6:C:231:ARG:HA	2.49	0.48
21:R:73:ASP:OD1	21:R:75:GLN:HB2	2.14	0.48
5:B:179:LEU:O	5:B:183:GLU:HG2	2.13	0.48
1:0:272:A:H5'	1:0:273:G:OP2	2.13	0.48
6:C:51:TYR:CE2	29:Z:53:LYS:HB3	2.48	0.48
24:U:12:THR:HG23	24:U:14:ALA:H	1.78	0.48
18:O:115:SER:O	18:O:117:SER:N	2.46	0.48
11:H:75:SER:C	11:H:79:ALA:HB2	2.34	0.48
5:B:279:THR:HG22	5:B:280:VAL:N	2.29	0.48
5:B:87:TYR:O	5:B:138:GLY:N	2.39	0.48
1:0:1972:U:C2'	1:0:1973:A:H5'	2.43	0.48
1:0:1900:A:H2'	1:0:1901:G:H8	1.78	0.48
38:O:3375:HOH:O	15:L:94:LYS:HE2	2.13	0.48
4:A:135:VAL:HG11	4:A:147:ARG:NH2	2.29	0.48
23:T:5:GLU:CG	23:T:10:GLY:O	2.61	0.48
1:0:1905:U:H2'	1:0:1906:C:H6	1.79	0.48
1:0:906:C:OP2	27:X:147:ARG:NH2	2.46	0.48
1:0:549:A:O2'	1:0:550:C:H5'	2.14	0.48
27:X:187:VAL:HG12	27:X:205:ILE:HA	1.96	0.48
31:2:69:TYR:CB	31:2:78:HIS:CE1	2.97	0.48
1:0:1154:A:H2'	1:0:1155:G:H8	1.77	0.48
8:E:80:TRP:O	8:E:134:SER:HA	2.13	0.48
1:0:1903:U:O2'	1:0:1904:A:N7	2.46	0.48
1:0:1218:U:H2'	1:0:1219:U:H6	1.79	0.48
1:0:466:A:H2'	1:0:467:G:O4'	2.13	0.48
1:0:1114:A:O2'	1:0:1115:U:H5'	2.12	0.48
1:0:1308:A:H2'	1:0:1309:U:H6	1.78	0.48
5:B:147:VAL:HG12	5:B:150:ALA:H	1.78	0.48
26:W:85:VAL:HG12	26:W:86:GLU:H	1.78	0.48
14:K:144:ASP:O	14:K:147:GLU:HB2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:B:168:GLY:H	5:B:174:ARG:HH11	1.62	0.48
1:O:1652:C:O4'	4:A:164:ARG:HG3	2.14	0.48
1:O:1462:C:H2'	1:O:1463:A:C8	2.49	0.48
1:O:1573:A:H2'	1:O:1574:C:O4'	2.14	0.48
1:O:1268:C:H2'	1:O:1269:G:C8	2.49	0.48
5:B:81:ALA:O	5:B:186:GLY:HA3	2.13	0.48
1:O:598:C:H2'	1:O:599:G:H8	1.78	0.48
5:B:14:GLY:HA2	5:B:15:PRO:C	2.35	0.48
1:O:2015:A:H2'	1:O:2016:U:O4'	2.13	0.48
29:Z:5:THR:HB	29:Z:6:PRO:CD	2.44	0.48
6:C:236:THR:O	6:C:237:GLU:C	2.52	0.47
5:B:43:GLY:O	5:B:308:LEU:HD12	2.13	0.47
6:C:118:THR:CG2	6:C:137:PRO:HB3	2.44	0.47
11:H:26:LYS:HG2	11:H:28:ILE:N	2.19	0.47
8:E:7:ILE:HD11	8:E:11:VAL:C	2.34	0.47
31:2:16:GLU:HG3	31:2:18:GLN:HE21	1.79	0.47
38:9:8479:HOH:O	16:M:18:THR:HG21	2.14	0.47
1:O:1298:U:H2'	1:O:1299:G:C8	2.49	0.47
14:K:24:ALA:CB	14:K:30:ARG:HD2	2.44	0.47
13:J:101:ASN:HB2	13:J:103:ASP:OD2	2.14	0.47
1:O:396:U:O2'	1:O:418:C:H4'	2.13	0.47
5:B:76:THR:N	5:B:77:PRO:HD3	2.28	0.47
22:S:41:ARG:NH1	22:S:42:VAL:O	2.47	0.47
1:O:1289:C:H3'	38:O:7289:HOH:O	2.14	0.47
1:O:2044:G:OP1	26:W:23:HIS:HE1	1.97	0.47
12:I:103:VAL:HG12	38:I:5907:HOH:O	2.13	0.47
1:O:764:C:H2'	1:O:765:G:O4'	2.14	0.47
1:O:2523:U:O2'	1:O:2524:G:H5'	2.13	0.47
6:C:132:ASP:HB3	38:C:8371:HOH:O	2.14	0.47
1:O:2735:U:H2'	1:O:2736:U:C6	2.49	0.47
11:H:72:VAL:HG11	11:H:81:TYR:CZ	2.49	0.47
6:C:236:THR:H	6:C:239:ALA:HB3	1.78	0.47
1:O:2503:A:OP1	11:H:147:ARG:NH2	2.44	0.47
8:E:7:ILE:CG2	8:E:45:ASP:O	2.62	0.47
9:F:28:ALA:HB3	9:F:99:THR:HG23	1.95	0.47
14:K:53:ARG:NH2	14:K:57:VAL:HG12	2.29	0.47
1:O:2539:U:C4	32:O:9500:SLD:H7	2.49	0.47
14:K:38:HIS:CD2	14:K:39:GLU:HG3	2.49	0.47
11:H:69:ASN:O	11:H:72:VAL:HG12	2.14	0.47
1:O:1717:A:H5''	18:O:54:LYS:HB2	1.96	0.47
1:O:1847:A:OP1	4:A:175:LYS:HG3	2.14	0.47
11:H:39:GLY:O	11:H:41:THR:N	2.47	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:C:240:LEU:HD23	6:C:240:LEU:O	2.13	0.47
1:0:157:G:H4'	15:L:95:LYS:CE	2.43	0.47
25:V:88:THR:CG2	25:V:110:GLN:NE2	2.72	0.47
25:V:119:HIS:CB	38:V:4276:HOH:O	2.62	0.47
5:B:211:THR:HA	5:B:255:GLY:O	2.14	0.47
4:A:164:ARG:HA	28:Y:69:TYR:HE1	1.78	0.47
4:A:65:ARG:C	4:A:66:ARG:HG3	2.35	0.47
1:0:1701:A:H5'	38:0:7166:HOH:O	2.13	0.47
1:0:1266:U:O2'	1:0:1267:C:H5'	2.14	0.47
4:A:114:ASP:HB2	4:A:117:LYS:HE2	1.96	0.47
1:0:1761:U:H5'	18:O:81:LYS:O	2.14	0.47
1:0:711:G:H1'	38:0:7966:HOH:O	2.13	0.47
11:H:26:LYS:HD2	11:H:28:ILE:CG1	2.45	0.47
2:9:3114:G:H2'	2:9:3115:C:C6	2.49	0.47
1:0:1851:G:O2'	1:0:1852:A:H5'	2.14	0.47
25:V:41:TYR:CD2	25:V:44:MET:HE3	2.49	0.47
1:0:310:U:H2'	1:0:311:C:C6	2.49	0.47
15:L:64:ARG:HD2	38:L:8587:HOH:O	2.13	0.47
11:H:140:PRO:HB3	38:H:8387:HOH:O	2.14	0.47
1:0:1603:A:H5'	1:0:1605:G:C4'	2.45	0.47
2:9:3047:A:C2	2:9:3048:C:C2	3.02	0.47
1:0:2255:A:O2'	1:0:2256:G:H5'	2.14	0.47
4:A:99:ILE:O	4:A:131:HIS:CE1	2.68	0.47
1:0:2266:A:H2'	1:0:2267:G:H8	1.77	0.47
1:0:431:G:O2'	1:0:432:G:H5'	2.13	0.47
1:0:2362:A:H2'	1:0:2363:G:C8	2.50	0.47
14:K:124:ASP:OD1	14:K:125:PHE:N	2.47	0.47
1:0:1782:G:O2'	1:0:1783:A:H5'	2.15	0.47
1:0:2437:A:H2'	1:0:2438:G:H8	1.79	0.47
11:H:81:TYR:C	11:H:81:TYR:CD1	2.86	0.47
1:0:1594:C:OP2	18:O:120:ARG:HD2	2.15	0.47
22:S:24:ARG:HH21	22:S:39:ASN:ND2	2.12	0.47
1:0:2473:U:O3'	1:0:2474:A:H3'	2.13	0.47
7:D:153:THR:O	7:D:156:ARG:HB2	2.14	0.47
1:0:288:A:H2'	1:0:289:G:H8	1.80	0.47
1:0:1592:G:O2'	1:0:1593:C:O5'	2.32	0.47
4:A:36:ASP:CB	4:A:85:ASP:H	2.27	0.47
5:B:82:VAL:HG12	5:B:101:TRP:CE3	2.48	0.47
1:0:1927:A:O2'	1:0:1928:C:H5'	2.14	0.47
5:B:320:GLN:HG3	5:B:321:PRO:HD2	1.96	0.47
4:A:153:ARG:CB	4:A:153:ARG:HH11	2.27	0.47
15:L:182:LYS:HD2	15:L:193:LYS:HB2	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:D:11:HIS:C	7:D:13:MET:H	2.17	0.47
22:S:24:ARG:HH21	22:S:39:ASN:HD22	1.60	0.47
17:N:39:THR:O	17:N:115:ARG:NH2	2.47	0.47
1:O:1593:C:H5'	18:O:116:SER:O	2.14	0.47
11:H:35:ASN:ND2	11:H:79:ALA:O	2.46	0.47
4:A:95:PRO:HA	4:A:153:ARG:HA	1.97	0.47
5:B:175:LEU:O	5:B:178:ALA:HB3	2.14	0.47
16:M:154:LEU:HD11	16:M:157:PRO:HA	1.97	0.47
2:9:3029:C:C2'	2:9:3030:C:H5'	2.43	0.47
1:O:1741:U:O2'	1:O:2723:G:H4'	2.15	0.47
5:B:51:VAL:CG2	5:B:327:VAL:HG13	2.45	0.47
1:O:945:U:H2'	1:O:946:C:C6	2.50	0.47
27:X:234:VAL:HG12	27:X:235:GLU:N	2.29	0.47
1:O:319:A:H4'	1:O:338:C:C5	2.50	0.47
1:O:1624:A:H5'	1:O:1626:A:O4'	2.15	0.47
31:2:7:PHE:HD1	31:2:8:ASN:O	1.97	0.47
1:O:2388:C:O2'	1:O:2389:U:H5'	2.15	0.47
1:O:941:G:C5	1:O:942:U:C4	3.03	0.47
1:O:1872:C:H5	4:A:20:SER:HB3	1.80	0.47
1:O:326:G:O2'	1:O:327:A:H5'	2.14	0.47
26:W:27:ASP:N	26:W:27:ASP:OD2	2.41	0.47
1:O:1792:C:H2'	1:O:1793:C:H6	1.78	0.47
1:O:1151:G:OP1	10:G:63:ARG:NH1	2.47	0.47
1:O:183:A:H5'	15:L:157:LEU:HD12	1.97	0.47
9:F:100:ASP:O	9:F:101:ALA:O	2.33	0.47
1:O:2897:C:O2'	1:O:2898:G:H5'	2.15	0.47
1:O:2898:G:O2'	1:O:2899:A:H5'	2.15	0.47
1:O:1299:G:N7	14:K:6:ARG:NH1	2.62	0.47
1:O:820:G:H5'	1:O:821:U:H5'	1.97	0.47
22:S:48:VAL:CG2	22:S:98:VAL:HA	2.45	0.47
1:O:946:C:H2'	1:O:947:U:C6	2.49	0.47
14:K:90:ARG:HH11	14:K:119:THR:HG21	1.80	0.47
1:O:2435:U:H1'	38:O:6323:HOH:O	2.13	0.47
1:O:2112:A:H2'	1:O:2113:G:H8	1.79	0.47
1:O:1921:A:C6	1:O:1922:A:C2	3.03	0.47
1:O:1307:A:H2'	1:O:1308:A:C8	2.50	0.47
1:O:474:C:O3'	6:C:73:LEU:CD2	2.62	0.47
6:C:242:GLU:HG3	38:C:8390:HOH:O	2.14	0.47
16:M:61:ALA:HB3	16:M:88:ALA:HB2	1.97	0.47
6:C:139:VAL:HG21	6:C:240:LEU:HD12	1.97	0.47
13:J:49:LEU:HA	13:J:73:VAL:CG1	2.45	0.47
5:B:177:HIS:NE2	5:B:181:ILE:HD11	2.29	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:K:57:VAL:O	14:K:57:VAL:HG12	2.15	0.47
12:I:39:VAL:CG1	12:I:107:ASN:HB2	2.44	0.47
1:O:553:G:O4'	1:O:1325:G:H5'	2.15	0.47
1:O:65:C:O2'	1:O:66:G:H5'	2.15	0.47
11:H:72:VAL:CG1	11:H:81:TYR:CZ	2.98	0.47
38:O:5858:HOH:O	2:9:3103:A:H4'	2.14	0.47
1:O:2687:G:O2'	1:O:2688:U:H5'	2.15	0.47
7:D:166:ILE:HB	38:D:6326:HOH:O	2.15	0.47
31:2:70:ARG:CG	31:2:77:ALA:HB2	2.40	0.47
9:F:99:THR:HG23	9:F:99:THR:O	2.14	0.47
5:B:175:LEU:C	5:B:175:LEU:CD2	2.83	0.47
10:G:67:LEU:O	10:G:71:LEU:HG	2.14	0.47
23:T:6:CYS:C	23:T:8:TYR:H	2.18	0.47
1:O:2729:C:H2'	1:O:2730:G:H8	1.79	0.47
1:O:1701:A:H4'	1:O:1702:U:C5'	2.44	0.47
1:O:2326:U:H4'	1:O:2412:G:C4'	2.45	0.47
16:M:42:HIS:CG	16:M:62:HIS:HE1	2.33	0.47
1:O:1217:G:H2'	1:O:1218:U:C6	2.50	0.47
1:O:2858:U:H2'	1:O:2859:C:H6	1.80	0.47
9:F:39:SER:HB3	9:F:45:ALA:HB2	1.97	0.47
7:D:91:ALA:HB1	38:D:5198:HOH:O	2.13	0.47
1:O:1800:G:O2'	1:O:1801:A:H5'	2.14	0.47
1:O:1181:A:H2'	1:O:1182:C:O4'	2.14	0.46
1:O:289:G:N1	1:O:363:A:C2	2.78	0.46
13:J:75:ARG:O	13:J:93:ASN:HA	2.15	0.46
5:B:315:VAL:HG23	5:B:316:ARG:HG2	1.97	0.46
31:2:42:ARG:HH11	31:2:42:ARG:CG	2.27	0.46
30:1:19:SER:O	30:1:36:ASN:ND2	2.47	0.46
16:M:139:TRP:CH2	16:M:176:ARG:NH1	2.83	0.46
1:O:581:G:O2'	1:O:582:C:H5'	2.15	0.46
1:O:1584:C:O2'	1:O:1585:C:H5'	2.15	0.46
1:O:383:A:H4'	38:O:6225:HOH:O	2.15	0.46
28:Y:81:LYS:O	28:Y:82:ALA:C	2.53	0.46
1:O:317:A:OP1	22:S:52:ARG:O	2.32	0.46
11:H:162:SER:CB	11:H:163:PRO:CD	2.78	0.46
7:D:21:VAL:HG13	7:D:131:THR:O	2.14	0.46
16:M:100:ALA:O	16:M:129:ILE:HG23	2.15	0.46
1:O:1942:A:H1'	38:A:8564:HOH:O	2.15	0.46
21:R:51:GLN:NE2	21:R:53:ASN:HD21	2.06	0.46
5:B:85:ARG:NH1	38:B:8648:HOH:O	2.47	0.46
9:F:110:GLU:HG2	38:F:6926:HOH:O	2.14	0.46
20:Q:98:ASN:ND2	20:Q:98:ASN:N	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1269:G:H2'	1:0:1270:U:C6	2.50	0.46
1:0:1787:C:O2'	1:0:1788:U:H5'	2.15	0.46
1:0:2090:G:H2'	1:0:2091:G:C8	2.49	0.46
1:0:665:A:H2'	1:0:666:A:C8	2.51	0.46
11:H:109:ASP:HB2	38:H:8349:HOH:O	2.15	0.46
22:S:30:ASP:O	22:S:33:GLU:HB3	2.15	0.46
1:0:1252:A:H2'	1:0:1253:C:O4'	2.15	0.46
1:0:2004:U:H4'	38:0:6205:HOH:O	2.16	0.46
6:C:127:ARG:HH21	6:C:225:PRO:HG2	1.70	0.46
1:0:1246:A:O2'	1:0:1247:A:H3'	2.15	0.46
5:B:55:ASN:HB3	5:B:64:GLY:H	1.80	0.46
5:B:274:GLU:HG3	5:B:275:GLY:N	2.30	0.46
4:A:55:VAL:HG22	4:A:68:ILE:O	2.15	0.46
9:F:113:ASP:O	9:F:117:GLU:HG3	2.16	0.46
21:R:14:ALA:HA	21:R:25:GLN:NE2	2.29	0.46
8:E:126:ILE:HB	8:E:131:LEU:CD2	2.45	0.46
1:0:958:G:O2'	1:0:959:C:H5'	2.16	0.46
10:G:63:ARG:HB2	10:G:66:LEU:HG	1.96	0.46
1:0:482:G:H4'	1:0:508:A:N1	2.30	0.46
1:0:1600:G:H8	1:0:1600:G:OP2	1.98	0.46
17:N:26:TRP:HB2	38:N:3062:HOH:O	2.15	0.46
2:9:3095:C:O2'	2:9:3096:C:H5'	2.16	0.46
11:H:137:ASN:O	11:H:138:PRO:C	2.53	0.46
16:M:74:PRO:HG2	16:M:159:TYR:CZ	2.51	0.46
7:D:67:ASP:O	7:D:69:ILE:HG13	2.16	0.46
6:C:107:ARG:CB	6:C:107:ARG:HH11	2.27	0.46
5:B:7:ARG:HB2	5:B:7:ARG:CZ	2.46	0.46
23:T:14:GLU:OE1	23:T:15:PRO:CD	2.63	0.46
1:0:1677:U:OP2	30:1:8:LYS:NZ	2.44	0.46
13:J:50:GLY:O	13:J:120:ARG:NH1	2.43	0.46
1:0:1773:G:C2'	1:0:1774:G:H5'	2.46	0.46
21:R:29:ASP:OD1	21:R:31:ARG:HG3	2.16	0.46
27:X:107:PRO:HB3	27:X:182:PHE:CD2	2.51	0.46
1:0:138:U:H5''	1:0:139:C:OP2	2.16	0.46
1:0:259:G:O2'	1:0:260:C:H5'	2.15	0.46
1:0:2311:A:O2'	1:0:2312:G:H5'	2.15	0.46
1:0:366:U:H2'	1:0:367:G:O4'	2.15	0.46
7:D:18:ILE:HG12	7:D:134:LEU:CD2	2.45	0.46
12:I:77:GLY:O	12:I:78:ILE:C	2.54	0.46
16:M:73:ALA:HB1	16:M:74:PRO:CD	2.45	0.46
31:2:69:TYR:HE1	31:2:80:ARG:HB2	1.79	0.46
10:G:12:ILE:HG13	38:G:6833:HOH:O	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:B:79:MET:HE1	38:B:8639:HOH:O	2.14	0.46
29:Z:28:HIS:ND1	29:Z:31:LYS:HE2	2.29	0.46
1:O:170:U:H2'	1:O:171:C:C5'	2.45	0.46
7:D:11:HIS:O	7:D:12:GLU:HB3	2.15	0.46
16:M:139:TRP:HA	16:M:139:TRP:HE3	1.81	0.46
1:O:212:A:O4'	1:O:214:U:C6	2.68	0.46
1:O:2332:A:H5'	1:O:2333:G:OP2	2.15	0.46
1:O:2748:G:H1'	38:O:8782:HOH:O	2.15	0.46
15:L:87:MET:HB3	31:2:46:ILE:CD1	2.24	0.46
15:L:67:ILE:CD1	15:L:104:ARG:HD2	2.46	0.46
1:O:960:G:N3	1:O:960:G:C2'	2.77	0.46
17:N:14:LEU:CG	17:N:102:ILE:HD11	2.45	0.46
5:B:147:VAL:O	5:B:150:ALA:HB3	2.15	0.46
1:O:200:U:H2'	38:O:4388:HOH:O	2.15	0.46
1:O:1503:U:H2'	1:O:1504:A:O4'	2.14	0.46
1:O:745:G:O6	17:N:68:GLY:HA3	2.15	0.46
1:O:1064:U:H2'	1:O:1065:G:C8	2.51	0.46
1:O:2825:C:H4'	1:O:2826:G:O5'	2.15	0.46
7:D:104:PHE:CE2	7:D:132:VAL:HB	2.51	0.46
1:O:724:G:O2'	1:O:725:C:H5'	2.15	0.46
1:O:2761:A:C4	1:O:2763:G:C8	3.04	0.46
1:O:1118:A:H62	1:O:1244:U:H3	1.63	0.46
7:D:49:PRO:HG3	38:D:5828:HOH:O	2.15	0.46
4:A:199:HIS:HD2	4:A:201:PHE:H	1.61	0.46
16:M:83:LEU:HD13	16:M:175:LEU:HD23	1.98	0.46
8:E:107:PHE:CE1	8:E:152:THR:HB	2.51	0.46
14:K:120:LEU:HD12	14:K:133:VAL:HG21	1.97	0.46
8:E:68:HIS:O	8:E:72:MET:HG3	2.16	0.46
22:S:73:HIS:CD2	22:S:88:PRO:CG	2.99	0.46
18:O:105:LEU:CD2	18:O:137:LEU:HD21	2.45	0.46
1:O:2786:G:H2'	38:O:8861:HOH:O	2.15	0.46
7:D:91:ALA:HB2	7:D:106:PHE:CD2	2.51	0.46
25:V:59:GLN:NE2	25:V:97:ALA:HB3	2.30	0.46
1:O:2034:U:H2'	1:O:2035:C:H6	1.80	0.46
1:O:2064:U:H4'	1:O:2653:A:OP1	2.16	0.46
12:I:19:MET:HE1	12:I:132:LEU:HD11	1.97	0.46
1:O:1878:G:O2'	1:O:1879:U:OP2	2.34	0.46
1:O:1300:G:H1'	38:O:5591:HOH:O	2.15	0.46
1:O:2578:G:C8	1:O:2578:G:H5'	2.48	0.46
11:H:15:THR:HG22	11:H:91:HIS:HA	1.98	0.46
27:X:184:GLU:OE1	27:X:204:ARG:NH1	2.49	0.46
1:O:445:U:H2'	1:O:446:G:C8	2.51	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:399:C:H5'	15:L:179:GLY:O	2.16	0.46
1:0:1735:C:H2'	1:0:1736:A:H8	1.80	0.46
1:0:2035:C:O2'	1:0:2036:C:H5'	2.16	0.46
12:I:135:ILE:O	12:I:139:LEU:HG	2.15	0.46
1:0:2365:G:H4'	19:P:45:PRO:O	2.15	0.46
13:J:62:PRO:CG	13:J:65:ARG:HH21	2.14	0.46
15:L:104:ARG:O	15:L:108:LYS:HG2	2.15	0.46
9:F:58:GLU:CD	15:L:27:ARG:HH22	2.18	0.46
16:M:67:ALA:C	16:M:69:TYR:H	2.20	0.46
16:M:71:TRP:N	38:M:8539:HOH:O	2.49	0.46
1:0:2851:G:C2'	1:0:2852:A:H5'	2.46	0.46
1:0:2899:A:O2'	1:0:2900:G:H5'	2.16	0.46
5:B:279:THR:CG2	5:B:280:VAL:N	2.79	0.46
1:0:1003:U:O2	11:H:90:PHE:CZ	2.69	0.46
1:0:926:A:O2'	14:K:41:HIS:CD2	2.69	0.46
4:A:105:VAL:HG11	4:A:154:ALA:HB1	1.98	0.46
16:M:62:HIS:O	16:M:65:ASP:OD1	2.34	0.46
1:0:1773:G:H2'	1:0:1774:G:H5'	1.98	0.46
1:0:47:G:N3	1:0:114:A:C2	2.84	0.46
1:0:299:U:O2'	1:0:300:C:H5'	2.16	0.46
26:W:18:ARG:HA	38:W:5356:HOH:O	2.16	0.46
1:0:2453:G:H3'	38:O:6807:HOH:O	2.15	0.46
1:0:903:U:OP2	14:K:11:ARG:NH1	2.44	0.46
4:A:4:ILE:HG22	4:A:198:ASP:O	2.16	0.46
1:0:453:A:H4'	1:0:455:A:N7	2.31	0.46
15:L:84:LYS:O	15:L:87:MET:HG2	2.16	0.46
30:1:41:HIS:H	30:1:45:ASN:ND2	2.04	0.46
16:M:67:ALA:C	16:M:69:TYR:N	2.69	0.46
16:M:91:ARG:HG3	16:M:186:LEU:CD2	2.44	0.46
1:0:2781:U:H2'	1:0:2782:G:H5'	1.97	0.46
1:0:1641:A:H2'	1:0:1642:A:C5'	2.45	0.46
1:0:2698:G:H2'	1:0:2699:A:C8	2.51	0.46
9:F:26:THR:HB	9:F:102:GLY:HA3	1.98	0.46
1:0:1557:G:O2'	1:0:1558:C:H5'	2.16	0.46
1:0:101:C:H2'	1:0:102:A:H8	1.81	0.46
25:V:34:LEU:CD1	25:V:100:LEU:HD13	2.46	0.46
7:D:60:GLU:O	7:D:62:ASP:N	2.49	0.46
1:0:232:A:H4'	38:O:6972:HOH:O	2.16	0.46
1:0:2372:A:H2'	1:0:2373:U:C6	2.51	0.46
1:0:156:C:H5''	15:L:171:ARG:CD	2.25	0.45
11:H:150:LYS:CB	11:H:157:ILE:HD12	2.46	0.45
1:0:1593:C:OP1	18:O:117:SER:HB3	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:H:58:HIS:HA	11:H:61:LEU:HD23	1.98	0.45
31:2:69:TYR:CE1	31:2:80:ARG:HB2	2.50	0.45
27:X:186:ARG:NH1	27:X:186:ARG:HG2	2.30	0.45
9:F:110:GLU:O	9:F:114:LYS:HG3	2.15	0.45
1:0:1335:C:OP2	27:X:207:SER:CB	2.64	0.45
1:0:1512:G:O2'	1:0:1513:C:H5'	2.16	0.45
7:D:10:PHE:CD1	7:D:11:HIS:N	2.84	0.45
22:S:15:PRO:O	22:S:19:ARG:HG3	2.16	0.45
1:0:1305:C:O2'	1:0:1306:U:H5'	2.15	0.45
1:0:1626:A:H2'	1:0:1627:G:O4'	2.16	0.45
23:T:34:SER:HA	23:T:37:GLU:OE1	2.16	0.45
6:C:197:SER:OG	6:C:242:GLU:OE2	2.32	0.45
6:C:123:LEU:HA	6:C:123:LEU:HD23	1.84	0.45
1:0:128:A:O2'	1:0:129:A:H5'	2.16	0.45
1:0:1116:U:C2'	1:0:1118:A:H2	2.27	0.45
25:V:4:LEU:HA	25:V:4:LEU:HD23	1.74	0.45
25:V:122:ARG:NH1	25:V:122:ARG:HG2	2.20	0.45
12:I:19:MET:HE2	12:I:78:ILE:HG22	1.97	0.45
1:0:1206:U:H2'	1:0:1207:A:O4'	2.16	0.45
1:0:963:C:H2'	1:0:964:G:C8	2.50	0.45
1:0:2256:G:C2'	1:0:2257:G:C5'	2.93	0.45
4:A:192:VAL:CG1	4:A:192:VAL:O	2.64	0.45
5:B:132:HIS:CE1	5:B:171:VAL:HG21	2.51	0.45
1:0:553:G:H5'	38:0:4440:HOH:O	2.16	0.45
1:0:1421:C:O2'	1:0:1422:U:H5'	2.16	0.45
5:B:146:THR:O	5:B:159:PRO:HB3	2.16	0.45
1:0:1171:A:C2'	1:0:1172:G:H5'	2.46	0.45
1:0:2546:U:H5	5:B:2:GLN:HE22	1.63	0.45
4:A:65:ARG:HH11	4:A:65:ARG:HG2	1.81	0.45
1:0:2885:A:H2'	1:0:2886:C:C6	2.51	0.45
16:M:139:TRP:HH2	16:M:176:ARG:HH11	1.62	0.45
1:0:1058:A:H2'	1:0:1060:C:C5'	2.47	0.45
2:9:3061:C:H2'	2:9:3062:A:H8	1.82	0.45
1:0:2314:G:O2'	1:0:2315:C:H5'	2.16	0.45
11:H:34:GLY:HA3	11:H:81:TYR:O	2.16	0.45
12:I:51:GLU:O	12:I:55:GLU:HG3	2.16	0.45
1:0:689:G:O2'	1:0:690:G:H5'	2.17	0.45
18:O:31:ILE:HG12	18:O:43:LEU:HD13	1.98	0.45
8:E:77:THR:OG1	8:E:78:GLU:N	2.48	0.45
1:0:1917:G:H2'	1:0:1918:U:C6	2.51	0.45
7:D:23:VAL:CG2	7:D:73:VAL:HB	2.46	0.45
11:H:59:ASN:H	11:H:59:ASN:ND2	2.14	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:Q:39:THR:CG2	20:Q:42:GLU:HG3	2.46	0.45
16:M:73:ALA:HB1	16:M:74:PRO:HD2	1.98	0.45
1:O:251:C:O2'	1:O:252:C:H5'	2.16	0.45
9:F:101:ALA:HB2	9:F:108:LEU:HD22	1.97	0.45
9:F:99:THR:O	9:F:100:ASP:HB2	2.15	0.45
16:M:184:ILE:HG22	16:M:185:GLU:N	2.30	0.45
29:Z:25:LYS:O	29:Z:25:LYS:HG2	2.17	0.45
1:O:697:G:H4'	1:O:730:G:O3'	2.17	0.45
1:O:2547:C:H2'	1:O:2548:C:C6	2.51	0.45
1:O:2355:G:H5''	1:O:2356:A:OP2	2.16	0.45
4:A:66:ARG:HH11	4:A:66:ARG:CB	2.29	0.45
1:O:170:U:C2'	1:O:171:C:H5'	2.47	0.45
1:O:709:G:O2'	17:N:25:VAL:HG12	2.16	0.45
1:O:2453:G:H4'	14:K:50:GLY:C	2.37	0.45
17:N:21:SER:OG	17:N:106:PRO:HB2	2.17	0.45
4:A:30:ARG:HB3	4:A:30:ARG:HE	1.65	0.45
1:O:489:A:C8	22:S:82:THR:HG22	2.51	0.45
1:O:1940:C:H5''	4:A:234:GLY:HA3	1.97	0.45
1:O:2630:G:O6	4:A:206:ARG:NH2	2.49	0.45
1:O:869:G:OP1	15:L:79:LYS:HE2	2.16	0.45
1:O:2846:C:H4'	5:B:156:LYS:HB3	1.97	0.45
1:O:2846:C:OP1	5:B:158:LYS:HD3	2.16	0.45
1:O:1545:C:H2'	1:O:1546:G:O4'	2.16	0.45
2:9:3026:C:H2'	2:9:3027:C:H6	1.81	0.45
11:H:151:MET:HE3	11:H:151:MET:HA	1.97	0.45
16:M:182:GLY:O	16:M:183:ASP:O	2.34	0.45
5:B:304:PRO:HD2	5:B:307:ARG:CD	2.40	0.45
1:O:249:G:H1'	1:O:265:U:O2	2.17	0.45
1:O:541:C:C2'	1:O:542:A:C5'	2.91	0.45
1:O:283:U:H5''	1:O:284:C:P	2.56	0.45
16:M:115:VAL:HG23	16:M:116:PHE:H	1.81	0.45
21:R:51:GLN:HB3	21:R:67:ARG:HH12	1.82	0.45
7:D:57:THR:HG23	7:D:63:ILE:HA	1.99	0.45
14:K:97:VAL:HG12	14:K:98:GLU:O	2.16	0.45
1:O:711:G:C2	1:O:718:C:C2	3.05	0.45
27:X:107:PRO:HB3	27:X:182:PHE:CE2	2.51	0.45
26:W:70:ILE:O	26:W:70:ILE:HG23	2.16	0.45
4:A:70:ALA:HA	4:A:71:PRO:HD3	1.79	0.45
1:O:1381:A:N3	1:O:1382:G:H1'	2.32	0.45
1:O:295:C:H2'	1:O:296:G:O4'	2.16	0.45
7:D:73:VAL:HG21	38:D:5828:HOH:O	2.15	0.45
1:O:31:C:H2'	38:O:8568:HOH:O	2.15	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:M:115:VAL:O	16:M:118:ILE:HB	2.17	0.45
4:A:161:GLY:O	28:Y:68:CYS:SG	2.75	0.45
4:A:57:ALA:HA	4:A:67:LEU:HD23	1.98	0.45
1:O:2000:G:O2'	1:O:2001:G:H5'	2.17	0.45
7:D:95:THR:HG21	7:D:174:VAL:HG22	1.99	0.45
1:O:1517:U:C2	1:O:1670:G:N2	2.84	0.45
19:P:75:ILE:CD1	19:P:84:ILE:HD11	2.46	0.45
7:D:35:ALA:HB2	38:D:5858:HOH:O	2.16	0.45
1:O:583:G:H2'	1:O:584:U:C6	2.51	0.45
25:V:130:HIS:O	25:V:136:GLY:HA3	2.17	0.45
1:O:539:G:H2'	1:O:540:A:C8	2.52	0.45
2:9:3117:G:H2'	2:9:3118:C:C6	2.51	0.45
27:X:189:ASN:C	27:X:189:ASN:ND2	2.67	0.45
9:F:99:THR:HA	38:F:3461:HOH:O	2.17	0.45
18:O:59:ARG:HG2	18:O:59:ARG:HH11	1.82	0.45
1:O:1184:C:H1'	38:O:8953:HOH:O	2.16	0.45
1:O:2716:G:C5'	5:B:206:THR:HG21	2.45	0.45
1:O:2346:C:H4'	7:D:52:THR:HG22	1.99	0.45
5:B:137:LEU:HD11	5:B:140:LEU:HD21	1.99	0.45
5:B:140:LEU:HD13	5:B:175:LEU:HA	1.97	0.45
5:B:243:ASN:HA	5:B:244:PRO:C	2.36	0.45
1:O:1500:U:P	18:O:41:ARG:HH22	2.39	0.45
16:M:77:ASN:OD1	16:M:80:SER:HB2	2.17	0.45
18:O:16:VAL:CG1	18:O:20:ARG:HB2	2.47	0.45
5:B:248:ARG:O	5:B:251:VAL:CG1	2.65	0.45
1:O:1735:C:H2'	1:O:1736:A:C8	2.51	0.45
8:E:145:ALA:HB1	8:E:168:ILE:CD1	2.46	0.45
11:H:112:ARG:O	11:H:113:ALA:C	2.55	0.45
27:X:172:THR:HG22	27:X:173:ALA:N	2.32	0.45
13:J:118:ALA:HA	13:J:125:ALA:HB2	1.99	0.45
25:V:54:PHE:CZ	25:V:140:LYS:HB2	2.52	0.45
30:1:40:ARG:HG3	30:1:45:ASN:CB	2.46	0.45
15:L:37:VAL:CG2	15:L:108:LYS:HG3	2.45	0.45
16:M:161:GLY:O	16:M:162:ASP:C	2.54	0.45
1:O:820:G:O2'	1:O:856:G:H4'	2.17	0.45
5:B:87:TYR:CE2	5:B:96:PRO:HG3	2.51	0.45
22:S:96:VAL:HG13	22:S:97:ARG:N	2.32	0.45
1:O:668:C:H2'	1:O:669:G:H8	1.80	0.45
10:G:27:ILE:HD12	10:G:70:ALA:HB1	1.98	0.45
29:Z:8:GLN:HE22	29:Z:11:LYS:HZ2	1.63	0.45
1:O:338:C:H4'	6:C:174:ILE:HD11	1.97	0.45
1:O:338:C:H4'	6:C:174:ILE:HD12	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:243:A:H61	1:0:269:G:C1'	2.29	0.45
1:0:958:G:H2'	1:0:959:C:H6	1.80	0.45
1:0:1813:U:O2'	18:O:81:LYS:HE3	2.17	0.45
27:X:106:THR:HG23	27:X:107:PRO:HD2	1.99	0.45
27:X:141:THR:HG23	38:X:8599:HOH:O	2.16	0.45
13:J:22:ASP:OD1	13:J:22:ASP:C	2.55	0.45
1:0:514:G:OP1	1:0:514:G:H2'	2.16	0.45
1:0:1565:C:O4'	1:0:2738:G:H1'	2.16	0.45
1:0:1416:G:C2'	1:0:1417:G:H5'	2.46	0.45
4:A:69:LEU:CD2	4:A:120:ARG:HB3	2.41	0.45
2:9:3047:A:H2'	2:9:3048:C:C6	2.51	0.45
5:B:144:THR:CG2	5:B:145:HIS:N	2.79	0.45
1:0:64:G:H2'	1:0:65:C:H6	1.80	0.45
1:0:2625:C:O2'	1:0:2626:C:H5'	2.16	0.45
20:Q:113:HIS:O	20:Q:145:LEU:HD12	2.17	0.45
1:0:1600:G:H4'	38:0:6539:HOH:O	2.17	0.45
9:F:20:LEU:O	9:F:23:ALA:HB3	2.16	0.45
6:C:126:ASP:C	6:C:128:GLY:N	2.70	0.45
1:0:1156:C:O2'	1:0:1157:C:H5'	2.17	0.45
15:L:99:ARG:HD2	15:L:167:GLY:HA2	1.98	0.45
1:0:1118:A:C8	1:0:1118:A:C3'	2.87	0.45
11:H:136:VAL:HG22	11:H:137:ASN:O	2.16	0.45
20:Q:39:THR:HG22	20:Q:42:GLU:HG3	1.98	0.45
1:0:2421:G:H4'	38:0:5686:HOH:O	2.17	0.45
31:2:11:CYS:HB2	31:2:20:HIS:NE2	2.32	0.45
12:I:17:CYS:HA	12:I:119:THR:O	2.17	0.45
5:B:7:ARG:CG	5:B:7:ARG:HH11	2.23	0.45
21:R:58:MET:SD	30:1:8:LYS:HE3	2.57	0.45
1:0:1973:A:H2'	1:0:1974:G:O4'	2.17	0.45
15:L:59:GLY:HA3	15:L:141:ILE:HD12	1.99	0.45
20:Q:66:VAL:HG22	20:Q:79:ARG:CZ	2.47	0.45
25:V:40:ALA:O	25:V:44:MET:HG3	2.16	0.45
8:E:162:PHE:CD1	8:E:162:PHE:N	2.84	0.45
1:0:740:G:O2'	1:0:741:C:H5'	2.17	0.45
1:0:953:G:H5'	38:0:8786:HOH:O	2.17	0.45
5:B:38:VAL:HG22	5:B:142:LEU:HD12	1.99	0.45
1:0:1613:C:H2'	1:0:1614:G:O4'	2.17	0.45
1:0:790:A:H1'	1:0:1710:A:H2'	1.99	0.45
22:S:44:ALA:HA	22:S:62:VAL:HG12	1.99	0.45
1:0:1029:U:O2'	1:0:1273:C:OP1	2.31	0.45
1:0:1134:G:C4'	11:H:151:MET:HE1	2.35	0.45
5:B:195:ARG:N	5:B:198:GLU:OE1	2.45	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:C:104:ASP:O	6:C:108:GLN:HG3	2.17	0.45
1:O:1470:A:OP1	15:L:93:ARG:HD2	2.17	0.45
15:L:113:ARG:NH2	15:L:156:ARG:HG2	2.31	0.45
17:N:14:LEU:CD2	17:N:102:ILE:HD11	2.47	0.45
1:O:1514:C:H2'	1:O:1515:A:H8	1.81	0.45
8:E:126:ILE:HB	8:E:131:LEU:HD23	1.99	0.45
1:O:538:C:H5''	1:O:539:G:C8	2.52	0.45
1:O:1758:U:H2'	1:O:1759:A:O4'	2.17	0.45
6:C:76:ARG:HD2	38:C:8444:HOH:O	2.17	0.45
1:O:1278:A:H4'	1:O:1279:U:C4	2.52	0.45
6:C:140:VAL:HB	38:C:8463:HOH:O	2.16	0.45
1:O:1523:G:H2'	1:O:1524:U:C6	2.52	0.45
27:X:219:GLU:HG3	27:X:220:GLU:N	2.31	0.45
16:M:34:LEU:HD13	16:M:47:LEU:HD21	1.99	0.44
12:I:19:MET:HE2	12:I:79:PHE:HA	1.98	0.44
23:T:46:ALA:HB1	23:T:52:THR:HG21	2.00	0.44
17:N:47:ARG:HG3	17:N:47:ARG:NH1	2.32	0.44
5:B:7:ARG:CG	5:B:7:ARG:NH1	2.80	0.44
26:W:30:MET:HE2	26:W:58:ALA:HB3	1.98	0.44
17:N:77:ALA:HA	17:N:96:VAL:O	2.17	0.44
1:O:169:A:H1'	31:2:48:ASN:ND2	2.31	0.44
22:S:24:ARG:NH2	22:S:39:ASN:HD22	2.15	0.44
2:9:3031:C:O2'	2:9:3032:G:H5'	2.17	0.44
1:O:653:C:H2'	1:O:654:A:C8	2.51	0.44
1:O:2561:C:OP1	8:E:153:ARG:NH2	2.50	0.44
16:M:47:LEU:HD13	16:M:97:VAL:HG11	1.98	0.44
28:Y:31:ILE:CG2	28:Y:32:LYS:N	2.80	0.44
16:M:72:GLU:H	16:M:171:HIS:CE1	2.35	0.44
4:A:101:GLU:HG2	38:A:8580:HOH:O	2.17	0.44
4:A:132:ASP:OD1	4:A:133:ARG:N	2.50	0.44
1:O:1384:C:H5'	26:W:30:MET:HG2	1.99	0.44
18:O:7:LYS:CD	18:O:21:VAL:CG2	2.95	0.44
1:O:658:C:O2'	1:O:662:U:OP1	2.28	0.44
25:V:149:LEU:HG	25:V:153:MET:HE1	2.00	0.44
1:O:812:A:H2'	1:O:813:C:H6	1.80	0.44
17:N:96:VAL:HA	38:N:4258:HOH:O	2.17	0.44
1:O:1937:U:O2'	1:O:1938:G:H5'	2.17	0.44
5:B:154:VAL:HG12	5:B:156:LYS:HG2	1.99	0.44
1:O:2709:G:H4'	13:J:3:ALA:CB	2.47	0.44
5:B:98:THR:HG22	5:B:99:GLU:H	1.83	0.44
19:P:77:ASP:N	19:P:80:LYS:O	2.49	0.44
1:O:1611:G:O2'	1:O:1612:A:H5'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2106:C:H2'	1:0:2107:U:C6	2.53	0.44
1:0:1548:U:O2'	1:0:1549:C:H5'	2.17	0.44
6:C:223:LEU:HA	6:C:223:LEU:HD12	1.87	0.44
14:K:144:ASP:HA	14:K:147:GLU:HG3	1.99	0.44
7:D:64:ARG:O	7:D:67:ASP:OD2	2.36	0.44
23:T:17:THR:CG2	23:T:18:GLY:N	2.81	0.44
14:K:125:PHE:CZ	14:K:140:VAL:HG13	2.52	0.44
1:0:1857:A:N6	1:0:2247:C:H1'	2.32	0.44
26:W:23:HIS:HB2	38:W:7830:HOH:O	2.16	0.44
16:M:58:LEU:HD12	16:M:58:LEU:N	2.32	0.44
13:J:21:ALA:O	13:J:96:VAL:HG22	2.17	0.44
1:0:1894:C:C2	1:0:1939:U:C4	3.05	0.44
1:0:349:U:O2'	1:0:350:C:H5'	2.18	0.44
1:0:2481:G:C3'	1:0:2482:G:H5''	2.46	0.44
15:L:88:VAL:HG12	15:L:89:ASN:N	2.32	0.44
16:M:37:ARG:NE	38:M:8534:HOH:O	2.50	0.44
18:O:115:SER:C	18:O:117:SER:H	2.20	0.44
11:H:139:ASP:O	11:H:139:ASP:CG	2.56	0.44
26:W:78:GLU:CG	26:W:79:GLU:H	2.26	0.44
1:0:1184:C:O2'	1:0:1185:U:P	2.76	0.44
1:0:2415:A:C2	16:M:25:ARG:HB3	2.52	0.44
1:0:731:U:H2'	1:0:732:C:H6	1.80	0.44
8:E:69:ILE:O	8:E:72:MET:HB2	2.16	0.44
11:H:117:LYS:O	11:H:119:VAL:HG13	2.18	0.44
18:O:10:ALA:HA	18:O:13:VAL:CG1	2.48	0.44
1:0:1872:C:O2	4:A:25:ALA:HA	2.18	0.44
1:0:653:C:H5''	38:N:7674:HOH:O	2.16	0.44
1:0:1372:A:H3'	38:O:8863:HOH:O	2.18	0.44
1:0:81:G:N3	1:0:98:A:C2	2.85	0.44
9:F:34:ASN:O	9:F:38:LYS:HG3	2.16	0.44
1:0:328:U:O4'	6:C:202:THR:HG22	2.17	0.44
16:M:32:PRO:HD2	16:M:99:GLU:O	2.17	0.44
1:0:2755:G:H1'	38:O:5590:HOH:O	2.18	0.44
11:H:86:ARG:HG2	11:H:86:ARG:H	1.44	0.44
1:0:1164:U:N3	1:0:1192:A:H2	2.07	0.44
1:0:363:A:O2'	1:0:364:C:H5'	2.18	0.44
25:V:110:GLN:HE21	25:V:110:GLN:HA	1.82	0.44
25:V:80:ASP:O	25:V:84:VAL:HG23	2.17	0.44
1:0:821:U:H5''	38:O:4004:HOH:O	2.17	0.44
32:O:9500:SLD:N4S	3:4:75:C:OP2	2.50	0.44
5:B:52:VAL:C	5:B:53:LEU:HD12	2.38	0.44
1:0:1463:A:H2'	1:0:1464:U:H6	1.82	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:J:34:VAL:CG2	13:J:47:ALA:HB2	2.48	0.44
1:0:2912:C:O2'	1:0:2913:A:H5'	2.18	0.44
1:0:113:A:OP2	1:0:114:A:H2'	2.18	0.44
2:9:3088:G:OP1	25:V:130:HIS:NE2	2.40	0.44
18:O:109:ARG:NH1	18:O:119:TYR:CE2	2.85	0.44
1:0:1746:A:O4'	1:0:1747:A:C2	2.70	0.44
14:K:101:ASP:C	14:K:103:ALA:H	2.20	0.44
1:0:622:G:P	27:X:148:GLY:HA3	2.57	0.44
13:J:10:GLN:NE2	13:J:10:GLN:N	2.31	0.44
1:0:2509:A:OP2	1:0:2510:C:H5	2.01	0.44
13:J:113:ILE:HD12	13:J:128:ALA:HB2	2.00	0.44
28:Y:30:GLU:HB3	28:Y:34:LYS:HE3	1.99	0.44
26:W:43:VAL:CG1	26:W:47:ALA:HB3	2.47	0.44
1:0:283:U:H5	1:0:284:C:H42	1.65	0.44
25:V:13:MET:HE1	25:V:18:GLN:CA	2.43	0.44
1:0:1299:G:N2	38:0:5591:HOH:O	2.50	0.44
1:0:2241:C:H2'	1:0:2242:U:H6	1.79	0.44
1:0:1514:C:O2'	1:0:1515:A:H5'	2.18	0.44
1:0:2091:G:O3'	5:B:235:ARG:HD3	2.17	0.44
1:0:101:C:H2'	1:0:102:A:C8	2.53	0.44
1:0:1019:C:O2	19:P:94:GLN:NE2	2.51	0.44
1:0:659:A:H5''	38:N:6799:HOH:O	2.17	0.44
1:0:2815:G:N7	12:I:80:LYS:NZ	2.64	0.44
1:0:152:A:O2'	1:0:153:C:H5'	2.18	0.44
1:0:1432:U:H5'	38:0:3181:HOH:O	2.17	0.44
25:V:7:LEU:HD12	25:V:53:ALA:HB2	2.00	0.44
9:F:50:VAL:CG1	9:F:60:VAL:HG11	2.46	0.44
8:E:7:ILE:HA	8:E:8:PRO:HD3	1.90	0.44
4:A:56:ALA:O	4:A:68:ILE:N	2.49	0.44
1:0:377:C:O2'	1:0:378:A:H5'	2.18	0.44
7:D:173:GLU:O	7:D:174:VAL:C	2.56	0.44
11:H:72:VAL:HG13	11:H:72:VAL:O	2.17	0.44
2:9:3078:G:N2	2:9:3103:A:OP2	2.48	0.44
1:0:2064:U:H2'	1:0:2065:C:H6	1.83	0.44
1:0:1759:A:N3	1:0:1818:C:H2'	2.33	0.44
1:0:1283:G:O2'	1:0:1284:G:H5'	2.18	0.44
15:L:40:ILE:O	15:L:40:ILE:HG13	2.18	0.44
1:0:818:A:O2'	28:Y:13:ARG:HD3	2.17	0.44
1:0:130:C:O2'	1:0:131:A:N7	2.50	0.44
1:0:1118:A:H8	1:0:1119:G:H5''	1.82	0.44
1:0:1180:U:H2'	1:0:1181:A:O4'	2.18	0.44
1:0:1201:C:H2'	1:0:1202:A:H5'	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:H:26:LYS:CG	11:H:28:ILE:H	2.20	0.44
1:0:2896:A:OP1	26:W:15:ARG:NH1	2.51	0.44
25:V:7:LEU:CD1	25:V:53:ALA:HB2	2.48	0.44
1:0:541:C:O2'	1:0:542:A:H5''	2.18	0.44
10:G:12:ILE:HA	38:G:8806:HOH:O	2.18	0.44
15:L:153:THR:O	15:L:156:ARG:HG3	2.17	0.44
12:I:107:ASN:HD22	12:I:107:ASN:C	2.20	0.44
27:X:184:GLU:OE2	27:X:204:ARG:HD2	2.17	0.44
5:B:148:PRO:HD2	38:B:8593:HOH:O	2.18	0.44
14:K:121:ILE:HG12	14:K:141:GLU:HB2	1.99	0.44
1:0:60:A:H5'	30:1:19:SER:HG	1.83	0.44
1:0:1901:G:O2'	1:0:1902:G:H5'	2.18	0.44
1:0:2252:A:H2'	1:0:2253:G:O4'	2.18	0.44
1:0:612:U:H2'	1:0:613:C:H6	1.83	0.44
1:0:2868:C:H2'	1:0:2869:G:O4'	2.18	0.44
1:0:1419:U:H2'	1:0:1685:A:C2	2.53	0.44
1:0:2834:G:C4	1:0:2847:G:N2	2.85	0.44
1:0:2401:A:H5'	38:0:3467:HOH:O	2.17	0.44
1:0:1072:G:OP2	27:X:154:ARG:NH2	2.51	0.44
2:9:3053:G:O2'	2:9:3054:A:H5'	2.18	0.44
11:H:84:ARG:CZ	11:H:135:TRP:CH2	3.00	0.44
7:D:27:ILE:CG2	7:D:28:GLY:H	2.18	0.44
25:V:122:ARG:CG	25:V:152:ALA:O	2.66	0.44
16:M:104:ILE:O	16:M:107:ASN:HB2	2.17	0.44
7:D:136:ARG:HD2	7:D:155:HIS:O	2.18	0.44
1:0:1882:C:OP1	4:A:192:VAL:HG23	2.18	0.44
5:B:41:PHE:CE1	5:B:79:MET:HG3	2.53	0.44
6:C:133:ARG:NE	6:C:138:VAL:HG22	2.33	0.44
24:U:23:LEU:HD22	24:U:49:LEU:HD23	2.00	0.44
1:0:308:U:H5'	22:S:97:ARG:NH2	2.33	0.44
28:Y:56:MET:CE	28:Y:63:LYS:HE3	2.48	0.44
8:E:69:ILE:HA	8:E:72:MET:CE	2.48	0.44
25:V:5:VAL:HG11	25:V:153:MET:CE	2.48	0.44
1:0:1936:C:O2'	1:0:1937:U:H5'	2.18	0.44
38:J:408:HOH:O	23:T:37:GLU:HB3	2.17	0.44
9:F:26:THR:HB	9:F:102:GLY:O	2.17	0.44
1:0:823:U:H2'	1:0:824:G:O4'	2.17	0.44
38:0:7167:HOH:O	27:X:158:LYS:HD3	2.17	0.44
5:B:66:GLU:OE1	5:B:328:ARG:HD2	2.18	0.44
1:0:2872:U:H2'	1:0:2873:C:H6	1.83	0.44
6:C:156:LEU:HD12	6:C:156:LEU:O	2.18	0.44
1:0:2807:U:OP2	5:B:28:SER:OG	2.28	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:177:A:H2'	1:0:178:U:O4'	2.18	0.44
15:L:87:MET:HG3	15:L:87:MET:H	1.35	0.43
6:C:19:PRO:HD2	6:C:240:LEU:HD21	2.00	0.43
12:I:19:MET:HE1	12:I:132:LEU:CD2	2.47	0.43
1:0:1852:A:H2'	1:0:1853:C:H6	1.83	0.43
2:9:3039:U:H3'	2:9:3040:C:H5''	1.99	0.43
1:0:2595:U:O2'	1:0:2596:A:H5'	2.18	0.43
13:J:81:ARG:HD3	13:J:87:ARG:NH1	2.33	0.43
1:0:1505:U:C6	1:0:1505:U:H5'	2.48	0.43
1:0:861:A:H2'	1:0:862:U:H6	1.83	0.43
1:0:60:A:H5'	30:1:19:SER:OG	2.18	0.43
7:D:55:LYS:O	7:D:56:ARG:HB2	2.18	0.43
1:0:2004:U:C2'	1:0:2005:G:OP1	2.66	0.43
1:0:102:A:H2'	1:0:103:U:C6	2.53	0.43
16:M:114:LYS:O	16:M:117:ALA:HB3	2.18	0.43
1:0:1052:G:H2'	1:0:1052:G:N3	2.33	0.43
1:0:2719:A:C2	5:B:70:PRO:HG3	2.53	0.43
1:0:2880:A:H2'	1:0:2881:C:O4'	2.18	0.43
13:J:78:LYS:HA	13:J:79:PRO:HD3	1.85	0.43
1:0:1311:G:C2	1:0:1312:G:C8	3.05	0.43
20:Q:50:VAL:O	20:Q:53:GLY:N	2.51	0.43
9:F:8:VAL:HG13	9:F:12:LEU:HD13	1.99	0.43
1:0:1537:C:H1'	38:0:7461:HOH:O	2.18	0.43
9:F:115:VAL:O	9:F:118:LEU:N	2.51	0.43
4:A:36:ASP:CA	4:A:83:GLY:HA3	2.47	0.43
9:F:104:ALA:O	9:F:108:LEU:HB3	2.18	0.43
4:A:95:PRO:HG2	4:A:98:GLU:HG2	2.00	0.43
1:0:305:A:C5	1:0:329:A:C2	3.06	0.43
7:D:77:ASP:HB3	7:D:78:GLU:H	1.59	0.43
27:X:212:ARG:HD2	38:X:8610:HOH:O	2.17	0.43
1:0:1116:U:O2'	1:0:1118:A:C2	2.44	0.43
16:M:37:ARG:HA	16:M:37:ARG:HD3	1.83	0.43
11:H:26:LYS:CE	11:H:28:ILE:HB	2.47	0.43
1:0:2502:C:H4'	11:H:151:MET:CG	2.43	0.43
18:O:114:LEU:HA	18:O:118:GLN:NE2	2.34	0.43
16:M:49:THR:CG2	16:M:56:ASP:HB2	2.36	0.43
25:V:122:ARG:NH2	38:V:4276:HOH:O	2.49	0.43
1:0:2837:U:H1'	5:B:307:ARG:HH12	1.83	0.43
1:0:2898:G:H4'	5:B:288:GLY:HA2	1.99	0.43
4:A:66:ARG:CB	4:A:66:ARG:NH1	2.81	0.43
19:P:40:HIS:HD2	19:P:60:THR:OG1	2.01	0.43
1:0:1114:A:H2'	1:0:1115:U:H6	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1278:A:P	17:N:19:ARG:HH22	2.41	0.43
1:0:1486:A:C5	30:1:2:LYS:HG3	2.53	0.43
1:0:2529:G:O2'	1:0:2530:C:H5'	2.18	0.43
12:I:97:ALA:O	12:I:101:VAL:HG23	2.17	0.43
8:E:101:GLU:HB2	8:E:116:THR:O	2.17	0.43
1:0:602:A:O2'	1:0:605:C:H4'	2.19	0.43
11:H:47:GLU:HG2	11:H:133:ILE:CD1	2.49	0.43
15:L:95:LYS:HG2	15:L:99:ARG:HB3	1.99	0.43
18:O:103:THR:HA	18:O:106:ARG:HH12	1.81	0.43
8:E:7:ILE:HD11	8:E:11:VAL:O	2.19	0.43
11:H:58:HIS:CE1	11:H:59:ASN:ND2	2.86	0.43
1:0:2694:A:C4'	8:E:91:PHE:HE1	2.23	0.43
1:0:1805:G:O2'	1:0:1806:G:H5'	2.18	0.43
1:0:235:C:O2'	1:0:236:A:H2'	2.18	0.43
5:B:41:PHE:CZ	5:B:79:MET:HG3	2.53	0.43
1:0:695:C:H2'	1:0:696:C:C6	2.53	0.43
27:X:100:ARG:HE	27:X:234:VAL:HG21	1.81	0.43
1:0:2434:A:O3'	31:2:28:GLY:HA3	2.19	0.43
5:B:62:ARG:HG2	5:B:65:MET:HE3	2.00	0.43
1:0:2758:G:O2'	1:0:2759:C:H5'	2.19	0.43
4:A:109:GLU:HG2	4:A:116:GLY:N	2.33	0.43
15:L:85:ARG:C	15:L:87:MET:HG3	2.39	0.43
16:M:47:LEU:CD1	16:M:97:VAL:HG11	2.48	0.43
18:O:103:THR:O	18:O:106:ARG:HB3	2.18	0.43
31:2:69:TYR:CE1	31:2:80:ARG:HD2	2.53	0.43
5:B:55:ASN:CB	5:B:63:GLU:HA	2.46	0.43
27:X:203:VAL:CG1	27:X:228:VAL:HG22	2.46	0.43
5:B:132:HIS:HB2	5:B:137:LEU:HD22	1.99	0.43
21:R:56:ASN:O	30:1:8:LYS:HE2	2.18	0.43
1:0:1461:U:H2'	1:0:1462:C:H6	1.80	0.43
1:0:2244:A:H5''	15:L:29:GLN:OE1	2.19	0.43
7:D:60:GLU:C	7:D:62:ASP:N	2.72	0.43
27:X:144:ARG:NE	38:X:8621:HOH:O	2.50	0.43
1:0:400:C:O2'	1:0:401:C:H5'	2.19	0.43
10:G:18:GLU:O	10:G:21:ASP:HB2	2.18	0.43
1:0:1244:U:H4'	1:0:1246:A:O4'	2.19	0.43
15:L:55:LYS:HB2	15:L:60:ILE:CD1	2.49	0.43
15:L:61:ILE:N	15:L:61:ILE:HD12	2.33	0.43
26:W:9:VAL:HG13	26:W:88:GLU:CD	2.38	0.43
5:B:180:ASP:O	5:B:181:ILE:C	2.57	0.43
38:O:5481:HOH:O	15:L:86:MET:HE3	2.18	0.43
27:X:200:THR:HG22	27:X:201:GLU:HG2	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2296:C:H2'	1:0:2297:U:C6	2.53	0.43
8:E:18:LEU:HD13	8:E:34:TRP:CG	2.54	0.43
1:0:1114:A:H2'	1:0:1115:U:C6	2.54	0.43
1:0:1276:U:H3'	17:N:19:ARG:HH11	1.83	0.43
7:D:128:LEU:C	7:D:128:LEU:HD23	2.39	0.43
16:M:15:GLU:O	16:M:17:ARG:HG3	2.19	0.43
28:Y:58:GLY:HA3	38:Y:8442:HOH:O	2.19	0.43
11:H:28:ILE:HG23	38:H:8390:HOH:O	2.17	0.43
27:X:189:ASN:ND2	27:X:192:ASP:H	2.16	0.43
8:E:22:VAL:O	8:E:28:SER:HA	2.19	0.43
1:0:797:A:H5'	28:Y:10:ARG:HG2	2.00	0.43
10:G:12:ILE:HG22	10:G:12:ILE:O	2.19	0.43
13:J:87:ARG:HB2	23:T:19:THR:HG23	2.01	0.43
1:0:353:G:H2'	1:0:354:A:H8	1.82	0.43
9:F:49:PHE:CD1	9:F:49:PHE:N	2.87	0.43
1:0:473:A:O2'	1:0:474:C:H5'	2.19	0.43
27:X:151:SER:HB3	27:X:154:ARG:HB3	2.00	0.43
1:0:883:U:O2	1:0:883:U:H2'	2.18	0.43
1:0:1755:A:H2'	1:0:1756:G:O4'	2.18	0.43
22:S:3:GLN:HA	22:S:4:PRO:HD3	1.89	0.43
7:D:21:VAL:HA	7:D:131:THR:O	2.18	0.43
13:J:90:PHE:CD1	13:J:90:PHE:N	2.87	0.43
16:M:143:ARG:HA	16:M:172:PHE:CE2	2.54	0.43
22:S:87:VAL:HB	22:S:88:PRO:HD2	2.00	0.43
15:L:184:ARG:NH1	15:L:184:ARG:HB2	2.34	0.43
1:0:440:C:H2'	1:0:441:A:C8	2.54	0.43
12:I:4:ALA:O	12:I:5:GLU:O	2.36	0.43
19:P:50:GLY:HA3	19:P:87:THR:OG1	2.19	0.43
1:0:999:C:O2'	1:0:1000:C:H5'	2.19	0.43
1:0:2670:G:O2'	1:0:2671:U:H5'	2.18	0.43
1:0:2661:U:H3	1:0:2812:A:H62	1.67	0.43
7:D:23:VAL:HG21	7:D:45:THR:CG2	2.49	0.43
25:V:26:ILE:CG1	25:V:26:ILE:O	2.66	0.43
28:Y:32:LYS:HB3	28:Y:32:LYS:HE2	1.90	0.43
1:0:264:G:H1'	1:0:265:U:H5	1.82	0.43
13:J:29:LEU:HB3	13:J:55:VAL:CG1	2.42	0.43
1:0:1205:U:H2'	1:0:1206:U:C5'	2.49	0.43
7:D:146:LYS:CE	16:M:107:ASN:ND2	2.81	0.43
1:0:559:U:O2'	1:0:560:C:H5'	2.19	0.43
1:0:1008:C:H2'	1:0:1009:U:C6	2.53	0.43
1:0:111:C:H2'	1:0:112:G:O4'	2.19	0.43
1:0:2538:A:H4'	1:0:2539:U:OP1	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2054:A:H2	20:Q:128:ARG:HH22	1.61	0.43
18:O:16:VAL:CG1	18:O:17:GLY:N	2.82	0.43
1:0:685:C:O2	1:0:748:C:H4'	2.18	0.43
26:W:26:ALA:O	26:W:27:ASP:C	2.57	0.43
13:J:125:ALA:C	13:J:127:ALA:H	2.21	0.43
1:0:790:A:H2'	1:0:791:A:O4'	2.19	0.43
1:0:2106:C:H1'	1:0:2484:U:O2	2.19	0.43
38:0:3070:HOH:O	5:B:214:PRO:HD2	2.19	0.43
1:0:2060:A:H2'	1:0:2061:C:C6	2.54	0.43
1:0:1566:C:O2'	1:0:1567:A:H5'	2.19	0.43
21:R:42:GLU:HG2	21:R:49:VAL:HG23	2.01	0.43
15:L:122:GLU:HB2	15:L:126:HIS:O	2.19	0.43
2:9:3056:A:O2'	7:D:14:ARG:HD3	2.19	0.43
1:0:250:C:O2'	1:0:251:C:H5'	2.18	0.43
1:0:1853:C:H5'	4:A:228:ILE:O	2.18	0.43
4:A:103:VAL:HA	4:A:104:PRO:HD3	1.84	0.43
1:0:1008:C:O2'	1:0:1009:U:H5'	2.19	0.43
9:F:36:THR:OG1	38:F:3111:HOH:O	2.22	0.43
16:M:108:SER:HA	16:M:109:PRO:HD3	1.80	0.43
1:0:392:U:H4'	15:L:193:LYS:HB3	2.00	0.43
11:H:111:MET:O	11:H:114:PRO:HD3	2.19	0.43
1:0:1377:C:H5'	1:0:1377:C:C6	2.51	0.43
1:0:354:A:H2'	1:0:355:C:H6	1.83	0.43
19:P:93:ARG:HG3	19:P:93:ARG:NH1	2.34	0.43
1:0:2684:A:H2'	1:0:2685:C:C6	2.54	0.43
1:0:1947:G:N2	1:0:1966:U:C2	2.87	0.43
4:A:97:ALA:HB2	4:A:150:PRO:HB2	2.01	0.43
18:O:135:ALA:HB1	18:O:139:ARG:HH12	1.84	0.43
15:L:71:SER:HB2	15:L:92:THR:HG22	2.00	0.43
24:U:12:THR:HG23	24:U:14:ALA:N	2.34	0.42
38:0:4117:HOH:O	15:L:87:MET:HE1	2.19	0.42
5:B:205:VAL:O	5:B:307:ARG:CD	2.67	0.42
20:Q:89:LEU:HD23	20:Q:89:LEU:HA	1.79	0.42
14:K:133:VAL:HB	38:K:8562:HOH:O	2.19	0.42
1:0:1329:A:N1	36:0:8513:CL:CL	2.88	0.42
1:0:1667:A:C8	1:0:1667:A:H5'	2.50	0.42
6:C:138:VAL:O	6:C:234:VAL:HA	2.19	0.42
1:0:2688:U:H2'	1:0:2689:A:C8	2.54	0.42
1:0:152:A:H2'	1:0:153:C:C6	2.54	0.42
6:C:7:ASP:C	6:C:9:ASP:H	2.22	0.42
1:0:123:U:H2'	1:0:124:C:C6	2.54	0.42
7:D:151:ILE:HA	7:D:152:PRO:HD3	1.89	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:B:238:ASN:ND2	5:B:240:GLY:N	2.54	0.42
15:L:35:PRO:HD2	15:L:38:VAL:CG2	2.48	0.42
25:V:154:ARG:HB3	25:V:154:ARG:HE	1.50	0.42
28:Y:27:ALA:O	28:Y:28:ASP:C	2.57	0.42
2:9:3007:G:H4'	16:M:55:ASP:OD2	2.18	0.42
1:0:2840:A:H3'	38:0:8528:HOH:O	2.18	0.42
6:C:194:PHE:HA	6:C:234:VAL:HG13	2.00	0.42
21:R:57:THR:CG2	21:R:58:MET:N	2.82	0.42
12:I:6:PHE:O	12:I:8:ALA:N	2.52	0.42
1:0:2730:G:O2'	1:0:2731:G:H5'	2.19	0.42
1:0:61:G:C2	1:0:62:C:C2	3.07	0.42
1:0:2708:G:H2'	1:0:2709:G:O4'	2.19	0.42
1:0:2105:C:H2'	1:0:2106:C:C6	2.54	0.42
31:2:5:ARG:HG3	31:2:5:ARG:O	2.20	0.42
1:0:843:A:C2	1:0:846:A:C8	3.08	0.42
8:E:106:ASN:ND2	8:E:109:GLY:HA2	2.34	0.42
1:0:2544:G:H2'	1:0:2545:U:O4'	2.18	0.42
25:V:29:VAL:O	25:V:30:ASN:HB2	2.18	0.42
38:0:4962:HOH:O	6:C:149:LYS:HE3	2.18	0.42
6:C:178:GLN:O	6:C:179:GLY:C	2.58	0.42
16:M:34:LEU:HD22	16:M:129:ILE:CD1	2.49	0.42
1:0:2896:A:N3	1:0:2896:A:H2'	2.34	0.42
11:H:46:VAL:CG1	11:H:146:TRP:HZ3	2.32	0.42
7:D:133:ASN:HD22	7:D:133:ASN:HA	1.66	0.42
38:0:7645:HOH:O	16:M:4:PRO:HD2	2.19	0.42
24:U:39:ALA:C	24:U:41:GLU:N	2.72	0.42
1:0:1328:A:N7	1:0:1329:A:C5	2.87	0.42
4:A:88:ILE:CD1	4:A:100:PRO:HD3	2.47	0.42
1:0:2347:C:H2'	1:0:2348:C:H6	1.85	0.42
1:0:776:A:H1'	1:0:779:U:O4	2.19	0.42
1:0:639:A:H2'	1:0:640:G:H8	1.83	0.42
1:0:1139:U:H2'	1:0:1140:C:H6	1.84	0.42
13:J:9:THR:HG22	13:J:78:LYS:HG2	2.01	0.42
8:E:101:GLU:OE2	8:E:115:ARG:HD3	2.19	0.42
38:9:8411:HOH:O	7:D:68:PRO:HG3	2.20	0.42
1:0:525:G:H2'	1:0:526:U:O4'	2.18	0.42
1:0:1433:G:O2'	1:0:1434:A:H5'	2.19	0.42
1:0:1342:C:O2'	1:0:1343:C:H5'	2.19	0.42
7:D:166:ILE:O	7:D:169:THR:N	2.51	0.42
16:M:175:LEU:HD12	16:M:175:LEU:HA	1.75	0.42
1:0:2353:A:H4'	1:0:2354:A:O5'	2.19	0.42
29:Z:25:LYS:CD	30:1:49:GLU:H	2.28	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:2011:A:H5'	1:O:2013:G:H1'	2.00	0.42
16:M:152:GLU:C	16:M:154:LEU:N	2.72	0.42
1:O:1635:U:O2'	1:O:1636:G:H5'	2.19	0.42
11:H:31:PHE:HE2	11:H:87:LYS:O	2.02	0.42
27:X:235:GLU:N	27:X:235:GLU:CD	2.71	0.42
1:O:565:A:H2'	1:O:566:A:C8	2.54	0.42
11:H:71:TYR:C	11:H:73:GLN:N	2.71	0.42
1:O:1669:A:H2'	1:O:1670:G:H8	1.84	0.42
38:O:5879:HOH:O	11:H:57:ARG:HG3	2.19	0.42
6:C:40:ALA:HB3	6:C:100:LEU:HD12	2.02	0.42
1:O:675:U:O2'	6:C:42:ARG:NH1	2.52	0.42
1:O:1649:G:O2'	1:O:1650:C:H5'	2.18	0.42
1:O:301:G:O2'	1:O:302:A:H5'	2.19	0.42
1:O:1028:U:H5'	1:O:1031:G:O4'	2.19	0.42
5:B:152:PRO:HD2	38:B:8645:HOH:O	2.18	0.42
12:I:142:ASN:O	12:I:144:THR:N	2.52	0.42
1:O:2053:G:H4'	20:Q:136:TRP:CE2	2.55	0.42
5:B:33:ASP:HB3	5:B:34:GLY:H	1.71	0.42
1:O:2039:A:H4'	1:O:2760:C:O2'	2.20	0.42
12:I:45:VAL:HG22	12:I:46:ILE:N	2.34	0.42
11:H:48:LEU:CG	11:H:157:ILE:HG21	2.48	0.42
5:B:83:ALA:HB2	5:B:101:TRP:CD2	2.54	0.42
7:D:54:ALA:O	7:D:65:GLU:O	2.37	0.42
1:O:370:G:O2'	1:O:371:U:H5'	2.19	0.42
1:O:191:A:H2'	1:O:237:G:O6	2.19	0.42
1:O:821:U:H2'	1:O:822:C:C6	2.54	0.42
1:O:902:G:N7	14:K:18:HIS:CD2	2.85	0.42
14:K:124:ASP:OD1	14:K:149:ARG:NH2	2.53	0.42
1:O:1517:U:H2'	1:O:1518:A:C8	2.54	0.42
1:O:1714:C:H4'	1:O:2745:C:O2	2.19	0.42
15:L:137:ASP:O	15:L:142:LYS:HE3	2.19	0.42
1:O:317:A:H5'	22:S:52:ARG:HD2	2.01	0.42
1:O:2824:C:H5''	1:O:2825:C:H5'	2.01	0.42
1:O:2039:A:H2'	1:O:2040:C:C6	2.55	0.42
1:O:307:G:C2	1:O:309:C:C4	3.06	0.42
1:O:770:C:O2'	1:O:771:G:H5'	2.18	0.42
18:O:84:ALA:C	18:O:86:ALA:H	2.23	0.42
13:J:19:THR:HB	13:J:94:ALA:HB2	2.01	0.42
1:O:2651:C:H2'	1:O:2652:U:O4'	2.19	0.42
9:F:4:VAL:HA	9:F:76:PHE:CE1	2.54	0.42
12:I:130:VAL:HG12	12:I:131:THR:N	2.32	0.42
18:O:103:THR:O	18:O:107:GLU:HG3	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1996:U:H6	1:0:2586:U:O2	2.03	0.42
16:M:69:TYR:HE2	16:M:183:ASP:OD2	2.03	0.42
8:E:15:GLN:NE2	8:E:40:VAL:O	2.52	0.42
10:G:20:VAL:O	10:G:24:VAL:HG23	2.20	0.42
29:Z:25:LYS:HD2	30:1:48:ASP:HA	2.02	0.42
5:B:132:HIS:CE1	5:B:171:VAL:CG2	3.03	0.42
7:D:95:THR:C	7:D:97:GLN:N	2.71	0.42
1:0:2413:A:N7	16:M:109:PRO:CB	2.81	0.42
1:0:1574:C:H2'	1:0:1575:C:C6	2.55	0.42
1:0:92:G:H4'	24:U:44:GLY:HA3	2.00	0.42
19:P:42:LYS:HD2	19:P:42:LYS:HA	1.93	0.42
1:0:1217:G:H2'	1:0:1218:U:H6	1.85	0.42
1:0:920:C:H5'	1:0:921:G:C4	2.55	0.42
1:0:1320:U:H2'	1:0:1321:A:C8	2.55	0.42
1:0:709:G:O2'	17:N:25:VAL:CG1	2.67	0.42
38:0:4613:HOH:O	15:L:79:LYS:HD3	2.20	0.42
8:E:116:THR:HG22	8:E:151:LEU:HD22	2.00	0.42
1:0:2670:G:H4'	5:B:112:THR:HG22	2.02	0.42
1:0:846:A:O2'	1:0:847:C:H5'	2.19	0.42
1:0:1014:A:H5''	2:9:3101:G:O2'	2.20	0.42
1:0:1200:A:H2'	38:0:6645:HOH:O	2.20	0.42
1:0:585:C:H2'	1:0:586:C:C6	2.54	0.42
6:C:200:PRO:HB3	6:C:212:VAL:HG23	2.01	0.42
16:M:34:LEU:HA	16:M:47:LEU:CD2	2.50	0.42
16:M:67:ALA:O	16:M:69:TYR:N	2.53	0.42
14:K:73:VAL:HG11	14:K:118:LEU:HD21	2.02	0.42
1:0:255:A:H2'	1:0:256:C:H6	1.83	0.42
14:K:40:PHE:C	14:K:40:PHE:CD1	2.92	0.42
1:0:1511:U:O2'	1:0:1512:G:H5'	2.19	0.42
28:Y:42:CYS:SG	28:Y:43:GLY:N	2.93	0.42
1:0:169:A:O2'	31:2:48:ASN:ND2	2.53	0.42
1:0:2478:U:H2'	1:0:2479:A:H8	1.85	0.42
1:0:1992:U:H2'	1:0:1994:A:OP2	2.20	0.42
5:B:183:GLU:OE1	5:B:183:GLU:HA	2.20	0.42
1:0:1976:G:H1'	1:0:2005:G:N2	2.35	0.42
1:0:2004:U:H2'	1:0:2005:G:OP1	2.19	0.42
28:Y:13:ARG:NH1	28:Y:14:PHE:CZ	2.87	0.42
30:1:22:PRO:HG2	30:1:25:VAL:HG23	2.02	0.42
1:0:2327:A:H2'	1:0:2328:U:C6	2.55	0.42
1:0:750:A:O3'	6:C:101:ASP:HB2	2.20	0.42
4:A:16:PHE:HB3	38:A:8556:HOH:O	2.20	0.42
1:0:1236:A:H2'	1:0:1237:U:O4'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:1597:A:O4'	18:O:95:GLU:HG2	2.20	0.42
22:S:80:GLU:OE2	22:S:84:GLY:HA2	2.20	0.42
1:O:1477:C:O2'	1:O:1478:U:H5'	2.19	0.42
1:O:424:C:H2'	1:O:425:U:C6	2.53	0.42
1:O:424:C:H2'	1:O:425:U:H6	1.85	0.42
1:O:1362:U:H5'	38:O:4214:HOH:O	2.19	0.42
1:O:35:U:O2'	1:O:36:C:H5'	2.20	0.42
11:H:47:GLU:CB	11:H:133:ILE:CD1	2.95	0.42
11:H:29:ALA:CB	11:H:65:ARG:HH12	2.18	0.42
7:D:41:LEU:O	7:D:44:ILE:HG22	2.20	0.42
5:B:27:ASN:HB3	38:B:8641:HOH:O	2.19	0.42
12:I:19:MET:CE	12:I:78:ILE:HG22	2.49	0.42
1:O:1666:C:H2'	1:O:1667:A:C8	2.54	0.42
16:M:154:LEU:HG	16:M:155:GLU:H	1.84	0.42
16:M:157:PRO:HG3	38:M:8526:HOH:O	2.19	0.42
25:V:65:VAL:HA	25:V:68:THR:HG22	2.01	0.42
9:F:21:GLU:O	9:F:24:ARG:CG	2.65	0.42
5:B:5:ARG:HD2	5:B:8:LYS:HZ1	1.82	0.42
1:O:39:G:N2	1:O:444:C:C2	2.88	0.42
23:T:37:GLU:O	23:T:40:ALA:HB3	2.20	0.42
9:F:23:ALA:HB1	38:F:5413:HOH:O	2.19	0.42
1:O:1276:U:H3'	17:N:19:ARG:NH1	2.34	0.42
2:9:3031:C:H2'	2:9:3032:G:O4'	2.19	0.42
8:E:3:VAL:HG22	8:E:49:ILE:HB	2.01	0.42
15:L:49:ALA:C	15:L:54:TYR:HB3	2.40	0.42
7:D:81:GLU:O	7:D:84:LEU:N	2.52	0.42
1:O:17:G:H2'	1:O:18:C:C6	2.54	0.42
14:K:12:THR:HG21	14:K:16:GLY:O	2.19	0.42
28:Y:57:CYS:C	28:Y:59:HIS:N	2.73	0.42
11:H:147:ARG:HA	11:H:150:LYS:HZ2	1.85	0.42
11:H:150:LYS:HA	11:H:153:VAL:HG22	2.01	0.42
1:O:1988:C:C2	1:O:2001:G:N2	2.88	0.42
1:O:2895:C:H4'	38:W:4132:HOH:O	2.19	0.42
1:O:462:A:C8	30:1:37:HIS:CE1	3.08	0.42
1:O:1268:C:O2'	1:O:1269:G:H5'	2.19	0.42
20:Q:19:ARG:HA	20:Q:142:ASP:OD1	2.20	0.42
1:O:2055:A:H4'	20:Q:132:ARG:NH2	2.35	0.42
1:O:1769:C:O2'	1:O:1770:U:H5'	2.20	0.42
1:O:2406:U:C2	1:O:2407:G:C8	3.08	0.42
1:O:1289:C:O2'	1:O:1290:G:H5'	2.20	0.42
1:O:2869:G:H2'	1:O:2870:C:C6	2.54	0.42
1:O:757:C:H2'	1:O:758:A:C8	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1069:C:H2'	1:0:1070:A:O4'	2.20	0.42
1:0:630:A:H5''	38:0:5660:HOH:O	2.19	0.42
22:S:69:LYS:O	22:S:71:VAL:HG23	2.20	0.42
6:C:114:ALA:HB1	6:C:223:LEU:HB3	2.01	0.42
1:0:2381:C:H4'	31:2:80:ARG:NH1	2.34	0.42
8:E:15:GLN:HB2	8:E:20:ILE:HA	2.02	0.42
18:O:59:ARG:O	18:O:62:ALA:HB3	2.20	0.42
1:0:1184:C:O2'	1:0:1185:U:OP2	2.35	0.42
4:A:130:THR:HG22	4:A:131:HIS:N	2.33	0.42
1:0:2782:G:O6	1:0:2790:C:H5''	2.19	0.42
20:Q:29:LYS:CD	38:Q:8542:HOH:O	2.60	0.42
1:0:668:C:H2'	1:0:669:G:C8	2.55	0.42
1:0:1352:A:P	6:C:92:PRO:HG3	2.60	0.42
1:0:319:A:H2'	1:0:320:G:C8	2.55	0.42
4:A:65:ARG:NH1	4:A:65:ARG:HG2	2.35	0.42
6:C:21:VAL:C	6:C:23:GLU:N	2.72	0.42
1:0:660:A:N6	1:0:746:A:O4'	2.53	0.42
1:0:441:A:H1'	1:0:442:A:N7	2.35	0.42
1:0:73:C:O2'	1:0:74:A:H5'	2.19	0.42
1:0:2445:U:H2'	1:0:2446:G:C8	2.55	0.42
1:0:1905:U:H2'	1:0:1906:C:C6	2.54	0.42
18:O:84:ALA:C	18:O:86:ALA:N	2.73	0.42
1:0:834:G:H5''	1:0:835:U:O5'	2.19	0.42
1:0:2604:A:H5'	38:0:6679:HOH:O	2.19	0.42
1:0:2866:U:H4'	1:0:2867:G:H5'	2.02	0.42
1:0:1520:G:H2'	1:0:1521:C:C6	2.54	0.42
1:0:185:G:H4'	1:0:186:A:H4'	2.01	0.42
15:L:87:MET:HE3	38:L:8596:HOH:O	2.18	0.41
6:C:236:THR:HG21	38:C:8382:HOH:O	2.20	0.41
1:0:1116:U:C2'	1:0:1118:A:C2	3.03	0.41
5:B:304:PRO:HD2	5:B:307:ARG:HH11	1.83	0.41
20:Q:44:VAL:HG13	20:Q:89:LEU:HD22	2.01	0.41
11:H:75:SER:HB3	11:H:79:ALA:HB1	2.02	0.41
16:M:102:LEU:HG	16:M:104:ILE:CG2	2.50	0.41
14:K:124:ASP:CG	14:K:125:PHE:N	2.73	0.41
1:0:2301:A:H5''	1:0:2302:A:H5'	2.02	0.41
1:0:1514:C:H2'	1:0:1515:A:C8	2.55	0.41
15:L:133:LEU:O	15:L:134:ILE:HD13	2.20	0.41
30:1:36:ASN:HB3	30:1:39:ARG:HG3	2.01	0.41
7:D:140:ARG:HH11	7:D:140:ARG:HG3	1.84	0.41
1:0:2253:G:O2'	1:0:2254:G:H5'	2.21	0.41
1:0:145:A:H4'	15:L:137:ASP:OD2	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:2389:U:H4'	19:P:53:HIS:CD2	2.54	0.41
1:O:1524:U:O2'	1:O:1525:G:P	2.78	0.41
5:B:139:ASP:HB2	38:B:8532:HOH:O	2.19	0.41
20:Q:123:GLN:HA	20:Q:137:ASN:OD1	2.20	0.41
1:O:163:U:O3'	1:O:896:C:H4'	2.19	0.41
1:O:51:G:O2'	1:O:52:A:H5'	2.20	0.41
1:O:23:G:H1'	1:O:520:A:N6	2.35	0.41
21:R:8:PRO:HD2	24:U:32:ALA:HA	2.02	0.41
26:W:74:ALA:HB2	26:W:85:VAL:HG13	2.01	0.41
1:O:2502:C:C4'	11:H:151:MET:CG	2.98	0.41
1:O:1044:C:H5''	38:O:3019:HOH:O	2.19	0.41
1:O:1334:C:H2'	1:O:1335:C:H6	1.85	0.41
14:K:90:ARG:HA	14:K:119:THR:HB	2.02	0.41
12:I:70:PHE:CD2	12:I:70:PHE:O	2.73	0.41
25:V:34:LEU:HD12	25:V:100:LEU:HD13	2.02	0.41
1:O:689:G:H2'	1:O:690:G:H8	1.84	0.41
1:O:883:U:C2'	1:O:883:U:O2	2.67	0.41
25:V:28:HIS:HD2	25:V:31:HIS:CE1	2.38	0.41
2:9:3011:A:O2'	2:9:3012:C:H3'	2.20	0.41
2:9:3036:C:C5	2:9:3037:C:C5	3.08	0.41
1:O:1409:G:H5'	38:O:4658:HOH:O	2.19	0.41
19:P:66:LYS:HB2	19:P:70:ALA:O	2.19	0.41
6:C:35:VAL:HG21	6:C:227:GLY:HA2	2.02	0.41
22:S:53:GLY:HA3	38:S:6384:HOH:O	2.20	0.41
2:9:3056:A:C3'	2:9:3057:A:H5''	2.50	0.41
26:W:76:ARG:NH1	26:W:76:ARG:CG	2.79	0.41
16:M:67:ALA:HA	16:M:71:TRP:HB3	2.02	0.41
1:O:251:C:H5'	15:L:140:ALA:HA	2.02	0.41
16:M:141:ARG:HB3	38:M:8569:HOH:O	2.20	0.41
4:A:130:THR:HG22	4:A:131:HIS:O	2.20	0.41
1:O:2781:U:H2'	1:O:2782:G:C5'	2.50	0.41
7:D:95:THR:OG1	7:D:174:VAL:HG22	2.20	0.41
23:T:6:CYS:HA	23:T:13:ILE:HD11	2.02	0.41
4:A:186:TRP:CG	4:A:187:PRO:HA	2.55	0.41
1:O:1735:C:H5'	5:B:235:ARG:NH2	2.35	0.41
1:O:294:C:H2'	1:O:295:C:O4'	2.20	0.41
1:O:2737:C:H3'	1:O:2738:G:H5''	2.02	0.41
1:O:876:A:H2'	1:O:876:A:N3	2.35	0.41
27:X:197:ASP:OD1	27:X:199:ASP:HB2	2.20	0.41
19:P:88:ALA:O	19:P:90:HIS:N	2.53	0.41
22:S:43:ASN:C	22:S:45:GLY:H	2.24	0.41
16:M:71:TRP:CE2	16:M:73:ALA:HB3	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:9:3008:G:O6	16:M:11:ARG:NH1	2.54	0.41
1:0:1150:A:C2	10:G:20:VAL:HG21	2.55	0.41
1:0:1150:A:N7	10:G:69:ARG:NH2	2.69	0.41
16:M:24:LEU:O	16:M:28:LYS:HG2	2.21	0.41
1:0:2900:G:H2'	1:0:2901:C:O4'	2.20	0.41
31:2:38:ARG:O	31:2:42:ARG:HB2	2.20	0.41
1:0:1586:G:H2'	1:0:1587:U:H6	1.85	0.41
1:0:213:G:O2'	1:0:214:U:OP2	2.37	0.41
1:0:311:C:H2'	1:0:312:U:C6	2.56	0.41
1:0:474:C:O3'	6:C:73:LEU:HD21	2.20	0.41
15:L:78:ASN:O	15:L:79:LYS:HG2	2.20	0.41
11:H:82:LYS:HB2	11:H:82:LYS:NZ	2.36	0.41
16:M:50:LEU:HA	16:M:50:LEU:HD12	1.74	0.41
20:Q:34:GLU:HG2	20:Q:46:TYR:CZ	2.56	0.41
1:0:2703:A:H2'	1:0:2704:C:H6	1.85	0.41
15:L:46:LEU:HB2	38:L:8611:HOH:O	2.20	0.41
25:V:146:ILE:HG23	25:V:150:LEU:HD12	2.02	0.41
1:0:1711:A:O2'	1:0:1712:A:H5'	2.20	0.41
17:N:42:GLU:HB2	38:N:2176:HOH:O	2.20	0.41
1:0:1365:C:H2'	1:0:1366:C:H6	1.85	0.41
1:0:541:C:H2'	1:0:542:A:H5'	2.01	0.41
6:C:2:GLN:HB3	38:C:8342:HOH:O	2.20	0.41
1:0:1666:C:C2'	1:0:1667:A:C5'	2.97	0.41
18:O:76:GLY:O	18:O:79:SER:HB2	2.21	0.41
1:0:1003:U:O2'	11:H:90:PHE:HE1	2.03	0.41
1:0:946:C:H2'	1:0:947:U:H6	1.85	0.41
6:C:187:ARG:HD2	6:C:188:ARG:N	2.35	0.41
15:L:137:ASP:HA	15:L:142:LYS:HE3	2.02	0.41
15:L:71:SER:CB	15:L:92:THR:HG22	2.51	0.41
1:0:734:U:H2'	1:0:736:A:OP2	2.21	0.41
1:0:736:A:H2'	1:0:737:A:O4'	2.20	0.41
1:0:2135:A:O2'	1:0:2136:G:H5'	2.20	0.41
1:0:2501:G:H1'	38:O:5452:HOH:O	2.20	0.41
21:R:23:LYS:HE2	38:R:8333:HOH:O	2.20	0.41
38:O:4776:HOH:O	11:H:11:LYS:HE2	2.20	0.41
15:L:69:LYS:HD3	15:L:125:ARG:HA	2.02	0.41
11:H:47:GLU:CG	11:H:133:ILE:CD1	2.99	0.41
1:0:1192:A:H3'	1:0:1193:A:H5'	2.02	0.41
28:Y:57:CYS:C	28:Y:59:HIS:H	2.23	0.41
20:Q:99:ALA:HB1	20:Q:109:MET:HE3	1.99	0.41
25:V:6:GLN:CB	25:V:26:ILE:HD12	2.39	0.41
9:F:58:GLU:CA	9:F:61:MET:HG3	2.46	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:I:74:ARG:HD3	38:I:5061:HOH:O	2.21	0.41
31:2:70:ARG:HB3	38:2:8576:HOH:O	2.20	0.41
1:0:1473:U:O2'	1:0:1474:C:H5''	2.20	0.41
14:K:122:ALA:HB3	14:K:125:PHE:CZ	2.56	0.41
1:0:168:C:C2'	1:0:169:A:H5'	2.50	0.41
1:0:1626:A:C2'	1:0:1627:G:H5'	2.51	0.41
16:M:180:LEU:O	16:M:181:ASP:CB	2.69	0.41
1:0:1375:A:C2'	1:0:1376:G:H5'	2.50	0.41
1:0:2686:C:O2'	1:0:2687:G:H5'	2.21	0.41
17:N:25:VAL:HG23	17:N:26:TRP:N	2.36	0.41
1:0:128:A:H3'	1:0:128:A:C8	2.55	0.41
1:0:1780:G:O2'	1:0:1781:G:H5'	2.20	0.41
38:0:3197:HOH:O	4:A:11:ARG:HD3	2.20	0.41
1:0:2443:C:O3'	14:K:56:LYS:HE3	2.20	0.41
1:0:1323:G:C2	1:0:1324:G:C8	3.09	0.41
1:0:2082:G:O2'	1:0:2083:A:H5'	2.20	0.41
1:0:2656:G:C2'	1:0:2657:G:H5'	2.50	0.41
6:C:237:GLU:N	38:C:8461:HOH:O	2.53	0.41
15:L:63:VAL:HG21	15:L:109:PHE:CE1	2.56	0.41
4:A:194:MET:HE3	4:A:199:HIS:HB2	1.96	0.41
4:A:169:PHE:O	4:A:170:VAL:HB	2.21	0.41
4:A:48:ASP:HA	4:A:49:PRO:HD3	1.85	0.41
4:A:211:LYS:HB3	4:A:212:PRO:CD	2.43	0.41
23:T:9:CYS:CA	23:T:52:THR:HG23	2.46	0.41
2:9:3007:G:OP1	16:M:23:ARG:NE	2.53	0.41
5:B:320:GLN:HG3	5:B:321:PRO:CD	2.51	0.41
1:0:2898:G:H2'	1:0:2899:A:H8	1.84	0.41
23:T:14:GLU:HA	23:T:15:PRO:HD2	1.92	0.41
1:0:778:C:C4	1:0:779:U:C4	3.09	0.41
1:0:2599:A:C6	1:0:2600:A:N1	2.89	0.41
24:U:42:ASN:O	24:U:44:GLY:N	2.53	0.41
15:L:173:LEU:HD23	15:L:183:VAL:HG12	2.02	0.41
4:A:105:VAL:HG13	4:A:155:THR:O	2.20	0.41
20:Q:17:MET:HE1	20:Q:19:ARG:NH2	2.36	0.41
1:0:2478:U:O2'	1:0:2479:A:H5'	2.20	0.41
2:9:3034:A:H2'	2:9:3035:C:O4'	2.21	0.41
1:0:345:G:N2	1:0:346:U:H1'	2.35	0.41
1:0:711:G:N2	1:0:718:C:C2	2.88	0.41
1:0:2833:C:H2'	1:0:2834:G:H8	1.85	0.41
1:0:681:G:N3	1:0:681:G:H5'	2.36	0.41
1:0:166:A:N7	14:K:25:GLY:HA2	2.35	0.41
1:0:2551:C:O2'	1:0:2552:C:H5'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:2831:C:H2'	1:O:2832:C:H5'	2.02	0.41
16:M:35:VAL:HG12	16:M:37:ARG:HG2	2.02	0.41
25:V:139:GLY:O	25:V:141:HIS:CD2	2.74	0.41
12:I:74:ARG:C	12:I:76:ASP:N	2.74	0.41
4:A:36:ASP:HB2	4:A:85:ASP:H	1.86	0.41
1:O:2381:C:H4'	31:2:80:ARG:CZ	2.51	0.41
31:2:55:VAL:O	31:2:56:PRO:C	2.58	0.41
1:O:380:A:H5''	15:L:48:ARG:NH2	2.35	0.41
4:A:75:GLY:HA2	28:Y:63:LYS:O	2.21	0.41
1:O:1003:U:O2	11:H:90:PHE:HZ	2.03	0.41
1:O:952:G:N3	1:O:2302:A:H2'	2.35	0.41
15:L:59:GLY:HA3	15:L:141:ILE:CD1	2.50	0.41
1:O:2688:U:H2'	1:O:2689:A:H8	1.85	0.41
1:O:138:U:OP2	1:O:139:C:H5	2.03	0.41
1:O:2737:C:H3'	1:O:2738:G:C5'	2.51	0.41
1:O:1525:G:H5'	1:O:1526:A:OP2	2.20	0.41
1:O:329:A:OP2	6:C:206:ASN:HB2	2.21	0.41
5:B:26:PHE:CE1	5:B:310:ARG:HB3	2.55	0.41
1:O:1616:A:H2'	1:O:1618:G:C8	2.55	0.41
4:A:123:GLY:HA3	4:A:162:GLY:HA2	2.03	0.41
1:O:716:G:O2'	1:O:717:C:H5'	2.21	0.41
12:I:24:SER:HA	12:I:86:MET:SD	2.61	0.41
24:U:5:VAL:HG23	38:U:2271:HOH:O	2.20	0.41
1:O:1165:G:OP1	1:O:1165:G:H3'	2.21	0.41
1:O:1196:C:C2'	1:O:1197:G:H5'	2.51	0.41
1:O:358:G:O2'	1:O:359:U:OP2	2.39	0.41
1:O:291:C:H2'	1:O:292:G:O4'	2.21	0.41
11:H:55:GLN:NE2	11:H:124:ARG:NE	2.59	0.41
7:D:23:VAL:CG2	7:D:23:VAL:O	2.69	0.41
11:H:140:PRO:HA	11:H:142:VAL:CG1	2.50	0.41
15:L:35:PRO:HD2	15:L:38:VAL:HG21	2.01	0.41
1:O:2506:A:O2'	1:O:2507:G:P	2.79	0.41
25:V:139:GLY:O	25:V:141:HIS:HD2	2.03	0.41
11:H:127:GLY:O	11:H:128:ALA:CB	2.66	0.41
7:D:57:THR:CG2	7:D:63:ILE:HG22	2.48	0.41
5:B:168:GLY:O	5:B:169:GLY:O	2.39	0.41
14:K:73:VAL:HG21	14:K:116:HIS:CD2	2.56	0.41
5:B:254:GLN:HG2	5:B:255:GLY:H	1.85	0.41
12:I:107:ASN:HD22	12:I:108:PRO:N	2.19	0.41
1:O:2134:G:C6	1:O:2258:A:C8	3.09	0.41
1:O:926:A:H5'	14:K:39:GLU:OE2	2.20	0.41
14:K:98:GLU:O	14:K:99:GLU:HB2	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:X:130:ARG:HB2	27:X:142:SER:O	2.20	0.41
1:0:1224:G:H2'	1:0:1225:C:C6	2.55	0.41
1:0:61:G:OP1	30:1:17:GLN:HG2	2.21	0.41
1:0:331:A:C6	1:0:332:G:C4	3.08	0.41
1:0:1269:G:H2'	1:0:1270:U:H6	1.86	0.41
23:T:31:PHE:CG	23:T:37:GLU:HG2	2.56	0.41
18:O:98:ILE:O	18:O:98:ILE:HD13	2.20	0.41
27:X:126:PRO:HG2	27:X:128:PHE:CZ	2.56	0.41
24:U:59:ILE:O	24:U:63:GLU:HG2	2.21	0.41
1:0:818:A:H2	28:Y:13:ARG:HA	1.86	0.41
6:C:7:ASP:O	6:C:9:ASP:N	2.54	0.41
5:B:310:ARG:HD2	38:B:8663:HOH:O	2.21	0.41
7:D:15:GLU:HA	7:D:16:PRO:HD3	1.95	0.41
1:0:2042:U:H2'	1:0:2043:U:C6	2.56	0.41
1:0:1748:U:H4'	38:0:8399:HOH:O	2.21	0.41
7:D:24:HIS:HB2	7:D:72:LYS:CB	2.51	0.41
1:0:701:U:C2	1:0:744:G:C2	3.08	0.41
1:0:2281:C:C2'	1:0:2282:U:H5'	2.49	0.41
1:0:1562:C:H2'	1:0:1562:C:O2	2.21	0.41
1:0:2664:A:H8	1:0:2664:A:OP1	2.04	0.41
27:X:163:THR:HG23	38:X:8529:HOH:O	2.20	0.41
1:0:1697:G:O2'	1:0:1698:U:H5'	2.20	0.41
26:W:7:GLU:HA	26:W:75:ALA:HA	2.03	0.41
29:Z:10:LYS:HG3	38:Z:2979:HOH:O	2.20	0.41
25:V:133:LYS:HG3	38:V:5904:HOH:O	2.20	0.41
1:0:899:C:H5'	38:0:4153:HOH:O	2.21	0.41
25:V:35:VAL:HA	25:V:36:PRO:HD3	1.85	0.41
1:0:2385:G:H2'	1:0:2386:U:C6	2.55	0.41
12:I:131:THR:CG2	12:I:134:GLU:HG3	2.51	0.41
18:O:115:SER:C	18:O:117:SER:N	2.74	0.41
9:F:60:VAL:O	9:F:61:MET:C	2.59	0.41
16:M:71:TRP:CZ2	16:M:73:ALA:HB3	2.56	0.41
4:A:217:ARG:HH11	4:A:217:ARG:HG3	1.84	0.41
16:M:25:ARG:O	16:M:28:LYS:HB2	2.21	0.41
1:0:2539:U:C5	32:0:9500:SLD:H7	2.56	0.41
1:0:255:A:H2'	1:0:256:C:O4'	2.21	0.41
1:0:1552:G:H2'	1:0:1553:C:H6	1.84	0.41
1:0:10:U:O2'	1:0:11:A:H8	2.03	0.41
4:A:93:THR:HG23	4:A:154:ALA:O	2.21	0.41
25:V:108:ARG:HE	25:V:114:PRO:CG	2.33	0.41
1:0:1269:G:O2'	1:0:1270:U:H5'	2.21	0.41
1:0:2531:U:H2'	1:0:2532:A:O4'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:9:3103:A:O2'	2:9:3104:A:H5'	2.21	0.41
1:0:1616:A:H5''	1:0:1617:C:OP1	2.21	0.41
26:W:75:ALA:O	26:W:83:ALA:HA	2.21	0.41
15:L:115:LEU:HD13	15:L:115:LEU:C	2.41	0.41
1:0:1021:G:O2'	1:0:1022:A:H5'	2.21	0.41
1:0:1679:C:H5'	38:0:3303:HOH:O	2.20	0.41
25:V:105:THR:HA	25:V:109:GLU:OE1	2.20	0.41
1:0:968:G:O2'	1:0:969:G:H5'	2.20	0.41
18:O:132:ASP:O	18:O:133:SER:HB3	2.20	0.41
1:0:1427:A:H61	1:0:1440:U:H1'	1.85	0.41
25:V:132:VAL:HG23	25:V:138:LEU:O	2.21	0.41
1:0:1896:G:C6	1:0:1897:U:C4	3.08	0.41
6:C:37:ALA:O	6:C:41:ASN:ND2	2.54	0.41
1:0:2284:G:H5'	38:0:3431:HOH:O	2.20	0.41
6:C:127:ARG:HD2	6:C:229:PRO:O	2.20	0.40
1:0:1242:A:H5'	12:I:82:THR:CG2	2.37	0.40
15:L:67:ILE:HG21	15:L:97:ILE:HG23	2.03	0.40
1:0:56:G:C5'	24:U:50:ARG:HH12	2.25	0.40
1:0:1853:C:H4'	4:A:217:ARG:HH22	1.87	0.40
1:0:2120:U:H2'	1:0:2121:G:O4'	2.22	0.40
12:I:40:ASN:OD1	12:I:106:GLY:HA2	2.21	0.40
22:S:48:VAL:CG1	22:S:96:VAL:HG13	2.51	0.40
1:0:2548:C:OP2	5:B:5:ARG:NH2	2.54	0.40
19:P:11:ARG:HD3	38:P:5620:HOH:O	2.20	0.40
13:J:82:ARG:HH21	13:J:115:ARG:HG2	1.86	0.40
14:K:125:PHE:CE2	14:K:140:VAL:HG22	2.56	0.40
1:0:860:U:H2'	1:0:861:A:C8	2.56	0.40
24:U:42:ASN:N	24:U:43:PRO:HD3	2.36	0.40
1:0:1472:C:H6	1:0:1472:C:O5'	2.04	0.40
1:0:1624:A:H4'	1:0:1626:A:H5''	2.03	0.40
22:S:89:ARG:HG3	22:S:89:ARG:O	2.21	0.40
1:0:244:C:H6	1:0:244:C:O5'	2.04	0.40
1:0:210:U:H2'	1:0:211:U:C6	2.56	0.40
20:Q:57:VAL:HG21	20:Q:81:PRO:HD2	2.03	0.40
1:0:2472:C:O2'	1:0:2634:G:H4'	2.21	0.40
5:B:30:PRO:HB2	5:B:39:GLN:NE2	2.35	0.40
15:L:74:ARG:HD3	15:L:91:ILE:HD12	2.04	0.40
15:L:97:ILE:CD1	15:L:127:LYS:HD2	2.51	0.40
1:0:2890:A:H1'	23:T:56:ARG:HH21	1.80	0.40
1:0:558:C:C2'	1:0:559:U:C5'	2.99	0.40
1:0:1159:G:H1	1:0:1208:C:H42	1.69	0.40
16:M:154:LEU:CG	16:M:155:GLU:H	2.34	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:816:G:C6	1:0:817:G:N1	2.89	0.40
4:A:55:VAL:HG11	4:A:67:LEU:HD13	2.02	0.40
1:0:2001:G:C2'	1:0:2002:C:H5'	2.52	0.40
6:C:185:LYS:HD3	6:C:186:TYR:CE1	2.56	0.40
13:J:72:VAL:O	13:J:95:ALA:HA	2.21	0.40
1:0:485:A:O2'	1:0:487:G:H5'	2.22	0.40
1:0:1767:A:O2'	1:0:1768:C:H5'	2.21	0.40
27:X:117:LEU:HA	27:X:174:VAL:HG11	2.03	0.40
1:0:834:G:H3'	1:0:835:U:H4'	2.04	0.40
11:H:82:LYS:CB	11:H:82:LYS:NZ	2.85	0.40
17:N:105:ASN:HD21	17:N:109:SER:H	1.68	0.40
5:B:84:LEU:HD13	5:B:84:LEU:C	2.41	0.40
11:H:118:PRO:HD2	38:H:8341:HOH:O	2.20	0.40
1:0:1314:U:H2'	38:0:6761:HOH:O	2.20	0.40
11:H:74:ASN:ND2	11:H:141:ASN:OD1	2.55	0.40
12:I:14:ALA:HB1	12:I:44:ALA:HB2	2.02	0.40
2:9:3072:C:O2'	2:9:3073:G:H5'	2.21	0.40
1:0:1001:U:O2'	1:0:1002:G:H5'	2.21	0.40
22:S:113:GLU:O	22:S:114:SER:C	2.58	0.40
30:1:41:HIS:CD2	30:1:44:ARG:H	2.34	0.40
4:A:211:LYS:HD3	38:A:8623:HOH:O	2.20	0.40
1:0:2852:A:H5''	38:0:6132:HOH:O	2.21	0.40
6:C:219:ASN:N	6:C:222:ASP:OD1	2.52	0.40
2:9:3013:A:H3'	2:9:3014:G:H5'	2.02	0.40
7:D:94:ALA:O	7:D:95:THR:O	2.39	0.40
31:2:84:ARG:HG3	31:2:84:ARG:HH11	1.86	0.40
28:Y:50:ALA:HB3	28:Y:54:ILE:CG2	2.49	0.40
1:0:2050:G:OP1	20:Q:79:ARG:HB3	2.21	0.40
7:D:58:VAL:CG1	7:D:59:GLY:N	2.83	0.40
1:0:514:G:H8	1:0:514:G:O5'	2.04	0.40
4:A:107:ASN:OD1	4:A:116:GLY:HA3	2.21	0.40
1:0:1434:A:H2'	1:0:1436:C:C5	2.56	0.40
1:0:1897:U:O2'	1:0:1898:G:H5'	2.21	0.40
5:B:209:LYS:HE2	38:B:8579:HOH:O	2.21	0.40
8:E:21:THR:HG23	8:E:30:THR:OG1	2.21	0.40
1:0:873:G:H2'	1:0:875:A:N7	2.37	0.40
2:9:3067:C:H2'	2:9:3068:G:H8	1.86	0.40
14:K:146:GLY:C	14:K:148:GLU:H	2.25	0.40
31:2:11:CYS:SG	31:2:14:CYS:HB2	2.61	0.40
22:S:32:ARG:HH12	22:S:38:ARG:HH12	1.67	0.40
22:S:48:VAL:HG13	22:S:96:VAL:HG13	2.03	0.40
1:0:775:G:OP1	29:Z:16:HIS:HE1	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2134:G:N2	1:0:2242:U:C2	2.90	0.40
1:0:2546:U:H2'	1:0:2547:C:C6	2.57	0.40
1:0:1572:A:H2'	1:0:1573:A:C8	2.55	0.40
1:0:1331:A:O2'	1:0:1332:C:H5'	2.21	0.40
15:L:183:VAL:HG12	15:L:184:ARG:N	2.37	0.40
1:0:1497:G:O2'	1:0:1498:G:H5'	2.22	0.40
2:9:3045:A:H2'	2:9:3046:C:C6	2.55	0.40
1:0:230:C:H2'	1:0:231:G:C8	2.57	0.40
17:N:26:TRP:CE3	17:N:26:TRP:HA	2.57	0.40
1:0:2653:A:H2'	1:0:2654:C:C6	2.57	0.40
1:0:929:A:H8	1:0:929:A:O5'	2.04	0.40
1:0:2124:G:H2'	1:0:2125:G:C8	2.57	0.40
5:B:108:GLU:HB3	5:B:111:ARG:HD2	2.04	0.40
31:2:34:LYS:HB2	31:2:37:ASP:OD2	2.20	0.40
1:0:1743:G:H1'	38:0:5797:HOH:O	2.22	0.40
1:0:1682:A:H5''	38:0:3430:HOH:O	2.21	0.40
8:E:100:ASP:HB2	38:E:2789:HOH:O	2.22	0.40
1:0:422:G:H2'	1:0:423:A:H8	1.85	0.40
15:L:66:ALA:HB2	15:L:128:TRP:NE1	2.37	0.40
1:0:2658:G:H4'	1:0:2842:G:C8	2.56	0.40
1:0:870:G:C3'	1:0:871:G:H5''	2.52	0.40
16:M:119:GLN:HE21	16:M:129:ILE:CG2	2.34	0.40
7:D:18:ILE:HG12	7:D:134:LEU:HD21	2.04	0.40
16:M:37:ARG:HD3	36:M:8507:CL:CL	2.58	0.40
28:Y:20:LEU:O	28:Y:21:LYS:C	2.59	0.40
1:0:588:G:O6	25:V:154:ARG:NH1	2.55	0.40
11:H:58:HIS:CE1	11:H:59:ASN:HD21	2.40	0.40
9:F:22:VAL:CG2	9:F:104:ALA:HB2	2.52	0.40
1:0:2255:A:N1	1:0:2256:G:C4	2.90	0.40
23:T:49:LEU:HD13	23:T:51:TRP:CZ2	2.57	0.40
1:0:2011:A:O4'	1:0:2013:G:C8	2.75	0.40
4:A:94:LEU:N	4:A:94:LEU:CD2	2.83	0.40
1:0:1211:G:O2'	1:0:1212:C:H5'	2.21	0.40
31:2:55:VAL:HG22	38:2:8509:HOH:O	2.22	0.40
12:I:75:PRO:HG2	12:I:105:LEU:CD2	2.49	0.40
5:B:5:ARG:HA	5:B:6:PRO:HD3	2.00	0.40
4:A:105:VAL:HG11	4:A:154:ALA:CB	2.52	0.40
11:H:57:ARG:HG3	11:H:57:ARG:HH11	1.86	0.40
1:0:1345:A:H2'	1:0:1346:U:H6	1.85	0.40
15:L:169:ARG:HD2	38:L:8593:HOH:O	2.21	0.40
1:0:1792:C:H2'	1:0:1793:C:C6	2.56	0.40
1:0:473:A:OP1	29:Z:51:GLN:NE2	2.55	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:675:U:H2'	1:0:676:C:H5'	2.03	0.40
4:A:165:THR:O	4:A:165:THR:HG22	2.20	0.40
1:0:1675:C:H5''	30:1:5:LYS:HD2	2.04	0.40
1:0:1235:G:C1'	12:I:63:ILE:HG23	2.51	0.40
1:0:1609:C:H2'	1:0:1610:G:H8	1.87	0.40
18:O:11:ALA:HB2	18:O:18:LYS:HA	2.03	0.40
1:0:2659:U:H4'	20:Q:76:ASP:HB3	2.04	0.40
5:B:185:GLY:HA2	38:B:8647:HOH:O	2.21	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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%)	207 (88%)	24 (10%)	4 (2%)	14	54
5	B	335/337 (99%)	300 (90%)	28 (8%)	7 (2%)	11	47
6	C	244/246 (99%)	213 (87%)	28 (12%)	3 (1%)	19	64
7	D	134/176 (76%)	96 (72%)	26 (19%)	12 (9%)	1	5
8	E	170/177 (96%)	157 (92%)	12 (7%)	1 (1%)	33	81
9	F	117/119 (98%)	102 (87%)	12 (10%)	3 (3%)	8	39
10	G	25/348 (7%)	22 (88%)	2 (8%)	1 (4%)	5	25
11	H	152/167 (91%)	132 (87%)	16 (10%)	4 (3%)	8	39
12	I	140/145 (97%)	127 (91%)	10 (7%)	3 (2%)	11	47
13	J	130/132 (98%)	117 (90%)	11 (8%)	2 (2%)	15	58
14	K	141/164 (86%)	116 (82%)	23 (16%)	2 (1%)	16	60
15	L	192/194 (99%)	167 (87%)	20 (10%)	5 (3%)	8	39
16	M	184/186 (99%)	153 (83%)	24 (13%)	7 (4%)	5	27
17	N	113/115 (98%)	106 (94%)	6 (5%)	1 (1%)	25	73
18	O	141/148 (95%)	129 (92%)	11 (8%)	1 (1%)	30	78

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	P	93/95 (98%)	88 (95%)	3 (3%)	2 (2%)	10	45
20	Q	148/154 (96%)	134 (90%)	14 (10%)	0	100	100
21	R	79/84 (94%)	76 (96%)	3 (4%)	0	100	100
22	S	117/119 (98%)	103 (88%)	12 (10%)	2 (2%)	14	54
23	T	51/66 (77%)	47 (92%)	3 (6%)	1 (2%)	11	48
24	U	63/70 (90%)	57 (90%)	4 (6%)	2 (3%)	6	33
25	V	152/154 (99%)	140 (92%)	11 (7%)	1 (1%)	30	78
26	W	80/91 (88%)	71 (89%)	7 (9%)	2 (2%)	9	40
27	X	140/240 (58%)	134 (96%)	6 (4%)	0	100	100
28	Y	71/73 (97%)	58 (82%)	10 (14%)	3 (4%)	4	24
29	Z	54/56 (96%)	50 (93%)	4 (7%)	0	100	100
30	1	42/48 (88%)	40 (95%)	2 (5%)	0	100	100
31	2	90/92 (98%)	82 (91%)	6 (7%)	2 (2%)	10	45
All	All	3633/4235 (86%)	3224 (89%)	338 (9%)	71 (2%)	11	48

All (71) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	B	139	ASP
7	D	93	LEU
7	D	95	THR
7	D	137	PRO
7	D	173	GLU
9	F	101	ALA
11	H	138	PRO
11	H	162	SER
12	I	5	GLU
16	M	139	TRP
16	M	154	LEU
16	M	162	ASP
16	M	164	ASP
16	M	183	ASP
28	Y	20	LEU
28	Y	81	LYS
31	2	56	PRO
5	B	34	GLY
5	B	107	SER

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Mol	Chain	Res	Type
5	B	169	GLY
6	C	8	LEU
7	D	11	HIS
7	D	16	PRO
7	D	20	LYS
7	D	61	PHE
7	D	147	ALA
10	G	72	ASP
11	H	164	ALA
12	I	89	HIS
12	I	143	LYS
14	K	80	ASP
15	L	148	SER
16	M	181	ASP
18	O	116	SER
22	S	53	GLY
24	U	43	PRO
28	Y	28	ASP
31	2	57	GLY
4	A	34	ASP
4	A	132	ASP
5	B	184	ASP
7	D	171	ASP
11	H	40	PRO
13	J	119	GLN
14	K	105	TYR
15	L	18	GLY
15	L	140	ALA
26	W	77	PHE
4	A	62	ASP
5	B	185	GLY
17	N	20	SER
23	T	7	ASP
26	W	70	ILE
5	B	2	GLN
6	C	145	GLU
7	D	36	ASN
7	D	60	GLU
9	F	61	MET
9	F	64	PRO
13	J	126	SER
15	L	15	PRO

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Mol	Chain	Res	Type
16	M	68	GLU
25	V	77	ALA
4	A	37	VAL
15	L	71	SER
22	S	44	ALA
8	E	44	GLY
24	U	40	PRO
19	P	18	PRO
6	C	19	PRO
19	P	54	PRO

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	A	179/181 (99%)	168 (94%)	11 (6%)	26	68
5	B	282/282 (100%)	264 (94%)	18 (6%)	25	66
6	C	193/193 (100%)	178 (92%)	15 (8%)	18	55
7	D	117/147 (80%)	108 (92%)	9 (8%)	18	56
8	E	152/155 (98%)	146 (96%)	6 (4%)	43	85
9	F	92/92 (100%)	91 (99%)	1 (1%)	84	97
10	G	27/283 (10%)	27 (100%)	0	100	100
11	H	122/122 (100%)	111 (91%)	11 (9%)	14	47
12	I	118/121 (98%)	110 (93%)	8 (7%)	22	63
13	J	106/106 (100%)	102 (96%)	4 (4%)	44	85
14	K	113/126 (90%)	108 (96%)	5 (4%)	39	82
15	L	166/166 (100%)	157 (95%)	9 (5%)	31	74
16	M	149/149 (100%)	141 (95%)	8 (5%)	31	74
17	N	93/93 (100%)	90 (97%)	3 (3%)	51	89
18	O	113/116 (97%)	109 (96%)	4 (4%)	48	87
19	P	79/79 (100%)	75 (95%)	4 (5%)	33	76
20	Q	117/121 (97%)	114 (97%)	3 (3%)	59	91

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	R	71/73 (97%)	69 (97%)	2 (3%)	56	91
22	S	105/105 (100%)	100 (95%)	5 (5%)	35	79
23	T	44/52 (85%)	44 (100%)	0	100	100
24	U	51/56 (91%)	49 (96%)	2 (4%)	43	85
25	V	130/130 (100%)	122 (94%)	8 (6%)	26	67
26	W	66/73 (90%)	62 (94%)	4 (6%)	26	68
27	X	120/195 (62%)	113 (94%)	7 (6%)	28	71
28	Y	56/56 (100%)	52 (93%)	4 (7%)	21	61
29	Z	46/46 (100%)	45 (98%)	1 (2%)	64	93
30	1	42/44 (96%)	41 (98%)	1 (2%)	61	92
31	2	79/79 (100%)	75 (95%)	4 (5%)	33	76
All	All	3028/3441 (88%)	2871 (95%)	157 (5%)	32	75

All (157) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	3	ARG
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	131	HIS
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	234	ARG
5	B	245	SER

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Mol	Chain	Res	Type
5	B	251	VAL
5	B	254	GLN
5	B	256	GLN
5	B	264	GLU
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	115	LEU
6	C	136	VAL
6	C	180	SER
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	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	54	ASP
8	E	102	VAL
8	E	164	ASP
9	F	64	PRO
11	H	18	GLU
11	H	59	ASN
11	H	61	LEU
11	H	72	VAL

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Mol	Chain	Res	Type
11	H	73	GLN
11	H	82	LYS
11	H	86	ARG
11	H	94	ARG
11	H	109	ASP
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	79	PHE
12	I	107	ASN
12	I	127	ILE
12	I	131	THR
13	J	10	GLN
13	J	49	LEU
13	J	56	SER
13	J	98	VAL
14	K	30	ARG
14	K	35	ARG
14	K	80	ASP
14	K	83	GLU
14	K	117	GLU
15	L	38	VAL
15	L	46	LEU
15	L	68	ARG
15	L	87	MET
15	L	93	ARG
15	L	99	ARG
15	L	159	THR
15	L	164	THR
15	L	170	CYS
16	M	26	LEU
16	M	47	LEU
16	M	49	THR
16	M	80	SER
16	M	127	LEU
16	M	128	ASP
16	M	152	GLU
16	M	163	PHE
17	N	3	THR

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Mol	Chain	Res	Type
17	N	98	LEU
17	N	111	VAL
18	O	52	LYS
18	O	81	LYS
18	O	91	LYS
18	O	98	ILE
19	P	11	ARG
19	P	16	ASN
19	P	57	ASP
19	P	95	GLU
20	Q	13	THR
20	Q	39	THR
20	Q	82	GLU
21	R	10	VAL
21	R	80	ARG
22	S	23	VAL
22	S	26	THR
22	S	39	ASN
22	S	48	VAL
22	S	73	HIS
24	U	22	ASP
24	U	65	ASP
25	V	35	VAL
25	V	52	VAL
25	V	73	LEU
25	V	122	ARG
25	V	128	VAL
25	V	142	ASP
25	V	146	ILE
25	V	154	ARG
26	W	15	ARG
26	W	27	ASP
26	W	49	ARG
26	W	72	VAL
27	X	115	ARG
27	X	154	ARG
27	X	163	THR
27	X	189	ASN
27	X	203	VAL
27	X	204	ARG
27	X	235	GLU
28	Y	11	THR

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Mol	Chain	Res	Type
28	Y	42	CYS
28	Y	64	ILE
28	Y	68	CYS
29	Z	36	SER
30	1	18	ASN
31	2	42	ARG
31	2	56	PRO
31	2	65	THR
31	2	74	CYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (91) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	47	HIS
4	A	92	ASN
4	A	125	ASN
4	A	127	GLN
4	A	176	HIS
4	A	199	HIS
5	B	27	ASN
5	B	145	HIS
5	B	238	ASN
5	B	256	GLN
5	B	260	HIS
5	B	320	GLN
5	B	332	ASN
6	C	2	GLN
6	C	39	GLN
6	C	129	HIS
7	D	47	GLN
7	D	85	GLN
7	D	103	ASN
7	D	133	ASN
8	E	106	ASN
8	E	143	GLN
10	G	17	GLN
10	G	64	ASN
11	H	35	ASN
11	H	45	GLN
11	H	55	GLN
11	H	58	HIS
11	H	59	ASN

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Mol	Chain	Res	Type
11	H	69	ASN
11	H	74	ASN
11	H	80	ASN
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
15	L	26	HIS
15	L	58	GLN
15	L	176	GLN
16	M	40	ASN
16	M	107	ASN
16	M	119	GLN
16	M	132	ASN
16	M	153	GLN
17	N	53	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
21	R	53	ASN
22	S	39	ASN
22	S	73	HIS
23	T	39	ASN
24	U	60	GLN
25	V	27	HIS
25	V	28	HIS
25	V	59	GLN
25	V	87	HIS

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Mol	Chain	Res	Type
25	V	110	GLN
25	V	119	HIS
25	V	125	HIS
25	V	141	HIS
26	W	23	HIS
26	W	36	HIS
27	X	134	HIS
27	X	149	GLN
27	X	189	ASN
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	30	GLN
31	2	48	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2745/2922 (93%)	241 (8%)	25 (0%)
2	9	121/122 (99%)	18 (14%)	3 (2%)
3	4	2/3 (66%)	1 (50%)	0
All	All	2868/3047 (94%)	260 (9%)	28 (0%)

All (260) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
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

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Mol	Chain	Res	Type
1	0	115	U
1	0	120	A
1	0	130	C
1	0	141	C
1	0	151	A
1	0	166	A
1	0	169	A
1	0	186	A
1	0	191	A
1	0	192	A
1	0	200	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	345	G
1	0	358	G
1	0	381	G
1	0	397	A
1	0	417	G
1	0	461	C
1	0	487	G
1	0	498	A
1	0	510	U
1	0	511	A
1	0	514	G
1	0	537	G
1	0	538	C
1	0	539	G
1	0	542	A
1	0	545	G
1	0	553	G
1	0	559	U

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Mol	Chain	Res	Type
1	0	581	G
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	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	898	G
1	0	905	C
1	0	920	C
1	0	921	G
1	0	923	A
1	0	938	G
1	0	953	G
1	0	960	G
1	0	961	A
1	0	1006	A
1	0	1008	C
1	0	1029	U
1	0	1045	G
1	0	1059	G
1	0	1060	C
1	0	1072	G

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Mol	Chain	Res	Type
1	0	1081	A
1	0	1088	A
1	0	1109	U
1	0	1110	G
1	0	1119	G
1	0	1130	U
1	0	1137	G
1	0	1151	G
1	0	1162	G
1	0	1164	U
1	0	1165	G
1	0	1166	A
1	0	1174	A
1	0	1175	G
1	0	1185	U
1	0	1192	A
1	0	1193	A
1	0	1206	U
1	0	1216	G
1	0	1237	U
1	0	1238	C
1	0	1239	G
1	0	1279	U
1	0	1289	C
1	0	1331	A
1	0	1342	C
1	0	1353	C
1	0	1360	C
1	0	1377	C
1	0	1407	A
1	0	1451	C
1	0	1460	G
1	0	1474	C
1	0	1485	A
1	0	1488	U
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	1564	C

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Mol	Chain	Res	Type
1	0	1580	A
1	0	1592	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	1731	C
1	0	1732	A
1	0	1752	G
1	0	1778	A
1	0	1798	C
1	0	1819	G
1	0	1820	G
1	0	1829	A
1	0	1856	C
1	0	1879	U
1	0	1904	A
1	0	1919	A
1	0	1942	A
1	0	1971	G
1	0	1973	A
1	0	1974	G
1	0	1978	A
1	0	1979	G
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

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Mol	Chain	Res	Type
1	0	2034	U
1	0	2063	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
1	0	2354	A
1	0	2361	A
1	0	2369	A
1	0	2422	U
1	0	2462	G
1	0	2467	A
1	0	2476	C
1	0	2483	A
1	0	2507	G
1	0	2511	A
1	0	2533	C
1	0	2537	G
1	0	2540	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	2637	A
1	0	2649	A

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Mol	Chain	Res	Type
1	0	2650	U
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	2768	A
1	0	2786	G
1	0	2792	A
1	0	2800	A
1	0	2811	A
1	0	2812	A
1	0	2825	C
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	3040	C
2	9	3041	C
2	9	3043	G
2	9	3044	A
2	9	3052	A
2	9	3057	A
2	9	3066	G
2	9	3077	A
2	9	3114	G
2	9	3122	C
3	4	76	A

All (28) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	129	A
1	0	284	C
1	0	338	C
1	0	603	A
1	0	604	G
1	0	834	G
1	0	871	G
1	0	877	G
1	0	1080	C
1	0	1164	U
1	0	1237	U
1	0	1352	A
1	0	1450	C
1	0	1563	G
1	0	1667	A
1	0	1856	C
1	0	1979	G
1	0	2011	A
1	0	2313	C
1	0	2320	U
1	0	2467	A
1	0	2536	C
1	0	2649	A
1	0	2718	C
1	0	2791	U
2	9	3024	U
2	9	3065	A
2	9	3103	A

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

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

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 233 ligands modelled in this entry, 232 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
32	SLD	0	9500	-	39,39,39	6.56	18 (46%)	53,53,53	2.48	17 (32%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	SLD	0	9500	-	-	0/23/51/51	0/3/3/3

All (18) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	9500	SLD	C8S-C6S	33.10	1.58	1.33
32	0	9500	SLD	C5S-N4S	10.68	1.45	1.33
32	0	9500	SLD	C9S-C8S	-9.35	1.35	1.50
32	0	9500	SLD	C6-N1	8.01	1.45	1.36
32	0	9500	SLD	C6S-C1S	7.57	1.58	1.44
32	0	9500	SLD	C12-C11	5.88	1.53	1.39
32	0	9500	SLD	C9S-C0S	-5.65	1.43	1.51
32	0	9500	SLD	C1-C2	5.48	1.50	1.39
32	0	9500	SLD	C4-C11	4.88	1.46	1.37
32	0	9500	SLD	C3-C1	4.72	1.47	1.38
32	0	9500	SLD	C12-C2B	4.53	1.54	1.47
32	0	9500	SLD	C7S-C5S	3.94	1.57	1.50
32	0	9500	SLD	O1-C6	3.80	1.40	1.35
32	0	9500	SLD	C1S-N2S	3.60	1.45	1.38
32	0	9500	SLD	O1-C7	-3.42	1.41	1.46
32	0	9500	SLD	F1-C11	3.42	1.44	1.35
32	0	9500	SLD	C3-C12	2.67	1.46	1.41
32	0	9500	SLD	C4-C2	2.06	1.43	1.39

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	0	9500	SLD	O3-C6-N1	-8.38	122.04	128.86
32	0	9500	SLD	O1-C6-O3	6.47	129.77	122.32
32	0	9500	SLD	C5-N1-C6	-5.44	108.17	111.26
32	0	9500	SLD	C3S-N4S-C5S	4.99	123.64	118.93
32	0	9500	SLD	C2-N1-C6	4.57	131.36	125.78
32	0	9500	SLD	C9S-C0S-N5S	-3.46	109.95	117.20
32	0	9500	SLD	C5B-CAS-N5S	3.05	121.40	112.21
32	0	9500	SLD	O1-C7-C5	2.99	107.91	104.67
32	0	9500	SLD	C8-N2-C9	2.95	126.33	122.73
32	0	9500	SLD	C7-O1-C6	-2.92	107.83	110.19
32	0	9500	SLD	O2S-C0S-C9S	2.90	126.61	121.06
32	0	9500	SLD	O1-C6-N1	-2.74	108.18	109.95
32	0	9500	SLD	CAS-C5B-C4B	2.63	122.35	113.21
32	0	9500	SLD	C5-C7-C8	-2.48	110.50	114.03
32	0	9500	SLD	C7-C8-N2	-2.31	106.40	111.97
32	0	9500	SLD	CAS-N5S-C0S	-2.24	118.28	122.84
32	0	9500	SLD	C6S-C5S-N4S	-2.12	118.32	122.83

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	0	2754/2922 (94%)	-0.50	20 (0%) 84 28	35, 63, 107, 150	0
2	9	122/122 (100%)	-0.10	4 (3%) 44 8	52, 80, 106, 150	0
3	4	3/3 (100%)	-0.57	0 100 100	49, 49, 51, 51	0
4	A	237/239 (99%)	-0.32	0 100 100	44, 69, 101, 121	0
5	B	337/337 (100%)	-0.27	0 100 100	42, 72, 98, 108	0
6	C	246/246 (100%)	-0.36	0 100 100	36, 63, 87, 99	0
7	D	140/176 (79%)	0.15	2 (1%) 72 18	70, 115, 131, 137	0
8	E	172/177 (97%)	-0.20	0 100 100	61, 84, 102, 107	0
9	F	119/119 (100%)	-0.11	0 100 100	70, 88, 112, 118	0
10	G	29/348 (8%)	-0.02	0 100 100	85, 105, 113, 117	0
11	H	156/167 (93%)	-0.23	0 100 100	51, 72, 100, 108	0
12	I	142/145 (97%)	-0.35	0 100 100	50, 66, 85, 102	0
13	J	132/132 (100%)	-0.27	0 100 100	53, 71, 89, 96	0
14	K	145/164 (88%)	-0.23	0 100 100	39, 83, 117, 129	0
15	L	194/194 (100%)	-0.42	0 100 100	47, 62, 79, 90	0
16	M	186/186 (100%)	-0.06	0 100 100	58, 81, 120, 133	0
17	N	115/115 (100%)	-0.26	0 100 100	56, 72, 90, 94	0
18	O	143/148 (96%)	-0.33	0 100 100	50, 72, 87, 94	0
19	P	95/95 (100%)	-0.32	1 (1%) 77 21	51, 62, 75, 88	0
20	Q	150/154 (97%)	-0.37	0 100 100	46, 61, 81, 88	0
21	R	81/84 (96%)	-0.24	0 100 100	59, 76, 95, 103	0
22	S	119/119 (100%)	-0.26	1 (0%) 83 26	55, 74, 97, 113	0
23	T	53/66 (80%)	-0.22	0 100 100	57, 73, 92, 99	0
24	U	65/70 (92%)	-0.00	2 (3%) 47 9	68, 91, 123, 129	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
25	V	154/154 (100%)	-0.38	0 100 100	51, 64, 82, 94	0
26	W	82/91 (90%)	-0.19	0 100 100	58, 75, 99, 117	0
27	X	142/240 (59%)	-0.42	0 100 100	43, 61, 82, 101	0
28	Y	73/73 (100%)	-0.22	0 100 100	62, 76, 95, 104	0
29	Z	56/56 (100%)	-0.50	0 100 100	42, 52, 58, 68	0
30	1	46/48 (95%)	-0.15	1 (2%) 59 12	49, 77, 105, 117	0
31	2	92/92 (100%)	-0.18	0 100 100	53, 73, 87, 98	0
All	All	6580/7282 (90%)	-0.36	31 (0%) 88 36	35, 69, 108, 150	0

All (31) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	9	3001	U	6.3
1	0	2250	G	4.9
2	9	3002	U	4.2
2	9	3025	G	3.9
2	9	3023	U	3.9
1	0	735	C	3.7
1	0	2237	G	3.5
1	0	1181	A	2.8
1	0	1951	G	2.6
1	0	362	G	2.5
1	0	2249	G	2.5
1	0	2664	A	2.4
1	0	960	G	2.4
1	0	970	U	2.4
1	0	1199	A	2.4
19	P	95	GLU	2.4
1	0	2251	G	2.4
1	0	1130	U	2.3
30	1	35	ARG	2.2
1	0	1279	U	2.2
1	0	128	A	2.2
1	0	1527	A	2.2
24	U	40	PRO	2.1
7	D	12	GLU	2.1
1	0	736	A	2.1
1	0	2253	G	2.1
7	D	43	GLU	2.1
24	U	39	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
1	0	2254	G	2.1
22	S	116	ASP	2.1
1	0	1171	A	2.0

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

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

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

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<sup>th</sup> 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	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
35	NA	0	8352	1/1	0.32	136.61	61,61,61,61	0
35	NA	0	8356	1/1	0.96	54.03	73,73,73,73	0
35	NA	0	8329	1/1	1.26	51.08	98,98,98,98	0
35	NA	0	8385	1/1	0.33	44.57	73,73,73,73	0
35	NA	0	8384	1/1	0.58	41.86	85,85,85,85	0
36	CL	A	8509	1/1	0.99	40.70	89,89,89,89	0
35	NA	0	8371	1/1	0.66	38.95	69,69,69,69	0
33	MG	0	8024	1/1	0.70	38.50	98,98,98,98	0
35	NA	0	8311	1/1	0.27	31.02	73,73,73,73	0
34	K	0	8202	1/1	0.82	28.69	92,92,92,92	0
33	MG	0	8072	1/1	0.30	26.68	78,78,78,78	0
35	NA	0	8363	1/1	0.56	25.16	83,83,83,83	0
35	NA	0	8377	1/1	0.47	24.88	75,75,75,75	0
35	NA	0	8349	1/1	0.45	24.25	69,69,69,69	0
33	MG	0	8103	1/1	0.49	23.71	97,97,97,97	0
35	NA	0	8376	1/1	0.43	23.70	79,79,79,79	0
33	MG	0	8092	1/1	0.27	23.64	111,111,111,111	0
36	CL	0	8522	1/1	0.63	23.50	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
35	NA	0	8323	1/1	0.40	23.40	66,66,66,66	0
33	MG	0	8041	1/1	0.27	23.40	68,68,68,68	0
35	NA	0	8378	1/1	0.74	23.31	65,65,65,65	0
35	NA	0	8379	1/1	0.28	23.15	48,48,48,48	0
35	NA	0	8372	1/1	0.71	19.99	72,72,72,72	0
36	CL	X	8520	1/1	0.28	19.78	57,57,57,57	0
35	NA	0	8368	1/1	0.39	18.55	69,69,69,69	0
35	NA	0	8321	1/1	0.42	18.47	67,67,67,67	0
35	NA	0	8360	1/1	0.44	18.39	69,69,69,69	0
35	NA	0	8370	1/1	0.35	18.07	76,76,76,76	0
35	NA	0	8361	1/1	0.41	16.94	77,77,77,77	0
35	NA	0	8354	1/1	0.44	16.57	58,58,58,58	0
33	MG	0	8064	1/1	0.32	16.39	39,39,39,39	0
35	NA	0	8381	1/1	0.29	16.37	69,69,69,69	0
36	CL	Q	8506	1/1	0.26	15.97	80,80,80,80	0
35	NA	0	8306	1/1	0.33	15.83	59,59,59,59	0
33	MG	0	8022	1/1	0.52	14.02	83,83,83,83	0
36	CL	B	8519	1/1	0.41	13.83	95,95,95,95	0
35	NA	0	8303	1/1	0.37	13.01	55,55,55,55	0
35	NA	0	8340	1/1	0.35	11.98	69,69,69,69	0
36	CL	2	8504	1/1	0.45	11.94	100,100,100,100	0
33	MG	0	8097	1/1	0.30	11.84	53,53,53,53	0
33	MG	0	8114	1/1	0.81	11.72	95,95,95,95	0
33	MG	0	8044	1/1	0.28	10.87	59,59,59,59	0
35	NA	0	8316	1/1	0.17	10.81	52,52,52,52	0
33	MG	0	8106	1/1	0.24	10.80	78,78,78,78	0
35	NA	0	8332	1/1	0.40	10.68	50,50,50,50	0
36	CL	0	8505	1/1	0.31	10.62	99,99,99,99	0
35	NA	Q	8386	1/1	0.60	10.30	107,107,107,107	0
35	NA	0	8341	1/1	0.37	10.27	60,60,60,60	0
33	MG	0	8113	1/1	0.14	9.50	60,60,60,60	0
35	NA	0	8366	1/1	0.37	9.22	82,82,82,82	0
36	CL	0	8503	1/1	0.30	9.22	82,82,82,82	0
35	NA	0	8325	1/1	0.26	9.17	64,64,64,64	0
33	MG	0	8085	1/1	0.25	8.93	92,92,92,92	0
35	NA	0	8362	1/1	0.23	8.88	79,79,79,79	0
33	MG	0	8051	1/1	0.22	8.39	97,97,97,97	0
35	NA	0	8302	1/1	0.17	8.30	55,55,55,55	0
35	NA	0	8350	1/1	0.24	8.25	57,57,57,57	0
35	NA	K	8380	1/1	0.36	7.99	85,85,85,85	0
35	NA	0	8308	1/1	0.29	7.79	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
35	NA	0	8375	1/1	0.63	7.73	81,81,81,81	0
35	NA	0	8307	1/1	0.35	7.51	71,71,71,71	0
35	NA	0	8315	1/1	0.17	7.32	70,70,70,70	0
35	NA	0	8364	1/1	0.23	7.25	66,66,66,66	0
33	MG	A	8105	1/1	0.32	6.86	52,52,52,52	0
33	MG	0	8108	1/1	0.24	6.80	102,102,102,102	0
36	CL	0	8513	1/1	0.24	6.77	74,74,74,74	0
35	NA	0	8333	1/1	0.27	6.73	40,40,40,40	0
35	NA	0	8369	1/1	0.36	6.52	96,96,96,96	0
35	NA	R	8312	1/1	0.90	6.20	84,84,84,84	0
33	MG	0	8053	1/1	0.27	6.14	63,63,63,63	0
33	MG	0	8102	1/1	0.34	6.14	91,91,91,91	0
35	NA	0	8324	1/1	0.40	6.07	58,58,58,58	0
35	NA	0	8313	1/1	0.24	6.06	89,89,89,89	0
35	NA	0	8382	1/1	0.21	5.64	89,89,89,89	0
33	MG	0	8100	1/1	0.21	5.47	97,97,97,97	0
33	MG	0	8021	1/1	0.17	5.36	54,54,54,54	0
35	NA	0	8357	1/1	0.23	5.35	61,61,61,61	0
33	MG	0	8006	1/1	0.25	5.24	60,60,60,60	0
36	CL	P	8511	1/1	0.34	4.90	84,84,84,84	0
35	NA	0	8358	1/1	0.27	4.82	109,109,109,109	0
33	MG	0	8045	1/1	0.24	4.74	91,91,91,91	0
36	CL	0	8515	1/1	0.26	4.62	100,100,100,100	0
35	NA	0	8365	1/1	0.48	4.59	47,47,47,47	0
35	NA	0	8326	1/1	0.29	4.56	73,73,73,73	0
35	NA	0	8367	1/1	0.21	4.38	85,85,85,85	0
35	NA	0	8314	1/1	0.25	4.26	53,53,53,53	0
35	NA	0	8355	1/1	0.42	4.25	77,77,77,77	0
35	NA	9	8383	1/1	0.37	4.07	67,67,67,67	0
33	MG	0	8030	1/1	0.17	3.77	48,48,48,48	0
33	MG	0	8088	1/1	0.23	3.75	40,40,40,40	0
35	NA	0	8335	1/1	0.17	3.68	83,83,83,83	0
36	CL	0	8516	1/1	0.27	3.66	64,64,64,64	0
36	CL	0	8517	1/1	0.27	3.62	82,82,82,82	0
33	MG	9	8095	1/1	0.32	3.59	106,106,106,106	0
35	NA	0	8373	1/1	0.20	3.54	57,57,57,57	0
35	NA	C	8304	1/1	0.34	3.31	51,51,51,51	0
35	NA	0	8318	1/1	0.20	3.27	48,48,48,48	0
35	NA	0	8334	1/1	0.23	3.24	48,48,48,48	0
33	MG	0	8020	1/1	0.18	3.13	53,53,53,53	0
35	NA	0	8328	1/1	0.18	3.06	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
36	CL	I	8521	1/1	0.23	2.86	69,69,69,69	0
33	MG	0	8054	1/1	0.18	2.83	45,45,45,45	0
33	MG	0	8046	1/1	0.17	2.75	86,86,86,86	0
33	MG	0	8090	1/1	0.29	2.65	81,81,81,81	0
33	MG	0	8099	1/1	0.24	2.62	80,80,80,80	0
35	NA	H	8322	1/1	0.42	2.48	78,78,78,78	0
33	MG	0	8038	1/1	0.17	2.44	56,56,56,56	0
33	MG	0	8115	1/1	0.16	2.33	73,73,73,73	0
37	CD	N	8405	1/1	0.24	2.31	150,150,150,150	0
33	MG	0	8042	1/1	0.14	2.26	61,61,61,61	0
32	SLD	0	9500	37/37	0.21	2.11	46,50,53,59	0
33	MG	0	8049	1/1	0.30	2.10	90,90,90,90	0
33	MG	0	8009	1/1	0.17	2.02	44,44,44,44	0
36	CL	M	8507	1/1	0.25	1.83	86,86,86,86	0
36	CL	J	8512	1/1	0.21	1.79	67,67,67,67	0
33	MG	0	8011	1/1	0.19	1.72	50,50,50,50	0
35	NA	0	8320	1/1	0.17	1.70	40,40,40,40	0
35	NA	H	8309	1/1	0.24	1.66	49,49,49,49	0
33	MG	0	8060	1/1	0.14	1.51	63,63,63,63	0
33	MG	0	8082	1/1	0.14	1.47	79,79,79,79	0
33	MG	X	8109	1/1	0.20	1.36	66,66,66,66	0
35	NA	0	8374	1/1	0.16	1.33	77,77,77,77	0
33	MG	0	8014	1/1	0.18	1.31	46,46,46,46	0
36	CL	K	8510	1/1	0.24	1.28	104,104,104,104	0
35	NA	0	8310	1/1	0.17	1.22	46,46,46,46	0
33	MG	0	8013	1/1	0.17	1.17	60,60,60,60	0
35	NA	Q	8337	1/1	0.23	1.11	64,64,64,64	0
33	MG	0	8004	1/1	0.18	1.01	50,50,50,50	0
33	MG	0	8001	1/1	0.16	1.00	46,46,46,46	0
35	NA	0	8339	1/1	0.15	0.96	33,33,33,33	0
36	CL	I	8501	1/1	0.18	0.81	99,99,99,99	0
35	NA	0	8359	1/1	0.14	0.80	81,81,81,81	0
33	MG	0	8101	1/1	0.13	0.75	94,94,94,94	0
36	CL	0	8514	1/1	0.14	0.72	75,75,75,75	0
36	CL	N	8508	1/1	0.19	0.72	116,116,116,116	0
33	MG	0	8008	1/1	0.15	0.72	52,52,52,52	0
33	MG	0	8112	1/1	0.15	0.69	64,64,64,64	0
33	MG	0	8116	1/1	0.16	0.64	84,84,84,84	0
35	NA	0	8319	1/1	0.17	0.46	41,41,41,41	0
35	NA	0	8331	1/1	0.14	0.44	60,60,60,60	0
35	NA	9	8351	1/1	0.34	0.36	94,94,94,94	0
33	MG	0	8079	1/1	0.12	0.34	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
33	MG	0	8017	1/1	0.15	0.30	43,43,43,43	0
33	MG	0	8104	1/1	0.15	0.09	66,66,66,66	0
33	MG	0	8076	1/1	0.15	0.09	102,102,102,102	0
33	MG	0	8003	1/1	0.14	0.06	51,51,51,51	0
35	NA	0	8330	1/1	0.12	-0.02	61,61,61,61	0
35	NA	0	8353	1/1	0.12	-0.02	43,43,43,43	0
33	MG	0	8028	1/1	0.16	-0.04	57,57,57,57	0
34	K	0	8201	1/1	0.13	-0.29	141,141,141,141	0
33	MG	0	8077	1/1	0.12	-0.46	54,54,54,54	0
35	NA	0	8342	1/1	0.13	-0.46	42,42,42,42	0
33	MG	0	8007	1/1	0.12	-0.55	47,47,47,47	0
33	MG	A	8065	1/1	0.13	-0.55	55,55,55,55	0
35	NA	0	8301	1/1	0.11	-0.60	59,59,59,59	0
33	MG	0	8034	1/1	0.11	-0.65	46,46,46,46	0
35	NA	L	8347	1/1	0.14	-0.66	55,55,55,55	0
33	MG	0	8110	1/1	0.13	-0.70	56,56,56,56	0
33	MG	0	8015	1/1	0.11	-0.90	60,60,60,60	0
33	MG	0	8066	1/1	0.15	-0.91	105,105,105,105	0
35	NA	0	8343	1/1	0.12	-0.92	48,48,48,48	0
33	MG	0	8111	1/1	0.11	-1.02	75,75,75,75	0
33	MG	0	8005	1/1	0.11	-1.10	58,58,58,58	0
37	CD	Y	8403	1/1	0.08	-1.13	84,84,84,84	0
33	MG	0	8058	1/1	0.09	-1.18	61,61,61,61	0
33	MG	S	8073	1/1	0.11	-1.20	71,71,71,71	0
33	MG	0	8093	1/1	0.11	-1.24	63,63,63,63	0
36	CL	I	8502	1/1	0.12	-1.29	93,93,93,93	0
37	CD	2	8404	1/1	0.09	-1.33	90,90,90,90	0
35	NA	I	8346	1/1	0.09	-1.38	45,45,45,45	0
33	MG	0	8086	1/1	0.06	-1.40	62,62,62,62	0
35	NA	0	8317	1/1	0.10	-1.41	57,57,57,57	0
33	MG	4	8063	1/1	0.11	-1.44	62,62,62,62	0
33	MG	0	8062	1/1	0.09	-1.48	90,90,90,90	0
33	MG	0	8057	1/1	0.08	-1.51	53,53,53,53	0
33	MG	0	8107	1/1	0.09	-1.52	55,55,55,55	0
35	NA	0	8327	1/1	0.11	-1.56	46,46,46,46	0
37	CD	Z	8402	1/1	0.06	-1.59	89,89,89,89	0
33	MG	0	8010	1/1	0.11	-1.63	47,47,47,47	0
33	MG	0	8074	1/1	0.06	-1.67	51,51,51,51	0
33	MG	0	8096	1/1	0.11	-1.67	70,70,70,70	0
33	MG	0	8098	1/1	0.10	-1.73	50,50,50,50	0
35	NA	0	8338	1/1	0.06	-1.74	66,66,66,66	0
33	MG	0	8039	1/1	0.10	-1.75	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
33	MG	0	8068	1/1	0.07	-1.84	64,64,64,64	0
33	MG	0	8117	1/1	0.08	-1.84	45,45,45,45	0
36	CL	L	8518	1/1	0.10	-1.86	69,69,69,69	0
33	MG	0	8070	1/1	0.09	-1.89	63,63,63,63	0
33	MG	0	8002	1/1	0.09	-1.99	51,51,51,51	0
33	MG	0	8019	1/1	0.12	-2.05	43,43,43,43	0
35	NA	A	8345	1/1	0.10	-2.08	48,48,48,48	0
33	MG	0	8018	1/1	0.09	-2.10	57,57,57,57	0
33	MG	9	8052	1/1	0.09	-2.12	60,60,60,60	0
35	NA	P	8348	1/1	0.09	-2.13	68,68,68,68	0
35	NA	0	8344	1/1	0.08	-2.21	48,48,48,48	0
33	MG	0	8056	1/1	0.10	-2.22	60,60,60,60	0
33	MG	0	8027	1/1	0.06	-2.26	65,65,65,65	0
33	MG	0	8031	1/1	0.11	-2.31	54,54,54,54	0
33	MG	0	8029	1/1	0.06	-2.40	60,60,60,60	0
33	MG	0	8040	1/1	0.09	-2.40	88,88,88,88	0
33	MG	0	8080	1/1	0.08	-2.53	52,52,52,52	0
33	MG	0	8067	1/1	0.10	-2.54	81,81,81,81	0
33	MG	B	8055	1/1	0.06	-2.58	71,71,71,71	0
33	MG	0	8081	1/1	0.08	-2.64	67,67,67,67	0
37	CD	T	8401	1/1	0.06	-2.67	83,83,83,83	0
33	MG	0	8087	1/1	0.08	-2.70	82,82,82,82	0
33	MG	0	8016	1/1	0.08	-2.78	71,71,71,71	0
33	MG	0	8050	1/1	0.16	-2.84	68,68,68,68	0
33	MG	2	8078	1/1	0.04	-2.92	65,65,65,65	0
33	MG	0	8083	1/1	0.08	-2.93	65,65,65,65	0
33	MG	0	8012	1/1	0.06	-3.06	42,42,42,42	0
33	MG	0	8033	1/1	0.11	-3.07	48,48,48,48	0
35	NA	0	8336	1/1	0.08	-3.24	63,63,63,63	0
33	MG	0	8075	1/1	0.08	-3.39	77,77,77,77	0
33	MG	0	8091	1/1	0.05	-3.43	65,65,65,65	0
33	MG	J	8069	1/1	0.05	-3.58	87,87,87,87	0
33	MG	0	8048	1/1	0.05	-3.60	66,66,66,66	0
33	MG	0	8094	1/1	0.06	-3.80	97,97,97,97	0
35	NA	0	8305	1/1	0.08	-4.03	42,42,42,42	0
33	MG	0	8043	1/1	0.07	-4.14	64,64,64,64	0
33	MG	0	8037	1/1	0.06	-4.20	54,54,54,54	0
33	MG	0	8089	1/1	0.09	-4.32	82,82,82,82	0
33	MG	0	8059	1/1	0.07	-4.45	60,60,60,60	0
33	MG	0	8071	1/1	0.07	-4.59	104,104,104,104	0
33	MG	0	8036	1/1	0.05	-4.76	52,52,52,52	0
33	MG	0	8032	1/1	0.06	-4.96	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
33	MG	0	8061	1/1	0.05	-5.49	45,45,45,45	0
33	MG	0	8026	1/1	0.10	-5.99	39,39,39,39	0
33	MG	0	8035	1/1	0.06	-6.17	69,69,69,69	0
33	MG	0	8084	1/1	0.05	-6.98	70,70,70,70	0
33	MG	0	8047	1/1	0.10	-7.84	90,90,90,90	0
33	MG	0	8025	1/1	0.06	-8.09	59,59,59,59	0
33	MG	0	8023	1/1	0.05	-51.62	46,46,46,46	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.